FILED 7/19/2019
DOCUMENT NO. 05678-2019
FPSC - COMMISSION CLERK

Docket No. 20170272-EI
Comprehensive Exhibit List for Entry into Hearing Record
May 21, 2019

EXH #	Witness	I.D. # As Filed	Exhibit Description	Issue Nos.	Entered
STAFF					
1		Exhibit List	Comprehensive Exhibit List		
DUKE ENERGY FLORIDA – (DIRECT)					
2	W. Bryan Buckler	BB-1[1]	Storm Cost Recovery Total.		
3	W. Bryan Buckler	BB-2[2]	Storm Costs by Storm.		
4	W. Bryan Buckler	BB-3	Storm Cost Reserve Activity.		
5	Marcia J. Olivier	MJO-1[3]	Storm Cost Amortization.		
6	Jason Cutliffe	JC-1	Forensic Analysis of Storm Damage to Duke's Distribution System as a Result of Hurricane Irma (Accenture Report).		
7	Jason Cutliffe	JC-2	Paths of Hurricane Irma and Nate.		

[1] Exhibit BB-1 Supplemental filed on 1/28/19
[2] Exhibit BB-2 Supplemental filed on 1/28/19
[3] Exhibit MJO-1 Supplemental filed on 1/28/19

8	Olivier 3, 31, 27-30 Buckler 9 , 10, 17, 19, 21-26, 31 Cutliffe 1, 2, 4-8, 11, 12, 14-16, 20, 38, 41, 42 Matthews 8, 14-16		DEF Response. to OPC 1st Interrogatories (3-10, 13-16, 27-30, 33-35, and 42). DEF 1st Supplemental Response to OPC 1st Interrogatories (1-, 2, 6, 12, 14-23, 36-38, 40, 41, 48, 49, 50). DEF 2nd Supplemental Response to OPC 1st Interrogatories 11, 12, 22, 24-26, 31, 32, and 44-47		
9	Cutliffe 4, 5, Matthews and Cutliffe 3, 10		DEF Response to OPC 1st Production of Documents (4 and 5). DEF 1st Supplemental Response to OPC 1st Production of Documents 3 and 10		
10	Matthews (51, 52, 55, 56, 63, 64) Cutliffe (52-54, 57-59)		DEF Response to OPC 2nd Interrogatories 51-59, 63 and 64		
11	Cutliffe (13)		DEF 1st Supplemental Response to OPC 2nd Production of Documents 13		
12	Shawver and Fouty 65, 66 Shawver and Fouty 65, 66		DEF Response to OPC 3rd Interrogatories (65-66). DEF Amended Response to OPC 3rd Interrogatories 65-66		

13	Buckler (72, 73, 77-81, 85-87, 90-95, 97, 98) Olivier (71, 74, 75, 76, 82, 83, 88, and 89)		DEF Response to OPC 4th Interrogatories 71-95, 97 and 98		
14	Buckler (23-26)		DEF Response to OPC 4th Production of Documents 23-26		
15	Cutliffe (101, 102) Bogdanos (103, 104)		DEF Response to OPC 5th Interrogatories 101-104		
16	Cutliffe and Matthews (30-32, 34, 35) Olivier (36-40)		DEF Response to OPC 5th Production of Documents 27-40		
17	Olivier (105) Dezonia (106) Buckler (107-111)		DEF Response to OPC 6th Interrogatories 105-111		
18	Buckler (112 – 116) Olivier (115, 116) Cutliffe (118)		DEF Response to OPC 7th Interrogatories 112-116 and 118		

19	Bogdanos (119-123) Cutliffe (125-127) Olivier (128-131)		DEF Response to OPC 8th Interrogatories 119-123 and 125-131		
20	Ghent (136-140) Roebuck (141-143)		DEF Response to OPC 9th Interrogatories 136-143		
21	Cutliffe (1-12)		DEF Response to Staff 1st Interrogatories 1-12		
22	Cutliffe (1)		DEF Response to Staff 1st Production of Documents 1		
23	Matthews (25-27) Cutliffe (13-24)		DEF Response to Staff 2nd Interrogatories 13-27		
24	Cutliffe (2)		DEF Response to Staff 2nd Production of Documents 2		
25	Buckler (29) Matthews (28)		DEF Response to Staff 3rd Interrogatories 28-29		

26			TR and EXH Deposition Duces Tecum of J Cutliffe, T Roebuck, A DeZonia, LaQuitta Ghent, B Sawyer, TFouty, Jay Shawver taken on March 14-15, 2019 and filed with FPSC on 5.20. 2019 DEF Panel Deposition **Confidential**		
STAFF HEARING EXHBITS					
27			DEF Response. to Staff's 1st Data Request (1-36) **See CD/USB for Staff Hearing Exhibits.** *[Bates No. 00001 – 00017]*		

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 2
PARTY: DUKE ENERGY FLORIDA – (DIRECT)
DESCRIPTION: W. Bryan Buckler BB-1

Docket No. 20170272-EI
Storm Costs Recovery Total
Exhibit BB-1, Page 1 of 1
(supplemental 1/28/19)

Line No.	Description	REF.	(A) Storm Costs ($000's)	(B) Storm Reserve Balance ($000's)
1	**Reserve Balance (Pre-2017 Storm) - Retail**	BB-3 line 7 column D		**($56,734)**
2				
3	**Total Storm Costs (2017)**			
4	Irma	BB-2p2 line 32 column H	$418,802	
5	Nate	BB-2p1 line 32 column H	5,085	
6	**Total Recoverable Restoration Costs - Retail**	lines 4:5		**423,886**
7				
8	**Net Recoverable Retail Restoration Costs**	line 1 + line 6		**367,152**
9				
10	Bond Issuance Costs	Exh. No. MJO-1		1,264
11				
12	**Beginning Balance for Recovery**	lines 8:10		**368,417**
13				
14	Plus: Interest on Unamortized Reserve Deficiency Balance	Exh. No. MJO-1 line 46		8,216
15				
16	Plus: Amount to Replenish Reserve	BB-3 line 1 column D		131,847
17				
18	**Total Retail Storm Recovery Amount**	lines 12:16		**$508,480**

Notes:

Pursuant to Rule No. 25-6.0431(3), F.A.C., line 12 reflects the rate base component on which DEF seeks recover interest expense.

Pursuant to Rule No. 25-6.0431(4), F.A.C., lines 12 and 14 reflect the amortization and interest expense, respectively, that DEF seeks to recover.

Docket No. 20170272-EI
Storm Costs Recovery Total
Exhibit BB-1, Page 1 of 1

Line No.	Description	REF.	(A) Storm Costs ($000's)	(B) Storm Reserve Balance ($000's)
1	**Reserve Balance (Pre-2017 Storm) - Retail**	BB-3 line 7 column D		**($56,734)**
2				
3	**Total Storm Costs (2017)**			
4	Irma	BB-2p2 line 32 column H	$420,478	
5	Nate	BB-2p1 line 32 column H	5,085	
6	**Total Recoverable Restoration Costs - Retail**	lines 4:5		**425,563**
7				
8	**Net Recoverable Retail Restoration Costs**	line 1 + line 6		**368,828**
9				
10	Bond Issuance Costs	Exh. No. MJO-1		1,264
11				
12	**Beginning Balance for Recovery**	lines 8:10		**370,093**
13				
14	Plus: Interest on Unamortized Reserve Deficiency Balance	Exh. No. MJO-1 line 46		8,543
15				
16	Plus: Amount to Replenish Reserve	BB-3 line 1 column D		131,847
17				
18	**Total Retail Storm Recovery Amount**	lines 12:16		**$510,483**

Notes:

Pursuant to Rule No. 25-6.0431(3), F.A.C., line 12 reflects the rate base component on which DEF seeks recover interest expense.

Pursuant to Rule No. 25-6.0431(4), F.A.C., lines 12 and 14 reflect the amortization and interest expense, respectively, that DEF seeks to recover.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 3
PARTY: DUKE ENERGY FLORIDA – (DIRECT)
DESCRIPTION: W. Bryan Buckler BB-2

Docket No. 20170272-EI
Storm Costs by Storm - Nate
Exhibit BB-2, Page 1 of 7
(supplemental 1/28/19)

			(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
			Storm Costs By Function ($000's)							
Line No.	Description	REF.	Transmission	Distribution	Generation Base	Generation Intermediate	Generation Peaking	Customer Service	Total	Storm Reserve Balance
1	**Pre-Storm Reserve Balance**	BB-3 line 8 column D								**($362,068)**
2										
3	**Storm Related Restoration Costs**									
4	Regular Payroll		3	33	-	-	-	-	36	
5	Overtime Payroll		5	193	-	-	-	-	199	
6	Labor Burdens/Incentives		3	76	-	-	-	-	79	
7	Overhead Allocations		26	28	-	-	-	-	54	
8	Employee Expenses		1	26	-	-	-	-	28	
9	Contractor Costs		361	4,386	-	-	-	-	4,747	
10	Materials & Supplies		0	168	-	-	-	-	168	
11	Internal Fleet Costs		0	12	-	-	-	-	12	
12	Uncollectible Account Expenses		-	-	-	-	-	-	-	
13	Other		-	-	-	-	-	-	-	
14	**Subtotal - Storm Related Restoration Costs**	lines 4:13	**400**	**4,923**	**-**	**-**	**-**	**-**	**5,323**	
15										
16	**Less: Estimated Non-Incremental Costs**									
17	Regular Payroll		(3)	(21)	-	-	-	-	(24)	
18	Overtime Payroll		-	(4)	-	-	-	-	(4)	
19	Incentives		(3)	(14)	-	-	-	-	(17)	
20	Overhead Allocations		(25)	(28)	-	-	-	-	(53)	
21	Internal Fleet Costs		(0)	(9)	-	-	-	-	(9)	
22	Vegetation Management Costs		-	-	-	-	-	-	-	
23	Other		-	-	-	-	-	-	-	
24	**Subtotal - Estimated Non-Incremental Costs**	lines 17:23	**(31)**	**(76)**	**-**	**-**	**-**	**-**	**(107)**	
25										
26	Less: Capitalizable Costs		-	-	-	-	-	-	-	
27										
28	**Total Recoverable Restoration Costs - System**	lines (14 + 24 + 26)	**369**	**4,847**	**-**	**-**	**-**	**-**	**5,216**	
29										
30	Jurisdictional Factor (Order PSC-2017-0451-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
31										
32	**Total Recoverable Restoration Costs - Retail**	lines (28 x 30)	**$259**	**$4,826**	**$0**	**$0**	**$0**	**$0**	**$5,085**	**$5,085**
33										
34	**Net Recoverable Retail Restoration Costs**	lines (32 - 1)								**(367,152)**

As filed on 05/31/18

Line No.	Description	REF.	(A) Transmission	(B) Distribution	(C) Generation Base	(D) Generation Intermediate	(E) Generation Peaking	(F) Customer Service	(G) Total	(H) Storm Reserve Balance
			Storm Costs By Function ($000's)							
1	**Pre-Storm Reserve Balance**	BB-3 line 7 column D								**$56,734**
2										
3	**Storm Related Restoration Costs**									
4	Regular Payroll		1,385	5,397	-	-	-	895	7,677	
5	Overtime Payroll		2,147	14,908	549	87	77	1,471	19,240	
6	Labor Burdens/Incentives		1,137	7,679	-	-	-	621	9,437	
7	Overhead Allocations		1,188	5,508	(21)	-	-	581	7,256	
8	Employee Expenses		1,642	20,644	39	11	2	649	22,986	
9	Contractor Costs		21,078	355,063	662	215	148	895	378,061	
10	Materials & Supplies		2,176	12,998	389	501	47	49	16,159	
11	Internal Fleet Costs		151	1,358	-	-	-	-	1,509	
12	Uncollectible Account Expenses		-	-	-	-	-	1,642	1,642	
13	Other [a]		12	110	-	-	-		122	
14	**Subtotal - Storm Related Restoration Costs**	lines 4:13	**30,917**	**423,665**	**1,617**	**814**	**275**	**6,801**	**464,088**	
15										
16	**Less: Estimated Non-Incremental Costs**									
17	Regular Payroll		(1,140)	(1,145)	-	-	-	(119)	(2,404)	
18	Overtime Payroll		(194)	(467)	-	-	-	-	(662)	
19	Incentives		(1,126)	(1,711)	-	-	-	(91)	(2,928)	
20	Overhead Allocations		(229)	(26)	21	-	-	-	(234)	
21	Internal Fleet Costs		(66)	-	-	-	-	-	(66)	
22	Vegetation Management Costs		(289)	(1,806)	-	-	-	-	(2,096)	
23	Other[b]		(12)	(245)	-	-	-	(5)	(262)	
24	**Subtotal - Estimated Non-Incremental Costs**	lines 17:23	**(3,057)**	**(5,400)**	**21**	**-**	**-**	**(216)**	**(8,651)**	
25										
26	Less: Capitalizable Costs		(6,143)	(20,248)	-	-	-	-	(26,391)	
27										
28	**Total Recoverable Restoration Costs - System**	lines (14 + 24 + 26)	**21,717**	**398,017**	**1,638**	**814**	**275**	**6,585**	**429,046**	
29										
30	Jurisdictional Factor (Order PSC-2017-0451-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
31										
32	**Total Recoverable Restoration Costs - Retail**	lines (28 x 30)	**$15,246**	**$396,270**	**$1,522**	**$592**	**$264**	**$6,585**	**$420,478**	**$420,478**
33										
34	**Net Recoverable Retail Restoration Costs**	lines (32 - 1)								**(363,744)**

Notes:

[a] Transmission - $12k relates to damage billing. Distribution - $75k relates to vehicle fuel; $13k relates to Federal, State and Local tax on undyed diesel; $20k in purchase card.

[b] Transmission - $12k relates to damage billing. Distribution - $182k relates to material expense and $63k relates to employee expenses.

Docket No. 20170272-EI
Storm Costs by Storm - Irma
Exhibit BB-2, Page 2(a) of 7
(supplemental 1/28/19)

Adjustments to 05/31/18 Filing

Line No.	Description	REF.	(A) Transmission	(B) Distribution	(C) Generation Base	(D) Generation Intermediate	(E) Generation Peaking	(F) Customer Service	(G) Total	(H) Storm Reserve Balance
			Storm Costs By Function ($000's)							
1	**Pre-Storm Reserve Balance**	BB-3 line 7 column D								
2										
3	**Storm Related Restoration Costs**									
4	Regular Payroll		0	6					6	
5	Overtime Payroll		-	1	(339)	(54)	(48)		(440)	
6	Labor Burdens/Incentives		2	3					5	
7	Overhead Allocations		6	3					9	
8	Employee Expenses		10	2	(24)	(7)	(2)		(21)	
9	Contractor Costs		204	(418)	(413)	(188)	(93)		(907)	
10	Materials & Supplies		8	66	(244)	(279)	(30)		(479)	
11	Internal Fleet Costs		1	0					2	
12	Uncollectible Account Expenses		-	-					-	
13	Other [a]		-	-					-	
14	**Subtotal - Storm Related Restoration Costs**	lines 4:13	**230**	**(336)**	**(1,020)**	**(528)**	**(172)**	**-**	**(1,826)**	
15										
16	**Less: Estimated Non-Incremental Costs**									
17	Regular Payroll			-					-	
18	Overtime Payroll			-					-	
19	Incentives			(1)					(1)	
20	Overhead Allocations			-					-	
21	Internal Fleet Costs			-					-	
22	Vegetation Management Costs			-					-	
23	Other[b]			(2)					(2)	
24	**Subtotal - Estimated Non-Incremental Costs**	lines 17:23	**-**	**(2)**	**-**	**-**	**-**	**-**	**(2)**	
25										
26	Less: Capitalizable Costs		(7)						(7)	
27										
28	**Total Recoverable Restoration Costs - System**	lines (14 + 24 + 26)	**224**	**(339)**	**(1,020)**	**(528)**	**(172)**	**-**	**(1,834)**	
29										
30	Jurisdictional Factor (Order PSC-2017-0451-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
31										
32	**Total Recoverable Restoration Costs - Retail**	lines (28 x 30)	**$157**	**($337)**	**($947)**	**($384)**	**($165)**	**$0**	**($1,676)**	**($1,676)**
33		Notes:	(A)	(B)	(C)	(C)	(C)			
34	**Net Recoverable Retail Restoration Costs**	lines (32 - 1)								**($1,676)**

Notes:

A) Transmission $157,000; additional contractor invoices and employee expenses received after May filing

B) Distribution ($337,000); Adjustments primarily to remove certain contractor invoice amounts

C) Generation ($1,496,000); insurance reimbursement of $1,720,000, multipled by jurisdictional factors on line 30

Docket No. 20170272-EI
Storm Costs by Storm - Irma
Exhibit BB-2, Page 2(b) of 7
(supplemental 1/28/19)

Adjusted Storm Costs

Line No.	Description	REF.	(A) Storm Costs By Function ($000's) Transmission	(B) Distribution	(C) Generation Base	(D) Generation Intermediate	(E) Generation Peaking	(F) Customer Service	(G) Total	(H) Storm Reserve Balance
1	**Pre-Storm Reserve Balance**	BB-3 line 7 column D								**$56,734**
2										
3	**Storm Related Restoration Costs**									
4	Regular Payroll		1,386	5,403	-	-	-	895	7,683	
5	Overtime Payroll		2,147	14,909	210	33	29	1,471	18,800	
6	Labor Burdens/Incentives		1,139	7,683	-	-	-	621	9,442	
7	Overhead Allocations		1,194	5,511	(21)	-	-	581	7,265	
8	Employee Expenses		1,651	20,646	15	4	1	649	22,965	
9	Contractor Costs		21,282	354,646	249	27	55	895	377,154	
10	Materials & Supplies		2,184	13,064	145	221	18	49	15,680	
11	Internal Fleet Costs		152	1,359	-	-	-	-	1,510	
12	Uncollectible Account Expenses		-	-	-	-	-	1,642	1,642	
13	Other [a]		12	110	-	-	-	-	122	
14	**Subtotal - Storm Related Restoration Costs**	lines 4:13	**31,147**	**423,329**	**597**	**286**	**102**	**6,801**	**462,262**	
15										
16	**Less: Estimated Non-Incremental Costs**									
17	Regular Payroll		(1,140)	(1,145)	-	-	-	(119)	(2,404)	
18	Overtime Payroll		(194)	(467)	-	-	-	-	(662)	
19	Incentives		(1,126)	(1,711)	-	-	-	(91)	(2,929)	
20	Overhead Allocations		(229)	(26)	21	-	-	-	(234)	
21	Internal Fleet Costs		(66)	-	-	-	-	-	(66)	
22	Vegetation Management Costs		(289)	(1,806)	-	-	-	-	(2,096)	
23	Other[b]		(12)	(246)	-	-	-	(5)	(263)	
24	**Subtotal - Estimated Non-Incremental Costs**	lines 17:23	**(3,057)**	**(5,402)**	**21**	**-**	**-**	**(216)**	**(8,653)**	
25										
26	Less: Capitalizable Costs		(6,149)	(20,248)	-	-	-	-	(26,397)	
27										
28	**Total Recoverable Restoration Costs - System**	lines (14 + 24 + 26)	**21,941**	**397,679**	**619**	**286**	**102**	**6,585**	**427,212**	
29										
30	Jurisdictional Factor (Order PSC-2017-0451-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
31										
32	**Total Recoverable Restoration Costs - Retail**	lines (28 x 30)	**$15,403**	**$395,933**	**$575**	**$208**	**$98**	**$6,585**	**$418,802**	**$418,802**
33										
34	**Net Recoverable Retail Restoration Costs**	lines (32 - 1)								**(362,068)**

Notes:

Docket No. 20170272-EI
Storm Costs by Storm - Nate
Exhibit BB-2, Page 1 of 7

Line No.	Description	REF.	(A) Transmission	(B) Distribution	(C) Generation Base	(D) Generation Intermediate	(E) Generation Peaking	(F) Customer Service	(G) Total	(H) Storm Reserve Balance
			Storm Costs By Function ($000's)							
1	**Pre-Storm Reserve Balance**	BB-3 line 8 column D								**($363,744)**
2										
3	**Storm Related Restoration Costs**									
4	Regular Payroll		3	33	-	-	-	-	36	
5	Overtime Payroll		5	193	-	-	-	-	199	
6	Labor Burdens/Incentives		3	76	-	-	-	-	79	
7	Overhead Allocations		26	28	-	-	-	-	54	
8	Employee Expenses		1	26	-	-	-	-	28	
9	Contractor Costs		361	4,386	-	-	-	-	4,747	
10	Materials & Supplies		0	168	-	-	-	-	168	
11	Internal Fleet Costs		0	12	-	-	-	-	12	
12	Uncollectible Account Expenses		-	-	-	-	-	-	-	
13	Other		-	-	-	-	-	-	-	
14	**Subtotal - Storm Related Restoration Costs**	lines 4:13	**400**	**4,923**	**-**	**-**	**-**	**-**	**5,323**	
15										
16	**Less: Estimated Non-Incremental Costs**									
17	Regular Payroll		(3)	(21)	-	-	-	-	(24)	
18	Overtime Payroll		-	(4)	-	-	-	-	(4)	
19	Incentives		(3)	(14)	-	-	-	-	(17)	
20	Overhead Allocations		(25)	(28)	-	-	-	-	(53)	
21	Internal Fleet Costs		(0)	(9)	-	-	-	-	(9)	
22	Vegetation Management Costs		-	-	-	-	-	-	-	
23	Other		-	-	-	-	-	-	-	
24	**Subtotal - Estimated Non-Incremental Costs**	lines 17:23	**(31)**	**(76)**	**-**	**-**	**-**	**-**	**(107)**	
25										
26	Less: Capitalizable Costs		-	-	-	-	-	-	-	
27										
28	**Total Recoverable Restoration Costs - System**	lines (14 + 24 + 26)	**369**	**4,847**	**-**	**-**	**-**	**-**	**5,216**	
29										
30	Jurisdictional Factor (Order PSC-2017-0451-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
31										
32	**Total Recoverable Restoration Costs - Retail**	lines (28 x 30)	**$259**	**$4,826**	**$0**	**$0**	**$0**	**$0**	**$5,085**	**$5,085**
33										
34	**Net Recoverable Retail Restoration Costs**	lines (32 - 1)								**(368,828)**

			(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
			Storm Costs By Function ($000's)							
Line No.	Description	REF.	Transmission	Distribution	Generation Base	Generation Intermediate	Generation Peaking	Customer Service	Total	Storm Reserve Balance
1	**Pre-Storm Reserve Balance**	BB-3 line 7 column D								**$56,734**
2										
3	**Storm Related Restoration Costs**									
4	Regular Payroll		1,385	5,397	-	-	-	895	7,677	
5	Overtime Payroll		2,147	14,908	549	87	77	1,471	19,240	
6	Labor Burdens/Incentives		1,137	7,679	-	-	-	621	9,437	
7	Overhead Allocations		1,188	5,508	(21)	-	-	581	7,256	
8	Employee Expenses		1,642	20,644	39	11	2	649	22,986	
9	Contractor Costs		21,078	355,063	662	215	148	895	378,061	
10	Materials & Supplies		2,176	12,998	389	501	47	49	16,159	
11	Internal Fleet Costs		151	1,358	-	-	-	-	1,509	
12	Uncollectible Account Expenses		-	-	-	-	-	1,642	1,642	
13	Other [a]		12	110	-	-	-		122	
14	**Subtotal - Storm Related Restoration Costs**	lines 4:13	**30,917**	**423,665**	**1,617**	**814**	**275**	**6,801**	**464,088**	
15										
16	**Less: Estimated Non-Incremental Costs**									
17	Regular Payroll		(1,140)	(1,145)	-	-	-	(119)	(2,404)	
18	Overtime Payroll		(194)	(467)	-	-	-	-	(662)	
19	Incentives		(1,126)	(1,711)	-	-	-	(91)	(2,928)	
20	Overhead Allocations		(229)	(26)	21	-	-	-	(234)	
21	Internal Fleet Costs		(66)	-	-	-	-	-	(66)	
22	Vegetation Management Costs		(289)	(1,806)	-	-	-	-	(2,096)	
23	Other[b]		(12)	(245)	-	-	-	(5)	(262)	
24	**Subtotal - Estimated Non-Incremental Costs**	lines 17:23	**(3,057)**	**(5,400)**	**21**	**-**	**-**	**(216)**	**(8,651)**	
25										
26	Less: Capitalizable Costs		(6,143)	(20,248)	-	-	-	-	(26,391)	
27										
28	**Total Recoverable Restoration Costs - System**	lines (14 + 24 + 26)	**21,717**	**398,017**	**1,638**	**814**	**275**	**6,585**	**429,046**	
29										
30	Jurisdictional Factor (Order PSC-2017-0451-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
31										
32	**Total Recoverable Restoration Costs - Retail**	lines (28 x 30)	**$15,246**	**$396,270**	**$1,522**	**$592**	**$264**	**$6,585**	**$420,478**	**$420,478**
33										
34	**Net Recoverable Retail Restoration Costs**	lines (32 - 1)								**(363,744)**

Notes:

[a] Transmission - $12k relates to damage billing. Distribution - $75k relates to vehicle fuel; $13k relates to Federal, State and Local tax on undyed diesel; $20k in purchase card.

[b] Transmission - $12k relates to damage billing. Distribution - $182k relates to material expense and $63k relates to employee expenses.

			(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
			Storm Costs By Function ($000's)							
Line No.	Description	REF.	Transmission	Distribution	Generation Base	Generation Intermediate	Generation Peaking	Customer Service	Total	Storm Reserve Balance
1	**Pre-Storm Reserve Balance**	BB-3 line 6 column D								**$91,990**
2										
3	**Storm Related Restoration Costs**									
4	Regular Payroll		104	749	20	-	4	28	904	
5	Overtime Payroll		211	3,108	26	-	3	246	3,593	
6	Labor Burdens/Incentives		99	1,436	2	-	0	206	1,742	
7	Overhead Allocations		1	587	18	-	1	208	815	
8	Employee Expenses		478	2,921	1	-	-	48	3,448	
9	Contractor Costs		911	25,900	-	-	276	62	27,149	
10	Materials & Supplies		116	1,311	1	-	36	1	1,465	
11	Internal Fleet Costs		-	867	-	-	-	-	867	
12	Uncollectible Account Expenses		-	-	-	-	-	-	-	
13	Other		-	-	-	-	-	-	-	
14	**Subtotal - Storm Related Restoration Costs**	lines 4:13	**1,920**	**36,879**	**68**	**-**	**319**	**799**	**39,984**	
15										
16	**Less: Estimated Non-Incremental Costs**									
17	Regular Payroll		(102)	(392)	(20)	-	(4)	(2)	(519)	
18	Overtime Payroll		-	(74)	-	-	-	-	(74)	
19	Incentives		(99)	(216)	(2)	-	(0)	-	(317)	
20	Overhead Allocations		0	(287)	(18)	-	(1)	-	(305)	
21	Internal Fleet Costs		-	(462)	-	-	-	-	(462)	
22	Vegetation Management Costs		(62)	(413)	-	-	-	-	(475)	
23	Other		-	-	-	-	-	-	-	
24	**Subtotal - Estimated Non-Incremental Costs**	lines 17:23	**(263)**	**(1,844)**	**(40)**	**-**	**(5)**	**(2)**	**(2,153)**	
25										
26	Less: Capitalizable Costs		(6)	(1,917)	-	-	-	-	(1,923)	
27										
28	**Total Recoverable Restoration Costs - System**	lines (14 + 24 + 26)	**1,651**	**33,118**	**28**	**-**	**314**	**797**	**35,908**	
29										
30	Jurisdictional Factor (Order PSC-2012-0104-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
31										
32	**Total Recoverable Restoration Costs - Retail**	lines (28 x 30)	**$1,159**	**$32,972**	**$26**	**$0**	**$302**	**$797**	**$35,256**	**$35,256**
33										
34	**Net Recoverable Retail Restoration Costs**	lines (32 - 1)								**56,734**

			(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
			Storm Costs By Function ($000's)							
Line No.	Description	REF.	Transmission	Distribution	Generation Base	Generation Intermediate	Generation Peaking	Customer Service	Total	Storm Reserve Balance
1	**Pre-Storm Reserve Balance**	BB-3 line 5 column D								**$116,299**
2										
3	**Storm Related Restoration Costs**									
4	Regular Payroll		85	451	(9)	-	-	21	548	
5	Overtime Payroll		191	2,003	94	-	-	96	2,384	
6	Labor Burdens/Incentives		88	1,015	2	-	-	82	1,187	
7	Overhead Allocations		3	1,285	17	-	-	26	1,331	
8	Employee Expenses		30	1,348	5	-	-	46	1,428	
9	Contractor Costs		594	19,323	448	-	-	-	20,365	
10	Materials & Supplies		91	872	122	-	-	0	1,085	
11	Internal Fleet Costs		-	242	-	-	-	-	242	
12	Uncollectible Account Expenses		-	-	-	-	-	-	-	
13	Other		(0)	-	-	-	-	0	(0)	
14	**Subtotal - Storm Related Restoration Costs**	lines 4:13	**1,080**	**26,540**	**678**	**-**	**-**	**271**	**28,570**	
15										
16	**Less: Estimated Non-Incremental Costs**									
17	Regular Payroll		(80)	(275)	9	-	-	(12)	(358)	
18	Overtime Payroll		-	(40)	-	-	-	-	(40)	
19	Incentives		(88)	(192)	(2)	-	-	-	(282)	
20	Overhead Allocations		(3)	(1,125)	(17)	-	-	-	(1,145)	
21	Internal Fleet Costs		-	(99)	-	-	-	-	(99)	
22	Vegetation Management Costs		(72)	(685)	-	-	-	-	(757)	
23	Other		(0)	-	-	-	-	-	(0)	
24	**Subtotal - Estimated Non-Incremental Costs**	lines 17:23	**(243)**	**(2,416)**	**(10)**	**-**	**-**	**(12)**	**(2,681)**	
25										
26	Less: Capitalizable Costs		-	(1,182)	-	-	-	-	(1,182)	
27										
28	**Total Recoverable Restoration Costs - System**	lines (14 + 24 + 26)	**837**	**22,943**	**669**	**-**	**-**	**259**	**24,707**	
29										
30	Jurisdictional Factor (Order PSC-2012-0104-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
31										
32	**Total Recoverable Restoration Costs - Retail**	lines (28 x 30)	**$588**	**$22,842**	**$621**	**$0**	**$0**	**$259**	**$24,309**	**$24,309**
33										
34	**Net Recoverable Retail Restoration Costs**	lines (32 - 1)								**91,990**

Line No.	Description	REF.	(A) Transmission	(B) Distribution	(C) Generation Base	(D) Generation Intermediate	(E) Generation Peaking	(F) Customer Service	(G) Total	(H) Storm Reserve Balance
			Storm Costs By Function ($000's)							
1	**Pre-Storm Reserve Balance**	BB-3 line 4 column D								**$118,660**
2										
3	**Storm Related Restoration Costs**									
4	Regular Payroll		24	171	-	-	-	-	195	
5	Overtime Payroll		8	427	-	-	-	-	435	
6	Labor Burdens/Incentives		9	245	-	-	-	-	254	
7	Overhead Allocations		0	388	-	-	-	-	388	
8	Employee Expenses		1	89	-	-	-	-	90	
9	Contractor Costs		15	2,066	-	-	-	-	2,081	
10	Materials & Supplies		1	-	-	-	-	-	1	
11	Internal Fleet Costs		-	144	-	-	-	-	144	
12	Uncollectible Account Expenses		-	-	-	-	-	-	-	
13	Other		-	-	-	-	-	-	-	
14	**Subtotal - Storm Related Restoration Costs**	lines 4:13	**57**	**3,531**	**-**	**-**	**-**	**-**	**3,588**	
15										
16	**Less: Estimated Non-Incremental Costs**									
17	Regular Payroll		(24)	(132)	-	-	-	-	(156)	
18	Overtime Payroll		-	(32)	-	-	-	-	(32)	
19	Incentives		(9)	(24)	-	-	-	-	(33)	
20	Overhead Allocations		(0)	(388)	-	-	-	-	(388)	
21	Internal Fleet Costs		-	(83)	-	-	-	-	(83)	
22	Vegetation Management Costs		(12)	(510)	-	-	-	-	(522)	
23	Other		-	-	-	-	-	-	-	
24	**Subtotal - Estimated Non-Incremental Costs**	lines 17:23	**(45)**	**(1,169)**	**-**	**-**	**-**	**-**	**(1,214)**	
25										
26	Less: Capitalizable Costs		-	-	-	-	-	-	-	
27										
28	**Total Recoverable Restoration Costs - System**	lines (14 + 24 + 26)	**12**	**2,362**	**-**	**-**	**-**	**-**	**2,374**	
29										
30	Jurisdictional Factor (Order PSC-2012-0104-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
31										
32	**Total Recoverable Restoration Costs - Retail**	lines (28 x 30)	**$9**	**$2,352**	**$0**	**$0**	**$0**	**$0**	**$2,360**	**$2,360**
33										
34	**Net Recoverable Retail Restoration Costs**	lines (32 - 1)								**116,299**

Line No.	Description	REF.	(A) Transmission	(B) Distribution	(C) Generation Base	(D) Generation Intermediate	(E) Generation Peaking	(F) Customer Service	(G) Total	(H) Storm Reserve Balance
			Storm Costs By Function ($000's)							
1	**Pre-Storm Reserve Balance**	BB-3 line 3 column D								**$123,839**
2										
3	**Storm Related Restoration Costs**									
4	Regular Payroll		73	297	-	-	-	-	370	
5	Overtime Payroll		16	386	-	-	-	-	402	
6	Labor Burdens/Incentives		5	291	-	-	-	-	297	
7	Overhead Allocations		-	-	-	-	-	-	-	
8	Employee Expenses		8	327	-	-	-	-	334	
9	Contractor Costs		37	3,492	-	-	-	-	3,529	
10	Materials & Supplies		1	55	-	-	-	-	56	
11	Internal Fleet Costs		37	99	-	-	-	-	136	
12	Uncollectible Account Expenses		-	-	-	-	-	-	-	
13	Other [a]		-	954	-	-	-	-	954	
14	**Subtotal - Storm Related Restoration Costs**	lines 4:13	**177**	**5,901**	**-**	**-**	**-**	**-**	**6,078**	
15										
16	**Less: Estimated Non-Incremental Costs**									
17	Regular Payroll		(70)	(243)	-	-	-	-	(313)	
18	Overtime Payroll		-	(25)	-	-	-	-	(25)	
19	Incentives		(5)	(61)	-	-	-	-	(67)	
20	Overhead Allocations		-	-	-	-	-	-	-	
21	Internal Fleet Costs		(37)	(63)	-	-	-	-	(100)	
22	Vegetation Management Costs		-	(248)	-	-	-	-	(248)	
23	Other		-	-	-	-	-	-	-	
24	**Subtotal - Estimated Non-Incremental Costs**	lines 17:23	**(113)**	**(641)**	**-**	**-**	**-**	**-**	**(754)**	
25										
26	Less: Capitalizable Costs		-	(103)	-	-	-	-	(103)	
27										
28	**Total Recoverable Restoration Costs - System**	lines (14 + 24 + 26)	**64**	**5,157**	**-**	**-**	**-**	**-**	**5,222**	
29										
30	Jurisdictional Factor (Order PSC-2012-0104-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
31										
32	**Total Recoverable Restoration Costs - Retail**	lines (28 x 30)	**$45**	**$5,135**	**$0**	**$0**	**$0**	**$0**	**$5,180**	**$5,180**
33										
34	**Net Recoverable Retail Restoration Costs**	lines (32 - 1)								**118,660**

Notes:

[a] $711k relates to contract services provided by KAM Serv Inc. (staging and logistics); $133k relates to vehicle fuel; $51k relates to Karl's Rentals (staging and logistics), $56k for informational adverstising and the remaining $2k is miscellaneous.

Line No.	Description	REF.	(A) Transmission	(B) Distribution	(C) Generation Base	(D) Generation Intermediate	(E) Generation Peaking	(F) Customer Service	(G) Total	(H) Storm Reserve Balance
			Storm Costs By Function ($000's)							
1	**Pre-Storm Reserve Balance**	BB-3 line 1 column D								**$131,847**
2										
3	**Storm Related Restoration Costs**									
4	Regular Payroll		283	643	5	-	-	122	1,052	
5	Overtime Payroll		118	1,489	10	-	-	88	1,704	
6	Labor Burdens/Incentives		23	449	1	-	-	-	473	
7	Overhead Allocations		22	-	0	-	-	-	23	
8	Employee Expenses		337	160	0	-	-	143	640	
9	Contractor Costs		1,306	5,182	139	-	-	66	6,693	
10	Materials & Supplies		125	382	3	-	-	13	523	
11	Internal Fleet Costs		78	273	-	-	-	6	357	
12	Uncollectible Account Expenses		-	-	-	-	-	-	-	
13	Other [a]		140	184	-	-	-	-	324	
14	**Subtotal - Storm Related Restoration Costs**	lines 4:13	**2,431**	**8,761**	**158**	**-**	**-**	**438**	**11,788**	
15										
16	**Less: Estimated Non-Incremental Costs**									
17	Regular Payroll		(114)	(456)	(5)	-	-	(122)	(696)	
18	Overtime Payroll		-	(91)	-	-	-	-	(91)	
19	Incentives		(23)	(154)	(1)	-	-	-	(178)	
20	Overhead Allocations		-	-	(0)	-	-	-	(0)	
21	Internal Fleet Costs		(78)	(100)	-	-	-	-	(177)	
22	Vegetation Management Costs		-	(419)	-	-	-	-	(419)	
23	Other		-	-	-	-	-	-	-	
24	**Subtotal - Estimated Non-Incremental Costs**	lines 17:23	**(214)**	**(1,220)**	**(6)**	**-**	**-**	**(122)**	**(1,562)**	
25										
26	Less: Capitalizable Costs		(527)	(1,149)	-	-	-	-	(1,676)	
27										
28	**Total Recoverable Restoration Costs - System**	lines (14 + 24 + 26)	**1,690**	**6,392**	**152**	**-**	**-**	**316**	**8,550**	
29										
30	Jurisdictional Factor (Order PSC-2012-0104-FOF-EI)		70.203%	99.561%	92.885%	72.703%	95.924%	100%		
31										
32	**Total Recoverable Restoration Costs - Retail**	lines (28 x 30)	**$1,187**	**$6,364**	**$141**	**$0**	**$0**	**$316**	**$8,008**	**$8,008**
33										
34	**Net Recoverable Retail Restoration Costs**	lines (32 - 1)								**123,839**

Notes:

[a] Tranmission - $137k relates to capital true-up and misc costs; $3k related to storm claims settlements. Distribution - $81k relates to informational advertising; $98k relates to vehicle fuel and the remaining is miscellaneous.

Docket No. 20170272-EI
Storm Cost Reserve Activity
Exhibit BB-3, Page 1 of 1

($000's)		(A)	(B)	(C)	(D)
Line No.	**Description**	**Retail Storm Costs per Estimated Filing Appendix A p.7**	**Change [a]**	**Storm Costs Adjusted**	**Account 228.100 Retail Storm Reserve Balance (Post Storm)**
1	Reserve Balance - February 2012				$131,847
2	Storm Costs:				
3	Tropical Storm Debby (2012)	($10,483)	$2,475	($8,008)	$123,839
4	Hurricane Isaac (2012)	(5,114)	(66)	(5,180)	$118,660
5	Tropical Storm Colin (2016)	(2,377)	17	(2,360)	$116,299
6	Hurricane Hermine (2016)	(24,468)	159	(24,309)	$91,990
7	Hurricane Matthew (2016)	(35,387)	131	(35,256)	$56,734
8	Hurricane Irma (2017)			(420,478)	($363,744) [b]
9	Hurricane Nate (2017)			(5,085)	**(368,828)** [b]
10	Total Storm Costs:	($77,830)	$2,717	($500,676)	

Notes:
[a] After making the Estimated Cost Filing, certain costs were adjusted to be consistent with the approach that Irma and Nate costs were recorded.
[b] These costs were recorded to a regulatory asset account and will be reclassified to account 228.1 at a later time

Jurisdictional Factor (Order PSC-2012-0104-FOF-EI)

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 4
PARTY: DUKE ENERGY FLORIDA – (DIRECT)
DESCRIPTION: W. Bryan Buckler BB-3

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 5
PARTY: DUKE ENERGY FLORIDA – (DIRECT)
DESCRIPTION: Marcia J. Olivier MJO-1

Docket No. 20170272-EI
Storm Cost Amortization
Exhibit MJO-1, Page 1 of 1
(supplemental 1/28/19)

($ thousands)

Beginning Storm Reserve Balance per Exh. BB-1	($367,152)
Bond Issuance Costs	(1,264)
Adjusted Beginning Storm Reserve Balance	(368,417)
Interest	(8,216)
Amortization	508,479
Ending Storm Reserve Balance per 2017 Settlement Par. 38	$131,847

Line	(A) Month	(B) Beginning Storm Reserve Balance	(C) Amortization (Exh. MJO-1 suppl. 12/27/18 Docket No. 20180047)	(D) Interest (2.10% APR)	(E) Net Monthly Activity col. (D) + (E)	(F) Ending Storm Reserve Balance
1	Jan-18	($368,417)	$12,892		$12,892	($355,524)
2	Feb-18	(355,524)	12,892		12,892	(342,632)
3	Mar-18	(342,632)	12,892	(588)	12,304	(330,328)
4	Apr-18	(330,328)	12,892	(567)	12,325	(318,003)
5	May-18	(318,003)	12,892	(545)	12,347	(305,656)
6	Jun-18	(305,656)	12,892	(524)	12,369	(293,287)
7	Jul-18	(293,287)	12,892	(502)	12,390	(280,897)
8	Aug-18	(280,897)	12,892	(480)	12,412	(268,485)
9	Sep-18	(268,485)	12,892	(459)	12,434	(256,051)
10	Oct-18	(256,051)	12,892	(437)	12,455	(243,596)
11	Nov-18	(243,596)	12,892	(415)	12,477	(231,119)
12	Dec-18	(231,119)	12,892	(393)	12,499	(218,619)
13	Annual Total		154,707	(4,910)	149,797	
14	Jan-19	(218,619)	12,892	(371)	12,521	(206,099)
15	Feb-19	(206,099)	12,892	(349)	12,543	(193,556)
16	Mar-19	(193,556)	12,892	(327)	12,565	(180,991)
17	Apr-19	(180,991)	12,892	(305)	12,587	(168,404)
18	May-19	(168,404)	12,892	(283)	12,609	(155,795)
19	Jun-19	(155,795)	12,892	(261)	12,631	(143,164)
20	Jul-19	(143,164)	12,892	(239)	12,653	(130,511)
21	Aug-19	(130,511)	12,892	(217)	12,675	(117,836)
22	Sep-19	(117,836)	12,892	(195)	12,697	(105,139)
23	Oct-19	(105,139)	12,892	(173)	12,720	(92,419)
24	Nov-19	(92,419)	12,892	(150)	12,742	(79,678)
25	Dec-19	(79,678)	12,892	(128)	12,764	(66,913)
26	Annual Total		154,707	(3,001)	151,706	
27	Jan-20	(66,913)	12,892	(106)	12,786	(54,127)
28	Feb-20	(54,127)	12,892	(83)	12,809	(41,318)
29	Mar-20	(41,318)	12,892	(61)	12,831	(28,487)
30	Apr-20	(28,487)	12,892	(39)	12,854	(15,633)
31	May-20	(15,633)	12,892	(16)	12,876	(2,757)
32	Jun-20	(2,757)	12,892	-	12,892	10,135
33	Jul-20	10,135	12,892	-	12,892	23,027
34	Aug-20	23,027	12,892	-	12,892	35,920
35	Sep-20	35,920	12,892	-	12,892	48,812
36	Oct-20	48,812	12,892	-	12,892	61,704
37	Nov-20	61,704	12,892	-	12,892	74,596
38	Dec-20	74,596	12,892	-	12,892	87,489
39	Annual Total		154,707	(305)	154,402	
40	Jan-21	87,489	12,892	-	12,892	100,381
41	Feb-21	100,381	12,892	-	12,892	113,273
42	Mar-21	113,273	12,892	-	12,892	126,165
43	Apr-21	126,165	5,682	-	5,682	131,847
44	May-21	131,847	-	-	-	131,847
45	Annual Total		44,358	-	44,358	
46	Totals		$508,479	($8,216)	$500,264	

($ thousands)

Beginning Storm Reserve Balance per Exh. BB-1	($368,828)
Bond Issuance Costs	(1,264)
Adjusted Beginning Storm Reserve Balance	(370,093)
Interest	(8,543)
Amortization	510,483
Ending Storm Reserve Balance per 2017 Settlement Par. 38	$131,847

Line	(A) Month	(B) Beginning Storm Reserve Balance	(D) Amortization (Exh. MJO-2 Docket No. 20180047)	(E) Interest (2.10% APR)	(F) Net Monthly Activity col. (D) + (E)	(G) Ending Storm Reserve Balance
1	Jan-18	($370,093)	$12,579		$12,579	($357,514)
2	Feb-18	(357,514)	12,579		12,579	(344,935)
3	Mar-18	(344,935)	12,579	(593)	11,986	(332,949)
4	Apr-18	(332,949)	12,579	(572)	12,007	(320,941)
5	May-18	(320,941)	12,579	(551)	12,028	(308,913)
6	Jun-18	(308,913)	12,579	(530)	12,049	(296,864)
7	Jul-18	(296,864)	12,579	(509)	12,070	(284,793)
8	Aug-18	(284,793)	12,579	(487)	12,092	(272,702)
9	Sep-18	(272,702)	12,579	(466)	12,113	(260,589)
10	Oct-18	(260,589)	12,579	(445)	12,134	(248,455)
11	Nov-18	(248,455)	12,579	(424)	12,155	(236,300)
12	Dec-18	(236,300)	12,579	(403)	12,176	(224,124)
13	Annual Total		150,947	(4,978)	145,969	
14	Jan-19	(224,124)	12,579	(381)	12,198	(211,926)
15	Feb-19	(211,926)	12,579	(360)	12,219	(199,707)
16	Mar-19	(199,707)	12,579	(338)	12,240	(187,467)
17	Apr-19	(187,467)	12,579	(317)	12,262	(175,205)
18	May-19	(175,205)	12,579	(296)	12,283	(162,921)
19	Jun-19	(162,921)	12,579	(274)	12,305	(150,617)
20	Jul-19	(150,617)	12,579	(253)	12,326	(138,290)
21	Aug-19	(138,290)	12,579	(231)	12,348	(125,942)
22	Sep-19	(125,942)	12,579	(209)	12,370	(113,573)
23	Oct-19	(113,573)	12,579	(188)	12,391	(101,182)
24	Nov-19	(101,182)	12,579	(166)	12,413	(88,769)
25	Dec-19	(88,769)	12,579	(144)	12,435	(76,334)
26	Annual Total		150,947	(3,157)	147,790	
27	Jan-20	(76,334)	12,579	(123)	12,456	(63,878)
28	Feb-20	(63,878)	12,579	(101)	12,478	(51,400)
29	Mar-20	(51,400)	12,579	(79)	12,500	(38,900)
30	Apr-20	(38,900)	12,579	(57)	12,522	(26,378)
31	May-20	(26,378)	12,579	(35)	12,544	(13,834)
32	Jun-20	(13,834)	12,579	(13)	12,566	(1,268)
33	Jul-20	(1,268)	12,579	-	12,579	11,311
34	Aug-20	11,311	12,579	-	12,579	23,889
35	Sep-20	23,889	12,579	-	12,579	36,468
36	Oct-20	36,468	12,579	-	12,579	49,047
37	Nov-20	49,047	12,579	-	12,579	61,626
38	Dec-20	61,626	12,579	-	12,579	74,205
39	Annual Total		150,947	(408)	150,539	
40	Jan-21	74,205	12,579	-	12,579	86,784
41	Feb-21	86,784	12,579	-	12,579	99,363
42	Mar-21	99,363	12,579	-	12,579	111,942
43	Apr-21	111,942	12,579	-	12,579	124,521
44	May-21	124,521	7,326	-	7,326	131,847
45	Annual Total		57,642	-	57,642	
46	Totals		$510,483	($8,543)	$501,940	

DUKE FL POLE FORENSICS SUPPORT REPORT

FINAL ANALYSIS

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 6
PARTY: DUKE ENERGY FLORIDA – (DIRECT)
DESCRIPTION: Jason Cutliffe JC-1

DUKE ENERGY FLORIDA

accentureconsulting

TABLE OF CONTENTS

- **Executive Summary**
- **Overview/Purpose**
- **Benchmarking Comparison**
- **Forensics Analysis**
- **Hardening Impact Assessment**

Copyright © 2018 Accenture. All rights reserved.

DUKE ENERGY. FLORIDA

EXECUTIVE SUMMARY

accentureconsulting

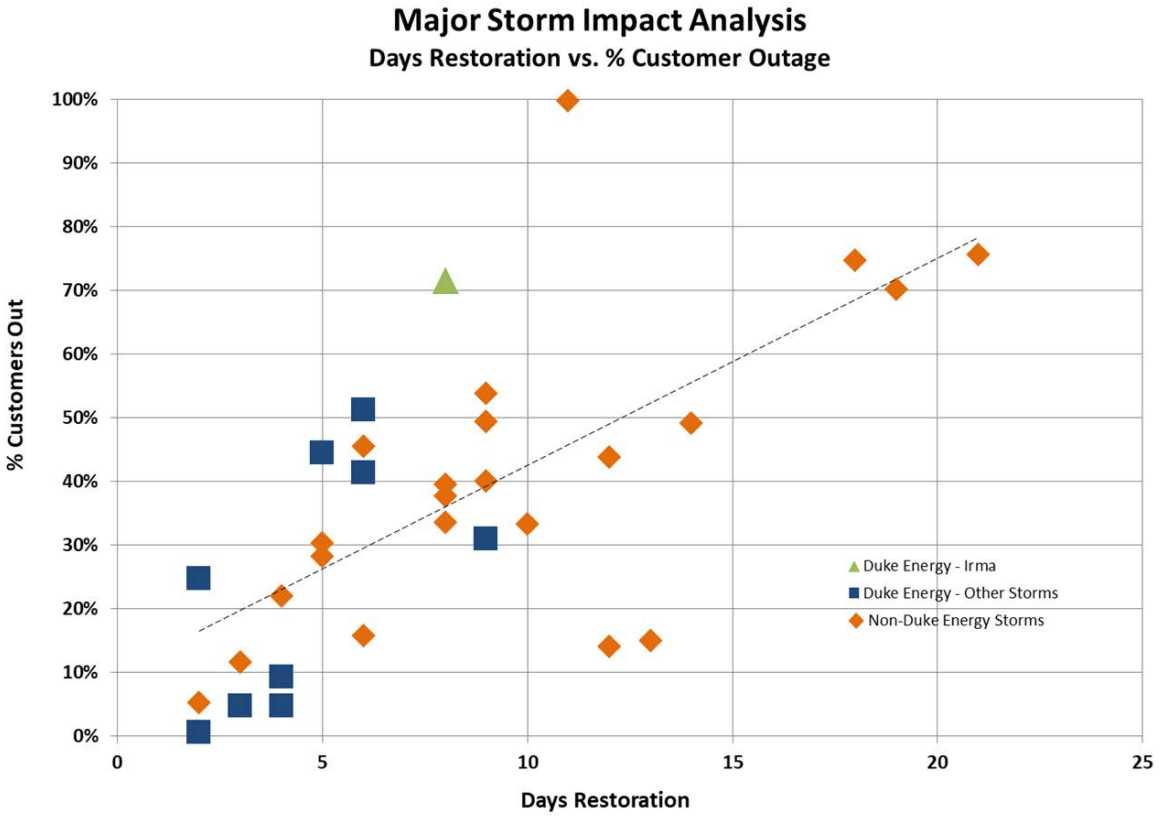
EXECUTIVE SUMMARY

- Hurricane Irma impacted Duke Energy Florida (DEF) service territory on September 10, 2017 as a Category 4 storm causing more than 70% of customers to lose power
- DEF collected forensic information on the broken poles in the early stages of the restoration and retained Accenture to conduct statistical and benchmark analysis using that data
- Accenture analysis focused on three key components:
  - **Benchmark Analysis** – leveraging "storm benchmark database" compared DEF performance against comparable storms
  - **Forensic Analysis** – using simple regression, multiple regression and multiple logistic analyses assessed the cause and effect of pole failures
  - **Storm Hardening Effectiveness** – applying visual and locational analysis evaluated the association of any broken poles to the hardening program established in 2006

Copyright © 2018 Accenture. All rights reserved.

EXECUTIVE SUMMARY – BENCHMARK

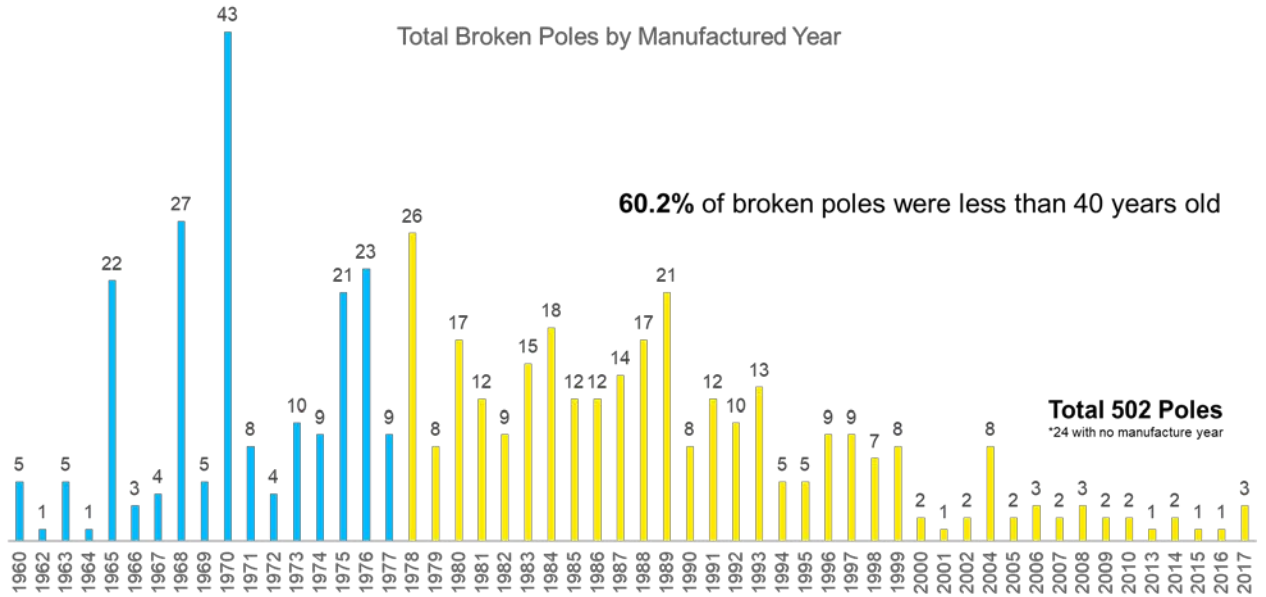
- DEF deployed a large contingent of resources to this storm to ensure fast restoration
- DEF experienced less damage to its pole infrastructure when compared to similar events
- The number of poles replaced per customers out at peak was relatively low despite the high percentage of customers being affected
- DEF's Hurricane Irma restoration restored power to all customers faster than previous hurricane events as well as previous major storm events



Copyright © 2018 Accenture. All rights reserved.

EXECUTIVE SUMMARY – FORENSIC

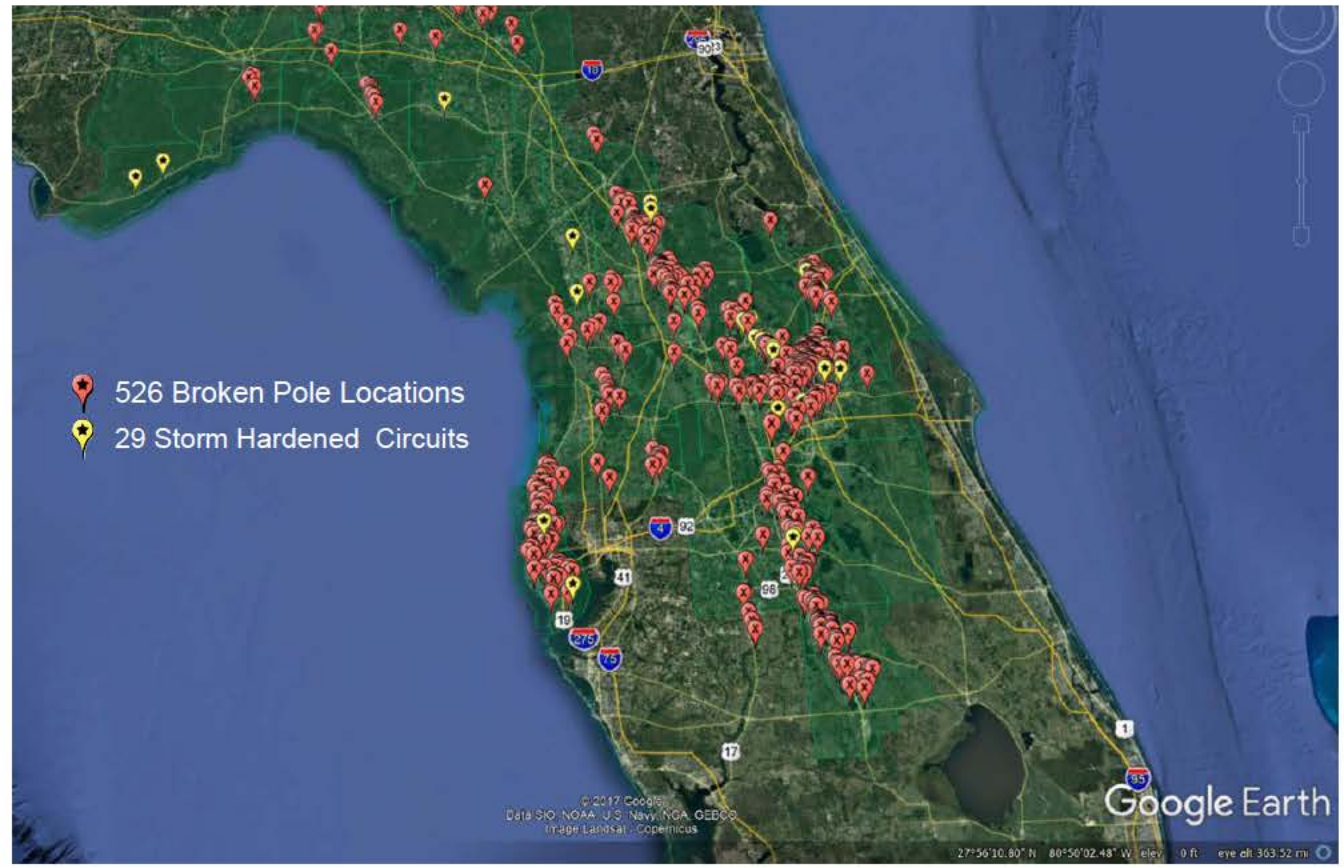
- Linear regression results indicated that age and pole height were correlated with failure rate.
- Multiple linear regression results suggested that the last inspection year and vegetation maintenance were not good indicators of pole failure rates.
- Results from both the simple and multiple analyses did not have a high correlation with the actual cause of pole failures. This suggests that other causal factors contributed to pole failures, e.g., damage to surrounding vegetation and additional loading on distribution facilities.
- The practice of conducting pole failure forensic analyses during major events is not yet widely used within the utility industry.



Copyright © 2018 Accenture. All rights reserved.

EXECUTIVE SUMMARY – SYSTEM HARDENING

- A forensic assessment of five hundred twenty-six (526) randomly selected poles was made across DEF's total broken pole population. None of these poles were a part of the 29 Storm Hardening projects.
- A separate assessment of twenty-nine (29) randomly selected Storm Hardening projects was made. No broken poles were identified.



Copyright © 2018 Accenture. All rights reserved.

DUKE ENERGY. FLORIDA

OVERVIEW/ PURPOSE

accentureconsulting

OVERVIEW/PURPOSE

- Duke Energy Florida (“Duke FL”) conducted a comprehensive analysis of forensic data on pole failures that the company collected in the aftermath of Hurricane Irma
- The purpose of the study is to determine the correlations and major causes of failure
- Accenture was retained to perform the analysis and performed the following tasks:
  - **Mobilized the Project**
    - Organize the available data into a single electronic database (table) to allow for analysis
    - Identify any gaps in the data and develop strategies to gather the missing information
  - **Performed Storm Benchmark Comparison**
    - Gather key statistics from the Duke FL response to Hurricane Irma
    - Identify the comparable events from Accenture’s storm benchmarking database to compare against Duke FL’s response
    - Conduct benchmark comparison and identify key metrics
    - Develop conclusions based on the benchmark analysis
  - **Conducted data analysis**
    - Define Duke FL’s hypotheses
    - Conduct the regression analysis or apply other analytic methods to allow for statistically valid assessment of the correlations of the different factors
    - Identify the key drivers or pole failures and determine the overall cause and effect
    - Develop conclusions based on the statistical analysis
  - **Synthesize and Summarized**
    - Prepare a summary report that describes the methodology and conclusions based on the pole failure data analysis and the benchmark comparison

Copyright © 2018 Accenture. All rights reserved.

DUKE ENERGY FLORIDA

BENCHMARKING COMPARISON

accentureconsulting

METHODOLOGY/APPROACH

Two methods were used to collect data for benchmarking:

- Surveys
  - Duke FL provided metrics surrounding the restoration efforts of Hurricane Irma
  - Additional surveys were completed by other utilities for storms over the past 25+ years
  - The survey focused on three areas:
    - System Information
    - Storm Magnitude
    - Restoration Performance
- Historical/Archival Research
  - Additional research completed to enhance the benchmarking for restorations performed by other North American utilities that was not collected through surveys
  - These sources were collected from public filings with the commission and archival news feeds from the utility websites

Copyright © 2018 Accenture. All rights reserved.

METHODOLOGY/APPROACH

- Identified similar category 1 – 4 hurricanes to perform the analysis of Duke FL's restoration efforts versus other utility companies captured in Accenture's storm benchmarking database from 1989 – 2017
- Highlighted restoration performances from Duke Energy and Progress Energy
- Accenture is using statistics that allow comparison without disclosing specific system information

Copyright © 2018 Accenture. All rights reserved.

DATA COLLECTION DEMOGRAPHICS

- 26 of 51 utilities included in the benchmarking
- 23 of 56 major events are included in the analysis
- 45 out of 119 unique restorations

Storm Type	Storm Name	Total
Hurricane Category 1	Fran	2
	Frances	2
	Hermine	1
	Hugo	1
	Humberto	1
	Irene	10
	Katrina	1
	Sandy	5
Hurricane Category 2	Elvis	1
	Georges	1
	Gustav	1
	Gustav + Ike	3
	Juan	1
	Isabel	2

Storm Type	Storm Name	Total
Hurricane Category 3	Ivan	2
	Jeanne	2
	Rita	2
	Wilma	1
Hurricane Category 4	Charley	2
	Hugo	1
	Irma	1
	Matthew	1
Hurricane Category 5	Floyd	1
Grand Total		**45**

Customers Served Range	# of Companies
0 – 500k	8
500k – 1 mil	2
1 mil – 1.5 mil	5
1.5 mil – 2 mil	2
2 mil – 2.5 mil	6
Over 2.5 mil	3
Grand Total	**26**

Copyright © 2018 Accenture. All rights reserved.

DATA COLLECTION
DUKE FL - IRMA STATISTICS

Company Information	
Total Number of Customers Served	1.8M
Total Overhead Distribution Line miles	18,000 miles
Total Underground Distribution Miles	14,000 miles

Storm Description	
Storm Name	Hurricane Irma
Storm Type	Hurricane
Storm Category	4
Start Date	September 10, 2017

Storm Damage Information	
Number of Customers Out at Peak	1,284,816
Number of Customers Out	1,738,030
Number of T&D Poles Replaced	2,271
Number of Transformers Replaced	1,106
Number of Conductor Feet Replaced	939,840 feet
Total Spans of Wire Down	> 26,000

Restoration Resources	
Total Line FTEs	7,500
Total Veg. Management FTEs	2,500
Total Damage Assessment Resources	2,408
Peak Number of Field Resources Deployed	12,500

Restoration Duration	
Restoration Duration (# Days)	8 days

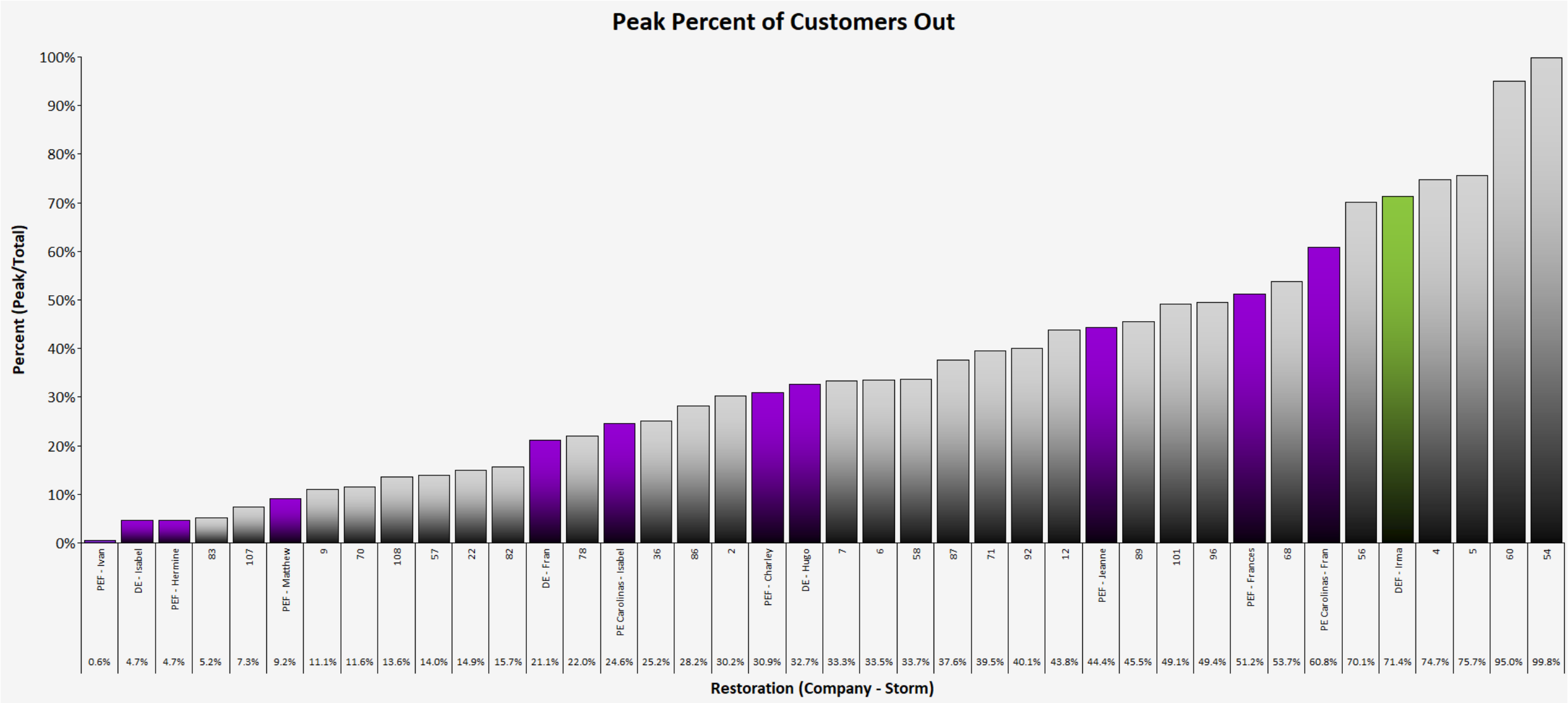
Restoration Costs	
Total Restoration Cost	$500M - $550M

Storm Drills	
Number of Storm Drills Per Year	1
Number of Table Top Exercises Per Year	2

Vegetation Management	
Average Tree-Trimming Cycle	3yr backbone / 5yr branchlines

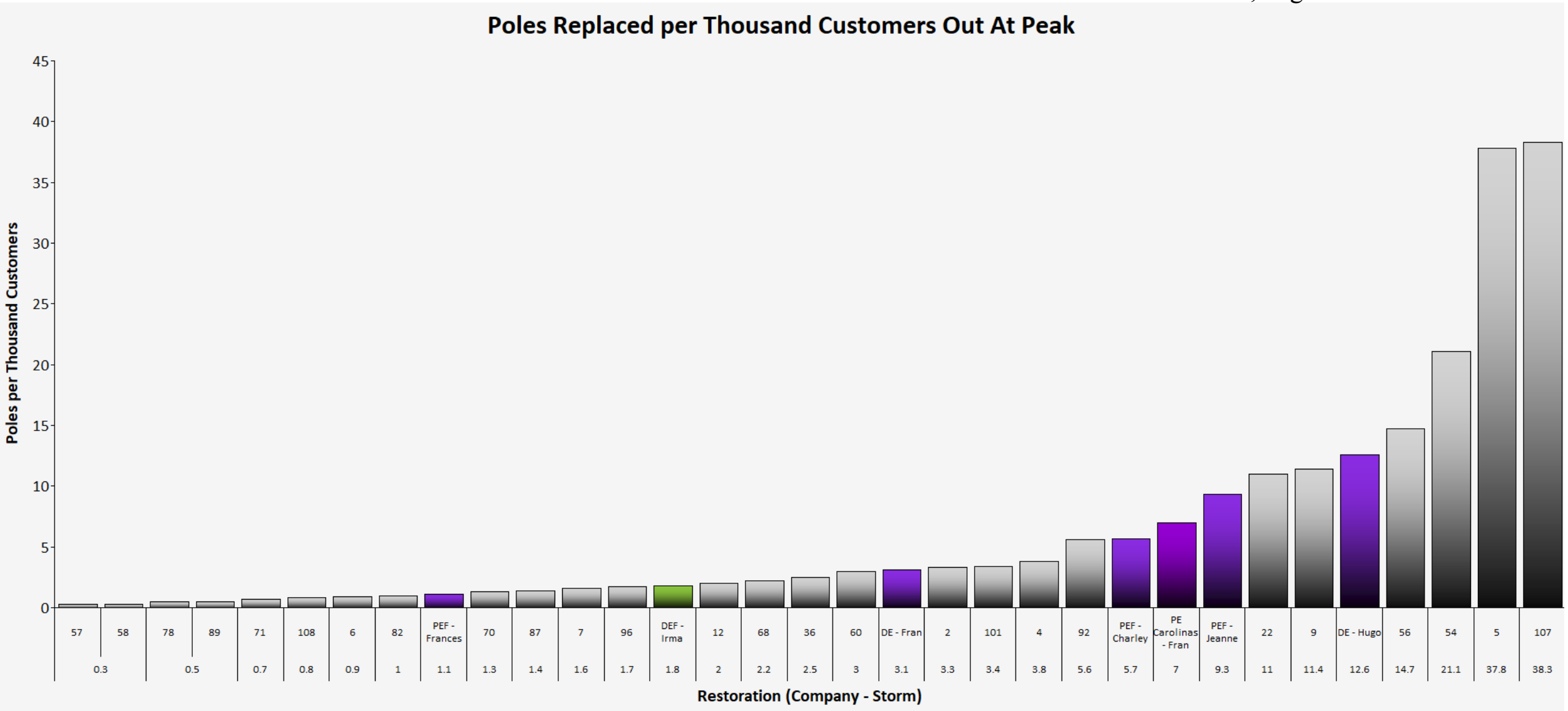
Copyright © 2018 Accenture. All rights reserved.

BENCHMARK RESULTS



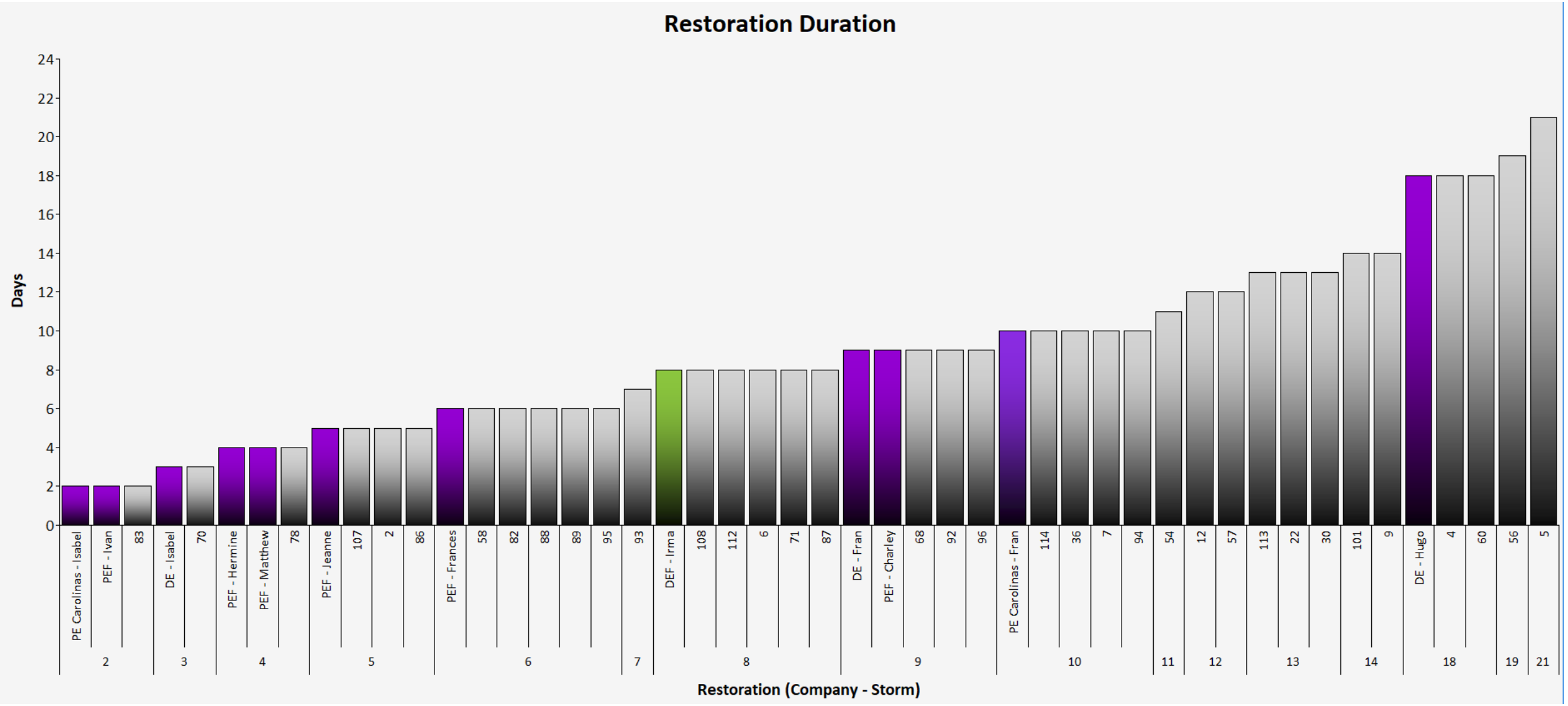
Copyright 2018 Accenture. All rights reserved.

BENCHMARK RESULTS



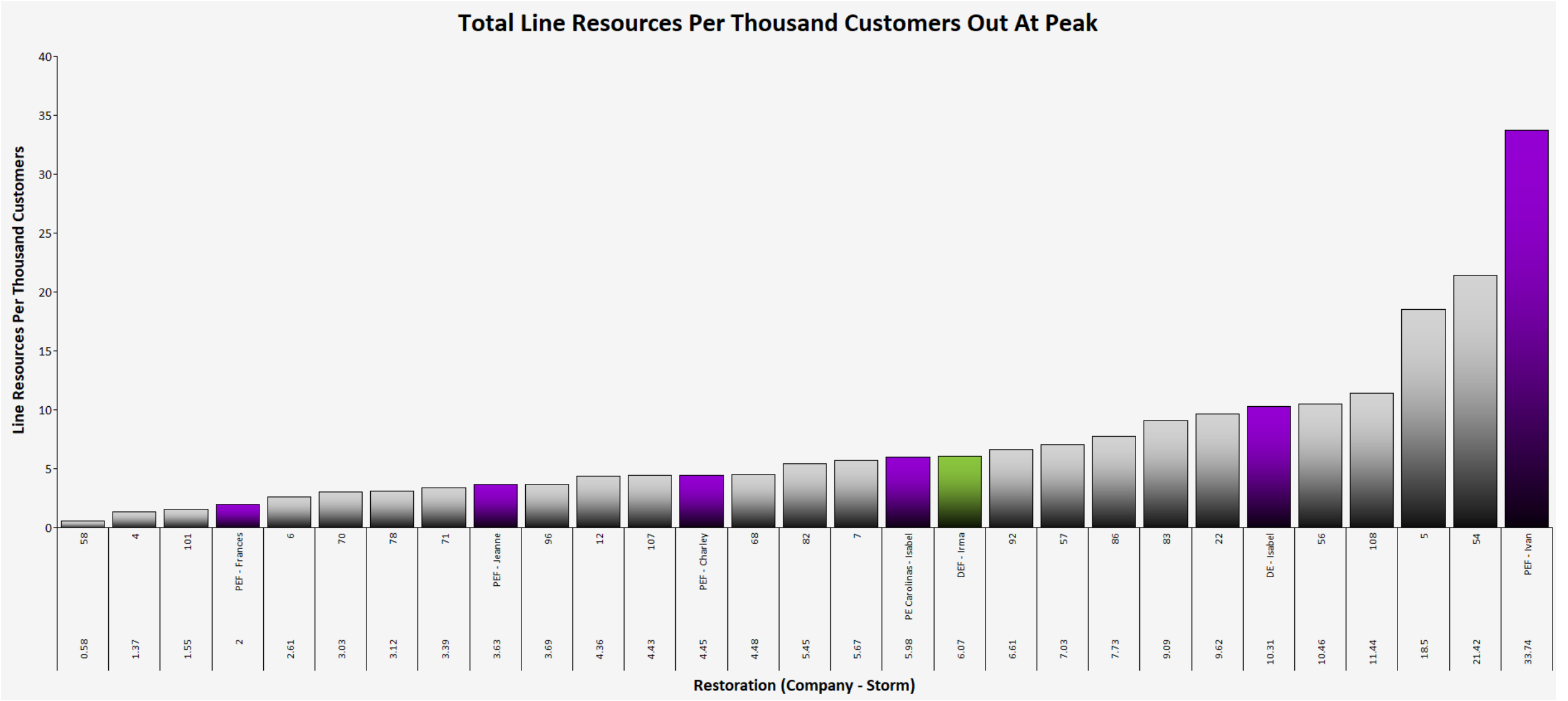
Copyright 2018 Accenture. All rights reserved.

BENCHMARK RESULTS



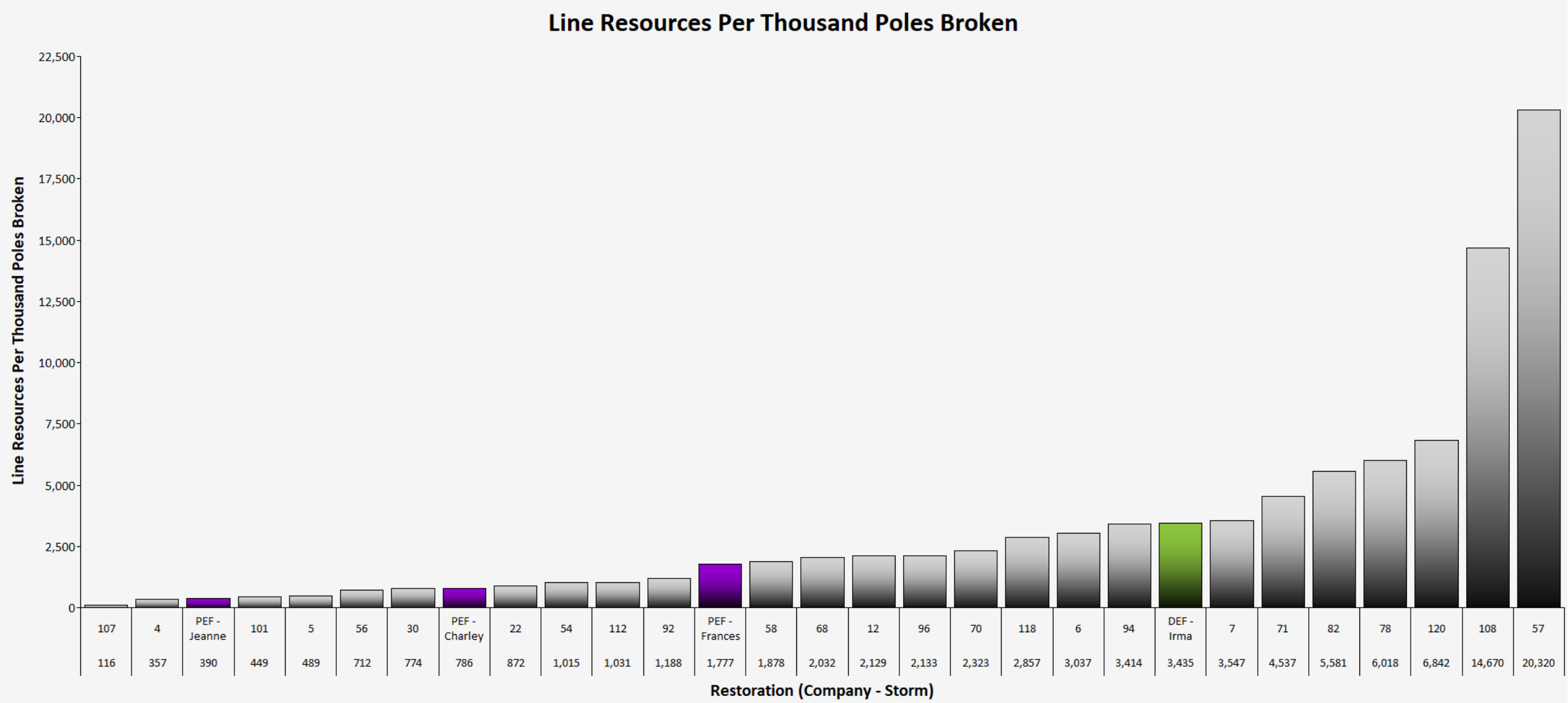
Copyright 2018 Accenture. All rights reserved.

BENCHMARK RESULTS



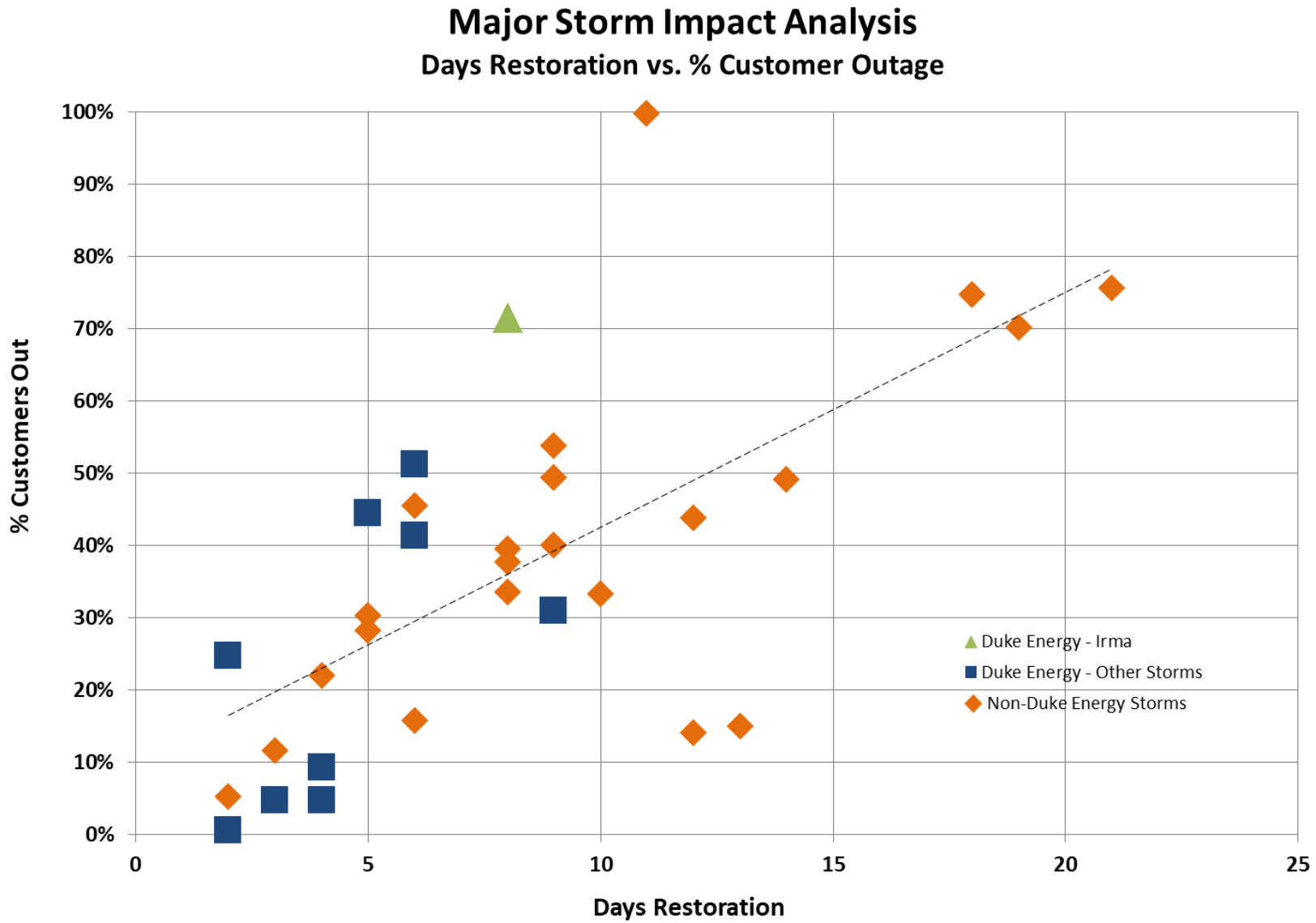
Copyright 2018 Accenture. All rights reserved.

BENCHMARK RESULTS



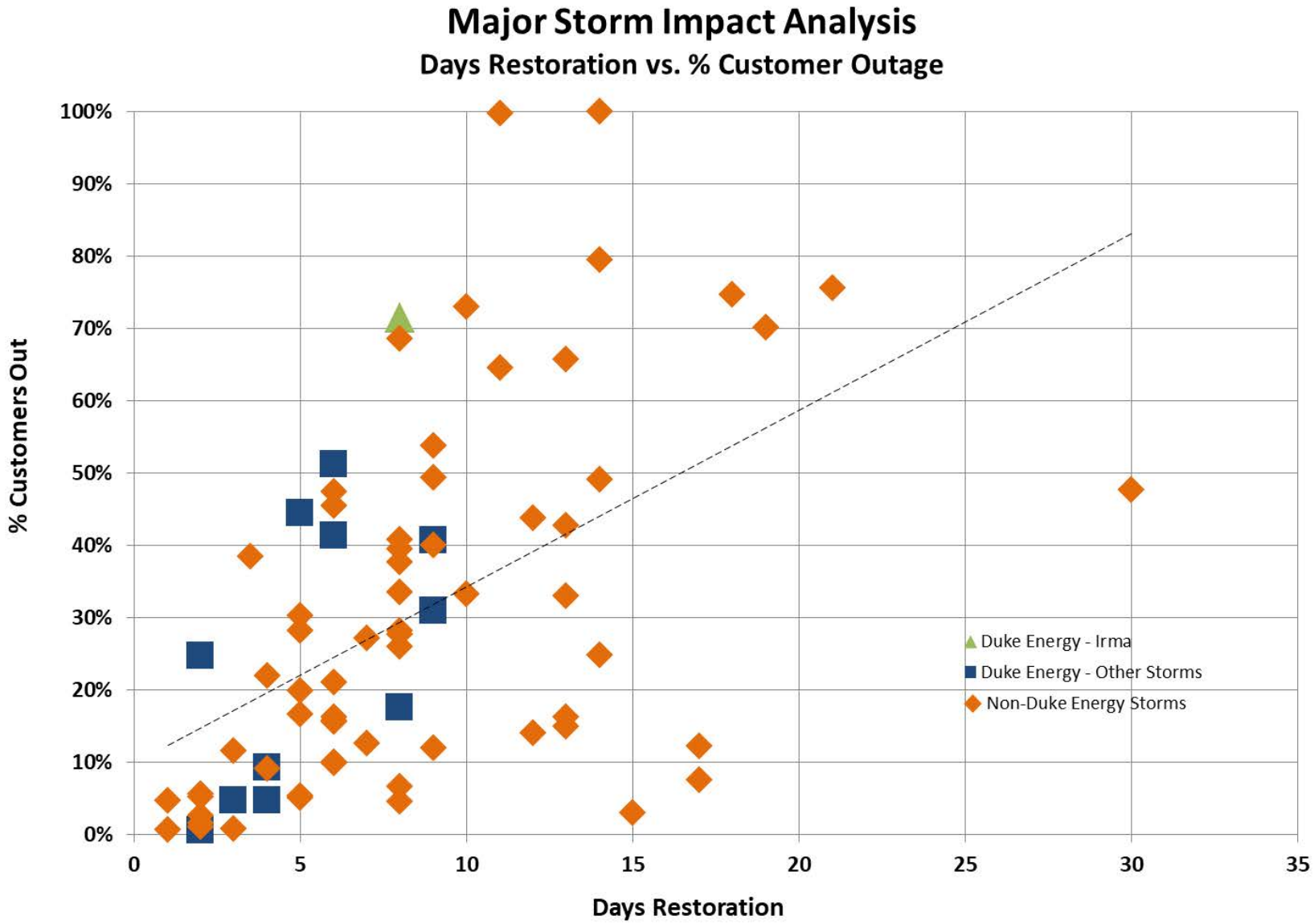
Copyright 2018 Accenture. All rights reserved.

BENCHMARK RESULTS– ALL HURRICANES



Copyright 2018 Accenture. All rights reserved.

BENCHMARK RESULTS– ALL RESTORATIONS



Copyright 2018 Accenture. All rights reserved.

FINDINGS

Based on the high-level benchmark analysis:

- Duke Florida experienced less damage to its infrastructure when compared to similar events
  - Number of poles replaced per customers out at peak is relatively low despite the high percentage of customers being affected
  - This could indicate that the storm caused more of “wire” damage than “pole” failures, which can be interpreted that the infrastructure withstood the storm fairly well
- Duke Florida’s Hurricane Irma restoration cost per customer out and per pole replaced was higher but the company restored power to all customers faster than comparable events
  - In comparison to other hurricanes in Accenture’s database, The Company aggressively deployed a large contingent of resources for this storm.

Copyright 2018 Accenture. All rights reserved.

DUKE ENERGY. FLORIDA

FORENSICS ANALYSIS

accentureconsulting

METHODOLOGY

Analyze **broken pole data** through visualizations

Compare **broken pole data to distribution wood pole inventory** to identify factors that contributed to pole failure

Use **regression analyses** to test the correlations between potential pole failure factors and the rate of pole failure by circuit

Factors Considered:

- wind
- gust
- manufactured year
- pole height
- last inspection date
- vegetation level

Copyright 2018 Accenture. All rights reserved.

ASSUMPTIONS

- ✓ All data used including Broken Pole Forensics, GIS Inventory and Inspection data provided by Duke Energy
- ✓ Used Equip_ID and Cust_Data_ID to integrate Broken Pole Forensics, GIS Inventory and Inspection data
- ✓ Assumed that GIS contains a full inventory of Duke owned poles
- ✓ **526** broken wood poles were included in the forensic analysis out of a total of 2,130 distribution poles that were broken during the event
- ✓ Poles that had incomplete data were excluded from this population

Copyright 2018 Accenture. All rights reserved.

DATA COLLECTION

DUKE ENERGY. FLORIDA

Broken Poles Included in Forensic Analysis

2,130 Total Broken Distribution Poles

687 Total Unique Broken Poles Sampled
— **114** Broken Poles not Duke, not Distribution, or not made of wood =

573 Distribution Broken Poles

- **47** Not Matched to GIS data =

526 Broken Poles Total
471 Broken Poles with Forensic Data

Pole Inventory – Duke Florida

1,083,388 Total Unique Pole Records

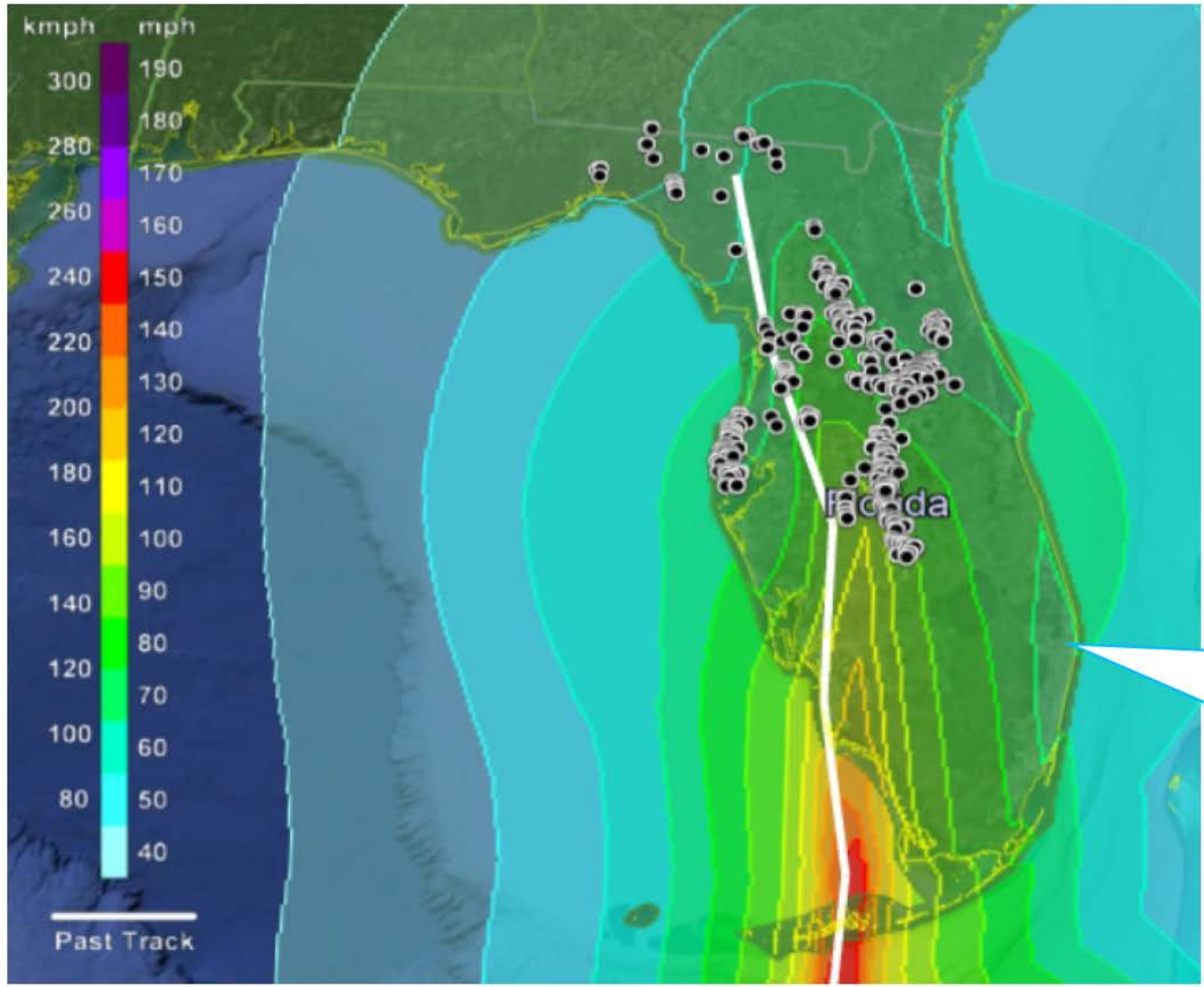
— **257,655** Transmission
— **99,469** Not Wood
— **624** Non Duke =

725,640 Total Distribution wood poles

Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS

Docket No. 20170272-EI
Pole Forensics Report
Exhibit JC-1, Page 27 of 50



https://data.humdata.org/dataset/hurricane-irma-windspeed

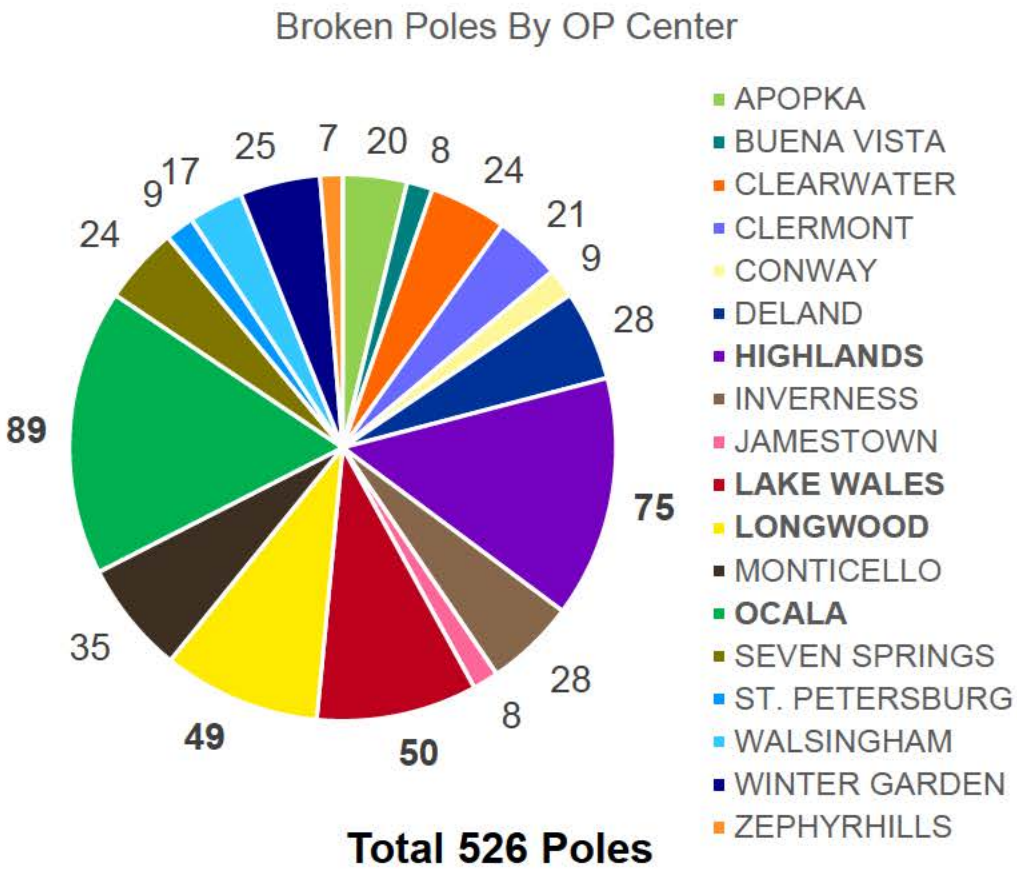
526 Broken Poles

Irma Path
9/11 12am – 12pm

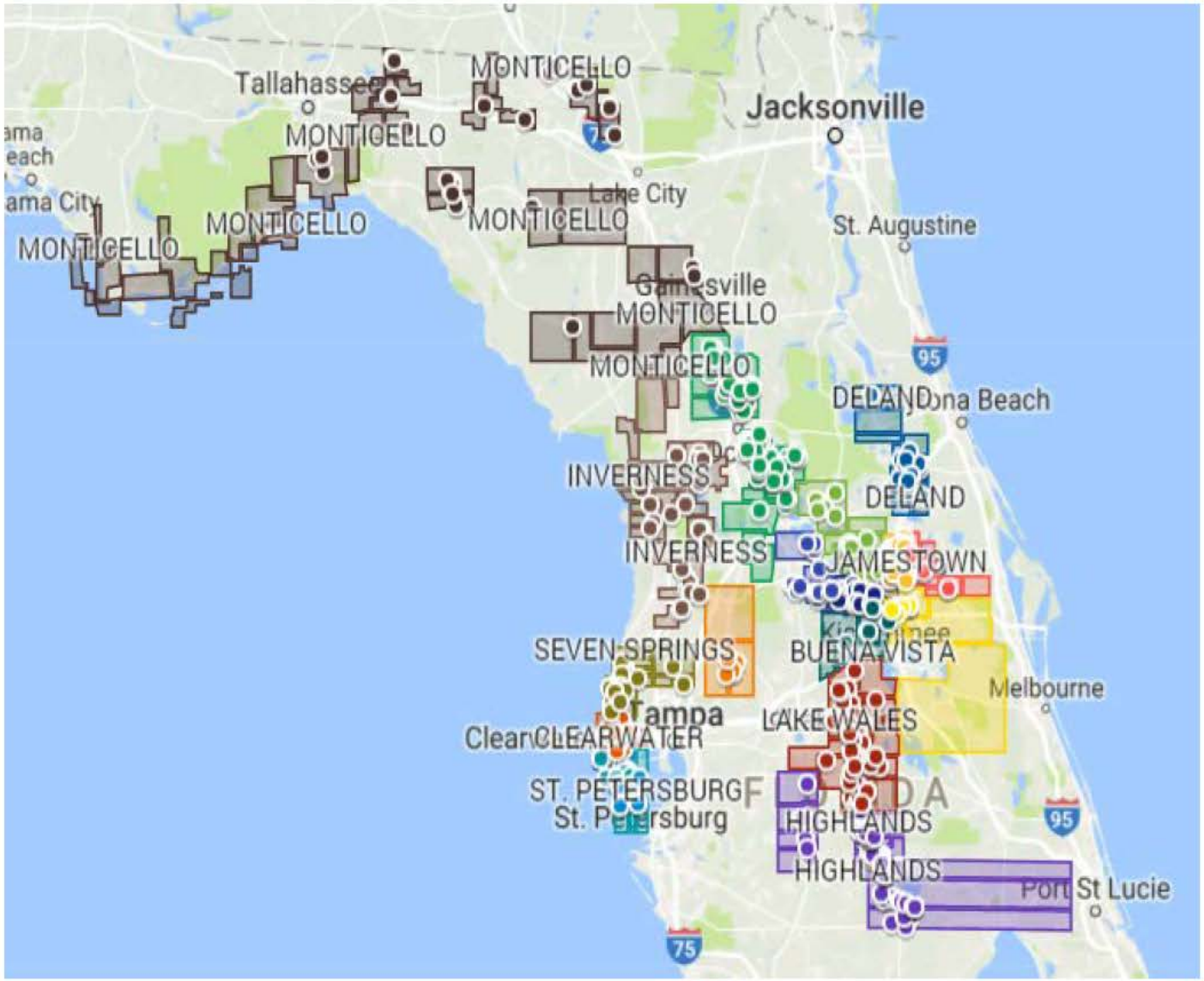
Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS

Docket No. 20170272-EI
Pole Forensics Report
Exhibit JC-1, Page 28 of 50



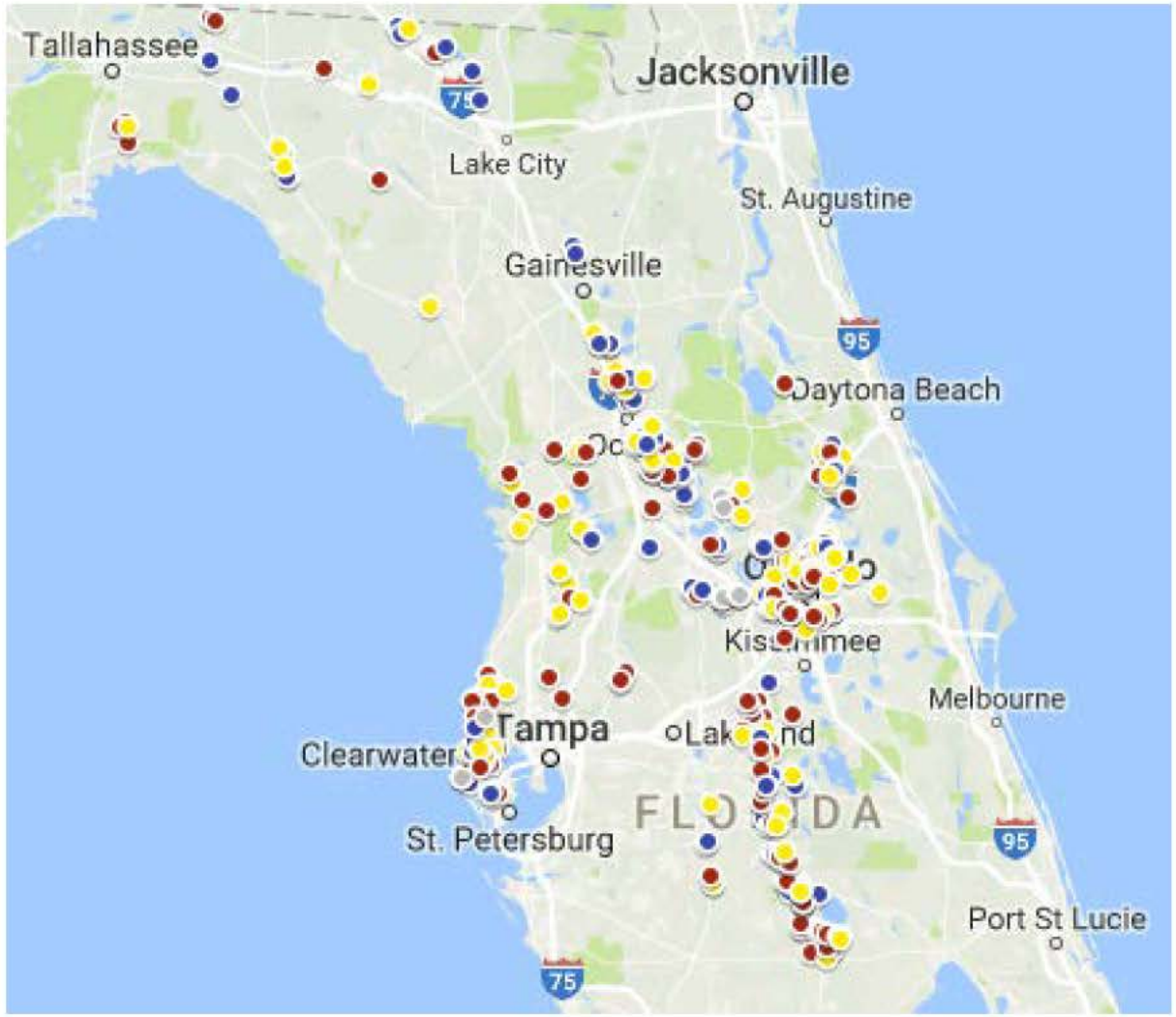
50% of broken pole data came from **Ocala**, **Highlands**, **Lake Wales** and **Longwood** OP Centers



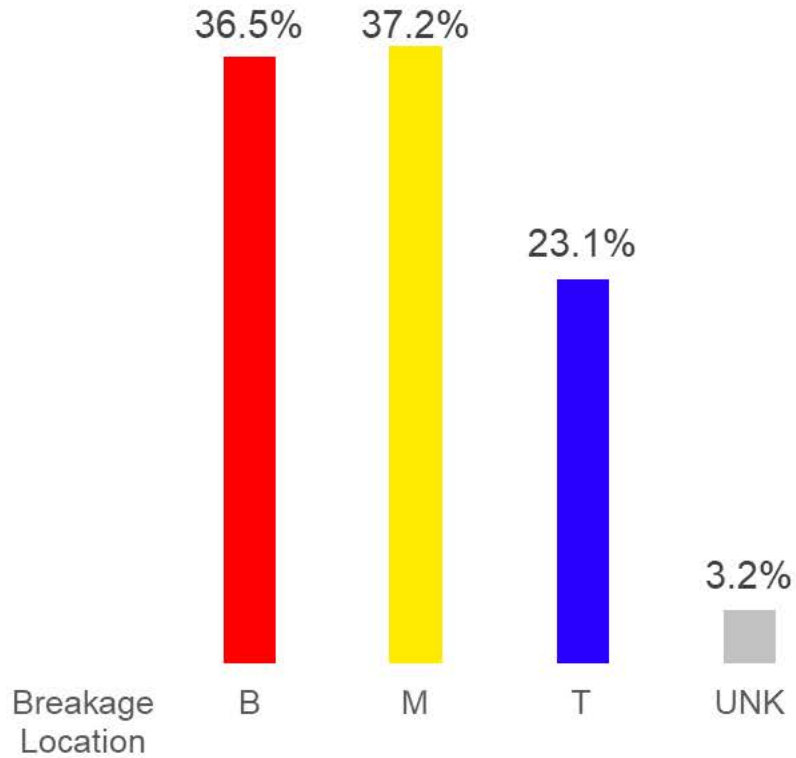
Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS

Docket No. 20170272-EI
Pole Forensics Report
Exhibit JC-1, Page 29 of 50



- **37.2%** of poles broke in the middle



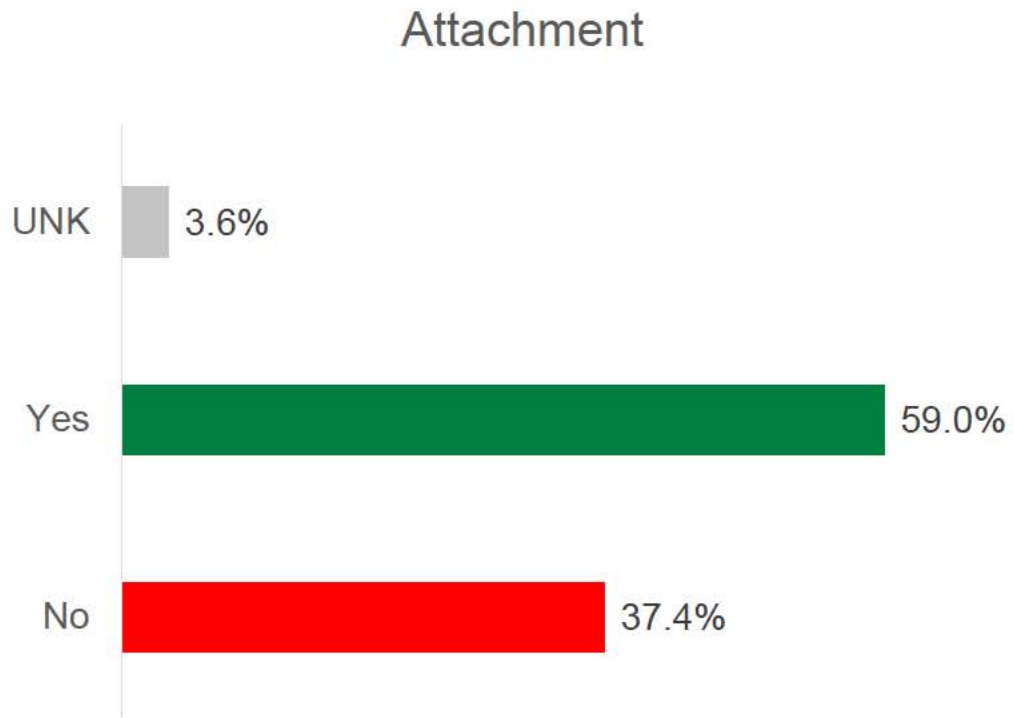
Total 471 Poles

***66 poles that broke at the bottom did not have reject status information**

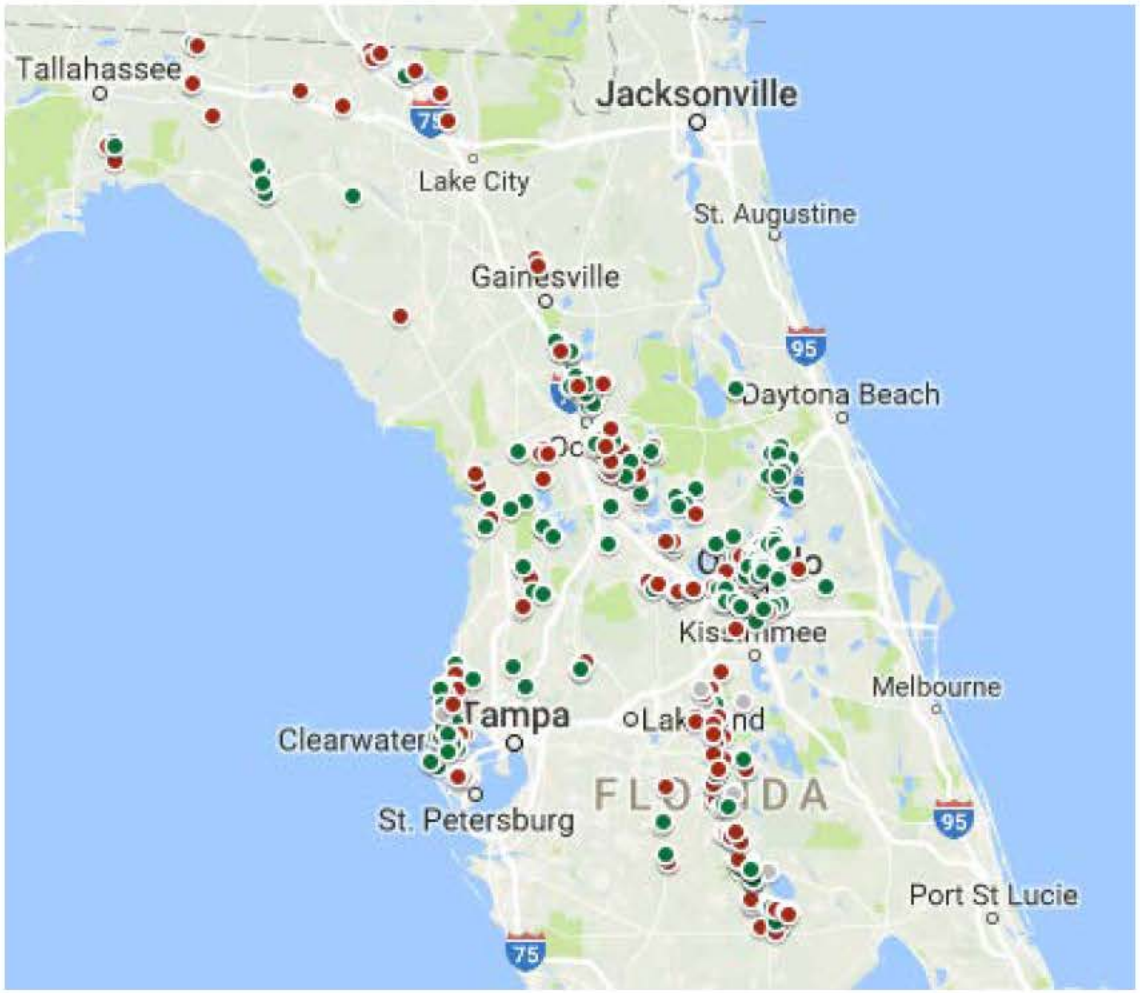
Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS

59% of broken poles had an attachment

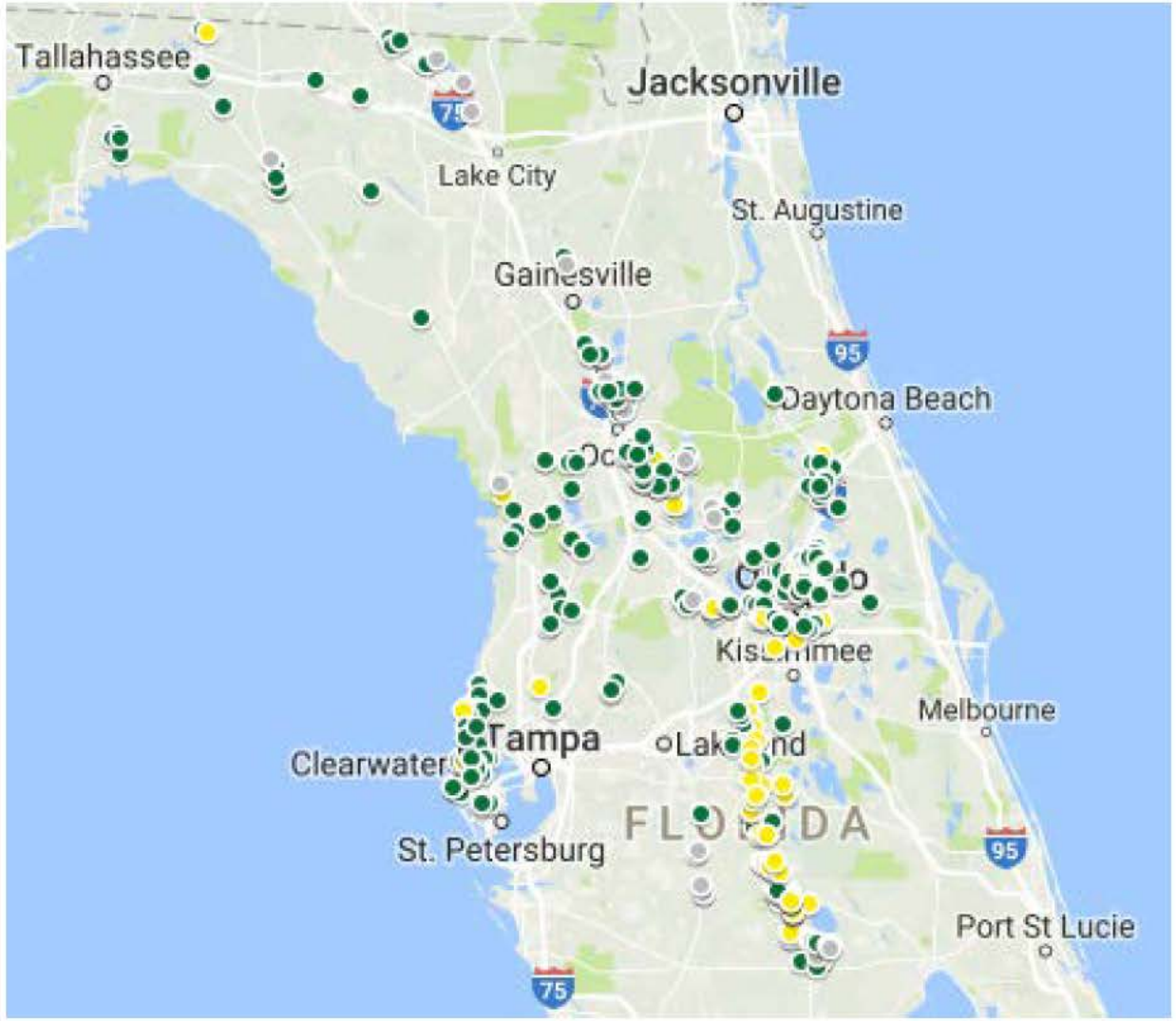


Total 471 Poles

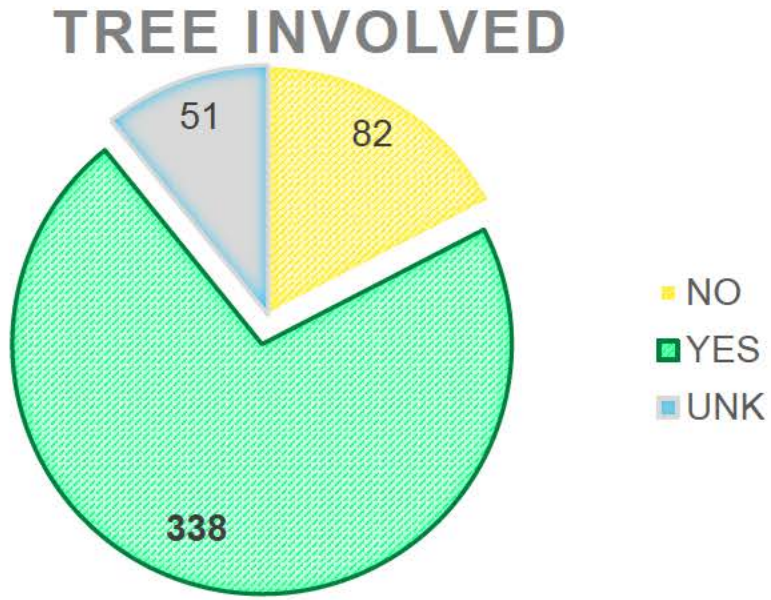


Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS



71.8% of broken poles had a tree involved

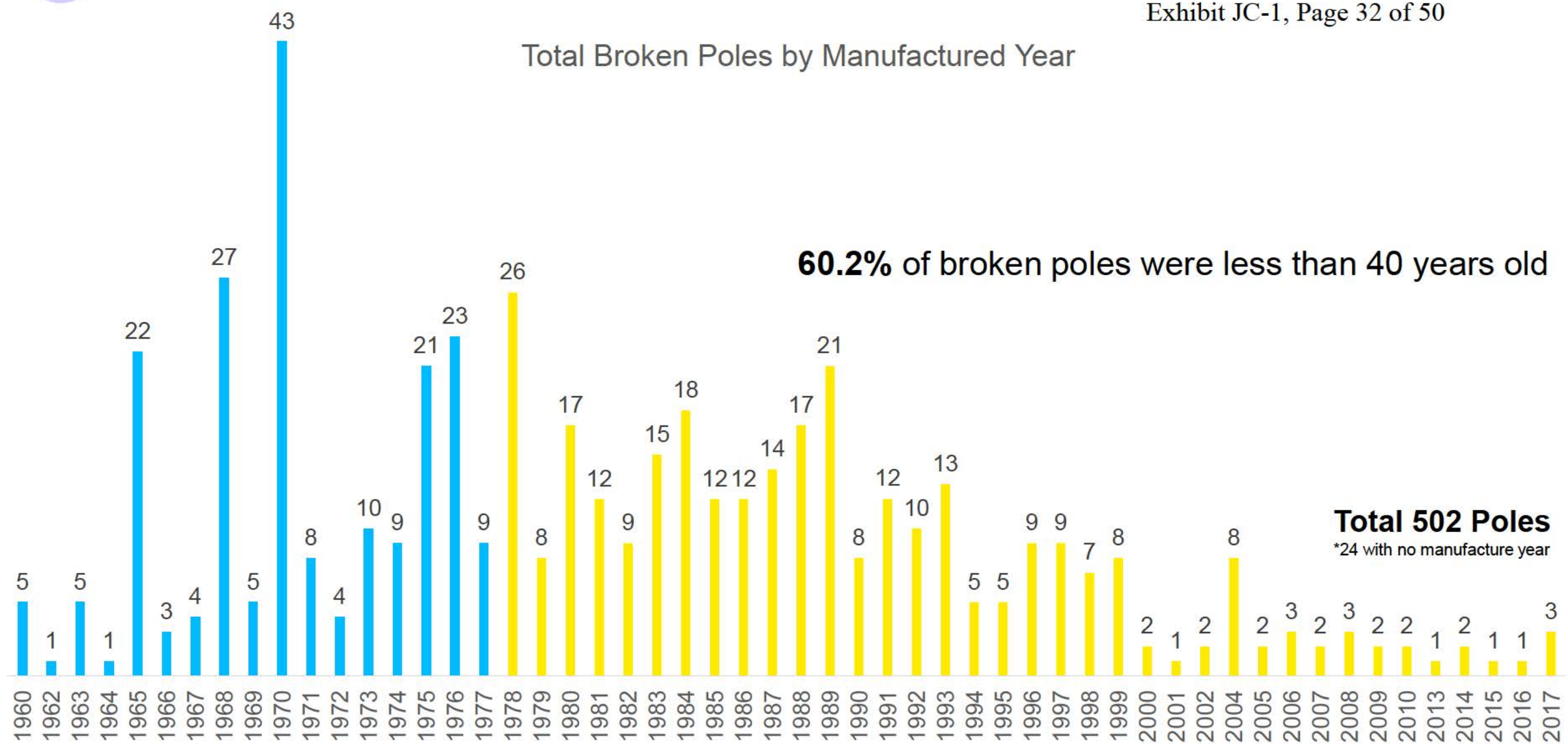


Total 471 Poles

Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS

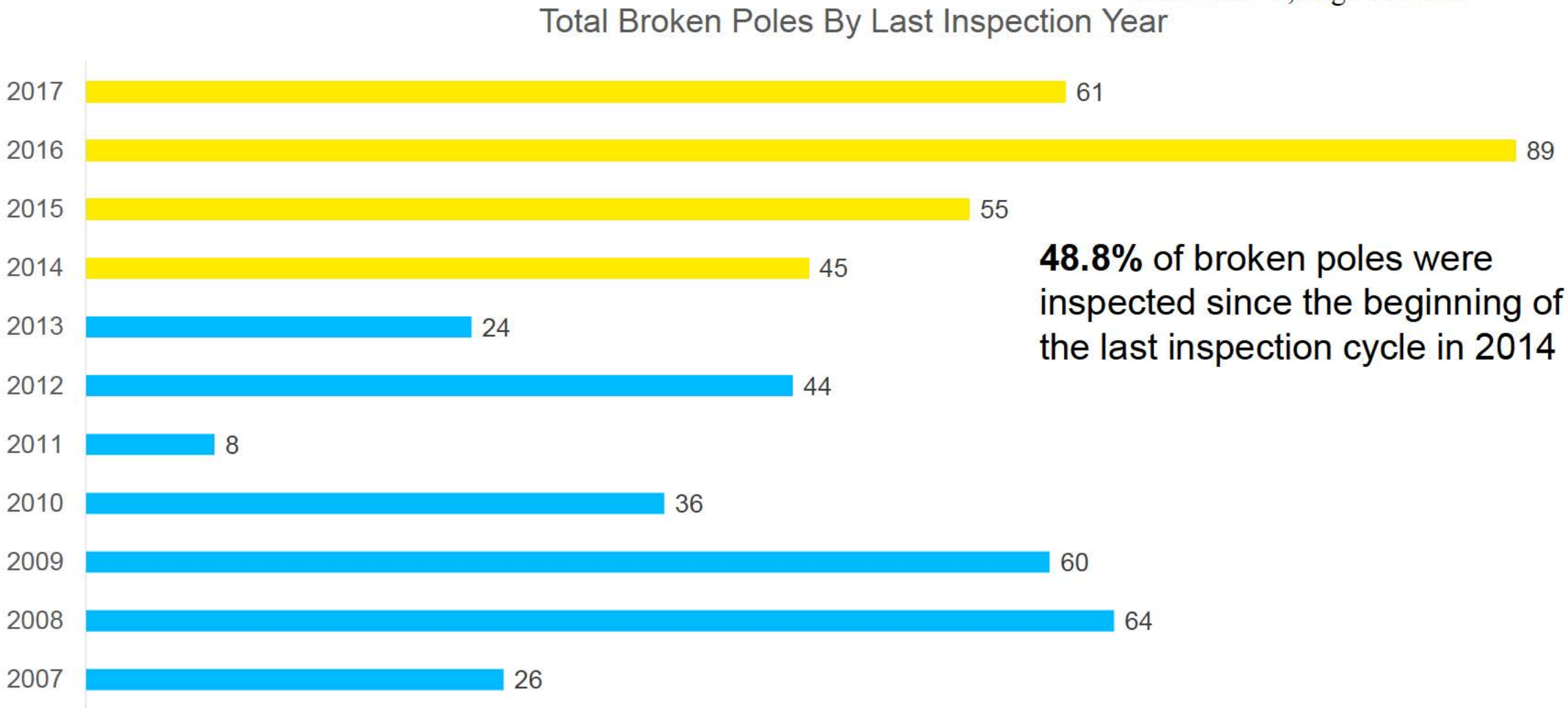
DUKE ENERGY. FLORIDA



Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS

Docket No. 20170272-EI
Pole Forensics Report
Exhibit JC-1, Page 33 of 50



48.8% of broken poles were inspected since the beginning of the last inspection cycle in 2014

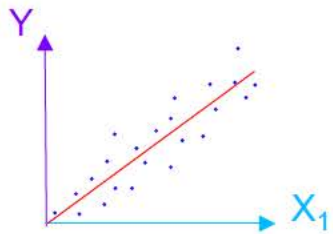
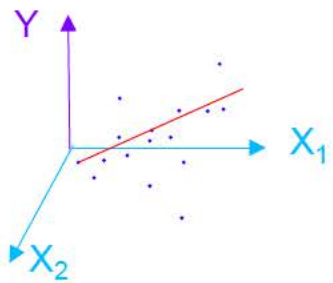
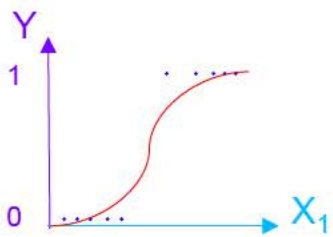
Total 512 Poles

*14 with no inspection year

Copyright 2018 Accenture. All rights reserved.

INTRO TO REGRESSION ANALYSES

Regression analysis is a way of mathematically determining the relationship between two or more variables. In our analysis we employ three types of regression analyses.

Type of Regression	Model Design	Why we use it
Simple Linear Regression 	$Y = Intercept + Correlation * X_1 + Error$ Y = Percent Pole Failure by Circuit X_1 = Pole Failure Factor (wind, gust, manufactured year, last inspection, off cycle)	▪ Determine correlation between each individual pole failure factor and pole failure rate
Multiple Linear Regression 	$Y = Intercept + Correlation * X_1 + Correlation * X_2 + \ldots + Error$ Y = Percent Pole Failure by Circuit X_1 = Pole Failure Factor i.e. wind speed … X_n = Pole Failure Factor i.e. max off cycle	▪ Consider the impact of the combination of all pole failure factors on percent pole failure rate ▪ Determine which factors compared to others have the most predictive power
Multiple Logistic Regression 	$Log(\frac{Y}{1-Y}) = Intercept + Correlation * X_1 + Correlation * X_2 + \ldots + Error$ Y = Likelihood of failing with tree involved X_1 = Pole Failure Factor i.e. wind speed … X_n = Pole Failure Factor i.e. attachment	▪ Given that a pole fails, determine what factors were contributed to it having a tree involved

Copyright 2018 Accenture. All rights reserved.

INTERPRETING REGRESSION RESULTS

There are multiple measures we can look at to understand the results of linear regression, including the **Correlation Coefficient Estimate**, associated **P Values**, and **R^2 Value**. Consider the example below:

Example Results:

$Y = \text{Intercept} + \textbf{Correlation} * X_1 + \ldots + \text{Error}$

Y = Percent Pole Failure by Circuit
X_1= Pole Failure Factor i.e. Avg Pole Height

	Estimate	P Value
Intercept	1.734e-03	0.00025***
Avg Pole Height	**-2.979e-05**	**0.01267***

Correlation Coefficient Estimate – This value denotes the relationship between the potential pole failure factor and pole failure rate. A positive value indicates that factor and pole failure are directly related (i.e. taller poles are associated with a higher pole failure rate). A negative value indicates that the factor and pole failure are inversely related (i.e. taller poles are associated with a lower pole failure rate).

P Value – The P value of a correlation coefficient estimate helps us understand how confident we can be in the correlation coefficient estimate. In our regression analysis, it is the probability that we falsely determine a correlation between the pole failure factors and pole failure rate with our sample data, given that there is no correlation. A small p value (typically <0.05) indicates a statistically significant correlation coefficient estimate.

In our results if:

P <.05 the p value is marked with a '*'
P < .01 the p value is marked with a '**'
P < .001 the p value is marked with a '***'

R^2 Value – The R^2 value is a measure that is used to determine how well the regression model fits the observed data set. It is the proportion of variance in percent pole failure that is explained by the model. R^2 values range from 0-1. The closer this value is to 1, the higher the model's predictive power of observed pole failure rates.

Copyright 2018 Accenture. All rights reserved.

POLE FAILURE FACTORS CONSIDERED

DUKE ENERGY. FLORIDA

In our regression analysis, we measure the following pole failure factors against the **average percent pole failure by circuit**.

Factor (by circuit)	Description	Minimum	Maximum	Median	Sample
Max Wind (mph)	Maximum wind speed experienced by a pole on the circuit measured from the closest weather center	15.8	70.2	41.4	1,215 circuits
Max Gust (mph)	Maximum gust speed experienced by a pole on the circuit measured from the closest weather center	20	88.6	58.4	1,083 circuits
Avg Manufactured Year	Average manufactured year by circuit	1963	2014	1987	1,235 circuits
Avg Height (ft.)	Average pole height by circuit measured in feet	16	52	39	1,269 circuits
Avg Last Inspection Year	Average pole last inspection year from consolidated inspection data	2007	2017	2013	1,249 circuits
Vegetation Management	Off cycle circuits given a value of 1. On cycle circuits given a value of 0.	0	1	0	1,248 circuits

Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: MAX WIND

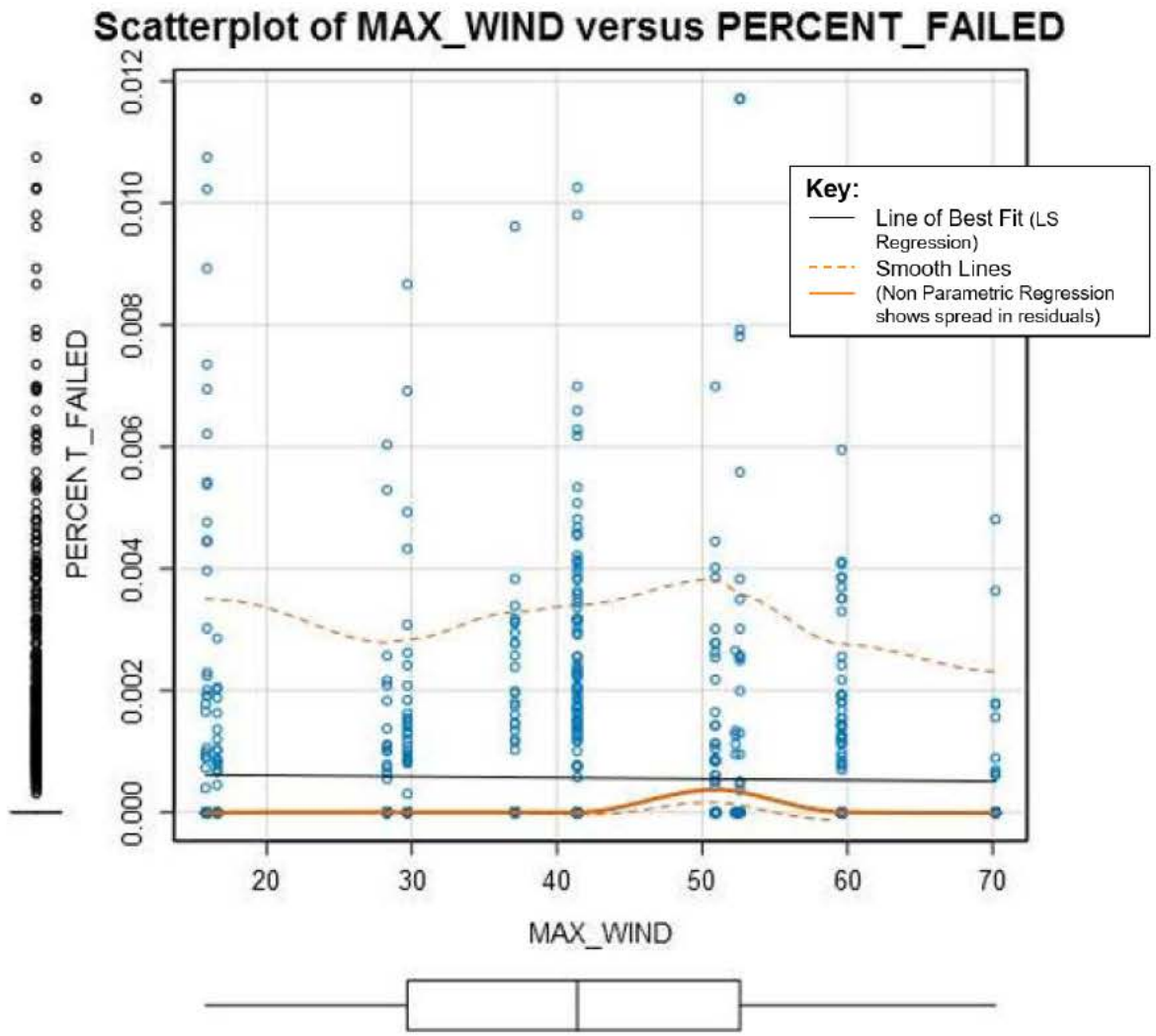
Data Summary

Variable	Min	Max	Median	Sample Size
Max Wind (x)	15.8 mph	70.2 mph	41.4 mph	1,215 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	6.498e-04	2.97e-08***
Max Wind	-2.038e-06	0.44725

- No statistically significant relationship between max wind experienced by a circuit and pole failure rate (P = 0.44725 >0.05)
- Data suggests other factors contributed to distribution pole failure



Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: MAX GUST

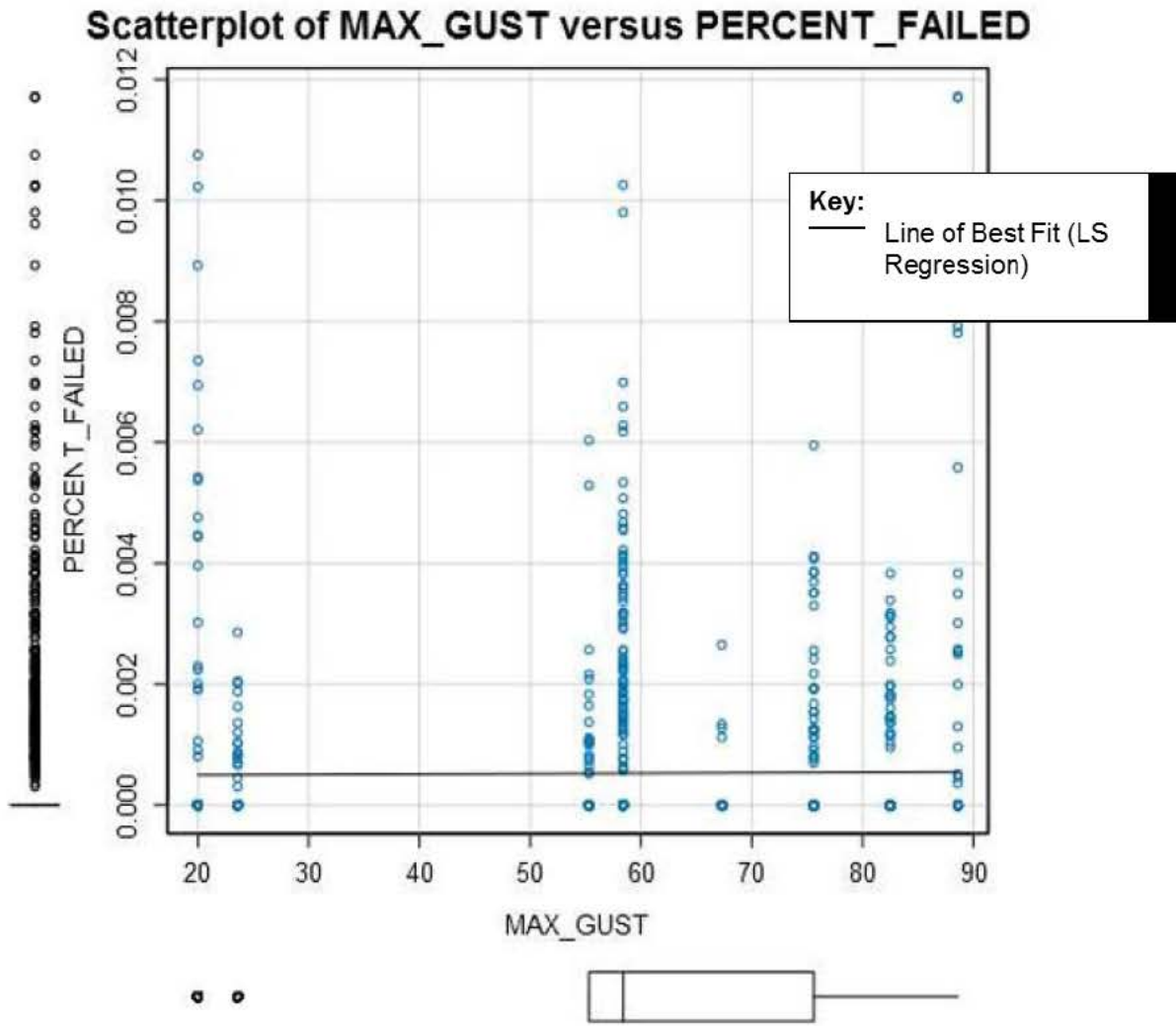
Data Summary

Variable	Min	Max	Median	Sample Size
Max Gust (x)	20 mph	88.6 mph	58.4 mph	1,083 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	4.836e-04	0.00016***
Max Gust	7.601e-07	0.71111

- No statistically significant relationship between max gust experienced by a circuit and percent pole failure (P = 0.71111 >0.05)
- Data suggests other factors contributed to distribution pole failure



Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: AVG MANUFACTURED YEAR

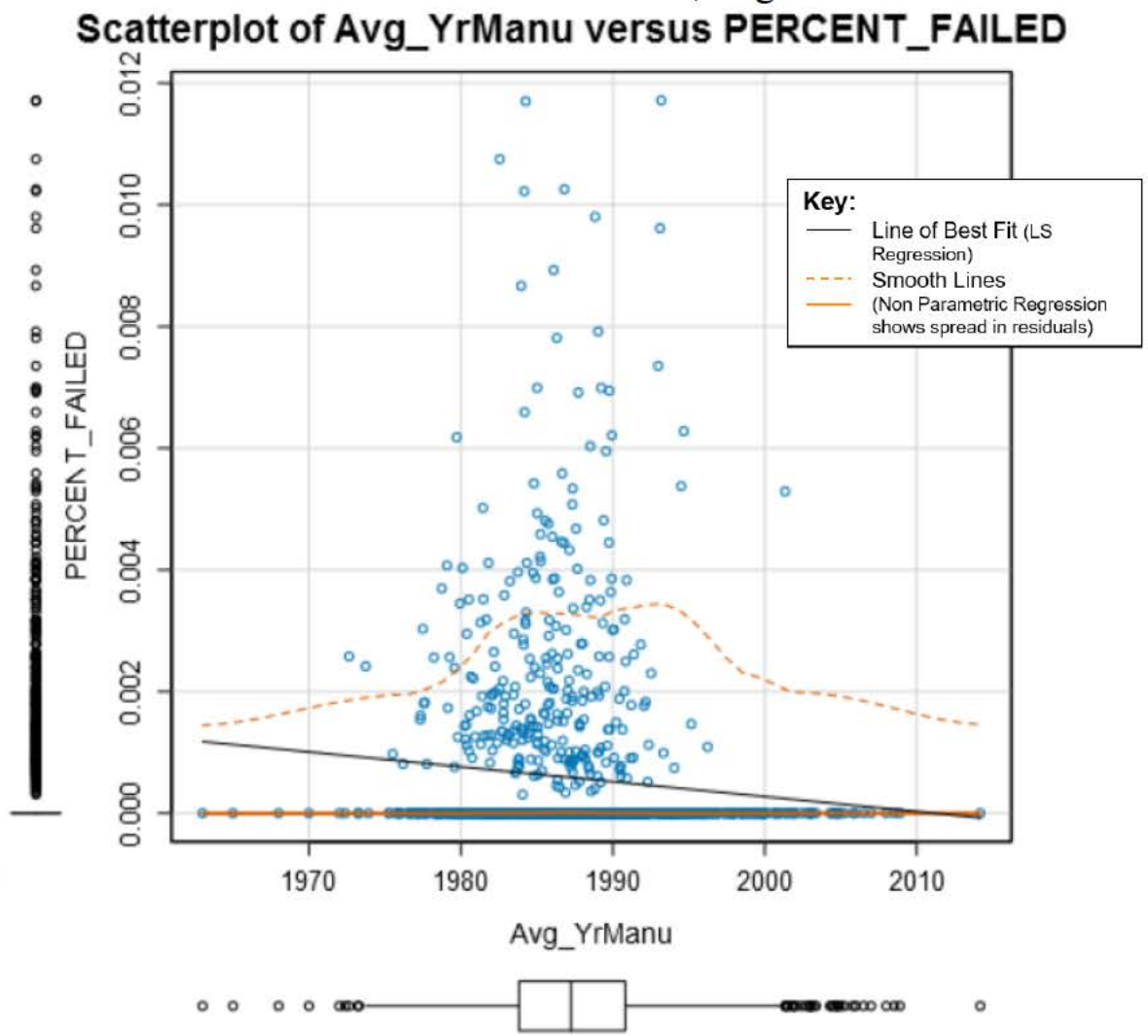
Data Summary

Variable	Min	Max	Median	Sample Size
Avg Manufactured Year (x)	1963	2014	1987	1,235 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	4.925e-02	0.00043***
Avg Manufactured Year	-2.449e-05	5e-04***

- There is a statistically significant relationship between average manufactured year of a circuit and percent pole failure. (P = 0.0005 <0.05)
- Data suggests circuits with newer poles on average are associated with lower pole failure rates*.



*Note: This analysis does not consider reinforcement of older poles.

Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: AVG POLE HEIGHT

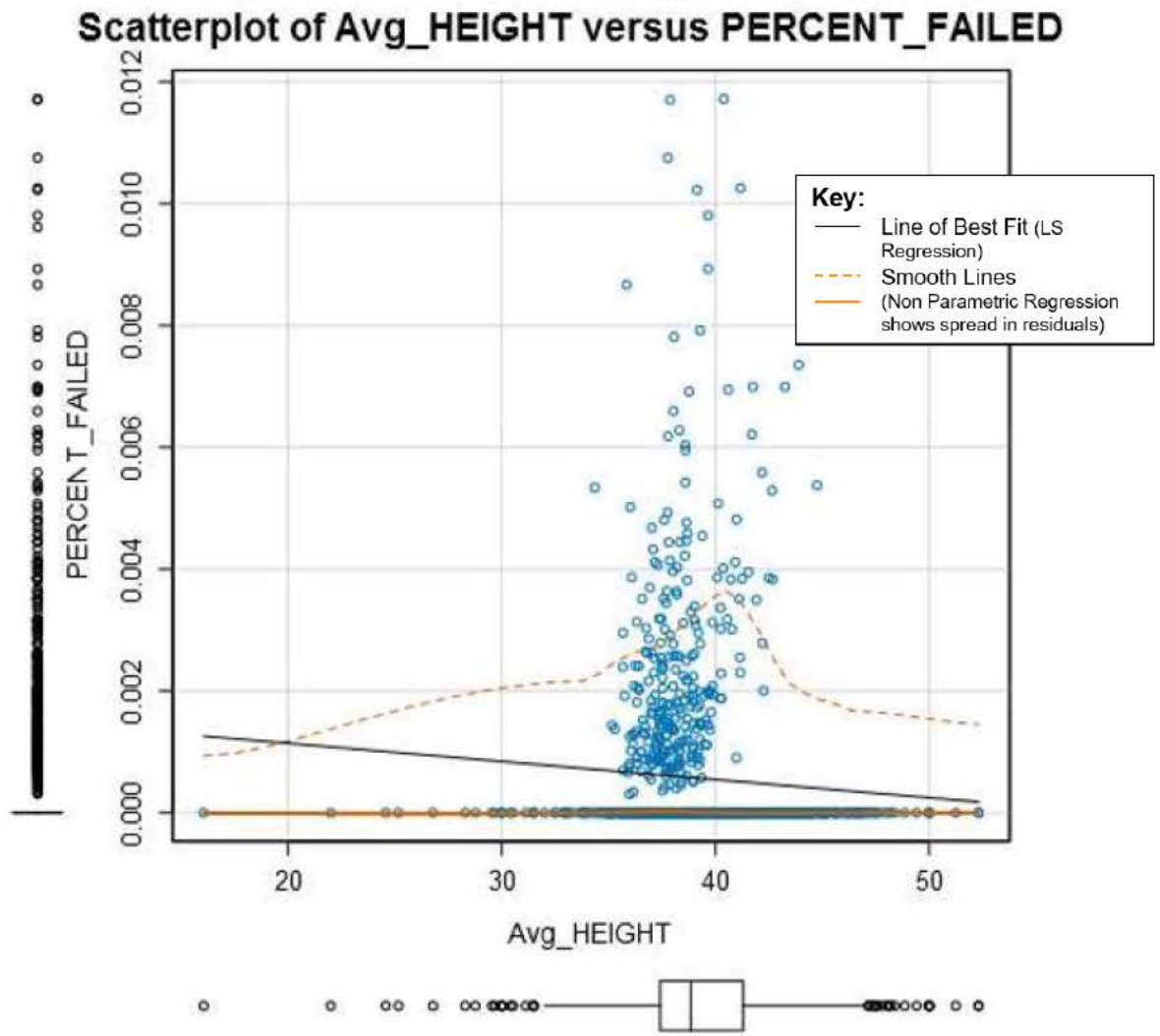
Data Summary

Variable	Min	Max	Median	Sample Size
Avg Pole Height (x)	16 ft.	52 ft.	39 ft.	1,269 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	1.734e-03	0.00025***
Avg Pole Height	-2.979e-05	0.01267*

- There is a statistically significant relationship between average pole height of a circuit and percent pole failure. (P = 0.01267 <0.05)
- Data suggests circuits with taller average pole heights are associated with lower pole failure rates.



Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: AVG LAST INSPECTION YEAR

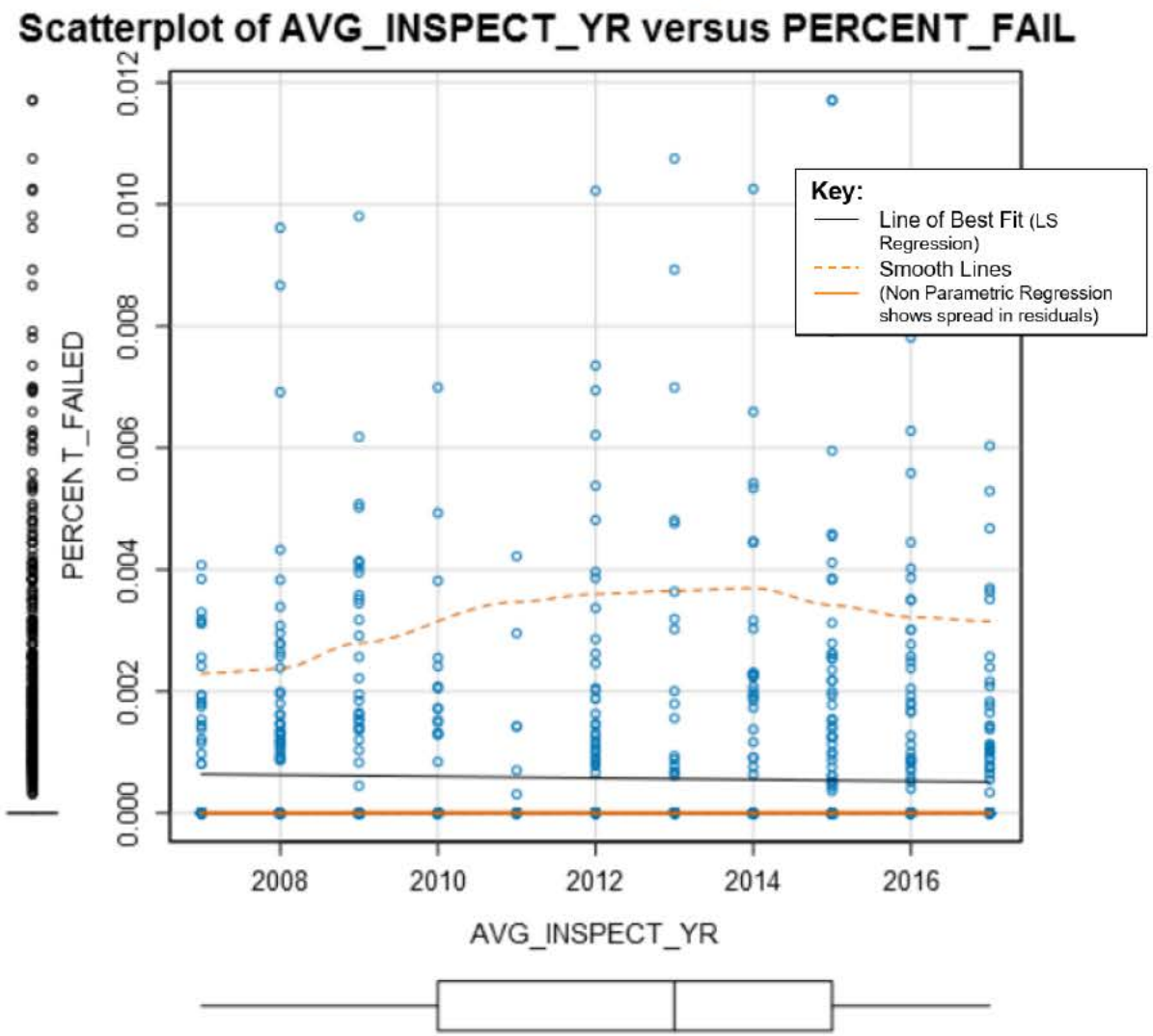
Data Summary

Variable	Min	Max	Median	Sample Size
Avg Inspection Year (x)	2007	2017	2013	1,249 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	2.629e-02	0.33208
Avg Inspection Year	-1.278e-05	0.34264

- No statistically significant relationship between average last inspection year of a circuit and percent pole failure (P = 0.34264 >0.05)
- Data suggests other factors contributed to distribution pole failure



Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: VEGETATION MANAGEMENT

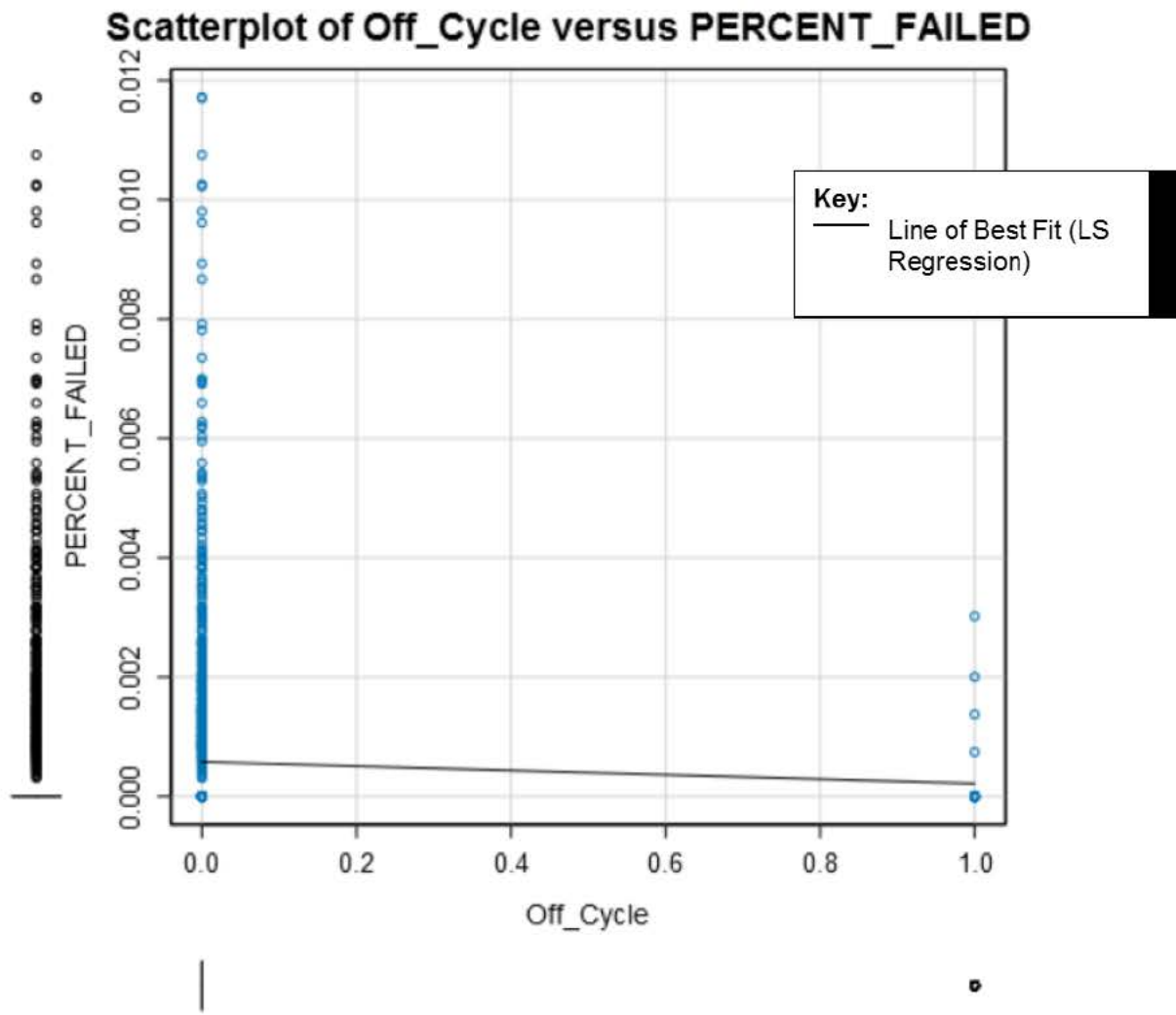
Data Summary

Variable	Min	Max	Median	Sample Size
Off Cycle* (x)	0	1	0	1,248 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	0.0005788	<2.2e-16***
Off Cycle	-0.0003623	0.15662

- No statistically significant relationship between whether or not the vegetation maintenance of a circuit is on cycle or off cycle and the percent pole failure. (P = 0.157 >0.05)
- Data suggests other factors contributed to distribution pole failure.



*Note: This survey does not provide an assessment of degrees of off-cycle trimming, and other aspects of the VM program, (i.e., hot spot trimming and periodic inspections that are performed to ensure that reliability is not at risk).

Copyright 2018 Accenture. All rights reserved.

MULTIPLE LINEAR REGRESSION ON ALL POLE DATA

Percent Failure By Circuit ~ Wind + Gust + Manufactured Yr. + Height + Last Inspection Yr.+ Max Off Cycle

Factor	Minimum	Maximum	Median	Sample Size	Estimate	P Value
Max Wind	15.8 mph	70.2 mph	41.4 mph	1,187 circuits	-1.731e-05	0.00254**
Max Gust	20 mph	88.6 mph	58.4 mph		7.011e-06	0.0794
Avg Manufactured Year	1963	2014	1987		-3.439e-05	0.00051***
Avg Height	22 ft.	55 ft.	39 ft.		-8.495e-06	0.59495
Avg Last Inspection Year	2007	2017	2013		3.038e-05	0.07384
Vegetation Management	0	1	0		-1.292e-04	0.6689

Results: While the correlations between max wind and average manufactured year versus pole failure rate are statistically significant, these factors are not the only contributors to pole failure.

- Higher average max winds are found to be associated with lower percent failure rates (P=0.0025<0.05). Circuits that have newer poles on average are also associated with a lower percent failure rates (P=0.00051<0.05).
- Gust, Height, Inspection Year and Vegetation Maintenance do not have statistically significant correlation coefficient estimates, suggesting that they are not highly correlated with pole failure rate by circuit.
- The Adjusted R^2 value of the model is 0.01619. Thus only 1.62% of the variation in observed pole failure rates by circuit is explained by our model. This indicates that other factors contributed to pole failure than those included in the model.
- Differing results from simple regression analysis can be explained by difference in samples as well as potential correlation between explanatory variables.

Copyright 2018 Accenture. All rights reserved.

OPTIMIZED MULTIPLE LINEAR REGRESSION ON ALL POLE DATA

Percent Failure By Circuit ~ Wind + Gust + Manufactured Yr. + Inspection Yr.

Factor	Minimum	Maximum	Median	Sample Size	Estimate	P Value
Max Wind	15.8 mph	70.2 mph	41.4 mph	1,187 circuits	-1.696e-05	0.00292**
Max Gust	20 mph	88.6 mph	58.4 mph		7.023e-06	0.07857
Avg Manufactured Year	1963	2014	1987		-3.737e-05	2e-05***
Avg Last Inspection Year	2007	2017	2013		3.165e-05	0.0603

Results: When optimizing the previous multiple linear regression model, the best predictors of pole failure are max wind and gust, along with the average manufactured year and inspection year.

- Again, higher average max winds are found to be associated with lower percent failure rates (P=0.003<0.05). Circuits that have newer poles on average are associated with a lower percent failure rates (P=0.00002<0.05).
- Adjusted R^2 value is 0.01767. Thus only 1.77% of variation in percent pole failure is explained by the model, still suggesting that there are other explanatory variables not captured.

Copyright 2018 Accenture. All rights reserved.

MULTIPLE LOGISTIC REGRESSION ON BROKEN POLE DATA

Failure by Tree ~ Max Wind + Manufactured Year + Height + Last Inspection + Breakage Location + Attachment

Factor	Minimum	Maximum	Median	Sample Size	Estimate	P Value
Max Wind (mph)	15.8	70.2	37.1	384 poles	-0.04031	9e-05***
Manufacture Year	1960	2017	1980		0.01710	0.17221
Height (ft.)	30	55	40		-0.1005	0.00029***
Last Inspection Year	2007	2017	2012		-0.10610	0.01527*
Breakage Location (T=3, M=2, B=1)	1	3	2		0.08490	0.65284
Attachment (Y=1, N=0)	0	1	0		1.55611	1e-05***

Results:

- When considering the above factors on the likelihood that a failed pole had a tree involved; max wind, height, last inspection year, and attachment are statistically significant factors.
- Poles with attachments were more likely to fail by mode of tree.

Copyright 2018 Accenture. All rights reserved.

RESULTS SUMMARY: REGRESSION

Simple

- Max wind, max gust, average last inspection year and off cycle vegetation maintenance did not have a statistically significant correlation with pole failure rate by circuit.
- Circuits with a taller average pole height were more likely to have a lower pole failure rate.
- Circuits with newer poles were associated with lower pole failure rates.

Multiple

- Average pole manufactured year and max wind speed were the best indicators of pole failure rate by circuit.
- Circuits with older poles were associated with higher pole failure rates.
- Circuits that experienced lower wind speeds were associated with higher pole failure rates. This counterintuitive result could be due to the difficulties collecting wind data at all pole locations.
- Pole height, inspection year, and vegetation management level are likely not good indicators of pole failure.

Overall

- Simple regression and multiple regression models did not have high predictive power of pole failure rates, suggesting that there are unaccounted for explanatory factors captured in the error term of our models.
- **Model Improvements:**
  - Potential explanatory factors to consider further would be vegetation density, height and proximity of vegetation to distribution facilities, rainfall, reject status and wind direction, etc.
  - Improve wind data accuracy (gust, wind, GPS related data)
  - Consistent data across all poles for all fields/ Confirm randomized sampling

Copyright 2018 Accenture. All rights reserved.

DUKE ENERGY FLORIDA

STORM HARDENING

accentureconsulting

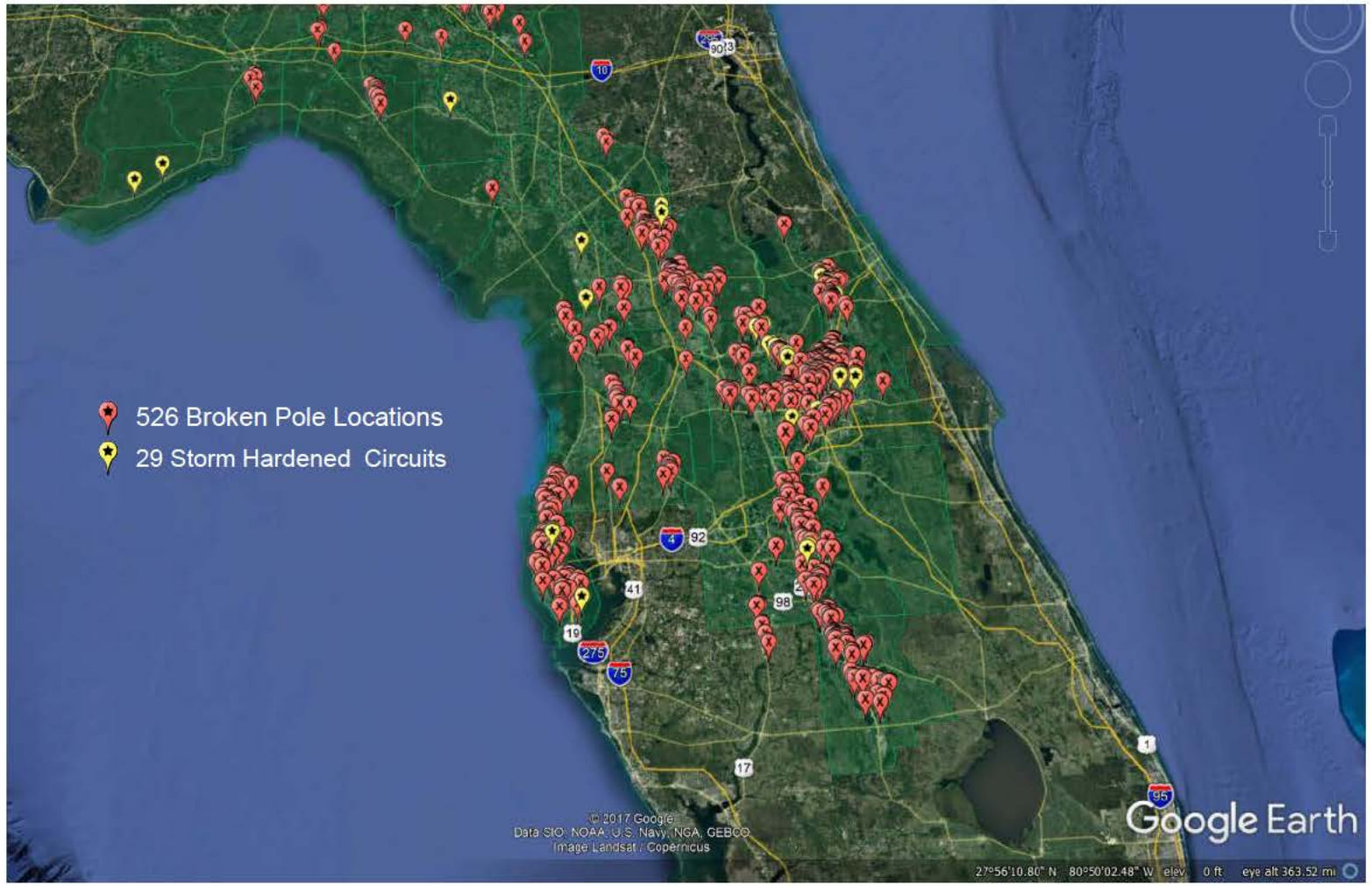
METHODOLOGY/APPROACH

- Duke FL performed storm hardening on a number of distribution line sections since 2006
- Determined if any poles that failed during Hurricane Irma were a part of the storm hardened circuits by:
  - Mapping broken poles that were reviewed by the forensics team
  - Overlaying storm hardened projects
  - Identifying if any broken poles were a part of the storm hardened projects

Copyright 2018 Accenture. All rights reserved.

DATA COLLECTION

- A sample set of broken pole data was collected by Duke FL's forensics team
- This information included:
  - EQUIP ID
  - POLE TAG
  - ADDRESS
  - DAMAGE COMMENTS
  - Birth Year
  - Last Inspect
  - Where did pole break? Top (T), Middle (M), Base (B)
  - Was Tree Involved?
  - ATTACHMENTS (Y/N)
  - EQUIPMENT(STA,RCL,SCT)
  - POLE BRACED?
  - OP CTR
- Matched broken pole data within GIS system to associate Latitude and Longitude coordinates
- Identified 29 storm hardening projects and mapped them with the broken pole data set



Copyright 2018 Accenture. All rights reserved.

RESULTS SUMMARY: SYSTEM HARDENING ANALYSIS

- A forensic assessment of five hundred twenty-six (526) randomly selected poles was made across DEF's total broken pole population. None of these poles were a part of the 29 Storm Hardening projects.
- A separate assessment of twenty-nine (29) randomly selected Storm Hardening projects was made. No broken poles were identified.
- Initial findings led the team to believe there was one pole that failed in the North Central Zone, Mercers Fernery Rd storm hardening project, but further analysis showed it was not a part of the project



North Central - Mercers Fernery Rd

Copyright 2018 Accenture. All rights reserved.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 7
PARTY: DUKE ENERGY FLORIDA – (DIRECT)
DESCRIPTION: Jason Cutliffe JC-2

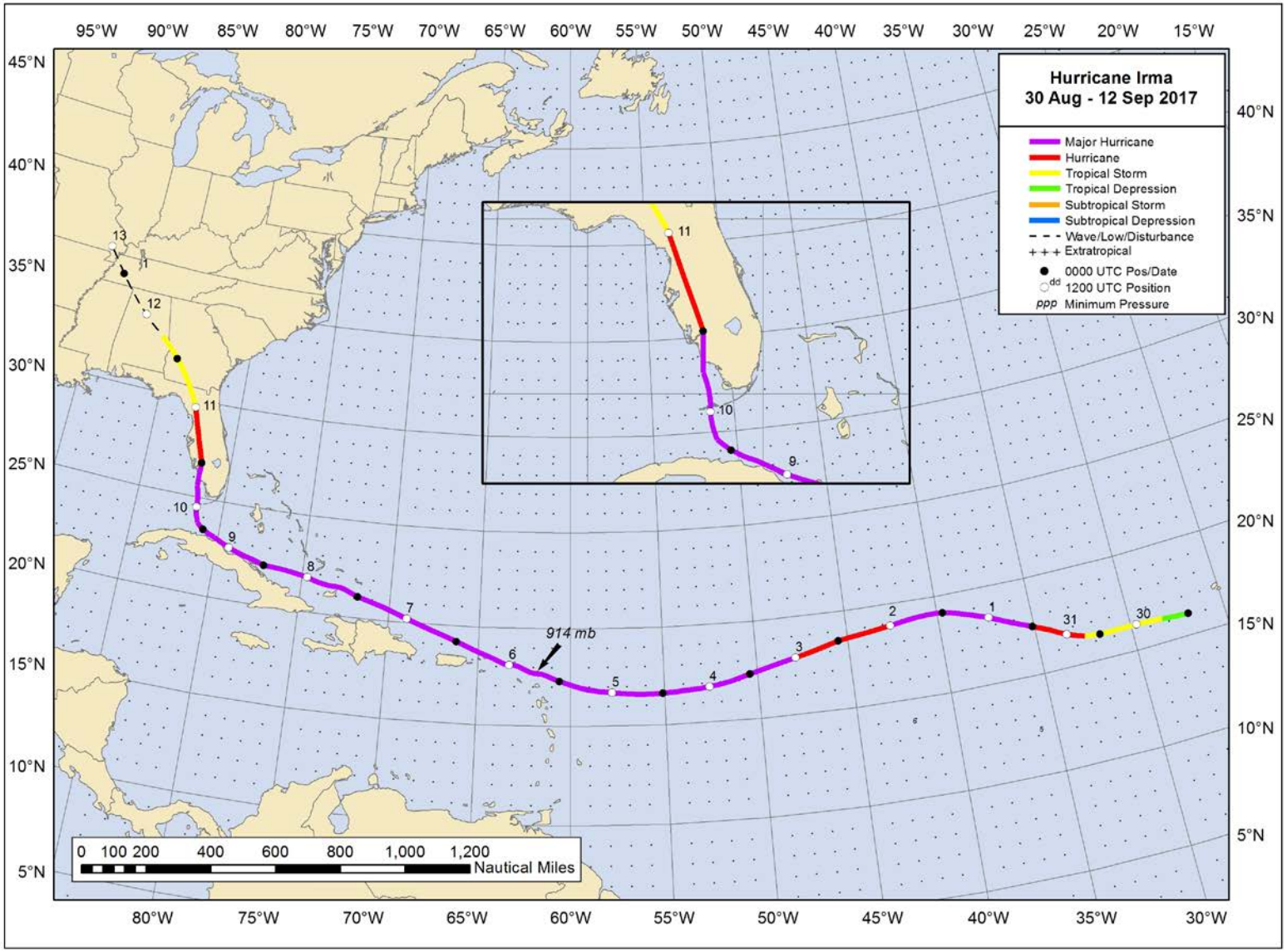
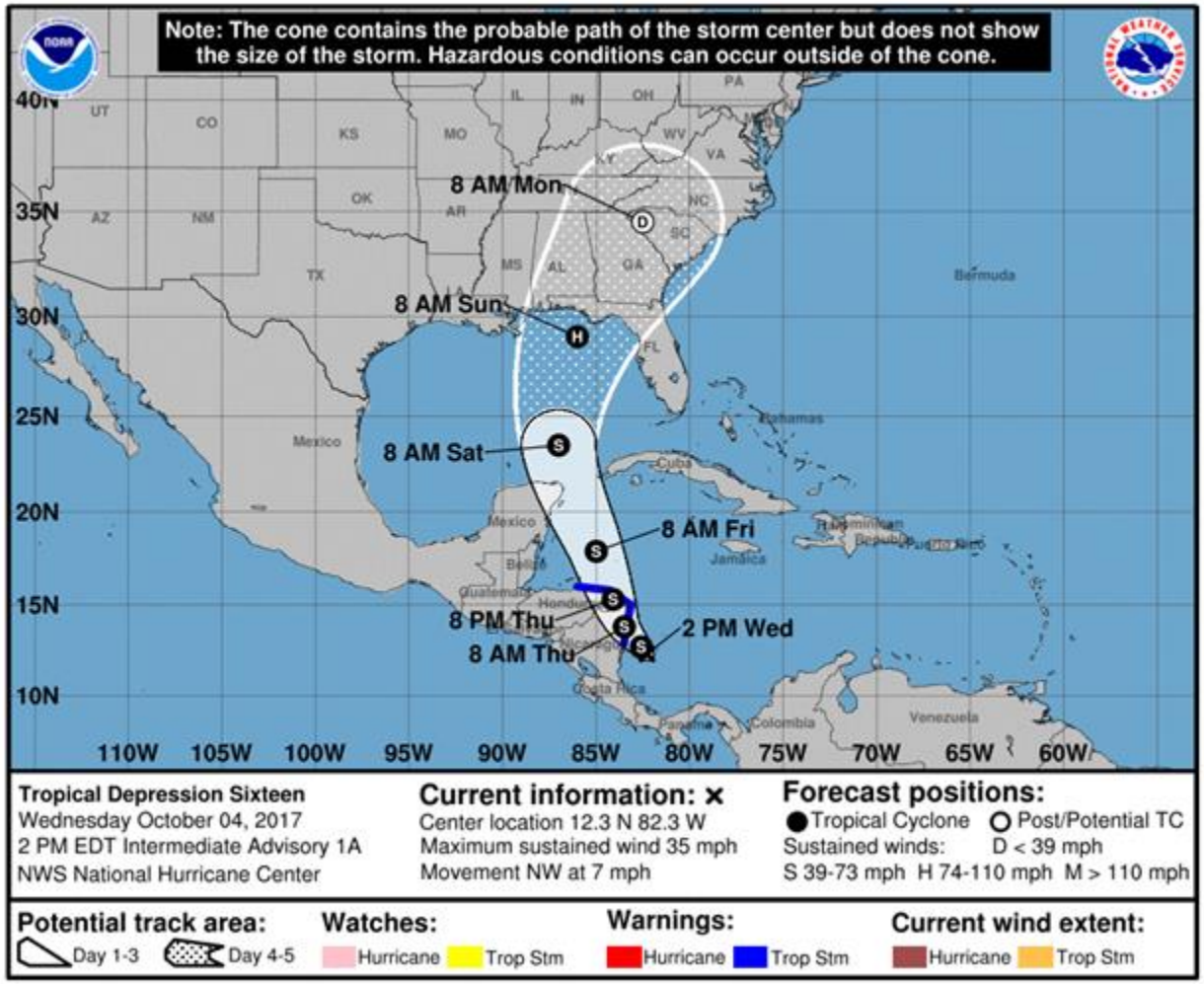


Figure 1. Best track positions for Hurricane Irma, 30 August–12 September 2017.

FORECASTED PATH OF HURRICANE NATE



BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: April 18, 2018

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO
CITIZENS' FIRST SET OF INTERROGATORIES (NOS. 1-50)

Duke Energy Florida, LLC ("DEF"), subject to and without waiving the contemporaneously served objections to these requests, responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") First Set of Interrogatories to DEF (Nos. 1-50) as follows:

1. Storm Timeline. For each of the seven storms listed on Appendix A, Page 1 and Page 7 of the Company's December 28, 2017 filing, provide a timeline summary indicating when the first costs were incurred, when the majority of the mobilization began, when the storm began, the peak storm time, when the storm ended, when demobilization started, when the majority of final costs were incurred and when the final cost was incurred (i.e., when follow-up work was completed).

Answer:

2. Hurricane Matthew. Refer to Appendix A, page 7. Please explain how the Company incurred approximately $35,800,000 in Hurricane Matthew related costs when according the NOAA storm track for Hurricane Matthew, the eye of the storm traveled up Florida's east coast without making landfall in Florida. See https://www.nhc.noaa.gov/data/tcr/AL142016_Matthew.pdf at page 82.

Answer:

3. Vegetation Management. Refer to the Company's response to Citizens' Interrogatory No. 5 in Docket No. 20170215-EI. Provide for each year 2012-2017 the amount of vegetation management that was allowed in base rates O&M expense.

Answer: $32 million was the amount approved for the 2010 test period in DEF's last rate case (Order No. PSC-10-0131-FOF-EI dated March 10, 2010).

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 8
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Oliver, Buckler, Cutliffe, Matthews

4. Poles. Refer to the Company's response to Citizens' Interrogatory No. 8c in Docket No. 20170215-EI. Provide for each year 2008-2017 the amount of cost capitalized for the replacements listed.

Answer:

Year	Capitalized Total
2008	$ 4,488,232
2009	$ 5,464,637
2010	$ 7,036,673
2011	$ 6,664,265
2012	$ 12,722,078
2013	$ 17,300,710
2014	$ 22,261,327
2015	$ 37,481,621
2016	$ 21,985,929
2017	$ 20,352,553

5. Poles. Refer to the Company's response to Citizens Interrogatory No. 8c and 8e in Docket No. 20170215-EI. Are the storm replaced poles included in the pole counts listed in 8c?

Answer:
The poles listed in DEF's response to question 8c only represent the planned replacements under the Pole Replacement Program and does not include the poles in 8e. Note, the number of poles in DEF's response to 8e in Docket No. 20170215-EU for Hurricane Irma was an estimate. The final number of poles is provided in response to question #8.

6. Poles. Provide, for each of the seven storms, a summary of the number of poles replaced, by either Company crews or contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer:
Duke Energy does not track specific location of equipment replaced or whether the work was completed by Company or contractors during a major storm restoration event. For the distribution assets, please see attached file bearing Bates number 20170272-DEF-OPC-ROG 1-6-00001 for details on quantity of equipment replaced by storm and month,

including the cost of the materials capitalized. DEF will supplement this response for storms Debby and Isaac. Also note that the capital cost is only the material cost. The total capital cost will be provided in response to question #22. The total number of poles replaced in Hurricane Irma reported in this file is different than previous responses to OPC as a result of additional true-up of inventory that has occurred since the previous totals were reported.

In regards to transmission, for the seven storms, only Hurricane Hermine and Hurricane Irma had pole replacements. Below are the number of poles and costs capitalized.

Hurricane Irma	
Number of Poles Replaced	142
Cost of Replacement	756,725
Average Cost Per Pole	5,329

Hurricane Hermine	
Number of Poles Replaced	2
Cost of Replacement***	-
Average Cost Per Pole	5,329

Note*** - Since Hermine overall capital was insignificant for Transmission, the same average from Hurricane Irma was used.

7. System. Starting in 2015, please provide a summary of distribution miles that identities the number of miles, the number of poles, the amount of conductor, and the number of transformers by district.

Answer:
See attached file bearing Bates numbers 20170272-DEF-OPC-ROG 1-7-00001 through 20170272-DEF-OPC-ROG 1-7-00006.

8. System. For each of the seven storms, please provide the number of miles, the number of poles, the amount of conductor and the number of transformers that were impacted by each of the respective storms.

Answer:
For distribution assets, the attached files bearing Bates numbers 20170272-DEF-OPC-ROG 1-8-00001 through 20170272-DEF-OPC-ROG 1-8-000014 provide a count of poles, conductors and transformers that felt the impact of the adverse weather these seven storms caused in Duke Energy territory.

For transmission assets, DEF considers only equipment that requires replacement to have been "impacted" by a storm. For the seven storms, only Hurricane Hermine and Hurricane Irma had pole replacements. Below are the number of poles replaced by storm.

Hurricane Irma	
Number of Poles Replaced	142

Hurricane Hermine	
Number of Poles Replaced	2

9. Storm Accounting Policies and Procedures. Provide a detailed explanation how the storm costs were accounted for (i.e. by cost code or other designation), including the designation used, how the costs were charged to specific functions, how materials and supplies were accounted for (i.e. withdrawn from inventory and charged to the storm, how vehicle and fuel costs were tracked or assigned, and how contractors and vendors were instructed to account for capital work.

Answer:

On an annual basis, the Storm Accounting Procedures memo is updated by DE Florida Accounting and Reporting team (See 2017 Storm Procedures provided in POD 2). The Functional finance/accounting personnel will meet and review the accounting process and procedures that are required in the event of a storm. In the event of a storm, each function will determine if they are anticipating incremental storm costs based on the projected size, strength and path of the storm. If they believe there will be incremental costs, they create a storm project and storm charging guidance specific to their function, or support personnel to their function. This charging guidance include specific instructions for items such as regular time worked, OT worked, materials charging, fleet charging, expenses charged, etc. These charging instructions are also provided to contractors. See specific charging guidance for each function with incremental storm costs in POD 2. These charges are booked to a 186 account. After storm restoration has occurred, finance personnel will prepare an estimate of the charges incurred for a storm, and monitor charges to their project/codeblock. They will record an accrual for accounting purposes and scrub those costs for non-recoverable storm costs and record adjustments for non-incremental costs and capital charges. The remaining costs would result in only including costs allowed pursuant to the Storm Rule (FL 25-6.0143). Throughout the months following the storm, Finance personnel continue to review the charges as actual invoices are received and processed, ensuring only allowable incremental charges remain in the storm account. In addition, they continue to adjust their accruals as additional information becomes known. In May of the following year, once all invoices have been received and accruals cleared, the DE Florida Accounting group will book a journal entry to move the retail dollars against the Retail Storm reserve account (228 account). While the project charged, and personnel may have changed over the years, the overall process has not changed from 2012 to current.

10. Storm Accounting Policies and Procedures. Since the storms cover the years 2012 through 2017, please identify any major changes to the accounting policies and procedures and when they occurred.

Answer:
As stated in DEF's response to question #9, there have been no major changes to the accounting policies or procedures during this time frame.

11. Contractors. Explain what measures are taken to determine that contractors rates are reasonable and comparable from contractor to contractor.

Answer:

12. Standby. Does the Company have any information that would identify what costs were incurred for standby contractors and mutual assistance? If not, explain why the Company does not analyze this cost, how the Company mitigates standby and how the Company can assert that all the cost requested are reasonable. If yes, please provide the information.

Answer:

13. Recovery. Please refer to paragraph 18 of the Petition filed on December 28, 2017, please explain why the Company's issues do not include the other five named storms on Appendix A, Page 7 which reduced the storm reserve balance prior to the 2017 storm season and whether those costs were properly charged against the storm reserve pursuant to Rule 25-6.0143, F.A.C.

Answer:
DEF does not believe that the costs incurred preparing for and/or responding to Tropical Storms Debbie and Colin, and Hurricanes Isaac, Hermine, and Matthew are issues that the Commission must decide in this proceeding, therefore DEF did not identify them as such. Pursuant to Rule 25-6.0143(1)(j), F.A.C., a "utility may petition the Commission for recovery of a debit balance in Account 228.1 plus an amount to replenish the storm reserve through a surcharge, securitization or other cost recovery mechanism." Pursuant to Paragraph 38(c) of the 2017 Second Revised and Restated Settlement Agreement, approved by the Commission in Order No. PSC-2017-0451-AS-EU, DEF is not precluded from "petitioning the Commission to seek recovery of costs associated with any storms without the application of any form of earnings test or measure and irrespective of previous or current base rate earnings." This same paragraph states that storm costs shall be limited to costs resulting from named storms, as well as "an estimate of incremental costs above the level of storm reserve prior to the storm event, and

replenishment of the storm reserve to the level as of the Implementation Date of the 2012 Settlement Agreement…or approximately $132 million (retail)."

Prior to landfall of Hurricane Irma, DEF' storm reserve was approximately $54 million. The costs incurred related to Hurricane Irma caused DEF's storm reserve to reach a debit (negative) balance, which was further exacerbated by the costs incurred in preparation for Hurricane Nate, therefore it was the effects of these two storms that caused DEF to file its petition to recover the debit balance. Thus, DEF believed that the final, actual cost of those storms was an issue the PSC needed to determine in order to establish the value of the debit balance to be recovered from customers. The amount necessary to replenish the reserve as contemplated by the 2017 Settlement Agreement will then be added to that amount for the final, total recovery.

14. Please provide, for each of the seven storms, a summary of the number of miles of conductor replaced, by Company crews or contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer:
Duke Energy does not track specific location of equipment replaced or whether the work was completed by Company or contractors during a major storm restoration event. For distribution assets, please see attached file bearing Bates number 20170272-DEF-OPC-ROG 1-6-00001 for details on quantity of equipment replaced by storm and month. DEF will supplement this response for storms Debby and Isaac. Also note that the capital cost is only the material cost. The total capital cost will be provided in response to question #22.

For transmission assets, there were zero miles of conductor replaced.

15. Please provide, for each of the seven storms, a summary of the number of cross arms replaced, by Company crews or by contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer:
Duke Energy does not track specific location of equipment replaced or whether the work was completed by Company or contractors during a major storm restoration event. For distribution assets, please see attached file bearing Bates number 20170272-DEF-OPC-ROG 1-6-00001 for details on quantity of equipment replaced by storm and month. Duke Energy does not capitalize cross arms. DEF will supplement this response for storms Debby and Isaac. Also note that the capital cost is only the material cost. The total capital cost will be provided in response to question #22.

For transmission assets, there was only one cross arm replaced for $3,043 in materials costs for Irma. Duke Energy does not track the specific location of Conductor.

Transmission verifies work completed by Duke Energy oversight assignment and daily reconciliation of ETRs.

16. Please provide, for each of the seven storms, a summary of the number of cross transformers replaced, by Company crews or by contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer:
Duke Energy does not track specific location of equipment replaced or whether the work was completed by Company or contractors during a major storm restoration event. Please see attached file bearing Bates number 20170272-DEF-OPC-ROG 1-6-00001 for details on quantity of equipment replaced by storm and month. DEF will supplement this response for storms Debby and Isaac. Also note that the capital cost is only the material cost. The total capital cost will be provided in response to question #22.

17. Cost Summary. Provide for the storms listed on Appendix A, Page 7 a summary similar to that presented for Irma and Nate on Page 1 of Appendix A.

Answer:

18. Cost Summary. Provide for the each storm listed on Appendix A, Page 1 a summary, by function, of the respective types of costs included in total listed on line 2 and line 6 (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies, etc.).

Answer:

19. Cost Summary. Provide for the each storm listed on Appendix A, Page 7 a summary, by function, of the respective types of costs included in the each of the total listed on lines 3 through 7 (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies, etc.).

Answer:

20. Mobilization/Demobilization. Refer to Appendix A Page 1 and Page 7. For each of the storms provide a summary, by function, of what amount of contractor and what amount of line clearing costs are included in their respective totals were for mobilization and demobilization.

Answer:

21. Capitalized Cost. Provide, for each of the seven storms, a detailed summary, by function, that shows an itemization of plant costs by type (i.e. poles, conductor, cross arms, transformers, etc.) that were capitalized, the associated quantities and the associated costs.

Answer:

22. Capitalized Cost. Provide, for each of the seven storms, a detailed summary, by function, that shows an itemization of costs by type (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies etc.).

Answer:

23. Non-incremental Costs. Provide, for each of the seven storms, a detailed summary, by function, that shows an itemization of costs by type (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies etc.).

Answer:

24. Payroll. Refer to Appendix A. For each of the seven storms provide an explanation of what related costs, if any, are included in the overtime payroll amounts, identify each type of related costs and the respective amount(s) (i.e. benefits, overheads and payroll taxes) and provide the overtime included in the total cost for each respective storm.

Answer:

25. Payroll. Refer to Appendix A. For each of the seven storms provide an explanation of what related costs, if any, are included in the regular payroll amounts, identify each type of related costs and the respective amount(s) (i.e. benefits, overheads and payroll taxes) and provide the overtime included in the total cost for each respective storm.

Answer:

26. Payroll. Refer to Appendix A. Identify the amount of any incentive compensation included in the recorded costs charged to each of the seven storms and identify how any of the costs were excluded from this request (i.e. as non-incremental or as capitalized).

Answer:

27. Payroll. Provide for each year, 2012, 2016 and 2017 the regular payroll, by O&M account, included in base rates identifying the Docket setting rates and the effective date rates when into effect (i.e. if rates went into effect during the year provide a prorate from each docket for that year).

Answer: Please see DEF's response to question 28 below.

28. Payroll. Provide for each year, 2012, 2016 and 2017 the actual regular payroll, by O&M account for that year.

Answer: 2010 was the last rate case test year approved by the Florida Public Service Commission. In the attached file bearing Bates numbers 20170272-DEF-OPC-ROG 1-28-00001 through 20170272-DEF-OPC-ROG 1-28-00002 are the FERC FORM 1 – Salaries and Wages information from Pages 354-355 for the years of 2010, 2012, 2016 and 2017.

29. Payroll. Provide for each year, 2012, 2016 and 2017 the overtime payroll, by O&M account, included in base rates identifying the Docket setting rates and the effective date rates when into effect (i.e. if rates went into effect during the year provide a prorate from each docket for that year).

Answer: Payroll amounts are located in FERC FORM 1 on pages 354 and 355 of the attached file bearing Bates numbers 20170272-DEF-OPC-ROG 1-28-00001 through 20170272-DEF-OPC-ROG 1-28-00002. The amounts are not available by overtime category. 2010 was the test year in the last rate case approved by the Florida Public Service Commission.

30. Payroll. Provide for each year, 2012, 2016 and 2017 the actual overtime payroll, by O&M account for that year.

Answer: Payroll amounts are located in FERC FORM 1 on pages 354 and 355 of the attached file bearing Bates numbers 20170272-DEF-OPC-ROG 1-28-00001 through 20170272-DEF-OPC-ROG 1-28-00002. The amounts are not available by overtime category. 2010 was the test year in the last rate case approved by the Florida Public Service Commission.

31. Regular Payroll. Provide, for each of the seven storms, a summary of the regular payroll by week charged to restoration work order (i.e. this would be just payroll and excludes overheads and/or other related costs).

Answer:

32. Overtime Payroll. Provide, for each of the seven storms, a summary of the overtime payroll by week by charged to restoration work order (i.e. this would be just payroll and excludes overheads and/or other related costs).

Answer:

33. Third Party Billing. Refer to Appendix A. Was the Company billed by any third party pole owners for pole replacements performed by the third party during any of the seven storms and if so provide a summary of costs by third parties for each storm.

Answer: The Company does not have records of being billed by third party companies for any of the seven storms.

34. Third Party Billing. Refer to Appendix A. Did the Company bill by any third party for pole replacements performed by the Company or its contractors during any of the seven storms and if so provide a summary of costs billed the third party for each storm.

Answer: Duke Energy did not bill any third parties for the poles replaced during the seven storms.

35. Third-Party Reimbursement. Provide an explanation how the costs for third-party reimbursement were tracked and billed and include a summary of poles replaced during any of the seven storms along with the respective associated cost.

Answer: Foreign owned poles represent only 1.4% of the total pole population in Duke Energy's inventory. Hurricane Irma damaged .2% of the total population; Hurricane Matthew damaged less than .02% of the population; the other five storms damaged less than .01% combined. The likelihood that there was an overlap of these population sets is marginal.

During a major restoration event, Duke Energy is focused on safely restoring service to its customers and does not track ownership of the poles requiring replacement due to the small possibility that the damaged pole was foreign owned.

36. Overhead Costs. For payroll costs if an overhead rate was used for benefits and other related costs provide, by year, the respective overhead rates and an explanation of how the rates were determined.

Answer:

37. Overheads. Provide for the same time period storm costs were recorded the respective overhead rates used for recording the normal general operating costs for the Company and explain any difference between the normal rates and the rates used for storm costs.

Answer:

38. Outside Contractors. Are all outside contractors' time to be approved by a Company representative? If yes, what happens if time reports are not approved? If no, explain why not and how the Company can be confident that the services were performed?

Answer:

39. Line Clearing. Refer to Appendix A. Provide, for each of the seven storms, a summary of line clearing costs (listing each invoice), and the line clearing contractor.

Answer:

40. Line Clearing. Refer to Appendix A. Provide, for each the seven storms, a summary showing the date and number of crews mobilized and the date and number of crews demobilized.

Answer:

41. Contractors. Explain in detail what services were performed by function by outside contractors (i.e. pole & wire work, plant repairs, etc.). If different for any of the seven storms please explain the difference.

Answer:

42. Contractors. Identify whether contractors set poles and provide for each of the seven storms the number of poles set by contractors.

Answer: The DEF major storm restoration plan requires a quantity of Off-System Contractor and Mutual Assistance resources many times the native restoration workforce. As a result, most employees assume a higher value storm role in coordination and oversight of the Off-System Contractor and Mutual Assistance crews. While DEF does not record which crews set poles versus other restoration activity, the vast majority of the poles replaced as reported in Question #6 were set by Off-System Contractor or Mutual Assistance crews.

43. Contractors. Refer to Appendix A. Provide, for each of the seven storms, a summary of costs (listing each invoice) by function, by contractor.

Answer:

44. Materials & Supplies Expense. Refer to Appendix A. Provide, for each of the seven storms, a summary listing costs, by function, by type of costs.

Answer:

45. Vehicle & Fuel. Provide, for each of the seven storms, a summary of costs by function identifying the costs by type (i.e. overhead charge, invoiced, contractor/vendor charge, other, etc.) that are included storm cost total.

Answer:

46. Other Operating Expenses. Explain what type of costs are included in other operating expenses and provide, for each of the seven storms, a summary of costs, by type, by function. Also identify whether P Card costs are included and if so prove a separate summary of those costs by invoice amount.

Answer:

47. Employee Expenses. Explain what type of costs are included in employee expenses and provide, for each of the seven storms, a summary of costs, by type, by function. Also identify whether P Card costs are included and if so prove a separate summary of those costs by invoice amount.

Answer:

48. Tree Trimming. Provide for each of the seven storms the amount of line clearing costs by month.

Answer:

49. Tree Trimming. Provide for each of the seven storms, for any month where line clearing costs were charged to the restoration work order the previous three calendar years of costs for that same month that were charged to O&M expense.

Answer:

50. Tree Trimming. Rule 25-6.0143(1)(f) states: "The types of storm related costs prohibited from being charged to the reserve under the ICCA [Incremental Cost and Capitalization Approach] methodology include, but are not limited to, the following" and paragraph 8 states: "Tree trimming expenses, incurred in any month in which storm damage restoration activities are conducted, that are less than the actual monthly average of tree trimming costs charged to operation and maintenance expense for the same month in the three previous calendar years." are to be excluded. Provide monthly calculations performed by the Company for each of the seven storms that would show whether the Company is in compliance with this requirement.

Answer:

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of _____, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BRIAN BUCKLER, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 9, 10, and 33 through 35, of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2018.

_____
BRIAN BUCKLER

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of _____, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 2, 4 through 8, 14 through 16, and 42 of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2018.

_____
JASON CUTLIFFE

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of _____, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BOB MATTHEWS, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 8, and 14 through 16, of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2018.

_____
BOB MATTHEWS

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of _____, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 3, and 27 through 30, of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2018.

_____
MARCIA OLIVIER

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

Number of Poles	August	September	October	November
Colin				
Hermine		75		
Matthew			213	
Irma		1,878	252	
Irma - Streetlight Poles		66	73	

Capital Material Cost of Poles	August	September	October	November
Colin				
Hermine		$ 11,382		
Matthew			$ 35,158	
Irma		$ 287,657	$ 43,299	
Irma - Streetlight Poles		$ 42,041	$ 1,578	

Feet of Wire	August	September	October	November
Colin				
Hermine	32,940	82,650	600	
Matthew			169,548	
Irma		1,573,322	138,099	4,000
Nate				

Capital Material Cost of Wire	August	September	October	November
Colin				
Hermine	$ 15,270	$ 21,846	$ 449	
Matthew			$ 58,020	
Irma		$ 549,849	$ 45,045	$ 2,325
Nate				

Feet of Cable Underground	August	September	October	November
Colin				
Hermine				
Matthew			45	
Irma		11,550	11,354	
Nate				

Capital Material Cost of Cable Underground	August	September	October	November
Colin				
Hermine				
Matthew			$ 59	
Irma		$ 16,869	$ 15,046	
Nate				

Number of Crossarms	August	September	October	November
Colin				
Hermine	20	25		
Matthew			153	
Irma		585	42	
Nate				

Material Cost of Crossarms	August	September	October	November
Colin				
Hermine	$ 602	$ 917		
Matthew			$ 5,959	
Irma		$ 66,303	$ 4,843	
Nate				

Number of Transformers - Pole	August	September	October	November
Colin				
Hermine	106	52		
Matthew			140	33
Irma		1,527	53	
Nate				

Capital Material Cost of Transformers - Pole	August	September	October	November
Colin				
Hermine	$ 70,742	$ 42,220		
Matthew			$ 110,350	$ 16,908
Irma		$ 1,183,365	$ 43,360	
Nate				

Number of Transformers - Padmount	August	September	October	November
Colin				
Hermine		20		
Matthew			15	
Irma		66	7	
Nate				

Capital Material Cost of Transformers - Padmount	August	September	October	November
Colin				
Hermine		$ 75,614		
Matthew			$ 42,164	
Irma		$ 284,081	$ 6,234	
Nate				

Ops Center	Total Transformers	Total Poles
APOPKA	22524	66368
DELAND	20651	62770
JAMESTOWN	21490	57996
LONGWOOD	15242	39100
INVERNESS	25579	75961
MONTICELLO	25930	92589
OCALA	25186	74551
BUENA VISTA	16498	45983
CLERMONT	7273	19676
CONWAY	15716	48046
HIGHLANDS	15736	50078
LAKE WALES	25662	81432
WINTER GARDEN	14370	42488
CLEARWATER	21671	66601
SEVEN SPRINGS	29882	78980
ST. PETERSBURG	19124	84967
WALSINGHAM	21592	68494
ZEPHYRHILLS	4912	13589
SYSTEM	349038	1069669

OP_CENTER	OH_PRIMARY	OH_BRANCH	UG_BRANCH	OH_FEEDER	UG_FEEDER	OH_SEC_CABLE	OH_SERV_CABLE	UG_PRIMARY	UG_SEC_CABLE	UG_SERV_CABLE
LONGWOOD	502.14	333.26	572.55	168.88	75.15	226.15	22.43	647.7	98.56	252.56
MONTICELLO	2397.63	2115.17	361.15	282.46	20.49	311.96	134.24	381.64	101.83	54.33
SEVEN SPRINGS	968.14	619.18	1605.19	348.95	90.07	452.2	74.31	1695.26	564.95	630.71
ST. PETERSBURG	919.39	688.38	355.85	231	98.06	1138.55	192.14	453.91	121.22	187.15
WALSINGHAM	804.4	560.14	558.7	244.27	60.82	610.49	146.09	619.52	156.15	369.99
ZEPHYRHILLS	221.07	178.41	142.88	42.66	4.22	62.73	12.4	147.11	50.34	13.35
INVERNESS	1905.66	1598.81	608.41	306.85	40.04	259.65	83.78	648.44	158.89	40.12
LAKE WALES	1701.21	1340.92	723.56	360.29	50.36	500.06	70.57	773.92	454.59	176.77
CLERMONT	312.58	231.86	425.23	80.72	40.41	88.01	11.38	465.64	231.15	96.93
WINTER GARDEN	428.7	277.07	922.95	151.63	76.87	174.22	34.4	999.82	420.57	380.79
CLEARWATER	797.44	556.54	565.77	240.9	55.1	645.74	72.92	620.87	205.42	177.16
HIGHLANDS	1190.56	970.65	295.48	219.91	8.24	223.16	58.95	303.72	79.7	17.31
DELAND	1225.23	986.29	422.1	238.94	21.27	536.07	23.55	443.37	176.95	137.44
JAMESTOWN	691.8	468.42	1267.71	223.37	105.13	205.1	31.31	1372.83	391.29	644.6
BUENA VISTA	334.21	154.66	1492.26	179.55	304.51	52.01	21.73	1796.77	666.56	421.47
CONWAY	847.93	610.45	780.43	237.48	163.65	196.72	40.14	944.08	350.38	358.26
APOPKA	1030.26	761.33	893.04	268.93	54.68	363.14	42.91	947.72	315.93	445.48
OCALA	1733.22	1505.25	634.45	227.98	32.21	306.59	97.04	666.66	187.08	47.07

Ops Center	Total Transformers	Total Poles
APOPKA	22471	66234
DELAND	20642	62715
JAMESTOWN	21429	57832
LONGWOOD	15242	39137
INVERNESS	25520	75810
MONTICELLO	25905	92679
OCALA	25184	74665
BUENA VISTA	16401	45860
CLERMONT	7268	19692
CONWAY	15648	48015
HIGHLANDS	15762	50211
LAKE WALES	25596	81244
WINTER GARDEN	14308	42393
CLEARWATER	21657	66587
SEVEN SPRINGS	29847	78959
ST. PETERSBURG	19156	85354
WALSINGHAM	21569	68654
ZEPHYRHILLS	4904	13546
SYSTEM	348509	1069587

OP_CENTER	OH_PRIMARY	OH_BRANCH	UG_BRANCH	OH_FEEDER	UG_FEEDER	OH_SEC_CABLE	OH_SERV_CABLE	UG_PRIMARY	UG_SEC_CABLE	UG_SERV_CABLE
ST. PETERSBURG	923.86	690.07	354.77	233.79	89.98	1135.55	194.51	444.76	113.17	184.57
INVERNESS	1905.62	1598.21	612.5	307.4	39.28	245.84	84.8	651.78	150.22	36.21
CONWAY	848.69	613.77	770.32	234.93	162.39	193.96	40.44	932.71	341.08	356.35
APOPKA	1030.1	763.02	881.71	267.08	51.78	360.12	43.54	933.49	306.06	442.02
CLERMONT	313.62	233.24	414.33	80.38	40.89	86.23	11.69	455.21	224.81	96.04
CLEARWATER	798.5	557.43	561.71	241.07	56.28	628.21	75.15	617.99	168.14	170.09
HIGHLANDS	1194.71	972.43	295.97	222.28	8.28	192.65	59.92	304.25	77.27	15.53
LONGWOOD	506.84	335.77	564.75	171.07	72.83	225.01	23.72	637.59	96	248.93
DELAND	1226.6	988.44	415.26	238.16	17.84	540.66	24.15	433.1	171.86	135.47
BUENA VISTA	340.62	159.54	1447.78	181.08	301.76	51.57	22.32	1749.54	626.75	422.18
JAMESTOWN	694.93	470.78	1258.42	224.15	102.99	203.33	32.33	1361.41	384.26	640.99
LAKE WALES	1699.68	1341.47	703.91	358.21	48.89	489.95	71.62	752.8	432.11	172.63
MONTICELLO	2402.18	2126.71	362.31	275.47	19.79	267.62	135.99	382.11	100.57	49.05
OCALA	1736.32	1510.95	626.41	225.38	32.19	290.3	97.87	658.6	175.54	42.71
SEVEN SPRINGS	969.79	622.51	1586.79	347.28	84.61	444.49	75.14	1671.4	530.87	625.13
WALSINGHAM	804.76	560.09	554.53	244.67	60.17	605.84	148.36	614.7	148.05	366.64
WINTER GARDEN	429.68	278.81	900.5	150.87	76.69	172.43	34.9	977.19	399.28	379.49
ZEPHYRHILLS	220.59	180.99	140.33	39.6	4.23	56.06	12.54	144.56	43.02	13.18

Ops Center	Total Transformers	Total Poles
APOPKA	22357	65985
DELAND	20614	63268
JAMESTOWN	21335	57700
LONGWOOD	15218	39368
INVERNESS	25382	75852
MONTICELLO	25770	92281
OCALA	25053	74342
BUENA VISTA	15990	44955
CLERMONT	7166	19541
CONWAY	15536	47680
HIGHLANDS	15692	50156
LAKE WALES	25366	80339
WINTER GARDEN	14135	41863
CLEARWATER	21592	66633
SEVEN SPRINGS	29738	78512
ST. PETERSBURG	19098	85311
WALSINGHAM	21537	68318
ZEPHYRHILLS	4890	15607
SYSTEM	346469	1067711

OP_CENTER	OH_PRIMARY	OH_BRANCH	UG_BRANCH	OH_FEEDER	UG_FEEDER	OH_SEC_CABLE	OH_SERV_CABLE	UG_PRIMARY	UG_SEC_CABLE	UG_SERV_CABLE
ST. PETERSBURG	925.21	692.48	351.63	232.73	88.37	1134.14	194.04	440	111.58	181.77
INVERNESS	1905.58	1600.71	605.74	304.86	37.66	225.25	85.12	643.4	145.37	33.53
CONWAY	848.72	615.75	757.89	232.97	159.05	191.7	40.5	916.94	334.1	354.67
APOPKA	1034	771.69	867.34	262.31	47.41	356.85	44.53	914.75	299.55	442.39
CLERMONT	314.89	236.78	406.5	78.11	39.71	84.77	11.8	446.21	217.57	95.28
HIGHLANDS	1196.77	973.16	292.57	223.62	7.94	179.56	60.26	300.51	75.87	14.06
LONGWOOD	509.05	336.27	560.16	172.77	71.8	223.29	23.68	631.97	92.77	246.4
DELAND	1224.62	987.45	405.4	237.17	17.37	539.84	24.1	422.77	165.46	133.27
ZEPHYRHILLS	220.74	181.14	137.22	39.6	4.23	52.49	12.59	141.44	39.66	12.99
BUENA VISTA	342.78	162.59	1387.34	180.19	297.01	50.53	22.51	1684.36	578.79	421.52
MONTICELLO	2079.47	1845.42	337.82	234.05	16.29	210.65	117.9	354.12	93.32	42.4
OCALA	2059.66	1794.9	645.17	264.76	32.82	303.72	117.29	677.99	166.85	41.52
SEVEN SPRINGS	964.65	617.58	1553.23	347.08	81.96	438.54	75.78	1635.19	508.16	618.82
WALSINGHAM	804.19	560.24	549.87	243.95	55.46	597.92	149.67	605.33	144.63	362.92
WINTER GARDEN	428.57	281.01	879.57	147.57	74.21	169.96	35.27	953.78	381.68	378.96
CLEARWATER	801.05	558.51	555.06	242.54	54.26	606.12	76.28	609.31	143.24	165.04
JAMESTOWN	696.53	473.56	1245.01	222.97	102.91	201.99	32.55	1347.91	372.87	638.31
LAKE WALES	1699.81	1340.67	683.78	359.14	47.41	480.08	72.38	731.19	418.74	170.83

	TOT_OH_PRIMARY	TOT_OH_BRANCH	TOT_UG_BRANCH	TOT_OH_SCND_CABLE	TOT_OH_SERV_CABLE	TOT_UG_PRIMARY	TOT_UG_SCND_CABLE	TOT_UG_SERV_CABLE	UG_SEC_CABLE
Impacted	22149.75	15703.73	5426.53	2130.14	523.43	6244.31	1587.76	1890.56	1452

	TOT_OH_PRIMARY	TOT_OH_BRANCH	TOT_UG_BRANCH	TOT_OH_SCND_CABLE	TOT_OH_SERV_CABLE	TOT_UG_PRIMARY	TOT_UG_SCND_CABLE	TOT_UG_SERV_CABLE	UG_SEC_CABLE
Impacted	23693.66	16171.71	7033.52	2662.11	512.06	8379.82	2315.64	2641.84	2142.34

	OH_PRIMARY	OH_BRANCH	UG_BRANCH	OH_FEEDER	UG_FEEDER	OH_SEC_CABLE	OH_SERV_CABLE	UG_PRIMARY	UG_SEC_CABLE	UG_SERV_CABLE
Impacted	6467.97	4916.45	5080.57	1551.53	363.34	2476.21	515.57	5443.9	1766.98	1708.81

	OH_PRIMARY	OH_BRANCH	UG_BRANCH	OH_FEEDER	UG_FEEDER	OH_SEC_CABLE	OH_SERV_CABLE	UG_PRIMARY	UG_SEC_CABLE	UG_SERV_CABLE
Impacted	6467.97	4916.45	5080.57	1551.53	363.34	2476.21	515.57	5443.9	1766.98	1708.81

	OH_PRIMARY	OH_BRANCH	UG_BRANCH	OH_FEEDER	UG_FEEDER	OH_SEC_CABLE	OH_SERV_CABLE	UG_PRIMARY	UG_SEC_CABLE	UG_SERV_CABLE
Impacted	11579.12	9087.78	7371.73	2491.34	907.53	3713.61	673.42	8279.29	2722.08	2688.4

	OH_PRIMARY	OH_BRANCH	UG_BRANCH	OH_FEEDER	UG_FEEDER	OH_SEC_CABLE	OH_SERV_CABLE	UG_PRIMARY	UG_SEC_CABLE	UG_SERV_CABLE
Impacted	18011.57	13956.79	12627.71	4054.77	1301.28	6352.55	1170.29	13928.98	4731.56	4451.49

N/A

	Total Transformers	Total Poles
Impacted	149302	472219

	Total Transformers	Total Poles
Impacted	144005	420318

	Total Transformers	Total Poles
Impacted	173194	555555

	Total Transformers	Total Poles
Impacted	173194	555555

	Total Transformers	Total Poles
Impacted	173732	511948

	Total Transformers	Total Poles
Impacted	349038	1069669

N/A

Source: Per FERC FORM 1 - pages 354-355

DISTRIBUTION OF SALARIES AND WAGES

Dollars in Thousands

Page No.	Line No.	Title of the FERC Account	12/31/2010	12/31/2012	12/31/2016	12/31/2017
354	1	**Electric**				
354	2	**Operation**				
354	3 b	Production	78,460	83,783	29,834	24,705
354	4 b	Transmission	11,019	9,914	8,009	8,293
354	5 b	Regional Market	0	0	0	0
354	6 b	Distr bution	37,107	37,810	28,342	27,835
354	7 b	Customer Accounts	18,454	19,395	28,228	26,475
354	8 b	Customer Service and Informational	11,492	12,902	8,017	7,825
354	9 b	Sales	927	1,132	2,601	4,379
354	10 b	Administrative and General	62,558	60,259	95,440	70,286
354	11 b	**TOTAL Operation (Total of lines 3 thru 10)**	220,016	225,194	200,470	169,798
354	12	**Maintenance**				
354	13 b	Production	39,955	47,264	64,261	64,803
354	14 b	Transmission	6,974	7,463	4,343	3,722
354	15 b	Regional Market	0	0	0	0
354	16 b	Distr bution	20,843	24,920	25,478	25,836
354	17 b	Administrative and General	31	8	5	33
354	18 b	**TOTAL Maintenance (Total of lines 13 thru 17)**	67,803	79,655	94,087	94,394
354	19	**Total Operation and Maintenance**				
354	20 b	Production (Total of lines 3 and 13)	118,415	131,047	94,095	89,509
354	21 b	Transmission (Total of lines 4 and 14)	17,993	17,377	12,352	12,015
354	22 b	Regional Market (Total of lines 5 and 15)	0	0	0	0
354	23 b	Distr bution (Total of lines 6 and 16)	57,950	62,730	53,820	53,671
354	24 b	Customer Accounts (Transcribe Line 7)	18,454	19,395	28,228	26,475
354	25 b	Customer Service and Informational (Transcr be Line 8)	11,492	12,902	8,017	7,825
354	26 b	Sales (Transcribe Line 9)	927	1,132	2,601	4,379
354	27 b	Administrative and General (Total of lines 10 and 17)	62,588	60,267	95,445	70,319
354	28 b	TOTAL Oper. And Maint. - Direct Payroll Distribution (Total of Lines 20 thru 27)	287,819	304,849	294,557	264,192
354	28 c	**TOTAL Oper. And Maint - Allocation of Payroll Charged for Clearing Accounts**	7,062	5,602	1,055	1,057
354	28 d	**TOTAL Operation & Maintenance - Electric**	294,882	310,451	295,612	265,249
354	29	**Gas**				
354	30	**Operation**				
354	31 b	Production-Manufactured Gas	0	0	0	0
354	32 b	Production-Natural Gas (Including Expl and Dev.)	0	0	0	0
354	33 b	Other Gas Supply	0	0	0	0
354	34 b	Storage, LNG Terminaling and Processing	0	0	0	0
354	35 b	Transmission	0	0	0	0
354	36 b	Distr bution	0	0	0	0
354	37 b	Customer Accounts	0	0	0	0
354	38 b	Customer Service and Informational	0	0	0	0
354	39 b	Sales	0	0	0	0
354	40 b	Administrative and General	0	0	0	0
354	41 b	**TOTAL Operation (Total of lines 31 thru 40)**	0	0	0	0
354	42	**Maintenance**				
354	43 b	Production-Manufactured Gas	0	0	0	0
354	44 b	Production-Natural Gas (Including Exploration and Development)	0	0	0	0
354	45 b	Other Gas Supply	0	0	0	0
354	46 b	Storage, LNG Terminaling and Processing	0	0	0	0
354	47 b	Transmission	0	0	0	0
355	48 b	Distr bution	0	0	0	0
355	49 b	Administrative and General	0	0	0	0
355	50 b	**TOTAL Maintenance (Total of lines 43 thru 49)**	0	0	0	0
355	51	**Total Operation and Maintenance**				
355	52 b	Production-Manufactured Gas (Total of lines 31 and 43)	0	0	0	0
355	53 b	Production-Natural Gas (Including Expl. And Dev), Line 32	0	0	0	0
355	54 b	Other Gas Supply (Total of lines 33 and 45)	0	0	0	0
355	55 b	Storage, LNG Terminaling and Processing (Total of lines 31 thru	0	0	0	0
355	56 b	Transmission Lines (Total of lines 35 and 47)	0	0	0	0
355	57 b	Distr bution (Total of lines 36 and 48)	0	0	0	0
355	58 b	Customer Accounts (Line 37)	0	0	0	0
355	59 b	Customer Service and Informational (Line 38)	0	0	0	0
355	60 b	Sales (Line 39)	0	0	0	0
355	61 b	Administrative and General (Total of lines 40 and 49)	0	0	0	0
355	62 b	TOTAL Oper. and Maint.- Direct Payroll Distr bution (Total of Lines 52 thru 61)	0	0	0	0
355	62 c	**TOTAL Oper. and Maint. - Allocation of Payroll Charged for Clearing Accounts**	0	0	0	0
355	62 d	**TOTAL Operation and Maintenance - Gas**	0	0	0	0
355	63-64b	Other Utility Departments - Direct Payroll Distribution	0	0	0	0
355	63-64c	Other Utility Departments - Allocation of Payroll Charged for Clearing Accounts	0	0	0	0
355	63-64d	**Other Utility Departments - Total**	0	0	0	0
355	64	**Operation and Maintenance**				
355	65 b	**TOTAL All Utility Dept. (Total of lines 28, 62, and 64) - Direct Payroll Distribution**	287,819	304,849	294,557	264,192
355	65 c	**TOTAL All Utility Dept. (Total of lines 28, 62, and 64) - Allocation of Payroll Charged for Clearing Accounts**	7,062	5,602	1,055	1,057
355	65 d	**TOTAL All Utility Dept. (Total of lines 28, 62, and 64)**	294,882	310,451	295,612	265,249
355	66	**Utility Plant**				
355	67	**Construction (By Utility Departments)**				
355	68 b	Electric Plant- Direct	92,801	95,871	119,276	128,360
355	68 c	Electric Plant - Allocation	9,993	10,501	9,487	10,178
355	68 d	**Electric Plant - Total**	102,794	106,372	128,764	138,538
355	69 b	Gas Plant - Direct	0	0	0	0
355	69 c	Gas Plant - Allocation	0	0	0	0

Source: Per FERC FORM 1 - pages 354-355

DISTRIBUTION OF SALARIES AND WAGES

Dollars in Thousands

Page No.	Line No.	Title of the FERC Account	12/31/2010	12/31/2012	12/31/2016	12/31/2017
355	69 d	**Gas Plant - Total**	0	0	0	0
355	70 b	Other (details in footnotes) - Direct	0	0	0	0
355	70 c	Other (details in footnotes) - Allocation	0	0	0	0
355	70 d	**Other (details in footnotes) - Total**	0	0	0	0
355	71 b	**TOTAL Construction (Total of lines 68 thru 70) - Direct**	92,801	95,871	119,276	128,360
355	71 c	**TOTAL Construction (Total of lines 68 thru 70) - Allocation**	9,993	10,501	9,487	10,178
355	71 d	**TOTAL Construction (Total of lines 68 thru 70) - Total**	102,794	106,372	128,764	138,538
355	72	**Plant Removal (By Utility Departments)**				
355	73 b	Electric Plant - Direct	0	0	22,575	25,785
355	73 c	Electric Plant - Allocation	0	0	0	0
355	73 d	**Electric Plant - Total**	0	0	22,575	25,785
355	74 b	Gas Plant - Direct	0	0	0	0
355	74 c	Gas Plant - Allocation	0	0	0	0
355	74 d	**Gas Plant - Total**	0	0	0	0
355	75 b	Other (details in footnote) - Direct	0	0	0	0
355	75 c	Other (details in footnote) - Allocation	0	0	0	0
355	75 d	**Other (details in footnote)- Total**	0	0	0	0
355	76 b	**TOTAL Plant Removal (Total of lines 73 thru 75) - Direct**	0	0	22,575	25,785
355	76 c	**TOTAL Plant Removal (Total of lines 73 thru 75) - Allocation**	0	0	0	0
355	76 d	**TOTAL Plant Removal (Total of lines 73 thru 75) - Total**	0	0	22,575	25,785
355	95 b	TOTAL Other Accounts - Direct	30,219	26,582	26,697	47,879
355	95 c	TOTAL Other Accounts - Allocation	-17,055	-16,103	-10,542	-11,235
355	95 d	**TOTAL Other Accounts - Total**	13,164	10,479	16,154	36,644
355	96 b	TOTAL SALARIES AND WAGES - Direct	410,839	427,302	463,106	466,216
355	96 c	TOTAL SALARIES AND WAGES - Allocation	0	0	0	0
355	96 d	**TOTAL SALARIES AND WAGES - Total**	410,839	427,302	463,106	466,216

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: June 1, 2018

DUKE ENERGY FLORIDA, LLC'S FIRST SUPPLEMENTAL RESPONSE TO CITIZENS' FIRST SET OF INTERROGATORIES (NOS. 1-50)

Duke Energy Florida, LLC ("DEF"), subject to and without waiving the contemporaneously served objections to these requests, responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") First Set of Interrogatories to DEF (Nos. 1-50) as follows:

1. Storm Timeline. For each of the seven storms listed on Appendix A, Page 1 and Page 7 of the Company's December 28, 2017 filing, provide a timeline summary indicating when the first costs were incurred, when the majority of the mobilization began, when the storm began, the peak storm time, when the storm ended, when demobilization started, when the majority of final costs were incurred and when the final cost was incurred (i.e., when follow-up work was completed).

Answer:

Storm	1st cost Incurred (month)	Mobilization Began	Storm Began	Storm Peak	Storm Ended	Demobilization Started	Majority Of Final Cost (month)	Final Cost (month)
Debby	June 2012	6/25/12	6/24/12	6/27/12	6/27/12	6/29/12	June 2012	April 2013
Isaac	August 2012	8/25/12	8/27/12	8/27/12	8/27/12	8/27/12	August/Sept 2012	April 2013
Colin	June 2016	6/2/16	6/5/16	6/5/16	6/6/16	6/6/16	June 2016	May 2017
Hermine	August 2016	8/31/16	9/1/16	9/2/16	9/5/16	9/3/16	August 2016	July 2017
Matthew	October 2016	10/5/16	10/6/16	10/7/16	10/10/16	10/8/16	October 2016	July 2018
Irma	September 2017	9/9/17	9/11/17	9/12/17	9/19/17	9/17/17	September 2017	Final Incurred cost still being received

Nate	October 2017	10/7/17	10/7/17	10/7/17	10/8/17	10/8/17	October 2017	Final Incurred cost still being received

2. Hurricane Matthew. Refer to Appendix A, page 7. Please explain how the Company incurred approximately $35,800,000 in Hurricane Matthew related costs when according the NOAA storm track for Hurricane Matthew, the eye of the storm traveled up Florida's east coast without making landfall in Florida. See https://www.nhc.noaa.gov/data/tcr/AL142016_Matthew.pdf at page 82.

Answer:
Although the eye of Hurricane Matthew never made landfall in Florida, DEF must prepare to respond to a storm's impact without the benefit of knowing exactly where, or if, the storm will officially make landfall in Florida, and preparation alone can result in significant costs. Moreover, as with Matthew, a storm can cause severe disruptions to electrical service and facilities without making landfall. The center of Matthew tracked just east of Florida's Atlantic coast causing extensive damage and power outages to the eastern Florida Peninsula, even though Matthew never officially made landfall on the Florida Peninsula. The strongest, hurricane-strength winds and gusts were registered along and near the east coast, and tropical storm-force sustained winds and gusts were generally observed at stations throughout the eastern half of the Peninsula with rain totals ranging from 5-7".

Deland- 62 mph sustained winds
Orlando-61mph sustained winds
North and south central zones-30-40 mph sustained winds
Pinellas County and neighboring counties-40-50 mph wind gust

Both sustained winds, wind gust and rain associated with Hurricane Matthew resulted in 316,600 customers restored (165,300 Peak Customers Out and 8,094 Outage Events).

3. Vegetation Management. Refer to the Company's response to Citizens' Interrogatory No. 5 in Docket No. 20170215-EI. Provide for each year 2012-2017 the amount of vegetation management that was allowed in base rates O&M expense.

Answer: See response previously provided on April 18, 2018.

4. Poles. Refer to the Company's response to Citizens' Interrogatory No. 8c in Docket No. 20170215-EI. Provide for each year 2008-2017 the amount of cost capitalized for the replacements listed.

Answer: See response previously provided on April 18, 2018.

5. Poles. Refer to the Company's response to Citizens Interrogatory No. 8c and 8e in Docket No. 20170215-EI. Are the storm replaced poles included in the pole counts listed in 8c?

Answer: See response previously provided on April 18, 2018.

6. Poles. Provide, for each of the seven storms, a summary of the number of poles replaced, by either Company crews or contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer: Please see the attached document bearing Bates Number 20170272-DEF-OPC-ROG 1-6-00002 which supersedes the document bearing Bates Number 20170272-DEF-OPC-ROG 1-6-00001.

7. System. Starting in 2015, please provide a summary of distribution miles that identities the number of miles, the number of poles, the amount of conductor, and the number of transformers by district.

Answer: See response previously provided on April 18, 2018.

8. System. For each of the seven storms, please provide the number of miles, the number of poles, the amount of conductor and the number of transformers that were impacted by each of the respective storms.

Answer: See response previously provided on April 18, 2018.

9. Storm Accounting Policies and Procedures. Provide a detailed explanation how the storm costs were accounted for (i.e. by cost code or other designation), including the designation used, how the costs were charged to specific functions, how materials and supplies were accounted for (i.e. withdrawn from inventory and charged to the storm, how vehicle and fuel costs were tracked or assigned, and how contractors and vendors were instructed to account for capital work.

Answer: See response previously provided on April 18, 2018.

10. Storm Accounting Policies and Procedures. Since the storms cover the years 2012 through 2017, please identify any major changes to the accounting policies and procedures and when they occurred.

Answer: See response previously provided on April 18, 2018.

11. Contractors. Explain what measures are taken to determine that contractors rates are reasonable and comparable from contractor to contractor.

Answer:
DEF will provide this response at a later date.

12. Standby. Does the Company have any information that would identify what costs were incurred for standby contractors and mutual assistance? If not, explain why the Company does not analyze this cost, how the Company mitigates standby and how the Company can assert that all the cost requested are reasonable. If yes, please provide the information.

Answer:
As a general practice in the utility industry, the assistance period commences when the responding company begins responding to the requesting utility's needs and ceased when the responding company is released and has returned back to their point of origin. Due to the nature of emergency assistance, mutual assistance agreements are based on labor hours to prepare, respond, and return to home base. Off system contractor and Mutual Assistance resources (line, tree, damage assessment, leadership, and support) record direct hours worked in support of the storm and do not typically differentiate by activity. In general, resources are either "pre-positioned" strategically ahead of landfall or working in direct support of restoration. Pre-positioning is necessary to have resources close to areas of damage so that restoration work can begin as soon as possible; for example in support of county EOC road clearing. Crews staged outside the hurricane path must travel large distances and navigate evacuation traffic to reach affected areas.

Under normal operations crews may be held over from the end of their shift with pay in anticipation of inclement weather in order to accelerate restoration. If weather does not develop, crews receive standby pay. In hurricane Irma all crews charging the event performed restoration work, so no standby was paid. In contrast, DEF incurred costs it considers "standby" costs in response to hurricane Nate; DEF called for mutual aid in

anticipation of the storm impacting DEF's service territory, when the storm's track shifted and DEF escaped the impact of the storm, the aid resources were released.

DEF attempts to secure the assistance it deems necessary to appropriately respond to the storm event, recognizing that these decisions must be made in advance of landfall to both ensure that sufficient resources can be obtained and to allow those resources sufficient time to mobilize and travel to, or as close as possible to, DEF's service territory so those resources are in position to begin response efforts as soon as conditions allow. DEF is mindful of its obligation to prudently manage its costs, but it is nonetheless incumbent on DEF to ensure adequate resources are available to restore service to its customers as quickly and safely as reasonably possible. To that end, DEF "mitigates" standby costs by using its collective judgment and experience to engage the appropriate amount of outside assistance. DEF manages its contract rates to ensure the rates it pays are reasonable in the marketplace.

Certain contractors may identify "standby" time on their invoices; however, DEF has no knowledge of how those contractors define standby, and therefore DEF does not specifically track those costs.

13. Recovery. Please refer to paragraph 18 of the Petition filed on December 28, 2017, please explain why the Company's issues do not include the other five named storms on Appendix A, Page 7 which reduced the storm reserve balance prior to the 2017 storm season and whether those costs were properly charged against the storm reserve pursuant to Rule 25-6.0143, F.A.C.

Answer: See response previously provided on April 18, 2018.

14. Please provide, for each of the seven storms, a summary of the number of miles of conductor replaced, by Company crews or contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer: Please see the document responsive to question 6 bearing Bates Number 20170272-DEF-OPC-ROG 1-6-00002 which supersedes the document bearing Bates Number 20170272-DEF-OPC-ROG 1-6-00001.

15. Please provide, for each of the seven storms, a summary of the number of cross arms replaced, by Company crews or by contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer: Please see the document responsive to question 6 bearing Bates Number 20170272-DEF-OPC-ROG 1-6-00002 which supersedes the document bearing Bates Number 20170272-DEF-OPC-ROG 1-6-00001.

16. Please provide, for each of the seven storms, a summary of the number of cross transformers replaced, by Company crews or by contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer: Please see the document responsive to question 6 bearing Bates Number 20170272-DEF-OPC-ROG 1-6-00002 which supersedes the document bearing Bates Number 20170272-DEF-OPC-ROG 1-6-00001.

17. Cost Summary. Provide for the storms listed on Appendix A, Page 7 a summary similar to that presented for Irma and Nate on Page 1 of Appendix A.

Answer: Appendix A was attached to DEF's estimated cost filing on December 28, 2018. DEF has filed its actual cost filing on May 31, 2018. Please refer to Exhibit No. __(BB-2) for the answer to this question.

18. Cost Summary. Provide for the each storm listed on Appendix A, Page 1 a summary, by function, of the respective types of costs included in total listed on line 2 and line 6 (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies, etc.).

Answer: Appendix A was attached to DEF's estimated cost filing on December 28, 2018. DEF has filed its actual cost filing on May 31, 2018. Please refer to Exhibit No. __(BB-2) for the answer to this question.

19. Cost Summary. Provide for the each storm listed on Appendix A, Page 7 a summary, by function, of the respective types of costs included in the each of the total listed on lines 3

through 7 (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies, etc.).

Answer: Appendix A was attached to DEF's estimated cost filing on December 28, 2018. DEF has filed its actual cost filing on May 31, 2018. Please refer to Exhibit No. __(BB-2) for the answer to this question.

20. Mobilization/Demobilization. Refer to Appendix A Page 1 and Page 7. For each of the storms provide a summary, by function, of what amount of contractor and what amount of line clearing costs are included in their respective totals were for mobilization and demobilization.

Answer:
Please see DEF's response to question #12 above. As general practice, Duke Energy, when engaging mutual assistance/contractors for emergency restoration, does not break out or specify standby / mobilization / demobilization charging and therefore does not track costs in that manner. At this time utility emergency assistance practice is that the assistance period commences when personnel and/ or equipment are initially incurred by the responding company to the requesting utility's needs. Due to the nature of emergency assistance, practice agreements are based on labor hours to prepare, respond, and return to home base.

21. Capitalized Cost. Provide, for each of the seven storms, a detailed summary, by function, that shows an itemization of plant costs by type (i.e. poles, conductor, cross arms, transformers, etc.) that were capitalized, the associated quantities and the associated costs.

Answer: Below are distribution capitalized costs. Transmission capitalized costs will be provided at a later date.

Type of Material (#)	Debby	Isaac	Hermine	Matthew	Irma	Total
Transformer - Pole	83	2	158	173	1,580	**1,996**
Transformer - Padmount	17	1	20	15	73	**126**
Wire	132,791	11,143	116,190	169,548	1,715,421	**2,145,093**
Cutout	285	-	315	321	4,134	**5,055**
Pole	89	7	75	213	2,130	**2,514**
Cable - Underground	-	1,770	-	45	22,904	**24,719**
Arrestor	66	-	281	212	1,923	**2,482**
Switchgear	-	-	-	1	3	**4**

Luminaire	6	65	-	-	477	**548**
Recloser	-	-	-	-	-	**-**
Regulator	-	-	-	-	2	**2**
Streetlight Pole	1	-	-	-	139	**140**

Type of Material ($)	Debby	Isaac	Hermine	Matthew	Irma	Total
Transformer - Pole	$ 85,607	$ 1,699	$ 112,962	$ 127,258	$1,226,725	**$ 1,554,251**
Transformer - Padmount	$ 61,194	$ 1,783	$ 75,614	$ 42,164	$ 290,315	**$ 471,070**
Wire	$ 79,881	$ 6,136	$ 37,565	$ 58,020	$ 597,220	**$ 778,823**
Cutout	$ 18,646	$ -	$ 15,984	$ 14,155	$ 221,910	**$ 270,695**
Pole	$ 13,238	$ 2,081	$ 11,382	$ 35,158	$ 330,955	**$ 392,815**
Cable - Underground	$ -	$ 3,171	$ -	$ 59	$ 31,915	**$ 35,144**
Arrestor	$ 2,628	$ -	$ 7,670	$ 5,200	$ 46,528	**$ 62,026**
Switchgear	$ -	$ -	$ -	$ 18,184	$ 47,423	**$ 65,607**
Luminaire	$ 321	$ 5,965	$ -	$ -	$ 56,140	**$ 62,425**
Recloser	$ -	$ -	$ (0)	$ -	$ -	**$ (0)**
Regulator	$ -	$ -	$ -	$ -	$ 24,750	**$ 24,750**
Streetlight Pole	$ 152	$ -	$ 0	$ -	$ 43,619	**$ 43,771**
	$ 261,667	**$ 20,835**	**$ 261,178**	**$ 300,197**	**$2,917,499**	**$ 3,761,376**

The above material costs reflect the direct cost and does not include any material burden. That is applied during the capital calculation - see OPC ROG 22.

22. Capitalized Cost. Provide, for each of the seven storms, a detailed summary, by function, that shows an itemization of costs by type (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies etc.).

Answer: Below are distribution capitalized costs. Transmission capitalized costs will be provided at a later date.

Material Components:	Debby	Isaac	Hermine	Matthew	Irma	Total
Capital Materials - Units of Property	$ 261,667	$ 20,835	$ 261,178	$ 300,197	$ 2,917,499	$ 3,761,376
Capital Materials - Warehouse Burdens	$ 26,167	$ 2,084	$ 26,118	$ 30,020	$ 291,750	$ 376,138
Working Stock materials	$ 39,250	$ 3,125	$ 39,177	$ 45,030	$ 437,625	$ 564,206
Capital Materials - Units of Property incl Burdens	$ 327,084	$ 26,044	$ 326,472	$ 375,246	$ 3,646,873	$ 4,701,720
Labor Components:						
Labor & Burdens to install Units of Property	$ 399,362	$ 37,228	$ 412,737	$ 748,331	$ 7,753,275	$ 9,350,933
Contractor/Affiliate adder	$ 243,054	$ 22,657	$ 231,029	$ 418,877	$ 4,248,752	$ 5,164,369
Overhead Allocation - applied to Labor only	$ 79,872	$ 7,446	$ 107,919	$ 190,932	$ 2,261,726	$ 2,647,895
Fleet Loading - applied to Labor only	$ 99,841	$ 9,307	$ 103,469	$ 183,678	$ 2,337,352	$ 2,733,646
Capital Labor on UOP incl Loading items	$ 822,129	$ 76,638	$ 855,153	$ 1,541,818	$ 16,601,106	$ 19,896,844
Distribution Capital Cost	**$ 1,149,213**	**$ 102,682**	**$ 1,181,626**	**$ 1,917,065**	**$ 20,247,979**	**$ 24,598,564**

23. Non-incremental Costs. Provide, for each of the seven storms, a detailed summary, by function, that shows an itemization of costs by type (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies etc.).

Answer: DEF has provided this information as Exhibit No. __ (BB-2) to the direct testimony of Bryan Buckler on May 31, 2018.

24. Payroll. Refer to Appendix A. For each of the seven storms provide an explanation of what related costs, if any, are included in the overtime payroll amounts, identify each type of related costs and the respective amount(s) (i.e. benefits, overheads and payroll taxes) and provide the overtime included in the total cost for each respective storm.

Answer: DEF will provide this response at a later date.

25. Payroll. Refer to Appendix A. For each of the seven storms provide an explanation of what related costs, if any, are included in the regular payroll amounts, identify each type of related costs and the respective amount(s) (i.e. benefits, overheads and payroll taxes) and provide the overtime included in the total cost for each respective storm.

Answer: DEF will provide this response at a later date.

26. Payroll. Refer to Appendix A. Identify the amount of any incentive compensation included in the recorded costs charged to each of the seven storms and identify how any of the costs were excluded from this request (i.e. as non-incremental or as capitalized).

Answer: DEF will provide this response at a later date.

27. Payroll. Provide for each year, 2012, 2016 and 2017 the regular payroll, by O&M account, included in base rates identifying the Docket setting rates and the effective date rates when into effect (i.e. if rates went into effect during the year provide a prorate from each docket for that year).

Answer: See response previously provided on April 18, 2018.

28. Payroll. Provide for each year, 2012, 2016 and 2017 the actual regular payroll, by O&M account for that year.

Answer: See response previously provided on April 18, 2018.

29. Payroll. Provide for each year, 2012, 2016 and 2017 the overtime payroll, by O&M account, included in base rates identifying the Docket setting rates and the effective date rates when into effect (i.e. if rates went into effect during the year provide a prorate from each docket for that year).

Answer: See response previously provided on April 18, 2018.

30. Payroll. Provide for each year, 2012, 2016 and 2017 the actual overtime payroll, by O&M account for that year.

Answer: See response previously provided on April 18, 2018.

31. Regular Payroll. Provide, for each of the seven storms, a summary of the regular payroll by week charged to restoration work order (i.e. this would be just payroll and excludes overheads and/or other related costs).

Answer: DEF will provide this response at a later date.

32. Overtime Payroll. Provide, for each of the seven storms, a summary of the overtime payroll by week by charged to restoration work order (i.e. this would be just payroll and excludes overheads and/or other related costs).

Answer: DEF will provide this response at a later date.

33. Third Party Billing. Refer to Appendix A. Was the Company billed by any third party pole owners for pole replacements performed by the third party during any of the seven storms and if so provide a summary of costs by third parties for each storm.

Answer: See response previously provided on April 18, 2018.

34. Third Party Billing. Refer to Appendix A. Did the Company bill by any third party for pole replacements performed by the Company or its contractors during any of the seven storms and if so provide a summary of costs billed the third party for each storm.

Answer: See response previously provided on April 18, 2018.

35. Third-Party Reimbursement. Provide an explanation how the costs for third-party reimbursement were tracked and billed and include a summary of poles replaced during any of the seven storms along with the respective associated cost.

Answer: See response previously provided on April 18, 2018.

36. Overhead Costs. For payroll costs if an overhead rate was used for benefits and other related costs provide, by year, the respective overhead rates and an explanation of how the rates were determined.

Answer: See the attached schedule bearing Bates Number 20170272-DEF-OPC ROG-1-36-00001.

37. Overheads. Provide for the same time period storm costs were recorded the respective overhead rates used for recording the normal general operating costs for the Company and explain any difference between the normal rates and the rates used for storm costs.

Answer:
The same rate would be applied to any labor associated with storm costs as was applied to labor elsewhere in the Company.

38. Outside Contractors. Are all outside contractors' time to be approved by a Company representative? If yes, what happens if time reports are not approved? If no, explain why not and how the Company can be confident that the services were performed?

Answer:
Yes, outside contractors are supervised by Company personnel and time spent on restoration activities is one element of that supervision function; DEF's feeder coordinators review time sheets daily and provide feedback to the storm center about crew effectiveness. When Duke Energy is responding to hurricane events requiring significant resources acquisition, Duke Energy line resources, because of their knowledge

of our system and the availability of technology in their vehicles, are assigned oversight of off-system contractor resources. Typically, the ratio is 1 Duke Energy employee to approximately 25 off-system contract resources. Duke Energy and off-system resources transition to standard daytime and overnight working schedules. The Duke Energy resources oversee daily safety, operational performance and schedule adherence of the off-system contractors. In addition, all contractor invoices are audited for accuracy.

39. Line Clearing. Refer to Appendix A. Provide, for each of the seven storms, a summary of line clearing costs (listing each invoice), and the line clearing contractor.

Answer: DEF will provide this response at a later date.

40. Line Clearing. Refer to Appendix A. Provide, for each the seven storms, a summary showing the date and number of crews mobilized and the date and number of crews demobilized.

Answer:

Debby - 2012		
Date	**Mobilized**	**Demobilized**
6/25/12	230	0
6/26/12	85	0
6/27/12	14	0
6/29/12	0	164
6/30/12	0	115
7/1/12	0	50

Isaac - 2012		
Date	**Mobilized**	**Demobilized**
8/25/12	150	0
8/27/12	0	100
8/29/12	0	50

Colin - 2016		
Date	**Mobilized**	**Demobilized**
6/2/16	41	0
6/6/16	0	41

Hurricane Hermine - 2016		
Date	**Mobilized**	**Demobilized**
8/31/16	32	0
9/1/16	191	0
9/2/16	23	0
9/3/16	143	34
9/4/16	0	118
9/5/16	0	0
9/6/16	0	217
9/7/16	0	20

Hurricane Matthew - 2016		
Date	**Mobilized**	**Demobilized**
10/5/16	163	0
10/6/16	71	0
10/7/16	0	0
10/8/16	0	27
10/9/16	0	44
10/10/16	0	0
10/11/16	0	163

Hurricane Irma - 2017		
Date	**Mobilized**	**Demobilized**
9/9/17	105	0
9/10/17	295	0
9/11/17	96	0
9/12/17	683	0
9/13/17	767	0
9/14/17	437	0
9/15/17	377	0
9/16/17	436	2
9/17/17	357	1516
9/18/17	339	118
9/19/17	141	77
9/20/17	40	1779
9/21/17	0	515
9/22/17	0	12
9/23/17	0	5
9/24/17	0	49

Nate - 2017		
Date	**Mobilized**	**Demobilized**
10/7/17	242	0
10/8/17	0	242

41. Contractors. Explain in detail what services were performed by function by outside contractors (i.e. pole & wire work, plant repairs, etc.). If different for any of the seven storms please explain the difference.

Answer:
In general, Logistics contractors are utilized to support the utilization of the following assets skills, resource, labor needs:

- Vegetation Contractors perform tree trimming in support restoration efforts
- Transmission & Distribution contract resources (overhead and underground) set poles, perform wire work (splice and replace),repair or replace overhead and underground equipment, replace transformers, repair and replace street light equipment, replace services, County EOC support, support Road Clearing and Make It Safe efforts.
- Damage Assessment contractors for both Transmission & Distribution perform damage assessment in advance of line resources performing restoration and capture the impact to our electrical system. Transmission contractors may perform DA form both the air and ground.
- Duke Energy leverages contract resources to perform general support and administrative roles

Distribution and Transmission outside contractors leveraged for logistics support including but not limited to meals, lodging, fuel, security, base camp support, traffic control, transportation, laundry services, material management etc

- Base Camp Assets & Services: Main feeding tent and other supporting tents, tables and chairs, light towers, mobile offices/command centers, porta-lets, generators, wash stations, forklifts & pallet jacks, Audio/Video service, fencing/barricades, dumpsters, containment, etc.
- Alternative Housing Assets: In addition to Base Camp assets, includes Sleeper trailers with linens and/or tents and cots with linens, mobile shower/bathroom units, and

housekeeping services. All living quarters shall have appropriate space conditioning for the current climate conditions.

- Food Services: Tables, chairs, mobile kitchen, catering tents, housekeeping services, ability to run meals to satellite locations.
- Parking Services: Parking and flagging on-site with appropriate signage, MOT flaggers for off-site traffic control (in roadways)
- Transportation Services: Busing or shuttle van service (including drivers)
- Lodging Services: Additional hotel coordination resources. Crew Support acquires hotel accommodations through a 3rd party vendor. Potential support needed for hotel key pick-up, room assignment, and key distribution.
- Fuel Services: Fueling, hazmat containment, vehicle maintenance
- Laundry Services: Laundry facilities with laundry collection and distribution coordination. Laundry facilities must be able to support Fire Retardant clothing cleaning requirements.
- Materials Services: Material handling and distribution
- Potential Supplemental Resource Needs: Runners, Additional Site Support, MOT flaggers, Certified Fork Lift Operators, Oversight/Leadership
- Logistics data management at System Logistics Center (data uploading and management of resources, resource type and logistical support for resources).

Customer Service contractors performed the following:

- The services performed were related to the inbound overflow and outbound calls.
- For IRMA and MATTHEW we engaged a service that automatically called customers to give them restoration updates.

Generation contractors performed the following:

- Contract labor and support used to prepare for, staff during, and recover from IRMA, including repairs to plant.

42. Contractors. Identify whether contractors set poles and provide for each of the seven storms the number of poles set by contractors.

Answer: See response previously provided on April 18, 2018.

43. Contractors. Refer to Appendix A. Provide, for each of the seven storms, a summary of costs (listing each invoice) by function, by contractor.

Answer: DEF will provide this response at a later date.

44. Materials & Supplies Expense. Refer to Appendix A. Provide, for each of the seven storms, a summary listing costs, by function, by type of costs.

Answer: DEF will provide this response at a later date.

45. Vehicle & Fuel. Provide, for each of the seven storms, a summary of costs by function identifying the costs by type (i.e. overhead charge, invoiced, contractor/vendor charge, other, etc.) that are included storm cost total.

Answer: DEF will provide this response at a later date.

46. Other Operating Expenses. Explain what type of costs are included in other operating expenses and provide, for each of the seven storms, a summary of costs, by type, by function. Also identify whether P Card costs are included and if so prove a separate summary of those costs by invoice amount.

Answer: DEF will provide this response at a later date.

47. Employee Expenses. Explain what type of costs are included in employee expenses and provide, for each of the seven storms, a summary of costs, by type, by function. Also identify whether P Card costs are included and if so prove a separate summary of those costs by invoice amount.

Answer: DEF will provide this response at a later date.

48. Tree Trimming. Provide for each of the seven storms the amount of line clearing costs by month.

Answer:
Please see the attached document bearing Bates Numbers 20170272-DEF-OPC-ROG 1-48-00001 (Transmission) and 20170272-DEF-OPC-ROG 1-48-00004 (Distribution).

49. Tree Trimming. Provide for each of the seven storms, for any month where line clearing costs were charged to the restoration work order the previous three calendar years of costs for that same month that were charged to O&M expense.

Answer:
Please see the documents responsive to question 48, specifically pages bearing Bates Numbers 20170272-DEF-OPC-ROG 1-48-00002 (Transmission) and 20170272-DEF-OPC-ROG 1-48-00005 (Distribution).

50. Tree Trimming. Rule 25-6.0143(1)(f) states: "The types of storm related costs prohibited from being charged to the reserve under the ICCA [Incremental Cost and Capitalization Approach] methodology include, but are not limited to, the following" and paragraph 8 states: "Tree trimming expenses, incurred in any month in which storm damage restoration activities are conducted, that are less than the actual monthly average of tree trimming costs charged to operation and maintenance expense for the same month in the three previous calendar years." are to be excluded. Provide monthly calculations performed by the Company for each of the seven storms that would show whether the Company is in compliance with this requirement.

Answer:
Please see the documents responsive to question 48, specifically pages bearing Bates Numbers 20170272-DEF-OPC-ROG 1-48-00003 (Transmission) and 20170272-DEF-OPC-ROG 1-48-00006 (Distribution).

Debby
Isaac
Others

	Number of Poles	June	July	August	September	October	November	Total	Capital Material Cost of Poles	June	July	August	September	October	November	Total
DebbyPole	Debby	87	2					89	Debby	$ 12,683	$ 556					$ 13,238
DebbyStreetlight Pole	Debby - Streetlight Poles	1							Debby - Streetlight Poles	152						
IsaacPole	Isaac			7				7	Isaac			2,058	24			$ 2,081
ColinPole	Colin							-	Colin							$ -
HerminePole	Hermine				75			75	Hermine				$ 11,382			$ 11,382
MatthewPole	Matthew					213		213	Matthew					$ 35,158		$ 35,158
IrmaPole	Irma				1,878	252		2,130	Irma				$ 287,657	$ 43,299		$ 330,955
IrmaStreetlightPole	Irma - Streetlight Poles				66	73		139	Irma - Streetlight Poles				$ 42,041	$ 1,578		$ 43,619

	Feet of Wire	June	July	August	September	October	November	Total	Capital Material Cost of Wire	June	July	August	September	October	November	Total
DebbyWire	Debby	122,513	10,278					132,791	Debby	$ 74,270	$ 5,612					$ 79,881
IsaacWire	Isaac			11,143				11,143	Isaac			6,136				$ 6,136
ColinWire	Colin							-	Colin							$ -
HermineWire	Hermine			32,940	82,650	600		116,190	Hermine			$ 15,270	$ 21,846	$ 449		$ 37,565
MatthewWire	Matthew					169,548		169,548	Matthew					$ 58,020		$ 58,020
IrmaWire	Irma				1,573,322	138,099	4,000	1,715,421	Irma				$ 549,849	$ 45,045	$ 2,325	$ 597,220
NateWire	Nate							-	Nate							$ -

	Feet of Cable Underground	June	July	August	September	October	November	Total	Capital Material Cost of Cable Underground	June	July	August	September	October	November	Total
DebbyCable - Underground	Debby							-	Debby					-	-	$ -
IsaacCable - Underground	Isaac			1,770				1,770	Isaac			$ 3,171				$ 3,171
ColinCable Underground	Colin							-	Colin							$ -
HermineCable Underground	Hermine							-	Hermine							$ -
MatthewCable Underground	Matthew					45		45	Matthew					$ 59		$ 59
IrmaCable Underground	Irma				11,550	11,354		22,904	Irma				$ 16,869	$ 15,046		$ 31,915
NateCable Underground	Nate							-	Nate							$ -

	Number of Crossarms	June	July	August	September	October	November	Total	Material Cost of Crossarms	June	July	August	September	October	November	Total
DebbyCrossarm	Debby	33	8					41	Debby	$ 1,248	$ 344					$ 1,592
IsaacCrossarm	Isaac			7				7	Isaac			$ 208				$ 208
ColinCrossarm	Colin							-	Colin							$ -
HermineCrossarm	Hermine			20	25			45	Hermine			$ 602	$ 917			$ 1,519
MatthewCrossarm	Matthew					153		153	Matthew					$ 5,959		$ 5,959
IrmaCrossarm	Irma				585	42		627	Irma				$ 66,303	$ 4,843		$ 71,146
NateCrossarm	Nate							-	Nate							$ -

	Number of Transformers - Pole	June	July	August	September	October	November	Total	Capital Material Cost of Transformers - Pole	June	July	August	September	October	November	Total
DebbyTransformer - Pole	Debby	75	8					83	Debby	$ 78,085	$ 7,522					$ 85,607
IsaacTransformer - Pole	Isaac			2				2	Isaac			$ 1,699				$ 1,699
ColinTransformers - Pole	Colin							-	Colin							$ -
HermineTransformers - Pole	Hermine			106	52			158	Hermine			$ 70,742	$ 42,220			$ 112,962
MatthewTransformers - Pole	Matthew				-	140	33	173	Matthew					$ 110,350	$ 16,908	$ 127,258
IrmaTransformers - Pole	Irma				1,527	53		1,580	Irma				$ 1,183,365	$ 43,360		$ 1,226,725
NateTransformers - Pole	Nate							-	Nate							$ -

	Number of Transformers - Padmount	June	July	August	September	October	November	Total	Capital Material Cost of Transformers - Padmount	June	July	August	September	October	November	Total
DebbyTransformer - Padmount	Debby	15	2					17	Debby	$ 56,214	$ 4,981					$ 61,194
IsaacTransformer - Padmount	Isaac			2	(1)			1	Isaac			$ 12,440	$ (10,657)			$ 1,783
ColinTransformers - Padmount	Colin							-	Colin							$ -
HermineTransformers - Padmount	Hermine				20			20	Hermine				$ 75,614			$ 75,614
MatthewTransformers - Padmount	Matthew					15		15	Matthew					$ 42,164		$ 42,164
IrmaTransformers - Padmount	Irma				66	7		73	Irma				$ 284,081	$ 6,234		$ 290,315
NateTransformers - Padmount	Nate							-	Nate							$ -

Storm Cost Recovery

Loader Percentages	2017	2016	2012 [(a)]
Benefits	14.86%	17.14%	32.87%
Incentives			
non-union	10.50%	10.50%	9.40%
union	3.00%	3.00%	
Payroll Tax	7.65%	7.65%	7.65%
Service Company Overhead Loader	25.25%	27.59%	15.42% (post merger)
Utility Affiliate Overhead loader	54.46%	49.72%	78.3% (post merger)

Detailed explanation

The benefits loader percentage is a simple calculation of budgeted benefits divided by budgeted labor

The non-union incentive loader percentage represents an average amount of incentive payout, at target, as a percentage of a participant's eligible earnings, for non-union employees participating in the Short-term Incentive Plan (STI)
The union incentive loader percentage represents an average amount of incentive payout, at target, as a percentage of a participant's eligible earnings, for union employees participating in the Union Employee Incentive Plan (UEIP)

We use a tax loader percentage of 7.65% to allocate the employer portion of payroll taxes throughout the year, which represents the approximate historical average of payroll tax payments. In December we change the rate to true it up to actual. This rate includes FICA (OASDI & Med), federal unemployment, state unemployment and any employer local taxes

Service Company Overhead Loader Applies to all Service Company labor.
As part of a fully distributed cost, an overhead component is charged to Affiliates as a percentage of Service Company labor costs, whether direct charged, distributed or allocated. This overhead represents the cost of shared services provided to shared services employees.

- A Service Company overhead rate is based on historical enterprise overhead charged to FE&G in the following functions: Information Systems, Transportation, Human Resources, Materials Management, Accounting, Legal, Finance, Facilities, Internal Auditing, Environmental, Health and Safety, Planning, and Executive. The rate is calculated each year as part of the budgeting process. The process to calculate the rate assigns the historical enterprise costs to Shared Services as if they are a business unit and the rate is then determined based on dividing by historical DEBS labor.
- The purpose of this loader is to better align the cost of shared services provided with shared services employees, following their actual labor charged
- The offset for the Overhead Loader in effect reduces the dollars being allocated through the normal Service Company Allocations process

Applies to any labor of a utility that is charged outside of that utility (ie. Duke Energy Florida employee charging Duke Energy Carolinas business). Labor Cost Multiplier

- Also referred to as the Utility Affiliate Loader or Administrative Overhead Rate
- Purpose is to assign overhead costs to utility labor
- Charges are generated when a utility employee charges labor to a business unit outside their jurisdiction
  - RESP_ALLOC tree defines the jurisdictions
  - Based on Payroll Company
- The rate is calculated using departmental overhead costs of each jurisdictions, plus service company governance and support costs and then dividing by total FE&G labor to calculate a rate used by each jurisdictions.

(a) Benefits and incentive overhead percentages reflect legacy Progress Energy's benefits platform.

Description	Tree Trimming Expenses Charged to Storm
TS Debby	8,353
TS Isaac	-
2016 TS Colin	11,804
Hurricane Hermine	72,232
Hurricane Matthew	62,056
Hurricane Irma	2,074,977
Hurricane Nate	-

Tree Trimming Costs By Year and Month

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
2017	87,094	515,282	388,392	351,852	259,601	201,745	218,310	399,842	143,745	529,481	600,201	228,659	3,924,203
2016	256,803	414,319	571,799	401,758	370,319	411,533	394,489	500,666	344,012	304,964	399,504	796,151	5,166,317
2015	430,050	629,830	624,418	666,505	549,386	542,355	441,114	344,642	328,108	366,659	285,422	807,528	6,016,019
2014	367,549	361,613	259,313	684,061	239,473	1,247,732	599,546	568,982	627,601	860,151	590,842	328,993	6,735,857
2013	624,005	378,579	193,737	250,201	20,620	651,081	471,582	510,731	399,699	634,058	757,298	735,760	5,627,351
2012	(134,530)	668,976	212,183	218,271	311,649	1,193,173	85,764	221,890	325,218	528,377	437,022	360,831	4,428,824
2011	8,341	830,203	424,374	342,904	259,421	365,922	111,780	369,366	478,699	354,072	673,667	1,115,245	5,333,994
2010	270,008	99,312	299,929	242,587	485,471	31,572	175,789	335,949	239,399	162,254	15,910	1,055,793	3,413,973
2009	266,663	206,234	74,967	156,624	360,609	326,860	309,478	372,528	365,898	529,789	166,519	823,320	3,959,489

Storm Month	Description	Average	Actual
June 2012	TS Debby	241,451	1,193,173
August 2012	TS Isaac	359,281	221,890
June 2016	2016 TS Colin	813,723	411,533
September 2016	Hurricane Hermine	451,803	344,012
October 2016	Hurricane Matthew	620,289	304,964
September 2017	Hurricane Irma	433,240	143,745
October 2017	Hurricane Nate	510,591	529,481

		Tree Trimming		
Storm Month	Description	Average	Actual	Disallowance
June 2012	TS Debby	241,451	1,193,173	-
August 2012	TS Isaac	359,281	221,890	(137,391)
June 2016	2016 TS Colin	813,723	411,533	(402,189)
September 2016	Hurricane Hermine	451,803	344,012	(107,791)
October 2016	Hurricane Matthew	620,289	304,964	(315,325)
September 2017	Hurricane Irma	433,240	143,745	(289,496)
October 2017	Hurricane Nate	510,591	529,481	-

Storm	Tree Trimming Expenses Charged to the Storm	
Debby	$	921,810
Isaac	$	408,185
Colin	$	510,110
Hermine	$	2,027,830
Matthew	$	2,043,861
Irma	$	26,016,030
Nate	$	-
Total	**$**	**31,927,827**

Tree Trimming Costs By Year and Month

Year	Debby Jun-12	Isaac Aug-12	Colin Jun-16	Hermine Sep-16	Matthew Oct-16	Irma Sep-17	Nate Oct-17
2009	$ 1,314,982	$ 1,797,269					
2010	$ 1,290,466	$ 2,960,858					
2011	$ 3,359,603	$ 3,435,522					
Average	**$ 1,988,350**	**$ 2,731,216**					
2013			$ 2,270,215	$ 2,401,188	$ 3,231,711		
2014			$ 2,969,693	$ 1,968,066	$ 3,784,546		
2015			$ 3,433,361	$ 3,776,837	$ 3,509,669		
Average			**$ 2,891,090**	**$ 2,715,364**	**$ 3,508,642**		
2014						1,968,066	3,784,546
2015						3,776,837	3,509,669
2016						2,030,321	3,095,468
Average						**$ 2,591,741**	**$ 3,463,228**

For the calculation of non-incremental costs on Hermine the month of September was used as that is the month it impacted our service territory

		Tree Trimming		
Storm Month	Description	Average	Actual	Disallowance
June 2012	TS Debby	1,988,350	1,569,717	(418,633)
August 2012	TS Isaac	2,731,216	2,482,728	(248,488)
June 2016	2016 TS Colin	2,891,090	1,944,700	(946,390)
September 2016	Hurricane Hermine	2,715,364	2,030,321	(685,043)
October 2016	Hurricane Matthew	3,508,642	3,095,468	(413,174)
September 2017	Hurricane Irma	2,591,741	785,587	(1,806,154)
October 2017	Hurricane Nate	3,463,228	1,391,444	(2,071,783)

For Colin only $0.5m in tree trimming expenses were incurred during the storm, so only that amount was considered non-incremental

For Nate no tree trimming costs were incurred and therefore, no non-incremental costs would be reflected

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: June 1, 2018

DUKE ENERGY FLORIDA, LLC'S SECOND SUPPLEMENTAL RESPONSE TO CITIZENS' FIRST SET OF INTERROGATORIES (NOS. 1-50)

Duke Energy Florida, LLC ("DEF"), subject to and without waiving the contemporaneously served objections to these requests, responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") First Set of Interrogatories to DEF (Nos. 1-50) as follows:

1. Storm Timeline. For each of the seven storms listed on Appendix A, Page 1 and Page 7 of the Company's December 28, 2017 filing, provide a timeline summary indicating when the first costs were incurred, when the majority of the mobilization began, when the storm began, the peak storm time, when the storm ended, when demobilization started, when the majority of final costs were incurred and when the final cost was incurred (i.e., when follow-up work was completed).

Answer: See response previously provided on June 1, 2018.

2. Hurricane Matthew. Refer to Appendix A, page 7. Please explain how the Company incurred approximately $35,800,000 in Hurricane Matthew related costs when according the NOAA storm track for Hurricane Matthew, the eye of the storm traveled up Florida's east coast without making landfall in Florida. See https://www.nhc.noaa.gov/data/tcr/AL142016_Matthew.pdf at page 82.

Answer: See response previously provided on June 1, 2018.

3. Vegetation Management. Refer to the Company's response to Citizens' Interrogatory No. 5 in Docket No. 20170215-EI. Provide for each year 2012-2017 the amount of vegetation management that was allowed in base rates O&M expense.

Answer: See response previously provided on April 18, 2018.

4. Poles. Refer to the Company's response to Citizens' Interrogatory No. 8c in Docket No. 20170215-EI. Provide for each year 2008-2017 the amount of cost capitalized for the replacements listed.

Answer: See response previously provided on April 18, 2018.

5. Poles. Refer to the Company's response to Citizens Interrogatory No. 8c and 8e in Docket No. 20170215-EI. Are the storm replaced poles included in the pole counts listed in 8c?

Answer: See response previously provided on April 18, 2018.

6. Poles. Provide, for each of the seven storms, a summary of the number of poles replaced, by either Company crews or contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer: See response previously provided on June 1, 2018.

7. System. Starting in 2015, please provide a summary of distribution miles that identities the number of miles, the number of poles, the amount of conductor, and the number of transformers by district.

Answer: See response previously provided on April 18, 2018.

8. System. For each of the seven storms, please provide the number of miles, the number of poles, the amount of conductor and the number of transformers that were impacted by each of the respective storms.

Answer: See response previously provided on April 18, 2018.

9. Storm Accounting Policies and Procedures. Provide a detailed explanation how the storm costs were accounted for (i.e. by cost code or other designation), including the designation used, how the costs were charged to specific functions, how materials and supplies were

accounted for (i.e. withdrawn from inventory and charged to the storm, how vehicle and fuel costs were tracked or assigned, and how contractors and vendors were instructed to account for capital work.

Answer: See response previously provided on April 18, 2018.

10. Storm Accounting Policies and Procedures. Since the storms cover the years 2012 through 2017, please identify any major changes to the accounting policies and procedures and when they occurred.

Answer: See response previously provided on April 18, 2018.

11. Contractors. Explain what measures are taken to determine that contractors rates are reasonable and comparable from contractor to contractor.

Answer:
All contracts and rates are reviewed and compared to the other contracts and proposed rates received to ensure they are reasonable and customary. If a contract proposal is received that includes a rate inconsistent with the other proposed rates, the need for the additional support and availability of alternative sources is evaluated, and the contract would only be accepted if the need for the additional resources outweighs the increased costs and there are no other reasonable alternatives to secure the additional resources.

12. Standby. Does the Company have any information that would identify what costs were incurred for standby contractors and mutual assistance? If not, explain why the Company does not analyze this cost, how the Company mitigates standby and how the Company can assert that all the cost requested are reasonable. If yes, please provide the information.

Answer:
See response previously provided on June 1, 2018.

13. Recovery. Please refer to paragraph 18 of the Petition filed on December 28, 2017, please explain why the Company's issues do not include the other five named storms on Appendix

A, Page 7 which reduced the storm reserve balance prior to the 2017 storm season and whether those costs were properly charged against the storm reserve pursuant to Rule 25-6.0143, F.A.C.

Answer: See response previously provided on April 18, 2018.

14. Please provide, for each of the seven storms, a summary of the number of miles of conductor replaced, by Company crews or contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer: See response previously provided on June 1, 2018.

15. Please provide, for each of the seven storms, a summary of the number of cross arms replaced, by Company crews or by contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer: See response previously provided on June 1, 2018.

16. Please provide, for each of the seven storms, a summary of the number of cross transformers replaced, by Company crews or by contractors, by month and location, identifying whether the replacement was capitalized and if capitalized, the cost capitalized.

Answer: See response previously provided on June 1, 2018.

17. Cost Summary. Provide for the storms listed on Appendix A, Page 7 a summary similar to that presented for Irma and Nate on Page 1 of Appendix A.

Answer: See response previously provided on June 1, 2018.

18. Cost Summary. Provide for the each storm listed on Appendix A, Page 1 a summary, by function, of the respective types of costs included in total listed on line 2 and line 6 (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies, etc.).

Answer: See response previously provided on June 1, 2018.

19. Cost Summary. Provide for the each storm listed on Appendix A, Page 7 a summary, by function, of the respective types of costs included in the each of the total listed on lines 3 through 7 (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies, etc.).

Answer: See response previously provided on June 1, 2018.

20. Mobilization/Demobilization. Refer to Appendix A Page 1 and Page 7. For each of the storms provide a summary, by function, of what amount of contractor and what amount of line clearing costs are included in their respective totals were for mobilization and demobilization.

Answer:
See response previously provided on June 1, 2018.

21. Capitalized Cost. Provide, for each of the seven storms, a detailed summary, by function, that shows an itemization of plant costs by type (i.e. poles, conductor, cross arms, transformers, etc.) that were capitalized, the associated quantities and the associated costs.

Answer: See response previously provided on June 1, 2018.

In regards to transmission, from 2012 through 2017, Transmission capitalized costs for the following three storms:

- 2012 - Tropical Storm Debby
- 2016 - Hurricane Matthew
- 2017 - Hurricane Irma

Hurricane Matthew's capital charges were only $6,000, thus immaterial. Below is the plant cost breakout for Tropical Storm Debby and Hurricane Irma.

Note: The below material costs reflect the direct costs only, and do not include any material burdens. The material burdens are applied in the capital breakout in OPC ROG 22.

Tropical Storm Debby

utility_account	retirement_unit	Quantity	Cost
35300 - Station Equipment	LIGHTING ARRESTORS-LA -35322300000	6	60,802
35500 - Poles and Fixtures	POLE-POLE - STEEL-POLE-35503535904	7	52,829
35600 - Overhead Conductors and	INSULATORS-INSULATOR-35609090220	27	11,669
36200 - Station Equipment	BATTERY-BATTERY-BATT-36254354000	4	112,422
	CIRCUIT BREAKER-CB, -36282282000	1	212,365
Grand Total		**45**	**450,088**

Hurricane Irma

utility_account	retirement_unit	Quantity	Cost
35300 - Station Equipment	CIRCUIT BREAKER-CB, VCB, OCB-CB, VCB, OCB	2	98,986
	RELAYS-RELAYS-RELAY	2	94,047
	SWITCHES-SW-SW	1	6,316
	TRANSFORMER-POWER-POWER TRANSFORMER-POWER TRANSFORMER	1	316,111
35500 - Poles and Fixtures	POLE-POLE - STEEL-POLE - STEEL-35503535904	142	3,095,896
35600 - Overhead Conductors and Dev	CONDUCTOR-CABLE-WIRE - 35620200	12,799	89,905
	INSULATORS-INSULATORS-INSULATORS-35609080000	385	429,637
36200 - Station Equipment	CIRCUIT BREAKER-CB, VCB, OCB-CB, VCB, OCB	4	248,525
	RELAYS-RELAYS-RELAY	1	45,474
	SWITCHES-SW-SW	36	43,428
Grand Total		**13,373**	**4,468,324**

22. Capitalized Cost. Provide, for each of the seven storms, a detailed summary, by function, that shows an itemization of costs by type (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies etc.).

Answer: See response previously provided on June 1, 2018. In regards to transmission, From 2012 through 2017, Transmission capitalized costs for the following three storms:

- 2012 - Tropical Storm Debby
- 2016 - Hurricane Matthew
- 2017 - Hurricane Irma

Hurricane Matthew's capital charges were only $6,000, thus immaterial. Below is the breakout for Tropical Storm Debby and Hurricane Irma

Tropical Storm Debby

Row Labels	Sum of amount
Contractor	93,702
Materials & Supplies	105,229
Other	137,008
Other Employee Expenses	1,864
Overhead Allocations	22,148
Regular Payroll	166,566
Grand Total	**526,517**

Hurricane Irma

Category	Capital Total
Contractor Costs	3,787,320
Fleet Costs (Internal)	8,857
Labor Burdens/Incentives	12,305
Materials & Supplies	1,748,715
Other	0
Other Employee Expenses	579
Overhead Allocations	556,584
Overtime Payroll	7,838
Regular Payroll	20,621
Grand Total	**6,142,820**

23. Non-incremental Costs. Provide, for each of the seven storms, a detailed summary, by function, that shows an itemization of costs by type (i.e. regular payroll, overtime payroll, contractors, line clearing, materials & supplies etc.).

Answer: See response previously provided on June 1, 2018.

24. Payroll. Refer to Appendix A. For each of the seven storms provide an explanation of what related costs, if any, are included in the overtime payroll amounts, identify each type of related costs and the respective amount(s) (i.e. benefits, overheads and payroll taxes) and provide the overtime included in the total cost for each respective storm.

Answer:

For Distribution:

Resource Type	Duke Energy Florida	Debby	Isaac	Colin	Hermine	Matthew	Irma	Nate	Total
							Preliminary 5/31/2018	Preliminary 5/31/2018	
12000	Overtime	198,967	141,433	5,128	103,872	123,529	333,676	9,852	916,458
12004	Overtime-Union	1,289,570	244,397	369,095	1,311,834	1,621,057	5,125,426	97,692	10,059,071
13000	Exempt Supplemental	-	-	50,108	428,378	625,507	1,627,171	65,452	2,796,616
		$1,488,537	$385,830	$ 424,330	$1,844,084	$2,370,092	$ 7,086,273	$ 172,997	$13,772,144
	Affiliate								
12000	Overtime	-	-	-	6,883	27,599	3,184,943	1,889	3,221,314
12004	Overtime-Union	-	-	-	19,061	521,224	2,402,355	11,660	2,954,300
13000	Exempt Supplemental	-	-	2,825	132,558	188,824	2,234,356	6,898	2,565,462
		$ -	$ -	$ 2,825	$ 158,502	$ 737,648	$ 7,821,655	$ 20,447	$ 8,741,076
	Total Labor Costs								
	Overtime	198,967	141,433	5,128	110,755	151,128	3,518,619	11,741	4,137,772
	Overtime-Union	1,289,570	244,397	369,095	1,330,895	2,142,281	7,527,781	109,352	13,013,370
	Exempt Supplemental	-	-	52,933	560,936	814,331	3,861,527	72,351	5,362,078
		$1,488,537	$385,830	$ 427,155	$2,002,586	$3,107,740	$14,907,928	$ 193,444	$22,513,220

Note: Debby and Isaac costs were incurred on a different accounting system that did not break labor out in the same manner.

The overtime amounts above are the total gross charges to those storms before any adjustments for non-incremental calculations. Affiliate amounts were not considered part of base rates and were excluded from non-incremental calculations.

For Generation, all regular payroll, benefits, overheads and payroll taxes are excluded from the storm request (as non-incremental).

Included in request - incremental	**9,612**	**-**	**-**	**93,987**	**28,096**	**713,279**	**-**	**844,975**
Excluded from request - non-incremental	**5,528**	**-**	**-**	**9,947**	**44,881**	**(21,458)**	**-**	**38,898**

Resource Type	Duke Energy Florida	Debby	Isaac	Colin	Hermine	Mathew	Irma (1)	Nate	Total
11000	Labor	2,788			-	-	-	-	2,788
11002	Labor-Union	627			(15,818)	18,911	-	-	3,719
12000	Overtime	3,836			869	3,021	20,273		27,998
12004	Overtime-Union	5,776			93,119	25,075	650,940		774,910
13000	Exempt Supplemental	-			-		42,066		42,066
15003	Labor Other-Union				400				400
18000	Labor Overhead Allocations	414			2,138				2,552
18001	Unproductive Labor Allocated	-			605	(25)			580
18005	Unproduct Labor Alloc-Union	-			(2,348)	8,594			6,246
18006	Unproduct Labor Alloc-Union OT	-							-
18250	Allocated Payroll Tax	1,097			288	172			1,557
18251	Allocated Payroll Tax-Union	-			5,724	4,883			10,607
18350	Allocated Fringes & Non Union	-			866	386			1,252
18351	Allocated Fringes-Union	-			14,703	10,211			24,914
18400	Incentives Allocated	602			155	223			979
18401	Incentives Allocated-Union	-			2,168	1,527			3,695
78000	Allocated S&E (Non-Labor)	-			1,068		(21,458)	-	(20,391)
		$ 15,140	$ -	$ -	$ 103,935	$ 72,978	$ 691,821	$ -	$ 883,873
							(2)		

Notes:

(1) FHO FL Generation incurred non-incremental Irma costs which were removed from the storm account via journal entries:

Regular Payroll	186,327	no longer in storm account
Incentives	33,423	no longer in storm account
Allocations	202,287	no longer in storm account
Total removed	422,037	

(2) A true-up in May will ensure that all non-incremental costs are removed from the Irma storm account activity

For Customer Operations:

Resource Type	Duke Energy Florida	Debbie	Hermine	Matthew	Irma	Total
12000	Overtime	51,512	62,552	39,226	602,788	**756,079**
12004	Overtime- Union	36,784	-	-	-	**36,784**
13000	Exempt Supplemental	-	5,748	7,355	31,055	**44,158**
Resource Type	**Affiliate**	**Debbie**	**Hermine**	**Matthew**	**Irma**	**Total**
12000	Overtime	-	16,620	140,649	498,824	**656,093**
12004	Overtime- Union	-	-	2,141	59,399	**61,540**
13000	Exempt Supplemental	-	11,099	56,832	279,635	**347,567**
	Total Labor Costs	**Debbie**	**Hermine**	**Matthew**	**Irma**	**Total**
	Overtime	51,512	79,172	179,875	1,101,612	**1,412,172**
	Overtime- Union	36,784	-	2,141	59,399	**98,324**
	Exempt Supplemental	-	16,847	64,188	310,690	**391,725**

For the 2012 storms, Transmission overtime costs included the following, by Corporate Resource Groupings Rollup:

- Overtime-Non Bargaining Unit
- Overtime - Bargaining Unit

Below are the Transmission Project Codes for the Storms:

O&M Project Codes	
Description	**Project ID**
TS Debby	20089322
TS Isaac	20094460
2016 TS Colin	16L01FL
Hurricane Hermine	16L02FL
Hurricane Matthew	16M03FL
Hurricane Irma	17TFIRMA
Hurricane Nate	17TFLNATE

Below are the breakouts of Transmissions Overtime by storm and Corporate Resource Groupings Rollup:

Tropical Storm Debby

Overtime Payroll	**$**	**117,514**
Overtime - Bargaining Unit	$	106,611
Overtime-Non Bargaining Unit	$	10,903

Hurricane Isaac

Overtime Payroll	**16,279**
Overtime - Bargaining Unit	7,088
Overtime-Non Bargaining Unit	9,191
Grand Total	**16,279**

For all seven storms, Transmission overtime costs included the following, by Resource Type:

- Resource Type "12000" – Overtime
- Resource Type "12004" – Overtime-Union
- Resource Type "13000" – Exempt Supplemental

Below are the Transmission Project Codes for the Storms:

O&M Project Codes	
Description	**Project ID**
TS Debby	20089322
TS Isaac	20094460
2016 TS Colin	16L01FL
Hurricane Hermine	16L02FL
Hurricane Matthew	16M03FL
Hurricane Irma	17TFIRMA
Hurricane Nate	17TFLNATE

Below are the breakouts of Transmissions Overtime by storm and by Resource Type:

	2016			2017	
Row Labels	Colin	Hermine	Matthew	Irma	Nate
12000		2,726	4,108	543,204	1,533
12004	7,841	158,471	159,104	1,028,664	1,457
13000		29,907	47,760	575,629	2,331
Grand Total	**7,841**	**191,104**	**210,972**	**2,147,497**	**5,321**

25. Payroll. Refer to Appendix A. For each of the seven storms provide an explanation of what related costs, if any, are included in the regular payroll amounts, identify each type of related costs and the respective amount(s) (i.e. benefits, overheads and payroll taxes) and provide the overtime included in the total cost for each respective storm.

Answer:

For Distribution:

							Preliminary 5/31/2018	Preliminary 5/31/2018	
Resource Type	Duke Energy Florida	Debby	Isaac	Colin	Hermine	Matthew	Irma	Nate	Total
11000	Labor	312,203	218,360	33,087	135,277	170,354	574,781	13,827	1,457,890
11001	Premium Pay	-		-	-	-	-	-	-
11002	Labor-Union	330,680	79,015	101,338	158,539	304,532	1,613,476	16,504	2,604,083
15002	Labor Other	-	-	-	47,500	-	7,500	-	55,000
18001	Unproductive Labor Allocated	-	-	(8,427)	8,217	(2,964)	50,765	(35)	47,557
18005	Unproduct Labor Alloc-Union	-	-	43,779	31,649	55,624	352,494	2,966	486,512
18500	Expense Reimburse-Labor	-	-	-	-	-	-	-	-
		$642,883	$297,375	$ 169,777	$381,181	$527,547	$2,599,016	$ 33,262	$4,651,041
	Affiliate								
11000	Labor	-	-	1,158	58,744	59,155	1,449,199	5	1,568,260
11001	Premium Pay	-	-	-	-	-	594	-	594
11002	Labor-Union	-	-	-	227	129,165	807,471	-	936,863
15002	Labor Other	-	-	-	-	7,950	275,218	-	283,168
18001	Unproductive Labor Allocated	-	-	184	11,165	3,632	153,170	(0)	168,151
18005	Unproduct Labor Alloc-Union	-	-	-	1	21,360	110,110	-	131,471
18500	Expense Reimburse-Labor	-	-	-	-	-	1,817	-	1,817
		$ -	$ -	$ 1,341	$ 70,137	$221,263	$2,797,579	$ 5	$3,090,325
	Total Labor Costs								
	Labor	312,203	218,360	34,245	194,020	229,509	2,023,980	13,832	3,026,150
	Premium Pay	-	-	-	-	-	594	-	594
	Labor-Union	330,680	79,015	101,338	158,767	433,698	2,420,947	16,504	3,540,947
	Labor Other	-	-	-	47,500	7,950	282,718	-	338,168
	Unproductive Labor Allocated	-	-	(8,243)	19,382	669	203,935	(35)	215,708
	Unproduct Labor Alloc-Union	-	-	43,779	31,650	76,984	462,604	2,966	617,983
	Expense Reimburse-Labor	-	-	-	-	-	1,817	-	1,817
		$642,883	$297,375	$ 171,118	$451,318	$748,810	$5,396,595	$ 33,267	$7,741,366

Note: Debby and Isaac costs were incurred on a different accounting system that did not break labor out in the same manner.

The payroll amounts above are the total gross charges to those storms before any adjustments for non-incremental calculations. Affiliate amounts were not considered part of base rates and were excluded from non-incremental calculations.

See OPC ROG 24 for the Overtime information

For Generation, only overtime amounts shaded in blue are included in the storm request; all regular payroll, benefits, overheads and payroll taxes are excluded from the storm request costs (as non-incremental):

Included in request - incremental		9,612	-	-	93,987	28,096	713,279	-	844,975
Excluded from request - non-incremental		5,528	-	-	9,947	44,881	(21,458)	-	38,898

Resource Type	Duke Energy Florida	Debby	Isaac	Colin	Hermine	Mathew	Irma (1)	Nate	Total
11000	Labor	2,788			-	-	-	-	2,788
11002	Labor-Union	627			(15,818)	18,911	-	-	3,719
12000	Overtime	3,836			869	3,021	20,273		27,998
12004	Overtime-Union	5,776			93,119	25,075	650,940		774,910
13000	Exempt Supplemental	-			-		42,066		42,066
15003	Labor Other-Union				400				400
18000	Labor Overhead Allocations	414			2,138				2,552
18001	Unproductive Labor Allocated	-			605	(25)			580
18005	Unproduct Labor Alloc-Union	-			(2,348)	8,594			6,246
18006	Unproduct Labor Alloc-Union OT	-							-
18250	Allocated Payroll Tax	1,097			288	172			1,557
18251	Allocated Payroll Tax-Union	-			5,724	4,883			10,607
18350	Allocated Fringes & Non Union	-			866	386			1,252
18351	Allocated Fringes-Union	-			14,703	10,211			24,914
18400	Incentives Allocated	602			155	223			979
18401	Incentives Allocated-Union	-			2,168	1,527			3,695
78000	Allocated S&E (Non-Labor)	-			1,068		(21,458)	-	(20,391)
		$ 15,140	$ -	$ -	$ 103,935	$ 72,978	$ 691,821	$ -	$ 883,873
							(2)		

Notes:

(1) FHO FL Generation incurred non-incremental Irma costs which were removed from the storm account via journal entries:

Regular Payroll	186,327	no longer in storm account
Incentives	33,423	no longer in storm account
Allocations	202,287	no longer in storm account
Total removed	422,037	

(2) A true-up in May will ensure that all non-incremental costs are removed from the Irma storm account activity

For Customer Operations, below are the Customer Project Codes for the storms:

Project Codes for 2016 & 2017 Storms	
Hermine	01FL16
Matthew	02FL16
Irma	01FL17

For the 2016 storms, Customer costs included the following, by Resource Type:

ROG Question 25 Support

Row Labels	Resource Type Long Descr CB	Sum of Monetary Amount JD	*Incremental*
02FL16			
11000	Labor	27,986	
11001	Premium Pay	667	
12000	Overtime	246,203	
18001	Unproductive Labor Allocated	8,797	
18250	Allocated Payroll Tax	45,240	
18350	Allocated Fringes & Non Union	76,379	
18400	Incentives Allocated	55,042	
19500	Service Company Overhead	21,880	
78000	Allocated S&E (Non-Labor)	208,084	
Grand Total		**690,277**	

Row Labels	Resource Type Long Descr CB	Sum of Monetary Amount JD	*Non-Incremental*
02FL16			
11000	Labor	(2,169)	
78000	Allocated S&E (Non-Labor)	(248)	
Grand Total		**(2,417)**	

	Total Allowable Costs	**687,860**

ROG Question 25 Support

Row Labels	Resource Type Long Descr CB	Sum of Monetary Amount JD	*Incremental*
01FL16			
11000	Labor	12,977	
11001	Premium Pay	160	
12000	Overtime	96,020	
18001	Unproductive Labor Allocated	7,917	
18250	Allocated Payroll Tax	21,900	
18350	Allocated Fringes & Non Union	33,996	
18400	Incentives Allocated	23,973	
19500	Service Company Overhead	1,631	
78000	Allocated S&E (Non-Labor)	26,033	
Grand Total		**224,607**	

Row Labels	Resource Type Long Descr CB	Sum of Monetary Amount JD	*Non-Incremental*
01FL16			
11000	Labor	(9,477)	
78000	Allocated S&E (Non-Labor)	(2,889)	
Grand Total		**(12,366)**	

	Total Allowable Costs	**212,240**

For the 2017 storms, Customer costs included the following, by Resource Type:

ROG Question 25 Support

Row Labels	Resource Type Long Descr CB	Sum of Monetary Amount JD	*Incremental*
01FL17			
11000	Labor	675,031	
11001	Premium Pay	2,304	
11002	Labor-Union	3,482	
12000	Overtime	1,101,612	
12004	Overtime Union	59,399	
13000	Exempt Supplemental	310,390	
15002	Labor Other	80,000	
18000	Labor Overhead Allocations	1,098	
18001	Unproductive Labor Allocated	87,829	
18005	Unproduct Labor Alloc-Union	212	
18250	Allocated Payroll Tax	166,971	
18251	Allocated Payroll Tax-Union	4,971	
18350	Allocated Fringes & Non Union	479,195	
18351	Allocated Fringes-Union	13,642	
18400	Incentives Allocated	203,627	
19500	Service Company Overhead	98,160	
78000	Allocated S&E (Non-Labor)	279,718	
Grand Total		**3,567,641**	

Row Labels	Resource Type Long Descr CB	Sum of Monetary Amount JD	*Non-Incremental*
01FL17			
11000	Labor	(79,510)	
18400	Incentives Allocated	(91,197)	
78000	Allocated S&E (Non-Labor)	(39,904)	
Grand Total		**(210,611)**	

	Total Allowable Costs	**3,357,030**

All Duke Energy Florida internal employee regular payroll with the resources type above were noted as non-incremental (i.e., disallowed from the reserve). Any regular labor from Duke Energy employees outside of Duke Energy Florida (e.g., Duke Energy Carolinas, Duke Energy Progress, etc.) was allowed in the reserve. For any DEBS employees who charged IRMA, we removed the DEF portion from the reserve.

For the 2012 storms, Transmission regular payroll costs included the following, by Corporate Resource Groupings Rollup:

- Base Prod Labor-Bargaining
- Base Prod Labor-Non Bargaining

Below are the Transmission Project Codes for the Storms:

O&M Project Codes	
Description	**Project ID**
TS Debby	20089322
TS Isaac	20094460
2016 TS Colin	16L01FL
Hurricane Hermine	16L02FL
Hurricane Matthew	16M03FL
Hurricane Irma	17TFIRMA
Hurricane Nate	17TFLNATE

Below are the breakouts of Transmissions Regular Payroll by storm and Corporate Resource Groupings Rollup:

Tropical Storm Debby – contained payroll charged to the storm code and payroll charged to the capital projects code, totaling $282,940.

Storm Code Charging

Regular Payroll	**$**	**116,375**
Base Prod Labor-Bargaining	$	100,705
Base Prod Labor-Non Bargaining	$	15,669
Grand Total	**$**	**116,375**

Capital Code Charging

Row Labels	Sum of amount
Regular Payroll	166,566
Grand Total	**166,566**

Hurricane Isaac

Regular Payroll	**72,998**
Base Prod Labor-Bargaining	48,293
Base Prod Labor-Non Bargaining	24,706
Grand Total	**72,998**

For the 2016 and 2017 storms, Transmission regular costs included the following, by Resource Type:

- Resource Type "11000" – Labor
- Resource Type "11002" – Labor-Union
- Resource Type "15002" – Labor Other
- Resource Type "18001" – Unproductive Labor Allocated
- Resource Type "18005" – Unproductive Labor Allocated-Union

All Duke Energy Florida internal employee regular payroll with the resources type above were noted as non-incremental (i.e., disallowed from the reserve). Any regular labor from Duke Energy employees outside of Duke Energy Florida (e.g., Duke Energy Carolinas, Duke Energy Progress, etc.) were allowed in the reserve.

Below are the Transmission Project Codes for the Storms:

O&M Project Codes	
Description	**Project ID**
TS Debby	20089322
TS Isaac	20094460
2016 TS Colin	16L01FL
Hurricane Hermine	16L02FL
Hurricane Matthew	16M03FL
Hurricane Irma	17TFIRMA
Hurricane Nate	17TFLNATE

Below are the breakouts of Transmissions regular by storm by Resource Type:

		2016			2017	
Resource Type ID CB	Resource Type Long Descr CB	Colin	Hermine	Matthew	Irma	Nate
11000	Labor		30,352	25,663	480,743	2,656
11002	Labor-Union	20,518	58,845	74,711	704,267	
15002	Labor Other			13,750	87,650	
18001	Unproductive Labor Allocated		1,752	816	91,839	22
18005	Unproduct Labor Alloc-Union	3,212	(6,350)	(11,220)	21,066	
Grand Total		**23,730**	**84,599**	**103,720**	**1,385,565**	**2,679**

Labor Burdens

For the 2016 and 2017 storms, Transmission Labor Burdens/Incentives included the following, by Resource Type:

- Resource Type "18250" – Allocated Payroll Tax
- Resource Type "18251" – Allocated Payroll Tax-Union
- Resource Type "18350" – Allocated Fringes & Non Union
- Resource Type "18351" – Allocated Fringes-Union
- Resource Type "18400" – Incentives Allocated
- Resource Type "18401" – Incentives Allocated-Union
- Resource Type "19500" – Service Company Overhead
- Resource Type "1E002" – Exec Short Term Incent
- Resource Type "1E200" – Restricted Stock Units

For the 2016 and 2017 storms, Transmission Labor Overhead Allocations included the following, by Resource Type:

- Resource Type "18000" – Labor Overhead Allocations
- Resource Type "78000" – Allocated S&E (Non-Labor)

Below are the Labor Burdens/Incentives and Overhead Allocations associated with both regular and overtime payroll, by Resource Type:

Category	Resource Type ID CB	Resource Type Long Descr CB	2016 Colin	Hermine	Matthew	2017 Irma	Nate
Labor Burdens/Incentives	18250	Allocated Payroll Tax	4	5,612	7,716	144,054	553
	18251	Allocated Payroll Tax-Union	2,488	16,633	17,539	138,110	115
	18350	Allocated Fringes & Non Union	10	12,686	17,414	305,930	1,090
	18351	Allocated Fringes-Union	5,551	37,172	39,395	275,798	223
	18400	Incentives Allocated		6,797	8,226	178,365	689
	18401	Incentives Allocated-Union	947	6,329	6,678	52,620	44
	19500	Service Company Overhead		2,508	2,471	36,932	51
	1E002	Exec Short Term Incent				2,692	
	1E200	Restricted Stock Units				3,651	
Labor Burdens/Incentives Total			9,000	87,737	99,439	1,138,152	2,765
Overhead Allocations	18000	Labor Overhead Allocations	56	1,377	273	12,995	
	78000	Allocated S&E (Non-Labor)	27	1,409	346	1,175,345	26,039
Overhead Allocations Total			83	2,786	619	1,188,339	26,039
Grand Total			9,082	90,523	100,058	2,326,492	28,803

26. Payroll. Refer to Appendix A. Identify the amount of any incentive compensation included in the recorded costs charged to each of the seven storms and identify how any of the costs were excluded from this request (i.e. as non-incremental or as capitalized).

Answer:

For Distribution:

							Preliminary 5/31/2018	Preliminary 5/31/2018	
Resource Type	Duke Energy Florida	Debby	Isaac	Colin	Hermine	Matthew	Irma	Nate	Total
15002	Labor Other	-	-	-	47,500	-	7,500	-	55,000
18400	Incentives Allocated	154,151	61,428	8,389	70,953	96,225	271,571	9,355	672,073
18401	Incentives Allocated-Union	-	-	15,426	45,061	59,436	212,742	3,515	336,180
1B310	Service/Safety Awards	-	-	-	-	-	541	-	541
1E002	Exec Short Term Incent	-	-	-	-	-	-	-	-
1E200	Restricted Stock Units	-	-	-	-	-	-	-	-
1E202	Performance Award	-	-	-	-	-	-	-	-
		$ 154,151	$ 61,428	$ 23,816	$ 163,514	$ 155,661	$ 492,354	$ 12,870	$ 1,063,794
	Affiliate								
15002	Labor Other	-	-	-	-	7,950	275,218	-	283,168
18400	Incentives Allocated	-	-	437	21,982	29,319	753,534	999	806,270
18401	Incentives Allocated-Union	-	-	-	579	20,153	99,611	350	120,692
1B310	Service/Safety Awards	-	-	-	-	-	-	-	-
1E002	Exec Short Term Incent	-	-	-	2,474	1,244	34,706	-	38,425
1E200	Restricted Stock Units	-	-	-	3,054	1,888	42,942	181	48,064
1E202	Performance Award	-	-	-	200	-	12,351	-	12,551
		$ -	$ -	$ 437	$ 28,289	$ 60,553	$ 1,218,361	$ 1,529	$ 1,309,170
	Total Labor Costs								
	Labor Other	-	-	-	47,500	7,950	282,718	-	338,168
	Incentives Allocated	154,151	61,428	8,827	92,935	125,543	1,025,105	10,354	1,478,343
	Incentives Allocated-Union	-	-	15,426	45,639	79,589	312,353	3,865	456,873
	Service/Safety Awards	-	-	-	-	-	541	-	541
	Exec Short Term Incent	-	-	-	2,474	1,244	34,706	-	38,425
	Restricted Stock Units	-	-	-	3,054	1,888	42,942	181	48,064
	Performance Award	-	-	-	200	-	12,351	-	12,551
		$ 154,151	$ 61,428	$ 24,253	$ 191,803	$ 216,214	$ 1,710,716	$ 14,400	$ 2,372,964

All of the above costs were considered "Non-incremental" and are reflected on OPC ROG 23 on the line item "Incentives".

Note: Debby and Isaac costs were incurred on a different accounting system that did not break labor out in the same manner.

For Generation, incentive resource types 18400 & 18401 are excluded from this request, only overtime costs are included:

Included in request - incremental	9,612	-	-	93,987	28,096	713,279	-	844,975
Excluded from request - non-incremental	5,528	-	-	9,947	44,881	(21,458)	-	38,898

Resource Type	Duke Energy Florida	Debby	Isaac	Colin	Hermine	Mathew	Irma (1)	Nate	Total
11000	Labor	2,788			-	-	-	-	2,788
11002	Labor-Union	627			(15,818)	18,911	-	-	3,719
12000	Overtime	3,836			869	3,021	20,273		27,998
12004	Overtime-Union	5,776			93,119	25,075	650,940		774,910
13000	Exempt Supplemental	-			-		42,066		42,066
15003	Labor Other-Union				400				400
18000	Labor Overhead Allocations	414			2,138				2,552
18001	Unproductive Labor Allocated	-			605	(25)			580
18005	Unproduct Labor Alloc-Union	-			(2,348)	8,594			6,246
18006	Unproduct Labor Alloc-Union OT	-							-
18250	Allocated Payroll Tax	1,097			288	172			1,557
18251	Allocated Payroll Tax-Union	-			5,724	4,883			10,607
18350	Allocated Fringes & Non Union	-			866	386			1,252
18351	Allocated Fringes-Union	-			14,703	10,211			24,914
18400	Incentives Allocated	602			155	223			979
18401	Incentives Allocated-Union	-			2,168	1,527			3,695
78000	Allocated S&E (Non-Labor)	-			1,068		(21,458)	-	(20,391)
		$ 15,140	$ -	$ -	$ 103,935	$ 72,978	$ 691,821 (2)	$ -	$ 883,873

Notes:

(1) FHO FL Generation incurred non-incremental Irma costs which were removed from the storm account via journal entries:

Regular Payroll	186,327	no longer in storm account
Incentives	33,423	no longer in storm account
Allocations	202,287	no longer in storm account
Total removed	422,037	

(2) A true-up in May will ensure that all non-incremental costs are removed from the Irma storm account activity

For Customer Operations:

Explanation: These incentives hit the Customer Storm project and we have reclassed these amounts and labeled them as non-incremental costs related to Storm Irma. The $91k in incentives is made up of ECA's, Phantom Stock and Executive ST incentives.

ECA's	74,750
Phantom Stock	10,205
Executive ST Incentives	6,242
Total:	**91,197**

For the 2012 storms, Transmission incentive costs included the following, by Resource Type Level 2:

- Other Burden Benefits
- Other Burden Incentives

Below are the Transmission Project Codes for the Storms:

O&M Project Codes	
Description	**Project ID**
TS Debby	20089322
TS Isaac	20094460
2016 TS Colin	16L01FL
Hurricane Hermine	16L02FL
Hurricane Matthew	16M03FL
Hurricane Irma	17TFIRMA
Hurricane Nate	17TFLNATE

Below are the breakouts of Transmissions incentive by storm and Corporate Resource Groupings Rollup:

Tropical Storm Debby

Row Labels	Transmission		
Labor Loaders/Incentives	**$**	**23,079**	
EXCEPTIONAL HRS BURDENING (OBN)	$	419	Burdens
OTHER BURDEN BENEFITS (OBB)	$	841	Incentives
OTHER BURDEN INCENTIVES (OBI)	$	11,285	Incentives
OTHER BURDEN TAXES (OBT)	$	10,110	Burdens
OTHER PENSION BURDEN (OBA)	$	424	Burdens
Grand Total	**$**	**23,079**	

Hurricane Isaac

Labor Loaders/Incentives	**5,249**	
EXCEPTIONAL HRS BURDENING (OBN)	462	Burdens
OTHER BURDEN BENEFITS (OBB)	923	Incentives
OTHER BURDEN INCENTIVES (OBI)	1,793	Incentives
OTHER BURDEN TAXES (OBT)	1,606	Burdens
OTHER PENSION BURDEN (OBA)	465	Burdens
Grand Total	**5,249**	

For the 2016 and 2017 storms, Transmission incentive costs included the following, by Resource Type:

- 15002 – Labor Other
- 18400 – Incentives Allocated
- 18401 – Incentives Allocated-Union
- 1E002 – Executive Short Term Incent
- 1E200 – Restricted Stock Units

Below are the Transmission Project Codes for the Storms:

O&M Project Codes	
Description	**Project ID**
TS Debby	20089322
TS Isaac	20094460
2016 TS Colin	16L01FL
Hurricane Hermine	16L02FL
Hurricane Matthew	16M03FL
Hurricane Irma	17TFIRMA
Hurricane Nate	17TFLNATE

These incentive Resources Types resided in categories such as Regular Payroll or Labor Burdens/Incentives; however, they were noted as non-incremental.

Below are the breakouts of Transmissions incentive compensation by storm and by Resource Type:

		2016			2017	
Resource Type ID	Resource Type Long Descr CB	Colin	Hermine	Matthew	Irma	Nate
15002	Labor Other			13,750	87,650	
18400	Incentives Allocated		6,797	8,226	178,365	689
18401	Incentives Allocated-Union	947	6,329	6,678	52,620	44
1E002	Exec Short Term Incent				2,692	
1E200	Restricted Stock Units				3,651	
Grand Total		**947**	**13,126**	**28,654**	**324,978**	**733**

27. Payroll. Provide for each year, 2012, 2016 and 2017 the regular payroll, by O&M account, included in base rates identifying the Docket setting rates and the effective date rates when into effect (i.e. if rates went into effect during the year provide a prorate from each docket for that year).

Answer: See response previously provided on April 18, 2018.

28. Payroll. Provide for each year, 2012, 2016 and 2017 the actual regular payroll, by O&M account for that year.

Answer: See response previously provided on April 18, 2018.

29. Payroll. Provide for each year, 2012, 2016 and 2017 the overtime payroll, by O&M account, included in base rates identifying the Docket setting rates and the effective date rates when into effect (i.e. if rates went into effect during the year provide a prorate from each docket for that year).

Answer: See response previously provided on April 18, 2018.

30. Payroll. Provide for each year, 2012, 2016 and 2017 the actual overtime payroll, by O&M account for that year.

Answer: See response previously provided on April 18, 2018.

31. Regular Payroll. Provide, for each of the seven storms, a summary of the regular payroll by week charged to restoration work order (i.e. this would be just payroll and excludes overheads and/or other related costs).

Answer: DEF does not maintain general ledger data by week, so monthly data is provided.

For Distribution, see the attachment bearing Bates Number 20170272-DEF-OPC-ROG 1-31-00001.

For Generation, Irma regular payroll amounts (removed from the storm account via journal entries):

Irma - FHO FL Generation
Account ID CB 0186295

Sum of Monetary Column											
	2017				2017 Total	2018				2018 Total	Grand Total
Row Labels	9	10	11	12		1	2	3	4		
11000	43,451	(43,269)			182	23,113	25,124	(3,680)	(44,738)	(182)	-
11001						476	336		(812)	-	-
11002	155,310	(152,361)	6,743	6,693	16,386	13,509	5,781	40,484	(76,159)	(16,386)	0

Hermine regular payroll amounts

Row Labels	4	9	10	12	Grand Total
11000	(6,317)	6,317			-
11002	(70,213)	54,395			(15,818)
15003		400			400

Mathew regular payroll amounts

Sum of Monetary Am	Column La			
Row Labels	1	11	12	Grand Total
11000	-			-
11002	6,600		12,311	18,911

Debby regular payroll amounts

Resourc	Resource Type Lvl 2 Descrip (Code)	2012		2012 Total	Grand Total
		7	8		
ETR	TEMPORARY PERSONNEL-REG (ETR)	2,788		2,788	2,788
EUR	PAYROLL BARGAINING UNIT-REG (EUR)	491	135	627	627
Grand Total		3,280	135	3,415	3,415

For the 2012 storm, Customer regular payroll costs included the following, by Corporate Resource Groupings Rollup:

* Base Prod Labor-Bargaining
* Base Prod Labor-Non Bargaining

Payroll data is only available by month. Below are the monthly breakouts of Customer Regular Payroll by storm and Corporate Resource Groupings Rollup:

Hurricane Debbie

Project	20089322				
Charge By Level 2 Code-Description	(Multiple Items)				
Sum of Transaction Amount	**Column Labels**				
	2012			**2012 Total**	**Grand Total**
Row Labels	**7**	**8**	**9**		
Base Prod Labor-Bargaining	14,226			14,226	14,226
Base Prod Labor-Non Bargaining	107,470	7	649	108,126	108,126
Grand Total	**121,696**	**7**	**649**	**122,352**	**122,352**

Customer Response for 2016 & 2017 Storms:

As described in OPC ROG 25 - For all seven storms, Customer labor costs included the following, by Resource Type:

* Resource Type "11000" – Labor
* Resource Type "11002" – Labor-Union
* Resource Type "15002" – Labor Other
* Resource Type "18001" – Unproductive Labor Allocated
* Resource Type "18005" – Unproductive Labor Allocated-Union

All Duke Energy Florida internal employee regular payroll with the resources type above were noted as non-incremental (i.e., disallowed from the reserve). Any regular labor from Duke Energy employees outside of Duke Energy Florida (e.g., Duke Energy Carolinas, Duke Energy Progress, etc.) was included in the reserve. Also, for any DEBS employees that charged their time to the storm project, the portion of DEBS labor already included in DEF base rates was excluded.

Payroll data is only available by month. Below are the monthly breakouts of Customer regular payroll storm by Resource Type:

Hurricane Hermine

Project ID CB	01FL16		
Account ID CB	0186295		
Sum of Monetary Amount JD		Column Labels	
Row Labels	Resource Type Long Descr CB	12	Grand Total
11000	Labor	12,977	12,977
18001	Unproductive Labor Allocated	7,917	7,917
Grand Total		20,894	20,894

**Regular payroll amounts were incurred from September through December. However, amounts were moved from numerous accounts into the reserve account (018629) in December. As a result, all amounts are reflected in December in the table above.*

Hurricane Matthew

Project ID CB	02FL16		
Account ID CB	0186295		
Sum of Monetary Amount JD		Column Labels	
Row Labels	Resource Type Long Descr CB	12	Grand Total
11000	Labor	18,287	18,287
11002	Labor-Union	355	355
18001	Unproductive Labor Allocated	8,797	8,797
18005	Unproduct Labor Alloc-Union	130	130
Grand Total		27,568	27,568

** Regular payroll amounts were incurred from October through December. However, amounts were moved from numerous accounts into the reserve account (018629) in December. As a result, all amounts are reflected in December in the table above.*

Hurricane Irma

Project ID CB	01FL17					
Sum of Monetary Amount JD		Column Labels				
Row Labels	Resource Type Long Descr CB	9	10	11	12	Grand Total
11000	Labor	594,483	28,837	21,170	3,096	647,586
11002	Labor-Union	3,482				3,482
15002	Labor Other		74,750	1,500	3,750	80,000
18001	Unproductive Labor Allocated	82,780	3,348	165	1,535	87,829
18005	Unproduct Labor Alloc-Union	212				212
Grand Total		680,957	106,935	22,835	8,382	819,108

For the 2012 storms, Transmission regular payroll costs included the following, by Corporate Resource Groupings Rollup:

- Base Prod Labor-Bargaining
- Base Prod Labor-Non Bargaining

Payroll data is only available by month. Below are the monthly breakouts of Transmissions Regular Payroll by storm and Corporate Resource Groupings Rollup:

Tropical Storm Debby – contained payroll charged to the storm code and payroll charged to the capital projects code, totaling $282,940.

Storm Charge Code

	2012					2013		
Row Labels	7	8	10	11	12	3	4	
Regular Payroll	99,419	5,737	9,339	1,784	34	35	26	116,375
Grand Total	**99,419**	**5,737**	**9,339**	**1,784**	**34**	**35**	**26**	**116,375**

Tropical Storm Debby - Capital Charge Code

Row Labels	Jul-12	Aug-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Jun-13	Nov-13	Dec-13	Feb-14	Mar-14	Oct-14	Sep-16	Grand Total
Regular Payroll	28,997	1,104	436	118,318	3,876	1,836	623	9,838	21,690	1,310	1,696	177	-	(23,335)	166,566
Grand Total	**28,997**	**1,104**	**436**	**118,318**	**3,876**	**1,836**	**623**	**9,838**	**21,690**	**1,310**	**1,696**	**177**	**-**	**(23,335)**	**166,566**

Hurricane Isaac

Row Labels	8	9
Regular Payroll	713	72,285
Grand Total	**713**	**72,285**

As described in OPC ROG 25 - For all seven storms, Transmission overtime costs included the following, by Resource Type:

- Resource Type "11000" – Labor
- Resource Type "11002" – Labor-Union
- Resource Type "15002" – Labor Other
- Resource Type "18001" – Unproductive Labor Allocated
- Resource Type "18005" – Unproductive Labor Allocated-Union

All Duke Energy Florida internal employee regular payroll with the resources type above were noted as non-incremental (i.e., disallowed from the reserve). Any regular labor from Duke Energy employees outside of Duke Energy Florida (e.g., Duke Energy Carolinas, Duke Energy Progress, etc.) were allowed in the reserve.

Payroll data is only available by month. Below are the monthly breakouts of Transmissions regular payroll storm and by Resource Type:

Tropical Storm Colin

Disallowable	Category	Resource Type ID CB	Resource Type Long Descr CB	2016 6	2017 1	Grand Total
Disallowed	Regular Payroll	11002	Labor-Union	20,134	384	20,518
		18005	Unproduct Labor Alloc-Union	2,635	576	3,212
Disallowed Total				22,770	960	23,730
Grand Total				22,770	960	23,730

Hurricane Hermine

Disallowable	Category	Resource Type ID CB	Resource Type Long Descr CB	2016 9	10	12	2017 6	Grand Tota
Disallowed	Regular Payroll	11000	Labor	26,785	(782)			26,003
		11002	Labor-Union	53,929		153	4,763	58,845
		18001	Unproductive Labor Allocated	1,601	64	86		1,752
		18005	Unproduct Labor Alloc-Union	(7,445)		85	1,009	(6,350)
Disallowed Total				74,870	(718)	325	5,772	80,249
Allowed	Regular Payroll	11000	Labor	3,975	187	187		4,350
Allowed Total				3,975	187	187		4,350
Grand Total				78,846	(531)	512	5,772	84,599

Hurricane Matthew

Disallowable	Category	Resource Type ID CB	Resource Type Long Descr CB	2016 10	11	12	2017 1	2	3	4	5	6	7	Grand Tota
Disallowed	Regular Payroll	11000	Labor	21,219	(1,365)	189	691	486	487	94	(75)	931	892	23,549
		11002	Labor-Union	74,389	323									74,711
		15002	Labor Other	500	13,250									13,750
		18001	Unproductive Labor Allocated	230	(141)	611	245	44	118	21	(30)	(389)	107	816
		18005	Unproduct Labor Alloc-Union	(10,797)	(423)									(11,220)
Disallowed Total				85,541	11,645	799	936	529	605	115	(105)	542	999	101,607
Allowed	Regular Payroll	11000	Labor	827	1,286									2,114
Allowed Total				827	1,286									2,114
Grand Total				86,368	12,931	799	936	529	605	115	(105)	542	999	103,720

Hurricane Irma

Disallowable	Category	Resource Typ	Resource Type Long Descr CB	2017 9	10	11	12	2018 1	2	3	4	Grand Total
Disallowed	Regular Payroll	11000	Labor	287,113	(870)	(2,402)			3,351	(3,351)		283,842
		11002	Labor-Union	563,170	87,603	4,177	(355)			4,694		659,289
		15002	Labor Other		95,150	(7,500)						87,650
		18001	Unproductive Labor Allocated	83,738	509	3,130			(218)	3,518		90,678
		18005	Unproduct Labor Alloc-Union	14,819	1,990	2,056	(167)			(480)		18,219
Disallowed Total				948,841	184,381	(538)	(521)		3,133	4,381		1,139,677
Capital	Regular Payroll	11000	Labor	4,107	2,167	270	90	-	-		164	6,798
		11002	Labor-Union		6,652	3,164			-			9,816
		18001	Unproductive Labor Allocated	698	368	46	21				28	1,161
		18005	Unproduct Labor Alloc-Union		1,929	918						2,847
Capital Total				4,806	11,116	4,398	111	-	-		192	20,621
Allowed	Regular Payroll	11000	Labor	136,817	10,089	43,197						190,104
		11002	Labor-Union	35,162								35,162
Allowed Total				171,980	10,089	43,197						225,266
Grand Total				1,125,626	205,586	47,057	(411)	-	3,133	4,381	192	1,385,565

Hurricane Nate

Disallowable	Category	Resource Type ID CB	Resource Type Long Descr CB	2017 10	Grand Total
Disallowed	Regular Payroll	11000	Labor	2,562	2,562
		18001	Unproductive Labor Allocated	22	22
Disallowed Total				2,584	2,584
Allowed	Regular Payroll	11000	Labor	95	95
Allowed Total				95	95
Grand Total				2,679	2,679

32. Overtime Payroll. Provide, for each of the seven storms, a summary of the overtime payroll by week by charged to restoration work order (i.e. this would be just payroll and excludes overheads and/or other related costs).

Answer: DEF does not maintain general ledger data by week, so monthly data is provided.

For Distribution, see the attachment bearing Bates Number 20170272-DEF-OPC-ROG 1-32-00001.

For Generation, see below:

Irma overtime payroll amounts

	2017				2017 Total	2018				2018 Total	Grand Total
Row Labe	9	10	11	12		1	2	3	4		
12000	3,314				3,314	12,572	6,837	(2,450)		16,959	20,273
12004	501,434	40,718	18,762	29,968	590,881	2,302		57,624	133	60,059	650,940
13000	28,100	9,944	2,420		40,464			1,059	544	1,603	42,066
Grand Total	**532,847**	**50,662**	**21,182**	**29,968**	**634,659**	**14,875**	**6,837**	**56,232**	**677**	**78,621**	**713,279**

Hermine overtime payroll amounts

Row Labels	4	9	10	12	Grand Total
12000		869	-		869
12004		90,421	1,136	1,562	93,119
13000	(4,200)	4,200			-
Grand Total	**(4,200)**	**95,489**	**1,136**	**1,562**	**93,987**

Mathew overtime payroll amounts

Row Labels	11	12	1	Grand Total
12000	3,021		-	3,021
12004	2,541	17,582	4,952	25,075
Grand Total	**5,563**	**17,582**	**4,952**	**28,096**

Debby overtime payroll amounts

		2012		2012 Total	Grand Total
Resource Type	Resource Type Lvl 2 Descrip (Code)	7	8		
EUO	PAYROLL BARGAINING UNIT-OT (EUO)	5,472	304	5,776	5,776
ETO	TEMPORARY PERSONNEL-OT (ETO)	3,836		3,836	3,836
Grand Total		**9,308**	**304**	**9,612**	**9,612**

For the 2012 storms, Customer overtime costs included the following, by Corporate Resource Groupings Rollup:

* Overtime-Non Bargaining Unit
* Overtime - Bargaining Unit

Payroll data is only available by month. Below are the monthly breakouts of Customers Overtime Payroll by storm and Corporate Resource Groupings Rollup:

Hurricane Debbie

Project	20089322
Charge By Level 2 Code-Description	(Multiple Items)

Row Labels	Sum of Transaction Amount
Overtime - Bargaining Unit	36,784
Overtime-Non Bargaining Unit	51,512
Grand Total	**88,297**

Customer Response for 2016 and 2017 Storms:

For all relevant storms, Customer overtime costs included the following, by Resource Type:

* Resource Type "12000" – Overtime
* Resource Type "12004" – Overtime-Union
* Resource Type "13000" – Exempt Supplemental

Payroll data is only available by month. Below are the breakouts of Customers Overtime by storm and by Resource Type:

Hurricane Hermine

Project ID CB	01FL16		
Account ID CB	0186295		
Sum of Monetary Amount JD		**Column Labels**	
Row Labels	**Resource Type Long Descr CB**	**12**	**Grand Total**
12000	Overtime	79,173	79,173
13000	Exempt Supplemental	16,847	16,847
Grand Total		**96,020**	**96,020**

** Overtime payroll amounts were incurred from September through December. However, amounts were moved from numerous accounts into the reserve account (018629) in December. As a result, all amounts are reflected in December in the table above.*

Hurricane Matthew

Project ID CB	02FL16							
Sum of Monetary Amount JD		**Column Labels**						
Row Labels	**Resource Type Long Descr CB**	**1**	**2**	**3**	**10**	**11**	**12**	**Grand Total**
12000	Overtime	120	(677)	17	173,361	645	131	173,597
12004	Overtime-Union				8,335		(143)	8,192
13000	Exempt Supplemental				58,435	5,715	1,243	65,393
Grand Total		120	(677)	17	240,132	6,360	1,231	247,183

** Overtime payroll amounts were incurred from October through December. However, amounts were moved from numerous accounts into the reserve account (018629) in December. As a result, all amounts are reflected in December in the table above.*

Hurricane Irma

Project ID CB	01FL17					
Sum of Monetary Amount JD		Column Labels				
Row Labels	Resource Type Long Descr CB	9	10	11	12	Grand Total
12000	Overtime	783,482	58,141	57,974	19	899,616
12004	Overtime-Union	59,399				59,399
13000	Exempt Supplemental	198,264	110,623	1,803		310,690
Grand Total		1,041,145	168,764	59,777	19	1,269,705

*Amount does not include the Post Restoration OT for $202,015. Total OT is $1,471,701.

For the 2012 storms, Transmission overtime costs included the following, by Corporate Resource Groupings Rollup:

- Overtime-Non Bargaining Unit
- Overtime - Bargaining Unit

Payroll data is only available by month. Below are the monthly breakouts of Transmissions Overtime Payroll by storm and Corporate Resource Groupings Rollup:

Tropical Storm Debby

	2012			
Row Labels	7	8	10	
Overtime Payroll	$ 105,760	$ 1,219	$ 10,535	$ 117,514
Grand Total	$ 105,760	$ 1,219	$ 10,535	$ 117,514

Hurricane Isaac

Row Labels	8	9	Grand Total
Overtime Payroll	3,406	12,873	16,279
Grand Total	3,406	12,873	16,279

For all seven storms, Transmission overtime costs included the following, by Resource Type:

- Resource Type "12000" – Overtime
- Resource Type "12004" – Overtime-Union
- Resource Type "13000" – Exempt Supplemental

Payroll data is only available by month. Below are the breakouts of Transmissions Overtime by storm and by Resource Type:

Tropical Storm Colin

Resource Type ID CB	Resource Type Long Descr CB	6
12004	Overtime-Union	7,841
Grand Total		7,841

Hurricane Hermine

Resource Type ID CB	Resource Type Long Descr CB	2016 9	2016 10	2016 11	2016 12	2017 6	Grand Total
12000	Overtime	2,726					2,726
12004	Overtime-Union	156,847		650	182	791	158,471
13000	Exempt Supplemental	28,770	1,137				29,907
Grand Total		**188,344**	**1,137**	**650**	**182**	**791**	**191,104**

Hurricane Matthew

Resource Type ID CB	Resource Type Long Descr CB	2016 10	2016 11	Grand Total
12000	Overtime	3,994	114	4,108
12004	Overtime-Union	158,900	204	159,104
13000	Exempt Supplemental	38,356	9,404	47,760
Grand Total		**201,250**	**9,722**	**210,972**

Hurricane Irma

Resource Type ID CB	Resource Type Long Descr CB	2017 9	2017 10	2017 11	2017 12	2018 2	2018 3	Grand Total
12000	Overtime	517,114		26,090		2,241	(2,241)	543,204
12004	Overtime-Union	978,924	39,342	5,586	2,572	-	2,241	1,028,664
13000	Exempt Supplemental	282,317	276,245	13,487	3,580			575,629
Grand Total		**1,778,355**	**315,587**	**45,162**	**6,152**	**2,241**	-	**2,147,497**

Hurricane Nate

Resource Type ID CB	Resource Type Long Descr CB	2017 10	2017 11	Grand Total
12000	Overtime	1,533		1,533
12004	Overtime-Union	1,457		1,457
13000	Exempt Supplemental	1,878	453	2,331
Grand Total		**4,868**	**453**	**5,321**

33. Third Party Billing. Refer to Appendix A. Was the Company billed by any third party pole owners for pole replacements performed by the third party during any of the seven storms and if so provide a summary of costs by third parties for each storm.

Answer: See response previously provided on April 18, 2018.

34. Third Party Billing. Refer to Appendix A. Did the Company bill by any third party for pole replacements performed by the Company or its contractors during any of the seven storms and if so provide a summary of costs billed the third party for each storm.

Answer: See response previously provided on April 18, 2018.

35. Third-Party Reimbursement. Provide an explanation how the costs for third-party reimbursement were tracked and billed and include a summary of poles replaced during any of the seven storms along with the respective associated cost.

Answer: See response previously provided on April 18, 2018.

36. Overhead Costs. For payroll costs if an overhead rate was used for benefits and other related costs provide, by year, the respective overhead rates and an explanation of how the rates were determined.

Answer: See response previously provided on June 1, 2018.

37. Overheads. Provide for the same time period storm costs were recorded the respective overhead rates used for recording the normal general operating costs for the Company and explain any difference between the normal rates and the rates used for storm costs.

Answer:
See response previously provided on June 1, 2018.

38. Outside Contractors. Are all outside contractors' time to be approved by a Company representative? If yes, what happens if time reports are not approved? If no, explain why not and how the Company can be confident that the services were performed?

Answer:
See response previously provided on June 1, 2018.

39. Line Clearing. Refer to Appendix A. Provide, for each of the seven storms, a summary of line clearing costs (listing each invoice), and the line clearing contractor.

Answer: For Distribution, see the attached file bearing Bates Number 20170272-DEF-OPC-ROG 1-39-00001 through 20170272-DEF-OPC-ROG 1-39-00007. The attachment is confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated June 18, 2018.

For Transmission, see the attached file bearing Bates Number 20170272-DEF-OPC-ROG 1-39-00008 through 20170272-DEF-OPC-ROG 1-39-000012. The attachment is confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated June 18, 2018.

40. Line Clearing. Refer to Appendix A. Provide, for each the seven storms, a summary showing the date and number of crews mobilized and the date and number of crews demobilized.

Answer: See response previously provided on June 1, 2018.

41. Contractors. Explain in detail what services were performed by function by outside contractors (i.e. pole & wire work, plant repairs, etc.). If different for any of the seven storms please explain the difference.

Answer: See response previously provided on June 1, 2018.

42. Contractors. Identify whether contractors set poles and provide for each of the seven storms the number of poles set by contractors.

Answer: See response previously provided on April 18, 2018.

43. Contractors. Refer to Appendix A. Provide, for each of the seven storms, a summary of costs (listing each invoice) by function, by contractor.

Answer: For Distribution, see the attached file bearing Bates Number 20170272-DEF-OPC-ROG 1-43-00001 through 20170272-DEF-OPC-ROG 1-43-000060. The attachment is confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated June 18, 2018.

For Generation, see the attached file bearing Bates Number 20170272-DEF-OPC-ROG 1-43-000061 through 20170272-DEF-OPC-ROG 1-43-0000145. The attachment is confidential; a redacted slip sheet is attached hereto and unredacted copies have been

filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated June 18, 2018.

For Customer Operations, see the attached file bearing Bates Number 20170272-DEF-OPC-ROG 1-43-0000146 through 20170272-DEF-OPC-ROG 1-43-0000149. The attachment is confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated June 18, 2018.

For Transmission, see the attached file bearing Bates Number 20170272-DEF-OPC-ROG 1-43-0000150 through 20170272-DEF-OPC-ROG 1-43-0000166. The attachment is confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated June 18, 2018.

44. Materials & Supplies Expense. Refer to Appendix A. Provide, for each of the seven storms, a summary listing costs, by function, by type of costs.

Answer: In regards to Distribution, see below:

Project #	Name of Storm
20089322	Debby
20094460	Isaac
FLASTORM4	Colin
LCOLIN16	Colin
LSTM4	Hermine
LMATT	Matthew
FLDIRMA	Irma
FLDNATE	Nate

The amounts reflected are the gross amounts and do not reflect any adjustments for moving costs to capital or adjustments for non-incremental.

Fiscal Year CMD	(All)
Account ID CB	0186295
*Cost Drivers	Material
Material Quantity JD	(All)

			Preliminary 5/31/2018	Preliminary 5/31/2018	
Sum of Monetary Amount JD	Column Labels				
Row Labels	LSTM4	LMATT	FLDIRMA	FLDNATE	Grand Total
Other					
CONTRACTORS - FUEL	343,321	392,636	3,246,563	156,868	4,139,389
CONTRACTORS - MATERIALS		185,569	2,915,717		3,101,285
MISC - CONTRACTORS / MATERIALS / SUPPLIES / SERVICES	26,354	136,245	1,652,542	14,718	1,829,859
CONTRACTORS - STAGING AND LOGISTICS		107,025	499,900		606,926
CONTRACTORS - AVIATION			318,413		318,413
CONTRACTORS - LINE			166,400		166,400
OTHER	6,123	(6,351)	41,502	(3,648)	37,626
Transformer - Pole	**112,962**	**127,258**	**1,226,725**	**32**	**1,466,977**
Kit	**128,356**	**99,905**	**682,159**		**910,420**
Other Hardware	**105,502**	**90,077**	**511,432**	**0**	**707,011**
Wire	**37,565**	**58,020**	**597,220**	**(24)**	**692,781**
Transformer - Padmount	**75,614**	**42,164**	**290,315**		**408,093**
Pole	**11,382**	**35,158**	**330,955**		**377,496**
Cutout	**15,984**	**14,155**	**221,910**		**252,049**
Crossarm	**1,519**	**5,959**	**71,146**	-	**78,624**
Switchgear		**18,184**	**47,423**		**65,607**
Arrestor	**7,670**	**5,200**	**46,528**		**59,398**
Luminaire		-	**56,140**		**56,140**
Streetlight Pole	**0**		**43,619**		**43,619**
Cable - Underground		**59**	**31,915**		**31,974**
Regulator			**24,750**		**24,750**
Fuel		**119**	**8,834**		**8,952**
Relay			**327**		**327**
Capacitor			**309**		**309**
Wire - Transmission		**70**			**70**
Recloser	**(0)**		-		**(0)**
Pole - Transmission		**0**	**(24,969)**		**(24,969)**
Grand Total	**872,353**	**1,311,451**	**13,007,772**	**167,947**	**15,359,523**

Project	20089322	
account	1861900	
Disallowed	(blank)	
Report Grouping	(Multiple Items)	
Row Labels	**Sum of Transaction Amount**	
Materials	**382,098**	
Other Hardware	**230,346**	
Wire	**79,881**	
Other	**35,398**	
Cutout	**18,646**	
Pole	**13,238**	
Arrester	**2,628**	
Capacitor	**2,039**	
Crossarm	**1,592**	
Kit	**364**	
Luminaire	**321**	
Streetlight Pole	**152**	
Cable - Underground	**85**	
Recloser	**(2,592)**	
Grand Total	**382,098**	

Project	20094460	
Account Class	JB	
Disallowed	(blank)	
Report Grouping	(Multiple Items)	
Row Labels	**Sum of Transaction Amount**	
Materials	**54,975**	
Other Hardware	70,289	
Other	6,464	
Wire	6,136	
Luminaire	5,965	
Cable - Underground	3,171	
Capacitor	2,997	
Pole	2,081	
Crossarm	208	
Kit	(42,337)	
Grand Total	**54,975**	

In regards to Generation, see the attached file bearing Bates Numbers 20170272-DEF-OPC-ROG 1-44-00001 through 20170272-DEF-OPC-ROG 1-44-0000229.

For Customer Operations, see below:

IRMA	48,570	
Hermine	276	
Matthew	771	
Debbie	13,338	
Grand Total:	**62,955**	
Items included are:		
Meals, Office Supplies and Tools		

For Transmission Materials and Supplies, Duke Energy uses the following Resource Types:

- Resource Type "21000" – Direct Material/Inventory Cost
- Resource Type "28000" – Material Allocations
- Resource Type "28002" – Stores Loading
- Resource Type "30000" – Direct Purchases
- Resource Type "31000" – Direct Material Purchases
- Resource Type "33000" – Office Supplies & Expenses
- Resource Type "33001" – Postage & Freight

Below is the breakdown of M&S costs, by storm, by year.

2016 & 2017 Storms

	2016			2017	
Row Labels	Colin	Hermine	Matthew	Irma	Nate
Materials & Supplies	**860**	**90,527**	**115,866**	**2,175,589**	**356**
Direct Material Purchases	819	563		56,261	
Direct Material/Inventory Cost			3,831	1,661,893	
Direct Purchases	41	89,364	110,224	336,777	356
Material Allocations			153		
Office Supplies & Expenses		600	1,314	17,389	
Postage & Freight				180	
Stores Loading			343	103,089	
Grand Total	**860**	**90,527**	**115,866**	**2,175,589**	**356**

In 2012, for Materials and Supplies, Duke Energy Florida used the Corporate Resource Groupings Rollup "Materials". Below is the breakdown of materials costs, by storm.

Tropical Storm Debby – O&M

Row Labels	Transmission	
Materials & Supplies	$	19,566
Grand Total	**$**	**19,566**

Tropical Storm Debby – Capital

Row Labels	Sum of amount
Materials & Supplies	105,229
Grand Total	**105,229**

Tropical Storm Isaac

Materials & Supplies	**683**
Materials	683
Grand Total	**683**

For Customer Operations, please see the attached file bearing Bates Numbers 20170272-DEF-OPC-ROG 1-44-0000230 through 20170272-DEF-OPC-ROG 1-44-0000234 .

45. Vehicle & Fuel. Provide, for each of the seven storms, a summary of costs by function identifying the costs by type (i.e. overhead charge, invoiced, contractor/vendor charge, other, etc.) that are included storm cost total.

Answer: For Distribution, see below:

Project #	Name of Storm
20089322	Debby
20094460	Isaac
FLASTORM4	Colin
LCOLIN16	Colin
LSTM4	Hermine
LMATT	Matthew
FLDIRMA	Irma
FLDNATE	Nate

Refer to OPC ROG 23 for details on the amounts accounted for as non-incremental. The below costs are gross amounts.

Fiscal Year CMD	(All)
Account ID CB	0186295

				Preliminary 5/31/2018	Preliminary 5/31/2018	
Sum of Monetary Amount JD	Column Labels					
Row Labels	LCOLIN16	LSTM4	LMATT	FLDIRMA	FLDNATE	Grand Total
Fleet	**$98,851**	**$242,487**	**$867,120**	**$1,358,374**	**$11,969**	**$2,578,800**
Vehicle & Equip. Chargeback	$62,833	$151,663	$382,154	$1,032,737	$6,276	$1,635,663
Vehicle & Equip Chrbk (Alloc)	$36,018	$90,824	$484,965	$325,637	$5,693	$943,137
Grand Total	**$98,851**	**$242,487**	**$867,120**	**$1,358,374**	**$11,969**	**$2,578,800**

Project	20089322
account	1861900
Report Grouping	(Multiple Items)
Disallowed	(blank)

Row Labels	Sum of Transaction Amount
Fleet	**273,286**
VEHICLE MILEAGE DISTRIBU	273,286
Grand Total	**273,286**

Project	20094460
Account Class	JB
Report Grouping	(Multiple Items)
Disallowed	(blank)

Row Labels	Sum of Transaction Amount
Fleet	**98,597**
VEHICLE MILEAGE DISTRIBU	98,597
Grand Total	**98,597**

For vehicles, Duke Energy uses a "Fleet" method that pools vehicle costs, such as repairs, leasing, depreciation, and fuel. These costs are gathered to determine the Fleet allocation. Below, the DEF fuel costs were 16% of the overall Fleet pooled cost.

Fleet breakdown for DEF	
	Split %
Repair Labor, Parts, Contracts/OH	36%
Leasing/Other Ownership Costs/OH	32%
Depreciation	16%
Fuel	16%

Duke Energy uses the following Resource Types to pool Fleet costs:

- Resource Type "50000" – Vehicle & Equip. Chargeback
- Resource Type "50002" – Vehicle & Equip Chrbk (Alloc)

It should be noted contractors typically do not provide fuel specific invoices; additionally, Duke Energy does not track contractor fuel costs. Thus, Duke Energy does not have visibility into contractor fuel costs. However, below are the fuel costs associated with the Duke Energy internal Fleet pool.

Transmission

Transmissions Florida Fleet costs were insignificant, thus Transmission disallowed the entire Florida Transmission Fleet cost, including fuel. All non-Florida Transmission Fleet costs (e.g., Duke Energy Carolinas, Duke Energy Progress, etc.); however we determined to be allowable. Below is the breakdown of vehicle costs, by storm, by Florida and Non-Florida vehicle locations.

2017 Storms

Category	Resp Center Location	Irma	Nate	Grand Total
Fleet Costs (Internal)	DEF TO DEF	75,090	318	75,407
	OUTSIDE DEF	75,532		75,532
Fleet Costs (Internal) Total		**150,622**	**318**	**150,940**
Grand Total		**150,622**	**318**	**150,940**

Isaac

Row Labels	Sum of Transaction Amount
Fleet	37,413
Grand Total	**37,413**

Debby

Row Labels	Transmission	Grand Total
Fleet Costs (Internal)	$ 77,572	$ 77,572
Grand Total	**$ 77,572**	**$ 77,572**

46. Other Operating Expenses. Explain what type of costs are included in other operating expenses and provide, for each of the seven storms, a summary of costs, by type, by function. Also identify whether P Card costs are included and if so prove a separate summary of those costs by invoice amount.

Answer: For Distribution, see the attached file bearing Bates Number 20170272-DEF-OPC-ROG 1-46-00001 through 20170272-DEF-OPC-ROG 1-46-00007.

For the 2016 and 2017 storms, Duke Energy Transmission did not categorize or report Other expenses, with the exception of a $12,000 damage claim for Hurricane Irma, which was disallowed. P Cards costs were not included in the 2016 or 2017 Other storm expenses.

2012 Storms
For Tropical Storm Debby, a $3,000 claim settlement was booked as Other. There were not corporate or P card charges in Other. The Debby's capital projects had charges of $137,008 that were converted as "other" during the system integration, as a result of the company's merger.

For Isaac, no costs were categorizes as Other.

47. Employee Expenses. Explain what type of costs are included in employee expenses and provide, for each of the seven storms, a summary of costs, by type, by function. Also identify whether P Card costs are included and if so prove a separate summary of those costs by invoice amount.

Answer: For Distribution, see below:

Project #	Name of Storm
20089322	Debby
20094460	Isaac
FLASTORM4	Colin
LCOLIN16	Colin
LSTM4	Hermine
LMATT	Matthew
FLDIRMA	Irma
FLDNATE	Nate

The amounts reflected are the gross amounts and do not reflect any adjustments for non-incremental.

The Travel Expenses line item includes various items associated with company travel: car rental, gasoline, meals, ground transportation, miscellaneous and hotels.

Fiscal Year CMD	(All)
Account ID CB	0186295

				Preliminary 5/31/2018	Preliminary 5/31/2018	
Sum of Monetary Amount JD	Column Labels					
Row Labels	LCOLIN16	LSTM4	LMATT	FLDIRMA	FLDNATE	Grand Total
Employee Expense	$84,782	$1,347,639	$2,920,884	$20,646,816	$26,363	$25,026,484
Travel Expenses	$74,752	$1,286,980	$2,822,024	$20,302,883	$20,968	$24,507,608
Meals and Entertainment (50%)	$529	$21,332	$39,237	$184,848	$3,338	$249,284
Overtime Meals (Non Travel)	$9,278	$30,041	$47,429	$75,794	$1,193	$163,735
Air Travel Cost		$1,615	$3,699	$40,495		$45,810
Personal Vehicle Mileage Reimb	$223	$7,224	$7,710	$29,559	$854	$45,570
PersMobileDevice reimbursement		$446	$200	$4,429		$5,074
Per Diem			$258	$3,474		$3,732
Meals & Entertain. (Billable)				$3,410	$10	$3,420
Dues - Deductible			$326	$1,040		$1,366
Comb travel, lodging, meals				$885		$885
Grand Total	$84,782	$1,347,639	$2,920,884	$20,646,816	$26,363	$25,026,484

Purchase Card		
Bank America	LMATT	FLDIRMA
5567611106094517OCT16	$ 2,586,806	
5567611106094517OCT16	$ 33,216	
5567611106094517OCT16	$ 21,543	
5567611106094517NOV16	$ 16,513	
5567611106094517MAR17	$ 10,338	
5567611106094517FEB17	$ 8,705	
5567611106094517JAN17	$ 1,020	
5567611106094517DEC16	$ 23	
5567611106094517SEP17		$ 10,959,383
5567611106094517OCT17		$ 4,467,211
5567611106094517DEC17		$ 621,789
5567611106094517NOV17		$ 406,841
5567611106094517SEP17		$ 110,633
5567611106094517JAN18		$ 29,138
5567611106094517OCT17		$ 106
	$ 2,678,163	$ 16,595,101

Project	20089322
account	1861900
Report Grouping	(Multiple Items)
Disallowed	(blank)

Row Labels	Sum of Transaction Amount
Meals/Travel/Lodging	159,850
MEALS/TRAVEL/LODGING (OML)	159,850
Grand Total	159,850

Project	20094460
Account Class	JB
Report Grouping	(Multiple Items)
Disallowed	(blank)

Row Labels	Sum of Transaction Amount
Meals/Travel/Lodging	326,617
MEALS/TRAVEL/LODGING (OML)	326,617
Grand Total	326,617

In regards to Generation, see the attached file bearing Bates Numbers 20170272-DEF-OPC-ROG 1-47-00001 through 20170272-DEF-OPC-ROG 1-47-000051.

For all seven storms, Transmission employee expense costs included the following, by Resource Type:

- Resource Type "40000" – Travel Expenses
- Resource Type "40001" – Air Travel Cost
- Resource Type "40004" – Per Diem
- Resource Type "40006" – Comb travel, lodging, meals
- Resource Type "40007" – Personal Mobile Device reimbursement
- Resource Type "41000" – Meals and Entertainment (50%)
- Resource Type "41001" – Overtime Meals (Non Travel)
- Resource Type "42000" – Personal Vehicle Mileage Reimbursement
- Resource Type "49002" – Dues – Deductible

The Duke Energy Corporate cards typically are used employee expenses during storm restoration.

In addition, Transmission's Staging and Logistics costs (e.g., block hotel rooms, etc.) were included in the "Other Employee Expenses" through the use of Storm Cards. Those costs were captured through the 40000 and 99810 – "Accounting Entry" resource types. These Storm cards charges are detailed further in the OPC POD 9 response.

Below are the breakouts of Transmission's Employee Expenses by storm and by Resource Type:

	2016			2017	
Row Labels / Colin		Hermine	Matthew	Irma	Nate
Accounting Entry				1,227,561	
Air Travel Cost		1,170	3,336	5,937	
Comb travel, lodging, meals				553	
Dues - Deductible				205	
Meals and Entertainment (50%)	11	3,720	4,711	50,011	58
Overtime Meals (Non Travel)	451	959	1,043	15,506	
Per Diem	129	10,320	13,932	16,710	
PersMobileDevice reimbursement				675	
Personal Vehicle Mileage Reimb		3,044	1,064	41,071	
Travel Expenses	362	10,633	453,773	283,468	1,388
Grand Total	**954**	**29,846**	**477,860**	**1,641,696**	**1,446**

2016 Storms

2016 storm project charging did not contain invoices, thus a summary of cost by invoice is not available.

2017 Storms

Transmission storm projects had only one invoice for employee expenses relating to Hurricane Irma. It is as follows:

Row Labels	2017
Personal Vehicle Mileage Reimb	36,527
0000172456 - H G HARDERS & SON INC	36,527
Grand Total	**36,527**

Storm Card invoices relating to the Staging and Logistics costs (e.g., block hotel rooms, etc.) booked to the Travel Expenses and Accounting Entry resource types above are provided in OPC POD 9.

For the 2012 storms, Transmission employee expense costs included the following, by Corporate Resource Groupings:

- Meals/Travel/Lodging
- Other

The Other Corporate Resource Grouping includes Transmission's Staging and Logistics costs (e.g., block hotel rooms, etc.).

Below are the breakouts of Transmission's Employee Expenses by storm and by Corporate Resource Groupings:

Tropical Storm Debby Storm project code

Other Employee Expenses	$	335,037
Meals/Travel/Lodging	$	9,321
Other	$	325,716
Grand Total	**$**	**335,037**

Tropical Storm Debby – Capital project

Row Labels	Sum of amount
Other Employee Expenses	1,864
Grand Total	**1,864**

Tropical Storm Isaac

Other Employee Expenses	7,552
Meals/Travel/Lodging	7,552
Grand Total	**7,552**

48. Tree Trimming. Provide for each of the seven storms the amount of line clearing costs by month.

Answer: See response previously provided on June 1, 2018.

49. Tree Trimming. Provide for each of the seven storms, for any month where line clearing costs were charged to the restoration work order the previous three calendar years of costs for that same month that were charged to O&M expense.

Answer: See response previously provided on June 1, 2018.

50. Tree Trimming. Rule 25-6.0143(1)(f) states: "The types of storm related costs prohibited from being charged to the reserve under the ICCA [Incremental Cost and Capitalization Approach] methodology include, but are not limited to, the following" and paragraph 8 states: "Tree trimming expenses, incurred in any month in which storm damage restoration activities are conducted, that are less than the actual monthly average of tree trimming costs charged to operation and maintenance expense for the same month in the three previous calendar years." are to be excluded. Provide monthly calculations performed by the Company for each of the seven storms that would show whether the Company is in compliance with this requirement.

Answer: See response previously provided on June 1, 2018.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of _____, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BRIAN BUCKLER, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 9, 10, 17 through 19, 21 through 26, 31 through 37, 39, 40, and 43 through 50 of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2018.

_____
BRIAN BUCKLER

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of _____, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 1, 2, 4 through 8, 11, 12, 14 through 16, 20, 38, 41, and 42 of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2018.

_____
JASON CUTLIFFE

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of _____, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BOB MATTHEWS, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 8, and 14 through 16, of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2018.

_____
BOB MATTHEWS

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of _____, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 3, 13, and 27 through 30, of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2018.

_____
MARCIA OLIVIER

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

Project #	Name of Storm
20089322	Debby
20094460	Isaac
FLASTORM4	Colin
LCOLIN16	Colin
LSTM4	Hermine
LMATT	Matthew
FLDIRMA	Irma
FLDNATE	Nate

See OPC ROG 25 for the resource groups included in Labor / Regular Payroll

Account ID CB	0186295
Resource Type Long Descr CB	(All)
Resource Type ID CB	(All)

Sum of Monetary Amount JD	Column Labels																				
	2016							2016 Total	2017					2017 Total	2018				2018 Total	Grand Total
Row Labels	6	7	8	9	10	11	12		1	9	10	11	12		1	2	3	4		
Affiliate	**$1,057**	**$284**		**$64,031**	**$235,332**	**($2,983)**	**($4,489)**	$293,231	**($491)**	**$2,475,268**	**$322,252**	**$2,114**	**($2,049)**	$2,797,093			**$0**		$0	**$3,090,325**
LCOLIN16	**$1,057**	**$284**						**$1,341**												**$1,341**
Labor	$1,057	$284						$1,341												$1,341
LSTM4				**$64,031**	**$6,771**	**($665)**		**$70,137**												**$70,137**
Labor				$64,031	$6,771	($665)		$70,137												$70,137
LMATT					**$228,561**	**($2,319)**	**($4,489)**	$221,753	**($491)**					($491)			**$0**		$0	**$221,263**
Labor					$228,561	($2,319)	($4,489)	$221,753	($491)					($491)			$0		$0	$221,263
FLDIRMA										**$2,475,268**	**$322,247**	**$2,114**	**($2,049)**	$2,797,579						**$2,797,579**
Labor										$2,475,268	$322,247	$2,114	($2,049)	$2,797,579						$2,797,579
FLDNATE											**$5**			**$5**						**$5**
Labor											$5			$5						$5
Duke Energy Florida	**$109,737**	**$42,305**	**$16,185**	**$332,124**	**$525,798**	**$40,222**	**$12,494**	$1,078,865	**($359)**	**$2,364,675**	**$236,136**	**$685**	**$16,160**	$2,617,298	**$12,313**	**$408**	**$668**	**$1,232**	$14,621	**$3,710,783**
FLASTORM4	**$57,415**	**($299)**			**$717**			**$57,832**												**$57,832**
Labor	$57,415	($299)			$717			$57,832												$57,832
LCOLIN16	**$52,322**	**$42,604**	**$16,185**	**$261**		**$573**		**$111,945**												**$111,945**
Labor	$52,322	$42,604	$16,185	$261		$573		$111,945												$111,945
LSTM4				**$331,863**	**$1,093**	**$47,693**	**$591**	**$381,240**	**($58)**					($58)						**$381,181**
Labor				$331,863	$1,093	$47,693	$591	$381,240	($58)					($58)						$381,181
LMATT					**$523,988**	**($8,044)**	**$11,904**	$527,848	**($301)**					($301)						**$527,547**
Labor					$523,988	($8,044)	$11,904	$527,848	($301)					($301)						$527,547
FLDIRMA										**$2,364,675**	**$202,874**	**$685**	**$16,160**	$2,584,395	**$12,313**	**$408**	**$668**	**$1,232**	$14,621	**$2,599,016**
Labor										$2,364,675	$202,874	$685	$16,160	$2,584,395	$12,313	$408	$668	$1,232	$14,621	$2,599,016
FLDNATE											**$33,262**			**$33,262**						**$33,262**
Labor											$33,262			$33,262						$33,262
Grand Total	**$110,794**	**$42,589**	**$16,185**	**$396,155**	**$761,129**	**$37,239**	**$8,006**	$1,372,096	**($850)**	**$4,839,943**	**$558,388**	**$2,799**	**$14,111**	$5,414,391	**$12,313**	**$408**	**$668**	**$1,232**	$14,621	**$6,801,108**

account	1861900
Report Grouping	(Multiple Items)
Project	20089322
Disallowed	(blank)

Sum of Transaction Amount	Column Labels							
Row Labels	7	8	9	10	11	12	1	2 Grand Total
Base Prod Labor-Bargaining	329,758	1	921					330,680
Base Prod Labor-Non Bargaining	307,747	2,175	1,330	493	111	157	105	84 312,203
Grand Total	**637,506**	**2,176**	**2,251**	**493**	**111**	**157**	**105**	**84 642,883**

Account Class	JB
Project	20094460
Disallowed	(blank)
Report Grouping	(Multiple Items)

Sum of Transaction Amount	Column Labels					
Row Labels	8	9	10	11	12	Grand Total
Base Prod Labor-Bargaining	6,989	72,357	(331)			79,015
Base Prod Labor-Non Bargaining	31,560	184,676	(259)	1,256	1,128	218,360
Grand Total	**38,549**	**257,033**	**(590)**	**1,256**	**1,128**	**297,375**

The payroll amounts above are the total gross charges to those storms before any adjustments for non-incremental calculations.
Affiliate amounts were not considered part of base rates and were excluded from non-incremental calculations.

Project #	Name of Storm
20089322	Debby
20094460	Isaac
FLASTORM4	Colin
LCOLIN16	Colin
LSTM4	Hermine
LMATT	Matthew
FLDIRMA	Irma
FLDNATE	Nate

See OPC ROG 23 for the resource groups that are included in Overtime

Account ID CB	0186295
Resource Type Long Descr CB	(All)
Resource Type ID CB	(All)

Sum of Monetary Amount JD	Column Labels																					
	2016							2016 Total	2017								2017 Total	2018			2018 Total	Grand Total
Row Labels	6	7	8	9	10	11	12		1	2	5	9	10	11	12		1	2	3		
Affiliate		$2,825		$139,049	$711,141	$34,851	$10,413	$898,280	$695			$6,242,132	$1,551,371	$43,829	$6,562	$7,844,588	($1,792)			($1,792)	$8,741,076
LCOLIN16		$2,825						$2,825													$2,825
Overtime		$2,825						$2,825													$2,825
LSTM4				$139,049	$19,261	$130		$158,440	$62							$62					$158,502
Overtime				$139,049	$19,261	$130		$158,440	$62							$62					$158,502
LMATT					$691,880	$34,722	$10,413	$737,015	$633							$633					$737,648
Overtime					$691,880	$34,722	$10,413	$737,015	$633							$633					$737,648
FLDIRMA												$6,242,132	$1,530,924	$43,829	$6,562	$7,823,447	($1,792)			($1,792)	$7,821,655
Overtime												$6,242,132	$1,530,924	$43,829	$6,562	$7,823,447	($1,792)			($1,792)	$7,821,655
FLDNATE													$20,447			$20,447					$20,447
Overtime													$20,447			$20,447					$20,447
Duke Energy Florida	$230,115	$141,881	$48,240	$1,783,396	$2,353,022	$53,930	$26,151	$4,636,735	$1,887	($133)	$18	$5,830,668	$1,349,161	$36,995	$34,461	$7,253,057	$3,544	$1,684	$2,758	$7,985	$11,897,777
FLASTORM4	$117,656	($808)				($58)		$116,790													$116,790
Overtime	$117,656	($808)				($58)		$116,790													$116,790
LCOLIN16	$112,460	$142,689	$48,240	$231		$3,121	$576	$307,316	$357	($133)						$224					$307,540
Overtime	$112,460	$142,689	$48,240	$231		$3,121	$576	$307,316	$357	($133)						$224					$307,540
LSTM4				$1,783,166	$58,694	$1,964	$473	$1,844,296	($230)		$18					($212)					$1,844,084
Overtime				$1,783,166	$58,694	$1,964	$473	$1,844,296	($230)		$18					($212)					$1,844,084
LMATT					$2,294,328	$48,902	$25,102	$2,368,332	$1,760							$1,760					$2,370,092
Overtime					$2,294,328	$48,902	$25,102	$2,368,332	$1,760							$1,760					$2,370,092
FLDIRMA												$5,830,668	$1,186,572	$31,256	$29,792	$7,078,288	$3,544	$1,684	$2,758	$7,985	$7,086,273
Overtime												$5,830,668	$1,186,572	$31,256	$29,792	$7,078,288	$3,544	$1,684	$2,758	$7,985	$7,086,273
FLDNATE													$162,589	$5,739	$4,669	$172,997					$172,997
Overtime													$162,589	$5,739	$4,669	$172,997					$172,997
Grand Total	$230,115	$144,706	$48,240	$1,922,446	$3,064,163	$88,781	$36,564	$5,535,014	$2,582	($133)	$18	$12,072,800	$2,900,532	$80,823	$41,023	$15,097,645	$1,752	$1,684	$2,758	$6,194	$20,638,853

account	1861900
Report Grouping	(Multiple Items)
Project	20089322
Disallowed	(blank)

Sum of Transaction Amount	Column Labels			
Row Labels	7	8	9	Grand Total
Overtime - Bargaining Unit	1,289,000	26	544	1,289,570
Overtime-Non Bargaining Unit	197,757	1,181	30	198,967
Grand Total	**1,486,756**	**1,207**	**573**	**1,488,537**

Account Class	JB
Project	20094460
Disallowed	(blank)
Report Grouping	(Multiple Items)

Sum of Transaction Amount	Column Labels					
Row Labels	8	9	10	11	12	Grand Total
Overtime - Bargaining Unit	35,840	208,060	496			244,397
Overtime-Non Bargaining Unit	4,151	135,185	2,124	-	(27)	141,433
Grand Total	**39,992**	**343,245**	**2,620**	**-**	**(27)**	**385,830**

The overtime amounts above are the total gross charges to those storms before any adjustments for non-incremental calculations.
Affiliate amounts were not considered part of base rates and were excluded from non-incremental calculations.

	500,732	14,774	717	91,344	268,341	14,511	39,628

Sum of Monetary Amount JD	Station						
Vendor / Matl Desc / JE Desc	**Anclote**	**Bartow**	**Central**	**CRN**	**CRS**	**Hines**	**North**
Anclote Storm FERC Reclass	398,791						
#2 ELEVATOR BUILDING REPAIR --	109,855						
CORRECTIONS FOR STORM IRMA CHA				5,830	35,396		
LUG,POSITECH ESR1-0438; #4 1-H					40,310		
WESCO DISTRIBUTION INC	35,778			2,548		67	
SENTRY EQUIPMENT CORP					36,814		
CRN U5 - 501 ACCPC AUTOMATIC T				27,752			
LANTERN,ELECTRIC, RED LED, 12V				25,173			
FILTER,AIR, AIR SYSTEM, 24" WD							21,894
TRANE US INC					21,102		
EXTENSION, IGNITOR, 3/4", TYPE				20,001			
PUMP, SEWAGE LIFT					19,928		
Sunbelt rental 20 kw diesel ge		16,695					
Anclote Storm FERC Account Rec	15,445						
INTERNATIONAL CONDUCTORS TO PR						14,406	
JOURNAL TO RECLASS FROM O&M TO				13,908			
MOTOR,ELECTRIC, AC, 100 HP, 46					13,813		
FLOWMETER, MAGNETIC, 0-51.41,					13,375		
PUMP,ROTARY, PISTON, INCLUDES:					12,636		
INDUSTRIAL SERVICE CO LTD					11,988		
LANTERN,ELECTRIC, GREEN LED, 1				10,789			
CONTRACTORS; CRS 2017 STORM SU					10,657		
SUNBELT RENTALS INC						10,600	
FREIGHT						10,600	
SCIENTIFIC SALES INC					10,345		
COMM DIVE MAINT;FLANGE BOLT RE					10,000		
Repairs to Jet Control House R			9,500				
GEARBOX, REDUCER, 300.34:1 GEA					9,214		
PLUG,SPARK,				8,061			
CRS CHIMNEY INSPECTION / ASSES					8,000		
FILTER, MOISTURE SEPARATOR, 24			335				7,301
SUNBELT BARTOW P4 CLEANING		7,382					
SPROCKET, DRIVE, 14 TEETH, CS,					7,356		
SPROCKET, DRIVE, DRIVEN, 80 TE					7,191		

SUNBELT INDUSTRIAL COMPANY INC						
SUMMIT ENVIRONMENTAL; U2 PRECI				6,692		
GREEN TWEED AND CO				6,334		
RENTAL - SUNBELT RENTAL/ GENER					5,945	
SBI - HNCC - LABOR - HURRICANE					5,936	
MOTOR,ELECTRIC, AC, 125 HP, 46				5,772		
SERVICE: ADD ADDITIONAL FUNDS	5,500					
DRIVE, 13.1 HP INPUT, SM-CYCLO		5,226				
CLASSIC CONTROLS INC				4,846		
RENT GENERATOR FOR HINES FOR I					4,319	
BHA ALTAIR LLC						4,212
CHAIN,DRIVE, 10' LG, CORROSION				4,138		
ELEMENT,FILTER, PRE-FILTER, 24						3,780
ELECTRIC SUPPLY INC				3,727		
PUMP, SUBMERSIBLE SUMP, 65 GPM				3,667		
KIT,TERMINATION, 5696K Cold Sh				3,431		
BHI SUPPLEMENTAL LABOR ADDENDU				3,267		
ANIXTER INC				2,952		
PUMP, LUBE OIL, BOILER CIRCULA				2,878		
SOUTHEASTERN CONSTRUCTION REPA					2,803	
FILTER,30" LG			2,708			
Expense Accrual Journal		2,698				
FILL FOR SAND BAGS			2,603			
SBI - HNCC - HURRICANE IRMA PR					2,568	
SOUTHERN FASTENERS & SUPPLY INC				2,224		
WSHER, FLAT, 1-3/4" , CS				2,098		
PAYPAL BEINERSALES				2,050		
SUNBELT 15,000LB FORK TRUCK RE				1,844		
XYL DEWATERING		1,797				
TECHNICAL INSTALLATION SPECIALISTS INC	1,749					
MOTOR,ELECTRIC, AC, 5 HP, 480V				1,655		
TIS, INC, SHIPPING	1,643					
ABRASIVE,PARTICLE, BLASTING, G				1,589		
WINN DIXIE #2421				1,587		
PN#52936; 1/2 PT AD				1,481		
SEAN M GERRITS INC			1,379			
CYLINDER,LINEAR ACTUATING, PNE				1,345		
SUNBELT EQUIPMENT AND HOIST RE			1,260			
ADAMS AIR & HYDRAULICS INC				1,208		
Hoffman A30P24SS6 30 x 24 Stai	1,202					

MOTOR,ELECTRIC, AC, 1-2 HP, 48					1,183		
McMaster-Carr		740					362
NORTHERN TOOL EQUIP					1,070		
THE HOME DEPOT #6332				280	712		
HEATER ELECTRIC, 460-480/60/3,					950		
PLEXIGLASS, CLEAR ACRYLIC, 1/4					840		
ANIXTER 3MR-0603 6/3 W/GRD 600					820		
AMAZON MKTPLACE PMTS W		807					
CARROLL'S BUILDING MAT		798					
PUMP,CENTRIFUGAL, 2" FNPT INLE						752	
22225374-1				750			
RING,LOCK, SHAFT JOURNAL, DWG					737		
AMAZON MKTPLACE PMTS	156	350			195		
OZ Gedney 31-150 1-1/2 Inch Ri	690						
MCMASTER-CARR SUPPLY COMPANY					683		
MODULE, CONTROLLER, COMMANDER					636		
METAL SUPERMAR00 OF 00					630		
ISC SALES ONLINE		615					
WW GRAINGER						613	
HARNESS, FALL PROTECTION FULL					613		
SHERWIN WILLIAMS 70255					567		
ELEMENT,FILTER, AIR, 24-3/4" X				542			
GAS, O2, CO, LEL PENTANE, H2S,						536	
AMAZON.COM AMZN.COM/BI		424					
CORD,EXTENSION, (3) 12 AWG CON				187	187	145	
WESCO DIST F&M MAFCO							491
CAN,CARBOY/JERRICAN,5 GAL,PE,C				271	203		
FLASHLIGHT, INTRINSICALLY SAFE	51			304		102	
CHEMICAL, 2-PROPANOL//ISO-PROP				438			
NORTH AMERICAN SWITCHGEAR INC					424		
COVERALL, LG SLEEVE, HEAVY WEI		86					337
FOOD RANCH				421			
WASHER,LOCK, BELLEVILLE, 1/2"					398		
MATERIAL, CLEAR PLASTIC (VISQU	86			258			
LOWES #01853					338		
WESCO - # 7848			334				
THE HOME DEPOT #0289		329					
THE HOME DEPOT #0288	328						
ROPE, 3/4" DIA, 600' REEL LG,				328			
TRAFFIC LOGIX						325	

KIT,TERMINATION, 15KV, (1) 2/0 323
WATER, SPRING, 16.9 OZ/500ML P 312
ROPE, 3/8" DIA, PP/DACRON, 600 205 102
CLEANER, CONTACT, 14 OZ CONTAI 285
THE WAREHOUSE 257
SOUTHEASTERN CONSTRUCTION & MAINTENANCE 251
ROPE,WIRE, 1/4" DIA, 500' REEL 249
FLASHLIGHT, HARD HAT, ADJUSTAB 68 168
RAG, HIGHLY ABSORBENT, 12" X 1 113 113
RELAY,TIME DELAY, 1-300 SECOND 215
SCREW,CAP,1-1/2" DIA,6 UNC,5-1 215
LOWES #01629 214
AIRGAS SOUTH 209
LARRYS SHOE REPAIR INC 208
WM SUPERCENTER #1960
THE HOME DEPOT #6323 199
RAINGEAR, COAT, X-LARGE, LG ST 142 44
SOLDER, 1 LB, STICK CORE, 1/4" 182
BATTERY,DRY CELL, ALKALINE, 1. 140 40
RED WING SHOES PINEVIL
ABSORBENT, OIL/CHEMICAL/WATER, 168
WRENCH,IMPACT, 1/2" DR, 6.8-7. 166
HOLDER, PUNCH, 6" LG, CAST STL 164
THE HOME DEPOT #0256
WRENCH,TORQUE, 3/8" SQ DRIVE, 154
TENCARVA MACHINERY COMPANY 154
INDEX,DRILL BIT, 1/16"-1/2" DR 151
DELIVERY 150
BLANKET, FLAME RETARDANT, 62" 146
PACKING, PUMP, CROSSLOK BRAIDE 141
GATE, VACUUM PUMP, F/ IRON HOR 140
PUBLIX #422 138
INSERT,CUTTING TOOL,DIAMOND 80 136
TAPE,ELECTRICAL, SELF FUSING, 135
WM SUPERCENTER #718
COVERALL, SHORT SLEEVE, HEAVY 132
ISOLATOR, POST, IPB, 36KV, 150 129
TAP,THREADING, PLUG, 7/8" DIA, 128
KIT, REBUILD, F/ AIR CYL 2.5" 128
WASHER, CONICAL, 1/2" NOM, SS, 127

FILTER, 27 X 24 X 2, GALV META					126	
DRUM,STORAGE, DOT REGULATED MA				61	57	
WINN DIXIE #2446		110				
SCREW SET, SPECIAL, 4 PIECE, F				108		
CONDUIT, FLEXIBLE SEALTIGHT, 4			108			
PLATE,CUT OFF				106		
CHANNEL,STRUCTURAL, 6" X 1/4",			104			
GLOVES, MECHANICS, X-LARGE, LE			103			
GLOVES, X-LARGE, HD WASP						103
HARBOR FREIGHT TOOLS 4			46			
TILE, ACOUSTICAL CEILING, 2' X					101	
GUNTERS FARM & FEED IN				100		
THERMOSTAT, NON-PROGRAMMABLE,				98		
ROD,WELDING, ASME SFA-5.4, E30						95
PIPE, 1-1/2" NPS, RANDOM FT MI				93		
PUBLIX #797			90			
WRENCH,RATCHET, 3/8" DRIVE, AI				89		
LANTERN,ELECTRIC, HANDHELD, 6V			88			
GOGGLES, SAFETY, CLEAR, FLEXSE				86		
CONNECTOR,CABLE/CONDUIT, CORD				84		
BOOTS, SNUG LEG ANKLE FITTING			50	32		
BIT, STEP, BIT, UNIBIT, 1/4" T				81		
CONNECTOR,ELECTRICAL, TERMINAL				79		
PROTECTOR,HEARING, EAR PLUG, 2						79
HOSE,FLEXIBLE METAL,1/2",36" L		77				
BAR,ROUND, 7/8" DIA, 12' LG, 2				73		
GLASSES,SAFETY, READERS, YELLO				73		
RAINGEAR, COAT, MED, LG STYLE,			57	14		
FILTER,AIR, PLEATED EXTENDED S						70
TUBING,NONMETALLIC, FLEXIBLE,					70	
LUBRICANT,ANTI-SEIZE,PASTE,1 L		69				
COMPOUND,SEALING, HIGH TEMP RT			67			
SEAL, ROTARY, 1-1/4", M ASSY,				65		
TAPE,SAFETY BARRIER, DANGER DO	64					
STUD,DOUBLE ENDED, COVER, 1/2"				64		
BAR,FLAT, 1-1/2" WD, 12' LG, 1	61					
COVER, BLANKET, WATERPROOF W/			59			
RAINGEAR, COAT, 3X-LARGE, LG S					59	
HOLDER, PUNCH, 8" LG, CS, HOLD						56
BODY,VALVE, F/ IRON HORSE HIGH				55		

BOX,ELECTRICAL, JUNCTION/PULL,					55				
RESPIRATOR, DISPOSABLE MASK, D				54					
RAINGEAR, HOODED JACKET/SUIT,				53					
GLOVES, WORK, LARGE, LEATHER,		53							
NUT,HEX, 1/2" DIA, 13 TPI, BRA					53				
ANGLE,STRUCTURAL, 2-1/2" WD, 2					51				
RAG, LINT FREE, 12" X 18" CUT,				51					
CORD,EXTENSION, (3) 14 AWG CON				50					
BATTERY,DRY CELL,ALKALINE,1.5V			29	14	7				
SEAL,ROCKER,STL,(2) SEALS PER					49				
SLING,WIRE ROPE, 1/2" DIA, 440	49								
COMPOUND,CAULKING, RTV SILICON				49					
CONNECTOR,CABLE/CONDUIT,CORD &					48				
TAPE,ELECTRICAL, 3/4" X 66' X				47					
ADHESIVE, HIGH STRENGTH, SPRAY						45			
ROPE, 1/4" DIA, 1200' REEL LG,				44					
BOOTS, SLIP ON, 10" HT, X-LARG				44					
PLATE, COVER, IPB BUS, CALVERT						44			
CVS/PHARMACY #05139									
BEARING,BALL, CONRAD, SGL ROW,					41				
SPRING SET, CORRUGATED, 2 PIEC					41				
BATTERY,DRY CELL,6VDC,SPRING T				40					
CRYSTAL RIVER ACE HDWE				19	19				
RELAY, KUP-14D15-12					39				
PYRAMID FASTENERS INC						37			
CLEANER, LAUNDRY DETERGENT, PO					37				
FUSE, TIME DELAY DUAL ELEMENT,						37			
BUSHING,CONDUIT,BONDING & GROU				36					
CLEANER, DETERGENT, LIQUID, 85					35				
FUNNEL, 160MM TOP DIA, PP				35					
GLASSES,SAFETY, READERS, +1.5								33	
TOWEL, HAND CLEANER, SCRUBS IN								32	
HAT, HARD, STD, WHITE, V-GARD				31					
ADVANCE AUTO PARTS #92				31					
CHANNEL,FRAMING, 1-5/8" X 13/1				31					
BOOTS, SNUG LEG, SIZE 9, ANKLE				15	15				
BUSHING,PUMP,BACK HEAD					29				
ROD,WELDING, ASME SFA-5.1, E70					29				
SHACKLE, ANCHOR, 1/2" SCREW PI				28					
MIRROR,HINGED,2-5/16" WD X 3-3					28				

INSERT,CUTTING TOOL,TRIANGULAR 28
SIGN, DANGER, BARRICADE, 6.75" 28
COMPOUND,SEALING, LIGHT WEIGHT 27
FACE,HAMMER,#4,RAWHIDE,#4 27
SENSOR, PEN SIZE, 110-600VAC, 27
O-RING, CIRCULATING WATER PUMP 26
LANTERN,ELECTRIC, HANDHELD, WA 25
STONE,SHARPENING, COMBINATION, 25
GLASSES,SAFETY, SUN, MIRRORED 24
WIPER, 4 PLY, 20" X 16.5" LARG 24
TAP,THREADING, SEMI-BOTTOM, 1/ 23
WHEEL,WIRE, BRUSH, 4" DIA, 5/1 22
PAINT, COLD GALVANIZING ZINC E 22
BAR,ROUND, 3/8" DIA, 12' LG, 0 21
SLEEVE, OIL SCREEN, SER 15, VA 21
HOLDER,SPRING, VALVE, F/ IRON 21
INSERT,CUTTING TOOL, DIAMOND 3 20
DISC,VALVE, F/ IRON HORSE HIGH 20
MCDONALD'S M5192 OF 20
RESPIRATOR, MASK, DUST, BOX OF 20
INSERT,CUTTING TOOL,GROOVING,0 20
PAINT, ALKYD ENAMEL, STD DARK 19
TIE,CABLE,SELF-LOCKING,1/16" T 19
GLASSES,SAFETY, SUN, SMOKE LEN 19
TIE,CABLE, SELF-LOCKING, NON-R 19
TAPE, DUCT, 2", SILVER 19
GREASE,INDUSTRIAL, LUBRICANT M 19
BATTERY,DRY CELL,LITHIUM,3VDC 18
GASKET, STATOR COOLING WATER T 18
BUSHING,PUMP, FRONT HEAD, F/ I 18
SHIM,INSERT,1/2" ID,80 DEG DIA 18
AMAZON.COM WWW.AMAZON. 16
GAUGE,LEVEL, SIGHT, 1" MPT, 18 15
END MILL,1/4" DIA,3-3/8" LG,3/ 15
BIT,TOOL,CUTTING,3/16" X 3/16" 15
NUT,CHANNEL, 3/8" DIA, 16 UNC, 14
SCREEN, SUCTION, F/ IRON HORSE 14
TREK BICYCLEST PETE 13
SPRING,VALVE, F/ IRON HORSE HI 13
LUBRICANT, MULTI PURPOSE, AERO 12

GAUGE,LEVEL, SIGHT, 3/4" MPT,				12			
F B WRIGHT CO				12			
LAMP, FLASHLIGHT, SGL CONTACT		11					
ADHESIVE, WEATHERSTRIP, 5 OZ T					10		
GASKET,SPIRAL WOUND, 2500 LB,				10			
INSERT, CUTTING TOOL,INDEXABLE				10			
GLASSES,SAFETY, EYE, CLEAR PLA						10	
PIN,LOCK,3/4" HT SHANK				10			
TAP,THREADING,HAND,FRACTIONAL				9			
BOTTLE, SPRAYER, 32 OZ, PLASTI			9				
LOWES #00740	9						
COMPOUND,SEALING, RTV SEALANT,			9				
BOLT,MACHINE, 3/4" DIA, 10 THD					8		
GLOVES, HEAVY DUTY, LARGE, GOA		7					
TAPE,DUCT,2" WD X 180' LG ROLL				7			
FUSE,FAST ACTING,1/4A,250,FERR				7			
SPRING SET, CUT-OFF PLATE, SK-				7			
CONNECTOR,ELECTRICAL,WIRE NUT,				6			
SPLICE,CONDUCTOR, SUPPORT, CAS					6		
BRUSH, DECK SCRUB, PLASTIC BRI			6				
BUCKET, RND, 5 GAL, PLASTIC, W			5				
ABRASIVE,DISC, FLAP, 4-1/2" OD				5			
COMPOUND,SEALING, RTV SILICONE				4			
SPRING, OIL SCREEN, F/ IRON HO				3			
BOLT,PLOW, 3/4" DIA, 10 TPI, 2					3		
BRUSH,PAINT, CHIP, 2" BRISTLE,	2						
BOTTLE, 1 GAL, PLASTIC, JUG	2						
WASHER,FLAT, 3/4" ID, 1-3/4" O					2		
BATTERY,DRY CELL,ALKALINE,9VDC			2				
WASHER,LOCK, SPLIT, 3/4" NOM,					2		
TAG, DO NOT OPERATE, 8.5" X 3.					2		
BRUSH,WIRE,TOOTHBRUSH STYLE SC				2			
BRUSH,WIRE,SCRATCH,1/2" WD BRI				1			
ELEMENT,FILTER, AIR, 12" X 24"					1		
ELEMENT,FILTER, AIR, 12 X 20 X					1		
GEARMOTOR,ELECTRIC, AC, GEAR R				-			
NUT,COUPLING, SHAFT I-26 M DWG				-			
SHAFT,PUMP, M INTERMEDIAT, ITE				-			
SHAFT,PUMP, UPPER, CWP, I-21 M				-			
PUMP,CENTRIFUGAL, 7/7.5" IMPEL				-			

RING, COUPLING SHAFT, M, ITEM					-		
RING,WEAR, IMPELLER THRUST, M					-		
MOTOR,ELECTRIC, AC, 3500 HP, 6				-			
COUPLING,SHAFT, M, ITEM 25 DWG					-		
SHAFT,PUMP, M BOWL, ITEM 11 DW					-		
BEARING,SLEEVE, JOURNAL, NICKE					(0)		
000012040042002 C0 1210		(10)					
000012060034029 C0 1210		(16)					
Move storm costs to correct FE							
CHASSIS,ELECTRONIC,DCM-H CONTR				(5,607)			
Accounting Entries from Maximo	(71,161)	(24,077)	(9,500)	(32,365)	(80,655)	(46,727)	
Grand Total	**500,732**	**14,774**	**717**	**91,344**	**268,341**	**14,511**	**39,628**

6,926	-	936,973

Osprey	Regional Services	Grand Total
		398,791
		109,855
		41,226
		40,310
		38,393
		36,814
		27,752
		25,173
		21,894
		21,102
		20,001
		19,928
		16,695
		15,445
		14,406
		13,908
		13,813
		13,375
		12,636
		11,988
		10,789
		10,657
		10,600
		10,600
		10,345
		10,000
		9,500
		9,214
		8,061
		8,000
		7,636
		7,382
		7,356
		7,191

6,738	6,738
	6,692
	6,334
	5,945
	5,936
	5,772
	5,500
	5,226
	4,846
	4,319
	4,212
	4,138
	3,780
	3,727
	3,667
	3,431
	3,267
	2,952
	2,878
	2,803
	2,708
	2,698
	2,603
	2,568
	2,224
	2,098
	2,050
	1,844
	1,797
	1,749
	1,655
	1,643
	1,589
	1,587
	1,481
	1,379
	1,345
	1,260
	1,208
	1,202

	1,183
	1,102
	1,070
	992
	950
	840
	820
	807
	798
	752
	750
	737
	701
	690
	683
	636
	630
	615
	613
	613
	567
	542
	536
109	533
	520
	491
	474
	457
	438
	424
	423
	421
	398
	344
	338
	334
	329
	328
	328
	325

	323
	312
	307
	285
	257
	251
	249
	236
	226
	215
	215
	214
	209
	208
205	205
	199
	186
	182
	180
169	169
	168
	166
	164
162	162
	154
	154
	151
	150
	146
	141
	140
	138
	136
	135
132	132
	132
	129
	128
	128
	127

126
118
110
108
108
106
104
103
103
56 102
101
100
98
95
93
90
89
88
86
84
82
81
79
79
77
73
73
71
70
70
69
67
65
64
64
61
59
59
56
55

55
54
53
53
53
51
51
50
50
49
49
49
48
47
45
44
44
44
42 42
41
41
40
39
39
37
37
37
36
35
35
33
32
31
31
31
29
29
29
28
28

28
28
27
27
27
26
25
25
24
24
23
22
22
21
21
21
20
20
20
20
20
19
19
19
19
19
19
18
18
18
18
16
15
15
15
14
14
13
13
12

12
12
11
10
10
10
10
10
9
9
9
9
8
7
7
7
7
6
6
6
5
5
4
3
3
2
2
2
2
2
2
2
1
1
1
-
-
-
-
-

		-
		-
		-
		-
		-
		(0)
		(10)
		(16)
	(686)	(686)
		(5,607)
		(264,485)
6,926	**-**	**936,973**

936,972.80

Fiscal Year CMD	Accounting Period CMD	Oper Unit ID CB	Station	Base / Intermediate / Peaking	Resp Center ID CB	RC Long Descr CB	Operator ID JD	Account ID CB	Process ID CB
2018	1	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA	E12281	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA	E12281	0186295	NFACMIS
2017	12	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA	E12281	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA	E12281	0186295	NFACMIS
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	I44292	0186295	BFACSYG
2017	10	CRYN	CRN	Base	U933	CR FGD CY MAINT - SI	I44292	0186295	BFUECFW
2017	10	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA	E12281	0186295	
2017	10	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA	E12281	0186295	
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	I44292	0186295	BFACSYG
2017	10	BTCC	Bartow	Base	W039	FL CT Frame/Jet- Trave	FMISRUN	0186295	
2017	11	BTCC	Bartow	Base	W039	FL CT Frame/Jet- Trave	FMISRUN	0186295	
2017	11	BTCC	Bartow	Base	W039	FL CT Frame/Jet- Trave	FMISRUN	0186295	
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	I44292	0186295	BFACMIS
2017	10	BTCC	Bartow	Base	W039	FL CT Frame/Jet- Trave	FMISRUN	0186295	
2017	10	BTCC	Bartow	Base	W039	FL CT Frame/Jet- Trave	FMISRUN	0186295	
2017	11	BTCC	Bartow	Base	W039	FL CT Frame/Jet- Trave	FMISRUN	0186295	
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	2	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2018	1	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	12	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	4	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	10	CTFF	Regional Se	Base	6460	CRM Strategy Sup Adm	MCAUDEL	0186295	
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	12	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BFACSYG
2018	4	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	1	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	12	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2018	1	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BFACSYG
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BFACSYG
2017	10	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BFACSYG
2017	10	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	10	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS

2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	10	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	PFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	11	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	10	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2018	2	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	11	BTCC	Bartow	Base	W034	BARTOW REPOWER I	FMISRUN	0186295	
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	4	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	11	ICC0	Central	Peaking	U967	INTERCESSION CITY (	FMISRUN	0186295	NFACMIS
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	2	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	4	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	10	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2018	1	BTCC	Bartow	Base	W034	BARTOW REPOWER I	FMISRUN	0186295	
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BELEPWR
2018	4	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	4	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	4	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	3	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2018	3	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG

2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	12	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BELEPWR
2018	3	DY09	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2017	10	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2017	10	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA	FMISRUN	0186295	
2017	12	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2018	4	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	9	CTFF	Regional Se	Base	6460	CRM Strategy Sup Adm	FMISRUN	0186295	
2017	12	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	12	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	4	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	4	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG

2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	10	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	10	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	ICC0	Central	Peaking	U967	INTERCESSION CITY (	EAMJRNL	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS

2017	9	ICC0	Central	Peaking	U967	INTERCESSION CITY (	EAMJRNL	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	10	DY09	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2017	11	DY09	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	PFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U951	CLEAN AIR OPS & MAI	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U951	CLEAN AIR OPS & MAI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS

2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	10	BTCC	Bartow	Base	W034	BARTOW REPOWER M	FMISRUN	0186295	
2017	10	BTCC	Bartow	Base	W034	BARTOW REPOWER M	FMISRUN	0186295	
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS

2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	CR05	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	CR05	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CR05	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	CR05	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	CR05	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	CR05	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS

2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U951	CLEAN AIR OPS & MAI	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U951	CLEAN AIR OPS & MAI	EAMJRNL	0186295	BFACSYG
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	10	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	10	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BENSSO

2017	10	CRS0	CRS	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BENSSO
2017	9	CTFF	Regional Sc	Base	6460	CRM Strategy Sup Adm	FMISRUN	0186295	
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2018	1	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	11	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	11	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	10	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	4	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	10	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2018	4	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	4	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2017	9	ICC0	Central	Peaking	U967	INTERCESSION CITY (	EAMJRNL	0186295	NFACMIS
2017	9	ICC0	Central	Peaking	U967	INTERCESSION CITY (	EAMJRNL	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	10	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS

2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BFACSYG
2018	1	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS

2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2017	9	ICC0	Central	Peaking	U967	INTERCESSION CITY (	EAMJRNL	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	FMISRUN	0186295	BENSSO
2017	11	OSP0	Osprey	Peaking	6776	Osprey Station	FMISRUN	0186295	
2017	12	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BELEPWR
2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	11	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	11	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG

2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2018	3	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	ICC0	Central	Peaking	U967	INTERCESSION CITY (	EAMJRNL	0186295	NFACMIS
2017	9	ICC0	Central	Peaking	U967	INTERCESSION CITY (	EAMJRNL	0186295	NFACMIS
2018	1	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	1	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	1	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	1	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	10	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	10	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	10	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG

2017	11	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	11	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	EAMJRNL	0186295	
2018	4	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	3	DY09	North	Peaking	W053	Turb/Gen Mechanical - I	FMISRUN	0186295	NFACMIS
2017	10	BTCC	Bartow	Base	W034	BARTOW REPOWER M	FMISRUN	0186295	
2018	3	DY09	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG

2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	10	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	4	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2017	9	DYC0	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG

2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CR05	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CR05	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG

2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CTFF	Regional Se	Base	6460	CRM Strategy Sup Adm	FMISRUN	0186295	
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CR05	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	10	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2018	1	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	10	ICC0	Central	Peaking	U967	INTERCESSION CITY (	EAMJRNL	0186295	NFACMIS
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BELEPWR
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	

2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS

2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2018	2	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2018	1	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2018	1	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	12	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	11	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	12	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	11	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	FMISRUN	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEN	EAMJRNL	0186295	BFACSYG
2017	10	BTCC	Bartow	Base	W034	BARTOW REPOWER N	EAMJRNL	0186295	
2017	12	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	10	OSP0	Osprey	Peaking	6776	Osprey Station	FMISRUN	0186295	BFACSYG
2017	11	OSP1	Osprey	Peaking	6776	Osprey Station	FMISRUN	0186295	BFACSYG

2017	10	OSP0	Osprey	Peaking	6776	Osprey Station	FMISRUN	0186295	BFACSYG
2017	11	OSP0	Osprey	Peaking	6776	Osprey Station	FMISRUN	0186295	BFACSYG
2017	11	OSP1	Osprey	Peaking	6776	Osprey Station	FMISRUN	0186295	BFACSYG
2017	12	BTCC	Bartow	Base	W034	BARTOW REPOWER I	EAMJRNL	0186295	
2018	2	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	10	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	10	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	10	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	10	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	9	CTFF	Regional Se	Base	6460	CRM Strategy Sup Adm	FMISRUN	0186295	
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	9	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA	FMISRUN	0186295	
2017	10	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA	FMISRUN	0186295	
2017	10	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2018	3	DY09	North	Peaking	W053	Turb/Gen Mechanical - I	FMISRUN	0186295	NFACMIS

2018	3	DY09	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BFACSYG
2017	12	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BELEPWR
2017	10	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2017	10	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	10	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	EAMJRNL	0186295	NFACMIS
2017	11	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	10	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	EAMJRNL	0186295	NGENELE
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	ICC0	Central	Peaking	U967	INTERCESSION CITY (	FMISRUN	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS

2018	3	DY09	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2018	4	DY09	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2018	3	DY09	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BELEPWR
2017	10	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BELEPWR
2017	11	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BELEPWR
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	10	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	12	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	10	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	11	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2018	1	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	9	BTCC	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	EAMJRNL	0186295	BFACSYG
2017	9	CTFF	Regional Se	Base	6460	CRM Strategy Sup Adm	FMISRUN	0186295	
2017	11	OSP0	Osprey	Peaking	6776	Osprey Station	FMISRUN	0186295	
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACMIS

2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	EAMJRNL	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	EAMJRNL	0186295	BFACMIS
2018	2	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	EAMJRNL	0186295	BFACSYG
2017	11	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	10	BTCC	Bartow	Base	W034	BARTOW REPOWER M	FMISRUN	0186295	

Process Long Descr CB	Project ID CB	Project Short Descr CB	Activity ID PRD	Resource Type ID CB	Res Type Summary	Source CD JD
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	239
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	IRMA	35000	Materials & Supplies	239
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	239
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	239
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	240
Fuel- Coal Condition	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	240
NO VALUE	OMAN1000	OR ANC HURRICANE IRMA	IRMA	35000	Materials & Supplies	239
NO VALUE	OMAN1000	OR ANC HURRICANE IRMA	IRMA	21000	Materials & Supplies	239
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	240
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EXP
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EXP
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EXP
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	240
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EXP
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EXP
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMARS17	Storm IRMA 2017	STORM	30000	Materials & Supplies	239
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM

BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
FACILITIES-Structu	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
MISC EQUIPMENT	CORIC1021	OR IC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	35000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM

BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
GENERATOR Excita	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excita	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excita	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excita	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EXP
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EXP
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	EXP
NO VALUE	OMAN1000	OR ANC HURRICANE IRMA	IRMA	30000	Materials & Supplies	EXP
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
NO VALUE	IRMARS17	Storm IRMA 2017	STORM	30000	Materials & Supplies	EXP
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP

BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORIC1021	OR IC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM

MISC EQUIPMENT	CORIC1021	OR IC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
FACILITIES-Structu	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM

MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	31000	Materials & Supplies	EXP
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM

VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM

BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
Eng/Supv Plant Ope	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP

Eng/Supv Plant Ope	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
NO VALUE	IRMARS17	Storm IRMA 2017	STORM	30000	Materials & Supplies	EXP
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORIC1021	OR IC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORIC1021	OR IC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM

MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM

MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORIC1021	OR IC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	EXP
Eng/Supv Plant Ope	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
NO VALUE	IRMAOSP17	Storm IRMA 2017	STORM	30000	Materials & Supplies	EXP
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM

BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
MISC EQUIPMENT	CORIC1021	OR IC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORIC1021	OR IC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	30000	Materials & Supplies	EXP
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP

NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	31000	Materials & Supplies	EXP
NO VALUE		NO VALUE		30000	Materials & Supplies	EXP
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	99416	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	99416	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	99416	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	99416	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP

BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM

BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	99416	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	99416	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
GENERATOR Excita	IRMAHN17	Storm IRMA 2017	STORM	31000	Materials & Supplies	AP
GENERATOR Excita	IRMAHN17	Storm IRMA 2017	STORM	31000	Materials & Supplies	AP
GENERATOR Excita	IRMAHN17	Storm IRMA 2017	STORM	31000	Materials & Supplies	AP
GENERATOR Excita	IRMAHN17	Storm IRMA 2017	STORM	31000	Materials & Supplies	AP
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM

BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMARS17	Storm IRMA 2017	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
MISC EQUIPMENT	CORIC1021	OR IC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM

BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM

MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	30000	Materials & Supplies	AP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	30000	Materials & Supplies	AP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	30000	Materials & Supplies	AP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	31000	Materials & Supplies	AP
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	35000	Materials & Supplies	EAM
BUILDINGS & GRO	IRMAOSP17	Storm IRMA 2017	STORM	30000	Materials & Supplies	AP
BUILDINGS & GRO	IRMAOSP17	Storm IRMA 2017	STORM	30000	Materials & Supplies	AP

BUILDINGS & GRO	IRMAOSP17	Storm IRMA 2017	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	IRMAOSP17	Storm IRMA 2017	STORM	30000	Materials & Supplies	AP
BUILDINGS & GRO	IRMAOSP17	Storm IRMA 2017	STORM	30000	Materials & Supplies	AP
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	33001	Materials & Supplies	AP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
NO VALUE	IRMARS17	Storm IRMA 2017	STORM	30000	Materials & Supplies	EXP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	30000	Materials & Supplies	EXP
NO VALUE	OMAN1000	OR ANC HURRICANE IRMA	IRMA	30000	Materials & Supplies	EXP
NO VALUE	OMAN1000	OR ANC HURRICANE IRMA	IRMA	30000	Materials & Supplies	EXP
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	31000	Materials & Supplies	EXP

MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	35000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	21000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
Eng/Supv Plant Ope	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
GENERATOR Excit	IRMAHN17	Storm IRMA 2017	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CORIC1021	OR IC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	EXP
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP

MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
VOLTAGE BREAKE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	31000	Materials & Supplies	AP
MISC EQUIPMENT	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	31000	Materials & Supplies	AP
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	30000	Materials & Supplies	EXP
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	30000	Materials & Supplies	EXP
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
NO VALUE	IRMARS17	Storm IRMA 2017	STORM	30000	Materials & Supplies	EXP
NO VALUE	IRMAOSP17	Storm IRMA 2017	STORM	30000	Materials & Supplies	EXP
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	21000	Materials & Supplies	EAM

MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
MISC EQUIPMENT	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	21000	Materials & Supplies	EAM
BUILDINGS & GRO	CRS917IRM	CRS HURRICANE IRMA 9-2(	STORM	35000	Materials & Supplies	EAM
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	30000	Materials & Supplies	EXP
NO VALUE		NO VALUE		30000	Materials & Supplies	EXP

Application Journal Template JD	Journal Mask ID JD	Journal ID JD	Journal Date JD	Date Time Stamp JD	Journal Descr JD
		ADJAN0118A	1/31/2018	2/2/2018 11:00	Anclote Storm FERC Reclass
		ADJAN1117A	11/30/2017	12/4/2017 15:06	Anclote Storm FERC Reclass
		ADJAN1217C	12/31/2017	1/3/2018 12:06	Anclote Storm FERC Reclass
		ADJAN0318B	3/31/2018	4/3/2018 14:00	Anclote Storm FERC Reclass
		ADJCR1117A	11/30/2017	12/1/2017 9:07	CORRECTIONS FOR STORM IRMA CHA
		ADJCR1017A	10/23/2017	10/23/2017 17:04	JOURNAL TO RECLASS FROM O&M TO
		ADJAN1031A	10/31/2017	10/16/2017 13:15	Anclote Storm FERC Account Rec
		ADJAN1031A	10/31/2017	10/16/2017 13:15	Anclote Storm FERC Account Rec
		ADJCR1117A	11/30/2017	12/1/2017 9:07	CORRECTIONS FOR STORM IRMA CHA
EXACCRUAL	EXACCT	EXACCT5718	10/26/2017	10/26/2017 22:19	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT8982	11/3/2017	11/3/2017 0:27	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT8982	11/3/2017	11/3/2017 0:27	Expense Accrual Journal
		ADJCR1117A	11/30/2017	12/1/2017 9:07	CORRECTIONS FOR STORM IRMA CHA
EXACCRUAL	EXACCT	EXACCT5718	10/26/2017	10/26/2017 22:19	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT4601	10/23/2017	10/23/2017 22:18	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT1691	11/13/2017	11/13/2017 22:36	Expense Accrual Journal
	MXACCR	MXACCR9177	11/1/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR4077	2/1/2018	2/1/2018 19:48	Accounting Entries from Maximo
	MXACCR	MXACCR2249	1/1/2018	1/1/2018 13:16	Accounting Entries from Maximo
	MXACCR	MXACCR478	12/1/2017	12/1/2017 15:39	Accounting Entries from Maximo
	MXACCR	MXACCR477	12/1/2017	12/1/2017 15:39	Accounting Entries from Maximo
	MXACCR	MXACCR9177	11/1/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR7778	4/1/2018	4/1/2018 13:08	Accounting Entries from Maximo
	MXACCR	MXACCR5812	3/1/2018	3/1/2018 17:13	Accounting Entries from Maximo
		ADJSTORM02	10/12/2017	10/12/2017 16:05	Move storm costs to correct FE
	MXACCR	MXACCR9177	11/1/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR477	12/1/2017	12/1/2017 15:39	Accounting Entries from Maximo
	MXACCR	MXACCR7778	4/1/2018	4/1/2018 13:08	Accounting Entries from Maximo
	MXACCR	MXACCR2249	1/1/2018	1/1/2018 13:16	Accounting Entries from Maximo
	MXACCR	MXACCR478	12/1/2017	12/1/2017 15:39	Accounting Entries from Maximo
	MXACCR	MXACCR5812	3/1/2018	3/1/2018 17:13	Accounting Entries from Maximo
	MXACCR	MXACCR2248	1/1/2018	1/1/2018 13:16	Accounting Entries from Maximo
	MXACCR	MXACCR9177	11/1/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR7502	10/1/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR7503	10/1/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR7502	10/1/2017	10/1/2017 19:14	Accounting Entries from Maximo

	MXACCR	MXACCR4076	2/1/2018	2/1/2018 19:40	Accounting Entries from Maximo
	MXACCR	MXACCR5812	3/1/2018	3/1/2018 17:13	Accounting Entries from Maximo
	MXACCR	MXACCR7503	10/1/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR4076	2/1/2018	2/1/2018 19:40	Accounting Entries from Maximo
	MXACCR	MXACCR7502	10/1/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR9178	11/1/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR7503	10/1/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR5812	3/1/2018	3/1/2018 17:13	Accounting Entries from Maximo
	MXACCR	MXACCR4077	2/1/2018	2/1/2018 19:48	Accounting Entries from Maximo
	MXACCR	MXACCR2248	1/1/2018	1/1/2018 13:16	Accounting Entries from Maximo
	MXACCR	MXACCR7502	10/1/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR9178	11/1/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR7502	10/1/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR7778	4/1/2018	4/1/2018 13:08	Accounting Entries from Maximo
	MXACCR	MXACCR5812	3/1/2018	3/1/2018 17:13	Accounting Entries from Maximo
	MXACCR	MXACCR4076	2/1/2018	2/1/2018 19:40	Accounting Entries from Maximo
	MXACCR	MXACCR9178	11/1/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR5812	3/1/2018	3/1/2018 17:13	Accounting Entries from Maximo
	MXACCR	MXACCR4077	2/1/2018	2/1/2018 19:48	Accounting Entries from Maximo
	MXACCR	MXACCR7502	10/1/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR7778	4/1/2018	4/1/2018 13:08	Accounting Entries from Maximo
	MXACCR	MXACCR4076	2/1/2018	2/1/2018 19:40	Accounting Entries from Maximo
	MXACCR	MXACCR7503	10/1/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR2249	1/1/2018	1/1/2018 13:16	Accounting Entries from Maximo
	MXACCR	MXACCR9177	11/1/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR7778	4/1/2018	4/1/2018 13:08	Accounting Entries from Maximo
	MXACCR	MXACCR7778	3/31/2018	4/1/2018 13:08	Accounting Entries from Maximo
	MXACCR	MXACCR9566	4/30/2018	5/1/2018 15:10	Accounting Entries from Maximo
	MXACCR	MXACCR4076	1/31/2018	2/1/2018 19:40	Accounting Entries from Maximo
	MXACCR	MXACCR7778	3/31/2018	4/1/2018 13:08	Accounting Entries from Maximo
	MXACCR	MXACCR9566	4/30/2018	5/1/2018 15:10	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT8578	3/5/2018	3/6/2018 0:03	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT8578	3/5/2018	3/6/2018 0:03	Expense Accrual Journal
	MXACCR	MXACCR477	11/30/2017	12/1/2017 15:39	Accounting Entries from Maximo
	MXINMU	MXINMU3316	1/20/2018	1/21/2018 13:52	Accounting Entries from Maximo
	MXINMU	MXINMU3470	1/24/2018	1/24/2018 7:07	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU2782	1/10/2018	1/10/2018 5:23	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU2782	1/10/2018	1/10/2018 5:23	Accounting Entries from Maximo

	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR93742	9/20/2017	9/20/2017 22:16	Accounts Payable - Accrual
	MXINMU	MXINMU6692	9/19/2017	9/19/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6692	9/19/2017	9/19/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6692	9/19/2017	9/19/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6692	9/19/2017	9/19/2017 5:16	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT8503	12/5/2017	12/6/2017 0:17	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT3079	3/19/2018	3/19/2018 22:16	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT9144	3/6/2018	3/6/2018 22:06	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT1145	10/11/2017	10/11/2017 22:21	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT5717	10/26/2017	10/26/2017 22:19	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT9380	10/5/2017	10/5/2017 22:23	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT3422	12/19/2017	12/19/2017 22:19	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT5989	4/23/2018	4/23/2018 22:08	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT6479	9/28/2017	9/28/2017 22:20	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT3422	12/19/2017	12/19/2017 22:19	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT8185	12/5/2017	12/5/2017 0:32	Expense Accrual Journal
	MXINMU	MXINMU6196	9/8/2017	9/8/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6196	9/8/2017	9/8/2017 5:19	Accounting Entries from Maximo
	MXACCR	MXACCR7778	3/31/2018	4/1/2018 13:08	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR99072	10/4/2017	10/5/2017 0:17	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR60248	4/5/2018	4/5/2018 23:04	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR60248	4/5/2018	4/5/2018 23:04	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR94668	9/22/2017	9/22/2017 22:31	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR08092	11/1/2017	11/2/2017 0:25	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual

AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR51415	3/13/2018	3/13/2018 22:21	Accounts Payable - Accrual
	MXINMU	MXINMU8288	10/17/2017	10/17/2017 5:31	Accounting Entries from Maximo
	MXINMU	MXINMU8288	10/17/2017	10/17/2017 5:31	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6254	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo

	MXINMU	MXINMU6254	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR06872	10/30/2017	10/30/2017 22:18	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR08761	11/2/2017	11/3/2017 0:27	Accounts Payable - Accrual
	MXACCR	MXACCR4076	1/31/2018	2/1/2018 19:40	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU3399	1/23/2018	1/23/2018 5:12	Accounting Entries from Maximo
	MXINMU	MXINMU3470	1/24/2018	1/24/2018 7:07	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6286	9/10/2017	9/10/2017 13:15	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6286	9/10/2017	9/10/2017 13:15	Accounting Entries from Maximo

	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU8819	10/27/2017	10/27/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU8819	10/27/2017	10/27/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU8624	10/24/2017	10/24/2017 5:18	Accounting Entries from Maximo
	MXINMU	MXINMU8624	10/24/2017	10/24/2017 5:18	Accounting Entries from Maximo
	MXINMU	MXINMU2987	1/13/2018	1/13/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU2987	1/13/2018	1/13/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU2987	1/13/2018	1/13/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU2987	1/13/2018	1/13/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU9975	11/22/2017	11/22/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU9975	11/22/2017	11/22/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT9381	10/5/2017	10/5/2017 22:23	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT9381	10/5/2017	10/5/2017 22:23	Expense Accrual Journal
	MXINMU	MXINMU9037	10/31/2017	11/1/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU9037	10/31/2017	11/1/2017 5:20	Accounting Entries from Maximo

	MXINMU	MXINMU9904	11/21/2017	11/21/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU9904	11/21/2017	11/21/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU9904	11/21/2017	11/21/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU9904	11/21/2017	11/21/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
AP ACCRUAL	APACR	APACR24373	12/21/2017	12/21/2017 22:19	Accounts Payable - Accrual
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6286	9/10/2017	9/10/2017 13:15	Accounting Entries from Maximo
	MXINMU	MXINMU6286	9/10/2017	9/10/2017 13:15	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXACCR	MXACCR5812	2/28/2018	3/1/2018 17:13	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU8689	10/25/2017	10/25/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU8689	10/25/2017	10/25/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU3552	1/25/2018	1/25/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU3552	1/25/2018	1/25/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU9975	11/22/2017	11/22/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU9975	11/22/2017	11/22/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo

	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXACCR	MXACCR7502	9/30/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU562	12/2/2017	12/2/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU7146	3/21/2018	3/21/2018 15:07	Accounting Entries from Maximo
	MXINMU	MXINMU7146	3/21/2018	3/21/2018 15:07	Accounting Entries from Maximo
	MXINMU	MXINMU8819	10/27/2017	10/27/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU7146	3/21/2018	3/21/2018 15:07	Accounting Entries from Maximo
	MXINMU	MXINMU7146	3/21/2018	3/21/2018 15:07	Accounting Entries from Maximo
	MXINMU	MXINMU8819	10/27/2017	10/27/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXACCR	MXACCR9177	10/31/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR7502	9/30/2017	10/1/2017 19:14	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT1879	10/13/2017	10/13/2017 22:19	Expense Accrual Journal

EXACCRUAL	EXACCT	EXACCT1879	10/13/2017	10/13/2017 22:19	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT6479	9/28/2017	9/28/2017 22:20	Expense Accrual Journal
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXACCR	MXACCR4077	1/31/2018	2/1/2018 19:48	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU9728	11/17/2017	11/17/2017 5:36	Accounting Entries from Maximo
	MXINMU	MXINMU9728	11/17/2017	11/17/2017 5:36	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR01641	10/12/2017	10/12/2017 22:20	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR96083	9/27/2017	9/27/2017 22:20	Accounts Payable - Accrual
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU8689	10/25/2017	10/25/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU8183	4/6/2018	4/6/2018 5:08	Accounting Entries from Maximo
	MXINMU	MXINMU3552	1/25/2018	1/25/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU3552	1/25/2018	1/25/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT3457	2/20/2018	2/21/2018 0:48	Expense Accrual Journal
	MXINMU	MXINMU3399	1/23/2018	1/23/2018 5:12	Accounting Entries from Maximo
	MXINMU	MXINMU3470	1/24/2018	1/24/2018 7:07	Accounting Entries from Maximo
	MXACCR	MXACCR9177	10/31/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR7502	9/30/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU8370	4/10/2018	4/10/2018 5:07	Accounting Entries from Maximo
	MXINMU	MXINMU8370	4/10/2018	4/10/2018 5:07	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU8689	10/25/2017	10/25/2017 5:17	Accounting Entries from Maximo

	MXINMU	MXINMU7673	3/30/2018	3/30/2018 5:08	Accounting Entries from Maximo
	MXINMU	MXINMU7673	3/30/2018	3/30/2018 5:08	Accounting Entries from Maximo
	MXINMU	MXINMU7673	3/30/2018	3/30/2018 5:08	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU8819	10/27/2017	10/27/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU8819	10/27/2017	10/27/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU9651	11/16/2017	11/16/2017 5:41	Accounting Entries from Maximo
	MXINMU	MXINMU9651	11/16/2017	11/16/2017 5:41	Accounting Entries from Maximo
	MXINMU	MXINMU9651	11/16/2017	11/16/2017 5:41	Accounting Entries from Maximo
	MXINMU	MXINMU9651	11/16/2017	11/16/2017 5:41	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT6049	9/27/2017	9/27/2017 22:20	Expense Accrual Journal
	MXACCR	MXACCR4077	1/31/2018	2/1/2018 19:48	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6691	9/19/2017	9/19/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6691	9/19/2017	9/19/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6935	9/23/2017	9/23/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6935	9/23/2017	9/23/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6935	9/23/2017	9/23/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6935	9/23/2017	9/23/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU1899	12/22/2017	12/22/2017 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU1899	12/22/2017	12/22/2017 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU6883	9/22/2017	9/22/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6883	9/22/2017	9/22/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU7840	10/7/2017	10/7/2017 5:23	Accounting Entries from Maximo

	MXINMU	MXINMU4736	2/13/2018	2/13/2018 5:08	Accounting Entries from Maximo
	MXINMU	MXINMU7449	3/27/2018	3/27/2018 5:07	Accounting Entries from Maximo
	MXINMU	MXINMU7449	3/27/2018	3/27/2018 5:07	Accounting Entries from Maximo
	MXINMU	MXINMU7449	3/27/2018	3/27/2018 5:07	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU7449	3/27/2018	3/27/2018 5:07	Accounting Entries from Maximo
	MXINMU	MXINMU7449	3/27/2018	3/27/2018 5:07	Accounting Entries from Maximo
	MXINMU	MXINMU6254	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU8819	10/27/2017	10/27/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU7449	3/27/2018	3/27/2018 5:07	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU2921	1/12/2018	1/12/2018 15:27	Accounting Entries from Maximo
	MXINMU	MXINMU2921	1/12/2018	1/12/2018 15:27	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT5742	2/27/2018	2/27/2018 22:06	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT2440	10/16/2017	10/16/2017 22:23	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT8379	11/2/2017	11/2/2017 0:25	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT8503	12/5/2017	12/6/2017 0:17	Expense Accrual Journal
	MXINMU	MXINMU6935	9/23/2017	9/23/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6935	9/23/2017	9/23/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXACCR	MXACCR477	11/30/2017	12/1/2017 15:39	Accounting Entries from Maximo
	MXACCR	MXACCR9177	10/31/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR5812	2/28/2018	3/1/2018 17:13	Accounting Entries from Maximo
	MXINMU	MXINMU6263	3/6/2018	3/6/2018 17:07	Accounting Entries from Maximo
	MXINMU	MXINMU6263	3/6/2018	3/6/2018 17:07	Accounting Entries from Maximo
	MXINMU	MXINMU6263	3/6/2018	3/6/2018 17:07	Accounting Entries from Maximo
	MXINMU	MXINMU6263	3/6/2018	3/6/2018 17:07	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU9652	11/16/2017	11/16/2017 5:41	Accounting Entries from Maximo
	MXINMU	MXINMU9652	11/16/2017	11/16/2017 5:41	Accounting Entries from Maximo
	MXINMU	MXINMU3399	1/23/2018	1/23/2018 5:12	Accounting Entries from Maximo
	MXINMU	MXINMU3470	1/24/2018	1/24/2018 7:07	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR34846	1/29/2018	1/29/2018 22:07	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR34846	1/29/2018	1/29/2018 22:07	Accounts Payable - Accrual
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo

	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3316	1/20/2018	1/21/2018 13:52	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3316	1/20/2018	1/21/2018 13:52	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3470	1/24/2018	1/24/2018 7:07	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3470	1/24/2018	1/24/2018 7:07	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3552	1/25/2018	1/25/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU3552	1/25/2018	1/25/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU3552	1/25/2018	1/25/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU3552	1/25/2018	1/25/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU3552	1/25/2018	1/25/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU3552	1/25/2018	1/25/2018 5:10	Accounting Entries from Maximo
	MXACCR	MXACCR7503	9/30/2017	10/1/2017 19:14	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT4878	3/23/2018	3/23/2018 22:05	Expense Accrual Journal
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU47	11/26/2017	11/26/2017 13:16	Accounting Entries from Maximo
	MXINMU	MXINMU47	11/26/2017	11/26/2017 13:16	Accounting Entries from Maximo
	MXACCR	MXACCR7502	9/30/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXINMU	MXINMU6254	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6254	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT9001	10/4/2017	10/5/2017 0:17	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT1145	10/11/2017	10/11/2017 22:21	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT1145	10/11/2017	10/11/2017 22:21	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT5786	9/26/2017	9/26/2017 22:16	Expense Accrual Journal

	MXINMU	MXINMU9327	11/3/2017	11/3/2017 5:22	Accounting Entries from Maximo
	MXINMU	MXINMU9327	11/3/2017	11/3/2017 5:22	Accounting Entries from Maximo
	MXINMU	MXINMU8624	10/24/2017	10/24/2017 5:18	Accounting Entries from Maximo
	MXINMU	MXINMU8624	10/24/2017	10/24/2017 5:18	Accounting Entries from Maximo
	MXACCR	MXACCR9566	4/30/2018	5/1/2018 15:10	Accounting Entries from Maximo
	MXACCR	MXACCR7778	3/31/2018	4/1/2018 13:08	Accounting Entries from Maximo
	MXACCR	MXACCR5812	2/28/2018	3/1/2018 17:13	Accounting Entries from Maximo
	MXACCR	MXACCR4076	1/31/2018	2/1/2018 19:40	Accounting Entries from Maximo
	MXACCR	MXACCR2248	12/31/2017	1/1/2018 13:16	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT4045	3/21/2018	3/21/2018 22:06	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT7531	10/31/2017	10/31/2017 22:18	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT9144	3/6/2018	3/6/2018 22:06	Expense Accrual Journal
AP_ACCRUAL	APACR	APACR56085	3/27/2018	3/27/2018 22:07	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR91388	9/12/2017	9/12/2017 22:15	Accounts Payable - Accrual
EXACCRUAL	EXACCT	EXACCT5742	2/27/2018	2/27/2018 22:06	Expense Accrual Journal
	MXINMU	MXINMU2987	1/13/2018	1/13/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU2987	1/13/2018	1/13/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU2052	12/28/2017	12/28/2017 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU2052	12/28/2017	12/28/2017 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU9578	11/15/2017	11/15/2017 5:39	Accounting Entries from Maximo
	MXINMU	MXINMU9578	11/15/2017	11/15/2017 5:39	Accounting Entries from Maximo
	MXINMU	MXINMU6001	3/2/2018	3/2/2018 11:40	Accounting Entries from Maximo
	MXINMU	MXINMU6001	3/2/2018	3/2/2018 11:40	Accounting Entries from Maximo
	MXINMU	MXINMU9651	11/16/2017	11/16/2017 5:41	Accounting Entries from Maximo
	MXINMU	MXINMU9651	11/16/2017	11/16/2017 5:41	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU6593	9/16/2017	9/16/2017 5:17	Accounting Entries from Maximo
	MXINMU	MXINMU1899	12/22/2017	12/22/2017 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU1899	12/22/2017	12/22/2017 5:26	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR94278	9/21/2017	9/21/2017 22:17	Accounts Payable - Accrual

EXACCRUAL	EXACCT	EXACCT5786	9/26/2017	9/26/2017 22:16	Expense Accrual Journal
	MXINMU	MXINMU9904	11/21/2017	11/21/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU9904	11/21/2017	11/21/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU742	12/6/2017	12/6/2017 11:22	Accounting Entries from Maximo
	MXINMU	MXINMU742	12/6/2017	12/6/2017 11:22	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXACCR	MXACCR9177	10/31/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU4560	2/9/2018	2/9/2018 5:07	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU9904	11/21/2017	11/21/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU9904	11/21/2017	11/21/2017 5:21	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT5717	10/26/2017	10/26/2017 22:19	Expense Accrual Journal
	MXINMU	MXINMU3316	1/20/2018	1/21/2018 13:52	Accounting Entries from Maximo
	MXINMU	MXINMU3470	1/24/2018	1/24/2018 7:07	Accounting Entries from Maximo
	MXINMU	MXINMU6935	9/23/2017	9/23/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6935	9/23/2017	9/23/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU7228	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU7228	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXACCR	MXACCR9566	4/30/2018	5/1/2018 15:10	Accounting Entries from Maximo
	MXACCR	MXACCR7778	3/31/2018	4/1/2018 13:08	Accounting Entries from Maximo
	MXACCR	MXACCR5812	2/28/2018	3/1/2018 17:13	Accounting Entries from Maximo
	MXINMU	MXINMU7449	3/27/2018	3/27/2018 5:07	Accounting Entries from Maximo
	MXINMU	MXINMU7449	3/27/2018	3/27/2018 5:07	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT3408	9/19/2017	9/19/2017 22:15	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT6049	9/27/2017	9/27/2017 22:20	Expense Accrual Journal
	MXINMU	MXINMU1899	12/22/2017	12/22/2017 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU1899	12/22/2017	12/22/2017 5:26	Accounting Entries from Maximo

	MXINMU	MXINMU6897	3/16/2018	3/16/2018 5:40	Accounting Entries from Maximo
	MXINMU	MXINMU6897	3/16/2018	3/16/2018 5:40	Accounting Entries from Maximo
	MXINMU	MXINMU6897	3/16/2018	3/16/2018 5:40	Accounting Entries from Maximo
	MXINMU	MXINMU6897	3/16/2018	3/16/2018 5:40	Accounting Entries from Maximo
	MXINMU	MXINMU9502	11/14/2017	11/14/2017 15:34	Accounting Entries from Maximo
	MXINMU	MXINMU9502	11/14/2017	11/14/2017 15:34	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6691	9/19/2017	9/19/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6691	9/19/2017	9/19/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU8014	10/11/2017	10/11/2017 5:22	Accounting Entries from Maximo
	MXINMU	MXINMU8014	10/11/2017	10/11/2017 5:22	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR94670	9/22/2017	9/22/2017 22:31	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR94670	9/22/2017	9/22/2017 22:31	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR94670	9/22/2017	9/22/2017 22:31	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR94670	9/22/2017	9/22/2017 22:31	Accounts Payable - Accrual
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo

	MXINMU	MXINMU6300	9/11/2017	9/11/2017 5:20	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT6479	9/28/2017	9/28/2017 22:20	Expense Accrual Journal
	MXACCR	MXACCR9177	10/31/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXINMU	MXINMU6526	9/15/2017	9/15/2017 5:19	Accounting Entries from Maximo
	MXACCR	MXACCR9178	10/31/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR4077	1/31/2018	2/1/2018 19:48	Accounting Entries from Maximo
	MXACCR	MXACCR9178	10/31/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU186	11/29/2017	11/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU3399	1/23/2018	1/23/2018 5:12	Accounting Entries from Maximo
	MXINMU	MXINMU3470	1/24/2018	1/24/2018 7:07	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU2712	1/9/2018	1/9/2018 5:26	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU6971	9/24/2017	9/24/2017 13:12	Accounting Entries from Maximo
	MXINMU	MXINMU6971	9/24/2017	9/24/2017 13:12	Accounting Entries from Maximo
	MXINMU	MXINMU7077	3/20/2018	3/20/2018 5:11	Accounting Entries from Maximo
	MXINMU	MXINMU7077	3/20/2018	3/20/2018 5:11	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU3857	1/31/2018	1/31/2018 7:06	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU3857	1/31/2018	1/31/2018 7:06	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXACCR	MXACCR7503	9/30/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR7503	9/30/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR7503	9/30/2017	10/1/2017 19:14	Accounting Entries from Maximo

AP_ACCRUAL	APACR	APACR16175	11/29/2017	11/29/2017 22:19	Accounts Payable - Accrual
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6691	9/19/2017	9/19/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6691	9/19/2017	9/19/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR14120	11/21/2017	11/21/2017 22:20	Accounts Payable - Accrual
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR21779	12/14/2017	12/14/2017 22:22	Accounts Payable - Accrual
	MXACCR	MXACCR5812	2/28/2018	3/1/2018 17:13	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU6253	9/9/2017	9/9/2017 5:21	Accounting Entries from Maximo
	MXINMU	MXINMU2782	1/10/2018	1/10/2018 5:23	Accounting Entries from Maximo
	MXINMU	MXINMU2782	1/10/2018	1/10/2018 5:23	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU2782	1/10/2018	1/10/2018 5:23	Accounting Entries from Maximo
	MXINMU	MXINMU2782	1/10/2018	1/10/2018 5:23	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU2782	1/10/2018	1/10/2018 5:23	Accounting Entries from Maximo
	MXINMU	MXINMU2782	1/10/2018	1/10/2018 5:23	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
	MXINMU	MXINMU5549	2/25/2018	2/26/2018 17:09	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT3457	2/20/2018	2/21/2018 0:48	Expense Accrual Journal
	MXINMU	MXINMU3316	1/20/2018	1/21/2018 13:52	Accounting Entries from Maximo
	MXINMU	MXINMU3470	1/24/2018	1/24/2018 7:07	Accounting Entries from Maximo
	MXINMU	MXINMU6262	3/6/2018	3/6/2018 17:07	Accounting Entries from Maximo
	MXINMU	MXINMU6262	3/6/2018	3/6/2018 17:07	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo

	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU5613	2/27/2018	2/27/2018 5:08	Accounting Entries from Maximo
	MXINMU	MXINMU5613	2/27/2018	2/27/2018 5:08	Accounting Entries from Maximo
	MXINMU	MXINMU5613	2/27/2018	2/27/2018 5:08	Accounting Entries from Maximo
	MXINMU	MXINMU5613	2/27/2018	2/27/2018 5:08	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR44539	2/23/2018	2/23/2018 22:11	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR30626	1/10/2018	1/10/2018 22:24	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR29851	1/8/2018	1/8/2018 22:23	Accounts Payable - Accrual
	MXACCR	MXACCR2249	12/31/2017	1/1/2018 13:16	Accounting Entries from Maximo
	MXACCR	MXACCR478	11/30/2017	12/1/2017 15:39	Accounting Entries from Maximo
	MXACCR	MXACCR2249	12/31/2017	1/1/2018 13:16	Accounting Entries from Maximo
	MXACCR	MXACCR478	11/30/2017	12/1/2017 15:39	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR49459	3/7/2018	3/8/2018 17:07	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR49459	3/7/2018	3/8/2018 17:07	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR49459	3/7/2018	3/8/2018 17:07	Accounts Payable - Accrual
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU9037	10/31/2017	11/1/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU9037	10/31/2017	11/1/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU9037	10/31/2017	11/1/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU9037	10/31/2017	11/1/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU742	12/6/2017	12/6/2017 11:22	Accounting Entries from Maximo
	MXINMU	MXINMU742	12/6/2017	12/6/2017 11:22	Accounting Entries from Maximo
	MXACCR	MXACCR7502	9/30/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXACCR	MXACCR4076	1/31/2018	2/1/2018 19:40	Accounting Entries from Maximo
	MXACCR	MXACCR9178	10/31/2017	11/1/2017 17:34	Accounting Entries from Maximo
	MXACCR	MXACCR2248	12/31/2017	1/1/2018 13:16	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR04161	10/20/2017	10/20/2017 22:23	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR12042	11/14/2017	11/14/2017 22:37	Accounts Payable - Accrual

AP_ACCRUAL	APACR	APACR04161	10/20/2017	10/20/2017 22:23	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR12042	11/14/2017	11/14/2017 22:37	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR12042	11/14/2017	11/14/2017 22:37	Accounts Payable - Accrual
	MXACCR	MXACCR2249	12/31/2017	1/1/2018 13:16	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR37161	2/2/2018	2/3/2018 0:15	Accounts Payable - Accrual
	MXINMU	MXINMU6467	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6467	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU3780	1/30/2018	1/30/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU3780	1/30/2018	1/30/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU3399	1/23/2018	1/23/2018 5:12	Accounting Entries from Maximo
	MXINMU	MXINMU3470	1/24/2018	1/24/2018 7:07	Accounting Entries from Maximo
	MXINMU	MXINMU3399	1/23/2018	1/23/2018 5:12	Accounting Entries from Maximo
	MXINMU	MXINMU3470	1/24/2018	1/24/2018 7:07	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU3857	1/31/2018	1/31/2018 7:06	Accounting Entries from Maximo
	MXINMU	MXINMU3857	1/31/2018	1/31/2018 7:06	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6466	9/14/2017	9/14/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU3857	1/31/2018	1/31/2018 7:06	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU3857	1/31/2018	1/31/2018 7:06	Accounting Entries from Maximo
AP_ACCRUAL	APACR	APACR06600	10/28/2017	10/28/2017 21:15	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR06600	10/28/2017	10/28/2017 21:15	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR06600	10/28/2017	10/28/2017 21:15	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR06600	10/28/2017	10/28/2017 21:15	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR23329	12/19/2017	12/19/2017 22:19	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR23329	12/19/2017	12/19/2017 22:19	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR23329	12/19/2017	12/19/2017 22:19	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR23329	12/19/2017	12/19/2017 22:19	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR23329	12/19/2017	12/19/2017 22:19	Accounts Payable - Accrual
EXACCRUAL	EXACCT	EXACCT6479	9/28/2017	9/28/2017 22:20	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT5256	2/26/2018	2/26/2018 22:09	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT6049	9/27/2017	9/27/2017 22:20	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT9380	10/5/2017	10/5/2017 22:23	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT1145	10/11/2017	10/11/2017 22:21	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT4045	3/21/2018	3/21/2018 22:06	Expense Accrual Journal

EXACCRUAL	EXACCT	EXACCT0820	3/12/2018	3/12/2018 22:12	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT9000	10/4/2017	10/5/2017 0:17	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT5786	9/26/2017	9/26/2017 22:16	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT6049	9/27/2017	9/27/2017 22:20	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT8503	12/5/2017	12/6/2017 0:17	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT1145	10/11/2017	10/11/2017 22:21	Expense Accrual Journal
	MXINMU	MXINMU5613	2/27/2018	2/27/2018 5:08	Accounting Entries from Maximo
	MXINMU	MXINMU5613	2/27/2018	2/27/2018 5:08	Accounting Entries from Maximo
	MXINMU	MXINMU5085	2/18/2018	2/18/2018 13:09	Accounting Entries from Maximo
	MXINMU	MXINMU5085	2/18/2018	2/18/2018 13:09	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU3933	1/31/2018	2/1/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU6072	3/3/2018	3/3/2018 6:06	Accounting Entries from Maximo
	MXINMU	MXINMU3933	1/31/2018	2/1/2018 5:10	Accounting Entries from Maximo
	MXINMU	MXINMU8417	10/19/2017	10/19/2017 5:18	Accounting Entries from Maximo
	MXINMU	MXINMU8417	10/19/2017	10/19/2017 5:18	Accounting Entries from Maximo
	MXACCR	MXACCR7502	9/30/2017	10/1/2017 19:14	Accounting Entries from Maximo
	MXINMU	MXINMU7449	3/27/2018	3/27/2018 5:07	Accounting Entries from Maximo
	MXINMU	MXINMU7449	3/27/2018	3/27/2018 5:07	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT3690	11/20/2017	11/20/2017 22:21	Expense Accrual Journal
AP_ACCRUAL	APACR	APACR03760	10/19/2017	10/19/2017 22:17	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR03760	10/19/2017	10/19/2017 22:17	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR03760	10/19/2017	10/19/2017 22:17	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR03760	10/19/2017	10/19/2017 22:17	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR20841	12/12/2017	12/12/2017 22:20	Accounts Payable - Accrual
EXACCRUAL	EXACCT	EXACCT1145	10/11/2017	10/11/2017 22:21	Expense Accrual Journal
	MXINMU	MXINMU6403	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU7096	9/27/2017	9/27/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU7096	9/27/2017	9/27/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU7229	9/29/2017	9/29/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6196	9/8/2017	9/8/2017 5:19	Accounting Entries from Maximo
	MXINMU	MXINMU6196	9/8/2017	9/8/2017 5:19	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT2997	9/18/2017	9/18/2017 22:16	Expense Accrual Journal
AP_ACCRUAL	APACR	APACR53721	3/20/2018	3/20/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR56088	3/27/2018	3/27/2018 22:07	Accounts Payable - Accrual

AP_ACCRUAL	APACR	APACR53721	3/20/2018	3/20/2018 22:21	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR61782	4/10/2018	4/10/2018 22:08	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR56088	3/27/2018	3/27/2018 22:07	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR12040	11/14/2017	11/14/2017 22:37	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR11562	11/13/2017	11/13/2017 22:36	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR49029	3/6/2018	3/6/2018 22:06	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR11562	11/13/2017	11/13/2017 22:36	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR11562	11/13/2017	11/13/2017 22:36	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR12040	11/14/2017	11/14/2017 22:37	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR11562	11/13/2017	11/13/2017 22:36	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR04158	10/20/2017	10/20/2017 22:23	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR09367	11/3/2017	11/4/2017 0:19	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR09367	11/3/2017	11/4/2017 0:19	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR46932	3/1/2018	3/2/2018 2:03	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR11562	11/13/2017	11/13/2017 22:36	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR49029	3/6/2018	3/6/2018 22:06	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR08758	11/2/2017	11/3/2017 0:27	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR15748	11/28/2017	11/28/2017 22:18	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR08092	11/1/2017	11/2/2017 0:25	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR08092	11/1/2017	11/2/2017 0:25	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR08092	11/1/2017	11/2/2017 0:25	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR08092	11/1/2017	11/2/2017 0:25	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR07462	10/31/2017	10/31/2017 22:18	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR12040	11/14/2017	11/14/2017 22:37	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR46932	3/1/2018	3/2/2018 2:03	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR12040	11/14/2017	11/14/2017 22:37	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR22899	12/18/2017	12/18/2017 22:19	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR08092	11/1/2017	11/2/2017 0:25	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR06396	10/27/2017	10/27/2017 22:20	Accounts Payable - Accrual
AP_ACCRUAL	APACR	APACR08092	11/1/2017	11/2/2017 0:25	Accounts Payable - Accrual
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
	MXINMU	MXINMU3153	1/17/2018	1/17/2018 5:28	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT5786	9/26/2017	9/26/2017 22:16	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT6479	9/28/2017	9/28/2017 22:20	Expense Accrual Journal
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT6479	9/28/2017	9/28/2017 22:20	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT8379	11/2/2017	11/2/2017 0:25	Expense Accrual Journal
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6402	9/13/2017	9/13/2017 5:16	Accounting Entries from Maximo

	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6820	9/21/2017	9/21/2017 5:16	Accounting Entries from Maximo
	MXINMU	MXINMU6883	9/22/2017	9/22/2017 5:20	Accounting Entries from Maximo
	MXINMU	MXINMU6883	9/22/2017	9/22/2017 5:20	Accounting Entries from Maximo
	MXACCR	MXACCR5812	2/28/2018	3/1/2018 17:13	Accounting Entries from Maximo
EXACCRUAL	EXACCT	EXACCT3690	11/20/2017	11/20/2017 22:21	Expense Accrual Journal
EXACCRUAL	EXACCT	EXACCT7531	10/31/2017	10/31/2017 22:18	Expense Accrual Journal

Employee ID JD	Employee Name JD	Material Stock Code JD	Material Descr JD	Material ID JD	Vendor Num JD
342373	Carmichael II, R Daniel				
340562	Seffern Jr., James R				
342373	Carmichael II, R Daniel				
340562	Seffern Jr., James R				
342373	Carmichael II, R Daniel				
340562	Seffern Jr., James R				

		#2 ELEVATOR BUILDING REPAIR --		
		#2 ELEVATOR BUILDING REPAIR --		
		#2 ELEVATOR BUILDING REPAIR --		
		#2 ELEVATOR BUILDING REPAIR --		
		#2 ELEVATOR BUILDING REPAIR --		
254860	Washburn, Richard D			
254860	Washburn, Richard D			
		22225374-1		
		ABRASIVE,DISC, FLAP, 4-1/2" OD	401525	0
		ABRASIVE,DISC, FLAP, 4-1/2" OD	401525	
		ABRASIVE,PARTICLE, BLASTING, G	478075	0
		ABRASIVE,PARTICLE, BLASTING, G	478075	0
		ABRASIVE,PARTICLE, BLASTING, G	478075	
		ABRASIVE,PARTICLE, BLASTING, G	478075	

		ABSORBENT, OIL/CHEMICAL/WATER,	4161497	0
		ABSORBENT, OIL/CHEMICAL/WATER,	4161497	0
		ABSORBENT, OIL/CHEMICAL/WATER,	4161497	
		ABSORBENT, OIL/CHEMICAL/WATER,	4161497	
				0000136714
		ADHESIVE, HIGH STRENGTH, SPRAY	50083711	0
		ADHESIVE, HIGH STRENGTH, SPRAY	50083711	
		ADHESIVE, WEATHERSTRIP, 5 OZ T	4086488	0
		ADHESIVE, WEATHERSTRIP, 5 OZ T	4086488	
351936	Brown, James M			
345162	Dixon, Lorenzo			
345162	Dixon, Lorenzo			
254860	Washburn, Richard D			
348595	Grimes, Richard L			
328003	Flynn, James R			
254860	Washburn, Richard D			
254860	Washburn, Richard D			
113866	Austin, Yogena S			
254860	Washburn, Richard D			
254860	Washburn, Richard D			
		ANGLE,STRUCTURAL, 2-1/2" WD, 2	4014187	0
		ANGLE,STRUCTURAL, 2-1/2" WD, 2	4014187	
		ANIXTER 3MR-0603 6/3 W/GRD 600		
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960
				0000136960

			0000136960
			0000136960
			0000136960
			0000136960
			0000136960
	BAR,FLAT, 1-1/2" WD, 12' LG, 1	4014256	0
	BAR,FLAT, 1-1/2" WD, 12' LG, 1	4014256	
	BAR,ROUND, 3/8" DIA, 12' LG, 0	4014433	0
	BAR,ROUND, 3/8" DIA, 12' LG, 0	4014433	
	BAR,ROUND, 7/8" DIA, 12' LG, 2	4014438	0
	BAR,ROUND, 7/8" DIA, 12' LG, 2	4014438	
	BATTERY,DRY CELL, ALKALINE, 1.	650000	0
	BATTERY,DRY CELL, ALKALINE, 1.	650000	0
	BATTERY,DRY CELL, ALKALINE, 1.	650000	0
	BATTERY,DRY CELL, ALKALINE, 1.	650000	0
	BATTERY,DRY CELL, ALKALINE, 1.	651593	0
	BATTERY,DRY CELL, ALKALINE, 1.	651593	0
	BATTERY,DRY CELL, ALKALINE, 1.	650000	0
	BATTERY,DRY CELL, ALKALINE, 1.	650000	0
	BATTERY,DRY CELL, ALKALINE, 1.	651593	0
	BATTERY,DRY CELL, ALKALINE, 1.	651589	0
	BATTERY,DRY CELL, ALKALINE, 1.	650000	
	BATTERY,DRY CELL, ALKALINE, 1.	650000	
	BATTERY,DRY CELL, ALKALINE, 1.	651589	0
	BATTERY,DRY CELL, ALKALINE, 1.	650000	
	BATTERY,DRY CELL, ALKALINE, 1.	650000	
	BATTERY,DRY CELL, ALKALINE, 1.	651593	
	BATTERY,DRY CELL, ALKALINE, 1.	651593	
	BATTERY,DRY CELL, ALKALINE, 1.	650000	
	BATTERY,DRY CELL, ALKALINE, 1.	650000	
	BATTERY,DRY CELL, ALKALINE, 1.	651593	
	BATTERY,DRY CELL, ALKALINE, 1.	651589	
	BATTERY,DRY CELL, ALKALINE, 1.	651589	
	BATTERY,DRY CELL,6VDC,SPRING T	651615	0
	BATTERY,DRY CELL,6VDC,SPRING T	651615	0
	BATTERY,DRY CELL,6VDC,SPRING T	651615	
	BATTERY,DRY CELL,6VDC,SPRING T	651615	
	BATTERY,DRY CELL,ALKALINE,1.5V	651590	0
	BATTERY,DRY CELL,ALKALINE,1.5V	651590	0
	BATTERY,DRY CELL,ALKALINE,1.5V	651590	0

	BATTERY,DRY CELL,ALKALINE,1.5V	651590	
	BATTERY,DRY CELL,ALKALINE,1.5V	651590	
	BATTERY,DRY CELL,ALKALINE,1.5V	651590	
	BATTERY,DRY CELL,ALKALINE,9VDC	651598	0
	BATTERY,DRY CELL,ALKALINE,9VDC	651598	
	BATTERY,DRY CELL,LITHIUM,3VDC	512853	0
	BATTERY,DRY CELL,LITHIUM,3VDC	512853	0
	BATTERY,DRY CELL,LITHIUM,3VDC	512853	
	BATTERY,DRY CELL,LITHIUM,3VDC	512853	
	BEARING,BALL, CONRAD, SGL ROW,	25787	0
	BEARING,BALL, CONRAD, SGL ROW,	25787	
	BEARING,SLEEVE, JOURNAL, NICKE	4023619	0
	BEARING,SLEEVE, JOURNAL, NICKE	4023619	
	BEARING,SLEEVE, JOURNAL, NICKE	4023619	
	BEARING,SLEEVE, JOURNAL, NICKE	4023619	0
			0000179264
			0000179264
	BHI SUPPLEMENTAL LABOR ADDENDU		
	BIT, STEP, BIT, UNIBIT, 1/4" T	4012356	0
	BIT, STEP, BIT, UNIBIT, 1/4" T	4012356	
	BIT,TOOL,CUTTING,3/16" X 3/16"	30026	0
	BIT,TOOL,CUTTING,3/16" X 3/16"	30026	
	BLANKET, FLAME RETARDANT, 62"	4006474	0
	BLANKET, FLAME RETARDANT, 62"	4006474	
	BODY,VALVE, F/ IRON HORSE HIGH	4140674	0
	BODY,VALVE, F/ IRON HORSE HIGH	4140674	
	BOLT,MACHINE, 3/4" DIA, 10 THD	4156816	0
	BOLT,MACHINE, 3/4" DIA, 10 THD	4156816	
	BOLT,PLOW, 3/4" DIA, 10 TPI, 2	4156805	0
	BOLT,PLOW, 3/4" DIA, 10 TPI, 2	4156805	
	BOOTS, SLIP ON, 10" HT, X-LARG	4011305	0
	BOOTS, SLIP ON, 10" HT, X-LARG	4011305	
	BOOTS, SNUG LEG ANKLE FITTING	4011301	0
	BOOTS, SNUG LEG ANKLE FITTING	4011300	0
	BOOTS, SNUG LEG ANKLE FITTING	4011300	0
	BOOTS, SNUG LEG ANKLE FITTING	4011297	0
	BOOTS, SNUG LEG ANKLE FITTING	4011297	0
	BOOTS, SNUG LEG ANKLE FITTING	4011301	
	BOOTS, SNUG LEG ANKLE FITTING	4011300	
	BOOTS, SNUG LEG ANKLE FITTING	4011300	

		BOOTS, SNUG LEG ANKLE FITTING	4011297	
		BOOTS, SNUG LEG ANKLE FITTING	4011297	
		BOOTS, SNUG LEG, SIZE 9, ANKLE	4011296	0
		BOOTS, SNUG LEG, SIZE 9, ANKLE	4011296	0
		BOOTS, SNUG LEG, SIZE 9, ANKLE	4011296	
		BOOTS, SNUG LEG, SIZE 9, ANKLE	4011296	
		BOTTLE, 1 GAL, PLASTIC, JUG	4013206	0
		BOTTLE, 1 GAL, PLASTIC, JUG	4013206	
		BOTTLE, SPRAYER, 32 OZ, PLASTI	4011306	0
		BOTTLE, SPRAYER, 32 OZ, PLASTI	4011306	
		BOX,ELECTRICAL, JUNCTION/PULL,	4010407	0
		BOX,ELECTRICAL, JUNCTION/PULL,	4010407	
		BRUSH, DECK SCRUB, PLASTIC BRI	4009848	0
		BRUSH, DECK SCRUB, PLASTIC BRI	4009848	
		BRUSH,PAINT, CHIP, 2" BRISTLE,	4014616	0
		BRUSH,PAINT, CHIP, 2" BRISTLE,	4014616	
		BRUSH,WIRE,SCRATCH,1/2" WD BRI	41223	0
		BRUSH,WIRE,SCRATCH,1/2" WD BRI	41223	
		BRUSH,WIRE,TOOTHBRUSH STYLE SC	41229	0
		BRUSH,WIRE,TOOTHBRUSH STYLE SC	41229	
		BUCKET, RND, 5 GAL, PLASTIC, W	4017084	0
		BUCKET, RND, 5 GAL, PLASTIC, W	4017084	
		BUSHING,CONDUIT,BONDING & GROU	41706	0
		BUSHING,CONDUIT,BONDING & GROU	41706	
		BUSHING,PUMP, FRONT HEAD, F/ I	4140662	0
		BUSHING,PUMP, FRONT HEAD, F/ I	4140662	
		BUSHING,PUMP,BACK HEAD	388640	0
		BUSHING,PUMP,BACK HEAD	388640	
		CAN,CARBOY/JERRICAN,5 GAL,PE,C	283330	0
		CAN,CARBOY/JERRICAN,5 GAL,PE,C	283330	0
		CAN,CARBOY/JERRICAN,5 GAL,PE,C	283330	0
		CAN,CARBOY/JERRICAN,5 GAL,PE,C	283330	0
		CAN,CARBOY/JERRICAN,5 GAL,PE,C	283330	
		CAN,CARBOY/JERRICAN,5 GAL,PE,C	283330	
		CAN,CARBOY/JERRICAN,5 GAL,PE,C	283330	
		CAN,CARBOY/JERRICAN,5 GAL,PE,C	283330	
350396	Horton, Thomas V			
350396	Horton, Thomas V			
		CHAIN,DRIVE, 10' LG, CORROSION	4182673	0
		CHAIN,DRIVE, 10' LG, CORROSION	4182673	

	CHANNEL,FRAMING, 1-5/8" X 13/1	4014580	0
	CHANNEL,FRAMING, 1-5/8" X 13/1	4014580	
	CHANNEL,STRUCTURAL, 6" X 1/4",	4014327	0
	CHANNEL,STRUCTURAL, 6" X 1/4",	4014327	
	CHASSIS,ELECTRONIC,DCM-H CONTR	598450	
	CHASSIS,ELECTRONIC,DCM-H CONTR	598450	0
	CHEMICAL, 2-PROPANOL//ISO-PROP	4009378	0
	CHEMICAL, 2-PROPANOL//ISO-PROP	4009378	0
	CHEMICAL, 2-PROPANOL//ISO-PROP	4009378	
	CHEMICAL, 2-PROPANOL//ISO-PROP	4009378	
			0000170892
	CLEANER, CONTACT, 14 OZ CONTAI	4192978	0
	CLEANER, CONTACT, 14 OZ CONTAI	4192978	
	CLEANER, DETERGENT, LIQUID, 85	505671	0
	CLEANER, DETERGENT, LIQUID, 85	505671	
	CLEANER, LAUNDRY DETERGENT, PO	1542729	0
	CLEANER, LAUNDRY DETERGENT, PO	1542729	
	COMM DIVE MAINT;FLANGE BOLT RE		
	COMPOUND,CAULKING, RTV SILICON	4058165	0
	COMPOUND,CAULKING, RTV SILICON	4058165	
	COMPOUND,SEALING, HIGH TEMP RT	4009338	0
	COMPOUND,SEALING, HIGH TEMP RT	4009338	
	COMPOUND,SEALING, LIGHT WEIGHT	4009443	0
	COMPOUND,SEALING, LIGHT WEIGHT	4009443	
	COMPOUND,SEALING, RTV SEALANT,	4009414	0
	COMPOUND,SEALING, RTV SEALANT,	4009414	
	COMPOUND,SEALING, RTV SILICONE	185912	0
	COMPOUND,SEALING, RTV SILICONE	185912	
	CONDUIT, FLEXIBLE SEALTIGHT, 4	4009981	0
	CONDUIT, FLEXIBLE SEALTIGHT, 4	4009981	
	CONNECTOR,CABLE/CONDUIT, CORD	62692	0
	CONNECTOR,CABLE/CONDUIT, CORD	62692	0
	CONNECTOR,CABLE/CONDUIT, CORD	62692	
	CONNECTOR,CABLE/CONDUIT, CORD	62692	
	CONNECTOR,CABLE/CONDUIT,CORD &	323056	0
	CONNECTOR,CABLE/CONDUIT,CORD &	323056	
	CONNECTOR,ELECTRICAL, TERMINAL	50064977	0
	CONNECTOR,ELECTRICAL, TERMINAL	4004208	0
	CONNECTOR,ELECTRICAL, TERMINAL	63274	0
	CONNECTOR,ELECTRICAL, TERMINAL	50064977	

		CONNECTOR,ELECTRICAL, TERMINAL	4004208	
		CONNECTOR,ELECTRICAL, TERMINAL	63274	
		CONNECTOR,ELECTRICAL,WIRE NUT,	50026921	0
		CONNECTOR,ELECTRICAL,WIRE NUT,	50026921	
		CONTRACTORS; CRS 2017 STORM SU		
		CORD,EXTENSION, (3) 12 AWG CON	4005927	0
		CORD,EXTENSION, (3) 12 AWG CON	4005926	0
		CORD,EXTENSION, (3) 12 AWG CON	4005927	0
		CORD,EXTENSION, (3) 12 AWG CON	4005927	0
		CORD,EXTENSION, (3) 12 AWG CON	4005927	0
		CORD,EXTENSION, (3) 12 AWG CON	4005927	0
		CORD,EXTENSION, (3) 12 AWG CON	4005926	0
		CORD,EXTENSION, (3) 12 AWG CON	4005926	0
		CORD,EXTENSION, (3) 12 AWG CON	4005926	0
		CORD,EXTENSION, (3) 12 AWG CON	4005926	
		CORD,EXTENSION, (3) 12 AWG CON	4005927	
		CORD,EXTENSION, (3) 12 AWG CON	4005927	
		CORD,EXTENSION, (3) 12 AWG CON	4005927	
		CORD,EXTENSION, (3) 12 AWG CON	4005927	
		CORD,EXTENSION, (3) 12 AWG CON	4005926	
		CORD,EXTENSION, (3) 12 AWG CON	4005926	
		CORD,EXTENSION, (3) 14 AWG CON	4010523	0
		CORD,EXTENSION, (3) 14 AWG CON	4010523	
		COUPLING,SHAFT, M, ITEM 25 DWG	4023602	0
		COUPLING,SHAFT, M, ITEM 25 DWG	4023602	
		COUPLING,SHAFT, M, ITEM 25 DWG	4023602	
		COUPLING,SHAFT, M, ITEM 25 DWG	4023602	0
		COVER, BLANKET, WATERPROOF W/	4006475	0
		COVER, BLANKET, WATERPROOF W/	4006475	
		COVERALL, LG SLEEVE, HEAVY WEI	4011401	0
		COVERALL, LG SLEEVE, HEAVY WEI	4011394	0
		COVERALL, LG SLEEVE, HEAVY WEI	4011394	0
		COVERALL, LG SLEEVE, HEAVY WEI	4011401	
		COVERALL, LG SLEEVE, HEAVY WEI	4011394	
		COVERALL, LG SLEEVE, HEAVY WEI	4011394	
		COVERALL, SHORT SLEEVE, HEAVY	4155749	0
		COVERALL, SHORT SLEEVE, HEAVY	4155749	
		CRN U5 - 501 ACCPC AUTOMATIC T		
		CRS CHIMNEY INSPECTION / ASSES		
340731	Griffiths, Lawrence N			

340731	Griffiths, Lawrence N			
113866	Austin, Yogena S			
		CYLINDER,LINEAR ACTUATING, PNE	71823	0
		CYLINDER,LINEAR ACTUATING, PNE	71823	
		DELIVERY		
		DISC,VALVE, F/ IRON HORSE HIGH	4140675	0
		DISC,VALVE, F/ IRON HORSE HIGH	4140675	
		DRIVE, 13.1 HP INPUT, SM-CYCLO	4143327	0
		DRIVE, 13.1 HP INPUT, SM-CYCLO	4143327	
		DRUM,STORAGE, DOT REGULATED MA	4005883	0
		DRUM,STORAGE, DOT REGULATED MA	4005883	0
		DRUM,STORAGE, DOT REGULATED MA	4005883	
				0000169278
				0000169278
		ELEMENT,FILTER, AIR, 12 X 20 X	4148145	0
		ELEMENT,FILTER, AIR, 12 X 20 X	4148145	
		ELEMENT,FILTER, AIR, 12" X 24"	4148146	0
		ELEMENT,FILTER, AIR, 12" X 24"	4148146	
		ELEMENT,FILTER, AIR, 24-3/4" X	4045777	0
		ELEMENT,FILTER, AIR, 24-3/4" X	4045777	
		ELEMENT,FILTER, PRE-FILTER, 24	1548662	0
		ELEMENT,FILTER, PRE-FILTER, 24	1548662	0
		END MILL,1/4" DIA,3-3/8" LG,3/	83738	0
		END MILL,1/4" DIA,3-3/8" LG,3/	83738	
		EXTENSION, IGNITOR, 3/4", TYPE	4045855	0
		EXTENSION, IGNITOR, 3/4", TYPE	4045855	
110887	Cline, Scott Oneil			
		FACE,HAMMER,#4,RAWHIDE,#4	84508	0
		FACE,HAMMER,#4,RAWHIDE,#4	84508	
		FILL FOR SAND BAGS		
		FILL FOR SAND BAGS		
		FILTER, 27 X 24 X 2, GALV META	4166346	0
		FILTER, 27 X 24 X 2, GALV META	4166346	
		FILTER, MOISTURE SEPARATOR, 24	4147354	0
		FILTER, MOISTURE SEPARATOR, 24	4147354	
		FILTER, MOISTURE SEPARATOR, 24	4147354	0
		FILTER, MOISTURE SEPARATOR, 24	4147354	
		FILTER,30" LG	50047327	0
		FILTER,30" LG	50047327	
		FILTER,AIR, AIR SYSTEM, 24" WD	1548722	0

		FILTER,AIR, AIR SYSTEM, 24" WD	1548722	0
		FILTER,AIR, PLEATED EXTENDED S	86150	0
		FILTER,AIR, PLEATED EXTENDED S	86150	
		FLASHLIGHT, HARD HAT, ADJUSTAB	4156195	0
		FLASHLIGHT, HARD HAT, ADJUSTAB	4156195	0
		FLASHLIGHT, HARD HAT, ADJUSTAB	4156195	
		FLASHLIGHT, HARD HAT, ADJUSTAB	4156195	
		FLASHLIGHT, INTRINSICALLY SAFE	4196960	0
		FLASHLIGHT, INTRINSICALLY SAFE	4196960	0
		FLASHLIGHT, INTRINSICALLY SAFE	4196960	0
		FLASHLIGHT, INTRINSICALLY SAFE	4196960	
		FLASHLIGHT, INTRINSICALLY SAFE	4196960	
		FLASHLIGHT, INTRINSICALLY SAFE	4196960	
		FLOWMETER, MAGNETIC, 0-51.41,	4188068	0
		FLOWMETER, MAGNETIC, 0-51.41,	4188068	0
		FLOWMETER, MAGNETIC, 0-51.41,	4188068	
		FLOWMETER, MAGNETIC, 0-51.41,	4188068	
104924	Mullins, Eugene L			
		FREIGHT		
		FUNNEL, 160MM TOP DIA, PP	4013203	0
		FUNNEL, 160MM TOP DIA, PP	4013203	
		FUSE, TIME DELAY DUAL ELEMENT,	50104209	0
		FUSE,FAST ACTING,1/4A,250,FERR	90629	0
		FUSE,FAST ACTING,1/4A,250,FERR	90629	
		GAS, O2, CO, LEL PENTANE, H2S,	4183214	0
		GASKET, STATOR COOLING WATER T	4044565	0
		GASKET, STATOR COOLING WATER T	4044565	
		GASKET,SPIRAL WOUND, 2500 LB,	4074247	0
		GASKET,SPIRAL WOUND, 2500 LB,	4074247	
		GATE, VACUUM PUMP, F/ IRON HOR	4140664	0
		GATE, VACUUM PUMP, F/ IRON HOR	4140664	
		GAUGE,LEVEL, SIGHT, 1" MPT, 18	4014002	0
		GAUGE,LEVEL, SIGHT, 1" MPT, 18	4014002	
		GAUGE,LEVEL, SIGHT, 3/4" MPT,	4014001	0
		GAUGE,LEVEL, SIGHT, 3/4" MPT,	4014001	
		GEARBOX, REDUCER, 300.34:1 GEA	4181199	0
		GEARBOX, REDUCER, 300.34:1 GEA	4181199	
		GEARMOTOR,ELECTRIC, AC, GEAR R	4141320	0
		GEARMOTOR,ELECTRIC, AC, GEAR R	4141320	
		GEARMOTOR,ELECTRIC, AC, GEAR R	4141320	

		GEARMOTOR,ELECTRIC, AC, GEAR R	4141320	0
		GLASSES,SAFETY, EYE, CLEAR PLA	4006458	0
		GLASSES,SAFETY, EYE, CLEAR PLA	4006458	0
		GLASSES,SAFETY, READERS, +1.5	4186872	0
		GLASSES,SAFETY, READERS, YELLO	4174104	0
		GLASSES,SAFETY, SUN, MIRRORED	4006456	0
		GLASSES,SAFETY, SUN, SMOKE LEN	4006455	0
		GLOVES, HEAVY DUTY, LARGE, GOA	4203212	0
		GLOVES, MECHANICS, X-LARGE, LE	4188427	0
		GLOVES, WORK, LARGE, LEATHER,	4017656	0
		GLOVES, X-LARGE, HD WASP	4175961	0
		GOGGLES, SAFETY, CLEAR, FLEXSE	4161742	0
		GREASE,INDUSTRIAL, LUBRICANT M	124213	0
		GREASE,INDUSTRIAL, LUBRICANT M	124213	
112518	Ballard, Jerry A			
358717	Savage, David W			
464222	Wise, John Edward			
351936	Brown, James M			
		HARNESS, FALL PROTECTION FULL	4203772	0
		HARNESS, FALL PROTECTION FULL	4203772	
		HAT, HARD, STD, WHITE, V-GARD	4199686	0
		HAT, HARD, STD, WHITE, V-GARD	4199686	
		HEATER ELECTRIC, 460-480/60/3,		
		HEATER ELECTRIC, 460-480/60/3,		
		Hoffman A30P24SS6 30 x 24 Stai		
		HOLDER, PUNCH, 6" LG, CAST STL	1564396	0
		HOLDER, PUNCH, 6" LG, CAST STL	1564396	
		HOLDER, PUNCH, 8" LG, CS, HOLD	1564393	0
		HOLDER, PUNCH, 8" LG, CS, HOLD	1564393	
		HOLDER,SPRING, VALVE, F/ IRON	4140676	0
		HOLDER,SPRING, VALVE, F/ IRON	4140676	
		HOSE,FLEXIBLE METAL,1/2",36" L	50119617	0
		HOSE,FLEXIBLE METAL,1/2",36" L	50119617	
		INDEX,DRILL BIT, 1/16"-1/2" DR	4016195	0
		INDEX,DRILL BIT, 1/16"-1/2" DR	4016195	
				0000071370
				0000071370
		INSERT, CUTTING TOOL,INDEXABLE	358328	0
		INSERT, CUTTING TOOL,INDEXABLE	358328	
		INSERT,CUTTING TOOL, DIAMOND 3	604018	0

		INSERT,CUTTING TOOL, DIAMOND 3	604018	
		INSERT,CUTTING TOOL,DIAMOND 80	113105	0
		INSERT,CUTTING TOOL,DIAMOND 80	113065	0
		INSERT,CUTTING TOOL,DIAMOND 80	113065	0
		INSERT,CUTTING TOOL,DIAMOND 80	113065	0
		INSERT,CUTTING TOOL,DIAMOND 80	113105	0
		INSERT,CUTTING TOOL,DIAMOND 80	113105	
		INSERT,CUTTING TOOL,DIAMOND 80	113065	
		INSERT,CUTTING TOOL,DIAMOND 80	113065	
		INSERT,CUTTING TOOL,DIAMOND 80	113065	
		INSERT,CUTTING TOOL,DIAMOND 80	113105	
		INSERT,CUTTING TOOL,GROOVING,0	290772	0
		INSERT,CUTTING TOOL,GROOVING,0	290772	
		INSERT,CUTTING TOOL,TRIANGULAR	290731	0
		INSERT,CUTTING TOOL,TRIANGULAR	290774	0
		INSERT,CUTTING TOOL,TRIANGULAR	290731	
		INSERT,CUTTING TOOL,TRIANGULAR	290774	
		INTERNATIONAL CONDUCTORS TO PR		
254860	Washburn, Richard D			
		ISOLATOR, POST, IPB, 36KV, 150	4156798	0
		ISOLATOR, POST, IPB, 36KV, 150	4156798	
		KIT, REBUILD, F/ AIR CYL 2.5"	118278	0
		KIT, REBUILD, F/ AIR CYL 2.5"	118278	
		KIT,TERMINATION, 15KV, (1) 2/0	4011768	0
		KIT,TERMINATION, 15KV, (1) 2/0	4011768	
		KIT,TERMINATION, 5696K Cold Sh		
		LAMP, FLASHLIGHT, SGL CONTACT	4003922	0
		LAMP, FLASHLIGHT, SGL CONTACT	4003922	
		LANTERN,ELECTRIC, GREEN LED, 1	4162777	0
		LANTERN,ELECTRIC, GREEN LED, 1	4162777	
		LANTERN,ELECTRIC, HANDHELD, 6V	4005844	0
		LANTERN,ELECTRIC, HANDHELD, 6V	4005844	
		LANTERN,ELECTRIC, HANDHELD, WA	4011522	0
		LANTERN,ELECTRIC, HANDHELD, WA	4011522	
		LANTERN,ELECTRIC, RED LED, 12V	4162778	0
		LANTERN,ELECTRIC, RED LED, 12V	4162778	
352423	Bennett, Murray W			
254860	Washburn, Richard D			
254860	Washburn, Richard D			
345490	Massingill, T Reid			

		LUBRICANT, MULTI PURPOSE, AERO	4013348	0
		LUBRICANT, MULTI PURPOSE, AERO	4013348	
		LUBRICANT,ANTI-SEIZE,PASTE,1 L	562097	0
		LUBRICANT,ANTI-SEIZE,PASTE,1 L	562097	
		LUG,POSITECH ESR1-0438; #4 1-H		
		LUG,POSITECH ESR1-0438; #4 1-H		
		LUG,POSITECH ESR1-0438; #4 1-H		
		LUG,POSITECH ESR1-0438; #4 1-H		
		LUG,POSITECH ESR1-0438; #4 1-H		
		MATERIAL, CLEAR PLASTIC (VISQU	4011647	0
		MATERIAL, CLEAR PLASTIC (VISQU	4011647	0
		MATERIAL, CLEAR PLASTIC (VISQU	4011647	0
		MATERIAL, CLEAR PLASTIC (VISQU	4011647	
		MATERIAL, CLEAR PLASTIC (VISQU	4011647	
		MATERIAL, CLEAR PLASTIC (VISQU	4011647	
352037	Owens III, Fred L			
341590	Baker, Wayne			
345162	Dixon, Lorenzo			
				0000022534
				0000022534
112518	Ballard, Jerry A			
		MIRROR,HINGED,2-5/16" WD X 3-3	126803	0
		MIRROR,HINGED,2-5/16" WD X 3-3	126803	
		MODULE, CONTROLLER, COMMANDER	1523547	0
		MODULE, CONTROLLER, COMMANDER	1523547	
		MOTOR,ELECTRIC, AC, 100 HP, 46	4159429	0
		MOTOR,ELECTRIC, AC, 100 HP, 46	4159429	
		MOTOR,ELECTRIC, AC, 100 HP, 46	4159429	
		MOTOR,ELECTRIC, AC, 100 HP, 46	4159429	0
		MOTOR,ELECTRIC, AC, 1-2 HP, 48	4160946	0
		MOTOR,ELECTRIC, AC, 1-2 HP, 48	4160946	
		MOTOR,ELECTRIC, AC, 125 HP, 46	4166358	0
		MOTOR,ELECTRIC, AC, 125 HP, 46	4166358	
		MOTOR,ELECTRIC, AC, 3500 HP, 6	4160166	0
		MOTOR,ELECTRIC, AC, 3500 HP, 6	4160166	
		MOTOR,ELECTRIC, AC, 3500 HP, 6	4160166	
		MOTOR,ELECTRIC, AC, 3500 HP, 6	4160166	0
		MOTOR,ELECTRIC, AC, 5 HP, 480V	4159209	0
		MOTOR,ELECTRIC, AC, 5 HP, 480V	4159209	
				0000146824

345490	Massingill, T Reid			
		NUT,CHANNEL, 3/8" DIA, 16 UNC,	907995	0
		NUT,CHANNEL, 3/8" DIA, 16 UNC,	907995	
		NUT,COUPLING, SHAFT I-26 M DWG	4023603	0
		NUT,COUPLING, SHAFT I-26 M DWG	4023603	
		NUT,COUPLING, SHAFT I-26 M DWG	4023603	
		NUT,COUPLING, SHAFT I-26 M DWG	4023603	0
		NUT,HEX, 1/2" DIA, 13 TPI, BRA	4009731	0
		NUT,HEX, 1/2" DIA, 13 TPI, BRA	4009731	
		O-RING, CIRCULATING WATER PUMP	4023616	0
		O-RING, CIRCULATING WATER PUMP	4023616	
		OZ Gedney 31-150 1-1/2 Inch Ri		
		PACKING, PUMP, CROSSLOK BRAIDE	4023621	0
		PACKING, PUMP, CROSSLOK BRAIDE	4023621	
		PACKING, PUMP, CROSSLOK BRAIDE	4023621	
		PAINT, ALKYD ENAMEL, STD DARK	4014681	0
		PAINT, ALKYD ENAMEL, STD DARK	4014681	
		PAINT, COLD GALVANIZING ZINC E	4014705	0
		PAINT, COLD GALVANIZING ZINC E	4014705	
348595	Grimes, Richard L			
		PIN,LOCK,3/4" HT SHANK	295006	0
		PIN,LOCK,3/4" HT SHANK	295006	
		PIPE, 1-1/2" NPS, RANDOM FT MI	4014816	0
		PIPE, 1-1/2" NPS, RANDOM FT MI	4014816	
		PLATE, COVER, IPB BUS, CALVERT	1540931	0
		PLATE,CUT OFF	152334	0
		PLATE,CUT OFF	152334	
		PLEXIGLASS, CLEAR ACRYLIC, 1/4	4017050	0
		PLEXIGLASS, CLEAR ACRYLIC, 1/4	4017050	
		PLUG,SPARK,	469905	0
		PLUG,SPARK,	469905	
		PN#52936; 1/2 PT AD		
		PN#52936; 1/2 PT AD		
		PN#52936; 1/2 PT AD		
		PROTECTOR,HEARING, EAR PLUG, 2	4015701	0
		PROTECTOR,HEARING, EAR PLUG, 2	4015701	
343874	Tumpack, Donna L.			
104924	Mullins, Eugene L			
		PUMP, LUBE OIL, BOILER CIRCULA	4018849	0
		PUMP, LUBE OIL, BOILER CIRCULA	4018849	

	PUMP, SEWAGE LIFT	4206871	0
	PUMP, SEWAGE LIFT	4206871	0
	PUMP, SEWAGE LIFT	4206871	
	PUMP, SEWAGE LIFT	4206871	
	PUMP, SUBMERSIBLE SUMP, 65 GPM	4026459	0
	PUMP, SUBMERSIBLE SUMP, 65 GPM	4026459	
	PUMP,CENTRIFUGAL, 2" FNPT INLE	4168827	0
	PUMP,CENTRIFUGAL, 7/7.5" IMPEL	4018662	0
	PUMP,CENTRIFUGAL, 7/7.5" IMPEL	4018662	
	PUMP,CENTRIFUGAL, 7/7.5" IMPEL	4018662	
	PUMP,CENTRIFUGAL, 7/7.5" IMPEL	4018662	0
	PUMP,ROTARY, PISTON, INCLUDES:	4197529	0
	PUMP,ROTARY, PISTON, INCLUDES:	4197529	
			0000171424
			0000171424
			0000171424
			0000171424
	RAG, HIGHLY ABSORBENT, 12" X 1	4014611	0
	RAG, HIGHLY ABSORBENT, 12" X 1	4014611	0
	RAG, HIGHLY ABSORBENT, 12" X 1	4014611	
	RAG, HIGHLY ABSORBENT, 12" X 1	4014611	
	RAG, LINT FREE, 12" X 18" CUT,	4017536	0
	RAG, LINT FREE, 12" X 18" CUT,	4017536	
	RAINGEAR, COAT, 3X-LARGE, LG S	4006579	0
	RAINGEAR, COAT, 3X-LARGE, LG S	4006579	
	RAINGEAR, COAT, MED, LG STYLE,	4006581	0
	RAINGEAR, COAT, MED, LG STYLE,	4006581	0
	RAINGEAR, COAT, MED, LG STYLE,	4006581	0
	RAINGEAR, COAT, MED, LG STYLE,	4006581	
	RAINGEAR, COAT, MED, LG STYLE,	4006581	
	RAINGEAR, COAT, MED, LG STYLE,	4006581	
	RAINGEAR, COAT, X-LARGE, LG ST	4006582	0
	RAINGEAR, COAT, X-LARGE, LG ST	4006582	0
	RAINGEAR, COAT, X-LARGE, LG ST	4006582	
	RAINGEAR, COAT, X-LARGE, LG ST	4006582	
	RAINGEAR, HOODED JACKET/SUIT,	4011668	0
	RAINGEAR, HOODED JACKET/SUIT,	4011668	0
	RAINGEAR, HOODED JACKET/SUIT,	4011668	0
	RAINGEAR, HOODED JACKET/SUIT,	4011668	
	RAINGEAR, HOODED JACKET/SUIT,	4011668	

		RAINGEAR, HOODED JACKET/SUIT,	4011668	
113866	Austin, Yogena S			
		RELAY, KUP-14D15-12		
		RELAY,TIME DELAY, 1-300 SECOND	4165194	0
		RENT GENERATOR FOR HINES FOR I		
		RENTAL - SUNBELT RENTAL/ GENER		
		Repairs to Jet Control House R		
		RESPIRATOR, DISPOSABLE MASK, D	4015709	0
		RESPIRATOR, DISPOSABLE MASK, D	4015709	
		RESPIRATOR, MASK, DUST, BOX OF	4184706	0
		RESPIRATOR, MASK, DUST, BOX OF	4184706	
		RING, COUPLING SHAFT, M, ITEM	4023604	0
		RING, COUPLING SHAFT, M, ITEM	4023604	
		RING, COUPLING SHAFT, M, ITEM	4023604	
		RING, COUPLING SHAFT, M, ITEM	4023604	0
		RING,LOCK, SHAFT JOURNAL, DWG	4023617	0
		RING,LOCK, SHAFT JOURNAL, DWG	4023617	
		RING,WEAR, IMPELLER THRUST, M	4023599	0
		RING,WEAR, IMPELLER THRUST, M	4023599	
		RING,WEAR, IMPELLER THRUST, M	4023599	
		RING,WEAR, IMPELLER THRUST, M	4023599	0
		ROD,WELDING, ASME SFA-5.1, E70	4016747	0
		ROD,WELDING, ASME SFA-5.1, E70	4016747	
		ROD,WELDING, ASME SFA-5.4, E30	4016784	0
		ROD,WELDING, ASME SFA-5.4, E30	4016784	
		ROPE, 1/4" DIA, 1200' REEL LG,	4005852	0
		ROPE, 1/4" DIA, 1200' REEL LG,	4005852	
		ROPE, 3/4" DIA, 600' REEL LG,	4005845	0
		ROPE, 3/4" DIA, 600' REEL LG,	4005845	
		ROPE, 3/8" DIA, PP/DACRON, 600	1523102	0
		ROPE, 3/8" DIA, PP/DACRON, 600	1523102	0
		ROPE, 3/8" DIA, PP/DACRON, 600	1523102	0
		ROPE, 3/8" DIA, PP/DACRON, 600	1523102	
		ROPE, 3/8" DIA, PP/DACRON, 600	1523102	
		ROPE, 3/8" DIA, PP/DACRON, 600	1523102	
		ROPE,WIRE, 1/4" DIA, 500' REEL	4011677	0
		ROPE,WIRE, 1/4" DIA, 500' REEL	4011677	
		SBI - HNCC - HURRICANE IRMA PR		
		SBI - HNCC - LABOR - HURRICANE		
		SBI - HNCC - LABOR - HURRICANE		

				0000131005
		SCREEN, SUCTION, F/ IRON HORSE	4140673	0
		SCREEN, SUCTION, F/ IRON HORSE	4140673	
		SCREW SET, SPECIAL, 4 PIECE, F	4140669	0
		SCREW SET, SPECIAL, 4 PIECE, F	4140669	0
		SCREW SET, SPECIAL, 4 PIECE, F	4140669	
		SCREW SET, SPECIAL, 4 PIECE, F	4140669	
		SCREW,CAP,1-1/2" DIA,6 UNC,5-1	298076	0
		SCREW,CAP,1-1/2" DIA,6 UNC,5-1	298076	
		SEAL, ROTARY, 1-1/4", M ASSY,	4140668	0
		SEAL, ROTARY, 1-1/4", M ASSY,	4140668	
		SEAL,ROCKER,STL,(2) SEALS PER	50101374	0
		SEAL,ROCKER,STL,(2) SEALS PER	50101374	
				0000174641
		SENSOR, PEN SIZE, 110-600VAC,	4010648	0
		SENSOR, PEN SIZE, 110-600VAC,	4010648	
				0000051547
		SERVICE: ADD ADDITIONAL FUNDS		
		SHACKLE, ANCHOR, 1/2" SCREW PI	4011694	0
		SHACKLE, ANCHOR, 1/2" SCREW PI	4011694	
		SHAFT,PUMP, M BOWL, ITEM 11 DW	4023598	0
		SHAFT,PUMP, M BOWL, ITEM 11 DW	4023598	
		SHAFT,PUMP, M BOWL, ITEM 11 DW	4023598	
		SHAFT,PUMP, M BOWL, ITEM 11 DW	4023598	0
		SHAFT,PUMP, M INTERMEDIAT, ITE	4023600	0
		SHAFT,PUMP, M INTERMEDIAT, ITE	4023600	
		SHAFT,PUMP, M INTERMEDIAT, ITE	4023600	
		SHAFT,PUMP, M INTERMEDIAT, ITE	4023600	0
		SHAFT,PUMP, UPPER, CWP, I-21 M	4023601	0
		SHAFT,PUMP, UPPER, CWP, I-21 M	4023601	
		SHAFT,PUMP, UPPER, CWP, I-21 M	4023601	
		SHAFT,PUMP, UPPER, CWP, I-21 M	4023601	0
110887	Cline, Scott Oneil			
		SHIM,INSERT,1/2" ID,80 DEG DIA	299401	0
		SHIM,INSERT,1/2" ID,80 DEG DIA	299401	
		SIGN, DANGER, BARRICADE, 6.75"	4162189	0
		SIGN, DANGER, BARRICADE, 6.75"	4162189	
		SLEEVE, OIL SCREEN, SER 15, VA	4140665	0
		SLEEVE, OIL SCREEN, SER 15, VA	4140665	
		SLING,WIRE ROPE, 1/2" DIA, 440	4005969	0

	SLING,WIRE ROPE, 1/2" DIA, 440	4005969	
	SOLDER, 1 LB, STICK CORE, 1/4"	4190823	0
	SOLDER, 1 LB, STICK CORE, 1/4"	4190823	0
	SOLDER, 1 LB, STICK CORE, 1/4"	4190823	
	SOLDER, 1 LB, STICK CORE, 1/4"	4190823	
			0000171933
			0000171933
			0000171933
	SOUTHEASTERN CONSTRUCTION REPA		
	SOUTHEASTERN CONSTRUCTION REPA		
	SOUTHEASTERN CONSTRUCTION REPA		
	SOUTHEASTERN CONSTRUCTION REPA		
			0000113724
			0000113724
			0000113724
	SPLICE,CONDUCTOR, SUPPORT, CAS	1540930	0
	SPRING SET, CORRUGATED, 2 PIEC	4140661	0
	SPRING SET, CORRUGATED, 2 PIEC	4140661	0
	SPRING SET, CORRUGATED, 2 PIEC	4140661	
	SPRING SET, CORRUGATED, 2 PIEC	4140661	
	SPRING SET, CUT-OFF PLATE, SK-	4140671	0
	SPRING SET, CUT-OFF PLATE, SK-	4140671	
	SPRING, OIL SCREEN, F/ IRON HO	4140666	0
	SPRING, OIL SCREEN, F/ IRON HO	4140666	
	SPRING,VALVE, F/ IRON HORSE HI	4140677	0
	SPRING,VALVE, F/ IRON HORSE HI	4140677	
	SPROCKET, DRIVE, 14 TEETH, CS,	4182572	0
	SPROCKET, DRIVE, 14 TEETH, CS,	4182572	
	SPROCKET, DRIVE, DRIVEN, 80 TE	4182574	0
	SPROCKET, DRIVE, DRIVEN, 80 TE	4182574	
	STONE,SHARPENING, COMBINATION,	4011704	0
	STONE,SHARPENING, COMBINATION,	4011704	
	STUD,DOUBLE ENDED, COVER, 1/2"	4041796	0
	STUD,DOUBLE ENDED, COVER, 1/2"	4041796	
	SUMMIT ENVIRONMENTAL; U2 PRECI		
	SUNBELT 15,000LB FORK TRUCK RE		
	SUNBELT BARTOW P4 CLEANING		
	SUNBELT EQUIPMENT AND HOIST RE		
			0000130120
			0000130120

				0000130120
				0000130120
				0000130120
		Sunbelt rental 20 kw diesel ge		
				0000056731
		TAG, DO NOT OPERATE, 8.5" X 3.	4002214	0
		TAG, DO NOT OPERATE, 8.5" X 3.	4002214	
		TAP,THREADING, PLUG, 7/8" DIA,	1530603	0
		TAP,THREADING, PLUG, 7/8" DIA,	1530603	
		TAP,THREADING, SEMI-BOTTOM, 1/	1530700	0
		TAP,THREADING, SEMI-BOTTOM, 1/	1530700	
		TAP,THREADING,HAND,FRACTIONAL	1001798	0
		TAP,THREADING,HAND,FRACTIONAL	1001798	
		TAPE, DUCT, 2", SILVER	4011724	0
		TAPE, DUCT, 2", SILVER	4011724	
		TAPE,DUCT,2" WD X 180' LG ROLL	1001801	0
		TAPE,DUCT,2" WD X 180' LG ROLL	1001801	
		TAPE,ELECTRICAL, 3/4" X 66' X	4011725	0
		TAPE,ELECTRICAL, 3/4" X 66' X	4011725	
		TAPE,ELECTRICAL, SELF FUSING,	4005479	0
		TAPE,ELECTRICAL, SELF FUSING,	4005479	
		TAPE,SAFETY BARRIER, DANGER DO	4017430	0
		TAPE,SAFETY BARRIER, DANGER DO	4017430	0
		TAPE,SAFETY BARRIER, DANGER DO	4017430	
		TAPE,SAFETY BARRIER, DANGER DO	4017430	
				0000194964
				0000194964
				0000194964
				0000194964
				0000034588
				0000034588
				0000034588
				0000034588
				0000034588
113866	Austin, Yogena S			
351936	Brown, James M			
449491	Jansen, Kevin Robert			
328003	Flynn, James R			
254860	Washburn, Richard D			
352037	Owens III, Fred L			

345162	Dixon, Lorenzo			
340556	Marchigiano, Steve A			
345490	Massingill, T Reid			
104924	Mullins, Eugene L			
351936	Brown, James M			
254860	Washburn, Richard D			
		THERMOSTAT, NON-PROGRAMMABLE,	4197493	0
		THERMOSTAT, NON-PROGRAMMABLE,	4197493	
		TIE,CABLE, SELF-LOCKING, NON-R	4005140	0
		TIE,CABLE, SELF-LOCKING, NON-R	4005140	
		TIE,CABLE,SELF-LOCKING,1/16" T	837879	0
		TIE,CABLE,SELF-LOCKING,1/16" T	837879	0
		TIE,CABLE,SELF-LOCKING,1/16" T	837879	
		TIE,CABLE,SELF-LOCKING,1/16" T	837879	
		TILE, ACOUSTICAL CEILING, 2' X	4137604	0
		TILE, ACOUSTICAL CEILING, 2' X	4137604	
		TIS, INC, SHIPPING		
		TOWEL, HAND CLEANER, SCRUBS IN	4161076	0
		TOWEL, HAND CLEANER, SCRUBS IN	4161076	
342724	Griffin, Debra A			
				0000072841
				0000072841
				0000072841
				0000072841
				0000072841
254860	Washburn, Richard D			
		TUBING,NONMETALLIC, FLEXIBLE,	4014106	0
		WASHER, CONICAL, 1/2" NOM, SS,	4156826	0
		WASHER, CONICAL, 1/2" NOM, SS,	4156826	
		WASHER,FLAT, 3/4" ID, 1-3/4" O	4156822	0
		WASHER,FLAT, 3/4" ID, 1-3/4" O	4156822	
		WASHER,LOCK, BELLEVILLE, 1/2"	4176400	0
		WASHER,LOCK, BELLEVILLE, 1/2"	4176400	
		WASHER,LOCK, SPLIT, 3/4" NOM,	4156825	0
		WASHER,LOCK, SPLIT, 3/4" NOM,	4156825	
		WATER, SPRING, 16.9 OZ/500ML P	4015570	0
		WATER, SPRING, 16.9 OZ/500ML P	4015570	
339879	Meldrim, Kenneth H			
				0000132112
				0000132112

				0000132112
				0000132112
				0000132112
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
				0000136065
		WHEEL,WIRE, BRUSH, 4" DIA, 5/1	306332	0
		WHEEL,WIRE, BRUSH, 4" DIA, 5/1	306332	
345490	Massingill, T Reid			
337364	Boulianne, Charlene D			
		WIPER, 4 PLY, 20" X 16.5" LARG	4009836	0
		WIPER, 4 PLY, 20" X 16.5" LARG	4009836	
113866	Austin, Yogena S			
464222	Wise, John Edward			
		WRENCH,IMPACT, 1/2" DR, 6.8-7.	50082831	0
		WRENCH,IMPACT, 1/2" DR, 6.8-7.	50082831	

		WRENCH,RATCHET, 3/8" DRIVE, AI	4016524	0
		WRENCH,RATCHET, 3/8" DRIVE, AI	4016524	
		WRENCH,TORQUE, 3/8" SQ DRIVE,	4183363	0
		WRENCH,TORQUE, 3/8" SQ DRIVE,	4183363	
		WSHER, FLAT, 1-3/4" , CS		
342724	Griffin, Debra A			
341590	Baker, Wayne			

Vendor Name JD	Invoice ID JD	Voucher ID JD	Purchase Order ID JD	Transaction Date JD	Transaction Reference Num JD	Facility Code JD	Analysis Type Code JD
				1/31/2018			ACT
				11/30/2017			ACT
				12/31/2017			ACT
				3/31/2018			ACT
				11/30/2017			ACT
				10/23/2017			ACT
				10/31/2017			ACT
				10/31/2017			ACT
				11/30/2017			ACT
				10/26/2017			ACT
				11/3/2017			ACT
				11/3/2017			ACT
				11/30/2017			ACT
				10/26/2017			ACT
				10/23/2017			ACT
				11/13/2017			ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
				10/12/2017			ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT
					00000000		ACT

				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
				00000000	ACT
	3320331	5328402	3/31/2018	00000000	ACT
	3320331	5328402	4/30/2018	00000000	ACT
	3235485	5328402	1/31/2018	00000000	ACT
	3323534	5328402	3/31/2018	00000000	ACT
	3323534	5328402	4/30/2018	00000000	ACT
000012040042002 C0			3/5/2018		ACT
000012060034029 C0			3/5/2018		ACT
	3148435	5098353	11/30/2017	00000000	ACT
			1/20/2018	00000000	ACT
			1/24/2018	00000000	ACT
			1/17/2018	00000000	ACT
			1/10/2018	00000000	ACT
			1/17/2018	00000000	ACT
			1/10/2018	00000000	ACT

				9/11/2017	00000000	ACT
				9/11/2017	00000000	ACT
				9/11/2017	00000000	ACT
				9/11/2017	00000000	ACT
ADAMS AIR & HYDRA	60136132	10465145		9/20/2017		ACT
				9/19/2017	00000000	ACT
				9/19/2017	00000000	ACT
				9/19/2017	00000000	ACT
				9/19/2017	00000000	ACT
ADVANCE AUTO PAF				12/5/2017		ACT
AIRGAS SOUTH				3/19/2018		ACT
AIRGAS SOUTH				3/6/2018		ACT
AMAZON MKTPLACE				10/11/2017		ACT
AMAZON MKTPLACE				10/26/2017		ACT
AMAZON MKTPLACE				10/5/2017		ACT
AMAZON MKTPLACE				12/19/2017		ACT
AMAZON.COM AMZN				4/23/2018		ACT
AMAZON.COM AMZN				9/28/2017		ACT
AMAZON.COM AMZN				12/19/2017		ACT
AMAZON.COM WWW				12/5/2017		ACT
				9/8/2017	00000000	ACT
				9/8/2017	00000000	ACT
			5653424	3/31/2018	00000000	ACT
ANIXTER INC	SE40763844001	10469542		10/4/2017		ACT
ANIXTER INC	SE41090643002	10527870		4/5/2018		ACT
ANIXTER INC	SE41090643002	10527870		4/5/2018		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT
ANIXTER INC	SE40771548001	10465808		9/22/2017		ACT
ANIXTER INC	SE40850182001	10480793		11/1/2017		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT
ANIXTER INC	SE41090643001	10519927		3/13/2018		ACT

ANIXTER INC	SE41090643001	10519927	3/13/2018	ACT
ANIXTER INC	SE41090643001	10519927	3/13/2018	ACT
ANIXTER INC	SE41090643001	10519927	3/13/2018	ACT
ANIXTER INC	SE41090643001	10519927	3/13/2018	ACT
ANIXTER INC	SE41090643001	10519927	3/13/2018	ACT
			10/17/2017 00000000	ACT
			10/17/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/14/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/14/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT

				9/9/2017	00000000	ACT
				9/9/2017	00000000	ACT
				9/9/2017	00000000	ACT
				9/9/2017	00000000	ACT
				9/9/2017	00000000	ACT
				9/16/2017	00000000	ACT
				9/16/2017	00000000	ACT
				9/16/2017	00000000	ACT
				9/16/2017	00000000	ACT
				9/21/2017	00000000	ACT
				9/21/2017	00000000	ACT
				1/9/2018	00000000	ACT
				1/9/2018	00000000	ACT
				2/25/2018	00000000	ACT
				2/25/2018	00000000	ACT
BHA ALTAIR LLC	13163767	10479817		10/30/2017		ACT
BHA ALTAIR LLC	13163820	10481232		11/2/2017		ACT
		3216322	2163838	1/31/2018	00000000	ACT
				12/2/2017	00000000	ACT
				12/2/2017	00000000	ACT
				1/23/2018	00000000	ACT
				1/24/2018	00000000	ACT
				9/9/2017	00000000	ACT
				9/9/2017	00000000	ACT
				9/21/2017	00000000	ACT
				9/21/2017	00000000	ACT
				9/29/2017	00000000	ACT
				9/29/2017	00000000	ACT
				9/29/2017	00000000	ACT
				9/29/2017	00000000	ACT
				9/11/2017	00000000	ACT
				9/11/2017	00000000	ACT
				9/9/2017	00000000	ACT
				9/9/2017	00000000	ACT
				9/10/2017	00000000	ACT
				9/13/2017	00000000	ACT
				9/11/2017	00000000	ACT
				9/9/2017	00000000	ACT
				9/9/2017	00000000	ACT
				9/10/2017	00000000	ACT

	9/13/2017 00000000	ACT
	9/11/2017 00000000	ACT
	9/13/2017 00000000	ACT
	9/13/2017 00000000	ACT
	9/13/2017 00000000	ACT
	9/13/2017 00000000	ACT
	10/27/2017 00000000	ACT
	10/27/2017 00000000	ACT
	11/29/2017 00000000	ACT
	11/29/2017 00000000	ACT
	12/2/2017 00000000	ACT
	12/2/2017 00000000	ACT
	11/29/2017 00000000	ACT
	11/29/2017 00000000	ACT
	10/24/2017 00000000	ACT
	10/24/2017 00000000	ACT
	1/13/2018 00000000	ACT
	1/13/2018 00000000	ACT
	1/13/2018 00000000	ACT
	1/13/2018 00000000	ACT
	9/11/2017 00000000	ACT
	9/11/2017 00000000	ACT
	11/22/2017 00000000	ACT
	11/22/2017 00000000	ACT
	9/21/2017 00000000	ACT
	9/21/2017 00000000	ACT
	9/21/2017 00000000	ACT
	9/21/2017 00000000	ACT
	9/9/2017 00000000	ACT
	9/9/2017 00000000	ACT
	9/9/2017 00000000	ACT
	9/9/2017 00000000	ACT
	9/9/2017 00000000	ACT
	9/9/2017 00000000	ACT
	9/9/2017 00000000	ACT
	9/9/2017 00000000	ACT
CARROLL'S BUILDIN(	10/5/2017	ACT
CARROLL'S BUILDIN(	10/5/2017	ACT
	10/31/2017 00000000	ACT
	10/31/2017 00000000	ACT

				11/21/2017 00000000	ACT
				11/21/2017 00000000	ACT
				11/21/2017 00000000	ACT
				11/21/2017 00000000	ACT
				9/16/2017 00000000	ACT
				9/16/2017 00000000	ACT
				11/29/2017 00000000	ACT
				9/15/2017 00000000	ACT
				11/29/2017 00000000	ACT
				9/15/2017 00000000	ACT
CLASSIC CONTROLS	167897	10495583		12/21/2017	ACT
				9/9/2017 00000000	ACT
				9/9/2017 00000000	ACT
				9/10/2017 00000000	ACT
				9/10/2017 00000000	ACT
				9/13/2017 00000000	ACT
				9/13/2017 00000000	ACT
		3274536	5502954	2/28/2018 00000000	ACT
				9/15/2017 00000000	ACT
				9/15/2017 00000000	ACT
				9/15/2017 00000000	ACT
				9/15/2017 00000000	ACT
				10/25/2017 00000000	ACT
				10/25/2017 00000000	ACT
				9/9/2017 00000000	ACT
				9/9/2017 00000000	ACT
				1/25/2018 00000000	ACT
				1/25/2018 00000000	ACT
				11/22/2017 00000000	ACT
				11/22/2017 00000000	ACT
				12/2/2017 00000000	ACT
				12/2/2017 00000000	ACT
				12/2/2017 00000000	ACT
				12/2/2017 00000000	ACT
				12/2/2017 00000000	ACT
				12/2/2017 00000000	ACT
				9/16/2017 00000000	ACT
				9/16/2017 00000000	ACT
				9/16/2017 00000000	ACT
				9/16/2017 00000000	ACT

			9/16/2017 00000000	ACT
			9/16/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
	3052716	5259988	9/30/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/9/2017 00000000	ACT
			12/2/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/15/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/13/2017 00000000	ACT
			12/2/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT
			12/2/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/15/2017 00000000	ACT
			9/9/2017 00000000	ACT
			12/2/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			1/9/2018 00000000	ACT
			1/9/2018 00000000	ACT
			2/25/2018 00000000	ACT
			2/25/2018 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			3/21/2018 00000000	ACT
			3/21/2018 00000000	ACT
			10/27/2017 00000000	ACT
			3/21/2018 00000000	ACT
			3/21/2018 00000000	ACT
			10/27/2017 00000000	ACT
			9/14/2017 00000000	ACT
			9/14/2017 00000000	ACT
	3103520	5302777	10/31/2017 00000000	ACT
	3050873	5270588	9/30/2017 00000000	ACT
CRYSTAL RIVER ACE			10/13/2017	ACT

CRYSTAL RIVER ACE			10/13/2017	ACT
CVS/PHARMACY #05			9/28/2017	ACT
			9/14/2017 00000000	ACT
			9/14/2017 00000000	ACT
	3234466	5262683	1/31/2018 00000000	ACT
			9/21/2017 00000000	ACT
			9/21/2017 00000000	ACT
			11/17/2017 00000000	ACT
			11/17/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
ELECTRIC SUPPLY II S2944867003	10473140		10/12/2017	ACT
ELECTRIC SUPPLY II S2944867001	10467147		9/27/2017	ACT
			9/13/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/14/2017 00000000	ACT
			9/14/2017 00000000	ACT
			10/25/2017 00000000	ACT
			4/6/2018 00000000	ACT
			1/25/2018 00000000	ACT
			1/25/2018 00000000	ACT
			9/15/2017 00000000	ACT
			9/15/2017 00000000	ACT
F B WRIGHT CO			2/20/2018	ACT
			1/23/2018 00000000	ACT
			1/24/2018 00000000	ACT
		5276100	10/31/2017 00000000	ACT
		5276100	9/30/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/13/2017 00000000	ACT
			4/10/2018 00000000	ACT
			4/10/2018 00000000	ACT
			9/29/2017 00000000	ACT
			9/29/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/13/2017 00000000	ACT
			10/25/2017 00000000	ACT

			3/30/2018 00000000	ACT
			3/30/2018 00000000	ACT
			3/30/2018 00000000	ACT
			9/9/2017 00000000	ACT
			10/27/2017 00000000	ACT
			9/9/2017 00000000	ACT
			10/27/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/13/2017 00000000	ACT
			3/3/2018 00000000	ACT
			9/9/2017 00000000	ACT
			9/13/2017 00000000	ACT
			3/3/2018 00000000	ACT
			11/16/2017 00000000	ACT
			11/16/2017 00000000	ACT
			11/16/2017 00000000	ACT
			11/16/2017 00000000	ACT
FOOD RANCH			9/27/2017	ACT
	3234466	5262683	1/31/2018 00000000	ACT
			11/29/2017 00000000	ACT
			11/29/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/16/2017 00000000	ACT
			9/16/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/19/2017 00000000	ACT
			9/19/2017 00000000	ACT
			9/21/2017 00000000	ACT
			9/21/2017 00000000	ACT
			9/23/2017 00000000	ACT
			9/23/2017 00000000	ACT
			9/23/2017 00000000	ACT
			9/23/2017 00000000	ACT
			12/22/2017 00000000	ACT
			12/22/2017 00000000	ACT
			9/22/2017 00000000	ACT
			9/22/2017 00000000	ACT
			10/7/2017 00000000	ACT

			2/13/2018	00000000	ACT
			3/27/2018	00000000	ACT
			3/27/2018	00000000	ACT
			3/27/2018	00000000	ACT
			9/14/2017	00000000	ACT
			3/27/2018	00000000	ACT
			3/27/2018	00000000	ACT
			9/9/2017	00000000	ACT
			9/14/2017	00000000	ACT
			10/27/2017	00000000	ACT
			3/27/2018	00000000	ACT
			9/9/2017	00000000	ACT
			1/12/2018	00000000	ACT
			1/12/2018	00000000	ACT
GREEN TWEED AND			2/27/2018		ACT
GUNTERS FARM & FI			10/16/2017		ACT
HARBOR FREIGHT T(			11/2/2017		ACT
HARBOR FREIGHT T(			12/5/2017		ACT
			9/23/2017	00000000	ACT
			9/23/2017	00000000	ACT
			9/11/2017	00000000	ACT
			9/11/2017	00000000	ACT
		5293419	11/30/2017	00000000	ACT
		5293419	10/31/2017	00000000	ACT
		5621549	2/28/2018	00000000	ACT
			3/6/2018	00000000	ACT
			3/6/2018	00000000	ACT
			3/6/2018	00000000	ACT
			3/6/2018	00000000	ACT
			9/21/2017	00000000	ACT
			9/21/2017	00000000	ACT
			11/16/2017	00000000	ACT
			11/16/2017	00000000	ACT
			1/23/2018	00000000	ACT
			1/24/2018	00000000	ACT
INDUSTRIAL SERVIC	18359	10985772	1/29/2018		ACT
INDUSTRIAL SERVIC	18359	10985772	1/29/2018		ACT
			1/17/2018	00000000	ACT
			1/17/2018	00000000	ACT
			1/17/2018	00000000	ACT

			1/17/2018 00000000	ACT
			1/20/2018 00000000	ACT
			1/17/2018 00000000	ACT
			1/20/2018 00000000	ACT
			1/17/2018 00000000	ACT
			1/17/2018 00000000	ACT
			1/24/2018 00000000	ACT
			1/17/2018 00000000	ACT
			1/24/2018 00000000	ACT
			1/17/2018 00000000	ACT
			1/17/2018 00000000	ACT
			1/25/2018 00000000	ACT
			1/25/2018 00000000	ACT
			1/25/2018 00000000	ACT
			1/25/2018 00000000	ACT
			1/25/2018 00000000	ACT
			1/25/2018 00000000	ACT
	3056932	5280289	9/30/2017 00000000	ACT
ISC SALES ONLINE			3/23/2018	ACT
			9/29/2017 00000000	ACT
			9/29/2017 00000000	ACT
			9/14/2017 00000000	ACT
			9/14/2017 00000000	ACT
			11/26/2017 00000000	ACT
			11/26/2017 00000000	ACT
		5279526	9/30/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			1/17/2018 00000000	ACT
			1/17/2018 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/11/2017 00000000	ACT
			1/17/2018 00000000	ACT
			1/17/2018 00000000	ACT
LARRYS SHOE REPA			10/4/2017	ACT
LOWES #00740			10/11/2017	ACT
LOWES #01629			10/11/2017	ACT
LOWES #01853			9/26/2017	ACT

			11/3/2017	00000000	ACT
			11/3/2017	00000000	ACT
			10/24/2017	00000000	ACT
			10/24/2017	00000000	ACT
		5503465	4/30/2018	00000000	ACT
		5503465	3/31/2018	00000000	ACT
		5503465	2/28/2018	00000000	ACT
		5503465	1/31/2018	00000000	ACT
		5503465	12/31/2017	00000000	ACT
			9/9/2017	00000000	ACT
			9/9/2017	00000000	ACT
			3/3/2018	00000000	ACT
			9/9/2017	00000000	ACT
			3/3/2018	00000000	ACT
			9/9/2017	00000000	ACT
MCDONALD'S M5192			3/21/2018		ACT
McMaster-Carr			10/31/2017		ACT
MCMASTER-CARR			3/6/2018		ACT
MCMASTER-CARR SI	59105821	10524736	3/27/2018		ACT
MCMASTER-CARR SI	45508324	10462640	9/12/2017		ACT
METAL SUPERMAR0(			2/27/2018		ACT
			1/13/2018	00000000	ACT
			1/13/2018	00000000	ACT
			12/28/2017	00000000	ACT
			12/28/2017	00000000	ACT
			2/25/2018	00000000	ACT
			2/25/2018	00000000	ACT
			11/15/2017	00000000	ACT
			11/15/2017	00000000	ACT
			3/2/2018	00000000	ACT
			3/2/2018	00000000	ACT
			11/16/2017	00000000	ACT
			11/16/2017	00000000	ACT
			9/14/2017	00000000	ACT
			9/14/2017	00000000	ACT
			9/16/2017	00000000	ACT
			9/16/2017	00000000	ACT
			12/22/2017	00000000	ACT
			12/22/2017	00000000	ACT
NORTH AMERICAN S	220768	10465548	9/21/2017		ACT

NORTHERN TOOL E(		9/26/2017	ACT
		11/21/2017 00000000	ACT
		11/21/2017 00000000	ACT
		1/9/2018 00000000	ACT
		1/9/2018 00000000	ACT
		2/25/2018 00000000	ACT
		2/25/2018 00000000	ACT
		12/6/2017 00000000	ACT
		12/6/2017 00000000	ACT
		1/9/2018 00000000	ACT
		1/9/2018 00000000	ACT
	5336267	10/31/2017 00000000	ACT
		1/9/2018 00000000	ACT
		1/9/2018 00000000	ACT
		2/9/2018 00000000	ACT
		11/29/2017 00000000	ACT
		11/29/2017 00000000	ACT
		11/21/2017 00000000	ACT
		11/21/2017 00000000	ACT
PAYPAL BEINERSAL		10/26/2017	ACT
		1/20/2018 00000000	ACT
		1/24/2018 00000000	ACT
		9/23/2017 00000000	ACT
		9/23/2017 00000000	ACT
		9/29/2017 00000000	ACT
		9/21/2017 00000000	ACT
		9/21/2017 00000000	ACT
		9/29/2017 00000000	ACT
		9/29/2017 00000000	ACT
		9/15/2017 00000000	ACT
		9/15/2017 00000000	ACT
	5619947	4/30/2018 00000000	ACT
	5619947	3/31/2018 00000000	ACT
	5619947	2/28/2018 00000000	ACT
		3/27/2018 00000000	ACT
		3/27/2018 00000000	ACT
PUBLIX #422		9/19/2017	ACT
PUBLIX #797		9/27/2017	ACT
		12/22/2017 00000000	ACT
		12/22/2017 00000000	ACT

			3/16/2018 00000000	ACT
			3/16/2018 00000000	ACT
			3/16/2018 00000000	ACT
			3/16/2018 00000000	ACT
			11/14/2017 00000000	ACT
			11/14/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/19/2017 00000000	ACT
			9/19/2017 00000000	ACT
			10/11/2017 00000000	ACT
			10/11/2017 00000000	ACT
			9/21/2017 00000000	ACT
			9/21/2017 00000000	ACT
PYRAMID FASTENER	299013	10465884	9/22/2017	ACT
PYRAMID FASTENER	299013	10465884	9/22/2017	ACT
PYRAMID FASTENER	299013	10465884	9/22/2017	ACT
PYRAMID FASTENER	299013	10465884	9/22/2017	ACT
			9/9/2017 00000000	ACT
			9/15/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/15/2017 00000000	ACT
			11/29/2017 00000000	ACT
			11/29/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/13/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/11/2017 00000000	ACT
			9/9/2017 00000000	ACT

			9/11/2017 00000000	ACT
RED WING SHOES P			9/28/2017	ACT
		5293326	10/31/2017 00000000	ACT
			9/15/2017 00000000	ACT
	3061816	5268665	10/31/2017 00000000	ACT
	3234466	5262683	1/31/2018 00000000	ACT
	3098769	5273135	10/31/2017 00000000	ACT
			11/29/2017 00000000	ACT
			11/29/2017 00000000	ACT
			1/23/2018 00000000	ACT
			1/24/2018 00000000	ACT
			1/9/2018 00000000	ACT
			1/9/2018 00000000	ACT
			2/25/2018 00000000	ACT
			2/25/2018 00000000	ACT
			1/9/2018 00000000	ACT
			1/9/2018 00000000	ACT
			1/9/2018 00000000	ACT
			1/9/2018 00000000	ACT
			2/25/2018 00000000	ACT
			2/25/2018 00000000	ACT
			9/24/2017 00000000	ACT
			9/24/2017 00000000	ACT
			3/20/2018 00000000	ACT
			3/20/2018 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			1/31/2018 00000000	ACT
			3/3/2018 00000000	ACT
			1/31/2018 00000000	ACT
			3/3/2018 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
			9/9/2017 00000000	ACT
	3052677	5010664	9/30/2017 00000000	ACT
	3043793	5010664	9/30/2017 00000000	ACT
	3043793	5010664	9/30/2017 00000000	ACT

SCIENTIFIC SALES IN	INV00037877	10486628		11/29/2017	ACT
				9/21/2017 00000000	ACT
				9/21/2017 00000000	ACT
				9/21/2017 00000000	ACT
				9/21/2017 00000000	ACT
				9/21/2017 00000000	ACT
				9/21/2017 00000000	ACT
				9/19/2017 00000000	ACT
				9/19/2017 00000000	ACT
				9/21/2017 00000000	ACT
				9/21/2017 00000000	ACT
				9/21/2017 00000000	ACT
				9/21/2017 00000000	ACT
SEAN M GERRITS IN	45194	10485029		11/21/2017	ACT
				9/9/2017 00000000	ACT
				9/9/2017 00000000	ACT
SENTRY EQUIPMENT	159984	10492560		12/14/2017	ACT
		3282681	5554643	2/28/2018 00000000	ACT
				9/9/2017 00000000	ACT
				9/9/2017 00000000	ACT
				1/10/2018 00000000	ACT
				1/10/2018 00000000	ACT
				2/25/2018 00000000	ACT
				2/25/2018 00000000	ACT
				1/10/2018 00000000	ACT
				1/10/2018 00000000	ACT
				2/25/2018 00000000	ACT
				2/25/2018 00000000	ACT
				1/10/2018 00000000	ACT
				1/10/2018 00000000	ACT
				2/25/2018 00000000	ACT
				2/25/2018 00000000	ACT
SHERWIN WILLIAMS				2/20/2018	ACT
				1/20/2018 00000000	ACT
				1/24/2018 00000000	ACT
				3/6/2018 00000000	ACT
				3/6/2018 00000000	ACT
				9/21/2017 00000000	ACT
				9/21/2017 00000000	ACT
				3/3/2018 00000000	ACT

			3/3/2018	00000000	ACT
			2/27/2018	00000000	ACT
			2/27/2018	00000000	ACT
			2/27/2018	00000000	ACT
			2/27/2018	00000000	ACT
SOUTHEASTERN CO	42803	10514155	2/23/2018		ACT
SOUTHEASTERN CO	42302	10499787	1/10/2018		ACT
SOUTHEASTERN CO	42333	10499116	1/8/2018		ACT
	3131741	5313964	12/31/2017	00000000	ACT
	3131741	5313964	11/30/2017	00000000	ACT
	3141729	5313964	12/31/2017	00000000	ACT
	3141729	5313964	11/30/2017	00000000	ACT
SOUTHERN FASTENI	1157222-1	10517968	3/7/2018		ACT
SOUTHERN FASTENI	1157222-1	10517968	3/7/2018		ACT
SOUTHERN FASTENI	1157222-1	10517968	3/7/2018		ACT
			9/29/2017	00000000	ACT
			9/21/2017	00000000	ACT
			9/21/2017	00000000	ACT
			9/21/2017	00000000	ACT
			9/21/2017	00000000	ACT
			9/21/2017	00000000	ACT
			9/21/2017	00000000	ACT
			9/21/2017	00000000	ACT
			9/21/2017	00000000	ACT
			9/21/2017	00000000	ACT
			9/21/2017	00000000	ACT
			9/21/2017	00000000	ACT
			10/31/2017	00000000	ACT
			10/31/2017	00000000	ACT
			10/31/2017	00000000	ACT
			10/31/2017	00000000	ACT
			3/3/2018	00000000	ACT
			3/3/2018	00000000	ACT
			12/6/2017	00000000	ACT
			12/6/2017	00000000	ACT
	3055408	5269797	9/30/2017	00000000	ACT
	3227819	5528604	1/31/2018	00000000	ACT
	3093561	5298272	10/31/2017	00000000	ACT
	3185475	5268500	12/31/2017	00000000	ACT
SUNBELT INDUSTRIA	175407	10475896	10/20/2017		ACT
SUNBELT INDUSTRIA	176513	10483316	11/14/2017		ACT

SUNBELT INDUSTRIA	175408	10475898		10/20/2017	ACT
SUNBELT INDUSTRIA	176514	10483302		11/14/2017	ACT
SUNBELT INDUSTRIA	176905	10483310		11/14/2017	ACT
	3153756	5262535		12/31/2017 00000000	ACT
SUNBELT RENTALS I	72231393-0001	10506873		2/2/2018	ACT
				9/14/2017 00000000	ACT
				9/14/2017 00000000	ACT
				1/30/2018 00000000	ACT
				1/30/2018 00000000	ACT
				1/23/2018 00000000	ACT
				1/24/2018 00000000	ACT
				1/23/2018 00000000	ACT
				1/24/2018 00000000	ACT
				3/3/2018 00000000	ACT
				3/3/2018 00000000	ACT
				1/31/2018 00000000	ACT
				1/31/2018 00000000	ACT
				9/14/2017 00000000	ACT
				9/14/2017 00000000	ACT
				9/14/2017 00000000	ACT
				9/14/2017 00000000	ACT
				3/3/2018 00000000	ACT
				1/31/2018 00000000	ACT
				3/3/2018 00000000	ACT
				1/31/2018 00000000	ACT
TECHNICAL INSTALL	2317	10479422		10/28/2017	ACT
TECHNICAL INSTALL	2317	10479422		10/28/2017	ACT
TECHNICAL INSTALL	2317	10479422		10/28/2017	ACT
TECHNICAL INSTALL	2317	10479422		10/28/2017	ACT
TENCARVA MACHINE	676414	10494649		12/19/2017	ACT
TENCARVA MACHINE	676414	10494649		12/19/2017	ACT
TENCARVA MACHINE	676414	10494649		12/19/2017	ACT
TENCARVA MACHINE	676414	10494649		12/19/2017	ACT
TENCARVA MACHINE	676414	10494649		12/19/2017	ACT
THE HOME DEPOT #(				9/28/2017	ACT
THE HOME DEPOT #(				2/26/2018	ACT
THE HOME DEPOT #(				9/27/2017	ACT
THE HOME DEPOT #(				10/5/2017	ACT
THE HOME DEPOT #(				10/11/2017	ACT
THE HOME DEPOT #(				3/21/2018	ACT

THE HOME DEPOT #(				3/12/2018		ACT
THE HOME DEPOT #(				10/4/2017		ACT
THE HOME DEPOT #(				9/26/2017		ACT
THE HOME DEPOT #(				9/27/2017		ACT
THE HOME DEPOT #(				12/5/2017		ACT
THE WAREHOUSE				10/11/2017		ACT
				2/27/2018	00000000	ACT
				2/27/2018	00000000	ACT
				2/18/2018	00000000	ACT
				2/18/2018	00000000	ACT
				3/3/2018	00000000	ACT
				1/31/2018	00000000	ACT
				3/3/2018	00000000	ACT
				1/31/2018	00000000	ACT
				10/19/2017	00000000	ACT
				10/19/2017	00000000	ACT
			5292547	9/30/2017	00000000	ACT
				3/27/2018	00000000	ACT
				3/27/2018	00000000	ACT
TRAFFIC LOGIX				11/20/2017		ACT
TRANE US INC	3267468	10475226		10/19/2017		ACT
TRANE US INC	3254165	10475217		10/19/2017		ACT
TRANE US INC	3267468	10475226		10/19/2017		ACT
TRANE US INC	3253679	10475223		10/19/2017		ACT
TRANE US INC	3223928	10491763		12/12/2017		ACT
TREK BICYCLEST PE				10/11/2017		ACT
				9/13/2017	00000000	ACT
				9/29/2017	00000000	ACT
				9/29/2017	00000000	ACT
				9/29/2017	00000000	ACT
				9/29/2017	00000000	ACT
				9/27/2017	00000000	ACT
				9/27/2017	00000000	ACT
				9/29/2017	00000000	ACT
				9/29/2017	00000000	ACT
				9/8/2017	00000000	ACT
				9/8/2017	00000000	ACT
WESCO - # 7848				9/18/2017		ACT
WESCO DIST F&M M.	5457042	10522092		3/20/2018		ACT
WESCO DIST F&M M.	5498803	10524793		3/27/2018		ACT

WESCO DIST F&M M.	5457042	10522092	3/20/2018	ACT
WESCO DIST F&M M.	5558140	10529407	4/10/2018	ACT
WESCO DIST F&M M.	5498803	10524793	3/27/2018	ACT
WESCO DISTRIBUTIC	4902642	10483178	11/14/2017	ACT
WESCO DISTRIBUTIC	4945408	10482996	11/13/2017	ACT
WESCO DISTRIBUTIC	5392764	10517396	3/6/2018	ACT
WESCO DISTRIBUTIC	4945408	10482996	11/13/2017	ACT
WESCO DISTRIBUTIC	4945408	10482996	11/13/2017	ACT
WESCO DISTRIBUTIC	4902642	10483178	11/14/2017	ACT
WESCO DISTRIBUTIC	4945415	10482998	11/13/2017	ACT
WESCO DISTRIBUTIC	4822993	10475648	10/20/2017	ACT
WESCO DISTRIBUTIC	4898168	10481639	11/3/2017	ACT
WESCO DISTRIBUTIC	4898168	10481639	11/3/2017	ACT
WESCO DISTRIBUTIC	5386912	10516415	3/1/2018	ACT
WESCO DISTRIBUTIC	4945408	10482996	11/13/2017	ACT
WESCO DISTRIBUTIC	5392764	10517396	3/6/2018	ACT
WESCO DISTRIBUTIC	4889275	10481009	11/2/2017	ACT
WESCO DISTRIBUTIC	5002816	10486563	11/28/2017	ACT
WESCO DISTRIBUTIC	4884310	10480422	11/1/2017	ACT
WESCO DISTRIBUTIC	4884310	10480422	11/1/2017	ACT
WESCO DISTRIBUTIC	4896456	10480947	11/1/2017	ACT
WESCO DISTRIBUTIC	4884310	10480422	11/1/2017	ACT
WESCO DISTRIBUTIC	4889238	10480382	10/31/2017	ACT
WESCO DISTRIBUTIC	4952089	10483416	11/14/2017	ACT
WESCO DISTRIBUTIC	5386912	10516415	3/1/2018	ACT
WESCO DISTRIBUTIC	4902641	10483164	11/14/2017	ACT
WESCO DISTRIBUTIC	5086211	10494303	12/18/2017	ACT
WESCO DISTRIBUTIC	4884310	10480422	11/1/2017	ACT
WESCO DISTRIBUTIC	4861638	10478751	10/27/2017	ACT
WESCO DISTRIBUTIC	4884310	10480422	11/1/2017	ACT
			1/17/2018 00000000	ACT
			1/17/2018 00000000	ACT
WINN DIXIE #2421			9/26/2017	ACT
WINN DIXIE #2446			9/28/2017	ACT
			9/13/2017 00000000	ACT
			9/13/2017 00000000	ACT
WM SUPERCENTER			9/28/2017	ACT
WM SUPERCENTER			11/2/2017	ACT
			9/13/2017 00000000	ACT
			9/13/2017 00000000	ACT

		9/21/2017	00000000	ACT
		9/21/2017	00000000	ACT
		9/22/2017	00000000	ACT
		9/22/2017	00000000	ACT
	5592073	2/28/2018	00000000	ACT
WW GRAINGER		11/20/2017		ACT
XYL DEWATERING		10/31/2017		ACT

Posted Date JD	Statistics Code JD	Resp Center Level 3 Descr LVL	Resp Center Level 4 Descr LVL	Resp Center Level 5 Descr LVL
2/2/2018		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/4/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/3/2018		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/3/2018		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/23/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/16/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/16/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/26/2017		REGULATED GENERATION	Fossil Hydro Operations	Central Services
11/3/2017		REGULATED GENERATION	Fossil Hydro Operations	Central Services
11/3/2017		REGULATED GENERATION	Fossil Hydro Operations	Central Services
12/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/26/2017		REGULATED GENERATION	Fossil Hydro Operations	Central Services
10/23/2017		REGULATED GENERATION	Fossil Hydro Operations	Central Services
11/13/2017		REGULATED GENERATION	Fossil Hydro Operations	Central Services
11/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/1/2018		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/1/2018		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/12/2017		Market-Carolinas Region	Operations Support	Tech Perf & Optimization
11/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/1/2018		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/1/2018		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/1/2018		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017		REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
5/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
5/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/21/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/24/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/20/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/6/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/19/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/26/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/5/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/23/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/28/2017	Market-Carolinas Region	Operations Support	Tech Perf & Optimization
12/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/5/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/8/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/8/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/5/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/5/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/5/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/17/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/17/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/30/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/3/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/23/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/24/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/10/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/10/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/24/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/24/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/5/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/5/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

11/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/10/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/10/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/25/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/25/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/25/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/25/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/21/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/21/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/21/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/21/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

10/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/28/2017	Market-Carolinas Region	Operations Support	Tech Perf & Optimization
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/17/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/17/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/12/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/25/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/25/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/25/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/21/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/23/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/24/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/25/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

3/30/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/30/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/30/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/23/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/23/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/23/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/23/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/7/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

2/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/12/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/12/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/6/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/23/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/23/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/23/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/24/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/29/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/29/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/21/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/21/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/24/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/24/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/25/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/25/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/25/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/25/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/25/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/25/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/23/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/26/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/26/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/5/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/26/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

11/3/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/3/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/24/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/24/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
5/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/21/2018	REGULATED GENERATION	Fossil Hydro Operations	Central Services
10/31/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/12/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/13/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/28/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/28/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/2/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/2/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/16/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

9/26/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/6/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/6/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/26/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/21/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/24/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/23/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/23/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
5/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

3/16/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/16/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/16/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/16/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

9/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/28/2017	Market-Carolinas Region	Operations Support	Tech Perf & Optimization
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/15/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/23/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/24/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/9/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/24/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/24/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/20/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/20/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/31/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/31/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

11/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/9/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/21/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/21/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/24/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/23/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/8/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/8/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/8/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/8/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/6/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/6/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/20/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

10/20/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/30/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/30/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/23/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/24/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/23/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/24/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/31/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/31/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/31/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/31/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/28/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/28/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/28/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/28/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/28/2017	Market-Carolinas Region	Operations Support	Tech Perf & Optimization
2/26/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/5/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/21/2018	REGULATED GENERATION	Fossil Hydro Operations	Central Services

3/12/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/5/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/26/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/6/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/18/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/18/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/3/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
2/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/1/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/20/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/19/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/12/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/11/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/29/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/8/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/8/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/18/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/20/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

3/20/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
4/10/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/27/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/20/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/4/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/4/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/2/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/6/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/3/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/28/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/31/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/2/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/14/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
12/18/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/27/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
1/17/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/26/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/28/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/28/2017	Market-Carolinas Region	Operations Support	Tech Perf & Optimization
11/2/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/13/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/21/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
9/22/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
3/1/2018	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
11/20/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida
10/31/2017	REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida

936,972.80

Resp Center Level 6 Descr LVL	Work Order Num JD	Statistics Amount JD	Monetary Amount JD	Journal Line Descr JD	Material Quantity JD
Anclote Station		0	170,640.82	Storm FERC Reclass	0
Anclote Station		0	148,276.30	Deferred Storm Expenses	0
Anclote Station		0	44,795.05	Deferred Storm Expenses	0
Anclote Station		0	35,078.37	Storm FERC Reclass	0
Crystal River		0	34,915.77	Maint Of Structures-Steam	0
Crystal River		0	13,907.62	SCHM Cwip	0
Anclote Station		0	8,728.00	Deferred Storm Expenses	0
Anclote Station		0	6,716.67	Deferred Storm Expenses	0
Crystal River		0	5,829.74	Maint Of Structures-Steam	0
Fleet Maintenance Service	22354829-1	0	568.00	342373	0
Fleet Maintenance Service	22354829-1	0	568.00	340562	0
Fleet Maintenance Service	22354829-1	0	568.00	342373	0
Crystal River		0	480.24	Maint Of Structures-Steam	0
Fleet Maintenance Service	22354829-1	0	426.00	340562	0
Fleet Maintenance Service	22354829-1	0	284.00	342373	0
Fleet Maintenance Service	22354829-1	0	284.00	340562	0
Crystal River		0	(38.92)	3301650|ACCTGACCRUAL	0
Hines/Tiger Bay		0	(150.00)	12467878|ACCTGACCRUA	0
Hines/Tiger Bay		0	(467.12)	11963901|ACCTGACCRUA	0
Hines/Tiger Bay		0	(467.12)	11963901|ACCTGACCRUA	0
Crystal River		0	(475.00)	3262866|ACCTGACCRUAL	0
Crystal River		0	(475.00)	3262866|ACCTGACCRUAL	0
Crystal River		0	(493.64)	3500621|ACCTGACCRUAL	0
Crystal River		0	(493.64)	3500621|ACCTGACCRUAL	0
Web & Voice Proj & Perfo		0	(686.24)	Deferred Storm Expenses	0
Anclote Station		0	(689.50)	3310112|ACCTGACCRUAL	0
Crystal River		0	(750.00)	12015542|ACCTGACCRUA	0
Crystal River		0	(820.00)	3520577|ACCTGACCRUAL	0
Hines/Tiger Bay		0	(934.42)	11920112|ACCTGACCRUA	0
Hines/Tiger Bay		0	(934.42)	11920112|ACCTGACCRUA	0
Anclote Station		0	(1,201.69)	3500603|ACCTGACCRUAL	0
Crystal River		0	(1,260.00)	12182763|ACCTGACCRUA	0
Crystal River		0	(1,301.36)	3237228|ACCTGACCRUAL	0
Crystal River		0	(1,301.36)	3237228|ACCTGACCRUAL	0
Hines/Tiger Bay		0	(1,394.69)	11635239|ACCTGACCRUA	0
Anclote Station		0	(1,642.61)	3259563|ACCTGACCRUAL	0

Crystal River		0	(1,843.88)	12410158|ACCTGACCRUA	0
Crystal River		0	(2,097.96)	3482990|ACCTGACCRUAL	0
Hines/Tiger Bay		0	(2,568.48)	11635099|ACCTGACCRUA	0
Crystal River		0	(3,267.10)	12350722|ACCTGACCRUA	0
Crystal River		0	(3,431.25)	3243769|ACCTGACCRUAL	0
Hines/Tiger Bay		0	(4,318.88)	11657263|ACCTGACCRUA	0
Hines/Tiger Bay		0	(4,541.36)	11635241|ACCTGACCRUA	0
Anclote Station		0	(5,500.00)	12741699|ACCTGACCRUA	0
Hines/Tiger Bay		0	(5,945.00)	12454481|ACCTGACCRUA	0
Crystal River		0	(6,550.04)	3397166|ACCTGACCRUAL	0
Crystal River		0	(6,691.56)	11620258|ACCTGACCRUA	0
Bartow Station		0	(7,381.50)	11730583|ACCTGACCRUA	0
Crystal River		0	(8,000.00)	11599471|ACCTGACCRUA	0
Crystal River		0	(8,440.04)	3425352|ACCTGACCRUAL	0
Crystal River		0	(8,440.04)	3425352|ACCTGACCRUAL	0
Crystal River		0	(8,440.04)	3425352|ACCTGACCRUAL	0
CT/Peaker		0	(9,500.00)	11743091|ACCTGACCRUA	0
Crystal River		0	(10,000.00)	12693643|ACCTGACCRUA	0
Hines/Tiger Bay		0	(10,600.00)	12467879|ACCTGACCRUA	0
Crystal River		0	(10,656.89)	11608355|ACCTGACCRUA	0
Anclote Station		0	(12,127.50)	12949189|ACCTGACCRUA	0
Anclote Station		0	(14,400.00)	12459640|ACCTGACCRUA	0
Hines/Tiger Bay		0	(14,405.64)	11628418|ACCTGACCRUA	0
Bartow Station		0	(16,695.00)	12024964|ACCTGACCRUA	0
Crystal River		0	(27,752.00)	11765556|ACCTGACCRUA	0
Anclote Station		0	(35,600.00)	12933321|ACCTGACCRUA	0
Anclote Station		0	35,600.00	12933321|ACCTGACCRUA	35600
Anclote Station		0	35,600.00	12933321|ACCTGACCRUA	35600
Anclote Station		0	14,400.00	12459640|ACCTGACCRUA	14400
Anclote Station		0	12,127.50	12949189|ACCTGACCRUA	12128
Anclote Station		0	12,127.50	12949189|ACCTGACCRUA	12128
Bartow Station		0	(9.57)	254860	0
Bartow Station		0	(15.99)	254860	0
Crystal River		0	750.00	12015542|ACCTGACCRUA	750
Crystal River	26834416-1	0	4.26	571217028|MATUSETRANS	1
Crystal River	26834416-1	0	0.29	571217028|USETAXTRANS	0
Crystal River	26834416-1	0	930.60	571194271|MATUSETRANS	20
Crystal River	26834416-1	0	558.36	571151153|MATUSETRANS	12
Crystal River	26834416-1	0	62.82	571194271|USETAXTRANS	0
Crystal River	26834416-1	0	37.69	571151153|USETAXTRANS	0

Crystal River	22225374-3	0	79.28	570490109|MATUSETRANS	1
Crystal River	22225374-3	0	79.28	570490102|MATUSETRANS	1
Crystal River	22225374-3	0	4.76	570490109|USETAXTRANS	0
Crystal River	22225374-3	0	4.76	570490102|USETAXTRANS	0
Crystal River	22231454-6	0	1,208.40	ELEMENT, HY-PRO OIL W/	0
Hines/Tiger Bay	22281396-4	0	42.33	570528123|MATUSETRANS	2
Hines/Tiger Bay	22281396-4	0	2.96	570528123|USETAXTRANS	0
Hines/Tiger Bay	22281396-4	0	9.65	570520991|MATUSETRANS	1
Hines/Tiger Bay	22281396-4	0	0.68	570520991|USETAXTRANS	0
Crystal River		0	30.69	351936	0
CT/Peaker	22383498-3	0	185.28	345162	0
CT/Peaker	22383498-3	0	23.56	345162	0
Bartow Station		0	349.99	254860	0
Crystal River		0	195.34	348595	0
Anclote Station		0	155.88	328003	0
Bartow Station		0	807.28	254860	0
Bartow Station		0	414.08	254860	0
Web & Voice Proj & Perfo		0	109.14	113866	0
Bartow Station		0	9.57	254860	0
Bartow Station		0	15.99	254860	0
Crystal River	22231454-1	0	48.50	570478287|MATUSETRANS	1
Crystal River	22231454-1	0	2.91	570478287|USETAXTRANS	0
Crystal River		0	820.00	3520577|ACCTGACCRUAL	400
Crystal River	22231454-11	0	759.28	CENTER, LOAD; 30 CIRCU	0
Crystal River	22231454-51	0	595.72	ANIXTER 3MR-0603 6/3 W/	0
Crystal River	22231454-51	0	273.48	ANIXTER 2MR-1003WG 10	0
Crystal River	22231454-51	0	248.04	CH DH362NRK,60A/3P,FUS	0
Crystal River	22231454-51	0	217.30	CH DH361NRK, 30A/3P HD	0
Crystal River	22231454-51	0	168.54	1 1/2 IN AL COND 10FT	0
Crystal River	22231454-51	0	140.13	BLINE B441-22-ZN PLTD B	0
Crystal River	22231454-51	0	103.88	1 IN AL CONDUIT	0
Crystal River	22231454-51	0	99.64	CONDUIT,1 IN EF/LT LIQ-T	0
Crystal River	22231454-51	0	77.91	PVR SELECT PVR35716 1 !	0
Crystal River	22231454-12	0	53.42	LUGS, 2/0 ,2 HOLE 3/8" (25	0
Crystal River	22231454-31	0	41.26	RELAY, KUP-14D15-12	0
Crystal River	22231454-51	0	36.41	FRZ TRS60R, 600V RK5 TD	0
Crystal River	22231454-51	0	25.86	CONDUIT 1 1/2 EF/LT LIQ-	0
Crystal River	22231454-51	0	20.92	FRZ TRS30R 30A 600V TD	0
Crystal River	22231454-51	0	19.95	TPZ 495S 1 1/2 MI 90D INS	0
Crystal River	22231454-51	0	14.80	TPZ 475S 1 1/2 MI STRT L/	0

Crystal River	22231454-51	0	13.82	TPZ 493S 1 IN MI 90D L/T C	0
Crystal River	22231454-51	0	13.82	TPZ 493S 1 IN MI 90D INS I	0
Crystal River	22231454-51	0	12.40	FLS SCR0100EG 1IN RIGID	0
Crystal River	22231454-51	0	9.33	FLS SCU015EG 1 1/2 STRU	0
Crystal River	22231454-51	0	5.75	TPZ 473S 1 IN MI STRT L/T	0
Anclote Station	22292660-2	0	56.60	570667478|MATUSETRANS	10
Anclote Station	22292660-2	0	3.96	570667478|USETAXTRANS	0
Crystal River	22231454-1	0	19.68	570479893|MATUSETRANS	12
Crystal River	22231454-1	0	1.18	570479893|USETAXTRANS	0
Crystal River	22231454-1	0	69.00	570478906|MATUSETRANS	12
Crystal River	22231454-1	0	4.14	570478906|USETAXTRANS	0
Crystal River	22207116-3	0	52.84	570481136|MATUSETRANS	72
Crystal River	22225374-3	0	25.92	570490103|MATUSETRANS	36
Crystal River	22231454-1	0	17.33	570507639|MATUSETRANS	24
Crystal River	22225374-3	0	17.28	570503676|MATUSETRANS	24
Crystal River	22207116-3	0	15.32	570480484|MATUSETRANS	30
Crystal River	22231454-1	0	12.25	570479890|MATUSETRANS	24
Crystal River	22225374-3	0	8.64	570490114|MATUSETRANS	12
Crystal River	22231454-1	0	8.55	570479889|MATUSETRANS	12
Crystal River	22225374-3	0	6.27	570486828|MATUSETRANS	12
Crystal River	22225374-3	0	3.94	570477984|MATUSETRANS	16
Crystal River	22207116-3	0	3.17	570481136|USETAXTRANS	0
Crystal River	22225374-3	0	1.56	570490103|USETAXTRANS	0
Crystal River	22225374-3	0	1.48	570477986|MATUSETRANS	6
Crystal River	22231454-1	0	1.04	570507639|USETAXTRANS	0
Crystal River	22225374-3	0	1.04	570503676|USETAXTRANS	0
Crystal River	22207116-3	0	0.92	570480484|USETAXTRANS	0
Crystal River	22231454-1	0	0.74	570479890|USETAXTRANS	0
Crystal River	22225374-3	0	0.52	570490114|USETAXTRANS	0
Crystal River	22231454-1	0	0.51	570479889|USETAXTRANS	0
Crystal River	22225374-3	0	0.38	570486828|USETAXTRANS	0
Crystal River	22225374-3	0	0.24	570477984|USETAXTRANS	0
Crystal River	22225374-3	0	0.09	570477986|USETAXTRANS	0
Crystal River	22207116-3	0	19.04	570500430|MATUSETRANS	12
Crystal River	22207116-5	0	19.04	570486825|MATUSETRANS	12
Crystal River	22207116-3	0	1.14	570500430|USETAXTRANS	0
Crystal River	22207116-5	0	1.14	570486825|USETAXTRANS	0
CT/Peaker	22238531-2	0	26.88	570482806|MATUSETRANS	96
Crystal River	22225374-3	0	13.44	570477985|MATUSETRANS	48
Crystal River	22231454-1	0	6.72	570481593|MATUSETRANS	24

CT/Peaker	22238531-2	0	2.02	570482806|USETAXTRANS	0
Crystal River	22225374-3	0	0.81	570477985|USETAXTRANS	0
Crystal River	22231454-1	0	0.40	570481593|USETAXTRANS	0
Crystal River	22225374-3	0	1.96	570480080|MATUSETRANS	2
Crystal River	22225374-3	0	0.12	570480080|USETAXTRANS	0
Crystal River	22231454-1	0	9.76	570518206|MATUSETRANS	4
Crystal River	22231454-1	0	7.52	570517823|MATUSETRANS	3
Crystal River	22231454-1	0	0.59	570518206|USETAXTRANS	0
Crystal River	22231454-1	0	0.45	570517823|USETAXTRANS	0
Crystal River	22292233-1	0	38.45	570540370|MATUSETRANS	1
Crystal River	22292233-1	0	2.31	570540370|USETAXTRANS	0
Crystal River	22231454-24	0	2,929.35	571144005|MATUSETRANS	4
Crystal River	22231454-24	0	175.76	571144005|USETAXTRANS	0
Crystal River	22231454-24	0	(175.76)	571374971|USETAXTRANS	0
Crystal River	22231454-24	0	(2,929.35)	571374971|MATUSETRANS	-4
CT/Peaker	22383498-4	0	3,595.50	CLARCOR PREFILTER RE	0
CT/Peaker	22383498-4	0	616.50	CLARCOR PREFILTER RE	0
Crystal River		0	3,267.10	12350722|ACCTGACCRUA	3267
Crystal River	22231454-12	0	76.16	570932994|MATUSETRANS	2
Crystal River	22231454-12	0	4.57	570932994|USETAXTRANS	0
Crystal River	26834416-1	0	13.74	571225549|MATUSETRANS	2
Crystal River	26834416-1	0	0.93	571225549|USETAXTRANS	0
Crystal River	22217145-4	0	137.93	570482703|MATUSETRANS	5
Crystal River	22217145-4	0	8.28	570482703|USETAXTRANS	0
Crystal River	22292233-1	0	51.74	570539899|MATUSETRANS	1
Crystal River	22292233-1	0	3.10	570539899|USETAXTRANS	0
Hines/Tiger Bay	22281396-4	0	7.11	570577116|MATUSETRANS	3
Hines/Tiger Bay	22281396-4	0	0.50	570577116|USETAXTRANS	0
Hines/Tiger Bay	22281396-4	0	2.73	570576428|MATUSETRANS	3
Hines/Tiger Bay	22281396-4	0	0.19	570576428|USETAXTRANS	0
Crystal River	22207116-5	0	41.31	570486822|MATUSETRANS	2
Crystal River	22207116-5	0	2.48	570486822|USETAXTRANS	0
Crystal River	22225374-3	0	16.00	570482735|MATUSETRANS	1
Crystal River	22225374-3	0	15.69	570482734|MATUSETRANS	1
Crystal River	22231454-1	0	15.28	570483035|MATUSETRANS	1
Crystal River	22231258-1	0	15.17	570501971|MATUSETRANS	1
Crystal River	22207116-5	0	15.17	570486826|MATUSETRANS	1
Crystal River	22225374-3	0	0.96	570482735|USETAXTRANS	0
Crystal River	22225374-3	0	0.94	570482734|USETAXTRANS	0
Crystal River	22231454-1	0	0.92	570483035|USETAXTRANS	0

Crystal River	22231258-1	0	0.91	570501971|USETAXTRANS	0
Crystal River	22207116-5	0	0.91	570486826|USETAXTRANS	0
Crystal River	22231258-1	0	13.84	570501970|MATUSETRANS	1
Crystal River	22255631-2	0	13.84	570498961|MATUSETRANS	1
Crystal River	22231258-1	0	0.83	570501970|USETAXTRANS	0
Crystal River	22255631-2	0	0.83	570498961|USETAXTRANS	0
CT/Peaker	22354829-1	0	2.08	570718708|MATUSETRANS	1
CT/Peaker	22354829-1	0	0.15	570718708|USETAXTRANS	0
Crystal River	22263041-4	0	8.69	570916018|MATUSETRANS	6
Crystal River	22263041-4	0	0.52	570916018|USETAXTRANS	0
Crystal River	22231454-12	0	51.48	570933019|MATUSETRANS	3
Crystal River	22231454-12	0	3.09	570933019|USETAXTRANS	0
Crystal River	22263041-4	0	5.80	570916023|MATUSETRANS	1
Crystal River	22263041-4	0	0.35	570916023|USETAXTRANS	0
CT/Peaker	22354829	0	2.20	570704294|MATUSETRANS	5
CT/Peaker	22354829	0	0.15	570704294|USETAXTRANS	0
Crystal River	26834416-1	0	1.35	571174807|MATUSETRANS	1
Crystal River	26834416-1	0	0.09	571174807|USETAXTRANS	0
Crystal River	26834416-1	0	1.53	571176126|MATUSETRANS	1
Crystal River	26834416-1	0	0.10	571176126|USETAXTRANS	0
Crystal River	22207116-3	0	5.13	570489839|MATUSETRANS	1
Crystal River	22207116-3	0	0.31	570489839|USETAXTRANS	0
Crystal River	22263041-2	0	33.89	570887645|MATUSETRANS	2
Crystal River	22263041-2	0	2.03	570887645|USETAXTRANS	0
Crystal River	22292233-1	0	16.73	570539830|MATUSETRANS	1
Crystal River	22292233-1	0	1.00	570539830|USETAXTRANS	0
Crystal River	22292233-1	0	27.22	570540360|MATUSETRANS	1
Crystal River	22292233-1	0	1.63	570540360|USETAXTRANS	0
Crystal River	22231454-1	0	127.80	570479899|MATUSETRANS	2
Crystal River	22207116-3	0	127.80	570481599|MATUSETRANS	2
Crystal River	22207116-3	0	127.80	570479065|MATUSETRANS	2
Crystal River	22231454-1	0	63.90	570481596|MATUSETRANS	1
Crystal River	22231454-1	0	7.67	570479899|USETAXTRANS	0
Crystal River	22207116-3	0	7.67	570481599|USETAXTRANS	0
Crystal River	22207116-3	0	7.67	570479065|USETAXTRANS	0
Crystal River	22231454-1	0	3.83	570481596|USETAXTRANS	0
Bartow Station		0	864.22	350396	0
Bartow Station		0	(66.00)	350396	0
Crystal River	22291635-1	0	3,904.00	570743008|MATUSETRANS	4
Crystal River	22291635-1	0	234.24	570743008|USETAXTRANS	0

Crystal River	22263041-2	0	28.90	570883158|MATUSETRANS	1
Crystal River	22263041-2	0	1.73	570883158|USETAXTRANS	0
Crystal River	22263041-2	0	98.24	570884140|MATUSETRANS	1
Crystal River	22263041-2	0	5.89	570884140|USETAXTRANS	0
Crystal River	22225374-2	0	(317.40)	570518518|USETAXTRANS	0
Crystal River	22225374-2	0	(5,290.00)	570518518|MATUSETRANS	-1
Crystal River	22263041-4	0	317.54	570916021|MATUSETRANS	3
Crystal River	22263880-3	0	95.44	570510696|MATUSETRANS	1
Crystal River	22263041-4	0	19.05	570916021|USETAXTRANS	0
Crystal River	22263880-3	0	5.73	570510696|USETAXTRANS	0
Crystal River	22231454-41	0	4,845.58	Yokogawa AXF Series Magr	0
Crystal River	22231454-1	0	268.72	570480756|MATUSETRANS	8
Crystal River	22231454-1	0	16.12	570480756|USETAXTRANS	0
Crystal River	22231454-1	0	33.16	570482082|MATUSETRANS	8
Crystal River	22231454-1	0	1.99	570482082|USETAXTRANS	0
Crystal River	22231454-1	0	34.91	570504103|MATUSETRANS	1
Crystal River	22231454-1	0	2.09	570504103|USETAXTRANS	0
Crystal River		0	10,000.00	12693643|ACCTGACCRUA	10000
Crystal River	22263880-3	0	45.82	570510698|MATUSETRANS	6
Crystal River	22263880-3	0	2.75	570510698|USETAXTRANS	0
Crystal River	22263880-3	0	63.60	570510695|MATUSETRANS	6
Crystal River	22263880-3	0	3.82	570510695|USETAXTRANS	0
CT/Peaker	22354829	0	25.32	570713257|MATUSETRANS	1
CT/Peaker	22354829	0	1.77	570713257|USETAXTRANS	0
Crystal River	22225374-3	0	8.45	570481029|MATUSETRANS	1
Crystal River	22225374-3	0	0.51	570481029|USETAXTRANS	0
Crystal River	26834416-1	0	4.07	571236526|MATUSETRANS	1
Crystal River	26834416-1	0	0.27	571236526|USETAXTRANS	0
Crystal River	22263041-2	0	101.90	570887644|MATUSETRANS	10
Crystal River	22263041-2	0	6.11	570887644|USETAXTRANS	0
Crystal River	22231454-12	0	43.79	570932995|MATUSETRANS	10
Crystal River	22231454-12	0	35.04	570933020|MATUSETRANS	8
Crystal River	22231454-12	0	2.63	570932995|USETAXTRANS	0
Crystal River	22231454-12	0	2.10	570933020|USETAXTRANS	0
Crystal River	22231454-12	0	45.70	570939272|MATUSETRANS	10
Crystal River	22231454-12	0	2.74	570939272|USETAXTRANS	0
Crystal River	22231454-1	0	41.95	570519249|MATUSETRANS	5
Crystal River	22231454-16	0	19.50	570519603|MATUSETRANS	10
Crystal River	22231454-16	0	12.92	570518520|MATUSETRANS	4
Crystal River	22231454-1	0	2.52	570519249|USETAXTRANS	0

Crystal River	22231454-16	0	1.17	570519603|USETAXTRANS	0
Crystal River	22231454-16	0	0.78	570518520|USETAXTRANS	0
Crystal River	22231454-1	0	6.00	570481398|MATUSETRANS	100
Crystal River	22231454-1	0	0.36	570481398|USETAXTRANS	0
Crystal River		0	10,656.89	11608355|ACCTGACCRUA	10657
Hines/Tiger Bay	22239794-1	0	114.06	570498587|MATUSETRANS	2
Crystal River	22207116-3	0	62.58	570482168|MATUSETRANS	2
Crystal River	22231454-12	0	57.15	570932993|MATUSETRANS	1
Crystal River	22231454-1	0	57.10	570483085|MATUSETRANS	1
Crystal River	22225374-1	0	57.10	570509458|MATUSETRANS	1
Crystal River	22207116-3	0	57.10	570481139|MATUSETRANS	1
Hines/Tiger Bay	22239794-1	0	31.29	570498589|MATUSETRANS	1
Crystal River	22231454-12	0	31.29	570932996|MATUSETRANS	1
Crystal River	22231454-1	0	31.29	570483084|MATUSETRANS	1
Crystal River	22207116-3	0	3.75	570482168|USETAXTRANS	0
Crystal River	22231454-12	0	3.43	570932993|USETAXTRANS	0
Crystal River	22231454-1	0	3.43	570483085|USETAXTRANS	0
Crystal River	22225374-1	0	3.43	570509458|USETAXTRANS	0
Crystal River	22207116-3	0	3.43	570481139|USETAXTRANS	0
Crystal River	22231454-12	0	1.88	570932996|USETAXTRANS	0
Crystal River	22231454-1	0	1.88	570483084|USETAXTRANS	0
Crystal River	22207116-3	0	47.58	570481141|MATUSETRANS	1
Crystal River	22207116-3	0	2.85	570481141|USETAXTRANS	0
Crystal River	22231454-24	0	7,140.00	571145444|MATUSETRANS	1
Crystal River	22231454-24	0	428.40	571145444|USETAXTRANS	0
Crystal River	22231454-24	0	(428.40)	571375699|USETAXTRANS	0
Crystal River	22231454-24	0	(7,140.00)	571375699|MATUSETRANS	-1
Crystal River	22217145-4	0	55.54	570481660|MATUSETRANS	10
Crystal River	22217145-4	0	3.33	570481660|USETAXTRANS	0
CT/Peaker	22383498-3	0	166.08	571486551|MATUSETRANS	4
CT/Peaker	22383498-3	0	150.11	571486554|MATUSETRANS	4
CT/Peaker	22354829-1	0	80.28	570719561|MATUSETRANS	2
CT/Peaker	22383498-3	0	10.80	571486551|USETAXTRANS	0
CT/Peaker	22383498-3	0	9.76	571486554|USETAXTRANS	0
CT/Peaker	22354829-1	0	5.62	570719561|USETAXTRANS	0
Crystal River	22231454-1	0	124.38	570507102|MATUSETRANS	3
Crystal River	22231454-1	0	7.46	570507102|USETAXTRANS	0
Crystal River		0	27,752.00	11765556|ACCTGACCRUA	27752
Crystal River		0	8,000.00	11599471|ACCTGACCRUA	8000
Crystal River		0	19.49	340731	0

Crystal River		0	19.48	340731	0
Web & Voice Proj & Perfo		0	42.04	113866	0
Crystal River	22231454-1	0	1,268.92	570505066|MATUSETRANS	4
Crystal River	22231454-1	0	76.14	570505066|USETAXTRANS	0
Hines/Tiger Bay		0	150.00	12467878|ACCTGACCRUA	150
Crystal River	22292233-1	0	19.25	570540283|MATUSETRANS	1
Crystal River	22292233-1	0	1.16	570540283|USETAXTRANS	0
CT/Peaker	22354829-2	0	4,884.34	570857198|MATUSETRANS	1
CT/Peaker	22354829-2	0	341.90	570857198|USETAXTRANS	0
Hines/Tiger Bay	22239794-1	0	57.46	570498560|MATUSETRANS	2
Crystal River	22231454-1	0	57.46	570481595|MATUSETRANS	2
Crystal River	22231454-1	0	3.45	570481595|USETAXTRANS	0
Crystal River	22231454-12	0	3,637.13	KIT,TERMINATION, 5696K	0
Crystal River	22231454-12	0	89.89	0 NS TB TB 54862BE CONN	0
Hines/Tiger Bay	22239794-1	0	1.01	570500355|MATUSETRANS	1
Hines/Tiger Bay	22239794-1	0	0.07	570500355|USETAXTRANS	0
Hines/Tiger Bay	22239794-1	0	1.07	570498591|MATUSETRANS	1
Hines/Tiger Bay	22239794-1	0	0.07	570498591|USETAXTRANS	0
Crystal River	22255631-2	0	511.52	570507058|MATUSETRANS	4
Crystal River	22255631-2	0	30.69	570507058|USETAXTRANS	0
CT/Peaker	22383498-3	0	4,560.00	570709532|MATUSETRANS	228
CT/Peaker	22383498-3	0	(780.00)	571564106|MATUSETRANS	-39
Crystal River	26834416-1	0	13.76	571236525|MATUSETRANS	1
Crystal River	26834416-1	0	0.93	571236525|USETAXTRANS	0
Crystal River	22225374-1	0	18,868.80	570509456|MATUSETRANS	20
Crystal River	22225374-1	0	1,132.13	570509456|USETAXTRANS	0
Crystal River		0	11.50	110887	0
Crystal River	26834416-1	0	25.33	571223826|MATUSETRANS	1
Crystal River	26834416-1	0	1.71	571223826|USETAXTRANS	0
Crystal River		0	1,301.36	3237228|ACCTGACCRUAL	4
Crystal River		0	1,301.36	3237228|ACCTGACCRUAL	4
Hines/Tiger Bay	22239794-1	0	117.72	570500366|MATUSETRANS	2
Hines/Tiger Bay	22239794-1	0	8.24	570500366|USETAXTRANS	0
CT/Peaker	22383498-3	0	6,864.00	571575142|MATUSETRANS	132
CT/Peaker	22383498-3	0	436.84	571575142|USETAXTRANS	0
CT/Peaker	22238531-2	0	312.00	570573893|MATUSETRANS	6
CT/Peaker	22238531-2	0	23.40	570573893|USETAXTRANS	0
Crystal River	22258600-1	0	2,555.02	570500419|MATUSETRANS	26
Crystal River	22258600-1	0	153.30	570500419|USETAXTRANS	0
CT/Peaker	22383498-3	0	20,292.00	570710570|MATUSETRANS	228

CT/Peaker	22383498-3	0	1,602.00	571532124|MATUSETRANS	18
CT/Peaker	22383498-3	0	65.73	571532625|MATUSETRANS	10
CT/Peaker	22383498-3	0	4.27	571532625|USETAXTRANS	0
Crystal River	22207116-3	0	158.90	570480503|MATUSETRANS	5
CT/Peaker	22354829-1	0	63.56	570719570|MATUSETRANS	2
Crystal River	22207116-3	0	9.53	570480503|USETAXTRANS	0
CT/Peaker	22354829-1	0	4.45	570719570|USETAXTRANS	0
Crystal River	22207116-3	0	286.38	570481172|MATUSETRANS	6
Hines/Tiger Bay	22239794-1	0	95.46	570500305|MATUSETRANS	2
Anclote Station	22566137-3	0	47.73	571404582|MATUSETRANS	1
Crystal River	22207116-3	0	17.18	570481172|USETAXTRANS	0
Hines/Tiger Bay	22239794-1	0	6.68	570500305|USETAXTRANS	0
Anclote Station	22566137-3	0	3.34	571404582|USETAXTRANS	0
Crystal River	22231454-23	0	6,308.85	570848876|MATUSETRANS	1
Crystal River	22231454-23	0	6,308.85	570848873|MATUSETRANS	1
Crystal River	22231454-23	0	378.53	570848876|USETAXTRANS	0
Crystal River	22231454-23	0	378.53	570848873|USETAXTRANS	0
Crystal River	22207116-5	0	421.25	104924	0
Hines/Tiger Bay		0	10,600.00	12467879|ACCTGACCRUA	10600
Crystal River	22263041-4	0	32.69	570919283|MATUSETRANS	1
Crystal River	22263041-4	0	1.96	570919283|USETAXTRANS	0
Hines/Tiger Bay	22239794-1	0	36.71	570496483|MATUSETRANS	2
Crystal River	22231454-1	0	6.47	570517097|MATUSETRANS	5
Crystal River	22231454-1	0	0.39	570517097|USETAXTRANS	0
Hines/Tiger Bay	22239794-1	0	535.69	570496885|MATUSETRANS	2
Crystal River	22258600-1	0	17.11	570500418|MATUSETRANS	1
Crystal River	22258600-1	0	1.03	570500418|USETAXTRANS	0
Crystal River	22231454-16	0	9.73	570528148|MATUSETRANS	1
Crystal River	22231454-16	0	0.58	570528148|USETAXTRANS	0
Crystal River	22292233-1	0	131.66	570539833|MATUSETRANS	1
Crystal River	22292233-1	0	7.90	570539833|USETAXTRANS	0
Crystal River	22292233-1	0	14.60	570551851|MATUSETRANS	1
Crystal River	22292233-1	0	0.88	570551851|USETAXTRANS	0
Crystal River	22292233-1	0	10.93	570551850|MATUSETRANS	1
Crystal River	22292233-1	0	0.66	570551850|USETAXTRANS	0
Crystal River	22231454-22	0	8,692.00	571062627|MATUSETRANS	2
Crystal River	22231454-22	0	521.52	571062627|USETAXTRANS	0
Crystal River	22292233-1	0	3,532.71	570542004|MATUSETRANS	1
Crystal River	22292233-1	0	211.96	570542004|USETAXTRANS	0
Crystal River	22292233-1	0	(211.96)	570617089|USETAXTRANS	0

Crystal River	22292233-1	0	(3,532.71)	570617089|MATUSETRANS	-1
CT/Peaker	22383498-3	0	5.59	571513787|MATUSETRANS	4
CT/Peaker	22383498-3	0	4.19	571511830|MATUSETRANS	3
CT/Peaker	22383498-3	0	33.27	571513777|MATUSETRANS	4
Crystal River	22231454-1	0	72.72	570507638|MATUSETRANS	10
CT/Peaker	22383498-3	0	23.81	571513786|MATUSETRANS	3
CT/Peaker	22383498-3	0	19.11	571513784|MATUSETRANS	3
CT/Peaker	22238531-2	0	7.49	570481756|MATUSETRANS	1
Crystal River	22255631-2	0	102.96	570507466|MATUSETRANS	12
CT/Peaker	22354829-1	0	53.04	570717998|MATUSETRANS	12
CT/Peaker	22383498-3	0	102.78	571513789|MATUSETRANS	6
Crystal River	22231454-1	0	85.68	570482493|MATUSETRANS	8
Crystal River	26834416-1	0	17.40	571163719|MATUSETRANS	1
Crystal River	26834416-1	0	1.17	571163719|USETAXTRANS	0
Crystal River		0	6,334.29	112518	0
Crystal River		0	100.00	358717	0
Osprey		0	55.60	464222	0
Crystal River		0	45.93	351936	0
Crystal River	22231258-1	0	578.21	570550337|MATUSETRANS	2
Crystal River	22231258-1	0	34.69	570550337|USETAXTRANS	0
Crystal River	22207116-3	0	29.02	570489840|MATUSETRANS	1
Crystal River	22207116-3	0	1.74	570489840|USETAXTRANS	0
Crystal River		0	475.00	3262866|ACCTGACCRUAL	1
Crystal River		0	475.00	3262866|ACCTGACCRUAL	1
Anclote Station		0	1,201.69	3500603|ACCTGACCRUAL	2
CT/Peaker	22383498-3	0	153.68	571414402|MATUSETRANS	4
CT/Peaker	22383498-3	0	9.99	571414402|USETAXTRANS	0
CT/Peaker	22383498-3	0	52.20	571414393|MATUSETRANS	4
CT/Peaker	22383498-3	0	3.39	571414393|USETAXTRANS	0
Crystal River	22292233-1	0	19.41	570538944|MATUSETRANS	1
Crystal River	22292233-1	0	1.16	570538944|USETAXTRANS	0
CT/Peaker	22354829	0	72.32	570843934|MATUSETRANS	1
CT/Peaker	22354829	0	5.06	570843934|USETAXTRANS	0
Anclote Station	27023096-1	0	141.22	571224765|MATUSETRANS	2
Anclote Station	27023096-1	0	9.89	571224765|USETAXTRANS	0
Crystal River	26834416-1	0	8,006.25	SHAFT SLEEVE. ISC P/N X	0
Crystal River	26834416-1	0	3,981.78	SHAFT SLEEVE. ISC P/N X	0
Crystal River	26834416-1	0	9.60	571195604|MATUSETRANS	1
Crystal River	26834416-1	0	0.65	571195604|USETAXTRANS	0
Crystal River	26834416-1	0	19.18	571193532|MATUSETRANS	1

Crystal River	26834416-1	0	1.29	571193532|USETAXTRANS	0
Crystal River	26834416-1	0	51.12	571217022|MATUSETRANS	4
Crystal River	26834416-1	0	31.72	571195608|MATUSETRANS	2
Crystal River	26834416-1	0	15.86	571217023|MATUSETRANS	1
Crystal River	26834416-1	0	15.86	571193533|MATUSETRANS	1
Crystal River	26834416-1	0	12.78	571194500|MATUSETRANS	1
Crystal River	26834416-1	0	3.45	571217022|USETAXTRANS	0
Crystal River	26834416-1	0	2.14	571195608|USETAXTRANS	0
Crystal River	26834416-1	0	1.07	571217023|USETAXTRANS	0
Crystal River	26834416-1	0	1.07	571193533|USETAXTRANS	0
Crystal River	26834416-1	0	0.86	571194500|USETAXTRANS	0
Crystal River	26834416-1	0	18.68	571237494|MATUSETRANS	1
Crystal River	26834416-1	0	1.26	571237494|USETAXTRANS	0
Crystal River	26834416-1	0	14.65	571236524|MATUSETRANS	1
Crystal River	26834416-1	0	11.17	571236523|MATUSETRANS	1
Crystal River	26834416-1	0	0.99	571236524|USETAXTRANS	0
Crystal River	26834416-1	0	0.75	571236523|USETAXTRANS	0
Hines/Tiger Bay		0	14,405.64	11628418|ACCTGACCRUA	14406
Bartow Station		0	615.00	254860	0
Hines/Tiger Bay	22281396-4	0	120.96	570576427|MATUSETRANS	2
Hines/Tiger Bay	22281396-4	0	8.47	570576427|USETAXTRANS	0
Crystal River	22231454-1	0	120.84	570505065|MATUSETRANS	4
Crystal River	22231454-1	0	7.25	570505065|USETAXTRANS	0
Crystal River	22263041-1	0	304.76	570896749|MATUSETRANS	3
Crystal River	22263041-1	0	18.29	570896749|USETAXTRANS	0
Crystal River		0	3,431.25	3243769|ACCTGACCRUAL	3
CT/Peaker	22238531-2	0	10.13	570481755|MATUSETRANS	6
CT/Peaker	22238531-2	0	0.76	570481755|USETAXTRANS	0
Crystal River	22296402-1	0	10,177.92	571195961|MATUSETRANS	3
Crystal River	22296402-1	0	610.68	571195961|USETAXTRANS	0
Crystal River	22207116-3	0	82.75	570480481|MATUSETRANS	4
Crystal River	22207116-3	0	4.97	570480481|USETAXTRANS	0
Crystal River	22207116-5	0	23.92	570486823|MATUSETRANS	4
Crystal River	22207116-5	0	1.44	570486823|USETAXTRANS	0
Crystal River	22296402-1	0	23,748.48	571195962|MATUSETRANS	7
Crystal River	22296402-1	0	1,424.91	571195962|USETAXTRANS	0
Hines/Tiger Bay		0	208.16	352423	0
Bartow Station		0	9.03	254860	0
Bartow Station		0	213.89	254860	0
Crystal River		0	338.14	345490	0

CT/Peaker	22354829-1	0	11.40	570758035|MATUSETRANS	1
CT/Peaker	22354829-1	0	0.80	570758035|USETAXTRANS	0
CT/Peaker	22354829	0	64.10	570703843|MATUSETRANS	1
CT/Peaker	22354829	0	4.49	570703843|USETAXTRANS	0
Crystal River		0	8,440.04	3425352|ACCTGACCRUAL	320
Crystal River		0	8,440.04	3425352|ACCTGACCRUAL	320
Crystal River		0	8,440.04	3425352|ACCTGACCRUAL	320
Crystal River		0	8,440.04	3425352|ACCTGACCRUAL	320
Crystal River		0	6,550.04	3397166|ACCTGACCRUAL	312
Crystal River	22207116-3	0	162.34	570482104|MATUSETRANS	2
Crystal River	22207116-3	0	81.17	570479063|MATUSETRANS	1
Anclote Station	22566137-3	0	80.72	571406347|MATUSETRANS	1
Crystal River	22207116-3	0	9.74	570482104|USETAXTRANS	0
Anclote Station	22566137-3	0	5.65	571406347|USETAXTRANS	0
Crystal River	22207116-3	0	4.87	570479063|USETAXTRANS	0
Fleet Maintenance Service	22383498-4	0	20.27	352037	0
Bartow Station		0	739.65	341590	0
CT/Peaker	22383498-3	0	362.38	345162	0
Crystal River	22231454-54	0	611.40	VALVE, 4" GATE, RISING S	0
Crystal River	22231454-3	0	71.21	CONNECTOR, 20A; MCMA	0
Crystal River		0	630.38	112518	0
Crystal River	26834416-1	0	26.39	571174803|MATUSETRANS	1
Crystal River	26834416-1	0	1.78	571174803|USETAXTRANS	0
Crystal River	22231454-22	0	600.00	571078609|MATUSETRANS	1
Crystal River	22231454-22	0	36.00	571078609|USETAXTRANS	0
Crystal River	22231454-21	0	23,991.34	571376644|MATUSETRANS	2
Crystal River	22231454-21	0	1,439.48	571376644|USETAXTRANS	0
Crystal River	22231454-38	0	(657.61)	570833504|USETAXTRANS	0
Crystal River	22231454-38	0	(10,960.20)	570833504|MATUSETRANS	-1
Crystal River	22231454-22	0	1,116.00	571401353|MATUSETRANS	2
Crystal River	22231454-22	0	66.96	571401353|USETAXTRANS	0
Crystal River	22231454-19	0	5,445.45	570848863|MATUSETRANS	1
Crystal River	22231454-19	0	326.73	570848863|USETAXTRANS	0
Crystal River	22255631-2	0	40,000.00	570503909|MATUSETRANS	1
Crystal River	22255631-2	0	2,400.00	570503909|USETAXTRANS	0
Crystal River	22255631-5	0	(2,400.00)	570517190|USETAXTRANS	0
Crystal River	22255631-5	0	(40,000.00)	570517190|MATUSETRANS	-1
Crystal River	22231454-14	0	1,561.45	571062618|MATUSETRANS	2
Crystal River	22231454-14	0	93.69	571062618|USETAXTRANS	0
Crystal River	22231454-7	0	424.00	RELAY,GE HGA; PN# 12HG	0

Crystal River		0	1,069.99	345490	0
Crystal River	22263041-2	0	13.14	570882783|MATUSETRANS	9
Crystal River	22263041-2	0	0.79	570882783|USETAXTRANS	0
Crystal River	22231454-24	0	996.00	571144907|MATUSETRANS	2
Crystal River	22231454-24	0	59.76	571144907|USETAXTRANS	0
Crystal River	22231454-24	0	(59.76)	571374972|USETAXTRANS	0
Crystal River	22231454-24	0	(996.00)	571374972|MATUSETRANS	-2
Crystal River	22231454-42	0	50.00	570953017|MATUSETRANS	100
Crystal River	22231454-42	0	3.00	570953017|USETAXTRANS	0
Crystal River	22231454-24	0	24.18	571145446|MATUSETRANS	3
Crystal River	22231454-24	0	1.45	571145446|USETAXTRANS	0
Anclote Station		0	689.50	3310112|ACCTGACCRUAL	46
Crystal River	22231454-24	0	140.97	571145448|MATUSETRANS	5
Crystal River	22231454-24	0	8.46	571145448|USETAXTRANS	0
Crystal River	22231454-24	0	(8.46)	571301464|USETAXTRANS	0
Crystal River	22263041-4	0	18.18	570919285|MATUSETRANS	3
Crystal River	22263041-4	0	1.09	570919285|USETAXTRANS	0
Crystal River	22263041-2	0	20.72	570883161|MATUSETRANS	2
Crystal River	22263041-2	0	1.24	570883161|USETAXTRANS	0
Crystal River		0	2,050.00	348595	0
Crystal River	26834416-1	0	9.06	571217017|MATUSETRANS	1
Crystal River	26834416-1	0	0.61	571217017|USETAXTRANS	0
Crystal River	22292233-1	0	88.20	570545925|MATUSETRANS	20
Crystal River	22292233-1	0	5.29	570545925|USETAXTRANS	0
Hines/Tiger Bay	22281396-4	0	43.52	570577114|MATUSETRANS	4
Crystal River	22292233-1	0	100.03	570540281|MATUSETRANS	1
Crystal River	22292233-1	0	6.00	570540281|USETAXTRANS	0
Crystal River	22231454-1	0	792.00	570577060|MATUSETRANS	4
Crystal River	22231454-1	0	47.52	570577060|USETAXTRANS	0
Crystal River	22225374-1	0	7,604.26	570507658|MATUSETRANS	30
Crystal River	22225374-1	0	456.26	570507658|USETAXTRANS	0
Crystal River		0	493.64	3500621|ACCTGACCRUAL	53
Crystal River		0	493.64	3500621|ACCTGACCRUAL	53
Crystal River		0	493.64	3500621|ACCTGACCRUAL	53
CT/Peaker	22383498-3	0	74.00	571511827|MATUSETRANS	100
CT/Peaker	22383498-3	0	4.81	571511827|USETAXTRANS	0
CT/Peaker		0	138.45	343874	0
Crystal River	22207116-5	0	89.91	104924	0
Crystal River	22231454-14	0	2,715.50	571062617|MATUSETRANS	2
Crystal River	22231454-14	0	162.93	571062617|USETAXTRANS	0

Crystal River	22231454-29	0	9,400.00	571465253|MATUSETRANS	1
Crystal River	22231454-29	0	9,400.00	571465009|MATUSETRANS	1
Crystal River	22231454-29	0	564.00	571465253|USETAXTRANS	0
Crystal River	22231454-29	0	564.00	571465009|USETAXTRANS	0
Crystal River	22231454-13	0	3,459.65	570823219|MATUSETRANS	5
Crystal River	22231454-13	0	207.58	570823219|USETAXTRANS	0
Hines/Tiger Bay	22239794-1	0	751.84	570498581|MATUSETRANS	1
Crystal River	22231454-16	0	25,395.00	570524878|MATUSETRANS	1
Crystal River	22231454-16	0	1,523.70	570524878|USETAXTRANS	0
Crystal River	22231454-16	0	(1,523.70)	570637254|USETAXTRANS	0
Crystal River	22231454-16	0	(25,395.00)	570637254|MATUSETRANS	-1
Crystal River	22292233-1	0	11,921.00	570539903|MATUSETRANS	1
Crystal River	22292233-1	0	715.26	570539903|USETAXTRANS	0
Hines/Tiger Bay	22281396-4	0	20.33	3/8-16 X 1-1/2" 316SS HEX	0
Hines/Tiger Bay	22281396-4	0	6.42	3/8" 316SS FLAT WASHER	0
Hines/Tiger Bay	22281396-4	0	6.42	3/8-16 316SS HEX NUT	0
Hines/Tiger Bay	22281396-4	0	4.28	3/8" 316SS LOCK WASHER	0
Crystal River	22231454-1	0	106.50	570481397|MATUSETRANS	50
Crystal River	22263880-3	0	106.50	570510724|MATUSETRANS	50
Crystal River	22231454-1	0	6.39	570481397|USETAXTRANS	0
Crystal River	22263880-3	0	6.39	570510724|USETAXTRANS	0
Crystal River	22263041-4	0	48.50	570916034|MATUSETRANS	25
Crystal River	22263041-4	0	2.91	570916034|USETAXTRANS	0
Hines/Tiger Bay	22239794-1	0	54.77	570500317|MATUSETRANS	2
Hines/Tiger Bay	22239794-1	0	3.83	570500317|USETAXTRANS	0
Crystal River	22225374-3	0	40.38	570490107|MATUSETRANS	3
Crystal River	22207116-3	0	13.38	570489838|MATUSETRANS	1
Crystal River	22231454-1	0	13.32	570481831|MATUSETRANS	1
Crystal River	22225374-3	0	2.42	570490107|USETAXTRANS	0
Crystal River	22231454-1	0	0.80	570481831|USETAXTRANS	0
Crystal River	22207116-3	0	0.80	570489838|USETAXTRANS	0
Crystal River	22225374-3	0	134.18	570490108|MATUSETRANS	10
Hines/Tiger Bay	22239794-1	0	40.76	570496348|MATUSETRANS	3
Crystal River	22225374-3	0	8.05	570490108|USETAXTRANS	0
Hines/Tiger Bay	22239794-1	0	2.85	570496348|USETAXTRANS	0
Crystal River	22207116-5	0	28.60	570486824|MATUSETRANS	4
Crystal River	22225374-3	0	14.30	570482718|MATUSETRANS	2
Crystal River	22225374-3	0	7.15	570490115|MATUSETRANS	1
Crystal River	22207116-5	0	1.72	570486824|USETAXTRANS	0
Crystal River	22225374-3	0	0.86	570482718|USETAXTRANS	0

Crystal River	22225374-3	0	0.43	570490115|USETAXTRANS	0
Web & Voice Proj & Perfo		0	168.91	113866	0
Crystal River		0	38.92	3301650|ACCTGACCRUAL	2
Crystal River	22263880-2	0	215.00	570511995|MATUSETRANS	1
Hines/Tiger Bay		0	4,318.88	11657263|ACCTGACCRUA	4319
Hines/Tiger Bay		0	5,945.00	12454481|ACCTGACCRUA	5945
CT/Peaker		0	9,500.00	11743091|ACCTGACCRUA	9500
Crystal River	22263041-4	0	50.53	570916038|MATUSETRANS	1
Crystal River	22263041-4	0	3.03	570916038|USETAXTRANS	0
Crystal River	26834416-1	0	18.97	571223821|MATUSETRANS	1
Crystal River	26834416-1	0	1.28	571223821|USETAXTRANS	0
Crystal River	22231454-24	0	1,550.26	571145445|MATUSETRANS	2
Crystal River	22231454-24	0	93.02	571145445|USETAXTRANS	0
Crystal River	22231454-24	0	(93.02)	571375701|USETAXTRANS	0
Crystal River	22231454-24	0	(1,550.26)	571375701|MATUSETRANS	-2
Crystal River	22231454-24	0	695.39	571145447|MATUSETRANS	1
Crystal River	22231454-24	0	41.72	571145447|USETAXTRANS	0
Crystal River	22231454-24	0	718.46	571145443|MATUSETRANS	1
Crystal River	22231454-24	0	43.11	571145443|USETAXTRANS	0
Crystal River	22231454-24	0	(43.11)	571374973|USETAXTRANS	0
Crystal River	22231454-24	0	(718.46)	571374973|MATUSETRANS	-1
Crystal River	22292233-1	0	27.14	570549963|MATUSETRANS	10
Crystal River	22292233-1	0	1.63	570549963|USETAXTRANS	0
CT/Peaker	22383498-3	0	89.03	571479772|MATUSETRANS	10
CT/Peaker	22383498-3	0	5.79	571479772|USETAXTRANS	0
Crystal River	22207116-3	0	41.82	570479058|MATUSETRANS	1
Crystal River	22207116-3	0	2.51	570479058|USETAXTRANS	0
Crystal River	22225374-3	0	309.35	570482192|MATUSETRANS	1
Crystal River	22225374-3	0	18.56	570482192|USETAXTRANS	0
Crystal River	22225374-3	0	96.00	570480485|MATUSETRANS	1
Anclote Station	26963201-2	0	96.00	571262387|MATUSETRANS	1
Anclote Station	22566137-3	0	96.00	571404571|MATUSETRANS	1
Anclote Station	26963201-2	0	6.72	571262387|USETAXTRANS	0
Anclote Station	22566137-3	0	6.72	571404571|USETAXTRANS	0
Crystal River	22225374-3	0	5.76	570480485|USETAXTRANS	0
Crystal River	22207116-3	0	235.00	570480043|MATUSETRANS	500
Crystal River	22207116-3	0	14.10	570480043|USETAXTRANS	0
Hines/Tiger Bay		0	2,568.48	11635099|ACCTGACCRUA	2568
Hines/Tiger Bay		0	4,541.36	11635241|ACCTGACCRUA	4541
Hines/Tiger Bay		0	1,394.69	11635239|ACCTGACCRUA	1395

Crystal River	22231454-20	0	10,345.46	ANALYZER, D.O.; PN# K11(	0
Crystal River	22292233-1	0	13.07	570540284|MATUSETRANS	1
Crystal River	22292233-1	0	0.78	570540284|USETAXTRANS	0
Crystal River	22292233-1	0	81.76	570538996|MATUSETRANS	4
Crystal River	22292233-1	0	20.44	570540359|MATUSETRANS	1
Crystal River	22292233-1	0	4.91	570538996|USETAXTRANS	0
Crystal River	22292233-1	0	1.23	570540359|USETAXTRANS	0
Crystal River	22231454-16	0	202.36	570528147|MATUSETRANS	12
Crystal River	22231454-16	0	12.14	570528147|USETAXTRANS	0
Crystal River	22292233-1	0	61.72	570540365|MATUSETRANS	1
Crystal River	22292233-1	0	3.70	570540365|USETAXTRANS	0
Crystal River	22292233-1	0	46.23	570540369|MATUSETRANS	1
Crystal River	22292233-1	0	2.77	570540369|USETAXTRANS	0
Crystal River	22207116-3	0	1,379.44	FILL FOR SAND BAGS	0
Crystal River	22225374-3	0	25.06	570480082|MATUSETRANS	1
Crystal River	22225374-3	0	1.50	570480082|USETAXTRANS	0
Crystal River	22231454-30	0	36,813.80	TEMPERATURE CONTROL	0
Anclote Station		0	5,500.00	12741699|ACCTGACCRUA	5500
Crystal River	22225374-3	0	26.73	570481152|MATUSETRANS	3
Crystal River	22225374-3	0	1.60	570481152|USETAXTRANS	0
Crystal River	22231454-24	0	29,925.00	571149640|MATUSETRANS	1
Crystal River	22231454-24	0	1,795.50	571149640|USETAXTRANS	0
Crystal River	22231454-24	0	(1,795.50)	571375698|USETAXTRANS	0
Crystal River	22231454-24	0	(29,925.00)	571375698|MATUSETRANS	-1
Crystal River	22231454-24	0	17,010.00	571149641|MATUSETRANS	1
Crystal River	22231454-24	0	1,020.60	571149641|USETAXTRANS	0
Crystal River	22231454-24	0	(1,020.60)	571376574|USETAXTRANS	0
Crystal River	22231454-24	0	(17,010.00)	571376574|MATUSETRANS	-1
Crystal River	22231454-24	0	13,755.00	571146634|MATUSETRANS	1
Crystal River	22231454-24	0	825.30	571146634|USETAXTRANS	0
Crystal River	22231454-24	0	(825.30)	571376573|USETAXTRANS	0
Crystal River	22231454-24	0	(13,755.00)	571376573|MATUSETRANS	-1
Crystal River	26834416-1	0	566.61	110887	0
Crystal River	26834416-1	0	16.48	571217013|MATUSETRANS	1
Crystal River	26834416-1	0	1.11	571217013|USETAXTRANS	0
Anclote Station	22566137-3	0	25.70	571408096|MATUSETRANS	10
Anclote Station	22566137-3	0	1.80	571408096|USETAXTRANS	0
Crystal River	22292233-1	0	19.50	570540291|MATUSETRANS	1
Crystal River	22292233-1	0	1.17	570540291|USETAXTRANS	0
Anclote Station	22566137-3	0	45.61	571404576|MATUSETRANS	1

Anclote Station	22566137-3	0	3.19	571404576|USETAXTRANS	0
Crystal River	22231454-36	0	105.93	571377492|MATUSETRANS	27
Crystal River	22231454-36	0	65.55	571381332|MATUSETRANS	27
Crystal River	22231454-36	0	6.36	571377492|USETAXTRANS	0
Crystal River	22231454-36	0	3.93	571381332|USETAXTRANS	0
Hines/Tiger Bay		0	185.00	EQUIPMENT	0
Hines/Tiger Bay		0	37.50	EQUIPMENT CHARGE	0
Hines/Tiger Bay		0	28.13	EQUIPMENT CHARGE	0
Hines/Tiger Bay		0	934.42	11920112|ACCTGACCRUA	934
Hines/Tiger Bay		0	934.42	11920112|ACCTGACCRUA	934
Hines/Tiger Bay		0	467.12	11963901|ACCTGACCRUA	467
Hines/Tiger Bay		0	467.12	11963901|ACCTGACCRUA	467
Crystal River	22231454-46	0	1,799.63	BOLT, 1-3/4" - 5 X 8" GR5, (	0
Crystal River	22231454-46	0	337.72	NUT, 1-3/4"-5 X 8", GR5 , C	0
Crystal River	22231454-46	0	86.50	WSHER, FLAT, 1-3/4" , CS	0
Hines/Tiger Bay	22281396-4	0	6.34	570577113|MATUSETRANS	1
Crystal River	22292233-1	0	25.54	570540285|MATUSETRANS	2
Crystal River	22292233-1	0	12.77	570540282|MATUSETRANS	1
Crystal River	22292233-1	0	1.53	570540285|USETAXTRANS	0
Crystal River	22292233-1	0	0.77	570540282|USETAXTRANS	0
Crystal River	22292233-1	0	6.40	570540278|MATUSETRANS	8
Crystal River	22292233-1	0	0.38	570540278|USETAXTRANS	0
Crystal River	22292233-1	0	3.12	570540279|MATUSETRANS	1
Crystal River	22292233-1	0	0.19	570540279|USETAXTRANS	0
Crystal River	22292233-1	0	12.19	570540288|MATUSETRANS	1
Crystal River	22292233-1	0	0.73	570540288|USETAXTRANS	0
Crystal River	22291635-1	0	6,940.00	570743007|MATUSETRANS	4
Crystal River	22291635-1	0	416.40	570743007|USETAXTRANS	0
Crystal River	22291635-1	0	6,784.00	570746263|MATUSETRANS	4
Crystal River	22291635-1	0	407.04	570746263|USETAXTRANS	0
Anclote Station	22566137-3	0	23.33	571406341|MATUSETRANS	1
Anclote Station	22566137-3	0	1.63	571406341|USETAXTRANS	0
Crystal River	22231454-42	0	60.00	570954936|MATUSETRANS	50
Crystal River	22231454-42	0	3.60	570954936|USETAXTRANS	0
Crystal River		0	6,691.56	11620258|ACCTGACCRUA	6692
Crystal River		0	1,843.88	12410158|ACCTGACCRUA	1844
Bartow Station		0	7,381.50	11730583|ACCTGACCRUA	7382
Crystal River		0	1,260.00	12182763|ACCTGACCRUA	1260
Osprey	22293670-1	0	2,467.13	HRSG 1 Storm Damage Rep	0
Osprey	22293670-1	0	2,333.33	HRSG 1 Storm Damage Rep	0

Osprey	22293670-2	0	1,420.55	HRSG 2 Storm Damage Rep	0
Osprey	22293670-2	0	379.80	HRSG 2 Storm Damage Rep	0
Osprey	22293670-2	0	136.76	HRSG 2 Storm Damage Rep	0
Bartow Station		0	16,695.00	12024964|ACCTGACCRUA	16695
Hines/Tiger Bay		0	10,600.00	FREIGHT	0
Hines/Tiger Bay	22239794-1	0	1.61	570505129|MATUSETRANS	1
Hines/Tiger Bay	22239794-1	0	0.11	570505129|USETAXTRANS	0
Crystal River	26834416-1	0	120.37	571253124|MATUSETRANS	1
Crystal River	26834416-1	0	8.12	571253124|USETAXTRANS	0
Crystal River	26834416-1	0	21.33	571224558|MATUSETRANS	1
Crystal River	26834416-1	0	1.44	571224558|USETAXTRANS	0
Crystal River	26834416-1	0	8.63	571225559|MATUSETRANS	1
Crystal River	26834416-1	0	0.58	571225559|USETAXTRANS	0
Anclote Station	22566137-3	0	17.40	571404572|MATUSETRANS	2
Anclote Station	22566137-3	0	1.22	571404572|USETAXTRANS	0
Crystal River	26834416-1	0	6.57	571262418|MATUSETRANS	1
Crystal River	26834416-1	0	0.44	571262418|USETAXTRANS	0
Crystal River	22225374-1	0	44.34	570504771|MATUSETRANS	12
Crystal River	22225374-1	0	2.66	570504771|USETAXTRANS	0
Crystal River	22225374-1	0	126.89	570506484|MATUSETRANS	12
Crystal River	22225374-1	0	7.61	570506484|USETAXTRANS	0
Anclote Station	22566137-3	0	48.20	571404569|MATUSETRANS	4
Anclote Station	26963201-2	0	12.05	571261690|MATUSETRANS	1
Anclote Station	22566137-3	0	3.37	571404569|USETAXTRANS	0
Anclote Station	26963201-2	0	0.84	571261690|USETAXTRANS	0
Anclote Station	20376741-37	0	1,513.65	TIS, INC, CAMERA, AXIS P	0
Anclote Station	20376741-37	0	106.62	TIS, INC, POLE MOUNT, AX	0
Anclote Station	20376741-37	0	80.00	TIS, INC, SHIPPING	0
Anclote Station	20376741-37	0	48.96	TIS, INC, PENTENT MOUN	0
Crystal River	22231454-40	0	127.20	FLAPPER, ITEM # 32	0
Crystal River	22231454-40	0	11.66	PIN, VALVE,SS; ITEM # 33	0
Crystal River	22231454-40	0	5.83	GASKET, SUCTION ITEM #	0
Crystal River	22231454-40	0	5.30	O-RING, COVER PLATE T3	0
Crystal River	22231454-40	0	4.24	ORING,COVER; ITEM # 20	0
Web & Voice Proj & Perfo		0	161.51	113866	0
Anclote Station		0	191.53	351936	0
Anclote Station		0	103.62	449491	0
Anclote Station		0	33.11	328003	0
Bartow Station		0	328.78	254860	0
Fleet Maintenance Service	22383498-4	0	129.29	352037	0

CT/Peaker	22383498-3	0	69.91	345162	0
Crystal River		0	369.91	340556	0
Crystal River		0	342.16	345490	0
Crystal River	22207116-5	0	179.76	104924	0
Crystal River		0	100.47	351936	0
Bartow Station		0	256.80	254860	0
Crystal River	22231454-36	0	92.42	571377901|MATUSETRANS	1
Crystal River	22231454-36	0	5.55	571377901|USETAXTRANS	0
Crystal River	22231454-48	0	18.00	571343543|MATUSETRANS	200
Crystal River	22231454-48	0	1.08	571343543|USETAXTRANS	0
Anclote Station	22566137-3	0	12.00	571404574|MATUSETRANS	200
Anclote Station	26963201-2	0	6.00	571263498|MATUSETRANS	100
Anclote Station	22566137-3	0	0.84	571404574|USETAXTRANS	0
Anclote Station	26963201-2	0	0.42	571263498|USETAXTRANS	0
Hines/Tiger Bay	22239794-9	0	94.68	570680184|MATUSETRANS	12
Hines/Tiger Bay	22239794-9	0	6.63	570680184|USETAXTRANS	0
Anclote Station		0	1,642.61	3259563|ACCTGACCRUAL	3
CT/Peaker	22383498-3	0	30.51	571513774|MATUSETRANS	3
CT/Peaker	22383498-3	0	1.98	571513774|USETAXTRANS	0
Hines/Tiger Bay		0	325.00	342724	0
Crystal River	22231454-36	0	7,703.29	TTA, ODYSSEY SPLIT SYS	0
Crystal River	22231454-33	0	6,535.96	TSC, PRECEDENT DX COC	0
Crystal River	22231454-36	0	3,603.64	TWE, ODYSSEY CONVERT	0
Crystal River	22231454-32	0	2,755.72	UNIT EBC,SMALL FOUNDA	0
Crystal River	22231454-33	0	503.50	HEATER ELECTRIC, 460-4	0
Bartow Station		0	13.38	254860	0
Hines/Tiger Bay	22239794-1	0	69.70	570501865|MATUSETRANS	50
Hines/Tiger Bay	22281396-4	0	118.75	570577119|MATUSETRANS	125
Hines/Tiger Bay	22281396-4	0	8.31	570577119|USETAXTRANS	0
Hines/Tiger Bay	22281396-4	0	2.04	570577117|MATUSETRANS	3
Hines/Tiger Bay	22281396-4	0	0.14	570577117|USETAXTRANS	0
Crystal River	22231454-17	0	375.00	570566826|MATUSETRANS	150
Crystal River	22231454-17	0	22.50	570566826|USETAXTRANS	0
Hines/Tiger Bay	22281396-4	0	1.86	570577118|MATUSETRANS	3
Hines/Tiger Bay	22281396-4	0	0.13	570577118|USETAXTRANS	0
Crystal River	22231454-1	0	294.00	570479378|MATUSETRANS	70
Crystal River	22231454-1	0	17.64	570479378|USETAXTRANS	0
CT/Peaker	22238531-2	0	334.26	339879	0
CT/Peaker	22383498-4	0	267.32	GRP 1212USD 3/8" DRIVE	0
CT/Peaker	22383498-4	0	83.60	JWH 309LT30 ER309L 1/16	0

CT/Peaker	22383498-4	0	78.17	GRP 1213SD 3/8" DRIVE SI	0
CT/Peaker	22383498-4	0	35.04	JWH E70S230 ER70S-2 1/1	0
CT/Peaker	22383498-4	0	26.94	JWH 60135010 E6013 3/32	0
Anclote Station	22292660-1	0	8,906.08	Hoffman A30H2408SSLP 3(	0
Anclote Station	22292660-1	0	7,214.80	OZ Gedney 30-300 3 Inch R	0
Anclote Station	22292660-1	0	5,564.28	Hoffman A30H2408SSLP 3(	0
Anclote Station	22292660-1	0	2,061.08	OZ Gedney 31-300 3 Inch R	0
Anclote Station	22292660-1	0	1,557.92	OZ Gedney 31-250 2-1/2 Inc	0
Anclote Station	22292660-1	0	1,380.39	Hoffman A30P24SS6 30 x 2	0
Crystal River	22263041-2	0	1,372.70	500 MCM DLO CABLE - HO	0
Anclote Station	22292864-1	0	1,255.20	Hoffman, UU1008030W NEI	0
Anclote Station	22292660-1	0	1,240.34	10 Allied 863302 2-1/2 Inch	0
Anclote Station	22292660-1	0	1,142.23	10 Allied 863303 3 Inch Rigi	0
Anclote Station	22292660-1	0	1,113.26	Hoffman A30H2408SSLP 3(	0
Anclote Station	22292660-1	0	1,095.42	OZ Gedney 30-250 2-1/2 Inc	0
Anclote Station	22292660-1	0	862.74	Hoffman A30P24SS6 30 x 2	0
Crystal River	22263041-2	0	732.29	CU/AL TWO-HOLE LUG, 6-	0
Crystal River	22263041-2	0	443.21	CONNECTOR, SEALTIGHT	0
Anclote Station	22292660-1	0	410.37	3 Inch Aluminum Coupling 3	0
Anclote Station	22292660-1	0	356.95	Myers STA-8 3 Inch Aluminu	0
Anclote Station	22292660-1	0	284.02	Myers STA-7 2-1/2 Inch Alur	0
Anclote Station	22292660-1	0	248.24	OZ Gedney 31-150 1-1/2 Inc	0
Anclote Station	22292660-1	0	225.98	10 SAPA 1-1/2 Inch Rigid Al	0
Anclote Station	22292660-1	0	201.38	2-1/2 Inch Aluminum Couplir	0
Anclote Station	22292660-1	0	172.55	Hoffman A30P24SS6 30 x 2	0
Anclote Station	22292660-1	0	163.84	OZ Gedney 30-150 1-1/2 Inc	0
Anclote Station	22292660-1	0	163.18	10 Allied 863303 3 Inch Rigi	0
Anclote Station	22292660-1	0	110.08	Myers STA-5 1-1/2 Inch Alur	0
Hines/Tiger Bay	22255997-1	0	66.91	HINGE KIT, HOFFMAN BOX	0
Anclote Station	22292660-1	0	47.76	1-1/2 Inch Aluminum Couplir	0
Crystal River	26834416-1	0	21.03	571194499|MATUSETRANS	1
Crystal River	26834416-1	0	1.42	571194499|USETAXTRANS	0
Crystal River		0	1,587.08	345490	0
Bartow Station		0	110.13	337364	0
Crystal River	22225374-3	0	22.37	570503675|MATUSETRANS	1
Crystal River	22225374-3	0	1.34	570503675|USETAXTRANS	0
Web & Voice Proj & Perfo		0	204.64	113866	0
Osprey		0	132.49	464222	0
Crystal River	22231454-1	0	156.47	570503087|MATUSETRANS	1
Crystal River	22231454-1	0	9.39	570503087|USETAXTRANS	0

Crystal River	22231258-1	0	84.21	570537113|MATUSETRANS	1
Crystal River	22231258-1	0	5.05	570537113|USETAXTRANS	0
Crystal River	22231258-1	0	145.53	570543226|MATUSETRANS	1
Crystal River	22231258-1	0	8.73	570543226|USETAXTRANS	0
Crystal River		0	2,097.96	3482990|ACCTGACCRUAL	210
Hines/Tiger Bay		0	613.44	342724	0
Bartow Station		0	1,797.22	341590	0

Vendor / Matl Desc / JE Desc
Anclote Storm FERC Reclass
Anclote Storm FERC Reclass
Anclote Storm FERC Reclass
Anclote Storm FERC Reclass
CORRECTIONS FOR STORM IRMA CHA
JOURNAL TO RECLASS FROM O&M TO
Anclote Storm FERC Account Rec
Anclote Storm FERC Account Rec
CORRECTIONS FOR STORM IRMA CHA
Expense Accrual Journal
Expense Accrual Journal
Expense Accrual Journal
CORRECTIONS FOR STORM IRMA CHA
Expense Accrual Journal
Expense Accrual Journal
Expense Accrual Journal
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Move storm costs to correct FE
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo

Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
Accounting Entries from Maximo
#2 ELEVATOR BUILDING REPAIR --
#2 ELEVATOR BUILDING REPAIR --
#2 ELEVATOR BUILDING REPAIR --
#2 ELEVATOR BUILDING REPAIR --
#2 ELEVATOR BUILDING REPAIR --
000012040042002 C0 1210
000012060034029 C0 1210
22225374-1
ABRASIVE,DISC, FLAP, 4-1/2" OD
ABRASIVE,DISC, FLAP, 4-1/2" OD
ABRASIVE,PARTICLE, BLASTING, G
ABRASIVE,PARTICLE, BLASTING, G
ABRASIVE,PARTICLE, BLASTING, G
ABRASIVE,PARTICLE, BLASTING, G

ABSORBENT, OIL/CHEMICAL/WATER,
ABSORBENT, OIL/CHEMICAL/WATER,
ABSORBENT, OIL/CHEMICAL/WATER,
ABSORBENT, OIL/CHEMICAL/WATER,
ADAMS AIR & HYDRAULICS INC
ADHESIVE, HIGH STRENGTH, SPRAY
ADHESIVE, HIGH STRENGTH, SPRAY
ADHESIVE, WEATHERSTRIP, 5 OZ T
ADHESIVE, WEATHERSTRIP, 5 OZ T
ADVANCE AUTO PARTS #92
AIRGAS SOUTH
AIRGAS SOUTH
AMAZON MKTPLACE PMTS
AMAZON MKTPLACE PMTS
AMAZON MKTPLACE PMTS
AMAZON MKTPLACE PMTS W
AMAZON.COM AMZN.COM/BI
AMAZON.COM AMZN.COM/BI
AMAZON.COM AMZN.COM/BI
AMAZON.COM WWW.AMAZON.
ANGLE,STRUCTURAL, 2-1/2" WD, 2
ANGLE,STRUCTURAL, 2-1/2" WD, 2
ANIXTER 3MR-0603 6/3 W/GRD 600
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC

ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
ANIXTER INC
BAR,FLAT, 1-1/2" WD, 12' LG, 1
BAR,FLAT, 1-1/2" WD, 12' LG, 1
BAR,ROUND, 3/8" DIA, 12' LG, 0
BAR,ROUND, 3/8" DIA, 12' LG, 0
BAR,ROUND, 7/8" DIA, 12' LG, 2
BAR,ROUND, 7/8" DIA, 12' LG, 2
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL, ALKALINE, 1.
BATTERY,DRY CELL,6VDC,SPRING T
BATTERY,DRY CELL,6VDC,SPRING T
BATTERY,DRY CELL,6VDC,SPRING T
BATTERY,DRY CELL,6VDC,SPRING T
BATTERY,DRY CELL,ALKALINE,1.5V
BATTERY,DRY CELL,ALKALINE,1.5V
BATTERY,DRY CELL,ALKALINE,1.5V

BATTERY,DRY CELL,ALKALINE,1.5V
BATTERY,DRY CELL,ALKALINE,1.5V
BATTERY,DRY CELL,ALKALINE,1.5V
BATTERY,DRY CELL,ALKALINE,9VDC
BATTERY,DRY CELL,ALKALINE,9VDC
BATTERY,DRY CELL,LITHIUM,3VDC
BATTERY,DRY CELL,LITHIUM,3VDC
BATTERY,DRY CELL,LITHIUM,3VDC
BATTERY,DRY CELL,LITHIUM,3VDC
BEARING,BALL, CONRAD, SGL ROW,
BEARING,BALL, CONRAD, SGL ROW,
BEARING,SLEEVE, JOURNAL, NICKE
BEARING,SLEEVE, JOURNAL, NICKE
BEARING,SLEEVE, JOURNAL, NICKE
BEARING,SLEEVE, JOURNAL, NICKE
BHA ALTAIR LLC
BHA ALTAIR LLC
BHI SUPPLEMENTAL LABOR ADDENDU
BIT, STEP, BIT, UNIBIT, 1/4" T
BIT, STEP, BIT, UNIBIT, 1/4" T
BIT,TOOL,CUTTING,3/16" X 3/16"
BIT,TOOL,CUTTING,3/16" X 3/16"
BLANKET, FLAME RETARDANT, 62"
BLANKET, FLAME RETARDANT, 62"
BODY,VALVE, F/ IRON HORSE HIGH
BODY,VALVE, F/ IRON HORSE HIGH
BOLT,MACHINE, 3/4" DIA, 10 THD
BOLT,MACHINE, 3/4" DIA, 10 THD
BOLT,PLOW, 3/4" DIA, 10 TPI, 2
BOLT,PLOW, 3/4" DIA, 10 TPI, 2
BOOTS, SLIP ON, 10" HT, X-LARG
BOOTS, SLIP ON, 10" HT, X-LARG
BOOTS, SNUG LEG ANKLE FITTING
BOOTS, SNUG LEG ANKLE FITTING
BOOTS, SNUG LEG ANKLE FITTING
BOOTS, SNUG LEG ANKLE FITTING
BOOTS, SNUG LEG ANKLE FITTING
BOOTS, SNUG LEG ANKLE FITTING
BOOTS, SNUG LEG ANKLE FITTING
BOOTS, SNUG LEG ANKLE FITTING

BOOTS, SNUG LEG ANKLE FITTING
BOOTS, SNUG LEG ANKLE FITTING
BOOTS, SNUG LEG, SIZE 9, ANKLE
BOOTS, SNUG LEG, SIZE 9, ANKLE
BOOTS, SNUG LEG, SIZE 9, ANKLE
BOOTS, SNUG LEG, SIZE 9, ANKLE
BOTTLE, 1 GAL, PLASTIC, JUG
BOTTLE, 1 GAL, PLASTIC, JUG
BOTTLE, SPRAYER, 32 OZ, PLASTI
BOTTLE, SPRAYER, 32 OZ, PLASTI
BOX,ELECTRICAL, JUNCTION/PULL,
BOX,ELECTRICAL, JUNCTION/PULL,
BRUSH, DECK SCRUB, PLASTIC BRI
BRUSH, DECK SCRUB, PLASTIC BRI
BRUSH,PAINT, CHIP, 2" BRISTLE,
BRUSH,PAINT, CHIP, 2" BRISTLE,
BRUSH,WIRE,SCRATCH,1/2" WD BRI
BRUSH,WIRE,SCRATCH,1/2" WD BRI
BRUSH,WIRE,TOOTHBRUSH STYLE SC
BRUSH,WIRE,TOOTHBRUSH STYLE SC
BUCKET, RND, 5 GAL, PLASTIC, W
BUCKET, RND, 5 GAL, PLASTIC, W
BUSHING,CONDUIT,BONDING & GROU
BUSHING,CONDUIT,BONDING & GROU
BUSHING,PUMP, FRONT HEAD, F/ I
BUSHING,PUMP, FRONT HEAD, F/ I
BUSHING,PUMP,BACK HEAD
BUSHING,PUMP,BACK HEAD
CAN,CARBOY/JERRICAN,5 GAL,PE,C
CAN,CARBOY/JERRICAN,5 GAL,PE,C
CAN,CARBOY/JERRICAN,5 GAL,PE,C
CAN,CARBOY/JERRICAN,5 GAL,PE,C
CAN,CARBOY/JERRICAN,5 GAL,PE,C
CAN,CARBOY/JERRICAN,5 GAL,PE,C
CAN,CARBOY/JERRICAN,5 GAL,PE,C
CAN,CARBOY/JERRICAN,5 GAL,PE,C
CARROLL'S BUILDING MAT
CARROLL'S BUILDING MAT
CHAIN,DRIVE, 10' LG, CORROSION
CHAIN,DRIVE, 10' LG, CORROSION

CHANNEL,FRAMING, 1-5/8" X 13/1
CHANNEL,FRAMING, 1-5/8" X 13/1
CHANNEL,STRUCTURAL, 6" X 1/4",
CHANNEL,STRUCTURAL, 6" X 1/4",
CHASSIS,ELECTRONIC,DCM-H CONTR
CHASSIS,ELECTRONIC,DCM-H CONTR
CHEMICAL, 2-PROPANOL//ISO-PROP
CHEMICAL, 2-PROPANOL//ISO-PROP
CHEMICAL, 2-PROPANOL//ISO-PROP
CHEMICAL, 2-PROPANOL//ISO-PROP
CLASSIC CONTROLS INC
CLEANER, CONTACT, 14 OZ CONTAI
CLEANER, CONTACT, 14 OZ CONTAI
CLEANER, DETERGENT, LIQUID, 85
CLEANER, DETERGENT, LIQUID, 85
CLEANER, LAUNDRY DETERGENT, PO
CLEANER, LAUNDRY DETERGENT, PO
COMM DIVE MAINT;FLANGE BOLT RE
COMPOUND,CAULKING, RTV SILICON
COMPOUND,CAULKING, RTV SILICON
COMPOUND,SEALING, HIGH TEMP RT
COMPOUND,SEALING, HIGH TEMP RT
COMPOUND,SEALING, LIGHT WEIGHT
COMPOUND,SEALING, LIGHT WEIGHT
COMPOUND,SEALING, RTV SEALANT,
COMPOUND,SEALING, RTV SEALANT,
COMPOUND,SEALING, RTV SILICONE
COMPOUND,SEALING, RTV SILICONE
CONDUIT, FLEXIBLE SEALTIGHT, 4
CONDUIT, FLEXIBLE SEALTIGHT, 4
CONNECTOR,CABLE/CONDUIT, CORD
CONNECTOR,CABLE/CONDUIT, CORD
CONNECTOR,CABLE/CONDUIT, CORD
CONNECTOR,CABLE/CONDUIT, CORD
CONNECTOR,CABLE/CONDUIT,CORD &
CONNECTOR,CABLE/CONDUIT,CORD &
CONNECTOR,ELECTRICAL, TERMINAL
CONNECTOR,ELECTRICAL, TERMINAL
CONNECTOR,ELECTRICAL, TERMINAL
CONNECTOR,ELECTRICAL, TERMINAL

CONNECTOR,ELECTRICAL, TERMINAL
CONNECTOR,ELECTRICAL, TERMINAL
CONNECTOR,ELECTRICAL,WIRE NUT,
CONNECTOR,ELECTRICAL,WIRE NUT,
CONTRACTORS; CRS 2017 STORM SU
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 12 AWG CON
CORD,EXTENSION, (3) 14 AWG CON
CORD,EXTENSION, (3) 14 AWG CON
COUPLING,SHAFT, M, ITEM 25 DWG
COUPLING,SHAFT, M, ITEM 25 DWG
COUPLING,SHAFT, M, ITEM 25 DWG
COUPLING,SHAFT, M, ITEM 25 DWG
COVER, BLANKET, WATERPROOF W/
COVER, BLANKET, WATERPROOF W/
COVERALL, LG SLEEVE, HEAVY WEI
COVERALL, LG SLEEVE, HEAVY WEI
COVERALL, LG SLEEVE, HEAVY WEI
COVERALL, LG SLEEVE, HEAVY WEI
COVERALL, LG SLEEVE, HEAVY WEI
COVERALL, LG SLEEVE, HEAVY WEI
COVERALL, SHORT SLEEVE, HEAVY
COVERALL, SHORT SLEEVE, HEAVY
CRN U5 - 501 ACCPC AUTOMATIC T
CRS CHIMNEY INSPECTION / ASSES
CRYSTAL RIVER ACE HDWE

CRYSTAL RIVER ACE HDWE
CVS/PHARMACY #05139
CYLINDER,LINEAR ACTUATING, PNE
CYLINDER,LINEAR ACTUATING, PNE
DELIVERY
DISC,VALVE, F/ IRON HORSE HIGH
DISC,VALVE, F/ IRON HORSE HIGH
DRIVE, 13.1 HP INPUT, SM-CYCLO
DRIVE, 13.1 HP INPUT, SM-CYCLO
DRUM,STORAGE, DOT REGULATED MA
DRUM,STORAGE, DOT REGULATED MA
DRUM,STORAGE, DOT REGULATED MA
ELECTRIC SUPPLY INC
ELECTRIC SUPPLY INC
ELEMENT,FILTER, AIR, 12 X 20 X
ELEMENT,FILTER, AIR, 12 X 20 X
ELEMENT,FILTER, AIR, 12" X 24"
ELEMENT,FILTER, AIR, 12" X 24"
ELEMENT,FILTER, AIR, 24-3/4" X
ELEMENT,FILTER, AIR, 24-3/4" X
ELEMENT,FILTER, PRE-FILTER, 24
ELEMENT,FILTER, PRE-FILTER, 24
END MILL,1/4" DIA,3-3/8" LG,3/
END MILL,1/4" DIA,3-3/8" LG,3/
EXTENSION, IGNITOR, 3/4", TYPE
EXTENSION, IGNITOR, 3/4", TYPE
F B WRIGHT CO
FACE,HAMMER,#4,RAWHIDE,#4
FACE,HAMMER,#4,RAWHIDE,#4
FILL FOR SAND BAGS
FILL FOR SAND BAGS
FILTER, 27 X 24 X 2, GALV META
FILTER, 27 X 24 X 2, GALV META
FILTER, MOISTURE SEPARATOR, 24
FILTER, MOISTURE SEPARATOR, 24
FILTER, MOISTURE SEPARATOR, 24
FILTER, MOISTURE SEPARATOR, 24
FILTER,30" LG
FILTER,30" LG
FILTER,AIR, AIR SYSTEM, 24" WD

FILTER,AIR, AIR SYSTEM, 24" WD
FILTER,AIR, PLEATED EXTENDED S
FILTER,AIR, PLEATED EXTENDED S
FLASHLIGHT, HARD HAT, ADJUSTAB
FLASHLIGHT, HARD HAT, ADJUSTAB
FLASHLIGHT, HARD HAT, ADJUSTAB
FLASHLIGHT, HARD HAT, ADJUSTAB
FLASHLIGHT, INTRINSICALLY SAFE
FLASHLIGHT, INTRINSICALLY SAFE
FLASHLIGHT, INTRINSICALLY SAFE
FLASHLIGHT, INTRINSICALLY SAFE
FLASHLIGHT, INTRINSICALLY SAFE
FLASHLIGHT, INTRINSICALLY SAFE
FLOWMETER, MAGNETIC, 0-51.41,
FLOWMETER, MAGNETIC, 0-51.41,
FLOWMETER, MAGNETIC, 0-51.41,
FLOWMETER, MAGNETIC, 0-51.41,
FOOD RANCH
FREIGHT
FUNNEL, 160MM TOP DIA, PP
FUNNEL, 160MM TOP DIA, PP
FUSE, TIME DELAY DUAL ELEMENT,
FUSE,FAST ACTING,1/4A,250,FERR
FUSE,FAST ACTING,1/4A,250,FERR
GAS, O2, CO, LEL PENTANE, H2S,
GASKET, STATOR COOLING WATER T
GASKET, STATOR COOLING WATER T
GASKET,SPIRAL WOUND, 2500 LB,
GASKET,SPIRAL WOUND, 2500 LB,
GATE, VACUUM PUMP, F/ IRON HOR
GATE, VACUUM PUMP, F/ IRON HOR
GAUGE,LEVEL, SIGHT, 1" MPT, 18
GAUGE,LEVEL, SIGHT, 1" MPT, 18
GAUGE,LEVEL, SIGHT, 3/4" MPT,
GAUGE,LEVEL, SIGHT, 3/4" MPT,
GEARBOX, REDUCER, 300.34:1 GEA
GEARBOX, REDUCER, 300.34:1 GEA
GEARMOTOR,ELECTRIC, AC, GEAR R
GEARMOTOR,ELECTRIC, AC, GEAR R
GEARMOTOR,ELECTRIC, AC, GEAR R

GEARMOTOR,ELECTRIC, AC, GEAR R
GLASSES,SAFETY, EYE, CLEAR PLA
GLASSES,SAFETY, EYE, CLEAR PLA
GLASSES,SAFETY, READERS, +1.5
GLASSES,SAFETY, READERS, YELLO
GLASSES,SAFETY, SUN, MIRRORED
GLASSES,SAFETY, SUN, SMOKE LEN
GLOVES, HEAVY DUTY, LARGE, GOA
GLOVES, MECHANICS, X-LARGE, LE
GLOVES, WORK, LARGE, LEATHER,
GLOVES, X-LARGE, HD WASP
GOGGLES, SAFETY, CLEAR, FLEXSE
GREASE,INDUSTRIAL, LUBRICANT M
GREASE,INDUSTRIAL, LUBRICANT M
GREEN TWEED AND CO
GUNTERS FARM & FEED IN
HARBOR FREIGHT TOOLS 4
HARBOR FREIGHT TOOLS 4
HARNESS, FALL PROTECTION FULL
HARNESS, FALL PROTECTION FULL
HAT, HARD, STD, WHITE, V-GARD
HAT, HARD, STD, WHITE, V-GARD
HEATER ELECTRIC, 460-480/60/3,
HEATER ELECTRIC, 460-480/60/3,
Hoffman A30P24SS6 30 x 24 Stai
HOLDER, PUNCH, 6" LG, CAST STL
HOLDER, PUNCH, 6" LG, CAST STL
HOLDER, PUNCH, 8" LG, CS, HOLD
HOLDER, PUNCH, 8" LG, CS, HOLD
HOLDER,SPRING, VALVE, F/ IRON
HOLDER,SPRING, VALVE, F/ IRON
HOSE,FLEXIBLE METAL,1/2",36" L
HOSE,FLEXIBLE METAL,1/2",36" L
INDEX,DRILL BIT, 1/16"-1/2" DR
INDEX,DRILL BIT, 1/16"-1/2" DR
INDUSTRIAL SERVICE CO LTD
INDUSTRIAL SERVICE CO LTD
INSERT, CUTTING TOOL,INDEXABLE
INSERT, CUTTING TOOL,INDEXABLE
INSERT,CUTTING TOOL, DIAMOND 3

INSERT,CUTTING TOOL, DIAMOND 3
INSERT,CUTTING TOOL,DIAMOND 80
INSERT,CUTTING TOOL,DIAMOND 80
INSERT,CUTTING TOOL,DIAMOND 80
INSERT,CUTTING TOOL,DIAMOND 80
INSERT,CUTTING TOOL,DIAMOND 80
INSERT,CUTTING TOOL,DIAMOND 80
INSERT,CUTTING TOOL,DIAMOND 80
INSERT,CUTTING TOOL,DIAMOND 80
INSERT,CUTTING TOOL,DIAMOND 80
INSERT,CUTTING TOOL,DIAMOND 80
INSERT,CUTTING TOOL,GROOVING,0
INSERT,CUTTING TOOL,GROOVING,0
INSERT,CUTTING TOOL,TRIANGULAR
INSERT,CUTTING TOOL,TRIANGULAR
INSERT,CUTTING TOOL,TRIANGULAR
INSERT,CUTTING TOOL,TRIANGULAR
INTERNATIONAL CONDUCTORS TO PR
ISC SALES ONLINE
ISOLATOR, POST, IPB, 36KV, 150
ISOLATOR, POST, IPB, 36KV, 150
KIT, REBUILD, F/ AIR CYL 2.5"
KIT, REBUILD, F/ AIR CYL 2.5"
KIT,TERMINATION, 15KV, (1) 2/0
KIT,TERMINATION, 15KV, (1) 2/0
KIT,TERMINATION, 5696K Cold Sh
LAMP, FLASHLIGHT, SGL CONTACT
LAMP, FLASHLIGHT, SGL CONTACT
LANTERN,ELECTRIC, GREEN LED, 1
LANTERN,ELECTRIC, GREEN LED, 1
LANTERN,ELECTRIC, HANDHELD, 6V
LANTERN,ELECTRIC, HANDHELD, 6V
LANTERN,ELECTRIC, HANDHELD, WA
LANTERN,ELECTRIC, HANDHELD, WA
LANTERN,ELECTRIC, RED LED, 12V
LANTERN,ELECTRIC, RED LED, 12V
LARRYS SHOE REPAIR INC
LOWES #00740
LOWES #01629
LOWES #01853

LUBRICANT, MULTI PURPOSE, AERO
LUBRICANT, MULTI PURPOSE, AERO
LUBRICANT,ANTI-SEIZE,PASTE,1 L
LUBRICANT,ANTI-SEIZE,PASTE,1 L
LUG,POSITECH ESR1-0438; #4 1-H
LUG,POSITECH ESR1-0438; #4 1-H
LUG,POSITECH ESR1-0438; #4 1-H
LUG,POSITECH ESR1-0438; #4 1-H
LUG,POSITECH ESR1-0438; #4 1-H
MATERIAL, CLEAR PLASTIC (VISQU
MATERIAL, CLEAR PLASTIC (VISQU
MATERIAL, CLEAR PLASTIC (VISQU
MATERIAL, CLEAR PLASTIC (VISQU
MATERIAL, CLEAR PLASTIC (VISQU
MATERIAL, CLEAR PLASTIC (VISQU
MCDONALD'S M5192 OF
McMaster-Carr
MCMASTER-CARR
MCMASTER-CARR SUPPLY COMPANY
MCMASTER-CARR SUPPLY COMPANY
METAL SUPERMAR00 OF 00
MIRROR,HINGED,2-5/16" WD X 3-3
MIRROR,HINGED,2-5/16" WD X 3-3
MODULE, CONTROLLER, COMMANDER
MODULE, CONTROLLER, COMMANDER
MOTOR,ELECTRIC, AC, 100 HP, 46
MOTOR,ELECTRIC, AC, 100 HP, 46
MOTOR,ELECTRIC, AC, 100 HP, 46
MOTOR,ELECTRIC, AC, 100 HP, 46
MOTOR,ELECTRIC, AC, 1-2 HP, 48
MOTOR,ELECTRIC, AC, 1-2 HP, 48
MOTOR,ELECTRIC, AC, 125 HP, 46
MOTOR,ELECTRIC, AC, 125 HP, 46
MOTOR,ELECTRIC, AC, 3500 HP, 6
MOTOR,ELECTRIC, AC, 3500 HP, 6
MOTOR,ELECTRIC, AC, 3500 HP, 6
MOTOR,ELECTRIC, AC, 3500 HP, 6
MOTOR,ELECTRIC, AC, 5 HP, 480V
MOTOR,ELECTRIC, AC, 5 HP, 480V
NORTH AMERICAN SWITCHGEAR INC

NORTHERN TOOL EQUIP
NUT,CHANNEL, 3/8" DIA, 16 UNC,
NUT,CHANNEL, 3/8" DIA, 16 UNC,
NUT,COUPLING, SHAFT I-26 M DWG
NUT,COUPLING, SHAFT I-26 M DWG
NUT,COUPLING, SHAFT I-26 M DWG
NUT,COUPLING, SHAFT I-26 M DWG
NUT,HEX, 1/2" DIA, 13 TPI, BRA
NUT,HEX, 1/2" DIA, 13 TPI, BRA
O-RING, CIRCULATING WATER PUMP
O-RING, CIRCULATING WATER PUMP
OZ Gedney 31-150 1-1/2 Inch Ri
PACKING, PUMP, CROSSLOK BRAIDE
PACKING, PUMP, CROSSLOK BRAIDE
PACKING, PUMP, CROSSLOK BRAIDE
PAINT, ALKYD ENAMEL, STD DARK
PAINT, ALKYD ENAMEL, STD DARK
PAINT, COLD GALVANIZING ZINC E
PAINT, COLD GALVANIZING ZINC E
PAYPAL BEINERSALES
PIN,LOCK,3/4" HT SHANK
PIN,LOCK,3/4" HT SHANK
PIPE, 1-1/2" NPS, RANDOM FT MI
PIPE, 1-1/2" NPS, RANDOM FT MI
PLATE, COVER, IPB BUS, CALVERT
PLATE,CUT OFF
PLATE,CUT OFF
PLEXIGLASS, CLEAR ACRYLIC, 1/4
PLEXIGLASS, CLEAR ACRYLIC, 1/4
PLUG,SPARK,
PLUG,SPARK,
PN#52936; 1/2 PT AD
PN#52936; 1/2 PT AD
PN#52936; 1/2 PT AD
PROTECTOR,HEARING, EAR PLUG, 2
PROTECTOR,HEARING, EAR PLUG, 2
PUBLIX #422
PUBLIX #797
PUMP, LUBE OIL, BOILER CIRCULA
PUMP, LUBE OIL, BOILER CIRCULA

PUMP, SEWAGE LIFT
PUMP, SEWAGE LIFT
PUMP, SEWAGE LIFT
PUMP, SEWAGE LIFT
PUMP, SUBMERSIBLE SUMP, 65 GPM
PUMP, SUBMERSIBLE SUMP, 65 GPM
PUMP,CENTRIFUGAL, 2" FNPT INLE
PUMP,CENTRIFUGAL, 7/7.5" IMPEL
PUMP,CENTRIFUGAL, 7/7.5" IMPEL
PUMP,CENTRIFUGAL, 7/7.5" IMPEL
PUMP,CENTRIFUGAL, 7/7.5" IMPEL
PUMP,ROTARY, PISTON, INCLUDES:
PUMP,ROTARY, PISTON, INCLUDES:
PYRAMID FASTENERS INC
PYRAMID FASTENERS INC
PYRAMID FASTENERS INC
PYRAMID FASTENERS INC
RAG, HIGHLY ABSORBENT, 12" X 1
RAG, HIGHLY ABSORBENT, 12" X 1
RAG, HIGHLY ABSORBENT, 12" X 1
RAG, HIGHLY ABSORBENT, 12" X 1
RAG, LINT FREE, 12" X 18" CUT,
RAG, LINT FREE, 12" X 18" CUT,
RAINGEAR, COAT, 3X-LARGE, LG S
RAINGEAR, COAT, 3X-LARGE, LG S
RAINGEAR, COAT, MED, LG STYLE,
RAINGEAR, COAT, MED, LG STYLE,
RAINGEAR, COAT, MED, LG STYLE,
RAINGEAR, COAT, MED, LG STYLE,
RAINGEAR, COAT, MED, LG STYLE,
RAINGEAR, COAT, MED, LG STYLE,
RAINGEAR, COAT, X-LARGE, LG ST
RAINGEAR, COAT, X-LARGE, LG ST
RAINGEAR, COAT, X-LARGE, LG ST
RAINGEAR, COAT, X-LARGE, LG ST
RAINGEAR, HOODED JACKET/SUIT,
RAINGEAR, HOODED JACKET/SUIT,
RAINGEAR, HOODED JACKET/SUIT,
RAINGEAR, HOODED JACKET/SUIT,
RAINGEAR, HOODED JACKET/SUIT,

RAINGEAR, HOODED JACKET/SUIT,
RED WING SHOES PINEVIL
RELAY, KUP-14D15-12
RELAY,TIME DELAY, 1-300 SECOND
RENT GENERATOR FOR HINES FOR I
RENTAL - SUNBELT RENTAL/ GENER
Repairs to Jet Control House R
RESPIRATOR, DISPOSABLE MASK, D
RESPIRATOR, DISPOSABLE MASK, D
RESPIRATOR, MASK, DUST, BOX OF
RESPIRATOR, MASK, DUST, BOX OF
RING, COUPLING SHAFT, M, ITEM
RING, COUPLING SHAFT, M, ITEM
RING, COUPLING SHAFT, M, ITEM
RING, COUPLING SHAFT, M, ITEM
RING,LOCK, SHAFT JOURNAL, DWG
RING,LOCK, SHAFT JOURNAL, DWG
RING,WEAR, IMPELLER THRUST, M
RING,WEAR, IMPELLER THRUST, M
RING,WEAR, IMPELLER THRUST, M
RING,WEAR, IMPELLER THRUST, M
ROD,WELDING, ASME SFA-5.1, E70
ROD,WELDING, ASME SFA-5.1, E70
ROD,WELDING, ASME SFA-5.4, E30
ROD,WELDING, ASME SFA-5.4, E30
ROPE, 1/4" DIA, 1200' REEL LG,
ROPE, 1/4" DIA, 1200' REEL LG,
ROPE, 3/4" DIA, 600' REEL LG,
ROPE, 3/4" DIA, 600' REEL LG,
ROPE, 3/8" DIA, PP/DACRON, 600
ROPE, 3/8" DIA, PP/DACRON, 600
ROPE, 3/8" DIA, PP/DACRON, 600
ROPE, 3/8" DIA, PP/DACRON, 600
ROPE, 3/8" DIA, PP/DACRON, 600
ROPE, 3/8" DIA, PP/DACRON, 600
ROPE,WIRE, 1/4" DIA, 500' REEL
ROPE,WIRE, 1/4" DIA, 500' REEL
SBI - HNCC - HURRICANE IRMA PR
SBI - HNCC - LABOR - HURRICANE
SBI - HNCC - LABOR - HURRICANE

SCIENTIFIC SALES INC
SCREEN, SUCTION, F/ IRON HORSE
SCREEN, SUCTION, F/ IRON HORSE
SCREW SET, SPECIAL, 4 PIECE, F
SCREW SET, SPECIAL, 4 PIECE, F
SCREW SET, SPECIAL, 4 PIECE, F
SCREW SET, SPECIAL, 4 PIECE, F
SCREW,CAP,1-1/2" DIA,6 UNC,5-1
SCREW,CAP,1-1/2" DIA,6 UNC,5-1
SEAL, ROTARY, 1-1/4", M ASSY,
SEAL, ROTARY, 1-1/4", M ASSY,
SEAL,ROCKER,STL,(2) SEALS PER
SEAL,ROCKER,STL,(2) SEALS PER
SEAN M GERRITS INC
SENSOR, PEN SIZE, 110-600VAC,
SENSOR, PEN SIZE, 110-600VAC,
SENTRY EQUIPMENT CORP
SERVICE: ADD ADDITIONAL FUNDS
SHACKLE, ANCHOR, 1/2" SCREW PI
SHACKLE, ANCHOR, 1/2" SCREW PI
SHAFT,PUMP, M BOWL, ITEM 11 DW
SHAFT,PUMP, M BOWL, ITEM 11 DW
SHAFT,PUMP, M BOWL, ITEM 11 DW
SHAFT,PUMP, M BOWL, ITEM 11 DW
SHAFT,PUMP, M INTERMEDIAT, ITE
SHAFT,PUMP, M INTERMEDIAT, ITE
SHAFT,PUMP, M INTERMEDIAT, ITE
SHAFT,PUMP, M INTERMEDIAT, ITE
SHAFT,PUMP, UPPER, CWP, I-21 M
SHAFT,PUMP, UPPER, CWP, I-21 M
SHAFT,PUMP, UPPER, CWP, I-21 M
SHAFT,PUMP, UPPER, CWP, I-21 M
SHERWIN WILLIAMS 70255
SHIM,INSERT,1/2" ID,80 DEG DIA
SHIM,INSERT,1/2" ID,80 DEG DIA
SIGN, DANGER, BARRICADE, 6.75"
SIGN, DANGER, BARRICADE, 6.75"
SLEEVE, OIL SCREEN, SER 15, VA
SLEEVE, OIL SCREEN, SER 15, VA
SLING,WIRE ROPE, 1/2" DIA, 440

SLING,WIRE ROPE, 1/2" DIA, 440
SOLDER, 1 LB, STICK CORE, 1/4"
SOLDER, 1 LB, STICK CORE, 1/4"
SOLDER, 1 LB, STICK CORE, 1/4"
SOLDER, 1 LB, STICK CORE, 1/4"
SOUTHEASTERN CONSTRUCTION & MAINTENANCE
SOUTHEASTERN CONSTRUCTION & MAINTENANCE
SOUTHEASTERN CONSTRUCTION & MAINTENANCE
SOUTHEASTERN CONSTRUCTION REPA
SOUTHEASTERN CONSTRUCTION REPA
SOUTHEASTERN CONSTRUCTION REPA
SOUTHEASTERN CONSTRUCTION REPA
SOUTHERN FASTENERS & SUPPLY INC
SOUTHERN FASTENERS & SUPPLY INC
SOUTHERN FASTENERS & SUPPLY INC
SPLICE,CONDUCTOR, SUPPORT, CAS
SPRING SET, CORRUGATED, 2 PIEC
SPRING SET, CORRUGATED, 2 PIEC
SPRING SET, CORRUGATED, 2 PIEC
SPRING SET, CORRUGATED, 2 PIEC
SPRING SET, CUT-OFF PLATE, SK-
SPRING SET, CUT-OFF PLATE, SK-
SPRING, OIL SCREEN, F/ IRON HO
SPRING, OIL SCREEN, F/ IRON HO
SPRING,VALVE, F/ IRON HORSE HI
SPRING,VALVE, F/ IRON HORSE HI
SPROCKET, DRIVE, 14 TEETH, CS,
SPROCKET, DRIVE, 14 TEETH, CS,
SPROCKET, DRIVE, DRIVEN, 80 TE
SPROCKET, DRIVE, DRIVEN, 80 TE
STONE,SHARPENING, COMBINATION,
STONE,SHARPENING, COMBINATION,
STUD,DOUBLE ENDED, COVER, 1/2"
STUD,DOUBLE ENDED, COVER, 1/2"
SUMMIT ENVIRONMENTAL; U2 PRECI
SUNBELT 15,000LB FORK TRUCK RE
SUNBELT BARTOW P4 CLEANING
SUNBELT EQUIPMENT AND HOIST RE
SUNBELT INDUSTRIAL COMPANY INC
SUNBELT INDUSTRIAL COMPANY INC

SUNBELT INDUSTRIAL COMPANY INC
SUNBELT INDUSTRIAL COMPANY INC
SUNBELT INDUSTRIAL COMPANY INC
Sunbelt rental 20 kw diesel ge
SUNBELT RENTALS INC
TAG, DO NOT OPERATE, 8.5" X 3.
TAG, DO NOT OPERATE, 8.5" X 3.
TAP,THREADING, PLUG, 7/8" DIA,
TAP,THREADING, PLUG, 7/8" DIA,
TAP,THREADING, SEMI-BOTTOM, 1/
TAP,THREADING, SEMI-BOTTOM, 1/
TAP,THREADING,HAND,FRACTIONAL
TAP,THREADING,HAND,FRACTIONAL
TAPE, DUCT, 2", SILVER
TAPE, DUCT, 2", SILVER
TAPE,DUCT,2" WD X 180' LG ROLL
TAPE,DUCT,2" WD X 180' LG ROLL
TAPE,ELECTRICAL, 3/4" X 66' X
TAPE,ELECTRICAL, 3/4" X 66' X
TAPE,ELECTRICAL, SELF FUSING,
TAPE,ELECTRICAL, SELF FUSING,
TAPE,SAFETY BARRIER, DANGER DO
TAPE,SAFETY BARRIER, DANGER DO
TAPE,SAFETY BARRIER, DANGER DO
TAPE,SAFETY BARRIER, DANGER DO
TECHNICAL INSTALLATION SPECIALISTS INC
TECHNICAL INSTALLATION SPECIALISTS INC
TECHNICAL INSTALLATION SPECIALISTS INC
TECHNICAL INSTALLATION SPECIALISTS INC
TENCARVA MACHINERY COMPANY
TENCARVA MACHINERY COMPANY
TENCARVA MACHINERY COMPANY
TENCARVA MACHINERY COMPANY
TENCARVA MACHINERY COMPANY
THE HOME DEPOT #0256
THE HOME DEPOT #0288
THE HOME DEPOT #0288
THE HOME DEPOT #0288
THE HOME DEPOT #0289
THE HOME DEPOT #6323

THE HOME DEPOT #6323
THE HOME DEPOT #6332
THE HOME DEPOT #6332
THE HOME DEPOT #6332
THE HOME DEPOT #6332
THE WAREHOUSE
THERMOSTAT, NON-PROGRAMMABLE,
THERMOSTAT, NON-PROGRAMMABLE,
TIE,CABLE, SELF-LOCKING, NON-R
TIE,CABLE, SELF-LOCKING, NON-R
TIE,CABLE,SELF-LOCKING,1/16" T
TIE,CABLE,SELF-LOCKING,1/16" T
TIE,CABLE,SELF-LOCKING,1/16" T
TIE,CABLE,SELF-LOCKING,1/16" T
TILE, ACOUSTICAL CEILING, 2' X
TILE, ACOUSTICAL CEILING, 2' X
TIS, INC, SHIPPING
TOWEL, HAND CLEANER, SCRUBS IN
TOWEL, HAND CLEANER, SCRUBS IN
TRAFFIC LOGIX
TRANE US INC
TRANE US INC
TRANE US INC
TRANE US INC
TRANE US INC
TREK BICYCLEST PETE
TUBING,NONMETALLIC, FLEXIBLE,
WASHER, CONICAL, 1/2" NOM, SS,
WASHER, CONICAL, 1/2" NOM, SS,
WASHER,FLAT, 3/4" ID, 1-3/4" O
WASHER,FLAT, 3/4" ID, 1-3/4" O
WASHER,LOCK, BELLEVILLE, 1/2"
WASHER,LOCK, BELLEVILLE, 1/2"
WASHER,LOCK, SPLIT, 3/4" NOM,
WASHER,LOCK, SPLIT, 3/4" NOM,
WATER, SPRING, 16.9 OZ/500ML P
WATER, SPRING, 16.9 OZ/500ML P
WESCO - # 7848
WESCO DIST F&M MAFCO
WESCO DIST F&M MAFCO

WESCO DIST F&M MAFCO
WESCO DIST F&M MAFCO
WESCO DIST F&M MAFCO
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WESCO DISTRIBUTION INC
WHEEL,WIRE, BRUSH, 4" DIA, 5/1
WHEEL,WIRE, BRUSH, 4" DIA, 5/1
WINN DIXIE #2421
WINN DIXIE #2446
WIPER, 4 PLY, 20" X 16.5" LARG
WIPER, 4 PLY, 20" X 16.5" LARG
WM SUPERCENTER #1960
WM SUPERCENTER #718
WRENCH,IMPACT, 1/2" DR, 6.8-7.
WRENCH,IMPACT, 1/2" DR, 6.8-7.

WRENCH,RATCHET, 3/8" DRIVE, AI
WRENCH,RATCHET, 3/8" DRIVE, AI
WRENCH,TORQUE, 3/8" SQ DRIVE,
WRENCH,TORQUE, 3/8" SQ DRIVE,
WSHER, FLAT, 1-3/4" , CS
WW GRAINGER
XYL DEWATERING

Sum of Monetary Amount JD			Station		
Project ID CB	**Journal ID JD**	**Journal Descr JD**	**CRN**	**CRS**	**Grand**
CRN916HER	**ADJCR1016**	JOURNAL HERMINE STORM COSTS FR	2,990		2,990
CRN916HER	**ADJCR1016A**	Move Storm Hermine costs from	74,828		74,828
CRN916HER	**PGFSCT2636**	Year-End Adjustments- incremen	18,241	2,363	20,604
CRN916HER Total			**96,059**	**2,363**	**98,422**
CRS916HER	**ADJCR1016**	JOURNAL HERMINE STORM COSTS FR		6,210	6,210
CRS916HER	**ADJCR1016**	Move Storm Hermine costs from		16,996	16,996
CRS916HER	**ADJCR1116C**	NOVEMBER ME ADJUSTMENTS FOR CR		456	456
CRS916HER Total				**23,662**	**23,662**
Grand Total			**96,059**	**26,025**	**122,084**

122,084.35

Account ID CB	Account Long Descr CB	Oper Unit Level 4 Descr LVL	Bus Unit ID CB	Accounting Period CMD	Oper Unit ID CB	Station	Base / Intermediate / Peaking	Resource Type ID CB
186295	Deferred Storm Expenses	Florida	50221	10	CRS0	CRS	Base	35000
186295	Deferred Storm Expenses	Florida	50221	11	CRS0	CRS	Base	35000
186295	Deferred Storm Expenses	Florida	50221	12	CRS0	CRS	Base	35000
186295	Deferred Storm Expenses	Florida	50221	9	CRS0	CRS	Base	31000
186295	Deferred Storm Expenses	Florida	50221	10	CRS0	CRS	Base	31000
186295	Deferred Storm Expenses	Florida	50221	11	CRS0	CRS	Base	31000
186295	Deferred Storm Expenses	Florida	50221	9	CRS0	CRS	Base	28002
186295	Deferred Storm Expenses	Florida	50221	10	CRS0	CRS	Base	28002
186295	Deferred Storm Expenses	Florida	50221	10	CRS0	CRS	Base	28002
186295	Deferred Storm Expenses	Florida	50221	12	CRS0	CRS	Base	28002
186295	Deferred Storm Expenses	Florida	50221	9	CRS0	CRS	Base	21000
186295	Deferred Storm Expenses	Florida	50221	10	CRS0	CRS	Base	21000
186295	Deferred Storm Expenses	Florida	50221	10	CR05	CRN	Base	21000
186295	Deferred Storm Expenses	Florida	50221	9	CR05	CRN	Base	21000
186295	Deferred Storm Expenses	Florida	50221	10	CR05	CRN	Base	28002
186295	Deferred Storm Expenses	Florida	50221	9	CR05	CRN	Base	28002
186295	Deferred Storm Expenses	Florida	50221	9	CR05	CRN	Base	30000
186295	Deferred Storm Expenses	Florida	50221	12	CR05	CRN	Base	31000
186295	Deferred Storm Expenses	Florida	50221	10	CR05	CRN	Base	31000
186295	Deferred Storm Expenses	Florida	50221	9	CR05	CRN	Base	31000
186295	Deferred Storm Expenses	Florida	50221	12	CR05	CRN	Base	33000
186295	Deferred Storm Expenses	Florida	50221	12	CR05	CRN	Base	33001
186295	Deferred Storm Expenses	Florida	50221	12	CR05	CRN	Base	35000
186295	Deferred Storm Expenses	Florida	50221	10	CR05	CRN	Base	35000
186295	Deferred Storm Expenses	Florida	50221	12	CRN0	CRN	Base	21000
186295	Deferred Storm Expenses	Florida	50221	12	CRN0	CRN	Base	28002
186295	Deferred Storm Expenses	Florida	50221	10	CRN0	CRN	Base	28002
186295	Deferred Storm Expenses	Florida	50221	12	CRN0	CRN	Base	35000
186295	Deferred Storm Expenses	Florida	50221	11	CRS0	CRS	Base	21000
186295	Deferred Storm Expenses	Florida	50221	12	CRS0	CRS	Base	21000

Res Type Summary	Journal ID JD	Operator ID JD	Journal Descr JD	Project ID CB	Resp Center ID CB
Materials & Supplies	ADJCR1016	I44292	JOURNAL HERMINE STORM COSTS FR	CRS916HER	U949
Materials & Supplies	ADJCR1116C	I44292	NOVEMBER ME ADJUSTMENTS FOR CR	CRS916HER	U949
Materials & Supplies	PGFSCT2636	I44292	Year-End Adjustments- incremen	CRN916HER	U949
Materials & Supplies	ADJCR1016	MCAUDEL	Move Storm Hermine costs from	CRS916HER	U949
Materials & Supplies	ADJCR1016	I44292	JOURNAL HERMINE STORM COSTS FR	CRS916HER	U949
Materials & Supplies	ADJCR1116C	I44292	NOVEMBER ME ADJUSTMENTS FOR CR	CRS916HER	U949
Materials & Supplies	ADJCR1016	MCAUDEL	Move Storm Hermine costs from	CRS916HER	U949
Materials & Supplies	ADJCR1016	I44292	JOURNAL HERMINE STORM COSTS FR	CRS916HER	Q112
Materials & Supplies	ADJCR1016	I44292	JOURNAL HERMINE STORM COSTS FR	CRS916HER	U949
Materials & Supplies	PGFSCT2636	I44292	Year-End Adjustments- incremen	CRN916HER	Q112
Materials & Supplies	ADJCR1016	MCAUDEL	Move Storm Hermine costs from	CRS916HER	U949
Materials & Supplies	ADJCR1016	I44292	JOURNAL HERMINE STORM COSTS FR	CRS916HER	U949
Materials & Supplies	ADJCR1016	I44292	JOURNAL HERMINE STORM COSTS FR	CRN916HER	U940
Materials & Supplies	ADJCR1016A	MCAUDEL	Move Storm Hermine costs from	CRN916HER	U940
Materials & Supplies	ADJCR1016	I44292	JOURNAL HERMINE STORM COSTS FR	CRN916HER	U940
Materials & Supplies	ADJCR1016A	MCAUDEL	Move Storm Hermine costs from	CRN916HER	U940
Materials & Supplies	ADJCR1016A	MCAUDEL	Move Storm Hermine costs from	CRN916HER	U940
Materials & Supplies	PGFSCT2636	I44292	Year-End Adjustments- incremen	CRN916HER	U940
Materials & Supplies	ADJCR1016	I44292	JOURNAL HERMINE STORM COSTS FR	CRN916HER	U940
Materials & Supplies	ADJCR1016A	MCAUDEL	Move Storm Hermine costs from	CRN916HER	U940
Materials & Supplies	PGFSCT2636	I44292	Year-End Adjustments- incremen	CRN916HER	U940
Materials & Supplies	PGFSCT2636	I44292	Year-End Adjustments- incremen	CRN916HER	U940
Materials & Supplies	PGFSCT2636	I44292	Year-End Adjustments- incremen	CRN916HER	U940
Materials & Supplies	ADJCR1016	I44292	JOURNAL HERMINE STORM COSTS FR	CRN916HER	U940
Materials & Supplies	PGFSCT2636	I44292	Year-End Adjustments- incremen	CRN916HER	U940
Materials & Supplies	PGFSCT2636	I44292	Year-End Adjustments- incremen	CRN916HER	Q112
Materials & Supplies	ADJCR1016	I44292	JOURNAL HERMINE STORM COSTS FR	CRN916HER	Q112
Materials & Supplies	PGFSCT2636	I44292	Year-End Adjustments- incremen	CRN916HER	Q051
Materials & Supplies	ADJCR1116C	I44292	NOVEMBER ME ADJUSTMENTS FOR CR	CRS916HER	U949
Materials & Supplies	PGFSCT2636	I44292	Year-End Adjustments- incremen	CRN916HER	U949

122,084.35

Process Long Descr CB	Activity ID PRD	Project Long Descr CB	Resp Center Level 4 Descr LVL	Resp Center Level 4 Node Name LVL	Monetary Amount JD	Storm
MISC EQUIPMENT - NBase	ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	2,014.00	Hermine
MISC EQUIPMENT - NBase	ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	(2,014.00)	Hermine
MISC EQUIPMENT - NBase	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	122.00	Hermine
MISC EQUIPMENT - NBase	ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	1,923.69	Hermine
MISC EQUIPMENT - NBase	ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	5,508.29	Hermine
MISC EQUIPMENT - NBase	ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	2,134.84	Hermine
MISC EQUIPMENT - NBase	ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	1,547.95	Hermine
MISC EQUIPMENT - NBase	ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	2,012.24	Hermine
MISC EQUIPMENT - NBase	ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	(1,547.95)	Hermine
MISC EQUIPMENT - NBase	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	411.89	Hermine
MISC EQUIPMENT - NBase	ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	13,524.15	Hermine
MISC EQUIPMENT - NBase	ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	(1,776.84)	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	4,253.97	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	19,565.32	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	(7,262.70)	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	7,262.70	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	317.96	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	22,073.01	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	(20,988.00)	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	47,681.93	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	580.73	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	18.80	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	(20,988.00)	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	21,327.45	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	528.49	Hermine
MISC EQUIPMENT - NBase	C0100	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	2,165.22	Hermine
VOLTAGE BREAKERS&FEE	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	5,659.58	Hermine
MISC EQUIPMENT - NBase	C0100	CR NORTH Storm Cleanup f	Operations Support	OPSP	13,863.00	Hermine
MISC EQUIPMENT - NBase	ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	335.52	Hermine
MISC EQUIPMENT - NBase	ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	1,829.11	Hermine

Group
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation
3. Generation

Sum of Monetary Amount JD		Station			
Journal ID JD	**Journal Descr JD**	**CRN**	**CRS**	**North**	**Grand**
ADJMATT01	Move costs from 0186201 to sta	53	1,186		1,239
PGFSCT1181	FERC Reclass to Storm Reserve	-	33	35,838	35,871
Grand Total		**53**	**1,219**	**35,838**	**37,110**

37,109.86

Account ID CB	Account Long Descr CB	Unit Level 4 Descr	Bus Unit ID CB	Accounting Period CMD	Oper Unit ID CB	Station	Base / Intermediate / Peaking	Resource Type ID CB
186295	Deferred Storm Expenses	Florida	50221	11	CRYN	CRN	Base	33000
186295	Deferred Storm Expenses	Florida	50221	1	CRYN	CRN	Base	33000
186295	Deferred Storm Expenses	Florida	50221	11	CRS0	CRS	Base	35000
186295	Deferred Storm Expenses	Florida	50221	1	CRS0	CRS	Base	35000
186295	Deferred Storm Expenses	Florida	50221	1	CRS0	CRS	Base	31000
186295	Deferred Storm Expenses	Florida	50221	11	CRS0	CRS	Base	21000
186295	Deferred Storm Expenses	Florida	50221	1	CRS0	CRS	Base	21000
186295	Deferred Storm Expenses	Florida	50222	1	DY08	North	Peaking	35000
186295	Deferred Storm Expenses	Florida	50222	1	DY08	North	Peaking	31000
186295	Deferred Storm Expenses	Florida	50222	1	DY08	North	Peaking	21000
186295	Deferred Storm Expenses	Florida	50222	1	DY07	North	Peaking	21000

Res Type Summary	Journal ID JD	Operator ID JD	Journal Descr JD	Project ID CB	Resp Center ID CB
Materials & Supplies	ADJMATT01	MCAUDEL	Move costs from 0186:	CRNMATT	W955
Materials & Supplies	PGFSCT1181	WJSISSO	FERC Reclass to Storr	CRNMATT	W955
Materials & Supplies	ADJMATT01	MCAUDEL	Move costs from 0186:	CRSMATT	U945
Materials & Supplies	PGFSCT1181	WJSISSO	FERC Reclass to Storr	CRSMATT	U945
Materials & Supplies	PGFSCT1181	WJSISSO	FERC Reclass to Storr	CRSMATT	U945
Materials & Supplies	ADJMATT01	MCAUDEL	Move costs from 0186:	CRSMATT	U945
Materials & Supplies	PGFSCT1181	WJSISSO	FERC Reclass to Storr	CRSMATT	U945
Materials & Supplies	PGFSCT1181	WJSISSO	FERC Reclass to Storr	CORDE109	U975
Materials & Supplies	PGFSCT1181	WJSISSO	FERC Reclass to Storr	CORDE109	U975
Materials & Supplies	PGFSCT1181	WJSISSO	FERC Reclass to Storr	CORDE109	U975
Materials & Supplies	PGFSCT1181	WJSISSO	FERC Reclass to Storr	CORDE109	U975

Process Long Descr CB	Activity ID PRD	Project Long Descr CB	Resp Center Level 4 Descr LVL
Eng/Supv Plant Operation Ba	STORM	CR NORTH Storm Restoratic	Fossil Hydro Operations
NO VALUE	STORM	CR NORTH Storm Restoratic	Fossil Hydro Operations
Eng/Supv Plant Operation Ba	STORM	CR SOUTH Storm Restoratic	Fossil Hydro Operations
NO VALUE	STORM	CR SOUTH Storm Restoratic	Fossil Hydro Operations
NO VALUE	STORM	CR SOUTH Storm Restoratic	Fossil Hydro Operations
Eng/Supv Plant Operation Ba	STORM	CR SOUTH Storm Restoratic	Fossil Hydro Operations
NO VALUE	STORM	CR SOUTH Storm Restoratic	Fossil Hydro Operations
Non-Routine Process PEF / P	CT201	OR DEB HURRICANE MATT	Fossil Hydro Operations
Non-Routine Process PEF / P	CT201	OR DEB HURRICANE MATT	Fossil Hydro Operations
Non-Routine Process PEF / P	CT201	OR DEB HURRICANE MATT	Fossil Hydro Operations
Non-Routine Process PEF / P	CT201	OR DEB HURRICANE MATT	Fossil Hydro Operations

37,109.86

Resp Center Level 4 Node Name LVL	Monetary Amount JD	Storm	Group
935	52.53	Matthew	3. Generation
935	-	Matthew	3. Generation
935	548.78	Matthew	3. Generation
935	(548.78)	Matthew	3. Generation
935	581.71	Matthew	3. Generation
935	637.49	Matthew	3. Generation
935	-	Matthew	3. Generation
935	1,029.60	Matthew	3. Generation
935	23,029.60	Matthew	3. Generation
935	11,513.18	Matthew	3. Generation
935	265.75	Matthew	3. Generation

Sum of Transaction Amount		Station		
Project	**Supplier Name**	**Bartow**	**CRN**	**Grand**
20089322			(29,997)	(29,997)
20089322	CLASSIC CONTROLS INC	1,772		1,772
20089322	DYNAMIC TOURS & TRANS INC		24,050	24,050
20089322	EPM POWER & WATER SOLUTIONS IN		(0)	(0)
20089322	QUALITROL CO	622		622
20089322	QUALITROL CO	1,023		1,023
20089322	(blank)	247	5,507	5,753
20089322 Total		**3,663**	**(440)**	**3,223**
Grand Total		**3,663**	**(440)**	**3,223**

3,223.09

Project User Defined Field	account	Charge To Level 3 Code-Description	Charge To Level 6 Code-Description	Charge By Level 2 Code-Description
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT

MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	01F10S - POWER GENERATION OPS PEC
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6021LS - CRYSTAL RIVER, OCONEE
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6021LS - CRYSTAL RIVER, OCONEE
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6021LS - CRYSTAL RIVER, OCONEE
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6021LS - CRYSTAL RIVER, OCONEE
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6021LS - CRYSTAL RIVER, OCONEE
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6021LS - CRYSTAL RIVER, OCONEE
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT

MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION	OPERAT

MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900 60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT

Charge By Level 3 Code-Description	Charge By Level 6 Code-Description	Station	Base / Intermediate / Peaking	Account Class	Corporate Resource Groupings Rollup
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials

60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
01EW6S - OUTAGE AND MAINTENANCE S	01CG2S - TS SUPPORT SERVICES	CRN	Base	JB	Materials
60GB9S - NUCLEAR OPERATIONS CRYST	60404S - CR3 WORK EXECUTION	CRN	Base	JB	Materials
60GB9S - NUCLEAR OPERATIONS CRYST	60404S - CR3 WORK EXECUTION	CRN	Base	JB	Materials
60GB9S - NUCLEAR OPERATIONS CRYST	60404S - CR3 WORK EXECUTION	CRN	Base	JB	Materials
60GB9S - NUCLEAR OPERATIONS CRYST	60404S - CR3 WORK EXECUTION	CRN	Base	JB	Materials
60GB9S - NUCLEAR OPERATIONS CRYST	60404S - CR3 WORK EXECUTION	CRN	Base	JB	Materials
60GB9S - NUCLEAR OPERATIONS CRYST	60404S - CR3 WORK EXECUTION	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60LH1S - BARTOW REPOWER MAINTENA	Bartow	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials

60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials

60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB	Materials

Res Type Summary	Resource Type	Resource Type Lvl 2 Descrip (Code)	Activity	Project	Task	Year	Month
Materials & Supplies	OSZ	SALVAGE - RETURNED TO STOCK (OSZ	D7202	20089322	FOSOT	2012	8
Materials & Supplies	OSZ	SALVAGE - RETURNED TO STOCK (OSZ	D7202	20089322	FOSOT	2012	8
Materials & Supplies	OSZ	SALVAGE - RETURNED TO STOCK (OSZ	D7202	20089322	FOSOT	2012	8
Materials & Supplies	OSZ	SALVAGE - RETURNED TO STOCK (OSZ	D7202	20089322	FOSOT	2012	8
Materials & Supplies	OSZ	SALVAGE - RETURNED TO STOCK (OSZ	D7202	20089322	FOSOT	2012	8
Materials & Supplies	OSZ	SALVAGE - RETURNED TO STOCK (OSZ	D7202	20089322	FOSOT	2012	8
Materials & Supplies	OSZ	SALVAGE - RETURNED TO STOCK (OSZ	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	1
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2

Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MNL	OTHER PURCHASED MATERIALS-NSTL	D7202	20089322	DOHLN	2012	7
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	D7202	2012	6
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	D7202	2012	8
Materials & Supplies	MN3	BURDEN MTLS LOAD PEF NUCLEAR (MN	X0213	20089322	D7202	2012	6
Materials & Supplies	MN3	BURDEN MTLS LOAD PEF NUCLEAR (MN	X0213	20089322	D7202	2012	8
Materials & Supplies	MTF	MTLS TAXABLE INVENTORY - FLA (MTF)	D7202	20089322	D7202	2012	6
Materials & Supplies	MTF	MTLS TAXABLE INVENTORY - FLA (MTF)	D7202	20089322	D7202	2012	8
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CTOPS	2012	6
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CTOPS	2012	6
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CTOPS	2012	7
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CTOPS	2012	7
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322	CTOPS	2012	6
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322	CTOPS	2012	6
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322	CTOPS	2012	7
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322	CTOPS	2012	7
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CTOPS	2012	6
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CTOPS	2012	6
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CTOPS	2012	7
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CTOPS	2012	7
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CTOPS	2012	7
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	4
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	4
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	4
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	4
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	3
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	3
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	3
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	3
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	FOSOT	2013	2

Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	2
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2013	1
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2012	8
Materials & Supplies	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322 FOSOT	2012	8
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	4
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	4
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	4
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	4
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	3
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	3
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	3
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	3
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNK	X0848	20089322 FOSOT	2013	2

Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	2
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2013	1
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2012	8
Materials & Supplies	MNK	BURDEN MTLS LOAD PWR GEN-FL (MNI	X0848	20089322	FOSOT	2012	8
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	4
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	4
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	4
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	4
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	3
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	3
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	3
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	3
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2
Materials & Supplies	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	FOSOT	2013	2

GL Posting Date/Time	Source System	GL Category	GL Batch Name	Line Description	Supplier Name	Invoice Number
8/31/2012	PASSPORT	Miscellaneous Tra	Projects 4386889: A	MODULE, .., CONTRO		
8/31/2012	PASSPORT	Miscellaneous Tra	Projects 4386889: A	MODULE, DATA, DEV		
8/31/2012	PASSPORT	Miscellaneous Tra	Projects 4386889: A	MODULE, DATA, DEV		
8/31/2012	PASSPORT	Miscellaneous Tra	Projects 4386889: A	MODULE, DATA, DEV		
8/31/2012	PASSPORT	Miscellaneous Tra	Projects 4386889: A	MODULE, ELECTRO		
8/31/2012	PASSPORT	Miscellaneous Tra	Projects 4386889: A	MODULE, TERMINAT		
8/31/2012	PASSPORT	Miscellaneous Tra	Projects 4386889: A	POWER SUPPLY, MO		
8/17/2012	PASSPORT	Miscellaneous Tra	Projects 4380496: A	MODULE, .., CONTRO		
8/17/2012	PASSPORT	Miscellaneous Tra	Projects 4380496: A	MODULE, DATA, DEV		
8/17/2012	PASSPORT	Miscellaneous Tra	Projects 4380496: A	MODULE, DIAGNOST		
8/17/2012	PASSPORT	Miscellaneous Tra	Projects 4380496: A	MODULE, ELECTRO		
8/17/2012	PASSPORT	Miscellaneous Tra	Projects 4380496: A	MODULE, TERMINAT		
8/17/2012	PASSPORT	Miscellaneous Tra	Projects 4380496: A	POWER SUPPLY, MO		
8/17/2012	PASSPORT	Miscellaneous Tra	Projects 4380496: A	TERMINATOR, .., BR		
8/17/2012	PASSPORT	Miscellaneous Tra	Projects 4380496: A	TERMINATOR, .., BR		
8/31/2012	PASSPORT	Miscellaneous Tra	Projects 4386889: A	MODULE, .., CONTRO		
8/31/2012	PASSPORT	Miscellaneous Tra	Projects 4386889: A	MODULE, DATA, DEV		
8/31/2012	PASSPORT	Miscellaneous Tra	Projects 4386889: A	TERMINATOR, .., BR		
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, .., CONTRO	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, .., CONTRO	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, ELECTRO	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, ELECTRO	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN	
1/18/2013	PASSPORT	Miscellaneous Tra	Projects 4464012: A	POWER SUPPLY, MO	EPM POWER & WATER SOLUTIONS IN	
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, .., CONTRO	EPM POWER & WATER SOLUTIONS IN	
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, .., CONTRO	EPM POWER & WATER SOLUTIONS IN	
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	

2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, DATA, DEV	EPM POWER & WATER SOLUTIONS IN	
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, ELECTRO	EPM POWER & WATER SOLUTIONS IN	
7/13/2012	Payables	Purchase Invoices	45322 Payables 4361	DYNAMIC TOURS TS	DYNAMIC TOURS &	12616
6/29/2012	Projects	Burden Cost	Projects 4353049: A	Journal Import Created		
8/31/2012	Projects	Burden Cost	Projects 4386889: A	Journal Import Created		
6/29/2012	Projects	Burden Cost	Projects 4353049: A	Journal Import Created		
8/31/2012	Projects	Burden Cost	Projects 4386889: A	Journal Import Created		
6/29/2012	PASSPORT	Miscellaneous Tra	Projects 4353049: A	HUB, .., 8 PORT 10/1		
8/31/2012	PASSPORT	Miscellaneous Tra	Projects 4386889: A	PATCH, .., YELLOW,I		
6/29/2012	Projects	Burden Cost	Projects 4353049: A	Journal Import Created		
7/2/2012	Projects	Burden Cost	Projects 4353979: A	Journal Import Created		
8/1/2012	Projects	Burden Cost	Projects 4370785: A	Journal Import Created		
7/27/2012	Projects	Burden Cost	Projects 4368208: A	Journal Import Created		
6/29/2012	Projects	Burden Cost	Projects 4353049: A	Journal Import Created		
7/2/2012	Projects	Burden Cost	Projects 4353979: A	Journal Import Created		
8/1/2012	Projects	Burden Cost	Projects 4370785: A	Journal Import Created		
7/27/2012	Projects	Burden Cost	Projects 4368208: A	Journal Import Created		
6/29/2012	PASSPORT	Miscellaneous Tra	Projects 4353049: A	DETACHABLE CONN	QUALITROL CO	
7/2/2012	PASSPORT	Miscellaneous Tra	Projects 4353979: A	3.5 LL GAGE-2SW DI	QUALITROL CO	
8/1/2012	PASSPORT	Miscellaneous Tra	Projects 4370785: A	FIREYE 55UV5-1009	CLASSIC CONTROLS INC	
7/27/2012	Payables	Purchase Invoices	45340 Payables 4368	SPECIAL CHARGES	QUALITROL CO	241962
7/27/2012	Payables	Purchase Invoices	45340 Payables 4368	PAYMT FRT AMOUN	QUALITROL CO	242111
4/12/2013	Projects	Burden Cost	Projects 4510133: A	Journal Import Created		
4/12/2013	Projects	Burden Cost	Projects 4510133: A	Journal Import Created		
4/12/2013	Projects	Burden Cost	Projects 4510133: A	Journal Import Created		
4/12/2013	Projects	Burden Cost	Projects 4510133: A	Journal Import Created		
3/29/2013	Projects	Burden Cost	Projects 4501130: A	Journal Import Created		
3/29/2013	Projects	Burden Cost	Projects 4501130: A	Journal Import Created		
3/29/2013	Projects	Burden Cost	Projects 4501130: A	Journal Import Created		
3/29/2013	Projects	Burden Cost	Projects 4501130: A	Journal Import Created		
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created		
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created		
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created		
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created		
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created		
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created		
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created		

2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created
8/31/2012	Projects	Burden Cost	Projects 4386889: A	Journal Import Created
8/17/2012	Projects	Burden Cost	Projects 4380496: A	Journal Import Created
4/12/2013	Projects	Burden Cost	Projects 4510133: A	Journal Import Created
4/12/2013	Projects	Burden Cost	Projects 4510133: A	Journal Import Created
4/12/2013	Projects	Burden Cost	Projects 4510133: A	Journal Import Created
4/12/2013	Projects	Burden Cost	Projects 4510133: A	Journal Import Created
3/29/2013	Projects	Burden Cost	Projects 4501130: A	Journal Import Created
3/29/2013	Projects	Burden Cost	Projects 4501130: A	Journal Import Created
3/29/2013	Projects	Burden Cost	Projects 4501130: A	Journal Import Created
3/29/2013	Projects	Burden Cost	Projects 4501130: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created

2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created	
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created	
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created	
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created	
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created	
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created	
2/8/2013	Projects	Burden Cost	Projects 4476098: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
1/18/2013	Projects	Burden Cost	Projects 4464012: A	Journal Import Created	
8/31/2012	Projects	Burden Cost	Projects 4386889: A	Journal Import Created	
8/17/2012	Projects	Burden Cost	Projects 4380496: A	Journal Import Created	
4/12/2013	PASSPORT	Miscellaneous Tra	Projects 4510133: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN
4/12/2013	PASSPORT	Miscellaneous Tra	Projects 4510133: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN
4/12/2013	PASSPORT	Miscellaneous Tra	Projects 4510133: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN
4/12/2013	PASSPORT	Miscellaneous Tra	Projects 4510133: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN
3/29/2013	PASSPORT	Miscellaneous Tra	Projects 4501130: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN
3/29/2013	PASSPORT	Miscellaneous Tra	Projects 4501130: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN
3/29/2013	PASSPORT	Miscellaneous Tra	Projects 4501130: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN
3/29/2013	PASSPORT	Miscellaneous Tra	Projects 4501130: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	POWER SUPPLY, MO	EPM POWER & WATER SOLUTIONS IN
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, TERMINAT	EPM POWER & WATER SOLUTIONS IN
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, TERMINAT	
2/8/2013	PASSPORT	Miscellaneous Tra	Projects 4476098: A	MODULE, ELECTRO	EPM POWER & WATER SOLUTIONS IN

PO Number	Work Order Number	Catalog/Part Number	Part UOM	Resource Type Level 1 Code	Part Quantity
	WO0210332904	9220146659	GOT		-2
	WO0210332904	9220191450	GOT		-4
		9220191450	GOT		-1
		9220191450	GOT		-1
	WO0210332904	9220197707	GOT		-2
	WO0210332904	9220191457	GOT		-3
	WO0210332904	9220066867	GOT		-1
	WO0210332904	9220146659	GMT		1
	WO0210332904	9220191450	GMT		1
	WO0210332904	9220194855	GMT		4
	WO0210332904	9220197707	GMT		2
	WO0210332904	9220191457	GMT		4
	WO0210332904	9220066867	GMT		1
	WO0210332904	76334629	GMT		1
	WO0210332904	76334630	GMT		2
	WO0210332904	9220146659	GMT		1
	WO0210332904	9220191450	GMT		3
	WO0210332904	76334629	GMT		2
643913		9220146659	GMT		1
643913		9220146659	GMT		1
643913		9220191450	GMT		1
643913		9220191450	GMT		1
643913		9220191450	GMT		1
643913		9220191450	GMT		1
643913		9220191450	GMT		1
643913		9220191450	GMT		1
643913		9220197707	GMT		1
643913		9220197707	GMT		1
643913		9220191457	GMT		1
643913		9220191457	GMT		1
643913		9220191457	GMT		1
643913		9220066867	GMT		1
643913		9220146659	GMT		-1
643913		9220146659	GMT		-1
643913		9220191450	GMT		-1
643913		9220191450	GMT		-1

643913		9220191450	GMT	-1
643913		9220191450	GMT	-1
643913		9220191450	GMT	-1
643913		9220191450	GMT	-1
643913		9220197707	GMT	-1
		EA	GMT	0
	CC0060389D		GMT	
	CC0060389D		GMT	
	CC0060389D		GMT	
	CC0060389D		GMT	
	CC0060389D	9220140942	GMT	1
	CC0060389D	690628	GMT	1
	WO0210336401		GMT	
	WO0210336401		GMT	
	WO0210434701		GMT	
			GMT	
	WO0210336401		GMT	
	WO0210336401		GMT	
	WO0210434701		GMT	
			GMT	
629592	WO0210336401		GMT	1
629592	WO0210336401		GMT	1
630919	WO0210434701		GMT	1
629592	WO0210336401	EA	GMT	0
629592	WO0210336401	EA	GMT	0
			GMT	
			GMT	
			GMT	
			GMT	
			GMT	
			GMT	
			GMT	
			GMT	
			GMT	
			GMT	
			GMT	
			GMT	
			GMT	
			GMT	
			GMT	

	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
WO0210332904	GMT
WO0210332904	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT
	GMT

		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
		GMT	
	WO0210332904	GMT	
	WO0210332904	GMT	
669548	9220191457	GMT	-1
669548	9220191457	GMT	-1
669548	9220191457	GMT	-1
669548	9220191457	GMT	-1
669548	9220191457	GMT	1
669548	9220191457	GMT	1
669548	9220191457	GMT	1
669548	9220191457	GMT	1
643913	9220066867	GMT	-1
643913	9220191457	GMT	-1
643913	9220191457	GMT	-1
643913	9220191457	GMT	-1
	9220191457	GMT	-4
643913	9220197707	GMT	-1

Transaction Amount
3,223.09
(19,268.50)
(37,202.00)
(9,845.25)
(9,845.25)
(12,308.00)
(11,583.00)
(6,050.00)
7,834.50
6,032.00
454.30
12,308.00
15,444.00
6,050.00
138.66
352.00
11,434.00
31,170.00
277.33
10,534.13
10,534.13
9,845.25
9,845.25
9,845.25
9,845.25
9,845.25
9,845.25
6,154.00
6,154.00
3,861.00
3,861.00
3,861.00
6,050.00
(10,534.13)
(10,534.13)
(9,845.25)
(9,845.25)

(9,845.25)
(9,845.25)
(9,845.25)
(9,845.25)
(6,154.00)
24,050.00
0.76
0.17
12.06
2.68
44.66
9.92
6.23
11.15
30.13
10.57
20.23
36.22
97.83
34.31
366.55
656.11
1,772.25
409.06
212.55
(65.64)
(65.64)
(65.64)
(65.64)
65.64
65.64
65.64
65.64
(262.55)
(104.62)
(104.62)
(65.64)
(65.64)
(65.64)
(102.85)

(167.37)
(167.37)
(167.37)
(167.37)
(167.37)
(167.37)
(179.08)
(179.08)
104.62
104.62
65.64
65.64
65.64
102.85
167.37
167.37
167.37
167.37
167.37
167.37
179.08
179.08
728.98
826.43
(213.13)
(213.13)
(213.13)
(213.13)
213.13
213.13
213.13
213.13
(852.51)
(339.70)
(339.70)
(213.13)
(213.13)
(213.13)
(333.96)
(543.46)

(543.46)
(543.46)
(543.46)
(581.48)
(581.48)
(543.46)
(543.46)
339.70
339.70
213.13
213.13
213.13
333.96
543.46
543.46
543.46
543.46
543.46
543.46
581.48
581.48
2,367.05
2,683.46
(3,861.00)
(3,861.00)
(3,861.00)
(3,861.00)
3,861.00
3,861.00
3,861.00
3,861.00
(6,050.00)
(3,861.00)
(3,861.00)
(3,861.00)
(15,444.00)
(6,154.00)

Duke Energy
Storms - Question 44

IRMA	48,570
Hermine	276
Matthew	771
Debbie	13,338
Grand Total:	**62,955**

Items included are:

Meals, Office Supplies and Tools

Account ID	Accounting	Fiscal Year	Bus Unit ID	Oper Unit	Bus Unit Lo	Resource T	Resource Type Long De	Resp Cente	Journal ID	JD	Project ID	Activity ID	Operator ID	Journal Line Descr	JD	Process ID	Voucher ID	RC Long Descr	CB	Journal De	Journal Line Nun	Monetary Amount	JD
186290	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4829	EXACCT5330		01FL17	CALL	FMISRUN			229306		Supervisors - Charlotte		Expense Ac	201	616.88	
186290	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4829	EXACCT5330		01FL17	CALL	FMISRUN			229306		Supervisors - Charlotte		Expense Ac	262	1,241.72	
186290	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	CS60	EXACCT5330		01FL17	CALL	FMISRUN			441672		Managers - CLT/GRNVL		Expense Ac	123	261.87	
186290	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	CS60	EXACCT5330		01FL17	CALL	FMISRUN			441672		Managers - CLT/GRNVL		Expense Ac	127	496.65	
186290	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	CS60	EXACCT5330		01FL17	CALL	FMISRUN			441672		Managers - CLT/GRNVL		Expense Ac	132	57.22	
186290	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	CS60	EXACCT5330		01FL17	CALL	FMISRUN			441672		Managers - CLT/GRNVL		Expense Ac	137	160.28	
903100	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4829	EXACCT3834		01FL17	CALL	FMISRUN			229306	CCSUPT	Supervisors - Charlotte		Expense Ac	2	330.54	
903100	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4829	EXACCT3834		01FL17	CALL	FMISRUN			229306	CCSUPT	Supervisors - Charlotte		Expense Ac	18	266.06	
903200	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4829	EXACCT3834		01FL17	CALL	FMISRUN			229306	CCSUPT	Supervisors - Charlotte		Expense Ac	3	312.68	
903200	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4829	EXACCT3834		01FL17	CALL	FMISRUN			229306	CCSUPT	Supervisors - Charlotte		Expense Ac	19	251.68	
903200	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	RG04	EXACCT6483		01FL17	CALL	FMISRUN			335498	CCR	Payments Leaders		Expense Ac	6	82.34	
903300	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4829	EXACCT3834		01FL17	CALL	FMISRUN			229306	CCSUPT	Supervisors - Charlotte		Expense Ac	4	250.14	
903300	9	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4829	EXACCT3834		01FL17	CALL	FMISRUN			229306	CCSUPT	Supervisors - Charlotte		Expense Ac	20	201.34	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4803	EXACCT2457		01FL17	CALL	FMISRUN			219099		Vendor Management - CLT/GRNVL		Expense Ac	260	760	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4835	EXACCT0559		01FL17	CALL	FMISRUN			291153	STORM	Admins - Midwest		Expense Ac	5	254.67	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4835	EXACCT0559		01FL17	CALL	FMISRUN			291153	STORM	Admins - Midwest		Expense Ac	6	487.58	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4835	EXACCT0559		01FL17	CALL	FMISRUN			291153	STORM	Admins - Midwest		Expense Ac	10	148.4	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	6833	EXACCT1150		01FL17	CALL	FMISRUN			11649	STORM	CIS DEBS		Expense Ac	15	22.67	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	6833	EXACCT1150		01FL17	CALL	FMISRUN			11649	STORM	CIS DEBS		Expense Ac	17	26.2	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	6833	EXACCT1150		01FL17	CALL	FMISRUN			11649	STORM	CIS DEBS		Expense Ac	18	44.7	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	J224	EXACCT3688		01FL17	CALL	FMISRUN			370235		Managers - Florida		Expense Ac	412	373.79	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	J224	EXACCT3688		01FL17	CALL	FMISRUN			370235		Managers - Florida		Expense Ac	435	159.8	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	J224	EXACCT3688		01FL17	CALL	FMISRUN			370235		Managers - Florida		Expense Ac	436	142.44	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	R008	EXACCT0559		01FL17	CALL	FMISRUN			116187		Distribution & Customer Ops HR		Expense Ac	58	10.58	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	R008	EXACCT0559		01FL17	CALL	FMISRUN			116187		Distribution & Customer Ops HR		Expense Ac	59	31.75	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	R008	EXACCT0559		01FL17	CALL	FMISRUN			116187		Distribution & Customer Ops HR		Expense Ac	62	30.14	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	R008	EXACCT0559		01FL17	CALL	FMISRUN			116187		Distribution & Customer Ops HR		Expense Ac	63	90.41	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	U032	EXACCT2279		01FL17	CALL	FMISRUN			334040		Managers - Raleigh		Expense Ac	33	819.85	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	U032	EXACCT5419		01FL17	CALL	FMISRUN			329943		Managers - Raleigh		Expense Ac	152	1,423.02	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	U032	EXACCT5419		01FL17	CALL	FMISRUN			329943		Managers - Raleigh		Expense Ac	166	882.54	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	U032	EXACCT5419		01FL17	CALL	FMISRUN			329943		Managers - Raleigh		Expense Ac	167	730.27	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	U032	EXACCT5419		01FL17	CALL	FMISRUN			329943		Managers - Raleigh		Expense Ac	171	1,612.23	
186290	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	U032	EXACCT7012		01FL17	CALL	FMISRUN			332218		Managers - Raleigh		Expense Ac	248	1,678.80	
186290	10	2017	50227	SPFL	DE Florida	31000	Direct Material Purchas	4812	EXACCT0559		01FL17	CALL	FMISRUN			346863	OFFSUP	Facilities & Business Continui		Expense Ac	211	1,026.33	
186290	10	2017	50227	SPFL	DE Florida	33000	Office Supplies & Exper	4704	EXACCT7535		01FL17	CALL	FMISRUN			269553	CUSTSVC	RCPS Staff		Expense Ac	39	114.91	
903000	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4064	EXACCT9385		01FL17	CALL	FMISRUN			60628	CUSTSVC	Chg Mgmt & Bus Excel		Expense Ac	14	80.19	
903000	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4064	EXACCT9385		01FL17	CALL	FMISRUN			60628	CUSTSVC	Chg Mgmt & Bus Excel		Expense Ac	15	24.59	
903000	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4064	EXACCT9385		01FL17	CALL	FMISRUN			60628	CUSTSVC	Chg Mgmt & Bus Excel		Expense Ac	16	-10.69	
903000	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4064	EXACCT9385		01FL17	CALL	FMISRUN			60628	CUSTSVC	Chg Mgmt & Bus Excel		Expense Ac	17	26.98	
903000	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4835	EXACCT8625		01FL17	CALL	FMISRUN			31482	STORM	Admins - Midwest		Expense Ac	225	527	
903000	10	2017	50227	SPFL	DE Florida	30000	Direct Purchases	CS41	APACR00017		01FL17	CALL	FMISRUN	CONERLY PRODUCTIONS			10933074	Contact Center Technology-CAR		Accounts P	7	1,155.00	
903000	10	2017	50227	SPFL	DE Florida	33000	Office Supplies & Exper	4064	EXACCT9385		01FL17	CALL	FMISRUN			60628	CUSTSVC	Chg Mgmt & Bus Excel		Expense Ac	13	48.44	
910100	10	2017	50227	SPFL	DE Florida	33000	Office Supplies & Exper	4812	EXACCT0819		01FL17	CALL	FMISRUN			23039	OFFSUP	Facilities & Business Continui		Expense Ac	41	41.98	
910100	10	2017	50227	SPFL	DE Florida	33000	Office Supplies & Exper	4812	EXACCT0819		01FL17	CALL	FMISRUN			23039	OFFSUP	Facilities & Business Continui		Expense Ac	50	60.36	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	10	1,485.42	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	20	1,072.59	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	21	433.92	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	22	4,509.31	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	23	4,549.91	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	25	2,345.86	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	26	1,489.45	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	27	1,476.58	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	28	521.72	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	29	252.04	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	30	135.19	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	31	397.48	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	33	418.73	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	34	334.86	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	35	205.85	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	36	84.24	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	50	998.23	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	51	31.68	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	52	3,464.88	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	53	6,751.96	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	54	697.35	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	4812	EXACCT3696		01FL17	CALL	FMISRUN			283517		Facilities & Business Continui		Expense Ac	61	-690.15	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	J221	EXACCT2435		01FL17	CALL	FMISRUN			337492		Staff - Raleigh		Expense Ac	304	53.58	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	J221	EXACCT2435		01FL17	CALL	FMISRUN			337492		Staff - Raleigh		Expense Ac	305	45.45	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	U015	EXACCT8986		01FL17	CALL	FMISRUN			348432		Supervisors - Raleigh		Expense Ac	77	24.29	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	U015	EXACCT8986		01FL17	CALL	FMISRUN			348432		Supervisors - Raleigh		Expense Ac	79	48.76	
186290	11	2017	50227	SPFL	DE Florida	30000	Direct Purchases	U367	EXACCT8986		01FL17	CALL	FMISRUN			327626		CIG ACCT MGMT		Expense Ac	199	40.97	
186290	11	2017	50227	SPFL	DE Florida	33000	Office Supplies & Exper	4064	EXACCT8383		01FL17	CALL	FMISRUN			60628	CUSTSVC	Chg Mgmt & Bus Excel		Expense Ac	181	35.98	
		Sum:																		**Grand Total:**		**48,570.46**	

Account ID CB	Project ID CB	Resource Type ID CB	Resp Center ID CB	Oper Unit ID CB	Resource Type Long Descr CB	Monetary Amount JD
0186295	01FL16	30000	U032	SPFL	Direct Purchases	151.73
0186295	01FL16	30000	U367	SPFL	Direct Purchases	124.04
					Grand Total:	**276**

Account ID CB	Project ID CB	Resource Type ID CB	Resp Center ID CB	Oper Unit ID CB	Resource Type Long Descr CB	Monetary Amount JD
0186295	02FL16	30000	4812	SPFL	Direct Purchases	141.53
0186295	02FL16	30000	J222	SPFL	Direct Purchases	49.13
0186295	02FL16	30000	J924	SPFL	Direct Purchases	63
0186295	02FL16	30000	U367	SPFL	Direct Purchases	404.65
0186295	02FL16	33000	U367	SPFL	Office Supplies & Expenses	112.33
					Grand Total:	**771**

Project Us	account	Charge To	Charge To	Charge By	Charge By	Charge By Level 6 Co	Account Cl	Corporate	Resource T	Resource Type Lvl 2 Descrip (Code)	Activity	Project	Task	Year	Month	GL Posting D	Source Sys	GL Batch N	Line Description	Supplier Name	Invoice Nu	PO Numbe	Wi	Ca	Part	Resou	Part C	Transaction An	Material G	Vendor Gr	Report Gro	Invoice Gr
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60634D - JAMESTOW	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	D7202	2012	11	11/30/2012	Projects	Projects 44	Irene project used; should be Fl	Debbie					GMT		129.5	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60634D - JAMESTOW	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	D7202	2012	11	11/30/2012	Projects	Projects 44	Journal Import Created						GMT		2.2	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60853D - ST PETE GA	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45328 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003314		EA	GMT	1		148.21	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60853D - ST PETE GA	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/3/2012	Payables	45285 Pay	INV#3045067 SOUTH CO	FLEET PRODUCTS	3045067		EA	GMT	0		134.5	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60853D - ST PETE GA	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/20/2012	Projects	Projects 45	Journal Import Created						GMT		2.52	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60853D - ST PETE GA	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/3/2012	Projects	Projects 45	Journal Import Created						GMT		2.29	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60598D - ODENA GA	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45330 Pay	PINNACLE/ RPEB2 - PE	DAIMLER TRUCK	063012-01		EA	GMT	0		689.01	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60598D - ODENA GA	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45328 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003319		EA	GMT	1		701.75	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60598D - ODENA GA	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	PASSPORT	Projects 45	FLEET CHARGE INTERNATION	FLEET CHARGE/INTL TRUCK	632611			GMT	0.02		590.11	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60598D - ODENA GA	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/20/2012	Projects	Projects 45	Journal Import Created						GMT		10.03	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60598D - ODENA GA	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/20/2012	Projects	Projects 45	Journal Import Created						GMT		11.71	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60598D - ODENA GA	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/20/2012	Projects	Projects 45	Journal Import Created						GMT		11.93	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60597D - MADISON (	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45328 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003319		EA	GMT	1		714.55	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60597D - MADISON (	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45327 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003318		EA	GMT	1		43.72	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60597D - MADISON (	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/20/2012	Projects	Projects 45	Journal Import Created						GMT		0.74	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60597D - MADISON (	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/20/2012	Projects	Projects 45	Journal Import Created						GMT		12.15	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60596D - MONTICELI	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/27/2012	Payables	45331 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003322		EA	GMT	1		350.07	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60596D - MONTICELI	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSCOT	2012	7	8/1/2012	Payables	45347 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003329		EA	GMT	1		240.35	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60596D - MONTICELI	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/23/2012	Projects	Projects 45	Journal Import Created						GMT		5.95	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60596D - MONTICELI	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSCOT	2012	7	8/1/2012	Projects	Projects 45	Journal Import Created						GMT		4.09	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60566D - WILDWOO	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/27/2012	Payables	45331 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003322		EA	GMT	1		301.43	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60566D - WILDWOO	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45327 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003318		EA	GMT	1		184.11	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60566D - WILDWOO	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/23/2012	Projects	Projects 45	Journal Import Created						GMT		5.12	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60566D - WILDWOO	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/20/2012	Projects	Projects 45	Journal Import Created						GMT		3.13	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60511D - WALSINGH	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	PASSPORT	Projects 45	FLEET CHARGE INTERNATION	FLEET CHARGE/INTL TRUCK	632611			GMT	0.02		537.07	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60511D - WALSINGH	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/20/2012	Projects	Projects 45	Journal Import Created						GMT		9.13	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60505D - SYSTEM TR	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45327 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003316		EA	GMT	1		120.3	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60505D - SYSTEM TR	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSCOT	2012	7	8/1/2012	Payables	45347 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003329		EA	GMT	1		1669.92	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60505D - SYSTEM TR	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSDOT	2012	7	7/20/2012	Projects	Projects 45	Journal Import Created						GMT		2.05	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60505D - SYSTEM TR	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	CSCOT	2012	7	8/1/2012	Projects	Projects 45	Journal Import Created						GMT		28.39	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60HZ1S - OPERATION	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	STLGO	2012	7	7/20/2012	Projects	Projects 45	Journal Import Created						GMT		0.54	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60HZ1S - OPERATION	JB	Materials	MCA	STANDARD CO ATTIRE PROGRAM-STL (MCA)	D7202	20089322	STLGO	2012	7	7/20/2012	Payables	45327 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003316		EA	GMT	1		31.97	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	STLGO	2012	7	7/7/2012	Expenditur	Projects 45	06/12 Concur Accrual						GMT	-170	-170.11	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	STLGO	2012	7	7/6/2012	Payables	45300 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003309		EA	GMT	1		170.11	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	STLGO	2012	7	7/6/2012	Payables	45300 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003308A		EA	GMT	1		167.16	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	STLGO	2012	7	7/6/2012	Payables	45300 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003316		EA	GMT	1		-167.16	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	STLGO	2012	7	7/6/2012	Payables	45300 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003308		EA	GMT	1		167.16	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	STLGO	2012	7	7/7/2012	Projects	Projects 45	Journal Import Created						GMT		-2.89	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	STLGO	2012	7	7/5/2012	Projects	Projects 45	Journal Import Created						GMT		5.73	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	STLGO	2012	6	7/2/2012	Expenditur	Projects 45	06/12 Concur Accrual						GMT	170	170.11	Other	No Vendor Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MLC	BURDEN MTLS LOAD CORP (MLC)	X0152	20089322	STLGO	2012	6	7/2/2012	Projects	Projects 45	Journal Import Created						GMT		2.89	Other	No Vendor Customer	NO	

Grand Total: 7,042

P-Card Amounts included above:

Project Us	account	Charge To	Charge To	Charge By	Charge By	Charge By Level 6 Co	Account Cl	Corporate	Resource T	Resource Type Lvl 2 Descrip (Code)	Activity	Project	Task	Year	Month	GL Posting D	Source Sys	GL Batch N	Line Description	Supplier Name	Invoice Nu	PO Numbe	Wi	Ca	Part	Resou	Part C	Transaction An	Material G	Vendor Gr	Report Gro	Invoice Gr
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60853D - ST PETE GA	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45328 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003314		EA	GMT	1		148.21	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60598D - ODENA GA	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45328 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003319		EA	GMT	1		701.75	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60597D - MADISON (	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45328 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003319		EA	GMT	1		714.55	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60597D - MADISON (	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45327 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003318		EA	GMT	1		43.72	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60596D - MONTICELI	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/27/2012	Payables	45331 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003322		EA	GMT	1		350.07	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60596D - MONTICELI	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSCOT	2012	7	8/1/2012	Payables	45347 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003329		EA	GMT	1		240.35	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60566D - WILDWOO	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/27/2012	Payables	45331 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003322		EA	GMT	1		301.43	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60566D - WILDWOO	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45327 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003318		EA	GMT	1		184.11	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60505D - SYSTEM TR	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSDOT	2012	7	7/20/2012	Payables	45327 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003316		EA	GMT	1		120.3	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60A33S - S	6044PS - F	60505D - SYSTEM TR	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	CSCOT	2012	7	8/1/2012	Payables	45347 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003329		EA	GMT	1		1669.92	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60HZ1S - OPERATION	JB	Materials	MCA	STANDARD CO ATTIRE PROGRAM-STL (MCA)	D7202	20089322	STLGO	2012	7	7/20/2012	Payables	45327 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003316		EA	GMT	1		31.97	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	STLGO	2012	7	7/6/2012	Payables	45300 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003309		EA	GMT	1		170.11	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	STLGO	2012	7	7/6/2012	Payables	45300 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003308A		EA	GMT	1		167.16	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	STLGO	2012	7	7/6/2012	Payables	45300 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003308A		EA	GMT	1		-167.16	Other	MISC - MA Customer	NO	
MJRSTM	1861900	60X00D - P	60X00D - P	60800S - C	60380S - P	60665D - ENGY EFFIC	JB	Materials	MPM	PURCHASED MATERIALS (MPM)	D7202	20089322	STLGO	2012	7	7/6/2012	Payables	45300 Pay	ONECARD TRANSACTION	JPMORGAN CHA	1CARD0000003308		EA	GMT	1		167.16	Other	MISC - MA Customer	NO	

Grand Total: 4,844

Project #	Name of Storm
20089322	Debby
20094460	Isaac
FLASTORM4	Colin
LCOLIN16	Colin
LSTM4	Hermine
LMATT	Matthew
FLDIRMA	Irma
FLDNATE	Nate

Fiscal Year CMD	(All)
Account ID CB	0186295

Sum of Monetary Amount JD	Column Labels			
Row Labels	FLDIRMA	FLDNATE	Grand Total	
Other	**$109,515**	**$0**	**$109,515**	
Accounting Entry	$108,730	$0	$108,730	See tab "Accounting Entry"
Expense Reimbursements	$784		$784	
Grand Total	**$109,515**	**$0**	**$109,515**	**Preliminary 5/31/2018**

Project	20089322
account	1861900
Report Grouping	(Multiple Items)
Disallowed	(blank)

Row Labels	Sum of Transaction Amount
Other	**183,905**
CELL PHONES (OWL)	333
CO-OWNED EQUIPMENT I	130

INFORMATIONAL ADVERT	81,031
LICENSES/PERMITS (OLP	700
LOCAL SERVICES (OTL)	-
OTHER LEASES TAXABLE	2,280
OTHER MISCELLANEOUS	851
REAL PROPERTY RENT ((	64
SERVICE COMPANY OVEI	665
VEHICLE FUEL (OCC)	97,850
Grand Total	**183,905**

Project	20094460
Account Class	JB
Disallowed	(blank)

Row Labels	Sum of Transaction Amount
Customer Service	
Other	**709,582**
OTHER MISCELLANEOI	613,295
VEHICLE FUEL (OCC)	96,287
Distribution	
Other	**38,056**
ALLOCATED S&E (NON	722
VEHICLE FUEL (OCC)	37,334
Other	
Other	**205,960**
ADVERTISEMENTS (OA	8,976
INFORMATIONAL ADVE	46,685
OTHER MISCELLANEOI	97,263
REAL PROPERTY REN	51,320
SERVICE COMPANY O'	1,716
Grand Total	**953,599**

Related to KAM Serv Inc - invoice # 14026

→ Total amount relates to a purchase card through JPMorgan - 1CARD0000003361 - Chair and Equipment Rentals (KAM Services, Inc) - Invoi

→ Total relates to 2 purchase cards through JPMORGAN -

$	38,587.50	Karls Rentals	1CARD0000003
	12,105.00	Karls Rentals	1CARD0000003
	600.00	Karls Rentals	1CARD0000003
$	27.50	1CARD0000003364	
$	**51,320.00**		

ice 21662-1 for $40,048.40 and Invoice 21664-1 for $57,215.06

359
359
359

Fiscal Year CMD	Accounting	Bus Unit ID CB	Oper Unit ID CB	Operator ID Descr JD	Project ID CB	Activity ID PRD	Account ID CB	Process ID CB	Source CD JD	Resource Type ID CB	Vendor Name JD
2018	1	50226	P40D	FMIS System	FLDIRMA	FLEET	0186295	SFL1702	AP	99810	STATE OF FLORIDA I
2017	9	50226	P40D	Thompson,David B	FLDIRMA	FLEET	0186295	SFL1702	ONL	99810	
2017	9	50226	P40D	Beal,Kim V	FLDIRMA	SVRCOM	0186295	SFL1604	ONL	99810	
2017	9	50226	P40D	Beal,Kim V	FLDIRMA	SVRCOM	0186295	SFL1604	ONL	99810	
2017	10	50226	P40D	Beal,Kim V	FLDIRMA	SVRCOM	0186295	SFL1604	ONL	99810	
2017	10	50226	P40D	King,Christopher	FLDIRMA	SVRCOM	0186295	SFL1604	234	99810	
2017	10	50226	P40D	King,Christopher	FLDIRMA	SVRCOM	0186295	SFL1702	234	99810	
2017	10	50226	P40D	FMIS System	FLDIRMA	FLEET	0186295	SFL1702	AP	99810	STATE OF FLORIDA I
2017	10	50226	P40D	FMIS System	FLDIRMA	FLEET	0186295	SFL1702	AP	99810	TREASURY GENERA
2017	10	50226	P40D	FMIS System	FLDIRMA	DAFFIL	0186295	SFL1702	AP	99810	BANK OF AMERICA
2017	10	50226	P40D	FMIS System	FLDIRMA	DAFFIL	0186295	SFL1702	AP	99810	BANK OF AMERICA

Invoice ID JD	Monetary Amount JD	Date Time Stamp JD	Reversal Type JD	Journal ID JD
917338	$735.14	01/03/18 12:31:22 AM	N/A	APACR27346
	$74,747.69	10/04/17 03:06:19 PM	N/A	DEFFOFLEET
	$50,000.00	09/28/17 04:04:10 PM	N/A	CASH091517
	($41,837.00)	10/03/17 03:06:20 PM	N/A	CASH092917
	($7,200.00)	10/30/17 11:04:59 AM	N/A	CASH100617
	$7,200.00	11/01/17 04:05:17 PM	N/A	MISPRJ7870
	($7,200.00)	11/01/17 04:05:17 PM	N/A	MISPRJ7870
101817678875FL	$6,788.75	10/19/17 10:18:07 PM	N/A	APACR03768
101717590086TR	$5,262.41	10/18/17 10:19:27 PM	N/A	APACR03313
	$88,496.99			

5567611106094517S	12,068.30	10/11/2017 22:21	N/A	No
5567611106094517S	8,165.00	10/11/2017 22:21	N/A	No
	$ 20,233.30			
	$108,730.29			

Notes
DEF Fuel Tax Penalty and Interest; Irma Recovery - David.Jones4@Duke-Energy.Com. (See Documents E and E.2). In an effort to assist with hurricane relief efforts DEF had to use dyed diesel reserves for on road use. This effort required a change to the way that we file and account for the dyed diesel that is usually only used in generation. The on road fuel use required taxes to be paid to the state for that period in a specific amount of time. Due to the revised process, limited time, and complications with the ACH process the payment of motor fuel taxes was paid one day late. This initiated penalty and interest on the payment being one day late.
Cost of diesel fuel used by Fleet for Storm (Document D); the email string in this document only refers to 'fuel oil' but I asked Chris Menendez and he knows that this transaction was for the #2 fuel oil, which is diesel.
Cash from DEC's BoA account, provided to DEC linemen traveling to FL in support of Irma restoration. (See Document A)
Deposit back to DEC's BoA account - partial return of cash provided to DEC linemen travelling to FL (See Document B)
Deposit back to DEC's BoA account - another partial return of cash provided to DEC linemen travelling to FL in support of Irma restoration (See Document C)
Journal to reverse the credit that was the deposit back to DEC's BoA account because it used the wrong process ID. This entire journal was meant to correct erroneous processes, accounts, and activites used in storm charging.
Journal line that credits back the deposit to DEC's BoA account, but using the correct process ID.
State and Local Option Tax on Undyed Diesel (See Document F)
Federal Tax on Undyed Diesel (See Document G)

Purchase Card	BANK OF A MISC - CO Other
Purchase Card	BANK OF A MISC - CO Other

			10,612	4,854	649	5,933	13,294

Sum of Monetary Amount JD			Station				
Journal Mask ID JD	Journal Descr JD	Resource Ty	Anclote	Bartow	Central	CRN	CRS
	Anclote Storm FERC Account Rec	40000	40				
	Anclote Storm FERC Account Rec	41001	317				
	CORRECTIONS FOR STORM IRMA CHA	40000					221
	CORRECTIONS FOR STORM IRMA CHA	41001					91
	Move storm costs to correct FE	40000					
Total			**357**				**311**
APACR	Accounts Payable - Accrual	40000					
APACR	Accounts Payable - Accrual	60011		780			
APACR	Accounts Payable - Accrual	65007				2,131	
APACR	Accounts Payable - Accrual	65008					
APACR	Accounts Payable - Accrual	66001		1,686			
APACR Total				**2,466**		**2,131**	
EXACCT	Expense Accrual Journal	40000	448	1,004			2,906
EXACCT	Expense Accrual Journal	40001					361
EXACCT	Expense Accrual Journal	40002					14
EXACCT	Expense Accrual Journal	40004	8,221	426			2,751
EXACCT	Expense Accrual Journal	40007		350			
EXACCT	Expense Accrual Journal	41000				96	653
EXACCT	Expense Accrual Journal	42000			29		
EXACCT Total			**8,669**	**1,780**	**29**	**96**	**6,684**
PAYRLL	LDS Labor Distribution	40000		80		460	500
PAYRLL	LDS Labor Distribution	41001	1,586	529	619	3,247	5,798
PAYRLL Total			**1,586**	**609**	**619**	**3,707**	**6,298**
Grand Total			**10,612**	**4,854**	**649**	**5,933**	**13,294**

14,667	1,485	-	136	76	51,705

Hines	North	Regional Services	SUW	UF	Grand Total
					40
					317
					221
					91
		(52)			(52)
		(52)			**617**
2,078					2,078
					780
3,598					5,728
6,352					6,352
					1,686
12,028					**16,624**
		52			4,410
					361
					14
2,237	367				14,002
					350
10	288				1,046
					29
2,247	**655**	**52**			**20,212**
					1,040
393	831		136	76	13,213
393	**831**		**136**	**76**	**14,253**
14,667	**1,485**	**-**	**136**	**76**	**51,705**

51,705.47

Fiscal Year CMD	Accounting Period CMD	Oper Unit ID CB	Station	Base / Intermediate / Peaking	Resp Center ID CB	RC Long Descr CB	Operator ID JD	Account ID CB	Process ID CB
2017	9	UFC0	UF	Base	U976	UNIV OF FLA CT PROI	HUMANRE	0186295	NELEPWR
2018	2	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	11	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	HUMANRE	0186295	
2017	9	HN00	Hines	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	9	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	NGENELE
2017	11	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	BFACFIR
2018	2	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	11	HN00	Hines	Base	W020	HINES ENERGY COMF	FMISRUN	0186295	
2017	10	CTFF	Regional Services	Base	6460	CRM Strategy Sup Adm	MCAUDEL	0186295	
2017	9	CTFF	Regional Services	Base	6460	CRM Strategy Sup Adm	FMISRUN	0186295	
2017	9	CRS0	CRS	Base	6925	Citrus CC Maint & Tech	HUMANRE	0186295	BFACMIS
2018	2	CRS0	CRS	Base	U812	HEAVY HAULING	HUMANRE	0186295	
2017	9	CRS0	CRS	Base	W049	FL Maint Svc - Travel Cı	HUMANRE	0186295	BFACMIS
2017	9	CRS0	CRS	Base	W048	FL Maint Svc - Travel Cı	HUMANRE	0186295	BFACMIS
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	HUMANRE	0186295	BFACSYG
2017	9	CRS0	CRS	Base	W046	FL Maint Svc - Travel Cı	HUMANRE	0186295	BFACMIS
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	I44292	0186295	BFACSYG
2017	9	CRS0	CRS	Base	6922	Citrus CC Ops 3	HUMANRE	0186295	BFACMIS
2017	10	CRS0	CRS	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	BFACMIS
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	HUMANRE	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	HUMANRE	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	HUMANRE	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	HUMANRE	0186295	BFACSYG
2017	9	CRS0	CRS	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	HUMANRE	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG

2017	11	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	FMISRUN	0186295	NFACMIS
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	12	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	FMISRUN	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	FMISRUN	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U491	FL SCO DO NOT USE !	FMISRUN	0186295	BFACMIS
2017	9	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2018	3	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	
2017	9	CRS0	CRS	Base	W049	FL Maint Svc - Travel C	HUMANRE	0186295	BFACMIS
2017	9	CRS0	CRS	Base	W043	FL Traveling Maint Supp	HUMANRE	0186295	BFACMIS
2017	11	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	I44292	0186295	BFACSYG
2017	10	CRS0	CRS	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	BFACMIS
2017	9	CRS0	CRS	Base	W039	FL CT Frame/Jet- Trave	HUMANRE	0186295	BFACMIS
2017	9	CRS0	CRS	Base	W048	FL Maint Svc - Travel C	HUMANRE	0186295	BFACMIS
2017	11	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	I44292	0186295	BFACSYG
2017	9	CRS0	CRS	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	BFACMIS
2017	10	CRS0	CRS	Base	U893	CR SOUTH O & R SUP	FMISRUN	0186295	BFACSYG
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	BFACSYG
2017	11	CRS0	CRS	Base	U897	CR SOUTH OPS SHIFT	FMISRUN	0186295	0921100
2017	10	CRS0	CRS	Base	U949	CR FGD CRS MAINTEI	FMISRUN	0186295	
2017	12	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BFACSYG
2018	1	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BFACSYG
2017	12	CRN0	CRN	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	BELEPWR
2017	11	CRN0	CRN	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	BELEPWR
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U933	CR FGD CY MAINT - SI	HUMANRE	0186295	BFACSYG
2017	12	CRN0	CRN	Base	U939	CR FGD ELEC/I&C CRI	HUMANRE	0186295	BELEPWR
2017	9	CRN0	CRN	Base	U956	CR CAIR OPS CREW #	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U955	CR CAIR OPS CREW #	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U918	CR FUEL OPERATION!	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U914	CR NORTH OPS SHIFT	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U912	CR NORTH O&R SUPT	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	W050	FL Seasonal Resources	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U952	CR CAIR ELEC-I&C & M	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U941	CR FGD MECH MAINT	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U953	CR CAIR OPS CREW #	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U950	CR CAIR MECHANICAI	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U939	CR FGD ELEC/I&C CRI	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U913	CR NORTH OPS SHIFT	HUMANRE	0186295	BFACSYG

2017	9	CRN0	CRN	Base	U933	CR FGD CY MAINT - SI	HUMANRE	0186295	BFACSYG
2017	9	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	HUMANRE	0186295	BFACSYG
2017	10	CRN0	CRN	Base	U940	CR FGD CRN MAINT -	FMISRUN	0186295	BFACSYG
2017	10	CRN0	CRN	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	BELEPWR
2017	11	CRN0	CRN	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	BELEPWR
2017	12	CRN0	CRN	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	BELEPWR
2017	10	CR05	CRN	Base	U940	CR FGD CRN MAINT -	HUMANRE	0186295	BFACHVA
2017	9	CR05	CRN	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	BELEPWR
2017	9	CR05	CRN	Base	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	BELEPWR
2017	9	BTCC	Bartow	Base	W014	BAYBORO CT	FMISRUN	0186295	
2017	11	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	FMISRUN	0186295	
2017	11	BTCC	Bartow	Base	W034	BARTOW REPOWER M	FMISRUN	0186295	
2017	9	BTCC	Bartow	Base	W046	FL Maint Svc - Travel Cl	HUMANRE	0186295	
2017	9	BTCC	Bartow	Base	W029	BARTOW CC PRODUC	HUMANRE	0186295	
2017	9	BTCC	Bartow	Base	J294	BARTOW CC PRODUC	HUMANRE	0186295	
2017	9	BTCC	Bartow	Base	W028	BARTOW REPOWER F	HUMANRE	0186295	
2017	9	BTCC	Bartow	Base	W034	BARTOW REPOWER M	HUMANRE	0186295	
2017	10	BTCC	Bartow	Base	W012	SUNCOAST COMBUST	FMISRUN	0186295	BCTUBUD
2017	9	BTCC	Bartow	Base	W046	FL Maint Svc - Travel Cl	HUMANRE	0186295	
2018	4	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2018	3	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2018	3	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2018	2	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	12	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	11	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	10	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	10	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2018	4	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	12	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2018	4	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2018	2	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2017	11	BTC4	Bartow	Base	W027	BARTOW REPOWER F	FMISRUN	0186295	BENSSO
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	HUMANRE	0186295	NFACMIS
2017	9	AN00	Anclote	Intermediate	Q178	FL Electrical - Travel Cr	HUMANRE	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U989	ANCLOTE MAINTENAN	HUMANRE	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U987	ANCLOTE STEAM PLT	HUMANRE	0186295	NFACMIS
2017	9	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM	HUMANRE	0186295	NFACMIS
2017	9	AN00	Anclote	Intermediate	W046	FL Maint Svc - Travel Cl	HUMANRE	0186295	NFACMIS
2017	10	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA	E12281	0186295	
2017	9	AN00	Anclote	Intermediate	U989	ANCLOTE MAINTENAN	HUMANRE	0186295	NFACMIS

2017	9	AN00	Anclote	Intermediate	U987	ANCLOTE STEAM PLT HUMANRE	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	3	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	PWTRCCW
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	PWTRCCW
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	PWTRCCW
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	PWTRCCW
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	PWTRCCW
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	PWTRCCW
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	2	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2018	1	AN00	Anclote	Intermediate	U986	ANCLOTE MAINT ADM FMISRUN	0186295	NFACMIS
2017	10	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA E12281	0186295	
2017	10	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA FMISRUN	0186295	
2017	9	AN00	Anclote	Intermediate	U990	ANCLOTE STEAM PLA FMISRUN	0186295	

2017	9	SWC0	SUW	Peaking	U962	SUWANNEE COMB TU	HUMANRE	0186295	NELEPWR
2017	9	ICC0	Central	Peaking	U967	INTERCESSION CITY (	FMISRUN	0186295	NFACMIS
2017	9	ICC0	Central	Peaking	U967	INTERCESSION CITY (	HUMANRE	0186295	NFACMIS
2017	9	ICC0	Central	Peaking	U968	CENTRAL CT PRODUC	HUMANRE	0186295	NFACMIS
2017	9	DYC0	North	Peaking	U970	NORTH CT PRODUCTI	HUMANRE	0186295	
2017	9	DYC0	North	Peaking	U970	NORTH CT PRODUCTI	HUMANRE	0186295	
2017	9	DYC0	North	Peaking	U970	NORTH CT PRODUCTI	HUMANRE	0186295	NFACMIS
2017	11	DYC0	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	NFACMIS
2017	11	DYC0	North	Peaking	U975	DEBARY CT	FMISRUN	0186295	
2018	3	DY09	North	Peaking	U967	INTERCESSION CITY (	FMISRUN	0186295	NFACMIS
2018	4	DY09	North	Peaking	U986	ANCLOTE MAINT ADM	FMISRUN	0186295	NFACMIS
2017	9	AVC0	Central	Peaking	U969	NORTH PRODUCTION	HUMANRE	0186295	NFACMIS
2017	9	AVC0	Central	Peaking	U968	CENTRAL CT PRODUC	HUMANRE	0186295	NFACMIS

Process Long Descr CB	Project ID CB	Project Short Descr CB	Activity ID PRD	Resource Type ID CB	Res Type Summary	Source CD JD
VOLTAGE BREAKERS & FE	OUFIRMA	UF HURRICANE IRMA	IRMA	41001	Employee Expense	133
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	65008	Employee Expense	AP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	65007	Employee Expense	AP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	41001	Employee Expense	133
GENERATOR Excitation Instr	IRMAHN17	Storm IRMA 2017	STORM	41001	Employee Expense	133
GENERATOR Excitation Instr	IRMAHN17	Storm IRMA 2017	STORM	41000	Employee Expense	EXP
GENERATOR Excitation Instr	IRMAHN17	Storm IRMA 2017	STORM	40004	Employee Expense	EXP
GENERATOR Excitation Instr	IRMAHN17	Storm IRMA 2017	STORM	40004	Employee Expense	EXP
GENERATOR Excitation Instr	IRMAHN17	Storm IRMA 2017	STORM	40004	Employee Expense	EXP
GENERATOR Excitation Instr	IRMAHN17	Storm IRMA 2017	STORM	40004	Employee Expense	EXP
GENERATOR Excitation Instr	IRMAHN17	Storm IRMA 2017	STORM	40004	Employee Expense	EXP
GENERATOR Excitation Instr	IRMAHN17	Storm IRMA 2017	STORM	40004	Employee Expense	EXP
GENERATOR Excitation Instr	IRMAHN17	Storm IRMA 2017	STORM	40004	Employee Expense	EXP
FIRE PROTECTION - Base	IRMAHN17	Storm IRMA 2017	STORM	40000	Employee Expense	AP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	40000	Employee Expense	AP
NO VALUE	IRMAHN17	Storm IRMA 2017	STORM	40000	Employee Expense	AP
NO VALUE	IRMARS17	Storm IRMA 2017	STORM	40000	Employee Expense	239
NO VALUE	IRMARS17	Storm IRMA 2017	STORM	40000	Employee Expense	EXP
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
NO VALUE	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	240
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
NO VALUE	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41000	Employee Expense	EXP
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	41000	Employee Expense	EXP

MISC EQUIPMENT - NBase	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40004	Employee Expense	EXP
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40004	Employee Expense	EXP
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40004	Employee Expense	EXP
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40004	Employee Expense	EXP
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40004	Employee Expense	EXP
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40004	Employee Expense	EXP
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40004	Employee Expense	EXP
NO VALUE	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40002	Employee Expense	EXP
NO VALUE	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40001	Employee Expense	EXP
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	133
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	133
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	240
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	133
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	133
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	133
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	240
MISC EQUIPMENT - Base	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	133
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	EXP
BUILDINGS & GROUNDS -B	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	EXP
Employee Expense	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	EXP
NO VALUE	CRS917IRM	CRS HURRICANE IRMA 9-2	STORM	40000	Employee Expense	EXP
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	65007	Employee Expense	AP
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	65007	Employee Expense	AP
VOLTAGE BREAKERS & FE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
VOLTAGE BREAKERS & FE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
VOLTAGE BREAKERS & FE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133

BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
BUILDINGS & GROUNDS -B	CRN917IRM	CRN HURRICANE IRMA 9-2	ST205	41000	Employee Expense	EXP
VOLTAGE BREAKERS & FE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	40000	Employee Expense	133
VOLTAGE BREAKERS & FE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	40000	Employee Expense	133
VOLTAGE BREAKERS & FE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	40000	Employee Expense	133
HVAC - Base	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
VOLTAGE BREAKERS & FE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	41001	Employee Expense	133
VOLTAGE BREAKERS & FE	CRN917IRM	CRN HURRICANE IRMA 9-2	STORM	40000	Employee Expense	133
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	66001	Employee Expense	AP
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	60011	Employee Expense	AP
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	60011	Employee Expense	AP
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	41001	Employee Expense	133
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	41001	Employee Expense	133
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	41001	Employee Expense	133
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	41001	Employee Expense	133
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	41001	Employee Expense	133
CT Equipment Budget Only	IRMABT17	Storm IRMA 2017 Costs	STORM	40004	Employee Expense	EXP
NO VALUE	IRMABT17	Storm IRMA 2017 Costs	STORM	40000	Employee Expense	133
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40007	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40007	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40007	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40007	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40007	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40007	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40007	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40000	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40000	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40000	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40000	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40000	Employee Expense	EXP
Eng/Supv Plant Operation Ba	IRMABT17	Storm IRMA 2017 Costs	STORM	40000	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	41001	Employee Expense	133
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	41001	Employee Expense	133
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	41001	Employee Expense	133
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	41001	Employee Expense	133
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	41001	Employee Expense	133
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	41001	Employee Expense	133
NO VALUE	OMAN1000	OR ANC HURRICANE IRMA	IRMA	41001	Employee Expense	239
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA	HIRMA	41001	Employee Expense	133

MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	41001	Employee Expense	133
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
CIRCULATING COOLING W	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
CIRCULATING COOLING W	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
CIRCULATING COOLING W	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
CIRCULATING COOLING W	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
CIRCULATING COOLING W	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
CIRCULATING COOLING W	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBase	OMAN1000	OR ANC HURRICANE IRMA HIRMA	40004	Employee Expense	EXP
NO VALUE	OMAN1000	OR ANC HURRICANE IRMA IRMA	40000	Employee Expense	239
NO VALUE	OMAN1000	OR ANC HURRICANE IRMA IRMA	40000	Employee Expense	EXP
NO VALUE	OMAN1000	OR ANC HURRICANE IRMA IRMA	40000	Employee Expense	EXP

VOLTAGE BREAKERS & FE	OSUWIRMA	SUW HURRICANE IRMA	IRMA	41001	Employee Expense	133
MISC EQUIPMENT - NBaes	CORIC1021	OR IC HURRICANE IRMA	HIRMA	42000	Employee Expense	EXP
MISC EQUIPMENT - NBaes	CORIC1021	OR IC HURRICANE IRMA	HIRMA	41001	Employee Expense	133
MISC EQUIPMENT - NBaes	CORIC1021	OR IC HURRICANE IRMA	HIRMA	41001	Employee Expense	133
NO VALUE	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	41001	Employee Expense	133
NO VALUE	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	41001	Employee Expense	133
MISC EQUIPMENT - NBaes	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	41001	Employee Expense	133
MISC EQUIPMENT - NBaes	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	41000	Employee Expense	EXP
NO VALUE	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	41000	Employee Expense	EXP
MISC EQUIPMENT - NBaes	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBaes	CORDE1000	OR DEB HURRICANE IRMA	HIRMA	40004	Employee Expense	EXP
MISC EQUIPMENT - NBaes	CORIC1021	OR IC HURRICANE IRMA	HIRMA	41001	Employee Expense	133
MISC EQUIPMENT - NBaes	CORIC1021	OR IC HURRICANE IRMA	HIRMA	41001	Employee Expense	133

Application Journal Template JD	Journal Mask ID JD	Journal ID JD	Journal Date JD	Date Time Stamp JD	Journal Descr JD	Employee ID JD
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
AP_ACCRUAL	APACR	APACR37161	2/2/2018	2/3/2018 0:15	Accounts Payable - Accrual	
AP_ACCRUAL	APACR	APACR12847	11/16/2017	11/16/2017 22:38	Accounts Payable - Accrual	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	EXACCT	EXACCT5326	9/25/2017	9/25/2017 22:17	Expense Accrual Journal	358637
	EXACCT	EXACCT6888	9/29/2017	9/29/2017 22:16	Expense Accrual Journal	359151
	EXACCT	EXACCT3828	9/20/2017	9/20/2017 22:16	Expense Accrual Journal	352423
	EXACCT	EXACCT3828	9/20/2017	9/20/2017 22:16	Expense Accrual Journal	352089
	EXACCT	EXACCT3828	9/20/2017	9/20/2017 22:16	Expense Accrual Journal	359151
	EXACCT	EXACCT3828	9/20/2017	9/20/2017 22:16	Expense Accrual Journal	358403
	EXACCT	EXACCT3828	9/20/2017	9/20/2017 22:16	Expense Accrual Journal	328066
	EXACCT	EXACCT4182	9/21/2017	9/21/2017 22:17	Expense Accrual Journal	351936
AP_ACCRUAL	APACR	APACR11566	11/13/2017	11/13/2017 22:36	Accounts Payable - Accrual	
AP_ACCRUAL	APACR	APACR37161	2/2/2018	2/3/2018 0:15	Accounts Payable - Accrual	
AP_ACCRUAL	APACR	APACR12847	11/16/2017	11/16/2017 22:38	Accounts Payable - Accrual	
		ADJSTORM02	10/12/2017	10/12/2017 16:05	Move storm costs to correct FE	
	EXACCT	EXACCT6479	9/28/2017	9/28/2017 22:20	Expense Accrual Journal	113866
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL1839	2/28/2018	2/15/2018 17:09	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL398	11/30/2017	11/8/2017 15:36	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
		ADJCR1117A	11/30/2017	12/1/2017 9:07	CORRECTIONS FOR STORM IRMA CHA	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL1085	10/31/2017	10/11/2017 17:31	LDS Labor Distribution	
	PAYRLL	PAYRLL3953	11/30/2017	11/21/2017 17:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL1085	10/31/2017	10/11/2017 17:31	LDS Labor Distribution	
	PAYRLL	PAYRLL1632	9/30/2017	9/13/2017 19:24	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	EXACCT	EXACCT0642	10/10/2017	10/10/2017 0:45	Expense Accrual Journal	342151
	EXACCT	EXACCT5786	9/26/2017	9/26/2017 22:16	Expense Accrual Journal	345490

	EXACCT	EXACCT9903	11/6/2017	11/6/2017 22:29	Expense Accrual Journal	345148
	EXACCT	EXACCT4242	12/21/2017	12/21/2017 22:19	Expense Accrual Journal	354023
	EXACCT	EXACCT2757	12/18/2017	12/18/2017 0:20	Expense Accrual Journal	354023
	EXACCT	EXACCT3827	9/20/2017	9/20/2017 22:16	Expense Accrual Journal	345148
	EXACCT	EXACCT5034	9/25/2017	9/25/2017 0:18	Expense Accrual Journal	345148
	EXACCT	EXACCT5786	9/26/2017	9/26/2017 22:16	Expense Accrual Journal	340530
	EXACCT	EXACCT5325	9/25/2017	9/25/2017 22:17	Expense Accrual Journal	363024
	EXACCT	EXACCT5478	3/26/2018	3/26/2018 22:07	Expense Accrual Journal	328941
	EXACCT	EXACCT0642	10/10/2017	10/10/2017 0:45	Expense Accrual Journal	342151
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
		ADJCR1117A	11/30/2017	12/1/2017 9:07	CORRECTIONS FOR STORM IRMA CHA	
	PAYRLL	PAYRLL1085	10/31/2017	10/11/2017 17:31	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
		ADJCR1117A	11/30/2017	12/1/2017 9:07	CORRECTIONS FOR STORM IRMA CHA	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	EXACCT	EXACCT2774	10/17/2017	10/17/2017 22:17	Expense Accrual Journal	467998
	EXACCT	EXACCT2440	10/16/2017	10/16/2017 22:23	Expense Accrual Journal	358717
	EXACCT	EXACCT1422	11/13/2017	11/13/2017 0:41	Expense Accrual Journal	358124
	EXACCT	EXACCT0642	10/10/2017	10/10/2017 0:45	Expense Accrual Journal	342151
AP_ACCRUAL	APACR	APACR18597	12/5/2017	12/6/2017 0:17	Accounts Payable - Accrual	
AP_ACCRUAL	APACR	APACR28835	1/4/2018	1/5/2018 0:26	Accounts Payable - Accrual	
	PAYRLL	PAYRLL9381	12/31/2017	12/7/2017 17:15	LDS Labor Distribution	
	PAYRLL	PAYRLL3953	11/30/2017	11/21/2017 17:28	LDS Labor Distribution	
	PAYRLL	PAYRLL1632	9/30/2017	9/13/2017 19:24	LDS Labor Distribution	
	PAYRLL	PAYRLL1632	9/30/2017	9/13/2017 19:24	LDS Labor Distribution	
	PAYRLL	PAYRLL9381	12/31/2017	12/7/2017 17:15	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	

	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	EXACCT	EXACCT7918	10/3/2017	10/3/2017 0:29	Expense Accrual Journal	352574
	PAYRLL	PAYRLL5323	10/31/2017	10/25/2017 20:32	LDS Labor Distribution	
	PAYRLL	PAYRLL3953	11/30/2017	11/21/2017 17:28	LDS Labor Distribution	
	PAYRLL	PAYRLL9381	12/31/2017	12/7/2017 17:15	LDS Labor Distribution	
	PAYRLL	PAYRLL1085	10/31/2017	10/11/2017 17:31	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
AP_ACCRUAL	APACR	APACR93747	9/20/2017	9/20/2017 22:16	Accounts Payable - Accrual	
AP_ACCRUAL	APACR	APACR16692	11/30/2017	11/30/2017 22:20	Accounts Payable - Accrual	
AP_ACCRUAL	APACR	APACR08761	11/2/2017	11/3/2017 0:27	Accounts Payable - Accrual	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	EXACCT	EXACCT3682	10/19/2017	10/19/2017 22:17	Expense Accrual Journal	340363
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	EXACCT	EXACCT5989	4/23/2018	4/23/2018 22:08	Expense Accrual Journal	254860
	EXACCT	EXACCT8578	3/5/2018	3/6/2018 0:03	Expense Accrual Journal	254860
	EXACCT	EXACCT3563	3/20/2018	3/20/2018 22:21	Expense Accrual Journal	254860
	EXACCT	EXACCT8706	2/6/2018	2/6/2018 23:06	Expense Accrual Journal	254860
	EXACCT	EXACCT3422	12/19/2017	12/19/2017 22:19	Expense Accrual Journal	254860
	EXACCT	EXACCT8379	11/2/2017	11/2/2017 0:25	Expense Accrual Journal	254860
	EXACCT	EXACCT1145	10/11/2017	10/11/2017 22:21	Expense Accrual Journal	254860
	EXACCT	EXACCT1145	10/11/2017	10/11/2017 22:21	Expense Accrual Journal	254860
	EXACCT	EXACCT5071	4/19/2018	4/19/2018 22:06	Expense Accrual Journal	254860
	EXACCT	EXACCT3422	12/19/2017	12/19/2017 22:19	Expense Accrual Journal	254860
	EXACCT	EXACCT5989	4/23/2018	4/23/2018 22:08	Expense Accrual Journal	254860
	EXACCT	EXACCT0706	2/12/2018	2/12/2018 22:07	Expense Accrual Journal	254860
	EXACCT	EXACCT8379	11/2/2017	11/2/2017 0:25	Expense Accrual Journal	254860
	PAYRLL	PAYRLL8684	1/31/2018	1/5/2018 13:39	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL8684	1/31/2018	1/5/2018 13:39	LDS Labor Distribution	
	PAYRLL	PAYRLL2142	3/31/2018	3/15/2018 15:13	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
		ADJAN1031A	10/31/2017	10/16/2017 13:15	Anclote Storm FERC Account Rec	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	

	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	EXACCT	EXACCT9205	2/7/2018	2/7/2018 23:06	Expense Accrual Journal	472907
	EXACCT	EXACCT8705	2/6/2018	2/6/2018 23:06	Expense Accrual Journal	472907
	EXACCT	EXACCT8197	2/5/2018	2/6/2018 0:03	Expense Accrual Journal	472907
	EXACCT	EXACCT6334	2/28/2018	2/28/2018 22:07	Expense Accrual Journal	472907
	EXACCT	EXACCT4230	2/22/2018	2/22/2018 23:18	Expense Accrual Journal	472907
	EXACCT	EXACCT3838	2/21/2018	2/21/2018 23:12	Expense Accrual Journal	472907
	EXACCT	EXACCT3457	2/20/2018	2/21/2018 0:48	Expense Accrual Journal	472907
	EXACCT	EXACCT3016	2/19/2018	2/19/2018 23:08	Expense Accrual Journal	472907
	EXACCT	EXACCT2559	2/16/2018	2/16/2018 23:07	Expense Accrual Journal	472907
	EXACCT	EXACCT2084	2/15/2018	2/15/2018 22:11	Expense Accrual Journal	472907
	EXACCT	EXACCT1661	2/14/2018	2/14/2018 23:06	Expense Accrual Journal	472907
	EXACCT	EXACCT0705	2/12/2018	2/12/2018 22:07	Expense Accrual Journal	472907
	EXACCT	EXACCT0465	2/12/2018	2/12/2018 1:29	Expense Accrual Journal	472907
	EXACCT	EXACCT5962	1/31/2018	1/31/2018 23:09	Expense Accrual Journal	472907
	EXACCT	EXACCT5431	1/30/2018	1/30/2018 23:09	Expense Accrual Journal	472907
	EXACCT	EXACCT4690	2/23/2018	2/23/2018 23:18	Expense Accrual Journal	351936
	EXACCT	EXACCT7982	3/5/2018	3/5/2018 0:28	Expense Accrual Journal	359169
	EXACCT	EXACCT7657	2/5/2018	2/5/2018 1:10	Expense Accrual Journal	472907
	EXACCT	EXACCT5742	2/27/2018	2/27/2018 22:06	Expense Accrual Journal	472907
	EXACCT	EXACCT3194	1/23/2018	1/24/2018 11:04	Expense Accrual Journal	472907
	EXACCT	EXACCT9671	2/8/2018	2/8/2018 23:06	Expense Accrual Journal	359169
	EXACCT	EXACCT1834	1/15/2018	1/15/2018 22:22	Expense Accrual Journal	472907
	EXACCT	EXACCT4690	2/23/2018	2/23/2018 23:18	Expense Accrual Journal	359169
	EXACCT	EXACCT0465	2/12/2018	2/12/2018 1:29	Expense Accrual Journal	351936
	EXACCT	EXACCT1834	1/15/2018	1/15/2018 22:22	Expense Accrual Journal	351936
	EXACCT	EXACCT4977	1/29/2018	1/29/2018 23:07	Expense Accrual Journal	359169
	EXACCT	EXACCT4977	1/29/2018	1/29/2018 23:07	Expense Accrual Journal	472907
	EXACCT	EXACCT2559	2/16/2018	2/16/2018 23:07	Expense Accrual Journal	359169
	EXACCT	EXACCT0465	2/12/2018	2/12/2018 1:29	Expense Accrual Journal	359169
	EXACCT	EXACCT9671	2/8/2018	2/8/2018 23:06	Expense Accrual Journal	472907
	EXACCT	EXACCT3194	1/23/2018	1/24/2018 11:04	Expense Accrual Journal	358403
	EXACCT	EXACCT9205	2/7/2018	2/7/2018 23:06	Expense Accrual Journal	351936
	EXACCT	EXACCT7657	2/5/2018	2/5/2018 1:10	Expense Accrual Journal	351936
	EXACCT	EXACCT5431	1/30/2018	1/30/2018 23:09	Expense Accrual Journal	351936
	EXACCT	EXACCT2559	2/16/2018	2/16/2018 23:07	Expense Accrual Journal	351936
	EXACCT	EXACCT3494	1/24/2018	1/24/2018 23:07	Expense Accrual Journal	351936
		ADJAN1031A	10/31/2017	10/16/2017 13:15	Anclote Storm FERC Account Rec	
	EXACCT	EXACCT9380	10/5/2017	10/5/2017 22:23	Expense Accrual Journal	328003
	EXACCT	EXACCT6049	9/27/2017	9/27/2017 22:20	Expense Accrual Journal	449491

	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	EXACCT	EXACCT1740	9/13/2017	9/13/2017 22:15	Expense Accrual Journal	339879
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL1632	9/30/2017	9/13/2017 19:24	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	EXACCT	EXACCT3690	11/20/2017	11/20/2017 22:21	Expense Accrual Journal	351448
	EXACCT	EXACCT1106	11/10/2017	11/10/2017 22:18	Expense Accrual Journal	342956
	EXACCT	EXACCT6444	3/28/2018	3/28/2018 22:09	Expense Accrual Journal	358433
	EXACCT	EXACCT0102	4/5/2018	4/5/2018 23:04	Expense Accrual Journal	362572
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	
	PAYRLL	PAYRLL5940	9/30/2017	9/27/2017 15:28	LDS Labor Distribution	

Employee Name JD	Material Stock Code JD	Material Descr JD	Material ID JD	Vendor Num JD	Vendor Name JD	Invoice ID JD	Voucher ID JD
				0000056731	SUNBELT RENTALS I	72231393-0001	10506873
				0000127533	UNITED RENTALS NC	150210768002	10483938
Armstrong, Robert W							
Addair, Christopher L.							
Bennett, Murray W							
Lewis, Brandon L							
Addair, Christopher L.							
Simmons, Bruce E							
O'Hanlon, Patrick Andre							
Brown, James M							
				0000175764	UNITED SITE SERVIC	1145771675	10482889
				0000056731	SUNBELT RENTALS I	72231393-0001	10506873
				0000127533	UNITED RENTALS NC	150210768002	10483938
Austin, Yogena S							
Breedlove, Brian L							
Massingill, T Reid							

Swann, Robert B.			
Metz, Kyle			
Metz, Kyle			
Swann, Robert B.			
Swann, Robert B.			
Schroeder, Dana E.			
Durrance, William C.			
Lorusso, Lloyd			
Breedlove, Brian L			
Huguley Jr., Charles Tin			
Savage, David W			
Norris, Tommy C			
Breedlove, Brian L			
	0000056731	SUNBELT RENTALS I 72300999-0002	10489283
	0000056731	SUNBELT RENTALS I 72304825-0001	10498218

Haslett, Geoffrey James

0000173001	BEX VOICE AND DAT	4167	10465074
0000148475	SUNBELT INDUSTRIA	177396	10487900
0000130120	SUNBELT INDUSTRIA	175665	10481482

Osteen Jr., Bennett

Washburn, Richard D
Washburn, Richard D
Washburn, Richard D
Washburn, Richard D
Washburn, Richard D
Washburn, Richard D
Washburn, Richard D
Washburn, Richard D
Washburn, Richard D
Washburn, Richard D
Washburn, Richard D
Washburn, Richard D
Washburn, Richard D
Washburn, Richard D

Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brown, James M
Benson, Michael E
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Brunk, Adam Galen Hol
Benson, Michael E
Brunk, Adam Galen Hol
Benson, Michael E
Brown, James M
Brown, James M
Benson, Michael E
Brunk, Adam Galen Hol
Benson, Michael E
Benson, Michael E
Brunk, Adam Galen Hol
Simmons, Bruce E
Brown, James M
Brown, James M
Brown, James M
Brown, James M
Brown, James M
Flynn, James R
Jansen, Kevin Robert

Meldrim, Kenneth H

Jensen, David R
Abdul, Mohammad M
Cannon, Thomas C
May, John

Purchase Order ID JD	Transaction Date JD	Transaction Reference Num JD	Facility Code JD	Analysis Type Code JD	Posted Date JD	Statistics Code JD
	9/30/2017	00000000		ACT	9/27/2017	HRS
	2/2/2018			ACT	2/3/2018	
	11/16/2017			ACT	11/16/2017	
	9/30/2017	00000000		ACT	9/27/2017	HRS
	9/30/2017	00000000		ACT	9/27/2017	HRS
	9/25/2017			ACT	9/25/2017	
	9/29/2017			ACT	9/29/2017	
	9/20/2017			ACT	9/20/2017	
	9/20/2017			ACT	9/20/2017	
	9/20/2017			ACT	9/20/2017	
	9/20/2017			ACT	9/20/2017	
	9/20/2017			ACT	9/20/2017	
	9/21/2017			ACT	9/21/2017	
	11/13/2017			ACT	11/13/2017	
	2/2/2018			ACT	2/3/2018	
	11/16/2017			ACT	11/16/2017	
	10/12/2017			ACT	10/12/2017	
	9/28/2017			ACT	9/28/2017	
	9/30/2017	00000000		ACT	9/27/2017	HRS
	2/28/2018	00000000		ACT	2/15/2018	HRS
	9/30/2017	00000000		ACT	9/27/2017	HRS
	9/30/2017	00000000		ACT	9/27/2017	HRS
	11/30/2017	00000000		ACT	11/8/2017	HRS
	9/30/2017	00000000		ACT	9/27/2017	HRS
	11/30/2017			ACT	12/1/2017	
	9/30/2017	00000000		ACT	9/27/2017	HRS
	10/31/2017	00000000		ACT	10/11/2017	HRS
	11/30/2017	00000000		ACT	11/21/2017	HRS
	9/30/2017	00000000		ACT	9/27/2017	HRS
	10/31/2017	00000000		ACT	10/11/2017	HRS
	9/30/2017	00000000		ACT	9/13/2017	HRS
	9/30/2017	00000000		ACT	9/27/2017	HRS
	9/30/2017	00000000		ACT	9/27/2017	HRS
	10/10/2017			ACT	10/10/2017	
	9/26/2017			ACT	9/26/2017	

11/6/2017		ACT	11/6/2017	
12/21/2017		ACT	12/21/2017	
12/18/2017		ACT	12/18/2017	
9/20/2017		ACT	9/20/2017	
9/25/2017		ACT	9/25/2017	
9/26/2017		ACT	9/26/2017	
9/25/2017		ACT	9/25/2017	
3/26/2018		ACT	3/26/2018	
10/10/2017		ACT	10/10/2017	
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
11/30/2017		ACT	12/1/2017	
10/31/2017	00000000	ACT	10/11/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
11/30/2017		ACT	12/1/2017	
9/30/2017	00000000	ACT	9/27/2017	HRS
10/17/2017		ACT	10/17/2017	
10/16/2017		ACT	10/16/2017	
11/13/2017		ACT	11/13/2017	
10/10/2017		ACT	10/10/2017	
12/5/2017		ACT	12/6/2017	
1/4/2018		ACT	1/5/2018	
12/31/2017	00000000	ACT	12/7/2017	HRS
11/30/2017	00000000	ACT	11/21/2017	HRS
9/30/2017	00000000	ACT	9/13/2017	HRS
9/30/2017	00000000	ACT	9/13/2017	HRS
12/31/2017	00000000	ACT	12/7/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS
9/30/2017	00000000	ACT	9/27/2017	HRS

9/30/2017 00000000	ACT	9/27/2017 HRS
9/30/2017 00000000	ACT	9/27/2017 HRS
10/3/2017	ACT	10/3/2017
10/31/2017 00000000	ACT	10/25/2017 HRS
11/30/2017 00000000	ACT	11/21/2017 HRS
12/31/2017 00000000	ACT	12/7/2017 HRS
10/31/2017 00000000	ACT	10/11/2017 HRS
9/30/2017 00000000	ACT	9/27/2017 HRS
9/30/2017 00000000	ACT	9/27/2017 HRS
9/20/2017	ACT	9/20/2017
11/30/2017	ACT	11/30/2017
11/2/2017	ACT	11/3/2017
9/30/2017 00000000	ACT	9/27/2017 HRS
9/30/2017 00000000	ACT	9/27/2017 HRS
9/30/2017 00000000	ACT	9/27/2017 HRS
9/30/2017 00000000	ACT	9/27/2017 HRS
9/30/2017 00000000	ACT	9/27/2017 HRS
10/19/2017	ACT	10/19/2017
9/30/2017 00000000	ACT	9/27/2017 HRS
4/23/2018	ACT	4/23/2018
3/5/2018	ACT	3/6/2018
3/20/2018	ACT	3/20/2018
2/6/2018	ACT	2/6/2018
12/19/2017	ACT	12/19/2017
11/2/2017	ACT	11/2/2017
10/11/2017	ACT	10/11/2017
10/11/2017	ACT	10/11/2017
4/19/2018	ACT	4/19/2018
12/19/2017	ACT	12/19/2017
4/23/2018	ACT	4/23/2018
2/12/2018	ACT	2/12/2018
11/2/2017	ACT	11/2/2017
1/31/2018 00000000	ACT	1/5/2018 HRS
9/30/2017 00000000	ACT	9/27/2017 HRS
1/31/2018 00000000	ACT	1/5/2018 HRS
3/31/2018 00000000	ACT	3/15/2018 HRS
9/30/2017 00000000	ACT	9/27/2017 HRS
9/30/2017 00000000	ACT	9/27/2017 HRS
10/31/2017	ACT	10/16/2017
9/30/2017 00000000	ACT	9/27/2017 HRS

9/30/2017 00000000	ACT	9/27/2017 HRS
2/7/2018	ACT	2/7/2018
2/6/2018	ACT	2/6/2018
2/5/2018	ACT	2/6/2018
2/28/2018	ACT	2/28/2018
2/22/2018	ACT	2/22/2018
2/21/2018	ACT	2/21/2018
2/20/2018	ACT	2/21/2018
2/19/2018	ACT	2/19/2018
2/16/2018	ACT	2/16/2018
2/15/2018	ACT	2/15/2018
2/14/2018	ACT	2/14/2018
2/12/2018	ACT	2/12/2018
2/12/2018	ACT	2/12/2018
1/31/2018	ACT	1/31/2018
1/30/2018	ACT	1/30/2018
2/23/2018	ACT	2/23/2018
3/5/2018	ACT	3/5/2018
2/5/2018	ACT	2/5/2018
2/27/2018	ACT	2/27/2018
1/23/2018	ACT	1/24/2018
2/8/2018	ACT	2/8/2018
1/15/2018	ACT	1/15/2018
2/23/2018	ACT	2/23/2018
2/12/2018	ACT	2/12/2018
1/15/2018	ACT	1/15/2018
1/29/2018	ACT	1/29/2018
1/29/2018	ACT	1/29/2018
2/16/2018	ACT	2/16/2018
2/12/2018	ACT	2/12/2018
2/8/2018	ACT	2/8/2018
1/23/2018	ACT	1/24/2018
2/7/2018	ACT	2/7/2018
2/5/2018	ACT	2/5/2018
1/30/2018	ACT	1/30/2018
2/16/2018	ACT	2/16/2018
1/24/2018	ACT	1/24/2018
10/31/2017	ACT	10/16/2017
10/5/2017	ACT	10/5/2017
9/27/2017	ACT	9/27/2017

9/30/2017	00000000	ACT	9/27/2017 HRS
9/13/2017		ACT	9/13/2017
9/30/2017	00000000	ACT	9/27/2017 HRS
9/30/2017	00000000	ACT	9/27/2017 HRS
9/30/2017	00000000	ACT	9/13/2017 HRS
9/30/2017	00000000	ACT	9/27/2017 HRS
9/30/2017	00000000	ACT	9/27/2017 HRS
11/20/2017		ACT	11/20/2017
11/10/2017		ACT	11/10/2017
3/28/2018		ACT	3/28/2018
4/5/2018		ACT	4/5/2018
9/30/2017	00000000	ACT	9/27/2017 HRS
9/30/2017	00000000	ACT	9/27/2017 HRS

Resp Center Level 3 Descr LVL	Resp Center Level 4 Descr LVL	Resp Center Level 5 Descr LVL	Resp Center Level 6 Descr LVL
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Hines/Tiger Bay
Market-Carolinas Region	Operations Support	Tech Perf & Optimization	Web & Voice Proj & Perform
Market-Carolinas Region	Operations Support	Tech Perf & Optimization	Web & Voice Proj & Perform
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Citrus Combines Cycle
REGULATED GENERATION	Transmission	Trans Const & Maint, Veg	Trans C&M FLORIDA
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Citrus Combines Cycle
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River

REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
Market-Carolinas Region	Distribution (1DF)	Construction & Maintenance	C&M Florida
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River

REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Crystal River
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Bartow Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	Central Services	Fleet Maintenance Services
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station

REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station

REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	Anclote Station
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker
REGULATED GENERATION	Fossil Hydro Operations	FHO - Florida	CT/Peaker

51,705.47

Work Order Num JD	Statistics Amount JD	Monetary Amount JD	Journal Line Descr JD	Material Quantity JD
	5	75.50	802 Labor Distribution	0
22170523-5	0	6,351.70	RENTAL - SUNBELT RENT	0
22239794-6	0	3,597.60	RENT GENERATOR FOR H	0
	4	60.40	802 Labor Distribution	0
	22	332.20	802 Labor Distribution	0
	0	10.00	358637	0
	0	75.00	359151	0
	0	142.00	352423	0
	0	142.00	352089	0
	0	300.00	359151	0
	0	300.00	358403	0
	0	568.00	328066	0
	0	710.00	351936	0
21581363-2	0	139.11	United Site Services - Hurric	0
	0	150.00	DELIVERY	0
	0	1,789.14	DELIVERY AND PICKUP CH	0
	0	(52.01)	Deferred Storm Expenses	0
	0	52.01	113866	0
	2	30.20	802 Labor Distribution	0
	0	45.30	802 Labor Distribution	0
	3	45.30	802 Labor Distribution	0
	4	60.40	802 Labor Distribution	0
	5	75.50	802 Labor Distribution	0
	5	75.50	802 Labor Distribution	0
	0	90.60	Maint Of Structures-Steam	0
	6	90.60	802 Labor Distribution	0
	7	105.70	802 Labor Distribution	0
	8	120.80	802 Labor Distribution	0
	10	151.00	802 Labor Distribution	0
	14	211.40	802 Labor Distribution	0
	19	286.90	802 Labor Distribution	0
	28	422.80	802 Labor Distribution	0
	270	4,077.00	802 Labor Distribution	0
	0	256.88	342151	0
	0	395.63	345490	0

	0	225.00	345148	0
	0	300.00	354023	0
	0	300.00	354023	0
	0	300.00	345148	0
	0	375.00	345148	0
	0	426.00	340530	0
	0	825.00	363024	0
	0	14.04	328941	0
	0	360.91	342151	0
	1	20.00	802 Labor Distribution	0
	1	20.00	802 Labor Distribution	0
	0	30.00	Maint Of Structures-Steam	0
	2	40.00	802 Labor Distribution	0
	3	60.00	802 Labor Distribution	0
	8	160.00	802 Labor Distribution	0
	0	190.82	Maint Of Structures-Steam	0
	10	200.00	802 Labor Distribution	0
	0	220.00	467998	0
	0	295.89	358717	0
	0	697.23	358124	0
	0	1,692.76	342151	0
	0	795.00	22225374-1	0
22255631-3	0	1,335.60	SUNBELT EQUIPMENT AN	0
	1	15.10	802 Labor Distribution	0
	1	15.10	802 Labor Distribution	0
	1	15.10	802 Labor Distribution	0
	1	15.10	802 Labor Distribution	0
	2	30.20	802 Labor Distribution	0
	3	45.30	802 Labor Distribution	0
	3	45.30	802 Labor Distribution	0
	3	45.30	802 Labor Distribution	0
	4	60.40	802 Labor Distribution	0
	4	60.40	802 Labor Distribution	0
	5	75.50	802 Labor Distribution	0
	6	90.60	802 Labor Distribution	0
	10	151.00	802 Labor Distribution	0
	12	181.20	802 Labor Distribution	0
	12	181.20	802 Labor Distribution	0
	12	181.20	802 Labor Distribution	0
	20	302.00	802 Labor Distribution	0

36	543.60	802 Labor Distribution	0
71	1,072.10	802 Labor Distribution	0
0	96.20	352574	0
1	20.00	802 Labor Distribution	0
3	60.00	802 Labor Distribution	0
11	220.00	802 Labor Distribution	0
3	45.30	802 Labor Distribution	0
5	75.50	802 Labor Distribution	0
8	160.00	802 Labor Distribution	0
0	1,686.00	BEX VOICE DATA-SAT PH(	0
0	180.00	Per Diem - SERVICE - SCAI	0
0	600.00	Per Diem - SUNBELT BART	0
2	30.20	802 Labor Distribution	0
3	45.30	802 Labor Distribution	0
4	60.40	802 Labor Distribution	0
5	75.50	802 Labor Distribution	0
21	317.10	802 Labor Distribution	0
0	426.00	340363	0
4	80.00	802 Labor Distribution	0
0	50.00	254860	0
0	50.00	254860	0
0	50.00	254860	0
0	50.00	254860	0
0	50.00	254860	0
0	50.00	254860	0
0	50.00	254860	0
0	74.16	254860	0
0	104.82	254860	0
0	160.88	254860	0
0	195.02	254860	0
0	202.01	254860	0
0	266.78	254860	0
0	15.10	802 Labor Distribution	0
1	15.10	802 Labor Distribution	0
0	30.20	802 Labor Distribution	0
0	75.50	802 Labor Distribution	0
5	75.50	802 Labor Distribution	0
6	90.60	802 Labor Distribution	0
0	317.10	Deferred Storm Expenses	0
33	498.30	802 Labor Distribution	0

52	785.20	802 Labor Distribution	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	75.00	472907	0
0	142.00	351936	0
0	150.00	359169	0
0	150.00	472907	0
0	150.00	472907	0
0	150.00	472907	0
0	225.00	359169	0
0	225.00	472907	0
0	240.00	359169	0
0	284.00	351936	0
0	298.20	351936	0
0	300.00	359169	0
0	300.00	472907	0
0	375.00	359169	0
0	375.00	359169	0
0	375.00	472907	0
0	375.00	358403	0
0	426.00	351936	0
0	426.00	351936	0
0	426.00	351936	0
0	710.00	351936	0
0	994.00	351936	0
0	40.00	Deferred Storm Expenses	0
0	211.37	328003	0
0	236.58	449491	0

9	135.90	802 Labor Distribution	0
0	29.43	339879	0
10	151.00	802 Labor Distribution	0
17	256.70	802 Labor Distribution	0
4	60.40	802 Labor Distribution	0
21	317.10	802 Labor Distribution	0
30	453.00	802 Labor Distribution	0
0	113.06	351448	0
0	174.45	342956	0
0	142.00	358433	0
0	225.00	362572	0
2	30.20	802 Labor Distribution	0
12	181.20	802 Labor Distribution	0

Sum of Monetary Amount JD			Station		
Journal ID JD	Journal Descr JD	Resource Type ID CB	CRN	CRS	Grand Total
ADJCR1016	JOURNAL HERMINE STORM COSTS FR	40000	-		-
ADJCR1016	JOURNAL HERMINE STORM COSTS FR	41001	-		-
ADJCR1016	Move Storm Hermine costs from	41001		606	606
ADJCR1016A	Move Storm Hermine costs from	40000	387		387
ADJCR1016A	Move Storm Hermine costs from	41001	2,327		2,327
PGFSCT2636	Year-End Adjustments- incremen	40000	992		992
PGFSCT2636	Year-End Adjustments- incremen	41001	14		14
Grand Total			**3,720**	**606**	**4,327**

4,326.60

Account ID CB	Account Long Descr CB	Oper Unit Level 4 Descr LVL	Bus Unit ID CB	Accounting Period CMD	Oper Unit ID CB	Station	Base / Intermediate / Peaking	Resource Type ID CB
186295	Deferred Storm Expenses	Florida	50221	9	CRS0	CRS	Base	41001
186295	Deferred Storm Expenses	Florida	50221	12	CRN0	CRN	Base	41001
186295	Deferred Storm Expenses	Florida	50221	9	CR05	CRN	Base	41001
186295	Deferred Storm Expenses	Florida	50221	10	CR05	CRN	Base	41001
186295	Deferred Storm Expenses	Florida	50221	10	CR05	CRN	Base	41001
186295	Deferred Storm Expenses	Florida	50221	10	CR05	CRN	Base	41001
186295	Deferred Storm Expenses	Florida	50221	10	CR05	CRN	Base	41001
186295	Deferred Storm Expenses	Florida	50221	9	CR05	CRN	Base	40000
186295	Deferred Storm Expenses	Florida	50221	10	CR05	CRN	Base	40000
186295	Deferred Storm Expenses	Florida	50221	10	CR05	CRN	Base	40000
186295	Deferred Storm Expenses	Florida	50221	12	CR05	CRN	Base	40000

Res Type Summary	Journal ID JD	Operator ID JD	Journal Descr JD	Project ID CB	Resp Center ID CB	Process Long Descr CB
Employee Expense	ADJCR1016	MCAUDEL	Move Storm Hermine (	CRS916HER	U949	MISC EQUIPMENT - NBase
Employee Expense	PGFSCT2636	I44292	Year-End Adjustments	CRN916HER	U793	VOLTAGE BREAKERS&FEE
Employee Expense	ADJCR1016A	MCAUDEL	Move Storm Hermine (	CRN916HER	U940	VOLTAGE BREAKERS&FEE
Employee Expense	ADJCR1016	I44292	JOURNAL HERMINE !	CRN916HER	Q178	VOLTAGE BREAKERS&FEE
Employee Expense	ADJCR1016	I44292	JOURNAL HERMINE !	CRN916HER	U912	VOLTAGE BREAKERS&FEE
Employee Expense	ADJCR1016	I44292	JOURNAL HERMINE !	CRN916HER	U939	VOLTAGE BREAKERS&FEE
Employee Expense	ADJCR1016	I44292	JOURNAL HERMINE !	CRN916HER	U940	VOLTAGE BREAKERS&FEE
Employee Expense	ADJCR1016A	MCAUDEL	Move Storm Hermine (	CRN916HER	U940	VOLTAGE BREAKERS&FEE
Employee Expense	ADJCR1016	I44292	JOURNAL HERMINE !	CRN916HER	Q178	VOLTAGE BREAKERS&FEE
Employee Expense	ADJCR1016	I44292	JOURNAL HERMINE !	CRN916HER	U940	VOLTAGE BREAKERS&FEE
Employee Expense	PGFSCT2636	I44292	Year-End Adjustments	CRN916HER	U940	VOLTAGE BREAKERS&FEE

4,326.60

Activity ID PRD	Project Long Descr CB	Resp Center Level 4 Descr LVL	Resp Center Level 4 Node Name LVL	Monetary Amount JD	Storm	Group
ST302	CR SOUTH Storm Cleanup f	Fossil Hydro Operations	935	606.30	Hermine	3. Generation
ST302	CR NORTH Storm Cleanup f	Transmission	TR01	14.10	Hermine	3. Generation
ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	2,326.50	Hermine	3. Generation
ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	84.60	Hermine	3. Generation
ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	98.70	Hermine	3. Generation
ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	310.20	Hermine	3. Generation
ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	(493.50)	Hermine	3. Generation
ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	387.26	Hermine	3. Generation
ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	80.00	Hermine	3. Generation
ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	(80.00)	Hermine	3. Generation
ST302	CR NORTH Storm Cleanup f	Fossil Hydro Operations	935	992.44	Hermine	3. Generation

Sum of Monetary Amount JD		Station			
Journal ID JD	Journal Descr JD	Resource Type ID CB	CRN	CRS	Grand Total
ADJCR1216A	JOURNAL ENTRY ADJUSTMENTS FOR	41001	634.5		634.5
ADJMATT01	Move costs from 0186201 to sta	40000	394.09		394.09
PGFSCT1181	FERC Reclass to Storm Reserve	40000	0		0
PGFSCT1181	FERC Reclass to Storm Reserve	41001		28.2	28.2
Grand Total			**1028.59**	**28.2**	**1056.79**

Account ID CB	Account Long Descr CB	Oper Unit Level 4 Descr LVL	Bus Unit ID CB	Accounting Period CMD	Oper Unit ID CB	Station	Base / Intermediate / Peaking	Resource Type ID CB
186295	Deferred Storm Expenses	Florida	50221	11	CRYN	CRN	Base	40000
186295	Deferred Storm Expenses	Florida	50221	1	CRYN	CRN	Base	40000
186295	Deferred Storm Expenses	Florida	50221	1	CRS0	CRS	Base	41001
186295	Deferred Storm Expenses	Florida	50221	12	CR01	CRN	Base	41001

Res Type Summary	Journal ID JD	Operator ID JD	Journal Descr JD	Project ID CB	Resp Center ID CB	Process Long Descr CB
Employee Expense	ADJMATT01	MCAUDEL	Move costs from 0186	CRNMATT	W955	Eng/Supv Plant Operation Ba
Employee Expense	PGFSCT1181	WJSISSO	FERC Reclass to Stor	CRNMATT	W955	NO VALUE
Employee Expense	PGFSCT1181	WJSISSO	FERC Reclass to Stor	CRSMATT	U949	NO VALUE
Employee Expense	ADJCR1216A	I44292	JOURNAL ENTRY AD		U949	MISC EQUIPMENT - POut

1,056.79

Activity ID PRD	Project Long Descr CB	Resp Center Level 4 Descr LVL	Resp Center Level 4 Node Name LVL	Monetary Amount JD	Storm	Group
STORM	CR NORTH Storm Restoratic	Fossil Hydro Operations	935	394.09	Matthew	3. Generation
STORM	CR NORTH Storm Restoratic	Fossil Hydro Operations	935	-	Matthew	3. Generation
STORM	CR SOUTH Storm Restoratic	Fossil Hydro Operations	935	28.20	Matthew	3. Generation
		Fossil Hydro Operations	935	634.50	Matthew	3. Generation

Project	20089322
account	1861900

Sum of Transaction Amount		Station	
Resource Type	**Source System**	**CRN**	**Grand Total**
OML	LABOR, NON-RECEIPT	229	229
OVE	VEHICLE	3	3
Grand Total		**232**	**232**

231.90

Project User Defined Field	account	Charge To Level 3 Code-Description	Charge To Level 6 Code-Description	Charge By Level 2 Code-Description
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT
MJRSTM	1861900	60X00D - PEF LEGAL ENTITY	60X00D - PEF LEGAL ENTITY	6011AS - POWER GENERATION OPERAT

Charge By Level 3 Code-Description	Charge By Level 6 Code-Description	Station	Base / Intermediate / Peaking	Account Class
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB
60747S - POWER GENERATION FLORIDA	60MK4S - CLEAN AIR OPS & MAINTENAN	CRN	Base	JB
60747S - POWER GENERATION FLORIDA	60KU4S - CR FGD CY MAINT - SUPT	CRN	Base	JB
60747S - POWER GENERATION FLORIDA	60930S - CR FUEL OPERATIONS SUPT	CRN	Base	JB
60747S - POWER GENERATION FLORIDA	60930S - CR FUEL OPERATIONS SUPT	CRN	Base	JB

Corporate Resource Groupings Rollup	Res Type Summary	Resource Type	Resource Type Lvl 2 Descrip (Code)	Activity	Project	Task
Fleet	Employee Expense	OVE	VEHICLE MILEAGE DISTRIBUTION (OVE)	D7202	20089322	FOSOT
Fleet	Employee Expense	OVE	VEHICLE MILEAGE DISTRIBUTION (OVE)	D7202	20089322	FOSOT
Meals/Travel/Lodging	Employee Expense	OML	MEALS/TRAVEL/LODGING (OML)	D7202	20089322	FOSIL
Meals/Travel/Lodging	Employee Expense	OML	MEALS/TRAVEL/LODGING (OML)	D7202	20089322	FOSIL
Meals/Travel/Lodging	Employee Expense	OML	MEALS/TRAVEL/LODGING (OML)	D7202	20089322	FOSIL

Year	Month	GL Posting Date/Time	Source System	GL Category	GL Batch Name	Line Description	Supplier Name
2012	8	8/16/2012	VEHICLE	Miscellaneous Tra	Projects 4379980: A 463169	Journal Import Created	
2012	8	8/30/2012	VEHICLE	Miscellaneous Tra	Projects 4386170: A 463249	Journal Import Created	
2012	7	7/5/2012	LABOR, NON-RECE	Miscellaneous Tra	Projects 4357248: A 461869	Journal Import Created	
2012	7	7/5/2012	LABOR, NON-RECE	Miscellaneous Tra	Projects 4357248: A 461869	Journal Import Created	
2012	7	7/5/2012	LABOR, NON-RECE	Miscellaneous Tra	Projects 4357248: A 461869	Journal Import Created	

231.90

Invoice Number	PO Number	Work Order Number	Catalog/Part Number	Part UOM	Resource Type Level 1 Code	Part Quantity	Transaction Amount
					GOT	2.24	2.24
					GOT	0.96	0.96
		WO0210473201			GOT	130	130.00
		WO0210497501			GOT	70.5	70.50
		WO0210497501			GOT	28.2	28.20

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: July 13, 2018

NOTICE OF FILING VERIFIED AFFIDAVITS

Duke Energy Florida, LLC, ("DEF") hereby gives notice of filing the verified affidavits of Marcia Olivier, Bryan Buckler, Jason Cutliffe, and Robert Matthews in support of DEF's Response to the Office of the Public Counsel's First Set of Interrogatories (Nos. 1-50), filed on April 18, 2018, DEF's First Supplemental Response filed on June 1, 2018, and DEF's Second Supplemental Response filed on June 15, 2018, via electronic mail to Charles Rehwinkel, Office of Public Counsel, (rehwinkel.charles@leg.state.fl.us), this 13th day of July, 2018.

/s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, FL 33701
T: 727. 820.4692
F: 727.820.5041
E: Dianne.Triplett@Duke-Energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 E. College Avenue, Suite 800
Tallahassee, FL 32301
T: 850.521.1428
F: 727.820.5041
E: Matthew.Bernier@Duke-Energy.com

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 13th day of July, 2018.

/s/ Matthew R. Bernier
Attorney

Kyesha Mapp Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 kmapp@psc.state.fl.us J. R. Kelly / C. Rehwinkel Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com George Cavros, Esq. Southern Alliance for Clean Energy 120 E. Oakland Park Blvd., Suite 105 Fort Lauderdale, FL 33334 george@cavros-law.com

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 26 day of June, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 3, 13, and 27 through 30, of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 26 day of June, 2018.

Marcia Olivier
MARCIA OLIVIER

SARAH HIRSCHMAN LIBES
Notary Public – State of Florida
Commission # GG 180580
My Comm. Expires Mar 23, 2022
Bonded through National Notary Assn.

Sarah Hirschman Libes
Notary Public
State of Florida, at Large

My Commission Expires:
3/23/2022

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 22 day of June, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BRYAN BUCKLER, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 9, 10, 17 through 19, 21 through 26, 31 through 37, 39, 40, and 43 through 50 of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 22nd day of June, 2018.

Bryan Buckler
BRYAN BUCKLER

Aloma M. Felder
Notary Public
State of North Carolina

My Commission Expires:
July 21, 2020

ALOMA M. FELDER
NOTARY
PUBLIC
CABARRUS COUNTY, N. C.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 27th day of June, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 1, 2, 4 through 8, 11, 12, 14 through 16, 20, 38, 41, and 42 of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 27th day of June, 2018.

Jason Cutliffe

JASON CUTLIFFE

NOTARY PUBLIC STATE OF FLORIDA

CHRISTINA WOLF
Commission # GG 146409
Expires September 27, 2021
Bonded Thru Budget Notary Services

Christina Wolf

Notary Public
State of Florida, at Large

My Commission Expires:
9-27-21

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 3rd day of July, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared ROBERT MATTHEWS, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 8, and 14 through 16, of OPC'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-50) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 3rd day of July, 2018.

ROBERT MATTHEWS

Notary Public
State of Florida, at Large

My Commission Expires:

KAROL ANN CARR
MY COMMISSION # GG010042
EXPIRES July 10, 2020
(407) 398-0153 FloridaNotaryService.com

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: April 18, 2018

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO
CITIZENS' FIRST REQUEST TO PRODUCE DOCUMENTS (NOS. 1-10)

Duke Energy Florida, LLC ("DEF"), responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") First Request to Produce Documents (Nos. 1-10) as follows:

1. Capitalization Policy. Provide a copy of the Company's capitalization policy.

Response: See the attached document bearing Bates Numbers 20170272-DEF-OPC-POD 1-1-00001 through 20170272-DEF-OPC-POD 1-1-0000199. The attachments are confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated April 18, 2018.

2. Storm Accounting Policies and Procedures. Provide a copy of the Company's storm restoration accounting policies and procedures and a copy of any instructions given to employees and/or contractors during mobilization and/or restoration.

Response:

3. Studies. Provide any assessment and/or study performed by the Company and/or for the Company that estimates the amount of storm cost savings the Company was able to achieve because of the storm hardening program work performed prior to each of the respective storms.

Response:

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 9
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Cutliffe 4, 5, Matthews and Cutliffe 3, 10

4. Studies. Provide any assessment and/or study performed by the Company and/or for the Company that identifies the damage that occurred to infrastructure where storm hardening work had not been performed yet.

Response: See the attached document bearing Bates Numbers 20170272-DEF-OPC-POD 1-4-00001 through 20170272-DEF-OPC-POD 1-4-000050.

5. Third Party Billings. For each of the seven storms, provide any third party billings for pole replacement, provide the supporting invoices for those amounts billed and any contracts associated with third party billings to the Company that detail pole replacement.

Response: Foreign owned poles represent only 1.4% of the total pole population in Duke Energy's inventory. Hurricane Irma damaged .2% of the total population; Hurricane Matthew damaged less than .02% of the population; the other five storms damaged less than .01% combined. The likelihood that there was an overlap of these population sets is marginal.

During a major restoration event, Duke Energy is focused on safely restoring service to its customers and does not track ownership of the poles requiring replacement due to the small possibility that the damaged pole was foreign owned. The administrative effort to deploy resources to every pole to determine ownership prior to replacement would extend the restoration process to an unacceptable level for both customer and company.

6. Contractors. For each of the seven storms, please provide by contractor the supporting invoices (including all supporting detail provided by the vendor) for invoices over $25,000.

Response:

7. Line Clearing. For each of the seven storms, please provide by line clearing contractor the supporting invoices (including all supporting detail provided by the vendor) for invoices over $25,000.

Response:

8. Employee Expenses. For each of the seven storms, please provide any invoices for charges over $5,000.

Response:

9. Other. For each of the seven storms, please provide any invoices for P Card charges over $7,500.

Response:

10. Third-Party Reimbursement. Provide a copy of the contract with any third party that serves as the support for Duke billing third parties for replacement of poles..

Response:

SUBMITTED this 18th day of April, 2018.

s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, FL 33701
Telephone: (850) 521-1428
Facsimile: (850) 521-1437
Attorneys for Duke Energy Florida, LLC

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 18th day of April, 2018.

/s/ Matthew R. Bernier
Attorney

Kyesha Mapp Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 kmapp@psc.state.fl.us J. R. Kelly / C. Rehwinkel / E. Sayler Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us sayler.erik@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com George Cavros, Esq. Southern Alliance for Clean Energy 120 E. Oakland Park Blvd., Suite 105 Fort Lauderdale, FL 33334 george@cavros-law.com

QUESTION #1

ENTIRELY REDACTED

Bates Numbers:

20170272-DEF-OPC-POD 1-1-00001 through 20170272-DEF-OPC-POD 1-1-0000199

DUKE FL POLE FORENSICS SUPPORT REPORT

FINAL ANALYSIS

DUKE ENERGY FLORIDA

accentureconsulting

20170272-DEF-OPC-POD 1-4-00001

TABLE OF CONTENTS

- **Executive Summary**
- **Overview/Purpose**
- **Benchmarking Comparison**
- **Forensics Analysis**
- **Hardening Impact Assessment**

Copyright © 2018 Accenture. All rights reserved.

EXECUTIVE SUMMARY

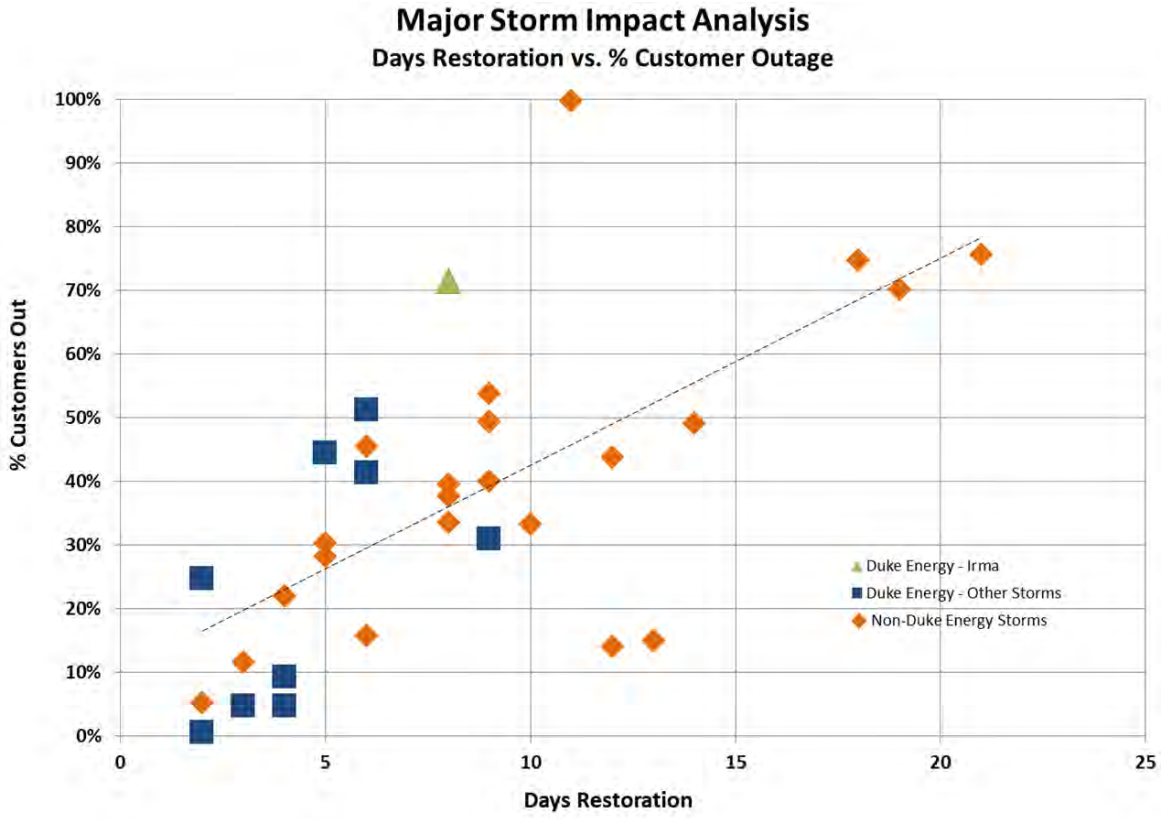
EXECUTIVE SUMMARY

- Hurricane Irma impacted Duke Energy Florida (DEF) service territory on September 10, 2017 as a Category 4 storm causing more than 70% of customers to lose power
- DEF collected forensic information on the broken poles in the early stages of the restoration and retained Accenture to conduct statistical and benchmark analysis using that data
- Accenture analysis focused on three key components:
  - **Benchmark Analysis** – leveraging “storm benchmark database” compared DEF performance against comparable storms
  - **Forensic Analysis** – using simple regression, multiple regression and multiple logistic analyses assessed the cause and effect of pole failures
  - **Storm Hardening Effectiveness** – applying visual and locational analysis evaluated the association of any broken poles to the hardening program established in 2006

Copyright © 2018 Accenture. All rights reserved.

EXECUTIVE SUMMARY – BENCHMARK

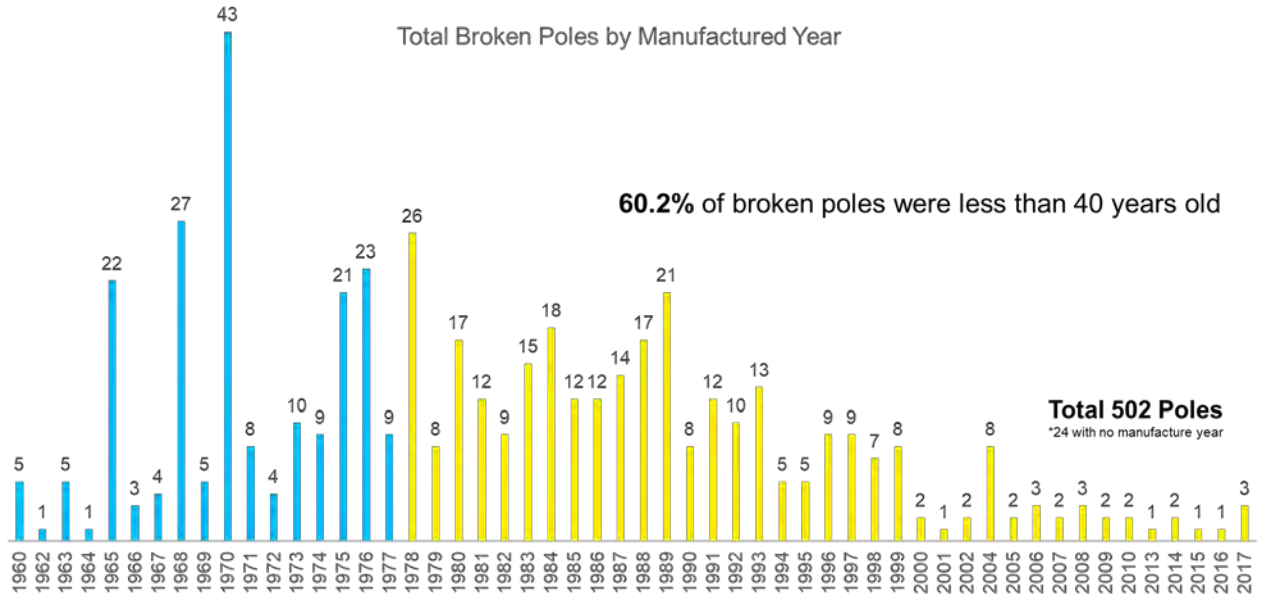
- DEF deployed a large contingent of resources to this storm to ensure fast restoration
- DEF experienced less damage to its pole infrastructure when compared to similar events
- The number of poles replaced per customers out at peak was relatively low despite the high percentage of customers being affected
- DEF's Hurricane Irma restoration restored power to all customers faster than previous hurricane events as well as previous major storm events



Copyright © 2018 Accenture. All rights reserved.

EXECUTIVE SUMMARY – FORENSIC

- Linear regression results indicated that age and pole height were correlated with failure rate.
- Multiple linear regression results suggested that the last inspection year and vegetation maintenance were not good indicators of pole failure rates.
- Results from both the simple and multiple analyses did not have a high correlation with the actual cause of pole failures. This suggests that other causal factors contributed to pole failures, e.g., damage to surrounding vegetation and additional loading on distribution facilities.
- The practice of conducting pole failure forensic analyses during major events is not yet widely used within the utility industry.

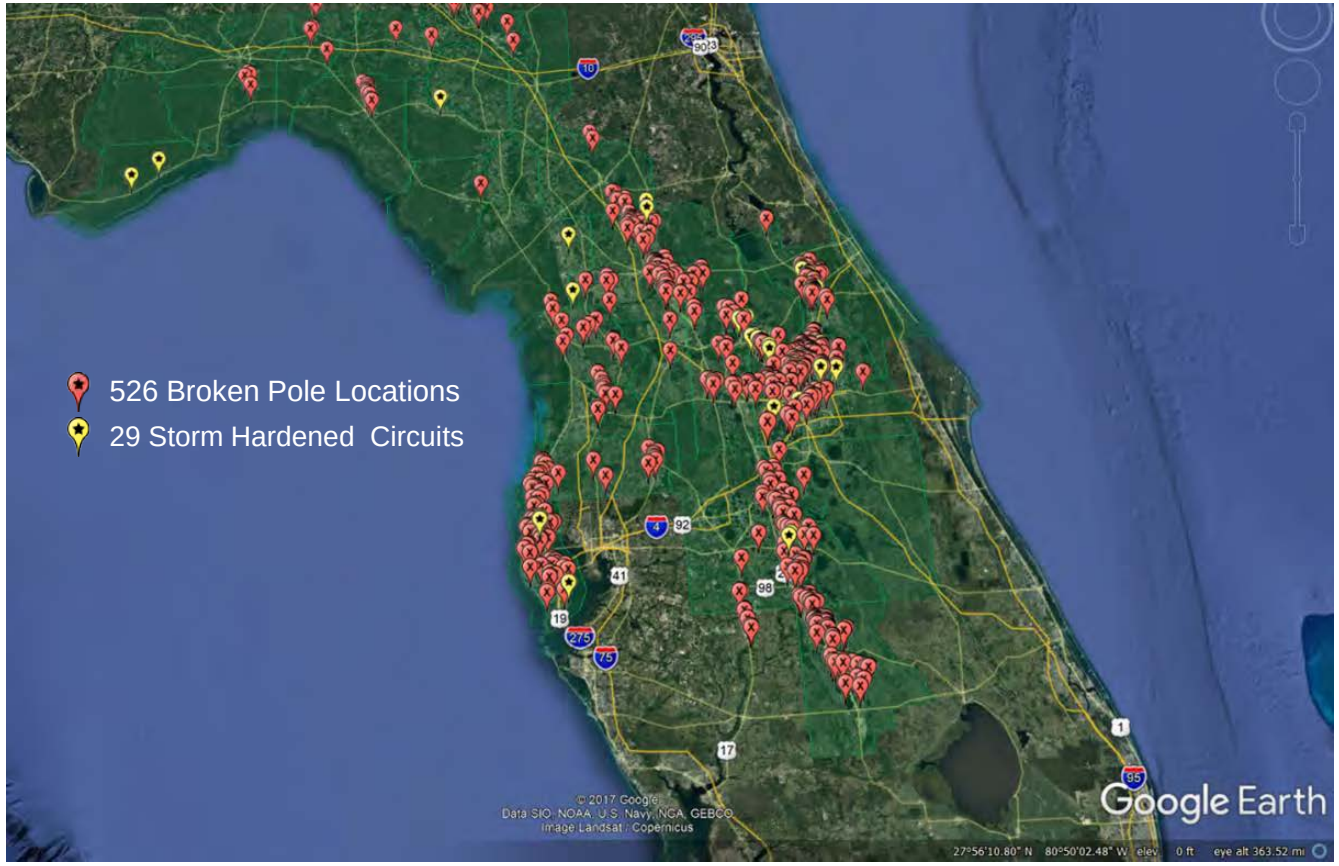


20170272-DEF-OPC-POD 1-4-00006

Copyright © 2018 Accenture. All rights reserved.

EXECUTIVE SUMMARY – SYSTEM HARDENING

- A forensic assessment of five hundred twenty-six (526) randomly selected poles was made across DEF's total broken pole population. None of these poles were a part of the 29 Storm Hardening projects.
- A separate assessment of twenty-nine (29) randomly selected Storm Hardening projects was made. No broken poles were identified.



Copyright © 2018 Accenture. All rights reserved.

OVERVIEW/ PURPOSE

OVERVIEW/PURPOSE

- Duke Energy Florida (“Duke FL”) conducted a comprehensive analysis of forensic data on pole failures that the company collected in the aftermath of Hurricane Irma
- The purpose of the study is to determine the correlations and major causes of failure
- Accenture was retained to perform the analysis and performed the following tasks:
  - **Mobilized the Project**
    - Organize the available data into a single electronic database (table) to allow for analysis
    - Identify any gaps in the data and develop strategies to gather the missing information
  - **Performed Storm Benchmark Comparison**
    - Gather key statistics from the Duke FL response to Hurricane Irma
    - Identify the comparable events from Accenture’s storm benchmarking database to compare against Duke FL’s response
    - Conduct benchmark comparison and identify key metrics
    - Develop conclusions based on the benchmark analysis
  - **Conducted data analysis**
    - Define Duke FL’s hypotheses
    - Conduct the regression analysis or apply other analytic methods to allow for statistically valid assessment of the correlations of the different factors
    - Identify the key drivers or pole failures and determine the overall cause and effect
    - Develop conclusions based on the statistical analysis
  - **Synthesize and Summarized**
    - Prepare a summary report that describes the methodology and conclusions based on the pole failure data analysis and the benchmark comparison

Copyright © 2018 Accenture. All rights reserved.

BENCHMARKING COMPARISON

accentureconsulting

METHODOLOGY/APPROACH

Two methods were used to collect data for benchmarking:

- Surveys
  - Duke FL provided metrics surrounding the restoration efforts of Hurricane Irma
  - Additional surveys were completed by other utilities for storms over the past 25+ years
  - The survey focused on three areas:
    - System Information
    - Storm Magnitude
    - Restoration Performance
- Historical/Archival Research
  - Additional research completed to enhance the benchmarking for restorations performed by other North American utilities that was not collected through surveys
  - These sources were collected from public filings with the commission and archival news feeds from the utility websites

Copyright © 2018 Accenture. All rights reserved.

METHODOLOGY/APPROACH

- Identified similar category 1 – 4 hurricanes to perform the analysis of Duke FL's restoration efforts versus other utility companies captured in Accenture's storm benchmarking database from 1989 – 2017
- Highlighted restoration performances from Duke Energy and Progress Energy
- Accenture is using statistics that allow comparison without disclosing specific system information

Copyright © 2018 Accenture. All rights reserved.

DATA COLLECTION DEMOGRAPHICS

- 26 of 51 utilities included in the benchmarking
- 23 of 56 major events are included in the analysis
- 45 out of 119 unique restorations

Storm Type	Storm Name	Total
Hurricane Category 1	Fran	2
	Frances	2
	Hermine	1
	Hugo	1
	Humberto	1
	Irene	10
	Katrina	1
	Sandy	5
Hurricane Category 2	Elvis	1
	Georges	1
	Gustav	1
	Gustav + Ike	3
	Juan	1
	Isabel	2

Storm Type	Storm Name	Total
Hurricane Category 3	Ivan	2
	Jeanne	2
	Rita	2
	Wilma	1
Hurricane Category 4	Charley	2
	Hugo	1
	Irma	1
	Matthew	1
Hurricane Category 5	Floyd	1
Grand Total		**45**

Customers Served Range	# of Companies
0 – 500k	8
500k – 1 mil	2
1 mil – 1.5 mil	5
1.5 mil – 2 mil	2
2 mil – 2.5 mil	6
Over 2.5 mil	3
Grand Total	**26**

Copyright © 2018 Accenture. All rights reserved.

DATA COLLECTION
DUKE FL - IRMA STATISTICS

Company Information	
Total Number of Customers Served	1.8M
Total Overhead Distribution Line miles	18,000 miles
Total Underground Distribution Miles	14,000 miles

Storm Description	
Storm Name	Hurricane Irma
Storm Type	Hurricane
Storm Category	4
Start Date	September 10, 2017

Storm Damage Information	
Number of Customers Out at Peak	1,284,816
Number of Customers Out	1,738,030
Number of T&D Poles Replaced	2,271
Number of Transformers Replaced	1,106
Number of Conductor Feet Replaced	939,840 feet
Total Spans of Wire Down	> 26,000

Restoration Resources	
Total Line FTEs	7,500
Total Veg. Management FTEs	2,500
Total Damage Assessment Resources	2,408
Peak Number of Field Resources Deployed	12,500

Restoration Duration	
Restoration Duration (# Days)	8 days

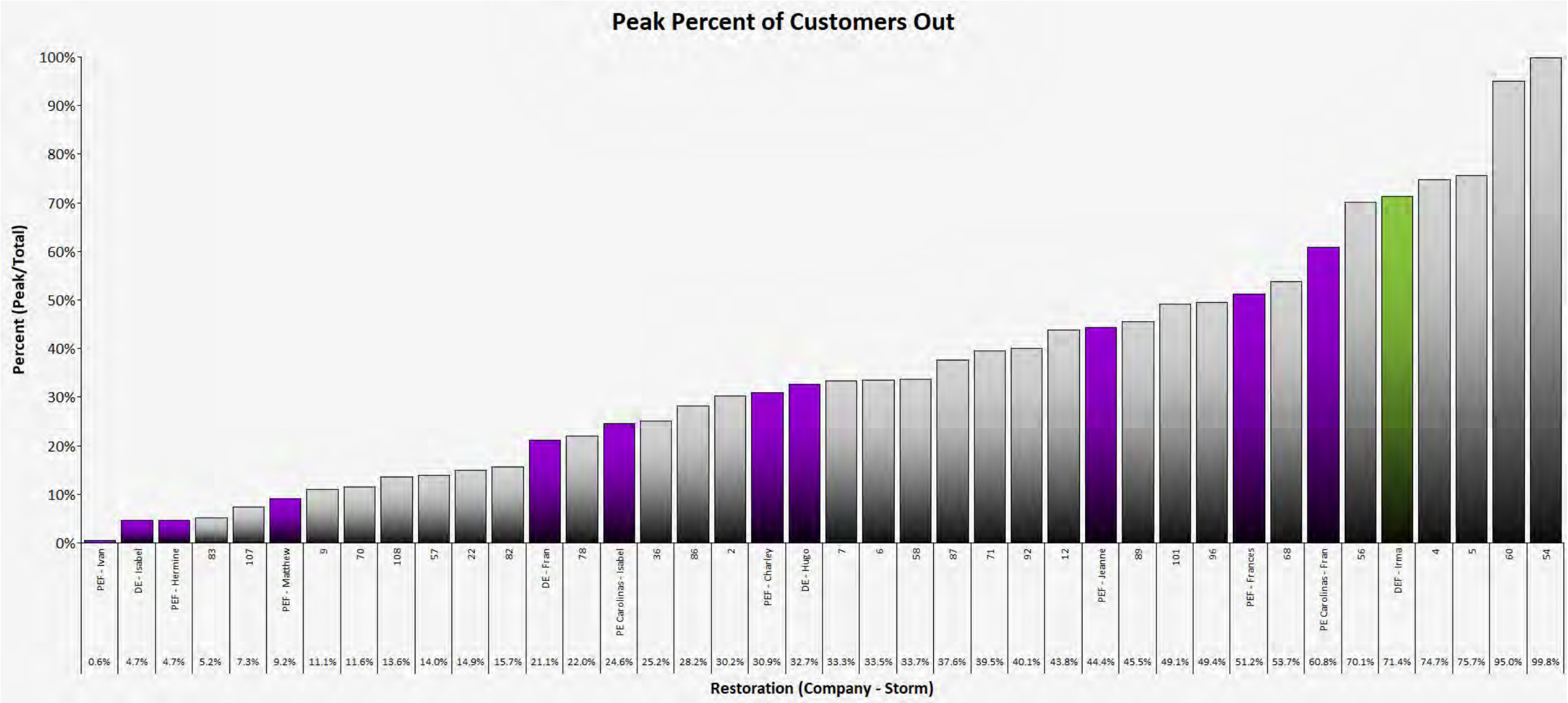
Restoration Costs	
Total Restoration Cost	$500M - $550M

Storm Drills	
Number of Storm Drills Per Year	1
Number of Table Top Exercises Per Year	2

Vegetation Management	
Average Tree-Trimming Cycle	3yr backbone / 5yr branchlines

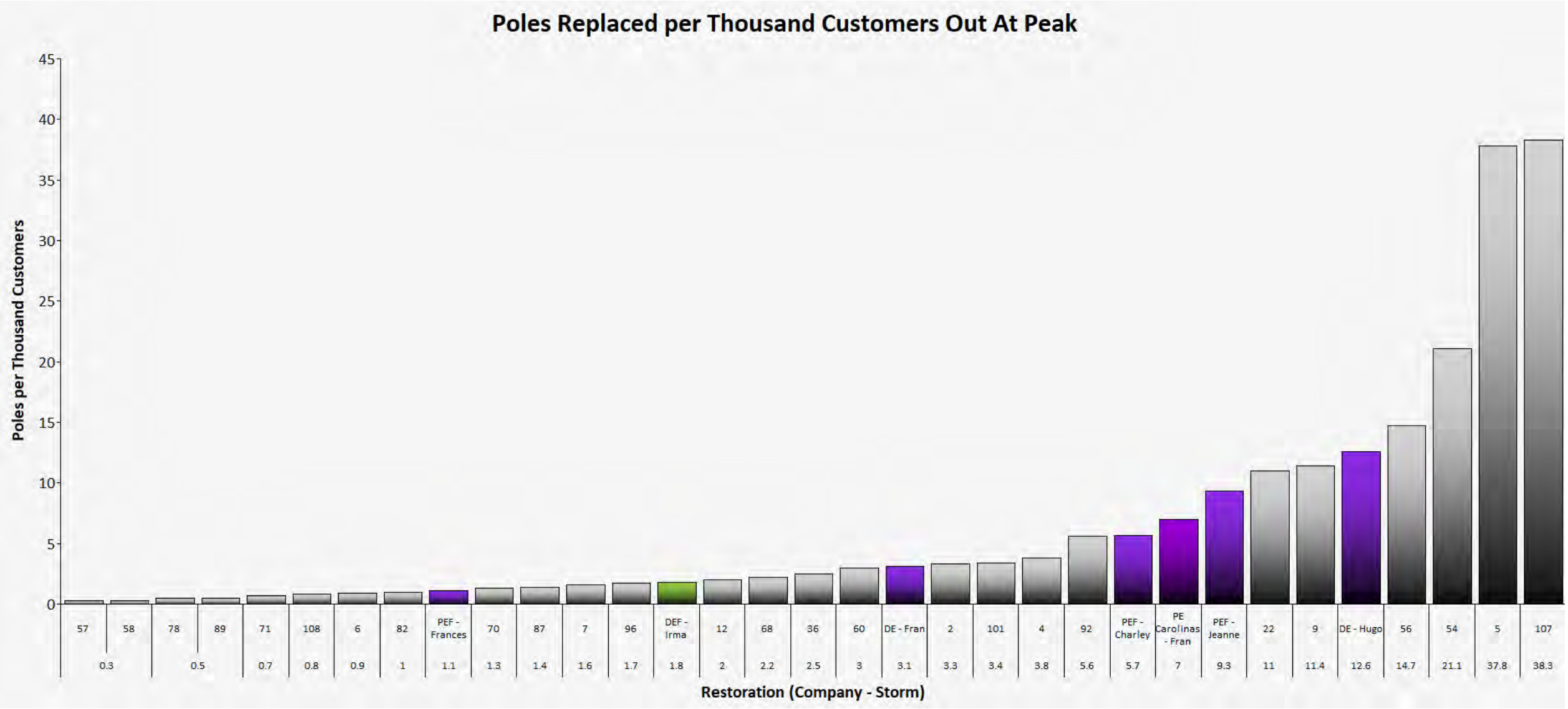
Copyright © 2018 Accenture. All rights reserved.

BENCHMARK RESULTS



Copyright 2018 Accenture. All rights reserved.

BENCHMARK RESULTS



20170272-DEF-OPC-POD 1-4-000016

Copyright 2018 Accenture. All rights reserved.

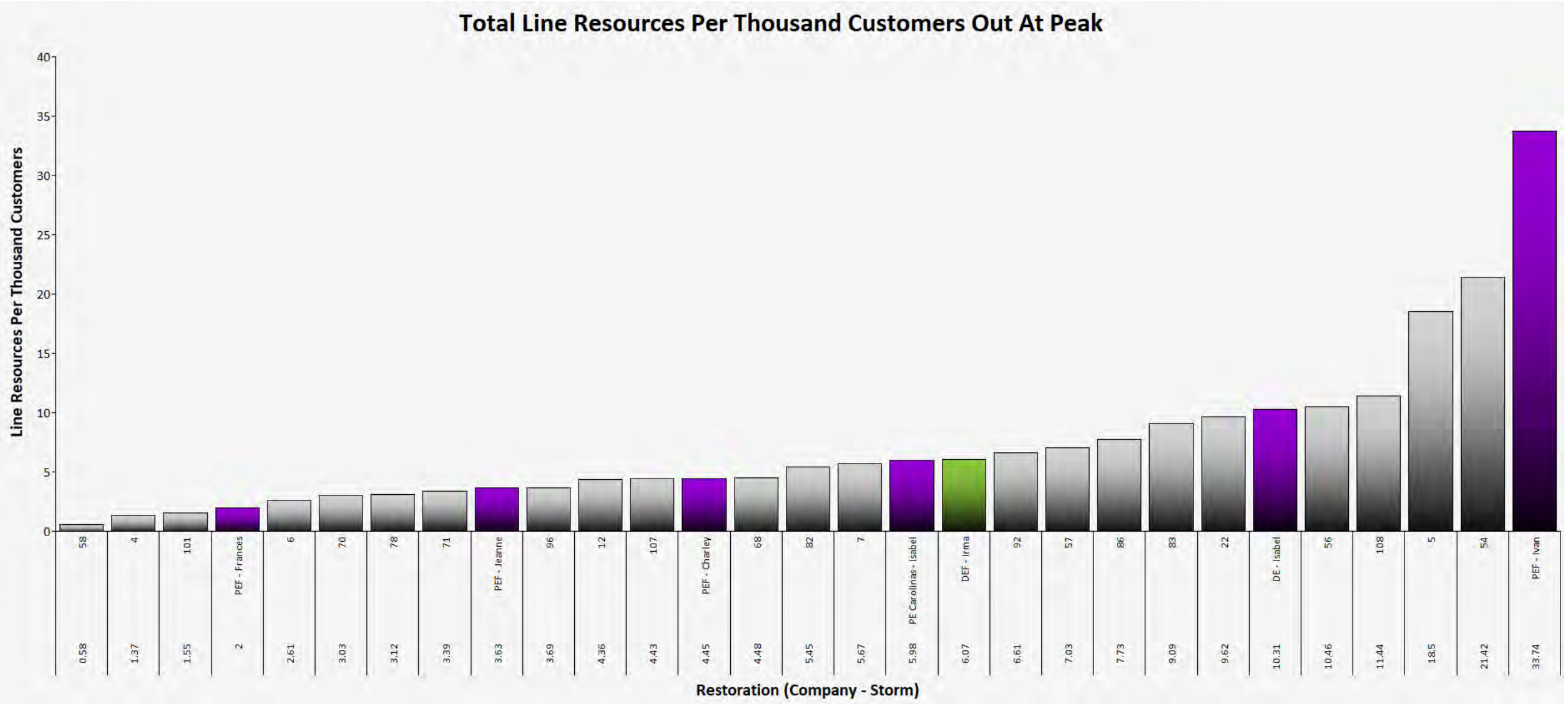
BENCHMARK RESULTS



20170272-DEF-OPC-POD 1-4-000017

Copyright 2018 Accenture. All rights reserved.

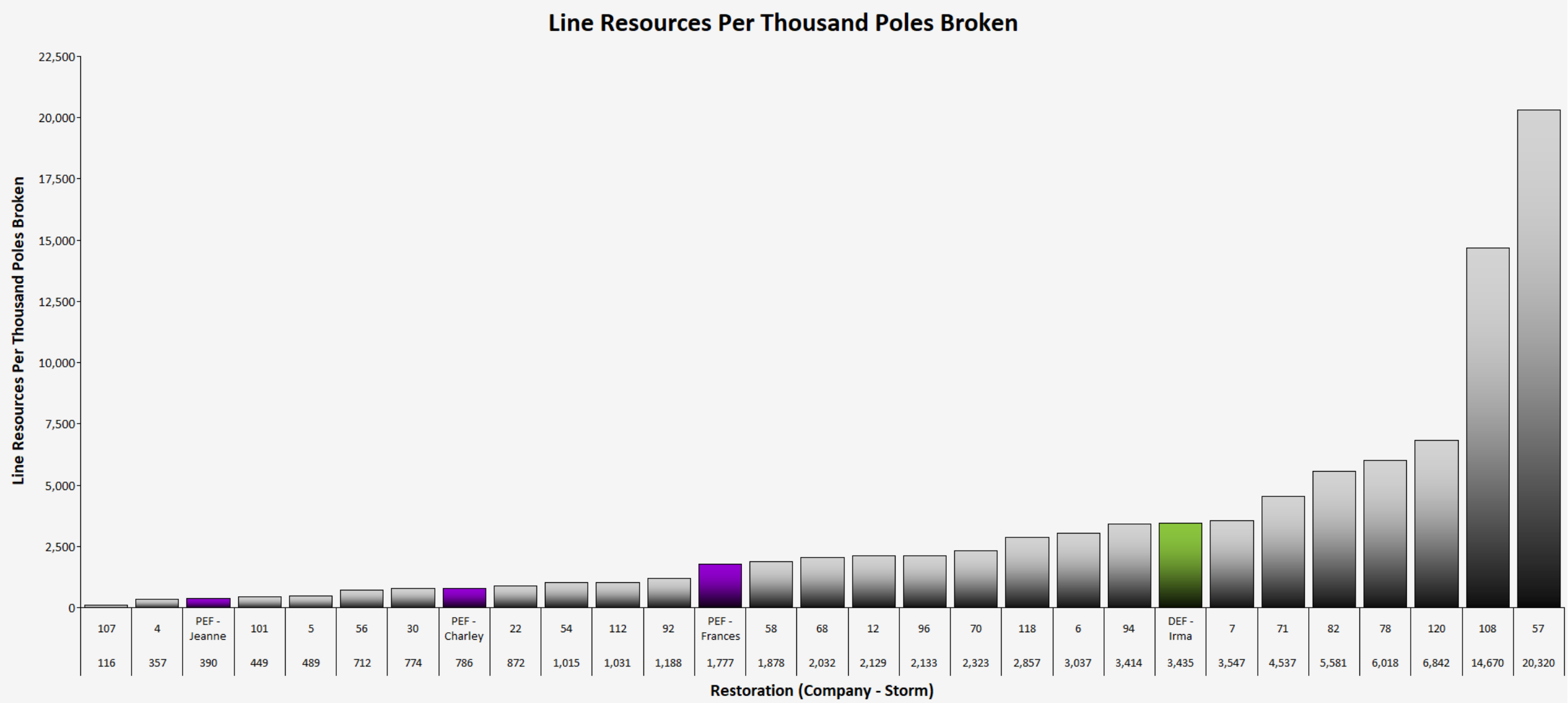
BENCHMARK RESULTS



20170272-DEF-OPC-POD 1-4-000018

Copyright 2018 Accenture. All rights reserved.

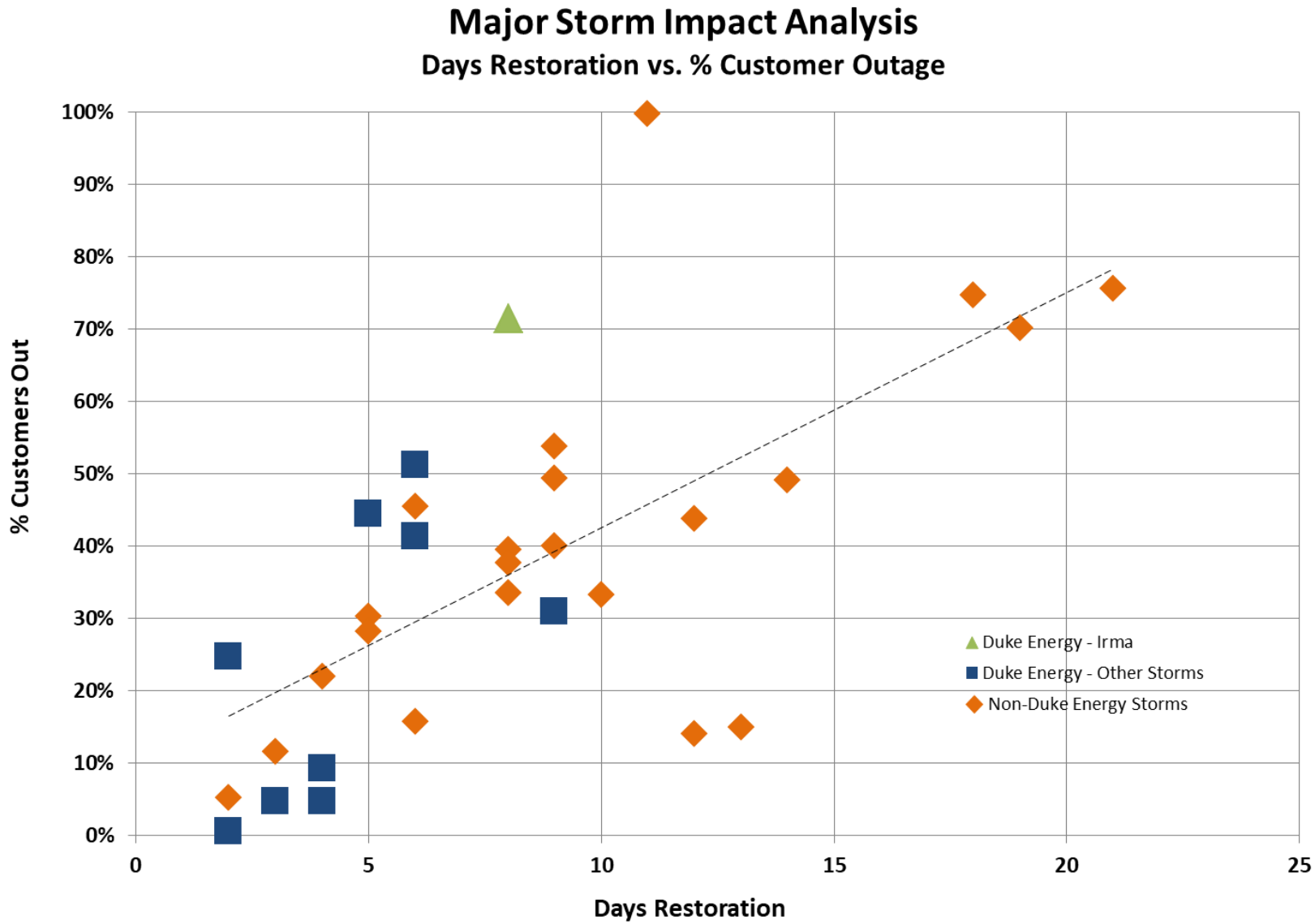
BENCHMARK RESULTS



20170272-DEF-OPC-POD 1-4-000019

Copyright 2018 Accenture. All rights reserved.

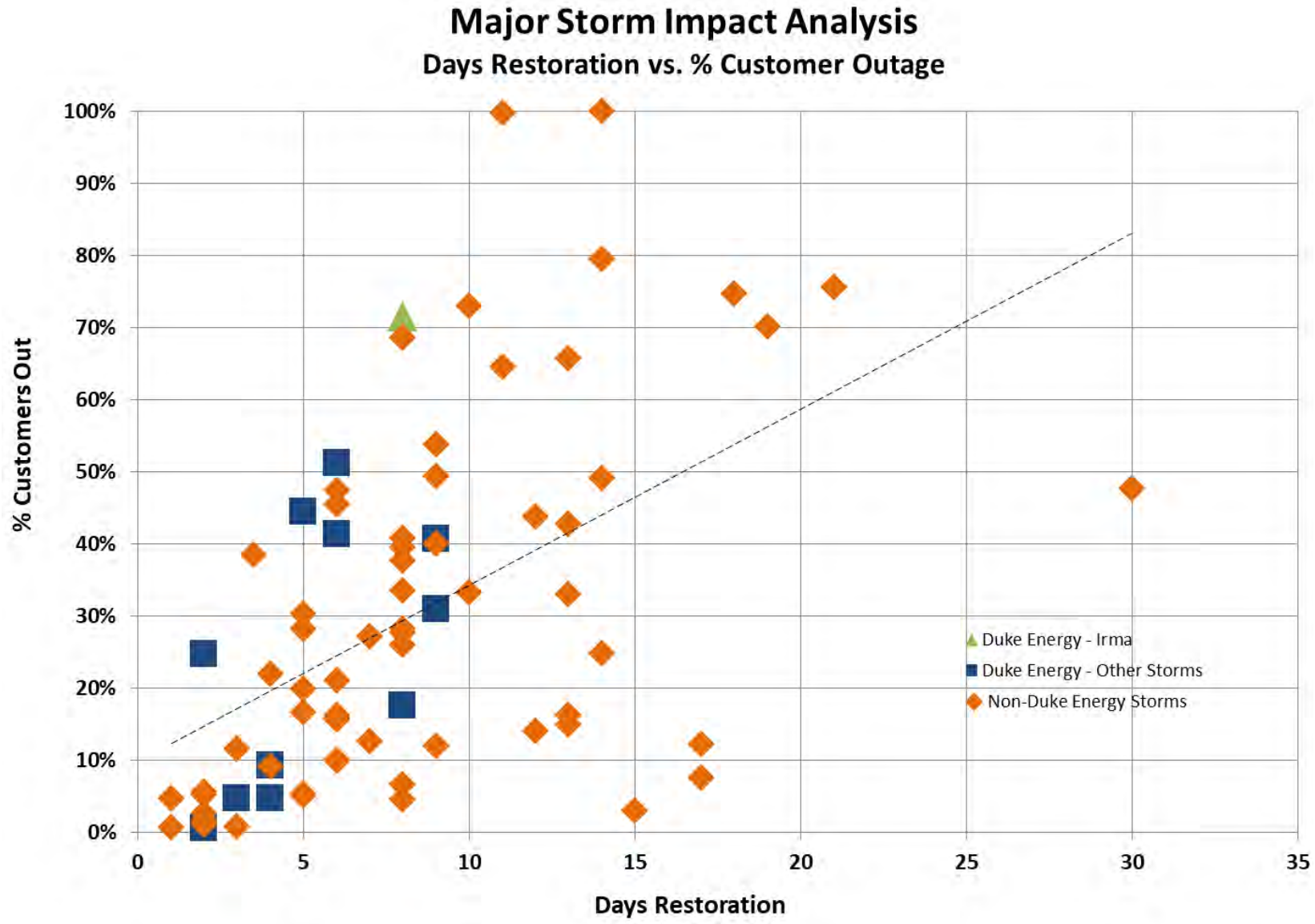
BENCHMARK RESULTS– ALL HURRICANES



20170272-DEF-OPC-POD 1-4-000020

Copyright 2018 Accenture. All rights reserved.

BENCHMARK RESULTS– ALL RESTORATIONS



20170272-DEF-OPC-POD 1-4-000021

Copyright 2018 Accenture. All rights reserved.

FINDINGS

Based on the high-level benchmark analysis:

- Duke Florida experienced less damage to its infrastructure when compared to similar events
  - Number of poles replaced per customers out at peak is relatively low despite the high percentage of customers being affected
  - This could indicate that the storm caused more of “wire” damage than “pole” failures, which can be interpreted that the infrastructure withstood the storm fairly well
- Duke Florida’s Hurricane Irma restoration cost per customer out and per pole replaced was higher but the company restored power to all customers faster than comparable events
  - In comparison to other hurricanes in Accenture’s database, The Company aggressively deployed a large contingent of resources for this storm.

Copyright 2018 Accenture. All rights reserved.

DUKE ENERGY FLORIDA

FORENSICS ANALYSIS

accentureconsulting

METHODOLOGY

Analyze **broken pole data** through visualizations

Compare **broken pole data to distribution wood pole inventory** to identify factors that contributed to pole failure

Use **regression analyses** to test the correlations between potential pole failure factors and the rate of pole failure by circuit

Factors Considered:

- wind
- gust
- manufactured year
- pole height
- last inspection date
- vegetation level

Copyright 2018 Accenture. All rights reserved.

ASSUMPTIONS

- ✓ All data used including Broken Pole Forensics, GIS Inventory and Inspection data provided by Duke Energy
- ✓ Used Equip_ID and Cust_Data_ID to integrate Broken Pole Forensics, GIS Inventory and Inspection data
- ✓ Assumed that GIS contains a full inventory of Duke owned poles
- ✓ **526** broken wood poles were included in the forensic analysis out of a total of 2,130 distribution poles that were broken during the event
- ✓ Poles that had incomplete data were excluded from this population

Copyright 2018 Accenture. All rights reserved.

DATA COLLECTION

Broken Poles Included in Forensic Analysis

2,130 Total Broken Distribution Poles

687 Total Unique Broken Poles Sampled
— **114** Broken Poles not Duke, not Distribution, or not made of wood =

573 Distribution Broken Poles

- 47 Not Matched to GIS data =

526 Broken Poles Total
471 Broken Poles with Forensic Data

Pole Inventory – Duke Florida

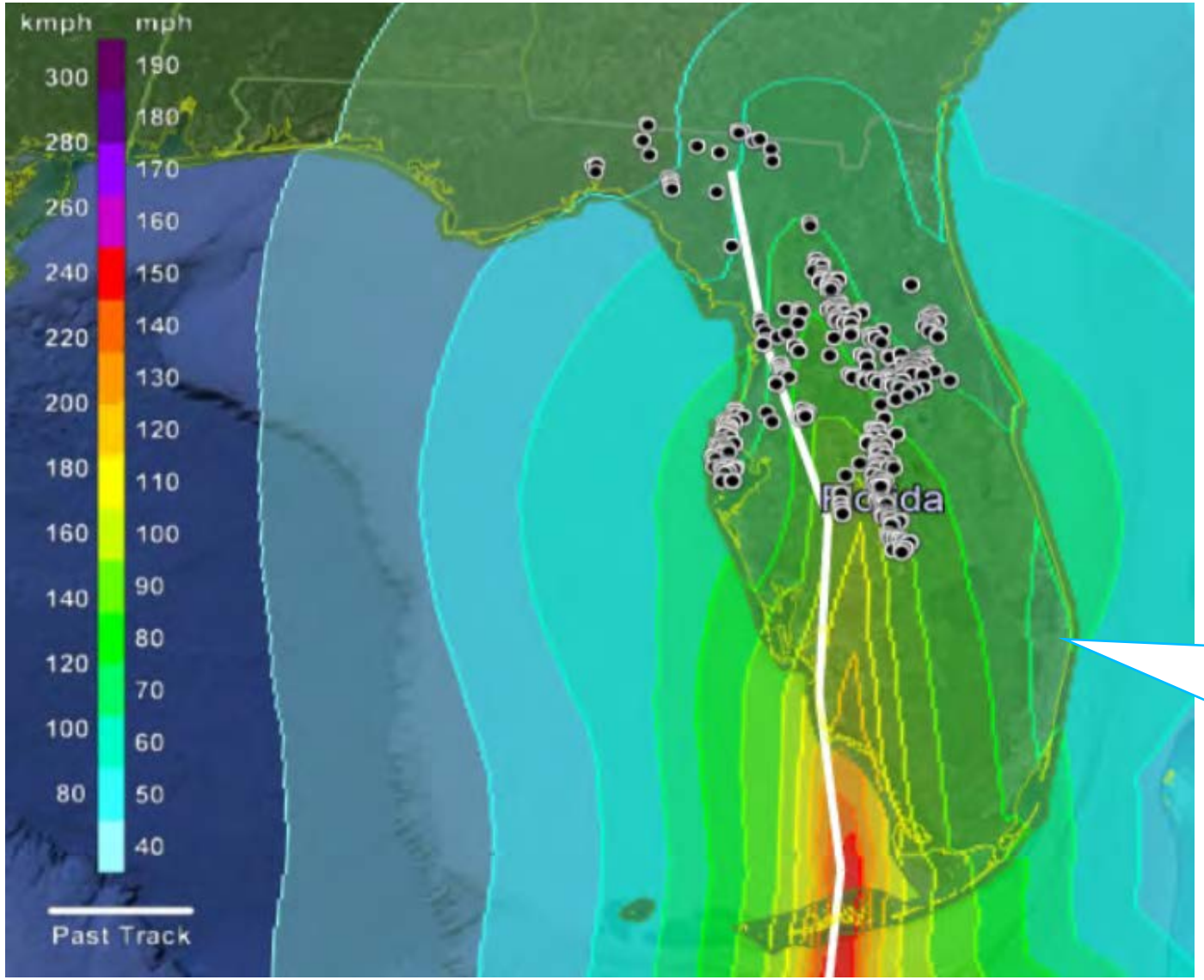
1,083,388 Total Unique Pole Records

— **257,655** Transmission
— **99,469** Not Wood
— **624** Non Duke =

725,640 Total Distribution wood poles

Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS



https://data.humdata.org/dataset/hurricane-irma-windspeed

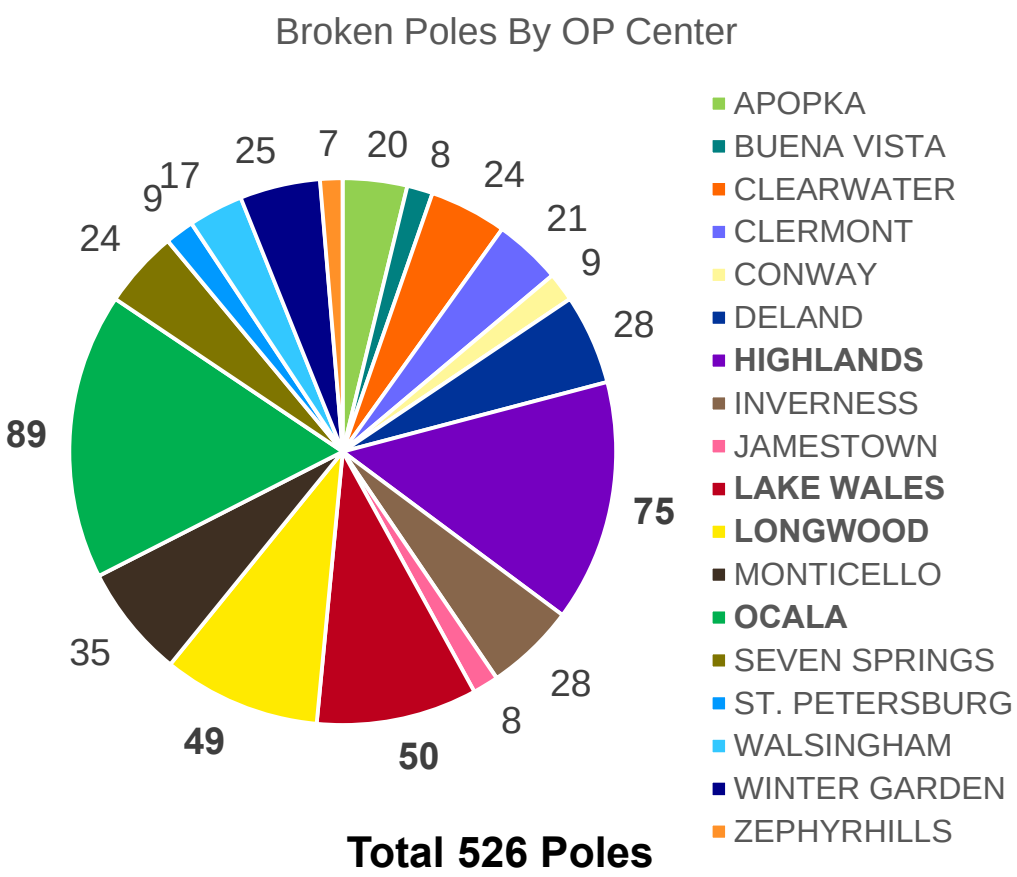
526 Broken Poles

Irma Path
9/11 12am – 12pm

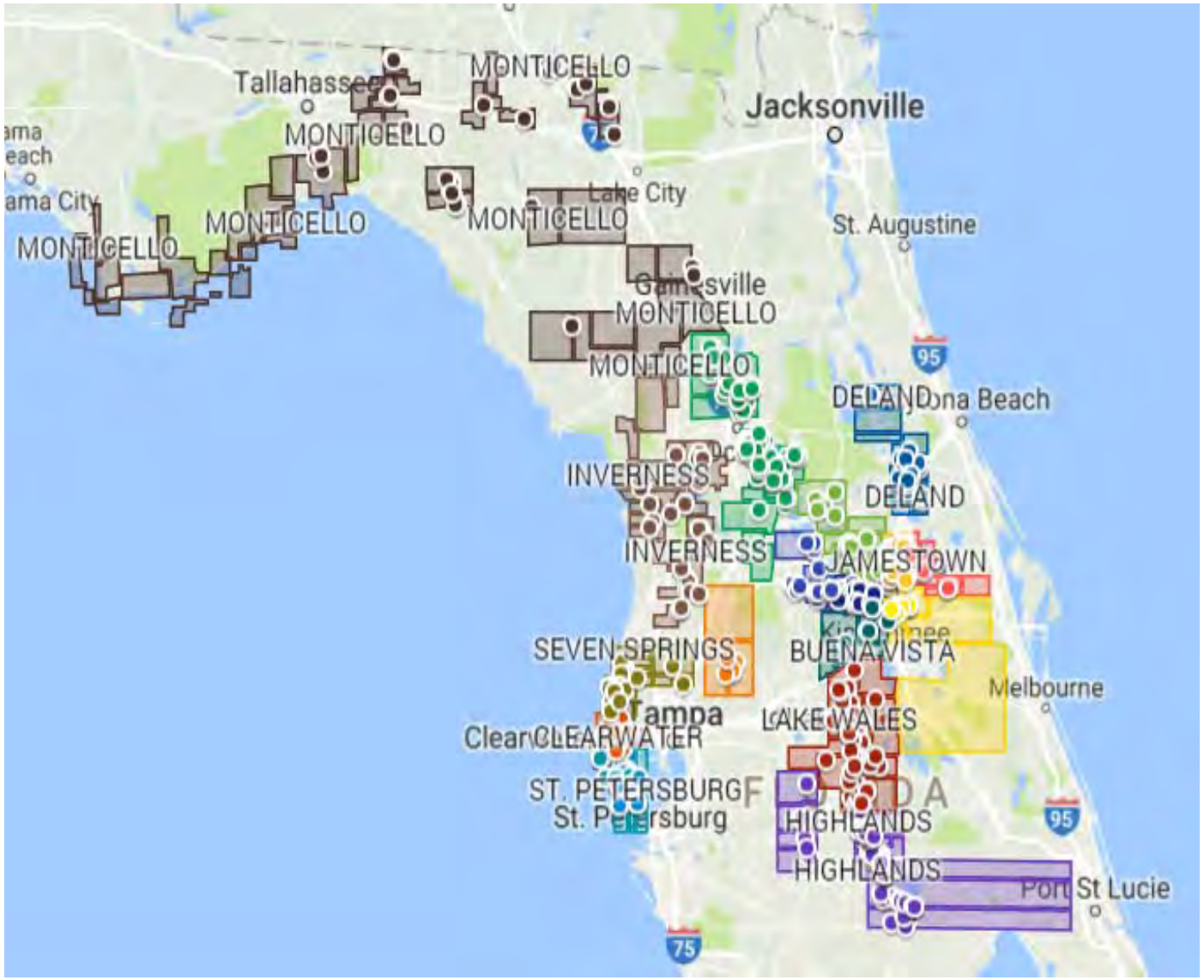
20170272-DEF-OPC-POD 1-4-000027

Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS



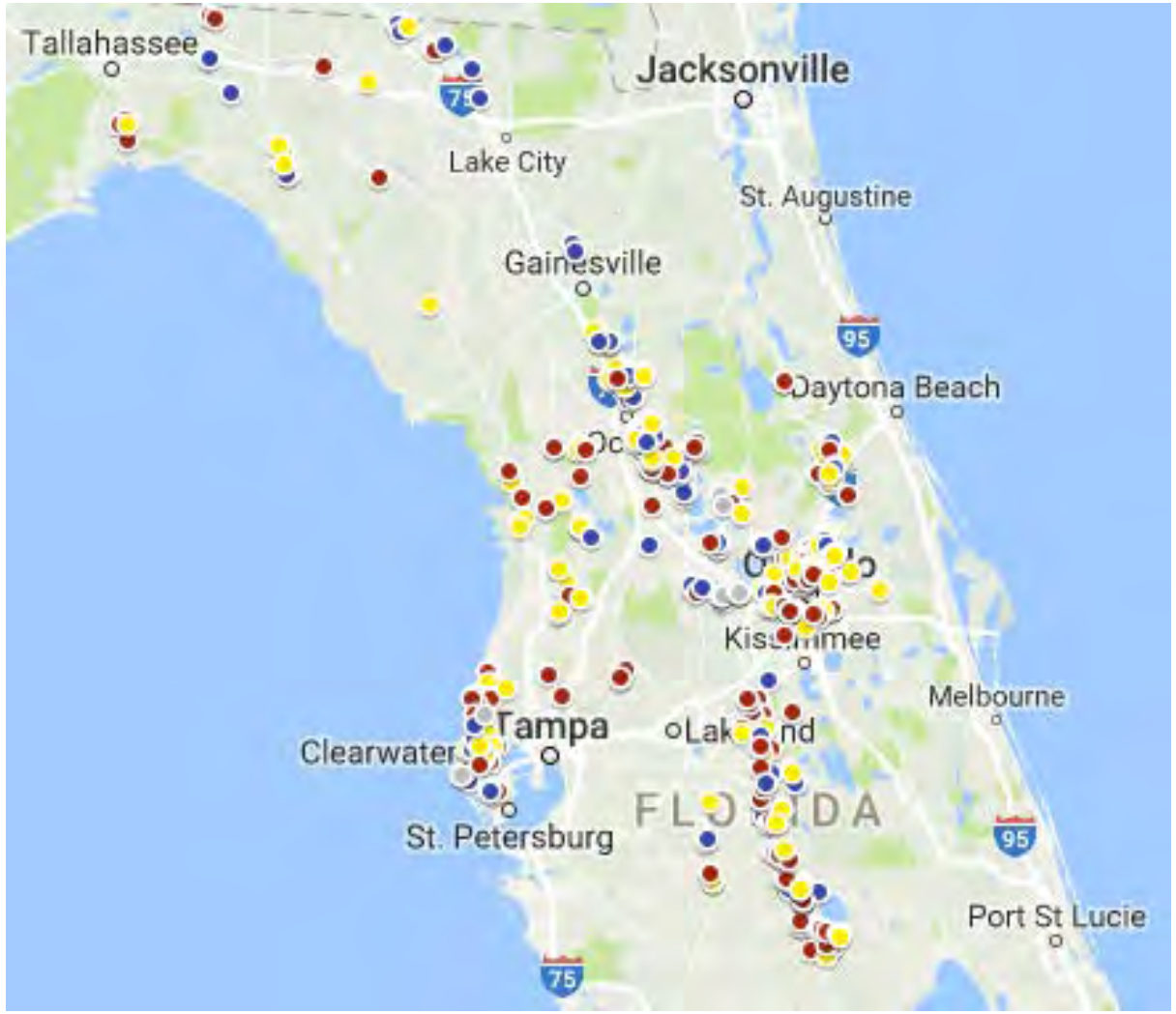
50% of broken pole data came from **Ocala**, **Highlands**, **Lake Wales** and **Longwood** OP Centers



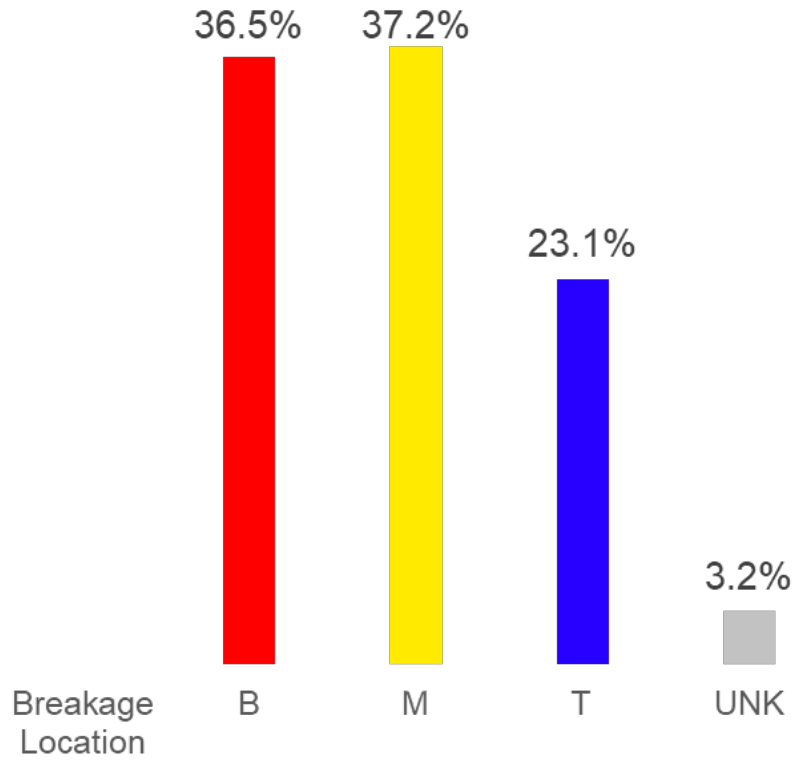
20170272-DEF-OPC-POD 1-4-000028

Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS



- **37.2%** of poles broke in the middle



Total 471 Poles

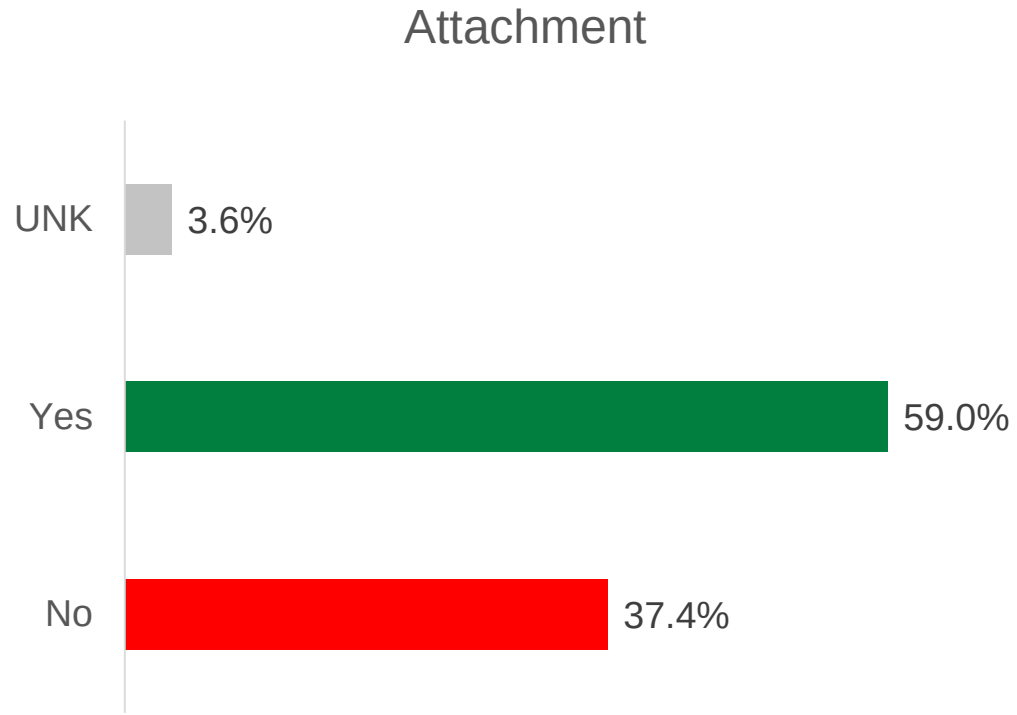
***66 poles that broke at the bottom did not have reject status information**

20170272-DEF-OPC-POD 1-4-000029

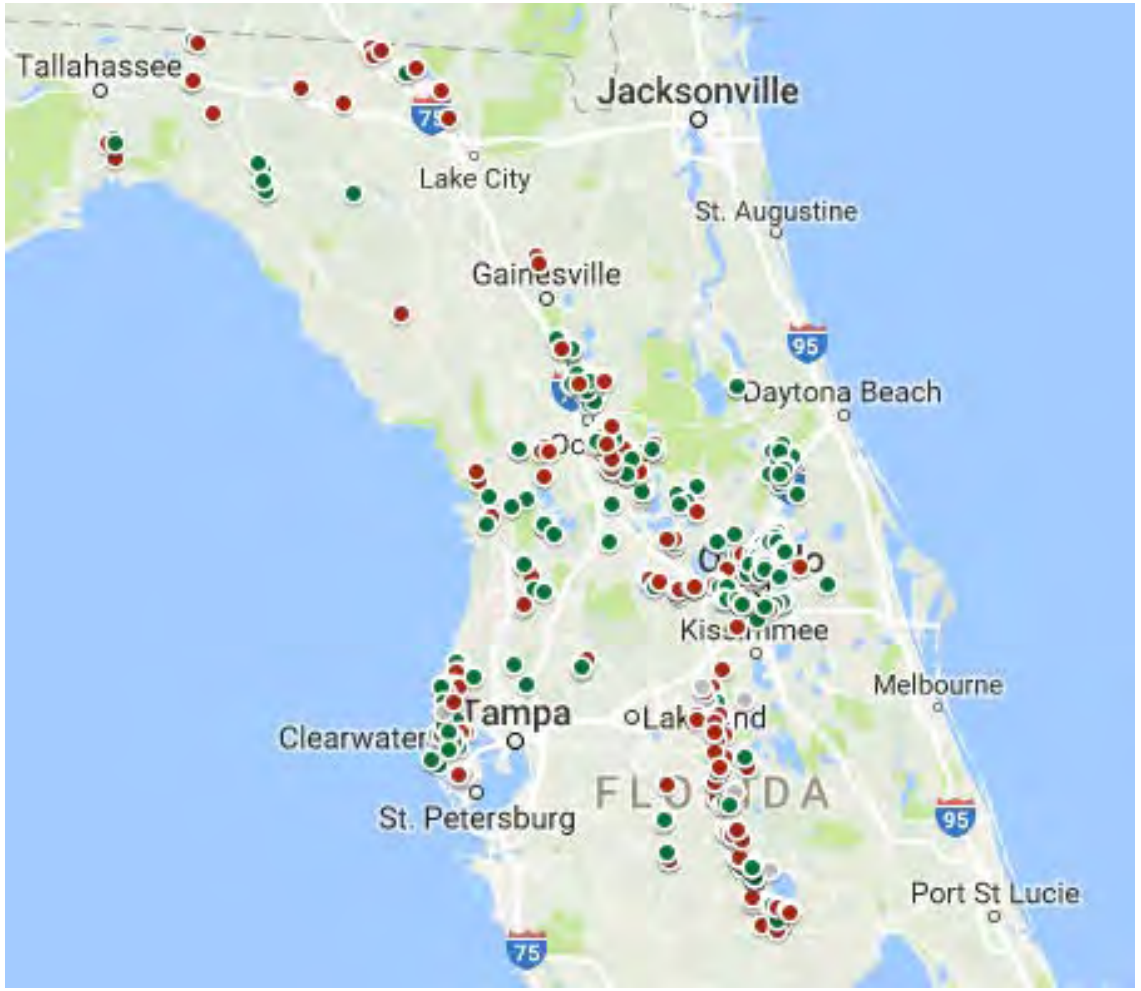
Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS

59% of broken poles had an attachment



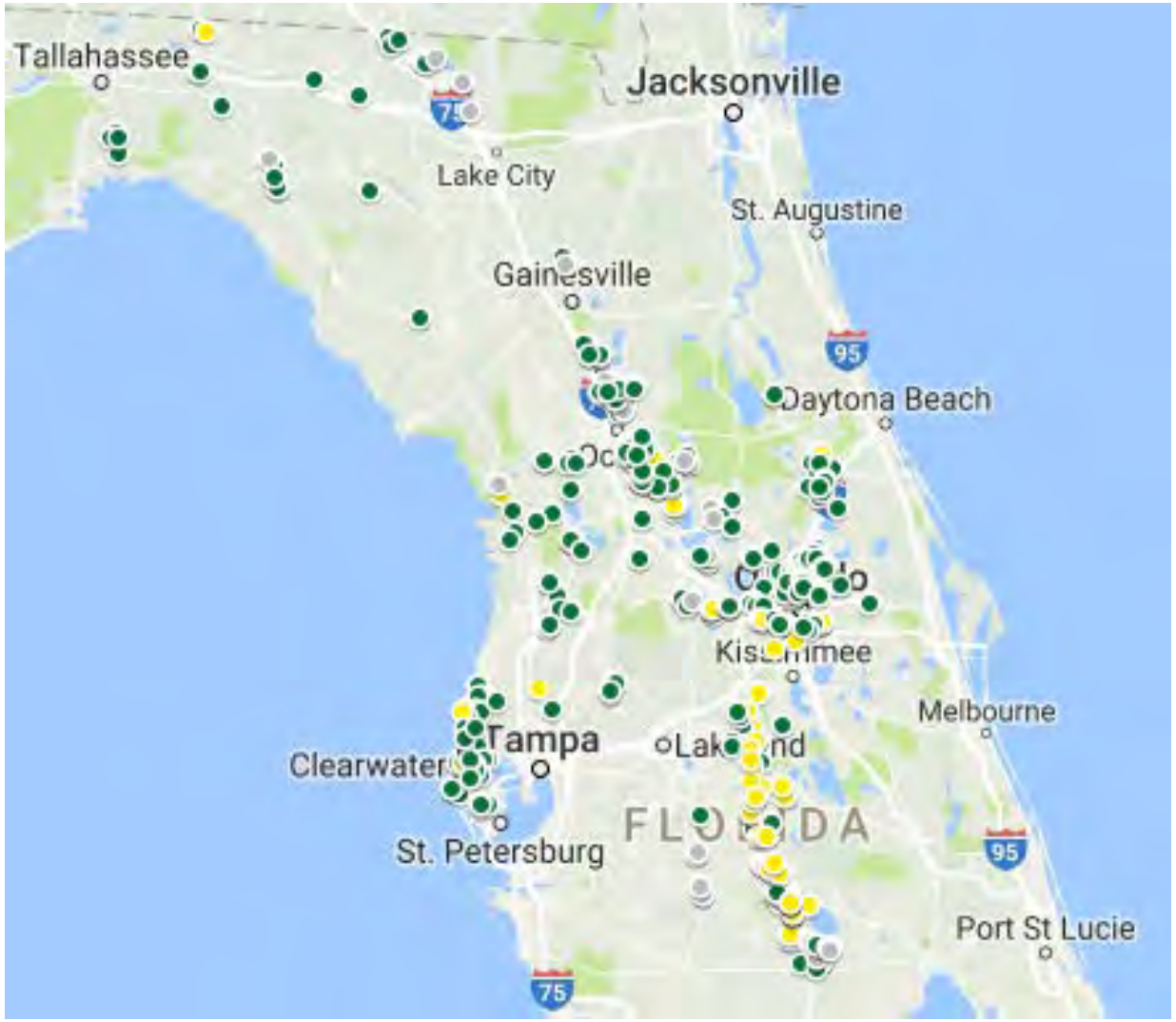
Total 471 Poles



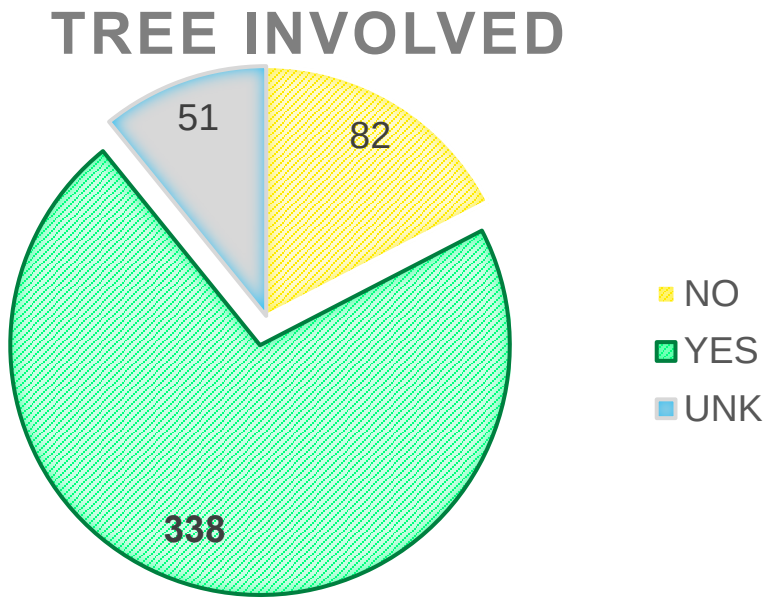
20170272-DEF-OPC-POD 1-4-000030

Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS



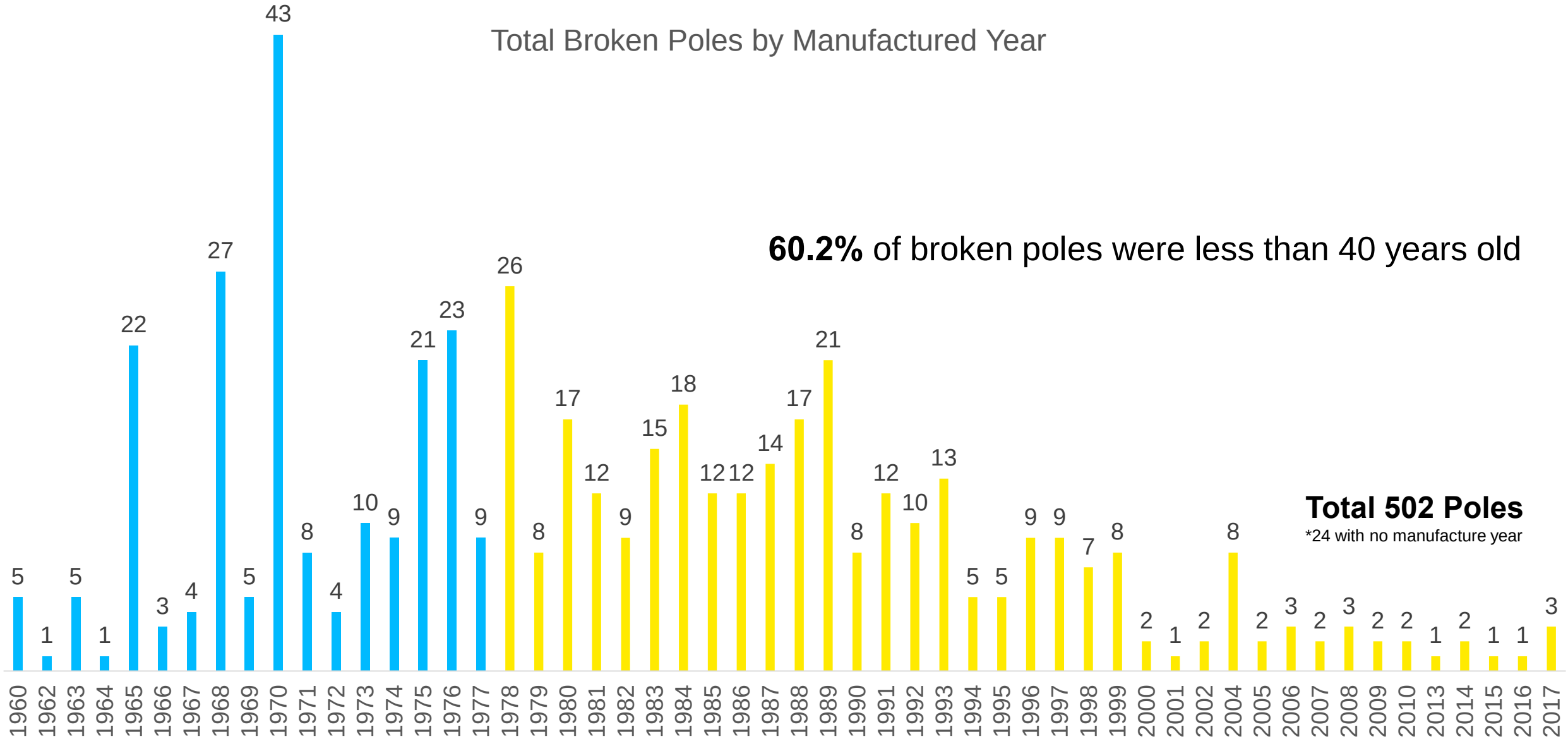
71.8% of broken poles had a tree involved



Total 471 Poles

Copyright 2018 Accenture. All rights reserved.

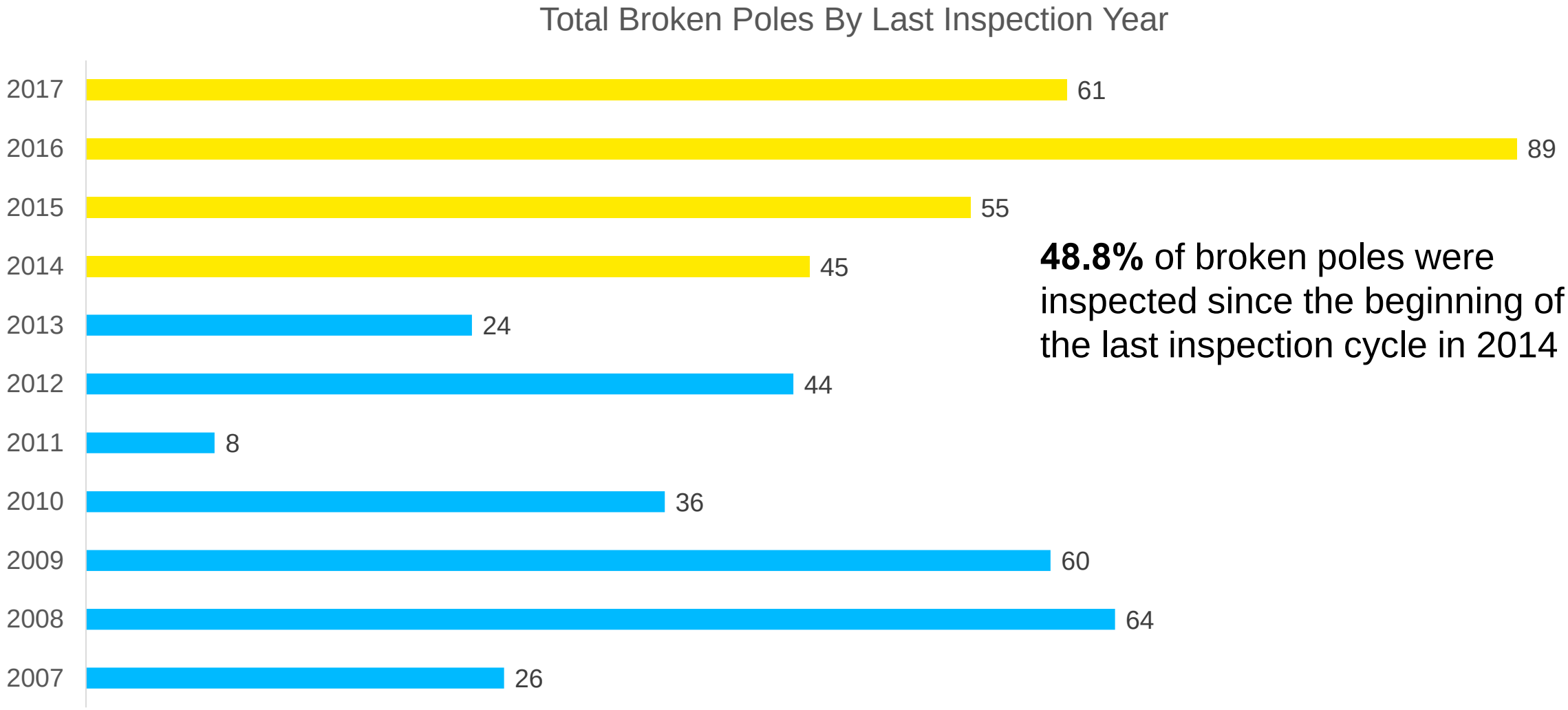
BROKEN POLE VISUALIZATIONS



20170272-DEF-OPC-POD 1-4-000032

Copyright 2018 Accenture. All rights reserved.

BROKEN POLE VISUALIZATIONS



48.8% of broken poles were inspected since the beginning of the last inspection cycle in 2014

Total 512 Poles

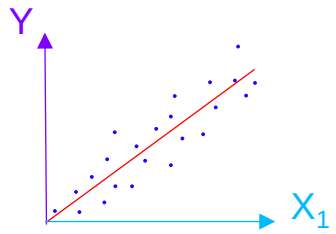
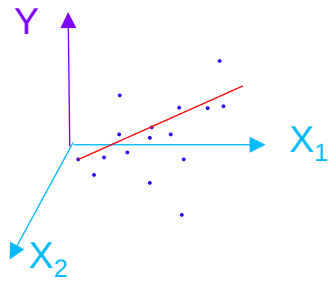
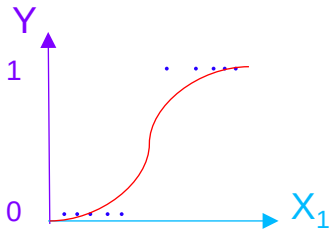
*14 with no inspection year

20170272-DEF-OPC-POD 1-4-000033

Copyright 2018 Accenture. All rights reserved.

INTRO TO REGRESSION ANALYSES

Regression analysis is a way of mathematically determining the relationship between two or more variables. In our analysis we employ three types of regression analyses.

Type of Regression	Model Design	Why we use it
Simple Linear Regression 	$Y = Intercept + Correlation * X_1 + Error$ Y = Percent Pole Failure by Circuit X_1 = Pole Failure Factor (wind, gust, manufactured year, last inspection, off cycle)	▪ Determine correlation between each individual pole failure factor and pole failure rate
Multiple Linear Regression 	$Y = Intercept + Correlation * X_1 + Correlation * X_2 + \ldots + Error$ Y = Percent Pole Failure by Circuit X_1 = Pole Failure Factor i.e. wind speed … X_n = Pole Failure Factor i.e. max off cycle	▪ Consider the impact of the combination of all pole failure factors on percent pole failure rate ▪ Determine which factors compared to others have the most predictive power
Multiple Logistic Regression 	$\text{Log}\left(\frac{Y}{1-Y}\right) = Intercept + Correlation * X_1 + Correlation * X_2 + \ldots + Error$ Y = Likelihood of failing with tree involved X_1 = Pole Failure Factor i.e. wind speed … X_n = Pole Failure Factor i.e. attachment	▪ Given that a pole fails, determine what factors were contributed to it having a tree involved

Copyright 2018 Accenture. All rights reserved.

INTERPRETING REGRESSION RESULTS

There are multiple measures we can look at to understand the results of linear regression, including the **Correlation Coefficient Estimate**, associated **P Values**, and **R^2 Value**. Consider the example below:

Example Results:

Y = Intercept + **Correlation** * X_1 +…+ Error

Y = Percent Pole Failure by Circuit
X_1= Pole Failure Factor i.e. Avg Pole Height

	Estimate	P Value
Intercept	1.734e-03	0.00025***
Avg Pole Height	**-2.979e-05**	**0.01267***

Correlation Coefficient Estimate – This value denotes the relationship between the potential pole failure factor and pole failure rate. A positive value indicates that factor and pole failure are directly related (i.e. taller poles are associated with a higher pole failure rate). A negative value indicates that the factor and pole failure are inversely related (i.e. taller poles are associated with a lower pole failure rate).

P Value – The P value of a correlation coefficient estimate helps us understand how confident we can be in the correlation coefficient estimate. In our regression analysis, it is the probability that we falsely determine a correlation between the pole failure factors and pole failure rate with our sample data, given that there is no correlation. A small p value (typically <0.05) indicates a statistically significant correlation coefficient estimate.

In our results if:

P <.05 the p value is marked with a '*'
P < .01 the p value is marked with a '**'
P < .001 the p value is marked with a '***'

R^2 Value – The R^2 value is a measure that is used to determine how well the regression model fits the observed data set. It is the proportion of variance in percent pole failure that is explained by the model. R^2 values range from 0-1. The closer this value is to 1, the higher the model's predictive power of observed pole failure rates.

Copyright 2018 Accenture. All rights reserved.

POLE FAILURE FACTORS CONSIDERED

In our regression analysis, we measure the following pole failure factors against the **average percent pole failure by circuit**.

Factor (by circuit)	Description	Minimum	Maximum	Median	Sample
Max Wind (mph)	Maximum wind speed experienced by a pole on the circuit measured from the closest weather center	15.8	70.2	41.4	1,215 circuits
Max Gust (mph)	Maximum gust speed experienced by a pole on the circuit measured from the closest weather center	20	88.6	58.4	1,083 circuits
Avg Manufactured Year	Average manufactured year by circuit	1963	2014	1987	1,235 circuits
Avg Height (ft.)	Average pole height by circuit measured in feet	16	52	39	1,269 circuits
Avg Last Inspection Year	Average pole last inspection year from consolidated inspection data	2007	2017	2013	1,249 circuits
Vegetation Management	Off cycle circuits given a value of 1. On cycle circuits given a value of 0.	0	1	0	1,248 circuits

Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: MAX WIND

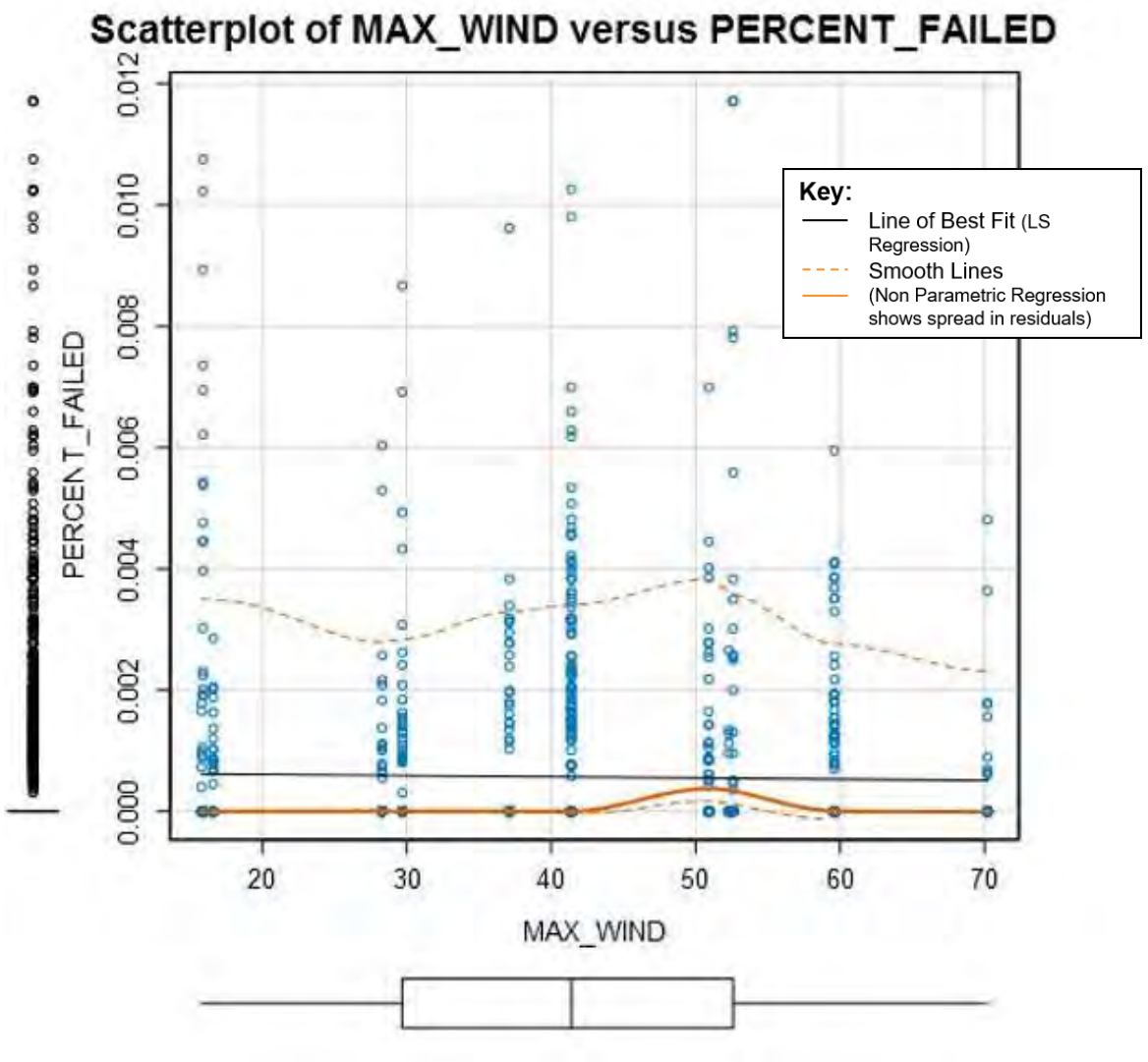
Data Summary

Variable	Min	Max	Median	Sample Size
Max Wind (x)	15.8 mph	70.2 mph	41.4 mph	1,215 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	6.498e-04	2.97e-08***
Max Wind	-2.038e-06	0.44725

- No statistically significant relationship between max wind experienced by a circuit and pole failure rate (P = 0.44725 >0.05)
- Data suggests other factors contributed to distribution pole failure



Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: MAX GUST

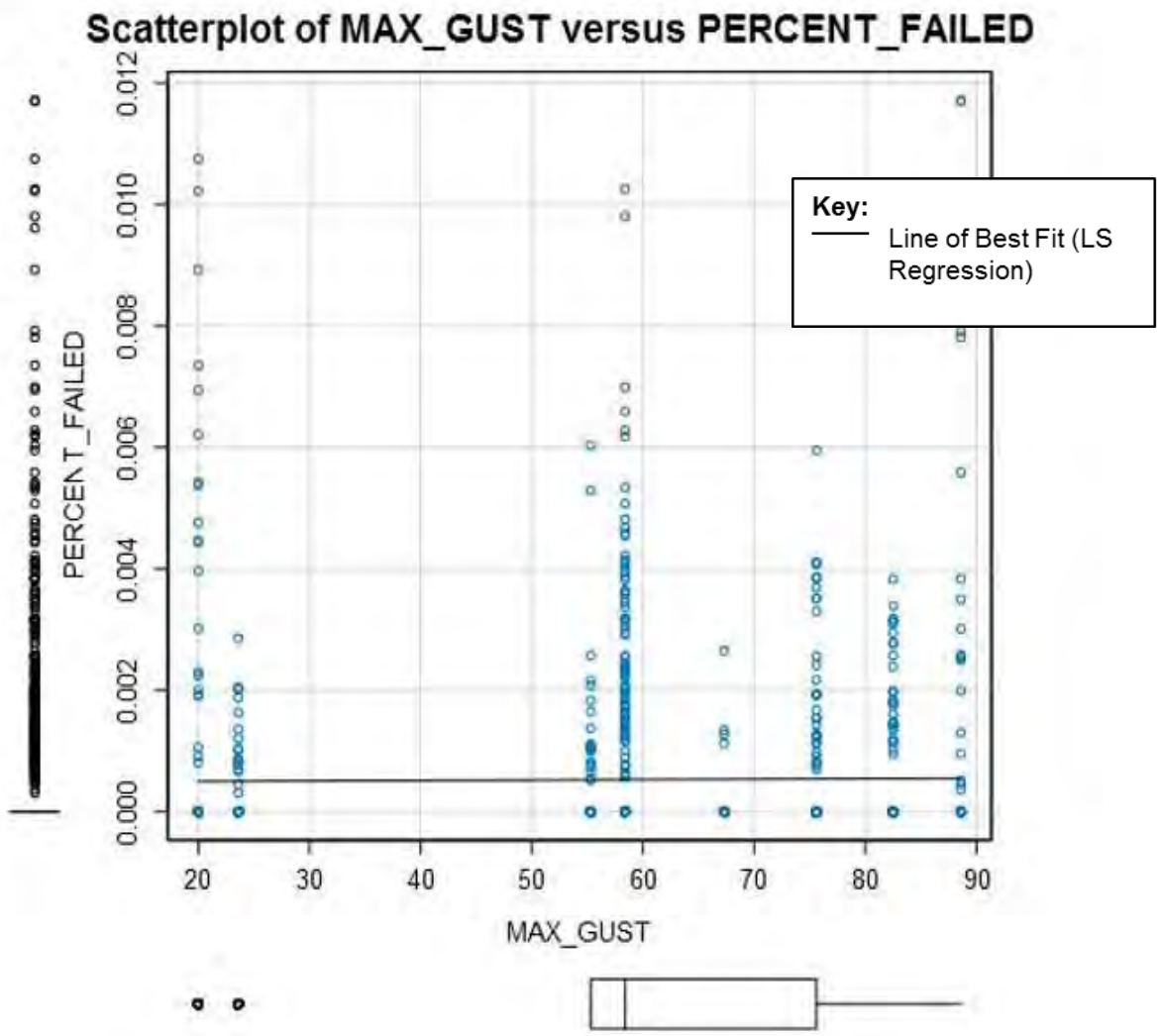
Data Summary

Variable	Min	Max	Median	Sample Size
Max Gust (x)	20 mph	88.6 mph	58.4 mph	1,083 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	4.836e-04	0.00016***
Max Gust	7.601e-07	0.71111

- No statistically significant relationship between max gust experienced by a circuit and percent pole failure (P = 0.71111 >0.05)
- Data suggests other factors contributed to distribution pole failure



Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: AVG MANUFACTURED YEAR

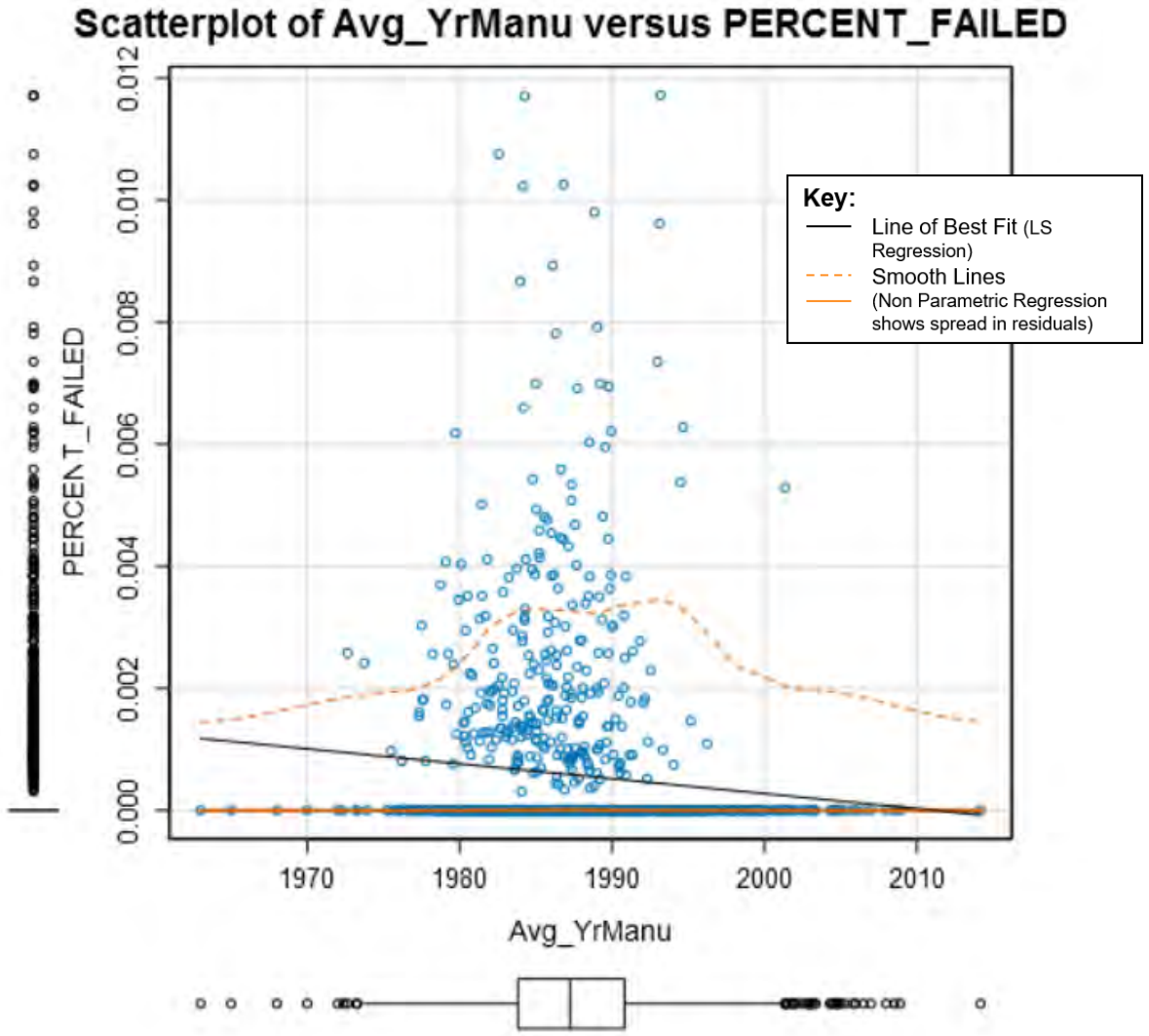
Data Summary

Variable	Min	Max	Median	Sample Size
Avg Manufactured Year (x)	1963	2014	1987	1,235 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	4.925e-02	0.00043***
Avg Manufactured Year	-2.449e-05	5e-04***

- There is a statistically significant relationship between average manufactured year of a circuit and percent pole failure. (P = 0.0005 <0.05)
- Data suggests circuits with newer poles on average are associated with lower pole failure rates*.



*Note: This analysis does not consider reinforcement of older poles.

Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: AVG POLE HEIGHT

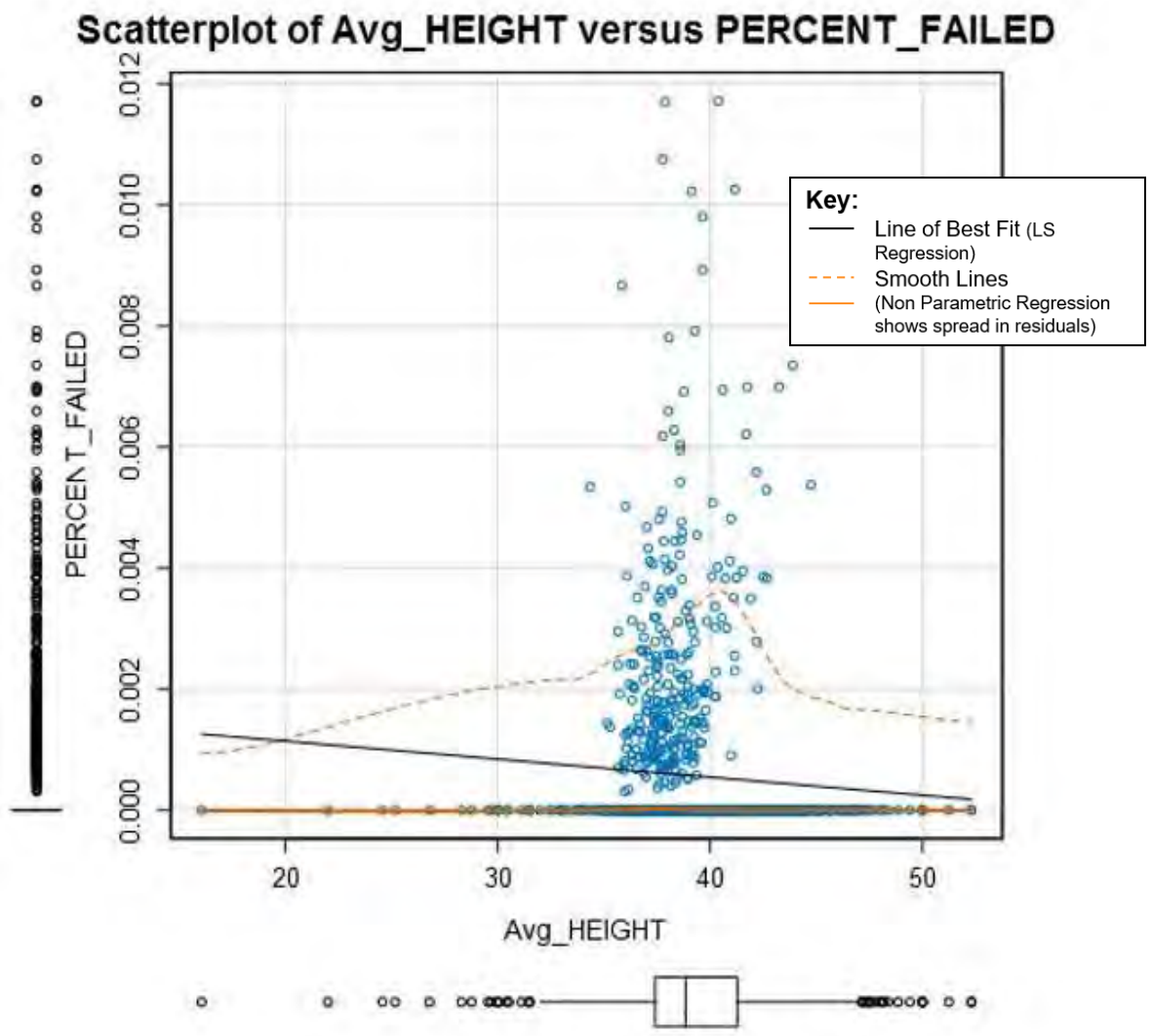
Data Summary

Variable	Min	Max	Median	Sample Size
Avg Pole Height (x)	16 ft.	52 ft.	39 ft.	1,269 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	1.734e-03	0.00025***
Avg Pole Height	-2.979e-05	0.01267*

- There is a statistically significant relationship between average pole height of a circuit and percent pole failure. (P = 0.01267 <0.05)
- Data suggests circuits with taller average pole heights are associated with lower pole failure rates.



Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: AVG LAST INSPECTION YEAR

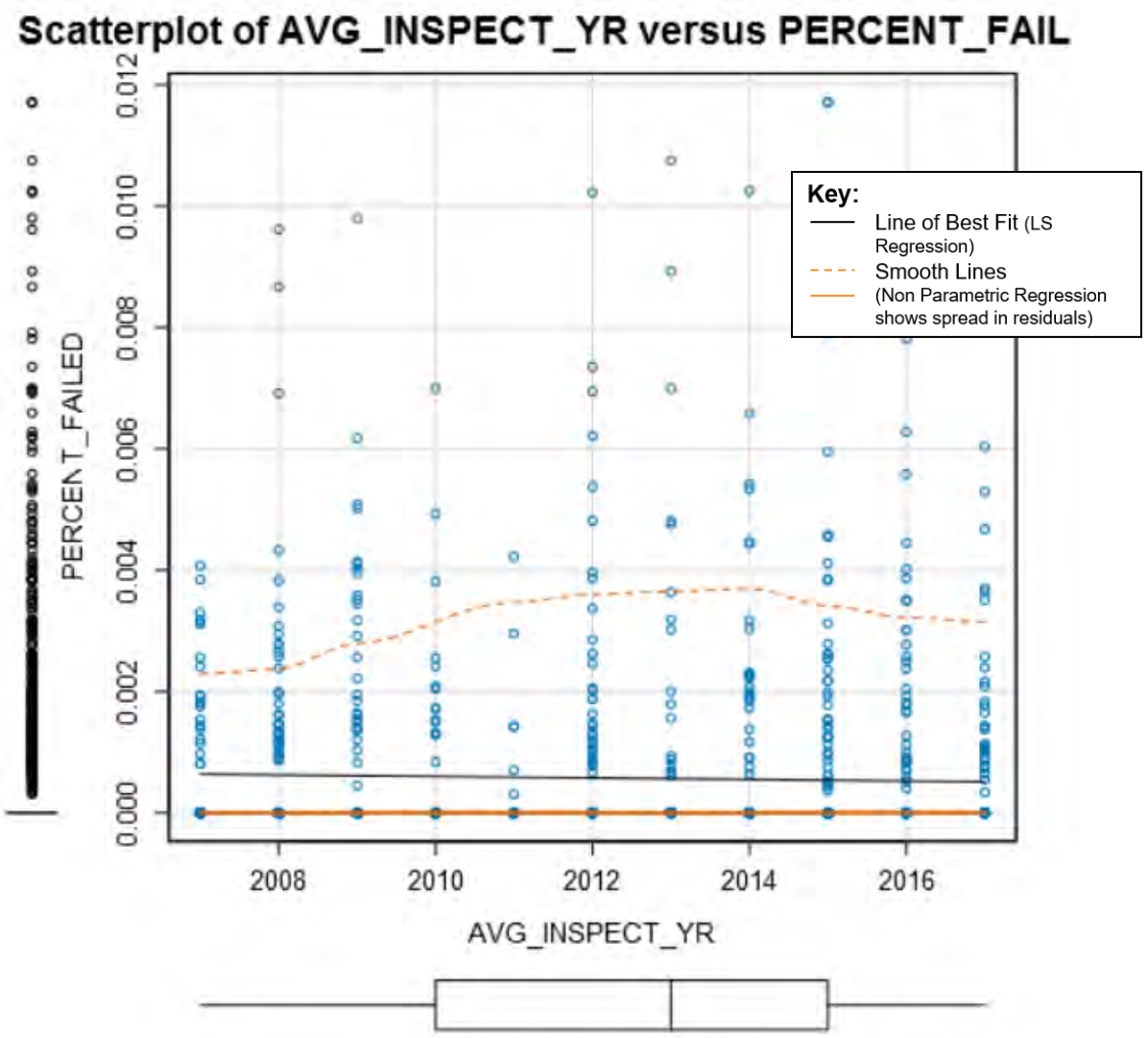
Data Summary

Variable	Min	Max	Median	Sample Size
Avg Inspection Year (x)	2007	2017	2013	1,249 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	2.629e-02	0.33208
Avg Inspection Year	-1.278e-05	0.34264

- No statistically significant relationship between average last inspection year of a circuit and percent pole failure (P = 0.34264 >0.05)
- Data suggests other factors contributed to distribution pole failure



20170272-DEF-OPC-POD 1-4-000041

Copyright 2018 Accenture. All rights reserved.

SIMPLE LINEAR REGRESSION: VEGETATION MANAGEMENT

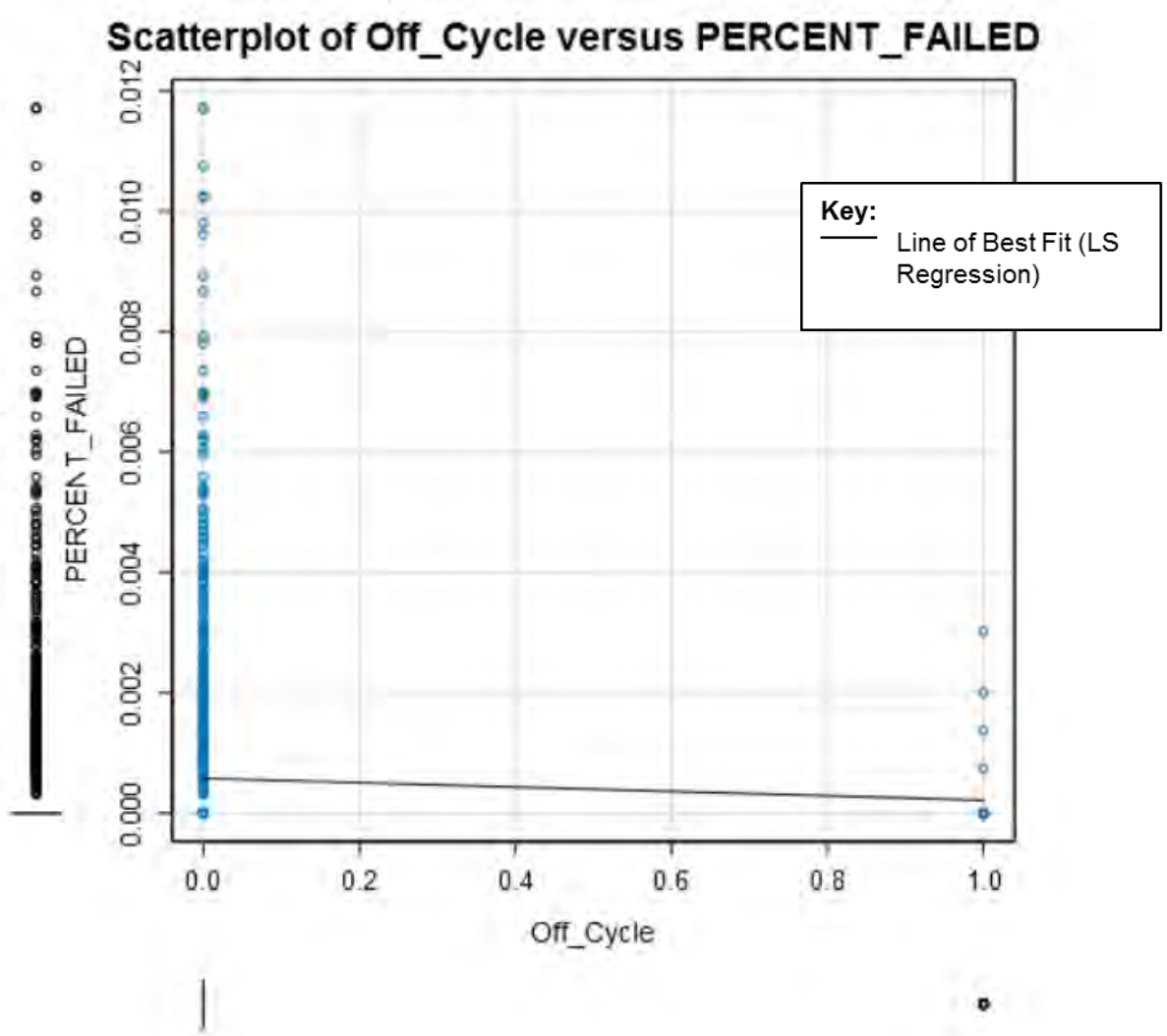
Data Summary

Variable	Min	Max	Median	Sample Size
Off Cycle* (x)	0	1	0	1,248 circuits
Percent Failed (y)	0.000	0.012	0.000	

Results

	Estimate	P Value
Intercept	0.0005788	<2.2e-16***
Off Cycle	-0.0003623	0.15662

- No statistically significant relationship between whether or not the vegetation maintenance of a circuit is on cycle or off cycle and the percent pole failure. (P = 0.157 >0.05)
- Data suggests other factors contributed to distribution pole failure.



*Note: This survey does not provide an assessment of degrees of off-cycle trimming, and other aspects of the VM program, (i.e., hot spot trimming and periodic inspections that are performed to ensure that reliability is not at risk).

Copyright 2018 Accenture. All rights reserved.

MULTIPLE LINEAR REGRESSION ON ALL POLE DATA

Percent Failure By Circuit ~ Wind + Gust + Manufactured Yr. + Height + Last Inspection Yr.+ Max Off Cycle

Factor	Minimum	Maximum	Median	Sample Size	Estimate	P Value
Max Wind	15.8 mph	70.2 mph	41.4 mph	1,187 circuits	-1.731e-05	0.00254**
Max Gust	20 mph	88.6 mph	58.4 mph		7.011e-06	0.0794
Avg Manufactured Year	1963	2014	1987		-3.439e-05	0.00051***
Avg Height	22 ft.	55 ft.	39 ft.		-8.495e-06	0.59495
Avg Last Inspection Year	2007	2017	2013		3.038e-05	0.07384
Vegetation Management	0	1	0		-1.292e-04	0.6689

Results: While the correlations between max wind and average manufactured year versus pole failure rate are statistically significant, these factors are not the only contributors to pole failure.

- Higher average max winds are found to be associated with lower percent failure rates (P=0.0025<0.05). Circuits that have newer poles on average are also associated with a lower percent failure rates (P=0.00051<0.05).
- Gust, Height, Inspection Year and Vegetation Maintenance do not have statistically significant correlation coefficient estimates, suggesting that they are not highly correlated with pole failure rate by circuit.
- The Adjusted R^2 value of the model is 0.01619. Thus only 1.62% of the variation in observed pole failure rates by circuit is explained by our model. This indicates that other factors contributed to pole failure than those included in the model.
- Differing results from simple regression analysis can be explained by difference in samples as well as potential correlation between explanatory variables.

Copyright 2018 Accenture. All rights reserved.

OPTIMIZED MULTIPLE LINEAR REGRESSION ON ALL POLE DATA

Percent Failure By Circuit ~ Wind + Gust + Manufactured Yr. + Inspection Yr.

Factor	Minimum	Maximum	Median	Sample Size	Estimate	P Value
Max Wind	15.8 mph	70.2 mph	41.4 mph	1,187 circuits	-1.696e-05	0.00292**
Max Gust	20 mph	88.6 mph	58.4 mph		7.023e-06	0.07857
Avg Manufactured Year	1963	2014	1987		-3.737e-05	2e-05***
Avg Last Inspection Year	2007	2017	2013		3.165e-05	0.0603

Results: When optimizing the previous multiple linear regression model, the best predictors of pole failure are max wind and gust, along with the average manufactured year and inspection year.

- Again, higher average max winds are found to be associated with lower percent failure rates (P=0.003<0.05). Circuits that have newer poles on average are associated with a lower percent failure rates (P=0.00002<0.05).
- Adjusted R^2 value is 0.01767. Thus only 1.77% of variation in percent pole failure is explained by the model, still suggesting that there are other explanatory variables not captured.

Copyright 2018 Accenture. All rights reserved.

MULTIPLE LOGISTIC REGRESSION ON BROKEN POLE DATA

Failure by Tree ~ Max Wind + Manufactured Year + Height + Last Inspection + Breakage Location + Attachment

Factor	Minimum	Maximum	Median	Sample Size	Estimate	P Value
Max Wind (mph)	15.8	70.2	37.1	384 poles	-0.04031	9e-05***
Manufacture Year	1960	2017	1980		0.01710	0.17221
Height (ft.)	30	55	40		-0.1005	0.00029***
Last Inspection Year	2007	2017	2012		-0.10610	0.01527*
Breakage Location (T=3, M=2, B=1)	1	3	2		0.08490	0.65284
Attachment (Y=1, N=0)	0	1	0		1.55611	1e-05***

Results:

- When considering the above factors on the likelihood that a failed pole had a tree involved; max wind, height, last inspection year, and attachment are statistically significant factors.
- Poles with attachments were more likely to fail by mode of tree.

Copyright 2018 Accenture. All rights reserved.

RESULTS SUMMARY: REGRESSION

Simple

- Max wind, max gust, average last inspection year and off cycle vegetation maintenance did not have a statistically significant correlation with pole failure rate by circuit.
- Circuits with a taller average pole height were more likely to have a lower pole failure rate.
- Circuits with newer poles were associated with lower pole failure rates.

Multiple

- Average pole manufactured year and max wind speed were the best indicators of pole failure rate by circuit.
- Circuits with older poles were associated with higher pole failure rates.
- Circuits that experienced lower wind speeds were associated with higher pole failure rates. This counterintuitive result could be due to the difficulties collecting wind data at all pole locations.
- Pole height, inspection year, and vegetation management level are likely not good indicators of pole failure.

Overall

- Simple regression and multiple regression models did not have high predictive power of pole failure rates, suggesting that there are unaccounted for explanatory factors captured in the error term of our models.
- **Model Improvements:**
  - Potential explanatory factors to consider further would be vegetation density, height and proximity of vegetation to distribution facilities, rainfall, reject status and wind direction, etc.
  - Improve wind data accuracy (gust, wind, GPS related data)
  - Consistent data across all poles for all fields/ Confirm randomized sampling

Copyright 2018 Accenture. All rights reserved.

STORM HARDENING

accentureconsulting

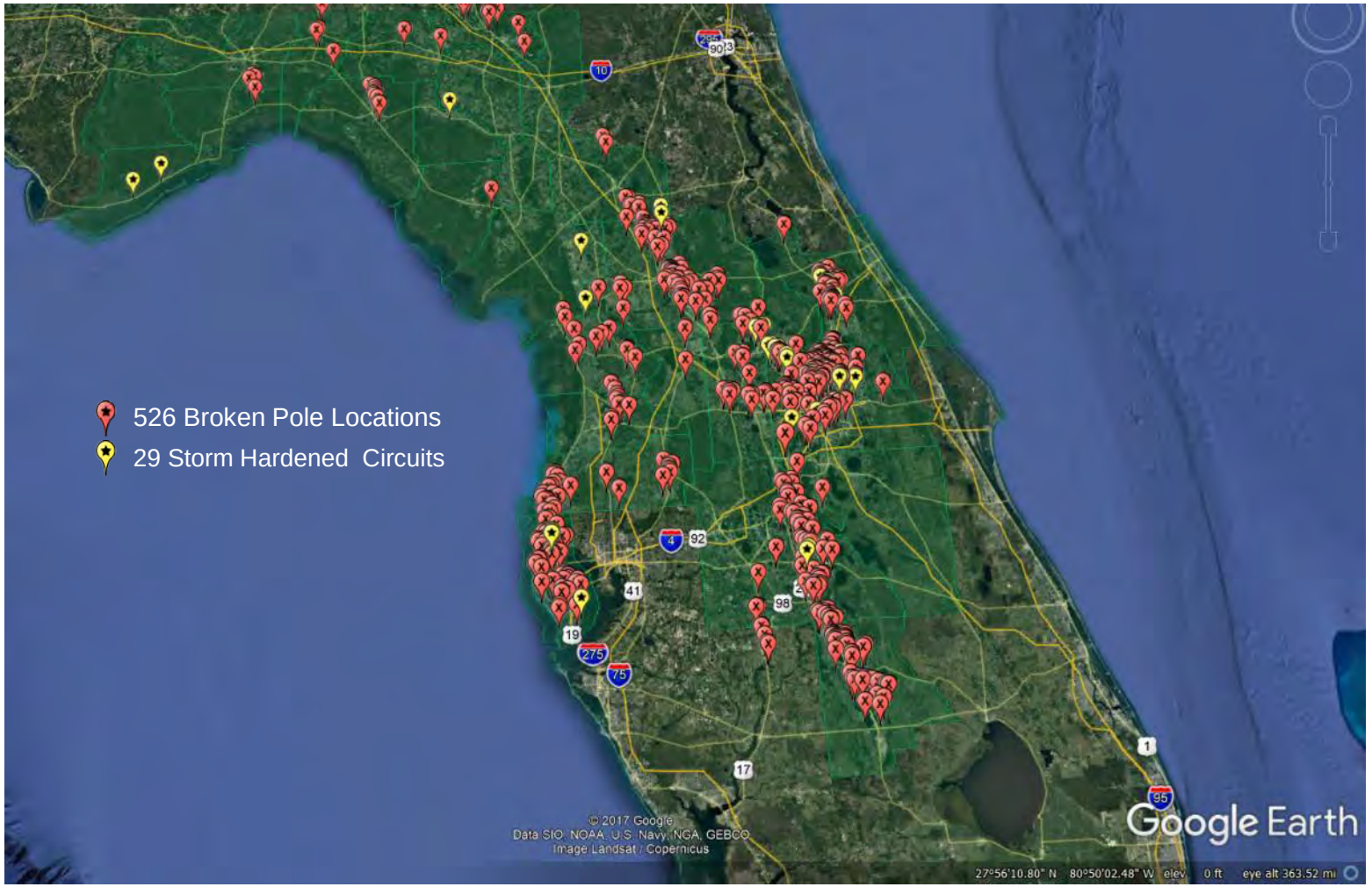
METHODOLOGY/APPROACH

- Duke FL performed storm hardening on a number of distribution line sections since 2006
- Determined if any poles that failed during Hurricane Irma were a part of the storm hardened circuits by:
  - Mapping broken poles that were reviewed by the forensics team
  - Overlaying storm hardened projects
  - Identifying if any broken poles were a part of the storm hardened projects

Copyright 2018 Accenture. All rights reserved.

DATA COLLECTION

- A sample set of broken pole data was collected by Duke FL's forensics team
- This information included:
  - EQUIP ID
  - POLE TAG
  - ADDRESS
  - DAMAGE COMMENTS
  - Birth Year
  - Last Inspect
  - Where did pole break? Top (T), Middle (M), Base (B)
  - Was Tree Involved?
  - ATTACHMENTS (Y/N)
  - EQUIPMENT(STA,RCL,SCT)
  - POLE BRACED?
  - OP CTR
- Matched broken pole data within GIS system to associate Latitude and Longitude coordinates
- Identified 29 storm hardening projects and mapped them with the broken pole data set



20170272-DEF-OPC-POD 1-4-000049

Copyright 2018 Accenture. All rights reserved.

RESULTS SUMMARY: SYSTEM HARDENING ANALYSIS

- A forensic assessment of five hundred twenty-six (526) randomly selected poles was made across DEF's total broken pole population. None of these poles were a part of the 29 Storm Hardening projects.
- A separate assessment of twenty-nine (29) randomly selected Storm Hardening projects was made. No broken poles were identified.
- Initial findings led the team to believe there was one pole that failed in the North Central Zone, Mercers Fernery Rd storm hardening project, but further analysis showed it was not a part of the project



North Central - Mercers Fernery Rd

20170272-DEF-OPC-POD 1-4-000050

Copyright 2018 Accenture. All rights reserved.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: June 15, 2018

DUKE ENERGY FLORIDA, LLC'S FIRST SUPPLEMENTAL RESPONSE TO CITIZENS' FIRST REQUEST TO PRODUCE DOCUMENTS (NOS. 1-10)

Duke Energy Florida, LLC ("DEF"), responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") First Request to Produce Documents (Nos. 1-10) as follows:

1. Capitalization Policy. Provide a copy of the Company's capitalization policy.

Response: See response previously provided on April 18, 2018.

2. Storm Accounting Policies and Procedures. Provide a copy of the Company's storm restoration accounting policies and procedures and a copy of any instructions given to employees and/or contractors during mobilization and/or restoration.

Response: See the attached documents bearing Bates Numbers 20170272-DEF-OPC-POD 1-2-00001 through 20170272-DEF-OPC-POD 1-2-0000047. Portions of the documents are confidential; redacted documents are attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated June 18, 2018.

3. Studies. Provide any assessment and/or study performed by the Company and/or for the Company that estimates the amount of storm cost savings the Company was able to achieve because of the storm hardening program work performed prior to each of the respective storms.

Response: N/A.

4. Studies. Provide any assessment and/or study performed by the Company and/or for the Company that identifies the damage that occurred to infrastructure where storm hardening work had not been performed yet.

Response: See response previously provided on April 18, 2018.

5. Third Party Billings. For each of the seven storms, provide any third party billings for pole replacement, provide the supporting invoices for those amounts billed and any contracts associated with third party billings to the Company that detail pole replacement.

Response: See response previously provided on April 18, 2018.

6. Contractors. For each of the seven storms, please provide by contractor the supporting invoices (including all supporting detail provided by the vendor) for invoices over $25,000.

Response: Response to be provided at a later date.

7. Line Clearing. For each of the seven storms, please provide by line clearing contractor the supporting invoices (including all supporting detail provided by the vendor) for invoices over $25,000.

Response: Response to be provided at a later date.

8. Employee Expenses. For each of the seven storms, please provide any invoices for charges over $5,000.

Response: Response to be provided at a later date.

9. Other. For each of the seven storms, please provide any invoices for P Card charges over $7,500.

Response: Response to be provided at a later date.

10. Third-Party Reimbursement. Provide a copy of the contract with any third party that serves as the support for Duke billing third parties for replacement of poles..

Response: N/A

SUBMITTED this 15th day of June, 2018.

s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, FL 33701
Telephone: (850) 521-1428
Facsimile: (850) 521-1437
Attorneys for Duke Energy Florida, LLC

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 15th day of June, 2018.

/s/ Matthew R. Bernier
Attorney

Kyesha Mapp Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 kmapp@psc.state.fl.us J. R. Kelly / C. Rehwinkel / E. Sayler Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us sayler.erik@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com George Cavros, Esq. Southern Alliance for Clean Energy 120 E. Oakland Park Blvd., Suite 105 Fort Lauderdale, FL 33334 george@cavros-law.com

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: June 27, 2018

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO
CITIZENS' SECOND SET OF INTERROGATORIES (NOS. 51-64)

Duke Energy Florida, LLC ("DEF"), subject to and without waiving the contemporaneously served objections to these requests, responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") Second Set of Interrogatories to DEF (Nos. 51-64) as follows:

INTERROGATORIES

51. Referring to the direct testimony of Robert Matthews, page 9 lines 1-3, please state what costs were incurred and what actions were necessitated in the aftermath of Hurricane Irma, for any damaged, **but not replaced**, hardened transmission assets.

Answer: DEF uses the term "storm hardened" to refer to the standard of construction applied to the structural components of the system (i.e., the poles and towers). DEF did not have any hardened structures damaged in Irma. However, there may have been damage to ancillary components attached to a hardened structure that by their very nature cannot be "hardened", for example insulators on a hardened structure. DEF Transmission did not track the replacement/repair costs of those ancillary components on a hardened versus non-hardened basis.

52. Please refer to the direct testimony of Jason Cutliffe, (pages 11, line 21) and Robert Matthews, (page 6, line 24). Please reconcile and explain the $2 billion figure with the $1.2 billion figure. At a minimum, break out by year between distribution and transmission, hardening expenditures, as well as by capital and expense. Please also indicate for each category if, and the extent of, such expenditures and incremental ongoing "non-hardening" O&M cost. Please populate the following table.

	DISTRIBUTION				TRANSMISSION				ANNUAL TOTAL EXP.
	O&M		Capital		O&M		Capital		
	Hardening	Non-Hardening	Hardening	Non-Hardening	Hardening	Non-Hardening	Hardening	Non-Hardening	
2004									
2005									
2006									
2007									

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 10
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Matthews (51, 52, 55, 56, 63, 64)Cutliffe (52-54, 57-59)

2008									
2009									
2010									
2011									
2012									
2013									
2014									
2015									
2016									
2017									

Answer: Jason Cutliffe's testimony provided the total amount spent on storm hardening for DEF from 2004 to present; Bob Matthews' testimony provided the DEF-Transmission total since 2006. The table below provides the breakdown of the figures stated in both testimonies.

	Distribution				Transmission					
	OM		Capital		OM		Capital		OM Trans & Distribution Veg Mgmt Cost Combined	Annual Total Exp.
	Hardening	Non Hardening	Hardening	Non Hardening	Hardening	Non Hardening	Hardening	Non Hardening		
2004	351,000		3,551,000				17,900,000			21,802,000
2005	2,933,333		7,100,000				23,200,000			33,233,333
2006	3,400,000		10,200,000		15,648,788		43,300,000		24,235,263	96,784,051
2007	2,960,000		10,610,000		14,498,565		38,000,000		29,949,339	96,017,904
2008	2,200,293		16,631,322		18,603,885		111,722,405		18,530,738	167,688,643
2009	3,440,955		19,052,230		16,081,336		99,822,011		27,515,055	165,911,587
2010	3,144,249		23,597,698		15,273,420		107,070,806		36,059,080	185,145,253
2011	2,808,091		21,833,971		17,406,077		81,794,465		27,509,602	151,352,206
2012	3,096,700		34,183,578		19,650,810		90,771,847		31,564,612	179,267,547
2013	3,110,177		31,091,153		17,734,840		140,278,933		39,881,025	232,096,128
2014	3,092,583		39,097,831		16,748,016		134,800,155		42,263,967	236,002,552
2015	3,412,065		58,759,175		15,005,372		142,992,995		44,493,393	264,663,000
2016	4,437,323		42,069,677		7,568,191		110,436,718		29,732,363	194,244,272
2017	Not Includ	Not Included	Not Included	Not Included	Not Include	Not Included	Not Included	Not Included	Not Included	Not Included
		Distribution	356,164,404			Transmission	1,316,309,635	Both	351,734,437	2,024,208,476

53. When did Hurricane Irma "leav[e] the state of Florida" for purposes of the testimony assertions on page 11, lines 7-11 of the direct testimony of Jason Cutliffe?

Answer: Hurricane Irma exited the Florida Service Area north of Madison County at approximately 12PM on Monday, September 11th.

54. Please provide a chronological timeline of when sustained winds from Hurricane Irma above 39 miles per hour occurred throughout DEF's service territory. Please also indicate

when, by defined areas used to deploy workforces, the sustained winds from Hurricane Irma dropped to 39 or below, such that assessment and restoration work could commence.

Answer: Sustained winds in excess of 39 mph entered the southern portions of our service territory midday on Sunday, September 10th and exited to the north midday on Monday, September 11th. Hurricane Irma's movement from south to north allowed for initiation of post storm activities including damage assessment as it became safe to drive and operate aerial lifts.

Driving and Bucket Safety

• Employees should cease traveling (in all vehicles) or working, including climbing, when winds reach storm velocities of 39 MPH.

• Do not operate buckets in the elevated work position when the wind (steady or gusts) exceeds 30 MPH. If the bucket truck manufacturer recommends a wind speed of less than 30 MPH, the manufacturer wind speed must be followed (example: Condor recommends 25 MPH, therefore; the 25 MPH wind speed must not be exceeded).

55. Referring to the direct testimony of Robert Matthews at pages 18-19, please state what impact the rainfall discussed had on damage to transmission facilities.

Answer: Rainfall caused minimal direct impact to transmission facilities; however, excessive rainfall typically impacts restoration efforts in a couple of different ways:

1. Soaked and softened ground creates an environment in which trees more readily lean or fall into transmission lines and therefore requiring additional resources to clear the system of debris.
2. Higher than normal ground water table flooding roadways and easements creates travel delays and site accessibility issues.

56. Referring to the direct testimony of Robert Matthews at page 18, line 16, please define what is meant by "a long-duration storm." Also, as a part of this explanation please identify examples of named tropical storms impacting DEF's service territory that meet the definition of "a long-duration storm." Please also identify storms impacting DEF that would be considered "a short duration storm" or something less than a "long duration storm."

Answer: The phrase "long-duration storm" was not used with a technical definition in mind, but in a more colloquial sense. It was intended as a general characterization; for example, typically in DEF's service territory, storms track relatively quickly (a few hours) across the state and move out of our region. DEF had not experienced a storm that tracked from south to north the length of the state before Irma. This event's track

prevented support from moving about the system and prevented out-of-state support from entering the state until it had completely left the system and bordering areas.

57. Referring to the direct testimony of Jason Cutliffe, at page 27, lines 14-16, please provide the beginning and ending point with the date and hour of each for calculating the three day and eight day periods.

Answer: As outlined in Jason Cutliffe's testimony on page 21 line 5 through page 22 Line 9, on the first day of all clear Duke Energy focuses on assessing a statistically valid sample of the system, completing the Isolate-and-Restore process and moving mutual assistance resources into forward locations. Following Hurricane Irma, these actions took place on Tuesday September 12. The first three days of restoration efforts began on Wednesday September 13 and continued through Friday September 15. The eight days of restoration continued through Wednesday September 20. Duke Energy's working hours during restoration are 16 hour days from 0500 to 2100.

58. Please identify the person or persons at Accenture conducting the analysis contained in JC-1.

Answer: DEF's points of contact with Accenture were: Justin Wagaman and Miki Deric.

59. Please identify the correspondence between you and Accenture Consulting relating to the pole forensics report (JC-1), including emails, drafts, draft comments and the very earliest project engagement discussions.

Answer: For Distribution, please see the documents responsive to OPC's Second Request to Produce, question 14.

60. Please identify all workpapers supporting the pole forensics report (JC-1) and all internal reviews within Accenture Consulting.

Answer: See DEF's objection filed contemporaneous with this response.

61. Please identify each similar or comparable pole forensics study performed by Accenture prior to the report in JC-1. Identify the utility, storm event and date of study.

Answer: See DEF's objection filed contemporaneous with this response.

62. Please describe the Accenture Storm Benchmarking database and indicate when it was initiated and what data points are collected contemporaneously (including vintages of data by category) and also indicate the purposes for which it has been used.

Answer: See DEF's objection filed contemporaneous with this response.

63. Please refer to the direct testimony of Robert Matthews page 18 and 19. Please provide a detailed analysis and explanation of why DEF "experienced extensive damage to its transmission system" when wind speeds never exceeded 85 mph according to Robert Matthews' testimony.

Answer: Damage to DEF's Transmission System was "extensive" in that the impacts were felt in every county in DEF's service territory; another way of describing the impacts would have been to say the damage was "expansive." Extensive / Expansive damage through the accumulation of equipment contamination via salt spray, trees falling into lines, and wood poles and 'non-hardened' structures failing due to wind gusts, micro-burst/tornados (micro-bursts and tornados would both produce winds in excess of 85 MPH).

The forensics analyses provided in response to Staff's Second Data Request, Question No. 2, in Docket No. 20170215-EU, provide detailed review of the structure failures that meet the criteria for review (i.e. adjacent structures failed/impacted).

Wind speed alone was not intended to be correlated with use of 'extensive' – the testimony provided shared documented weather conditions and hurricane tracking information to explain the expansive / extensive impact to DEF system.

64. Please refer to Robert Matthews' testimony, page 7, lines 22 and 23 and page 8, lines 6 and 7. Mr. Matthews testifies that ground inspections are done on an 8 year cycle, but in 2017 60% of wood pole structures were ground inspected.

a. Please provide an analysis of how many of Duke Energy Florida's poles were inspected as normal maintenance or as storm restoration in 2017.

b. Please quantify both the financial and physical effect, of inspecting 60% of wood poles in 2017, will have on the company's pole inspection cycles for 2018, 2019 and 2020.

c. Please explain why it was necessary to inspect 60% of all wooden poles instead of the normal 12.5%?

d. Provide the cost associated with inspecting 60% of the poles in 2017, identify the account(s) the cost were charged to and the respective amounts charged to the

account(s) and identify whether any costs were charged to the storm recovery costs being requested

Answer: The inspections referenced in Mr. Matthews' Testimony were maintenance inspections – not storm restoration inspections. The wood pole inspections are an annual O&M expense investment incurred by DEF, and reported in the Annual Reliability Report and therefore are not included in the storm recovery costs.
Inspection percentages vary each year due to availability of resources, negotiated pricing of vendors, and scheduling.

- Percentage inspected is 12,699/21,285 = 59.7 %, rounded up to 60%
    - Of the 12,699 wood poles inspected, 10,766 wood poles had Visual Inspections only.
        - A subset of the 12,699 wood poles inspected (1,933) had Visual Inspection and Sound & Bore inspection

a) Answered above. All normal maintenance process as reported within reliability reporting
b) Normal Maintenance process; DEF is working at standard pace to both maintain the system and reduce/remove wood structures cost effectively.
c) Answered above. Inspection percentages vary each year due to availability of resources, negotiated pricing of vendors, and scheduling.
d) Answered above. The wood pole inspections are an annual O&M expense investment incurred by DEF, and reported in the Annual Reliability Report; therefore are not included in the storm recovery costs. The 2017 cost of performing these inspection was $1,242,836, as shown in DEF's annual reliability report.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF Seminole

I hereby certify that on this 25 day of June, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared ROBERT MATTHEWS, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 51,52, 55, 56, 63 and 64, of OPC'S SECOND SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 51-64) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 25 day of June, 2018.

ROBERT MATTHEWS

Notary Public
State of Florida, at Large

My Commission Expires:

KAROL ANN CARR
MY COMMISSION # GG010042
EXPIRES July 10, 2020
(407) 398-0153 FloridaNotaryService.com

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 27th day of June, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 52, 53, 54, and 57 through 59 of OPC'S SECOND SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 51-64) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 27th day of June, 2018.

Jason Cutliffe
JASON CUTLIFFE

CHRISTINA WOLF
Commission # GG 146409
Expires September 27, 2021
Bonded Thru Budget Notary Services

Christina Wolf
Notary Public
State of Florida, at Large

My Commission Expires:
9-27-21

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: June 28, 2018

DUKE ENERGY FLORIDA, LLC'S FIRST SUPPLEMENTAL RESPONSE TO CITIZENS' SECOND REQUEST TO PRODUCE DOCUMENTS (NOS. 11-15)

Duke Energy Florida, LLC ("DEF"), responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") Second Request to Produce Documents (Nos. 11-15) as follows:

PRODUCTION OF DOCUMENTS

11. Please provide all correspondence, including but not limited to, emails, between DEF or any affiliate, agent, or representative of DEF and the vendor of the Outage Management System ("OMS") (including any agent or representative of the vendor) related to problems, failures, defects and patches related to the OMS' performance or operation during Hurricane Irma and afterwards.

Response: Please see response previously provided on June 27, 2018.

12. Please provide all internal correspondence, including but not limited to, emails, between and among DEF employees or the employees of any affiliate, agent, or representative of DEF (including among and between employees of any service company (including DEBS) and affiliates and consultants or agents) related to problems, failures, defects and patches related to the OMS' performance or operation during Hurricane Irma and afterwards.

Response: Please see response previously provided on June 27, 2018.

13. Please provide the approval documentation (including supporting documentation) for purchase and installation and implementation of the OMS within DEF (or a larger set of affiliated companies).

Response: Please see attached documents bearing bates numbers 20170272-DEF-OPC-POD 2-13-000001 through 20170272-DEF-OPC-POD 2-13-000293.

14. Please provide all documents identified in your response to OPC Interrogatory No. 59.

Response: Please see response previously provided on June 27, 2018.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 11
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Cutliffe (13)

15. Please provide all documents identified in your response to OPC Interrogatory No. 60.

Response: See DEF's objection filed contemporaneous with this response.

Respectfully submitted,

/s/ Matthew R. Bernier

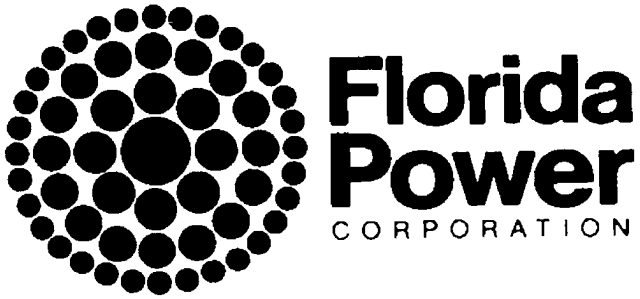
DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC.
299 First Avenue North
St. Petersburg, FL 33701
T: 727.820.4692
F: 727.820.5041
E: Dianne.Triplett@duke-energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 East College Avenue
Suite 800
Tallahassee, Florida 32301
T: 850.521.1428
F: 727.820.5041
E: Matthew.Bernier@duke-energy.com

INTERGRAPH
PUBLIC SAFETY

SOLUTION DOCUMENT

INTERGRAPH PUBLIC SAFETY (IPS)
Solution for the
Florida Power Corporation Outage Management System



INTRODUCTION

Intergraph Public Safety (IPS) welcomes the opportunity to propose a state-of-the-art hardware platform and software solution for a Computer-Aided Dispatch (CAD) System and Outage Management System (OMS) that meets the requirements of Florida Power Corporation.

During the past eight years, IPS has implemented the IPS/Computer-Aided Dispatch (I/CAD) System for public safety and roadside assistance agencies around the world. We are sensitive to the mission-critical nature of these industries and believe that the combination of our hardware design, operating system, and software configuration offers the most reliable platform and robust CAD system available in today's marketplace.

In addition to Computer-Aided Dispatch, Florida Power requires a state-of-the-art Outage Management System. Such a system would combine, in a single workflow, Computer-Aided Dispatch, Trouble Analysis, and interfaces to a variety of existing Florida Power systems. The system could also include Mobile Data Terminals (MDTs) with GPS in service vehicles to aid in the communication of repair activities and to provide information to field vehicles.

IPS has been actively searching for a partner to help us combine our expertise in CAD and Systems Integration and Intergraph's expertise and presence in the Utilities Facilities Management market to produce an operational Outage Management System. Through this proposal we hope to establish such a partnership with Florida Power Corporation. For the past three months we have worked with Florida Power personnel to produce a functional design document. This proposal addresses the requirements identified in that document.

This document presents the IPS solution in the following format:

1.0 Proposed Hardware Configurations

Section 1.0 provides hardware configuration diagrams, server specifications, optional workstation specifications, and peripheral specifications. In addition, this section lists hardware requirements that must be satisfied in order to integrate with existing systems.

This section also provides customers who have background knowledge in client/server topology and hardware specifications with a quick overview of the proposed hardware configurations.

2.0 Proposed Software Configurations

Section 2.0 provides a textual description of the I/CAD System software for the proposed system servers and workstations. All servers and workstations are presented individually with software configuration.

3.0 Outage Management System

Section 3.0 contains an overview of functional requirements developed jointly by Florida Power and IPS personnel that defines the software development specific to the Outage Management System.

4.0 Proposed Cost Schedules

IPS realizes that Florida Power may change the configuration, requirements, or provide additional information before making a final decision, and IPS agrees to adjust the pricing accordingly.

5.0 The System Architecture

Section 5.0 provides a rationale for the architecture proposed for the CAD and OMS and covers the strategies used to ensure system operability, performance, maintainability, scalability, flexibility, and fault tolerance.

In addition, Section 5.0 introduces the operating system used to support I/CAD System software and covers the advantages of client/server topology. Section 5.0 also covers open systems, the Windows NT operating system design, the Microsoft graphical user interface (GUI), and system and security administration as provided by the Windows NT platform and I/CAD software.

6.0 Networking Hardware Prerequisites

Section 6.0 describes the networking system and environment required to efficiently operate the I/CAD System.

7.0 Software Capabilities

Section 7.0 provides an overview of I/CAD software capabilities and the integrated CAD functionality.

8.0 Project Management

Section 8.0 presents the 5-phase process used by IPS to move the system from contract award to production operation.

9.0 System Implementation

Section 9.0 provides detail on two on-site workshops conducted by IPS. The I/CAD Implementation and Configuration Workshop is intended to ensure a quick, well-founded startup. The I/CAD Data Modeling Workshop functions as a vehicle for gathering information critical to generating the base I/CAD map and customizing the system to meet Florida Power's requirements.

10.0 Training

Section 10.0 introduces some cost-effective training options for Florida Power. In designing a Training Plan, IPS offers a number of courses that are comprehensive, yet can be tailored to meet the specific needs of Florida Power.

11.0 Warranty and Maintenance

Section 11.0 provides an overview of warranty, as well as the programs available for ongoing maintenance of the system.

Appendix A: Mobile Workstations

Appendix A provides an overview of the proposed Mobile workstations and the products and services required for their installation in Florida Power vehicles.

Appendix B: Functional Requirements

Appendix B is the functional requirements document produced jointly by Florida Power and IPS.

Appendix C: Detailed Pricing

Appendix C provides detailed pricing of the complete configuration.

Appendix D: Project Schedule

Appendix D provides a complete project schedule for the Outage Management System.

Appendix E: I/CAD System Overview

Appendix E is IPS' standard I/CAD overview. While this document is written using Public Safety terminology, we hope that it will provide a detailed overview of the I/CAD suite of standard products.

1.0 PROPOSED HARDWARE CONFIGURATIONS

The CAD/OMS for Florida Power requires installation of two complete and independent dispatch centers. Two centers provide a level of redundancy such that, if one center is destroyed or must be evacuated, the other center is capable of continuing operations. These two dispatch centers are identified as East and West. Outage Management operations at the East center are for the eastern portion of Florida Power's coverage area, and operations at the West center are for the west. These two centers communicate with each other and with existing systems (such as CSS and SCADA) via Florida Power's Wide Area Network (WAN).

The configuration at each center consists of dual redundant database servers, one interface/communications server, and one optional tertiary backup server. Proposed workstations are also included in the configuration diagram.

The tertiary backup server supports the scenario where, when one center is destroyed or evacuated, the other center is capable of continuing operations. Each tertiary server contains a replicated copy of the database from the other center. In this scenario, the surviving center dedicates certain workstations to the replicated database of the other center and continues operations. The servers supporting this mode of operation are optional because the replicated database could reside on the I/CAD secondary server. For operational and performance reasons, IPS recommends a separate server for this purpose. If the tertiary server is omitted, then the I/Backup product must be moved to the secondary server.

Server specifications and descriptions, as well as information covering the workstations follow the diagram in Sections 1.1.1 and 1.1.2, respectively. Section 1.1.3 lists the hardware requirements necessary to successfully operate the I/CAD base software, and, therefore, integrate existing, or second-source workstations into the proposed I/CAD System. Specifications for the peripheral hardware used to support archival and backup services are provided in Section 1.1.4.

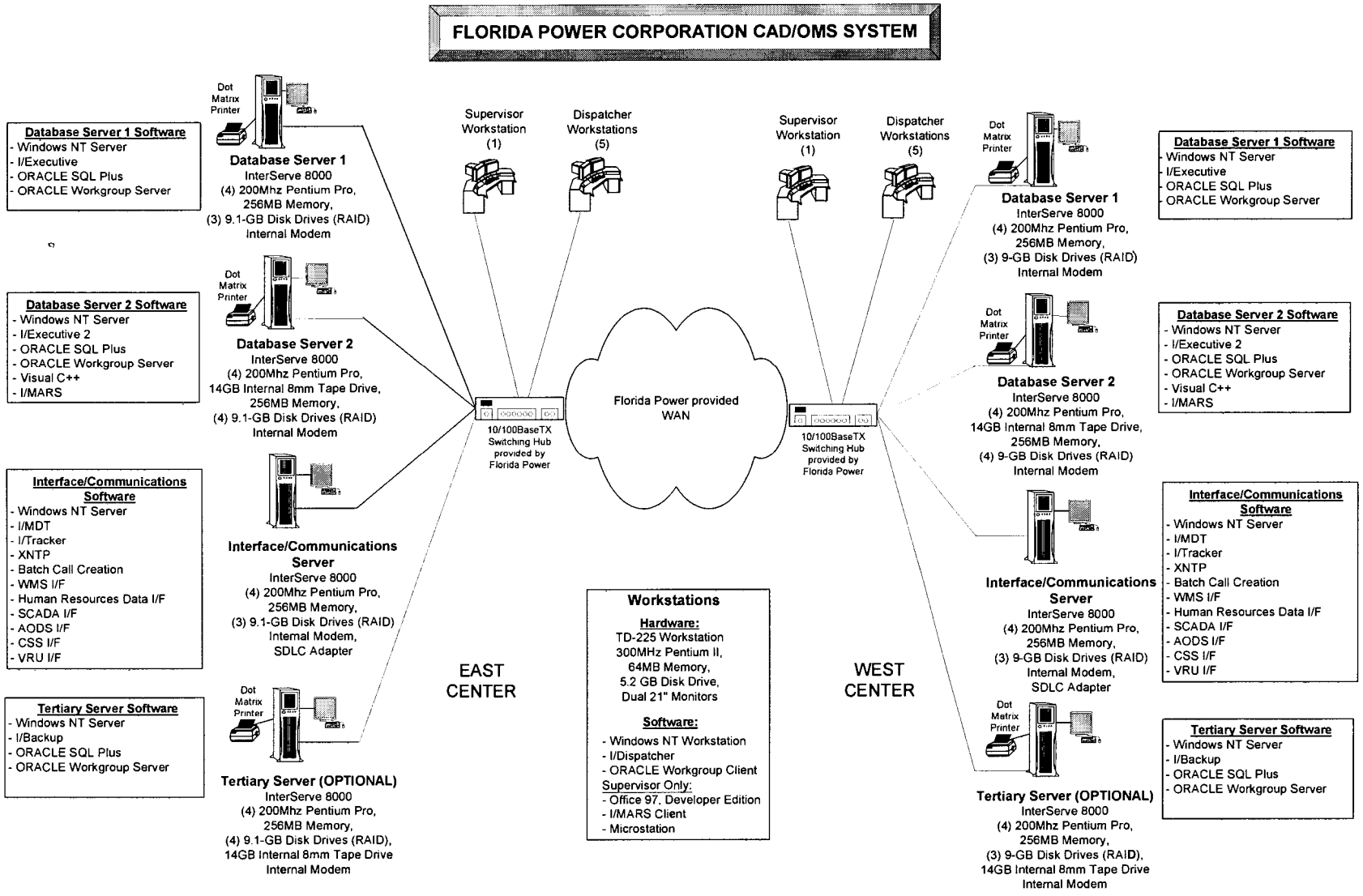


Figure 1. Proposed CAD Configuration

20170272-DEF-OPC-POD 2-13-000006

1.1 Hardware Specifications

The proposed Intergraph Intel-based systems are designed to deliver performance, reliability, and scalability for mission-critical dispatch environments based on Windows NT. Built for maximum availability, InterServe Servers offer reliability, with hot-swappable dual power supplies, RAID striping, and a variety of fault-tolerant features for backup of mission-critical data. With a variety of configurations and expandability options, InterServe Servers enable users to scale their networks to accommodate any-sized operation, from a single application to an enterprise serving many users.

The Intergraph TD Personal Workstations are rich -- both in features and performance, while providing quality and return on investment. These high-performance graphics workstations bear the excellence of Intergraph's graphics-tuned architecture and the attention to quality and expandability. Intergraph systems effectively capitalize on the best characteristics of PCs to provide a single, highly productive package, with high-level performance, graphics, and integrated networking in a truly open, industry-standard architecture.

1.1.1 Database and Interface/Communications Servers Descriptions and Specifications

For Florida Power, IPS proposes two Database Servers, one Interface/Communications Server, and one backup server at each center.

Each proposed server is an InterServe-8000 equipped with 256 megabytes of RAM and four 200-megahertz Pentium Pro processors. Database Server 2 is configured with 36 gigabytes of storage, while Database Server 1 and the Interface/Communications Server both provide 27 gigabytes of storage. These servers are sized to provide quick response times, as well as to allow for significant growth.



The Interface/Communications Server is configured to support the proposed interfaces and communications software, taking into consideration the following:

- The number of interfaces required by Florida Power and the anticipated frequency of communication for each interface

- The estimated amount of data associated with each transaction
- The software used to support each interface

The actual interfaces are discussed in Section 2.1.

With the exception of Database Server 2 and the optional Tertiary Server, which is equipped with an extra 9-gigabyte disk drive and an internal 14-gigabyte, 8-mm tape drive, server specifications are standard. Each server is configured with:

- Four, 200-megahertz Intel Pentium Pro processors
  - 512-kilobyte synchronous internal cache for each processor, 4-way set associative, write-back
- 256 megabytes of random access memory (RAM), expandable to 4 gigabyte
  - Industry-standard single in-line memory management (SIMM) technology (5-volt, 60-nanosecond, fast page mode, single- or double-sided)
  - 288-bit error correction code (ECC) architecture
  - One-, 2-, or 4-way interleave
- Internal modem
- Three PCI buses
- UltraWide Small Computer Systems Interconnect (SCSI) interface controller
- PCI-based RAID interface controller
  - On-board Intel i960 processor with 8 megabytes of 2-way interleaved dynamic random access memory (DRAM)
  - Three Fast/Wide SCSI channels
  - Additional RAID controllers supported for maximum external expansion
  - Dynamic resizing
  - Array management console
- Three (4 on Database Server 2) 9-gigabyte, 3.5-inch system disk drives providing
  - Hot-swappable, form factor disk drives
  - 6.0- to 9.5-megabyte per second internal data transfer rate
  - 9.0-millisecond average seek time
  - 13.2-millisecond average access time
  - 7,200 revolutions per minute
- 3.5-inch floppy disk drive
  - 1.44-megabyte/720-kilobyte capacity (formatted)

- Network Interface
  - PCI 10/100BaseT (uses one slot) supports full duplex operation, RJ45 style connector
- InterSite server monitoring system
  - Includes an ISA-based monitoring card with built-in PCMCIA modem and 4-hour battery backup
  - Provides local and remote monitoring with easy-to-view status and graphs
  - Monitors power; temperature; and more than 250 system variables, including memory, disk, CPU; and network performance
  - Offers SNMP event reporting, as well as remote event reporting using the PCMCIA modem with pager capabilities
- Remote system administration, including diagnostics, remote system reboots, and remote power on/off
- PCI/ISA slots
  - Nine PCI slots
  - Three ISA slots
- Miscellaneous I/O ports
  - One DB-25 enhanced parallel port/extended capabilities port (EPP/ECP)
  - Two DB-9 buffered serial ports
  - One external SCSI port
  - PS/2 mouse and keyboard ports
- Two type I/II or one type III PCMCIA slot
- Three-button, PS/2 mouse
- 101-key, AT-compatible keyboard
- PCI-based G95 graphics accelerator
  - Matrox Millennium chip with 2 megabytes of Windows random access memory (WRAM)
  - Standard SVGA monitor support
- Network Cabling
  - 10/100Base-T Ready
  - UTP CAT5 Patch Cord Cable

The 15-inch, multi-sync color monitors proposed for all servers offer a maximum resolution of 1,280 by 1,024 pixels at a refresh rate of 60 hertz. Lower resolutions support a higher refresh rate. Specifications for the proposed 15-inch monitor are as follows:

- 14-inch viewable image

- 0.27-millimeter dot pitch
- Horizontal scan rate of 30 to 67 kilohertz; vertical scan rate of 50 to 120 hertz
- Energy Star-compliant, conforming to VESA DPMS protocol

The following specifications relate to the 14-gigabyte, 8-mm tape drive internal to Database Server 2 only. This tape drive uses removable, rewritable 8-mm tape cartridges. Features include:

- An integrated, single-ended SCSI controller
- Advance helical scan technology that can store
  - 14 gigabytes of data on a 160-meter XL tape at a 2:1 compression ratio, or 7 gigabytes of data on a 160-meter XL tape in native mode
  - 10 gigabytes of data on a 112-meter tape at a 2:1 compression ratio, or 5 gigabytes on the same tape length in native mode

1.1.2 136-Column, 9-Pin Dot Matrix Printers

Two dot matrix printers, one connected to each Database Server via an RS-232-C serial interface, print a sequential hardcopy log of server transactions. In the event of a server failure, hardcopy logs can be used to troubleshoot the server. In the unlikely event of system failure, these logs provide a bridge between the most recent backup of the database and transactions completed since the last backup. Printer features include:

- Print speed
  - Draft mode: 300 characters per second (cps)
  - Utility mode: 250 cps
  - Near letter quality mode: 63 cps
- Print pitch
  - 10 characters per inch (cpi)
  - 12 cpi
  - 17.1 cpi
  - 20 cpi
- Print paper
  - Accepts cut sheet paper in widths of 7.2 to 14.3 inches
  - Accepts tractor feed paper in widths of 3 to 16 inches

1.1.3 Workstation Specifications

If the Intergraph hardware platform is based on standard Intel technology and the proposed system is non-proprietary, what sets Intergraph workstations apart from other PCs available in the marketplace? There are two answers–the industrial engineering and performance of the system and utilization of first quality components.

Within the PC market, there are many platforms available from many different vendors; however, the engineering applied in constructing these systems varies. PCs built from standardly available components that meet customer requirements constitute one end of the engineering spectrum. Computers that have been specifically engineered and tested to meet the performance criteria demanded in a 24 hour per day, 7 day per week operating environment constitute the other end of the spectrum.

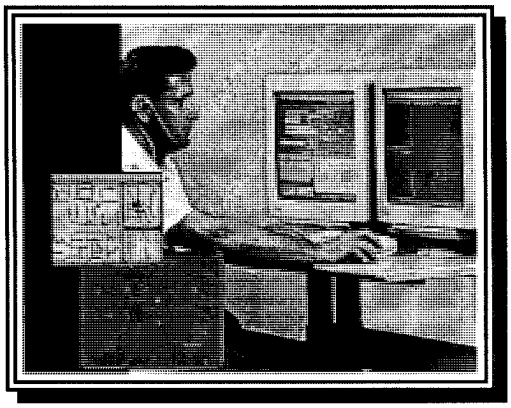
The proposed Intergraph workstations undergo an unusually high degree of testing. They are also tested by the National Software Testing Laboratories (NSTL), ensuring adherence to a variety of hardware and software standards and performance criteria. The IPS proposed system has been engineered to run day and night, in mission-critical environments, 365 days per year. Heat buildup in the base has been carefully studied, and the component layout has been specifically designed for maximum uptime. Only components that meet the highest specifications and quality standards are used. Even the keyboards are produced to withstand day and night, continuous operation, every day of the year.

It is possible to select any computer that meets the appropriate hardware prerequisites and has the ability to run the Windows NT operating system. However, we believe there is significant merit in evaluating the engineering and construction of proposed IPS workstations. Furthermore, should there ever be any operational problems, because IPS is responsible for both system software and hardware, there will be no doubt who owns the problem and who will provide the solution–IPS.

All proposed workstation positions are high-performance Intergraph TD-225 personal computers (PCs) based on 300-megahertz Pentium II processors. These workstations have been priced with 21-inch monitors; however, monitor sizes are also available in 15-, 17-, 19-, 24-, and 28-inches.

The workstation configuration proposes dual-screen workstations for dispatcher and supervisor positions. A single, easy-to-use mouse and keyboard controls either configuration.

Intergraph's TD-225, which features one 300-megahertz processor, 64 megabytes of RAM, and 2.1 gigabytes of disk storage, has dedicated graphics accelerators and drivers optimized for high resolution. Each PC is equipped with a 32-bit, PCI-based Ethernet controller, a 3.5-inch disk drive, and is network ready.



Since dispatcher monitors display a large amount of information in a relatively small space, high-quality monitors are required to prevent unnecessary eye fatigue. In addition, map displays require clear, large monitors to present detail in a usable format. When selecting a workstation monitor, performance, readability, reliability, ergonomics, and flexibility should be considered—Intergraph monitors are designed to accommodate these demands. Our proposed monitors feature anti-glare coating, line-surge and brown-out protection, and automatic sizing, centering, and geometry.

Each proposed PC is configured with:

- 300-megahertz Intel Pentium II processor
- 64 megabytes of EDO random access memory, upgradeable to 256 megabytes
- System I/O Bus – Dual EIDE channels supporting 4 devices
- System Disk Drive
  - 5.2 gigabytes EIDE
- Floppy Drive
  - 3.5-inch, 1.44-megabyte (formatted)
- Matrox Millinium II graphics accelerator
  - 4 megabytes of dual-ported WRAM

- Miscellaneous I/O Ports
  - Two DB9 serial ports
  - One DB25 enhanced parallel port/extended capabilities port (EPP/ECP)
- 104-key, Windows 95-compatible keyboard; three-button, PS/2 mouse
- Peripheral slots and bays
  - Motherboard card slots; 7 total card slots (3 PCI; 3 ISA; 1 Shared)
  - Peripheral bays: 6 total (3 internal 3.5-inch; 1 external 3.5-inch; 2 external 5.25-inch)
  - Card and peripheral options: networking, Fast SCSI-2 controller and drives, plug-in PCMCIA assembly supporting two Type I or II PC cards or one Type III card
- Microsoft Intellimouse (PS/2)
- 32-bit Ethernet controller with standard 10Base-T support

Intergraph's 21-inch monitor is a superb choice for users who would like the generous real estate of a big-screen monitor at a very affordable price. With an improved electron gun design for enhanced focus, the image quality of the monitor displays brighter, richer color, and better contrast at the same time. The monitor provides flat, square screen technology; the monitor minimizes distortion for a very accurate display, even at screen edges and corners.

1.1.4 Base Hardware Requirements for Existing or Third-Party Workstations

In order to provide the requisite processing speed and memory necessary to support the required I/CAD System software, existing or third-party workstations must satisfy the following minimum configuration:

- 200-megahertz Pentium processor
- 64 megabytes of RAM
- 2-gigabyte hard drive
- Must be capable of running the Windows NT operating system
- Must be network enabled/ready

2.0 PROPOSED SOFTWARE CONFIGURATIONS

The following tables list the software for each proposed server and workstation, by type. An additional software configuration is included for MDTs. Although a brief description is provided for each application, refer to the *I/CAD System Overview* (Appendix E) for more detailed information on the purpose and functionality of the I/CAD application modules or third-party software packages.

Inherent to the I/CAD System standardization is an open systems software architecture that offers complete modularity, providing system expandability without disruption to the base configuration. It does not matter whether future expansion takes the form of adding new servers, new workstations, or new software modules, nor does it matter whether expansion is the result of additional responsibilities in the dispatch center or is forced by the demands of community growth.

Florida Power has also requested that all workstations and servers have access to Network File System (NFS) data throughout the corporate network. To support this access, a 25-user license of DiskAccess, NFS Client for Windows NT has been proposed. Using DiskAccess, Windows NT users are able to mount and access files on UNIX and other systems acting as NFS servers. DiskAccess is designed to be an integral part of a Windows NT system, allowing users to browse for NFS systems through Explorer, Network Neighborhood, and File Manager. It includes the following features:

- Network File System (NFS) version 3 client support
- Authentication by connection; pcnfsd authentication/printing
- Windowed ftp and telnet applications
- showmount, rpcinfo, and DNS query utilities
- 32-bit (WIN32) multithreaded, kernel-mode application
- Microsoft's native TCP/IP protocol stack
- IBM 5250 and Graphics 3270 Terminal Emulations
- NTP (Network Time Protocol) server and client tools
- RSHD (remote shell server) and RCP (remote copy)
- DOS to UNIX text conversion utility

2.1 Server Software Configurations

Database Server 1 Software	
Windows NT Server	Windows NT Server provides the operating system for Database Server 1 and enables this server to act as the Primary Domain Controller (PDC), centralizing security for the domain.
I/Executive	I/Executive coordinates all IPS software modules and passes information between the I/MDT and I/Informer interfaces and the various client workstations. In addition, I/Executive includes map and database maintenance utilities and prints standard reports of dispatch center activity. The I/Executive security toolkit is used to fine-tune access and control privileges to dispatch databases.
ORACLE Workgroup Server	ORACLE Workgroup Server provides the relational database management (RDBMS) system used by the I/CAD System to store incident histories and resource information. A copy of ORACLE Workgroup Server resides on both database servers. Copies of ORACLE Workgroup Client, resident on each client workstation, communicate with the server databases via standard ORACLE transactions, thereby continuously updating the databases to retain currency.
ORACLE SQL*Plus	ORACLE SQL*Plus provides a user-friendly environment for querying, defining, and controlling the database. ORACLE SQL*Plus delivers full implementation of ORACLE SQL and PL/SQL query languages, along with a rich set of extensions.

Database Server 2 Software	
Windows NT Server	Windows NT Server provides the operating system for Database Server 2 and enables the server to function as backup domain controller and to authenticate log-on requests. In the event that Database Server 1 fails, Database Server 2 assumes the role of Primary Domain Controller (PDC), re-centralizing security for the system.
I/Executive 2	I/Executive 2 provides the utilities to support dual redundant database operations. In the unlikely event of server failure, I/Executive 2 automatically redirects network traffic to the functioning database and alerts designated users of the failure. Following recovery, I/Executive resynchronizes the failed database, then re-enables dual server operation.
ORACLE Workgroup Server	Refer to the ORACLE Workgroup Server description provided in the software table for Database Server 1.
ORACLE SQL*Plus	Refer to the ORACLE SQL*Plus description provided in the software table for Database Server 1.
Visual C++	On site, Visual C++ is used to tailor the GUI to the individual requirements of each agency. In addition, Visual C++ also provides a system for managing third-party OLE controls, as well as features that allow developers to store classes, resources, and header files as C++ components that can be re-used.
I/Management Analysis and Reporting System (I/MARS) Server	I/MARS is a map-based incident analyses system that allows users to query records and to display those records in graphic form using the CAD map used at calltaking and dispatching consoles. Results of incident selection processes are also available as graphs, bar charts, pie charts, histograms, and printed lists.

Tertiary Server Software	
Windows NT Server	Windows NT Server provides the operating system for Database Server 2 and enables the server to function as backup domain controller and to authenticate log-on requests. In the event that Database Server 1 fails, Database Server 2 assumes the role of Primary Domain Controller (PDC), re-centralizing security for the system.
I/Backup	I/Backup provides support for an off-site, near real-time backup of an I/CAD database server over a medium- to low-speed communication link. This support is normally used in the following situations: 1. Off-site Server The database server site must be evacuated or is disabled or destroyed and there is a need to resume operations with as little disruption as possible. A supervisor may declare the backup database as live and the calltakers/dispatchers may log into the backup database. This presumes that the calltakers/dispatcher are also offsite and have remote communication with the backup server. 2. Multi-Center Dispatching There is a requirement for multiple, regional dispatch centers which operate autonomously but must provide backup for each other in case of the failure of one center. In this scenario, each center has a backup of the other center's database. If one center must shut down, the supervisor declares the backup database at the other center to be the live one and dispatchers/calltakers from the surviving center may log into the backup database. I/Backup also provides support when both centers are operational. Events and resources can be transferred from one center to another. Inquiries may be performed on the backup database so that centers may coordinate activities. I/Backup is a compliment to the database redundancy that is part of the I/Exec2 product. Either or both products may be used to

	ensure continued operation in the face of system failure. I/Exec2 is used for seamless failover for servers in the same Local Area Network. I/Backup is used for near real-time failover for servers separated in a wide area network. I/Backup makes use of database replication technology to back up a command center over a medium- to low-speed communication link. Provisions are made to switch control to the backup center on a failure of the main or primary center. When operation at the primary center is restored, the databases are automatically synchronized and normal operation is resumed.
ORACLE Workgroup Server	Refer to the ORACLE Workgroup Server description provided in the software table for Database Server 1.
ORACLE SQL*Plus	Refer to the ORACLE SQL*Plus description provided in the software table for Database Server 1.

Interface/Communications Server Software	
Windows NT Server (operating system)	Windows NT Server provides the operating system for the Interface/Communications Server and enables the server to function as a backup domain controller and to authenticate log-on requests.
I/Mobile Data Terminal (I/MDT)	I/MDT provides the server side functions required for a complete implementation of mobile data terminals. This application will, via CDPD, establish communication between the dispatch environment and vehicle-based MDTs with I/Mobile software. This connection enables MDTs to review and update incident, unit, personnel, and equipment information maintained in the dispatch environment.
I/Tracker	I/Tracker accepts, via I/MDT, incoming vehicle location data received from a GPS receiver in the mobile computer. This product functions as an extension to the dispatcher functionality. I/Tracker periodically sends the latest updated location information to the dispatch environment for map update of vehicle locations.
XNTP	XNTP is third-party software used to permit time synchronization of the entire dispatch environment.
Trouble Analysis	The Trouble Analysis component analyzes call data to determine, from the pattern of calls within the outage area, a probable outage device. The server process will then create an outage event based on this analysis.
Batch Call Creation	The Batch Call Creation component is a new standard IPS product that provides a standard mechanism for external processes to create events in the I/CAD System. The external process would replace or supplement the standard I/Calltaker product as a mechanism for entering events into the I/CAD System. The Batch Call Creation component is a gateway to the I/CAD database and network protocols. The database fields that make up an event record are configurable to some degree in the I/CAD System. Certain fields must be present, but others may be added to meet the needs of specific customers. The component must support this configurability.
Interface to WMS	The Workorder Management System (WMS) is provided by Severn Trent Systems as part of another proposal. I/Dispatcher will send work order requests to the WMS. These work requests will be in the form of records written to the appropriate table in

	the WMS Oracle database. (WMS periodically checks this table for additions.) I/Calltaker and I/Dispatcher will not interface directly to WMS for lineup information, but once WMS is online shift lineups may be imported into the I/CAD Oracle database from the WMS Oracle database using a transfer process written for that purpose.
Interface to Human Resources Data	I/Dispatcher will not have a direct interface to the customer's Human Resources system, but it will be possible to transfer personnel identification and skill information to the I/CAD Oracle database via an external utility program. The default interface will be via an ASCII file. The customer will be responsible for exporting the data from the HR system in a format to be specified. I/CAD will provide a utility to update the Oracle database from the ASCII file. This process may be displaced by the Interface to WMS.
Interface to SCADA	The OMS will have a server-based program that monitors and manipulates Supervisory Control and Data Acquisition (SCADA) status. This server process will accept requests from the Dispatcher workstations and forward SCADA status information to the workstation displays.
Interface to AODS	The OMS will have a server-based program that monitors and manipulates Automated Outage Detection System (AODS) status. This server process will accept requests from the Dispatcher workstations and forward AODS status information to the workstation displays.
Interface to CSS	The OMS will have a server-based program that accepts new call information from the Customer Service System (CSS) and creates I/CAD jobs via the batch call creation interface. There are other components of the Interface to CSS that operate on the client workstation.
Interface to VRU	The OMS will have a server-based program that creates callout requests on a voice response unit (VRU). These requests can provide a list of customers that should be called to determine if power is restored at their home. These requests can also provide a list of field personnel that can be called up to perform outage work.

2.2 Workstation Software Configurations

Dispatcher Workstations	
Windows NT Workstation	Windows NT Workstation provides an independent operating system for client workstations, allowing clients to participate in the network and to load and run software applications locally.
ORACLE Workgroup Client	ORACLE Workgroup Client is the relational database management (RDBMS) system used by client workstations to communicate with the server databases, thereby allowing continuous updating of the databases.
I/Dispatcher	I/Dispatcher incorporates all the functionality of I/Calltaker plus dispatching and emergency vehicle monitoring and control capabilities that include recommendation of emergency vehicles for dispatch; access to agency deployment plans; the ability to transfer incidents between emergency vehicles; the ability to log emergency vehicles on and off; the ability to transfer emergency vehicles between stations; and the ability to generate automatic route recommendations.

Supervisory Workstation	
Windows NT Workstation	Windows NT Workstation provides an independent operating system for client workstations, allowing clients to participate in the network and to load and run software applications locally.
ORACLE Workgroup Client	ORACLE Workgroup Client is the relational database management (RDBMS) system used by client workstations to communicate with the server databases, thereby allowing continuous updating of the databases.
I/Dispatcher	I/Dispatcher incorporates all the functionality of I/Calltaker plus dispatching and emergency vehicle monitoring and control capabilities that include recommendation of emergency vehicles for dispatch; access to agency deployment plans; the ability to transfer incidents between emergency vehicles; the ability to log emergency vehicles on and off; the ability to transfer emergency vehicles between stations; and the ability to generate automatic route recommendations. Using supervisory log-on privileges, I/Dispatcher commands are available that only supervisors should use, such as the ability to monitor any I/CAD incident transparently to both dispatchers and calltakers.
Microsoft Office 97, Developer Edition	The Office 97 software is used in the I/CAD System to produce, integrate, and distribute management report documents that encompass information output in Microsoft Access, Word, Excel, and PowerPoint. Microsoft Access allows managers or supervisors to design and generate customized reports and to distribute the reports to other users. While Microsoft Office 97, Developer Edition provides the traditional Office Professional suite of software, capabilities have been upgraded to enhance integration and usability of the individual Office modules and to add Microsoft Forms, more than 500 programmable objects, and Visual Basic, Applications Edition (VBA). In addition, development tools are packaged with this suite, including a royalty-free run-time license, Microsoft Access/Microsoft Visual SafeSource, Replication Manager, Setup Wizard, and expanded ActiveX controls.

Mobile Computer	
Windows 95	Windows NT Server provides the operating system for Database Server 1 and enables this server to act as the Primary Domain Controller (PDC), centralizing security for the domain.
I/Mobile	I/Mobile is the software that resides in each MDT. I/Mobile provides the mobile user interface to the I/CAD System and to other mobile MDTs. The MDT also interfaces with automatic vehicle location hardware. I/Mobile communicates with I/CAD through the Server-based I/MDT product. Messages are sent and received asynchronously. I/Mobile allows units to access a subset of I/CAD commands and provides an interface to external databases for queries like vehicle license checks.

3.0 OUTAGE MANAGEMENT SYSTEM

The I/CAD System has been developed over the years to meet a variety of needs for public safety service providers. These providers include police, fire, ambulance, and roadside assistance (auto club) customers, and multi-agency customers that provide multiple types of service.

The core products in I/CAD are I/Calltaker and I/Dispatcher. The function of I/Calltaker is to support the person taking telephone calls from the public (or club members) and creating events (requests for service). The function of I/Dispatcher is to support the person communicating with the units in the field (for example, fire trucks and patrolmen) and managing the assignment of events to units. Both products use a GUI and a digital map, and provide real-time status displays, database inquiry, and message facilities.

Generally a calltaker takes calls from anywhere in the service area, and the resulting event is automatically sent to the appropriate dispatcher workstation based on the event type and location. All entered data is entered into a central Oracle database, and a subset of the data is broadcast on the local area network to update the real-time status displays of other workstations. The GUI and the database schema are highly configurable so that the system may be tailored for the terminology, workflow, and data processing requirements of a wide range of customers. Both I/Calltaker and I/Dispatcher use a high-speed map display to display geographic and situational information.

There is a large degree of overlap between the requirements of public safety customers and those of utility customers. However, the following differences have been identified:

- In public safety, the general rule is that one telephone calls leads to one dispatchable event. There are cases when the same occurrence is reported multiple times (like traffic accidents), and the I/CAD System detects nearby events and recommends to the calltaker that they may be collapsed into a single event. In a utility distribution system, the general rule is that multiple calls reporting a service outage need to be aggregated to a single dispatch to repair the failed piece of equipment upstream from the callers. This aggregation should be based not on geographic proximity, but rather on information about the distribution network and current knowledge about the equipment and the other outstanding outage reports. The aggregation may need to change as more information is obtained about equipment status and outages. Therefore, the I/CAD System will need a new *Trouble Analysis* function to perform the analysis to predict the equipment that needs repair and to maintain the association between outage calls and repairs
- In public safety, the two primary pieces of information in taking a call are the event location and the event type. From those, the agency response, dispatch

group, and unit recommendations are computed. The event location may be entered as a street address, intersection, commonplace name, alarm identifier, or geographic coordinate. The location entry is converted to a map point and a response zone by the process of *location verification,* using the map and the geographic database. While some locations may have specific information or response plans stored for them, most do not. In a utility distribution system, the key is to identify a customer premise. The input may be a customer name, address, or account number. Each customer can be found in a customer database with important additional information needed to process the call, such as the identification of the service transformer and whether service has been cut off for nonpayment. Since this customer database is used for many other business purposes, it will remain external to the I/CAD System. Therefore, the I/CAD System will need a new *Customer Data Interface* function to supplement or replace the existing location verification function. This interface can also support other functions, such as recording outage repair times, inquiry of supplemental premise information, and the generation of a list of customers affected by an outage

- In public safety, the displayed base map is primarily a street map with a dynamic overlay of unit and event location symbols. The street graphics are linked to database tables used for address verification, optimal routing, and road closures. Optional static overlays include building outlines, political and administrative boundaries, utilities, and more. These optional graphic levels may also be linked to database tables and interactively queried, but are not otherwise used in direct processing. In a utility distribution system, the distribution network is a core component of the base map, and the street network has less importance. The distribution network graphics should be linked to a network model that is either stored within the I/CAD System, or external in an AM/FM GIS. In addition, the map should show an additional dynamic overlay for the status of the network based on SCADA information or other sources.

IPS has worked with Florida Power to identify the functional requirements for an initial implementation of Outage Management. The result of this activity is a functional requirements document that is attached to this proposal as Appendix B.

This functional requirements document identifies two phases for the implementation of the OMS. The two phases were defined to separate those activities that were required for a minimal operational capability of the OMS from those activities that were not required or were dependent on other projects such as the AM/FM/WMS project. The proposed schedule for this project does not differentiate between these phases. IPS would prefer to address these activities as outlined in the proposed project schedule. In this way, design decisions can be made early and development can proceed in advance of the required

systems integration. This will serve to minimize the impact of software change in the operational OMS. If, during detailed project analysis, it is determined that a second phase is required, IPS will work with Florida Power to develop a viable schedule.

The success of this implementation depends on data and interfaces from a variety of sources. The tables below identify IPS' understanding of the sources and its responsibilities with respect to the data and interfaces.

Data Dependencies	
GIS Map Base	Prior to the implementation of the AM/FM/WMS project, the I/CAD GIS Map Base will be provided by Florida Power based on data acquired for another project with the Lightstone Group. Details of our assumptions and dependencies are outlined in Section 7.4 of this document. After the implementation of the AM/FM/WMS project, the GIS Map Base will come from data developed and maintained through that project. We assume that this data will meet, at a minimum, the same requirements as listed above. We also assume that, by this time, Florida Power personnel will be trained and experienced with upgrading CAD maps and will be able to roll this information into the system. We have not, as part of this proposal, bid the services required to make this transition. However, if required, we would be glad to bid these services as the need arises.
Facilities Data (FRAMME)	Prior to the implementation of the AM/FM/WMS project, the facilities data required to support Trouble Analysis will be provided by Florida Power in the form of a FRAMME Database. This data, like the pilot project data, will be translated from the existing DIFIS data. IPS has a copy of the Pilot Project database translated from DIFIS with which to do software development. We assume that Florida Power will want to provide fresh data prior to system testing and training as well as just prior to going into live operation with the OMS. After the implementation of the AM/FM/WMS project, the facilities data will come from data developed by that project. We assume that this data will be in the form of a FRAMME Database that is compatible with the previous database for the information on which OMS is dependent. It is our understanding that the connectivity data (critical to

	Trouble Analysis) for a FRAMME project is consistent from project to project and should therefore require no change to software. We have not, as part of this proposal, bid any software development effort required to make this transition. However, if required, we would be glad to bid this effort as the need arises.

Interface Software Dependencies	
I/Mobile Data Terminal (I/MDT)	I/MDT provides the server side functions required for a complete implementation of mobile data terminals. This application will, via CDPD, establish communication between the dispatch environment and vehicle-based MDTs with I/Mobile software. This proposal bids a mobile computer with CDPD modems and GPS. We assume that Florida Power is responsible for procuring CDPD bandwidth from GTE. If necessary for pricing, IPS can provide details on the required data bandwidth.
I/Tracker	I/Tracker accepts, via I/MDT, incoming vehicle location data received from a GPS receiver in the mobile computer. This product functions as an extension to the dispatcher functionality. I/Tracker periodically sends the latest updated location information to the dispatch environment for map update of vehicle locations. This proposal bids a mobile computer with CDPD modems and GPS. We assume that Florida Power does not require Differential Correction to the GPS coordinates.
Interface to WMS	The Workorder Management System (WMS) is provided by Severn Trent Systems as part of another proposal. I/Dispatcher will send work order requests to the WMS. These work requests will be in the form of records written to the appropriate table in the WMS Oracle database. (WMS periodically checks this table for additions.)
Interface to Human Resources Data	I/Dispatcher will not have a direct interface to the customer's Human Resources system, but it will be possible to transfer personnel identification and skill information to the I/CAD Oracle database via an external utility program. The default interface will be via an ASCII file. The customer will be responsible for exporting the data from the HR system in a format to be specified. I/CAD will provide a utility to update the

	Oracle database from the ASCII file. This process may be displaced by the Interface to WMS.

Interface to SCADA	The OMS will have a server-based program that monitors and manipulates SCADA status. This server process will accept requests from the Dispatcher workstations and forward SCADA status information to the workstation displays. We assume that this interface will be performed using TCP/IP protocol over the Florida Power WAN communicating with a program provided by Florida Power. This interface will receive packets describing the state of the SCADA system and send packets to affect change.
Interface to AODS	The OMS will have a server-based program that monitors and manipulates AODS status. This server process will accept requests from the Dispatcher workstations and forward AODS status information to the workstation displays. We assume that this interface will be performed using TCP/IP protocol over the Florida Power WAN communicating with a program provided by Florida Power.
Interface to CSS	The OMS will have a server-based program that accepts new call information from the CSS and creates I/CAD jobs via the batch call creation interface. There are other components of the Interface to CSS that operate on the client workstation We assume that this interface will be performed using TCP/IP protocol over the Florida Power WAN communicating with a program provided by Florida Power.
Interface to VRU	The OMS will have a server-based program that creates callout requests on a VRU. These requests can provide a list of customers that should be called to determine if power is restored at their home. These requests can also provide a list of field personnel that can be called up to perform outage work. IPS has discussed this interface with Laird Smay of Baker Audio/Telecom. Mr. Smay agrees that the appropriate interface can be provided. We assume that Florida Power is responsible for providing this interface. We would be glad to work with Baker Audio during the design of this interface.

4.0 PROPOSED COST SCHEDULES

IPS has provided pricing for the complete configuration as requested by Florida Power. Based on the fact that this project is a partnership between the two companies, we have included significant discounts to our normal list prices. The details of that discounting are included in Appendix C. IPS realizes that Florida Power may change the configuration, requirements, or provide additional information before making a final decision, and IPS agrees to adjust the pricing accordingly. Please refer to Appendix C for detailed Pricing.

5.0 THE SYSTEM ARCHITECTURE

To sustain the system operability requisite in any dispatch environment, an open systems architecture that incorporates configuration flexibility, redundancy, and fault tolerant technologies, is essential. IPS believes that our proposed architecture furnishes these elements in a truly open, non-proprietary environment.

The IPS goal in selecting each hardware and software component was to produce a system that combines the best technological solutions available in today's marketplace while preserving the system's ability to be upgradeable to the next generations of technology. To ensure the continuing viability of Florida Power's CAD system, the IPS system architecture is based to the use of industry-standard technology and software, such as Intel processors, the Microsoft Windows NT operating system, and the ORACLE Relational Database Management System (RDBMS). Code is written in C++, and the Microsoft GUI is leveraged to provide a familiar user interface that reduces training requirements.

The following subsections describe the proposed IPS system architecture and provide a high-level rationale for the selections we have made to maximize Florida Power's investment.

5.1 Client/Server Topology

The maintaining of system operability while allowing for future growth makes the selection of a client/sever architecture a natural fit.

Within the client/server topology, each workstation (client) is equipped to perform most of its tasks, creating what might be called a heavy client. To accomplish this independence, workstations are configured with the hardware components and software applications necessary to perform tasks locally. By increasing processing speed and adding random access memory (RAM) and hard drive disk space to each client workstation, most of the system processing is distributed to the client, meaning that applications software can be installed and run locally and applications processing can be accomplished locally. This modular architecture eliminates much of the network traffic associated with mainframe computing, and this combination of distributed processing and client autonomy sustains system operability by schematically isolating the impact of a client malfunction. In addition, the flexibility of the architecture allows new workstations to be added without disrupting operations within the dispatch center.

However, while the majority of processing is distributed to client workstations, the results of that processing must be collectively accessible to all clients. Consequently, there must be a centralized machine capable of the following:

- Continuously updating the information database constructed to initiate operations
- Maintaining ongoing communication with the individual clients

These tasks become the business of the server. In establishing communications between itself and each client, the server provides a communications network used by the system to pass information from one client to another. And, by continuously updating the database with new information accumulated by clients, the server centralizes database information and maintains the currency of that information. By maintaining a current database, the server can pass the most up-to-date information to clients so that they, in turn, can use the best available information to perform their processes.

It's a simple, elegant solution. The same design that sustains system operability supplies the flexibility necessary to add clients to the network or to take clients off-line for routine maintenance or to install upgrades. To further enhance this flexibility, if activity on one server becomes too great, new servers can be added and new processes or existing processes can be redirected. As an example, each interface application residing on the Interface/Communications Server could be redistributed and run on a separate server.

But what if a Database Server fails?

5.2 Providing Redundant Database Servers

Since access to information in the database and communication between clients is cardinal to sustaining Florida Power's operability, the proposed system architecture includes two, fully redundant database servers to prevent disruption of operations in the unlikely event of a server failure. From the perspective of system operations, each server has a mirrored copy of the database; neither is primary, and the database on each server is maintained by the system in real-time.

In providing database redundancy, if a client workstation detects a problem with one of the database servers, all client nodes are discreetly notified, all database operations are diverted to the functional database server, designated personnel, such as the system administrator, receive notification of failover, and database operations are terminated against the failed server. Software on the functional server marks the point of failover in the database so that, once brought back on-line, the failed server's database can be reconstructed. All of these activities occur automatically, without operator intervention and without impacting calltaker or dispatcher operations.

After repairing the failed server, the administrator initiates a recovery process, and the failed server begins updating its copy of the database from the point of failure. The amount of time it takes to fully update the database depends on the amount of time the server was down. This process will continue until both server databases are synchronized. As with failover, recovery does not impact calltaker or dispatcher operations.

Following recovery, all nodes are discreetly notified that both servers are back on-line, and the servers are returned to mirrored dual operation. Again, return to dual server operation takes place without disruption to operator procedures.

Using a similar sequence of events, a server can be taken off-line for routine maintenance without interfering with normal operations.

Reliability analyses of I/CAD Systems around the world confirm that an availability rate greater than 99 percent is expected and achievable with the proposed configuration. The aim of the configuration is to provide continuous operation for the Communications Department 24 hours a day, 365 days a year.

5.3 Interface/Communications Server

The proposed Interface/Communications Server ties the external systems necessary to complete Florida Power's configuration requirements into the network.

During the last eight years, IPS has developed and established an extensive suite of interface products for the dispatch industry and is committed to creating new products to add to this suite as dispatch interface requirements emerge. We also actively update our existing suite of products to provide improved performance or to incorporate new features.

The open systems, client/server architecture proposed by IPS is ideal for adding new interface devices and interface software without disturbing mainline functionality.

While the Interface/Communications Server provides significant communication services within the system, continued operation of this server component is not mission-critical. In the unlikely event that the Interface/Communications Server should fail, operability within the system would continue; however, functionality would be limited. For this reason, IPS has not proposed a backup Interface/Communications Server. However, if Florida Power would like to configure a system that includes redundancy of the Interface/Communications Server, IPS can provide this configuration.

5.4 Fault Tolerance

In addition to providing database redundancy, the IPS proposed system architecture is designed to provide fault tolerance, meaning that the system is designed to continue functioning even after failure of a system component.

IPS uses Redundant Array of Independent Disks (RAID) technology on all servers to enhance reliability within the system and to minimize loss of data, should a disk fail.

When a server disk fails, designated personnel are notified of the failure and simply remove the disk and replace it with a new one. Each disk is "hot-swappable," which means that it can be removed and replaced without taking the server off-line and that during the period of time between failure and disk replacement, the system automatically writes data to the functioning disks. In the meantime, operations within the Communications Department continue normally.

Hot swappable power supplies also contribute to the fault tolerant design. Once again, should an internal power supply fail, designated personnel are notified and the failed power supply is swapped for a new component without taking the server off-line and without disrupting normal operations.

5.5 Windows NT–The Operating System

Think about Microsoft Corporation's Windows NT, and security, stability, and reliability quickly come to mind. Ask people who use it on a daily basis, and they will tell you Microsoft Windows NT systems that crash are about as common as 286-based machines running Windows 1.0 are today. The Windows NT operating system design replicates the paradigm of the client/server environment: isolate and modularize processes to produce stability.

Microsoft pushed tasking to operating system sublevels, allowing the Windows NT base operating system to perform only those processes that could not be reasonably performed elsewhere. The result is a base operating system that is as small and tight as possible. Functionality removed from the base operating system is distributed to a set of "protected subsystems."

The result is a very stable, modularized platform. While a subsystem may fail, the core operating system and remaining subsystems can continue to function. Enhancements occur at the protected subsystem level, which enables the system to be upgraded without rebuilding the entire operating system. In fact, new protected subsystems can be added to the operating system, or subsystems can be upgraded, without requiring modification to either the base operating system or to existing subsystems.

In addition to decentralizing as much of the core operating system as possible, the Windows NT modular design provides an open systems platform that allows users to engineer system functionality by selecting industry-standard software from a variety of vendors.

Embedded in the definition of "industry standard" are two categories: *de jure* and *de facto*. *De jure* standards are those that have been created by standards bodies such as the American National Standards Institute (ANSI) or the International Standards Organization (ISO). An example of a de jure standard is the ANSI American Standard Code for Information Interchange (ASCII) character encoding standard. De facto standards are those that have been widely adopted by industry but not originally endorsed by any of the standards bodies. An example of a de facto standard is the Transmission Control Protocol/Internet Protocol (TCP/IP) network communications protocol. De facto standards have arisen either to fill gaps left by implementation specifications of the de jure standards or because no standard had yet been defined for the particular area.

It is safe to say that open systems based solely on de jure standards have yet to be fully realized, and it is doubtful that they ever will be. At the heart of the problem are the very different natures of the computer industry and the academic standards process. The speed with which the technology is changing is staggering, and the formal standards process is inherently unable to keep pace with it. So, the utopian "de jure"-centric world of open systems has largely given way to the newer, reality-based recognition that real-world open systems cannot live by de jure standards alone. In today's open systems, both de facto and de jure standards are combined to create inter-operable systems. It is this strategic combining of both types of standards, this middle-of-the-road approach, that enables open systems to keep pace with the rapidly changing nature of technology.

The beauty of this architecture is that it allows for the plug-and-play of modules, meaning that a new module implementing a de facto standard can later be supplemented or replaced with one that implements a de jure standard. In effect, you end up with the best of both worlds: open systems and industry standards.

5.6 A GUI Standardized across Applications

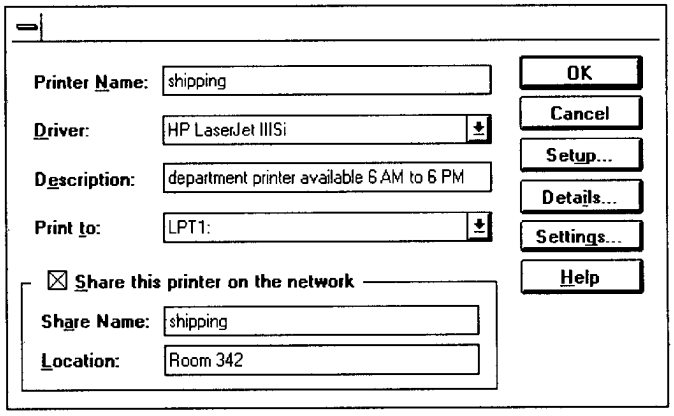
Since its introduction in the initial release of Windows in 1985, the Windows GUI has steadily eroded older-generation, command line user interfaces (CLUIs). In an astonishingly short period, Windows operating systems have become the platform used on 87 percent of computer systems worldwide, virtually removing command line-only interfaces from the marketplace.

Why the success? It has more to do with ease of learning and the convenience of using icons, buttons, and dialog boxes to communicate with the operating system; it has to do with consistency. During the past 12 years, Microsoft and third-party applications have leveraged what users already know about how to control their operating system to provide a structure for learning new software. With millions of Windows users, Microsoft guidelines for GUI development have effectively become ubiquitous, and there are currently more then 11,000 shrink-wrapped, commercial, off-the-shelf (COTS) applications that can be run on Windows NT, all of which share the Microsoft GUI.

Each I/CAD module proposed for Florida Power's system offers complete implementation of the Microsoft GUI, allowing commands to be entered from the CAD map, through the use of forms or dialog boxes, or by using the command line or shortcut keys. And, while developing new or updated products and technology on a biannual basis is an integral part of IPS corporate operations, user familiarity with the GUI will continue to be supported to reduce training requirements.

5.7 Systems Administration of the Operating System

From an administrator's standpoint, the most improved aspect of the Windows NT operating system may have taken place in the systems administration arena. From installation and configuration of the operating system itself, to configuration of peripheral devices, to installation and configuration of application software, Windows NT uses its GUI-based setup programs to step administrators through building their systems, relieving them of the burden of editing numerous configuration files. Dialog boxes are used to solicit configuration information, such as which file system to use or which print drivers to download, and the system automatically writes this information to the Windows NT Registry database.



The use of dialog boxes for various installation procedures reduces the chances of a configuration error. However, if an error does occur, Windows NT provides a descriptive message, directing the administrator to the problem.

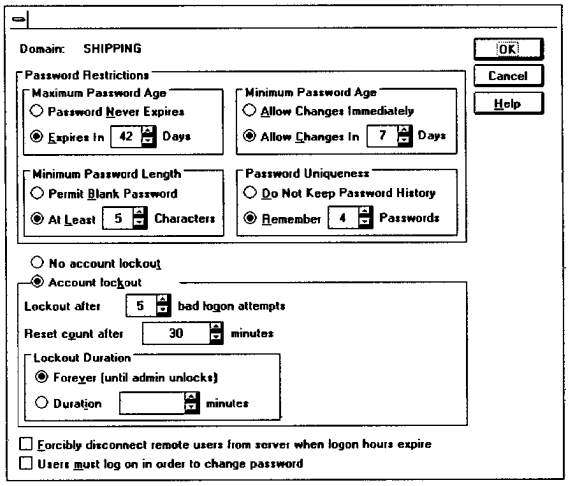
5.8 Windows NT Security Administration

Windows NT automatically supports multiple file systems; however, the file system of choice for a dispatch environment that needs to protect both internal and external database access is the Windows NT File System (NTFS), which provides the highest level of security; the ability to institute fault-tolerant disk strategies; and which supports large files and disk sizes.

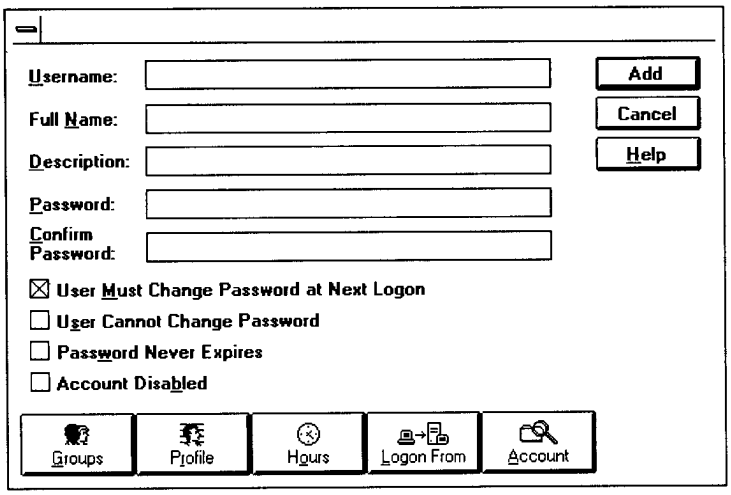
As with the setup programs used to load new software or to update existing software, security administration is GUI-driven. However, rather than stepping the administrator through rigid, system-defined security policies, Windows NT uses combinations of options presented on dialog boxes or in user windows to establish a system security setup that circumscribes the customer's requirements.

These utilities set:

- Domain account policies and restrictions, that determine
  - Maximum and minimum password ages
  - Minimum password length
  - Number of passwords that must be used before a previously used password can be recycled (password uniqueness)
  - Number of bad log-on attempts prior to enacting account lockout
  - The amount of time the account lockout remains in effect
  - Forcible disconnection of users when a set number of hours expire
  - Forcible user log on prior to changing a password. This option prevents users whose passwords have expired from logging into the system

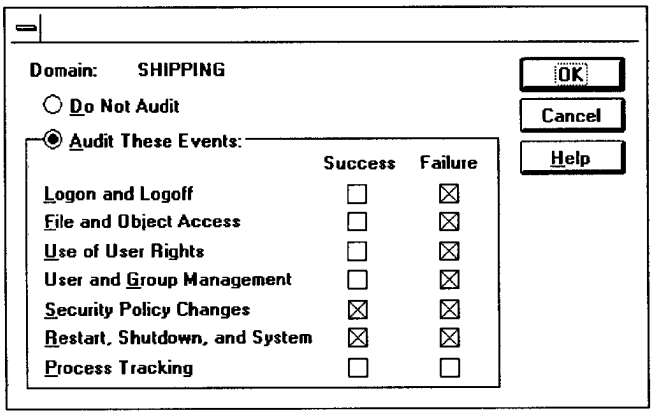


- User account policies, such as
  - Whether or not users can independently change passwords or whether password modification requires system administration assistance
  - Whether a user account is enabled or disabled. An account may be disabled if an operator is on vacation, for example. If the user no longer works for Florida Power, however, the user account should be removed
  - Groups the user belongs to
  - Time of day users are entitled to access the system
  - Specific workstation a user is entitled to log on to



- Group and user account parameters and privileges, that determine
  - Which user accounts have access to system management privileges, such as
    - Administrator privileges
    - Server operator privileges
    - Account operator privileges
    - Print operator privileges
  - Which folders and files a user group may access
  - Who can log on to the server
  - Who has the right to kick off backups of the system. Potentially, operators granted this privilege can carry information off-site
  - Who can set up auditing and security logs
  - Who can take ownership of files or other objects

- System audit policies and administrator account privileges, such as
  - Whether or not to audit failed log-on attempts, file and object access, security policy changes, workstation startup and shutdown, and process use
  - Whether or not administrative procedures must be performed from a designated workstation
  - Removal or retention of the Domain Administrator's Group for each workstation



- File and directory permissions and shares privileges and auditing options such as
  - Whether or not accessing files or folders will be audited
  - Which groups or users have access to certain files and folders

5.9 Customization versus Custom Design

The IPS solution integrates several widely used, standard applications available from IPS, as well as from third-party vendors. I/CAD software modules are COTS products and are designed to be available to the marketplace as a whole. All I/CAD customers run standard software with each system tailored to customer needs by adding the appropriate I/CAD applications, then setting extensive user-definable parameters. If customers purchase an active full maintenance contract, all product enhancements are received at no cost. In this way, as technology advances and new software standards become available, the IPS customer keeps pace.

The alternative to providing a COTS-based system is to develop custom software created for each specific user agency. To upgrade custom software, each customer must bear the *full cost of the upgrade*, and a good deal of time and effort is required to move the customer forward.

The reliability of the proposed I/CAD COTS software is demonstrated by the fact that as I/CAD has evolved over the last 8 years, the base product has repeatedly proved itself, currently functioning at more than 60 sites (customers) around the world.

6.0 NETWORKING HARDWARE PREREQUISITES

IPS understands that Florida Power will supply the network hardware and software for the CAD system. The following subsection describes the IPS networking environment.

6.1 Networking Environment

The I/CAD System is a network-based, distributed computing environment with each client workstation running its own application software and Windows NT operating system. These workstations communicate with and through the database server(s) over a local area network (LAN) or a wide area network (WAN). This distributed approach avoids interdependence and leads to a simple and elegant solution.

IPS' network is a 10 and/or 100Base-T Ethernet design using the TCP/IP transport protocol. TCP/IP is a long-tested, preferred protocol, particularly for local and wide area networking. Its routability, scalable architecture, reliable delivery, and global use have made TCP/IP a necessity for any customer wishing to build wide area networks or to access worldwide information networks, such as the Internet.

All of our workstations and servers include an IEEE 802.3 Ethernet communication interface to provide optimal throughput. Intergraph uses a 10/100Base-T PCI card for high bandwidth communication with each server and workstation. This backbone takes advantage of existing industry-standard network technology and provides an excellent migration path to future network products.

The physical network consists of 100Base-T for the servers and 10Base-T for the workstations. IPS uses the standard hub design because it delivers proven, industry-standard connectivity for demanding network environments, such as a dispatching environment. Hubs provide a low-cost, high-performance solution that prevents network bottlenecks and provides high response times—the design is also expandable to accommodate large networks.

Windows NT is a complete operating system with fully integrated networking, including built-in support for both peer-to-peer and client/server networking. It provides interoperability with remote dial-in access to existing networks, support for distributed applications, file and print sharing, and the capability to easily add networking software and hardware. The following transport protocols are supported: TCP/IP; NBF, derived from NetBEUI; NWLink, an NDIS-compliant version of Novell Internetwork Packet Exchange (IPX/SPX); Microsoft Data Link Control (DCL); and AppleTalk. The use of Windows Sockets provides true transport protocol independence and extends Windows NT's support to additional protocols and technologies, including DECnet, OSI, ATM, wireless, and telephony.

7.0 SOFTWARE CAPABILITIES

The I/CAD software capability integrates calltaking, dispatching, and supervisory functionality with an interactive map display. This functionality requires no special interface and places any geographic information that has been entered into the I/CAD System at the fingertips of dispatchers and calltakers.

7.1 I/Calltaker

At Florida Power, calltaking is normally done through the CSS system and transferred to I/CAD via that interface. We have not bid calltaker seats for this proposal but this application is available. Essentially a subset of the I/Dispatcher software, I/Calltaker retains the functionality necessary to answer calls, verify locations and enter incident information, and to forward calls to dispatchers. For details, reference Appendix A, the *I/CAD System Overview*.

7.2 I/Dispatcher

In addition to providing all the functionality of I/Calltaker, I/Dispatcher allows users to dispatch emergency service vehicles and monitor vehicle and incident status and type. Using the digital map, I/Dispatcher also provides automatic dispatch recommendations based on incident and vehicle location, type, availability, and other pertinent factors. For details, reference Appendix A, the *I/CAD System Overview*.

7.2.1 Supervisory Functionality within I/Dispatcher

Many I/CAD commands can be restricted to the Supervisor. The Supervisor may also be configured to be a part of the approval process, and to that of security and administration.

Using I/Dispatcher, supervisors can monitor any I/CAD incident from any workstation, and the monitoring of an incident is transparent to both dispatchers and calltakers.

The ORACLE RDBMS enables the I/CAD System to store any number of records for an agency's use, such as personnel records and building floor plans, and supervisors can access this database information to produce 17 standard I/Dispatcher reports. Additional, specialized reports may be written on-site using system-provided tools.

7.3 I/CAD Software Highlights

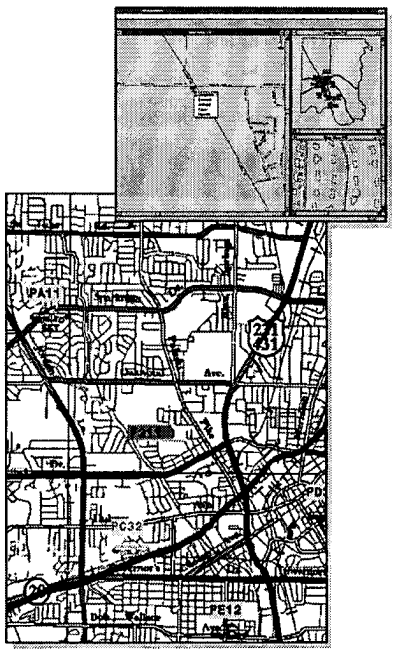
I/CAD combines sophisticated dispatching functionality and mapping by using one interface, one operating system, one database, and one hardware platform for the entire I/CAD System. In public safety terminology, I/CAD is a multi-agency system (for example, Police, Fire and Ambulance). While Utilities in general and Florida Power in

particular don't have "agencies", they may have groups of field resources with individual responsibilities. I/CAD may be used to coordinate the activities of these independent groups.

Other I/CAD features include:

- Screen forms and incident types that can be customized by agency and jurisdiction, and monitor displays that allow individual operators to personalize status, pending incident, and map display
- Multiple deployment (coverage area) strategies that can be mapped to shortcut commands
- Multiple roster and lineup information
- Incident copying for transfer of information to multiple agencies
- Location histories, hazard information, notes, and other data that are maintained and can be recalled, including building floor plans that can be retrieved and displayed
- Road closures that appear on the graphic display and that the system recognizes so that units are automatically routed around them
- Fire hydrants and utility poles, as well as gas, water, and sewer lines and locations that can be displayed as symbols on the map
- Database links to information relevant to any map symbol that can be accessed by simply clicking on the symbol
- Sophisticated address verification algorithms
- Call scheduling that can be applied to specific units, at appointed times, or both
- Unit and incident transfer between dispatchers, including transfer of ongoing TDD calls
- Unit recommendations that factor in current location, call type, specialized equipment or training requirements using a true street network, not an "as the crow flies" algorithm
- Extensive customer customization

7.4 Integrated Mapping



IPS understands that Florida Power Corporation has an ongoing project with the Lightstone Group that includes data that could possibly be used for the CAD Map. We also understand that the original source of this information was GDT. Maps generated using GDT data have been used for IPS CAD before, and are efficiently translated and loaded onto the I/CAD System and displayed on the dispatcher's screen to determine the location of an outage, event, or other reference location. The system can also determine the location and status of repair units.

For the sake of this proposal we will assume that the customer will provide a CAD-compatible map to IPS, and IPS will provide the services necessary to integrate that map with CAD. IPS has experience with this approach and believes that it provides the best solution with the least amount of redundant map maintenance effort. We are committed to providing the training services to the utility and system administration personnel to identify the special requirements necessary to make the map compatible with the I/CAD System. This training has been included in the cost of the proposed system. The I/CAD System maintains an integrity check on the use of the GIS data. All invalidated locations entered into the system are recorded in the database and a report of all inconsistent or new addresses is easily generated.

When the geofile and database are generated from the GDT data, the graphics and database information for the coverage area will be correct both in form (linework, intersections, area features, and symbols created and connected properly according to CAD requirements) and information (street names, address ranges, zip codes, and more). IPS will provide a document, if needed, that identifies the structure needed to be successful in a CAD map. This file will be the resultant street network file I/CAD will use for its "address verification" and "routing" utilities. It is the most important graphics and tabular layer to the dispatching system. It needs to be as complete and updated as possible, but will function as long as network and database structure is correct. Maintenance will continue on an on-going basis, and updates can be provided to the map using either the customer's or I/CAD's graphics and database editing tools.

The information in the table below is valid information that meets the minimum requirements of the I/CAD System, so there will be very little data content work that is necessary. It should be stressed that the following be true; however,

1. The CAD system will only verify addresses and locations and even streets that are contained within the graphics files and the database information tables. For example, if an outage call came in for "213 Topsail Court" and the address range on that road was only from "201-211 Topsail Court", the system would have no way of finding that address.

2. IPS has not provided cost for any time or services for updating and/or correcting the content of the data from which the CAD map will be derived. IPS has used the commercial GDT data in the past for accounts, and it is generally geometrically excellent, but database content and information is sometimes inconsistent. IPS fully assumes that Florida Power will be responsible for all map data provided for the system, and the attribution accuracy contained therein. IPS assumes that update work will be necessary on this data.

3. IPS also assumes that any other map data that may be needed or desired for reference (such as waterways and lakes, cartographic labels and text at all scales, and man-made landmarks and reference points) will be provided by the customer.

4. There are three services that IPS will provide as part of this proposal: an educational workshop to describe the information needed to run the CAD Map system, implementation time and services to verify and install the map in the CAD system, and training services to show the customer and/or map provider how to maintain this map data.

5. IPS makes an open offer to help the customer create, update, and/or maintain the map at anytime, particularly due to time constraints or data problems. IPS would price this amount of work at a later date.

The required columns are:

Feature Name	Column Width	Verbal Description	Column Type
FDPRE	2	Road Prefix	C
FNAME	30	Road Name	C
FTYPE	4	Road Type	C
FDSUF	2	Road Suffix	C
LEFTADD1	11	Low Left addr	C
LEFTADD2	11	High Left addr	C

ZIPCOLEF	5	Zip Code Left	I
RGTADD1	11	Low Right Addr	C
RGTADD2	11	High Right Add	C
ZIPCORGT	5	Zip Code Right	I

The attributed street network is the most valuable and necessary layer in the CAD map. There are many choices to be made about what attribution and graphics can be included above and beyond that information mentioned above. All data, such as railroads and hydrology to hydrants and building footprints, will make for a very complete, informative, and aesthetically pleasing map image as well. These additional layers will serve as feature references, that can be intelligent if they have the attribution, or purely visual reference for the operators if not. Informative (cartographic) text is another layer not to be overlooked. From the street level text to title or greater scale overview text, the operators will need a frame of reference from which to make geographic. (Any areas of parks, bodies of water, or other real obstacles to crew and equipment are also useful.) The customer will provide all of this information unless otherwise priced and discussed.

The Map Advantage

With systems that do not provide a map, calltakers and dispatchers often depend on personal knowledge of an area and memory to locate landmarks, street intersections, construction, and street closures.

I/CAD has the distinction of offering the first CAD system to integrate mapping to assist public safety calltakers, dispatchers, and supervisors in providing the most efficient and effective response to calls. Since its introduction in 1989, numerous CAD vendors have included an "interface" to a map as part of their dispatch system. However, IPS has gone far beyond providing a map that represents a graphic picture of an area; we provide an integrated and intelligent map that functions as part of the system and the user interface. Changing a unit's location or adding an incident, for example, automatically updates all map displays to reflect the change. Commands can be issued from the command line, the menu, or the map, and response lists that apply to multiple units can be mapped to single commands. The map also provides a source for additional, situation-dependent information.

There is no technical limit on the amount of information that can be displayed on the fully interactive, intelligent map. In addition to streets and highways, the map is capable of displaying building footprints, HazMat flags, power lines, rivers, lakes, railroad lines, and much more. Multiple windows can be opened and manipulated so that different areas and information sets can be viewed simultaneously. These intelligent maps are not just pictures on a screen—they are "smart" maps, encompassing features that include

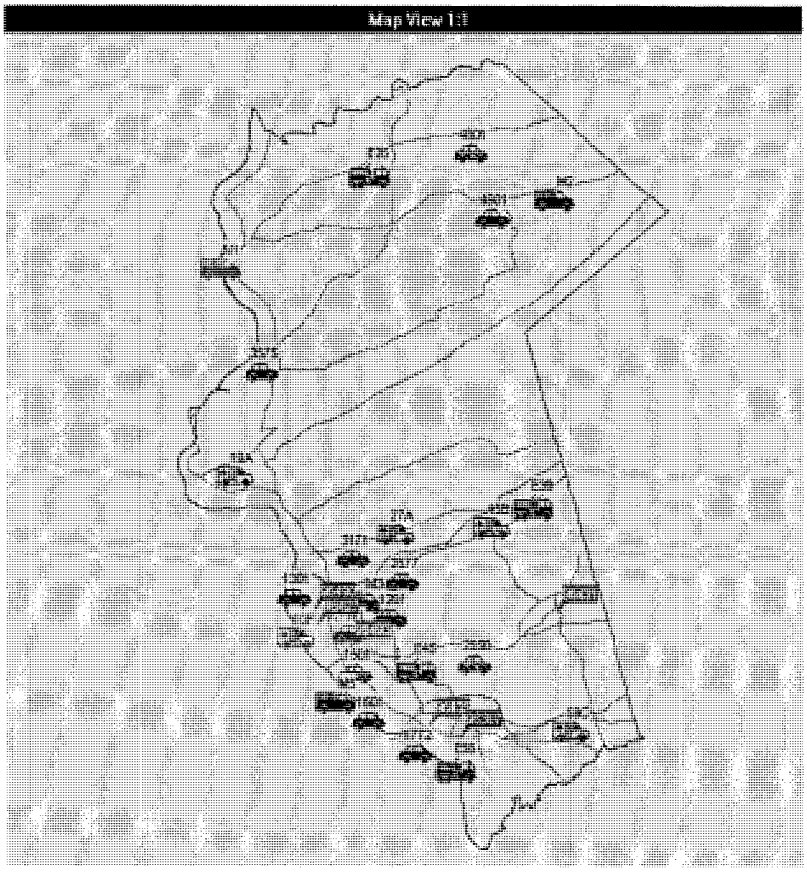
extensive database records that can be accessed for immediate data recall. Operators can scale map displays to any size and access information by simply pointing and clicking on map symbols. Using the street network, the system enables operators to route units to locations by the shortest time, shortest distance, fewest turns or intersections, and minimum risk involved while taking into account daily traffic fluctuations and the type of vehicle being dispatched. When a dispatcher closes a street, all map displays within the system update to reflect the closure, and units are automatically re-routed.

Individual operators control their map displays by zooming in or out and by turning levels of information on and off.

IPS has many customers who integrate mapping data from a GIS into the I/CAD System. While MGE, ARC/INFO, and MapInfo represent the most common data formats used by previous customers, other GIS vendor data has been successfully integrated into the I/CAD System.

It is understood that Florida Power will provide the required map data for the system, and that IPS is to use this information to generate the base map. Any unique information provided, such as special addresses, commonplace names, and unique identifiers for streets, will also be imported to the I/CAD System. IPS will support the initial map data translation/implementation and offer training for designated personnel on the workflow for future maintenance.

The following figure illustrates a typical Window containing a CAD map. Note that incidents and units are colored-coded to signify current status.


Map View 1

The map data structure is organized so that similar graphic elements can be placed on separate layers/levels and different types of graphic features can be separated into different files. For example, all transportation elements and related text may be in one file, but interstates may be on level one, primary roads on level two, secondary roads on level three, and alleys on level four. Related textual names may be placed on separate levels. Boundary graphics may be in a totally different graphic file, with municipal boundaries on level one, emergency service zones (ESZs) on level two, and response beats on level three, with their text separated as well. Reference data, such as drainage, fire hydrants, or vegetation, can be similarly separated. In this manner, file sizes and data response times are negligible compared to the capability of the software to display them.

Any graphic entity on the map can have an attribute record attached to it, and that record can be queried and reviewed. The database stores any information that the customer determines to be of value about each graphic entity on the map. In addition, the customer defines graphic symbols and default color schemes.

7.5 Map and Database Creation and Maintenance

IPS supports the following options for maintaining and updating the I/CAD System base map:

- Local GIS maintenance
- CAD department maintenance
- IPS service maintenance

For this proposal, we assume that Florida Power or its contractors will assume the responsibility for maintaining the data (that is, CAD department maintenance).

Local GIS Maintenance

If the initial map data comes from a local GIS department, then that department may continue to provide the Utility with regular updates. After the Utility's workflow is determined, IPS can offer guidance on selecting the necessary tools and developing the necessary skills to maintain data.

CAD Department Maintenance

IPS has many customers that update the CAD base map using the following tools embedded in the I/Executive software:

CADTools

The CADTools utility provides database geofile maintenance and support functions that assist the administrator in maintaining the graphic map and the database records associated with elements that comprise the map. This tool is specifically designed to work and interact with the I/CAD System as part of a complete package. With CADTools, the GIS administrator can define emergency service zones (ESZs), jurisdictional boundaries, beats, or even assign multiple names to a highway. The utility interfaces with the database and updates the database records as map-related commands are provided to support the following edits:

- Street segment
- Street intersection
- Address
- ESZ
- Geographic area
- Beat
- Traffic data
- Street names
- Feature symbols
- Special addresses

In addition to editing capabilities, CADTools provides a database verification component that helps to determine the location of potential problems in the map and its associated database tables. The following automated verification processes are provided:

- Street segments with no corresponding edges
- Street segments with no street names
- Street segments with invalid street names
- Street segments with undefined address ranges
- Street segments with no assigned municipalities
- Street segments with no assigned ESZ

Map and database updates are usually performed on a separate database, allowing normal dispatch operation to continue uninterrupted during map changes. Once updates have been completed and verified, the changes can be merged with the live system without disruption to service.

CAD Database Manager (CADDBM)

The CADDBM utility provides a GUI that allows a database administrator to manipulate I/CAD database records. Using CADDBM, the administrator can create new records in

the database and revise existing records. CADDBM also provides the mechanism for maintaining system security and administrator privileges. The following list summarizes the database maintenance functions supported by the CADDBM utility:

- Agency Definitions–such as police, fire, and EMS
- Deployment Plans–creates new beats or allows administrators to edit existing beats
- Disposition Types–defines the disposition codes used by the I/CAD System when dispatchers clear a unit
- Estimated Time of Arrival Table–enables the system to estimate times of arrival based on agency, dispatch group, hour of the day, and day of the week
- Lineup Definition–creates and maintains database tables that catalog available units and the personnel assigned to those units for each agency serviced by the system
- Number Table–defines the numbering schema used by the system to automatically assign case, incident, arrest, and accident numbers
- Out of Service Type–catalogs the non-active duty status types and associated overdue alert timers for each agency in the database
- Personnel–creates and maintains personnel records for employees of the various agencies serviced by the system
- Personnel (Limited Access)–allows personnel with lower security levels to update non-sensitive personnel records in the database
- Response List–creates the information used by the I/CAD Recommend Unit command and the Select and Recommend command to determine which units and how many units to recommend for a particular type of incident
- Roster Definition–creates and maintains duty rosters for various agencies
- Rotational Service Definition–assigns an identification number to a company and catalogs all of the equipment available at that company and, for each piece of equipment, lists the hours of availability by day of week
- Special Address Definition–cross-references and maintains database records of address locations that can be identified by a common place name
- Special Situation Definition–catalogs locations or areas of special interest
- Task Force Definition–groups several units into a single task force that can be dispatched using a single command
- Unit Definition–creates and maintains the database records for units belonging to each agency. A vehicle and employees are assigned to a unit. Thus a unit may be defined as a 4-person ladder truck, a 2-person patrol car, etc.
- Vehicle Definition–catalogs information for each vehicle assigned to an agency

IPS Service Maintenance

IPS maintains several customer databases and base maps to ensure that current information is in place. IPS will price this option at Florida Power's request.

7.6 I/CAD Security Administration

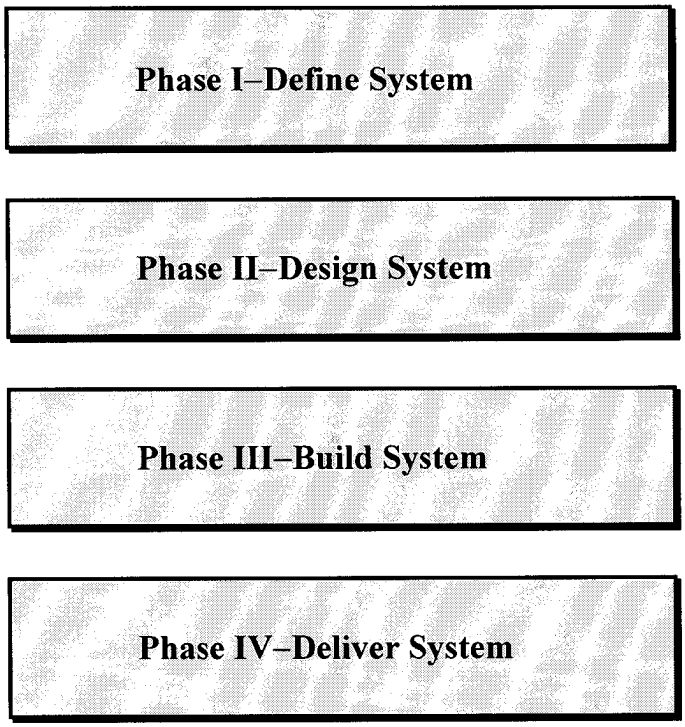
Within the I/CAD environment, security measures beyond those provided by the operating system can be instituted to restrict access to applications and commands by job function. For example, by requiring I/CAD user names and passwords, the security administrator can fine-tune I/CAD user privileges according to user types, such as a calltaker or a dispatcher. Dispatchers can further be divided into dispatch groups that provide access to resources and personnel assigned to that group but prohibit access to resources and personnel assigned to another dispatch group. Classifying users in this manner determines the commands and functionality available to the user.

8.0 PROJECT MANAGEMENT

Since 1989, IPS has installed more than 60 dispatch systems in the United States, Canada, England, France, Australia, New Zealand, Germany, and Thailand. IPS customers include the world's largest fire fighting authority, the world's largest naval base, and the world's busiest airport, as well as a shuttle space center, a military base, and two automobile clubs.

An Assessment Phase usually precedes any large project, and IPS considers this phase completed upon contract award. During the process leading up to award, the customer and IPS will have examined requirements, solutions, goals, objectives, feasibility considerations, risks and risk analyses, costs, and benefits. The negotiated contract will be the primary input into the initial project management plan.

IPS follows a 5-phased project management methodology, outlined in the following figure, to ensure that each dispatch system satisfies its mission requirements–on schedule and within budget. The five phases of the IPS project management methodology are incorporated into an Implementation Plan that includes the following general elements.



Phase V–Maintain System

Phase I–Define System

The process of defining the system ensures that the operational intent and the proposal and contract, as written, are consistent. Key components of this phase may include, but are not limited to, the following.

Phase I–Define System

1) Contract Review
2) Requirements Analysis
3) Project Plan–Milestone Schedule Approval
4) Project Organization/Responsibilities
5) Training Plan

1) Contract Review

The contract:

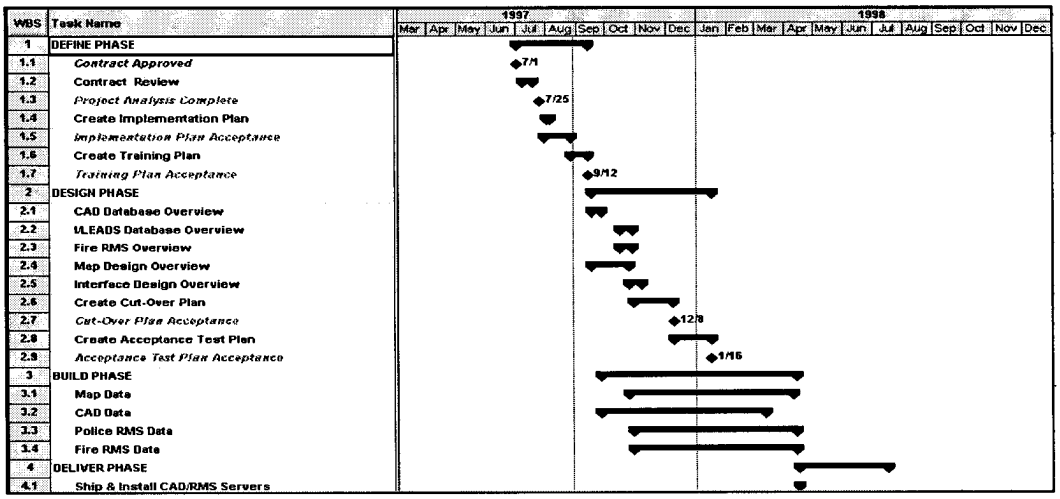
- Functions as the original statement of work reflected in the initial proposal and proposal addenda
- Documents specifically the work to be performed
- Establishes the conditions of work
- Sets the expectations for the system
- Is reviewed by the customer and IPS to ensure that the joint project team understands the requirements

2) Requirements Analysis

A system can be responsive to a given problem only if that problem is properly understood. Experience has demonstrated that most errors result from a misunderstanding of how the system should perform. The Requirements Analysis allows the project team to analyze functional, operational, performance, application, data, and interface requirements.

3) Project Plan–Milestone Schedule Approval

The project plan and milestone schedule is created/updated and expanded in accordance with decisions made during this phase. This document defines the baseline project description against which project direction and status are maintained. This deliverable is formatted in a GANTT chart similar to the one below.



4) Project Organization/Responsibilities

The following organizational charts define members of the project teams for each organization and show how the members of the customer team will relate to the IPS team.

IPS Project Team

a. Project Manager (interacts with b)
f. CAD Development Lead
g. Map Construction Lead (interacts with d)
h. Interface Development Lead
i. Implementation Support Lead (interacts with c)
j. Training Support Lead
k. Field Service Lead
l. Sales Support Representative

Customer Project Team

b. Project Manager (interacts with a)
c. System Administrator (interacts with i)
d. Map Lead (interacts with g)
e. Data Lead

The responsibilities of the team members are as follows:

a) IPS Project Manager:

- Directs the project as the primary contractor contact and is responsible for project performance from initiation to closure, which includes planning, organizing, managing, and controlling all aspects of the project to ensure that project tasks are performed according to schedule
- Reviews the final contract internally and with Florida Power's Project Manager

At project initiation, the IPS Project Manager:

- Coordinates the project kickoff between Florida Power and IPS
- Reviews the estimated project schedule
- Conducts an initial post-contract site visit/evaluation
- Identifies any known local scheduled events or seasonal celebrations that may impact the availability of customer resources during the project lifecycle
- Reviews any CAD custom development requirements
- Reviews CAD interface requirements
- Reviews non-CAD and subcontractor commitments
- Resolves any discrepancies or conflicts
- Reviews initial IPS work authorization reports and proposed parts lists to ensure compliance with final contracted project configuration
- Initiates project reporting and filing systems
- Conducts initial project implementation team meeting and project kickoff
- Establishes and maintains a network configuration diagram
- Establishes Florida Power's resources for IPS project management, such as work space, telephone, office and copying services, site access, and other communications, such as e-mail
- Establishes project change order procedures, which are controlled by the IPS Project Manager

- Conducts on-site evaluation to verify site preparation
- Resolves such training logistics considerations as schedules and classroom resources

On an as-needed basis, the IPS Project Manager:

- Responds to Florida Power's inquiries
- Obtains written customer clarification or change requests for interfaces and other custom development before establishing a development schedule
- Monitors critical schedules such as hardware delivery and custom development
- Processes requests for quotes
- Initiates contract change orders
- Monitors subcontractor commitments
- Conducts design review sessions between subcontractors and IPS personnel
- Monitors IPS commitments, such as map development
- Monitors Florida Power's trouble reports
- Coordinates IPS logistics for all on-site activities
- Researches alternatives and sources for any contract changes
- Visits the site with the customer to review and evaluate project progress

On a weekly basis, the IPS Project Manager:

- Updates IPS upper management
- Provides a general wrap-up of project activity to the implementation team members
- Monitors milestone payments/invoices and recommends that billing be initiated

On a monthly basis, the IPS Project Manager:

- Submits a monthly progress report to the customer
- Updates and submits any agreed-upon changes to the implementation schedule to Florida Power for approval

At project completion, the IPS Project Manager:

- Establishes a "punch list" of any incomplete requirements or unresolved issues
- Coordinates field service personnel to initiate ongoing maintenance contracts and agreements
- Closes out and resolves any customer concerns or problems

b) Florida Power's Project Manager:

- Acts as Florida Power's single point of contact for working with IPS

- Has sufficient authority and responsibility to make decisions on a day-to-day basis about the project
- Coordinates the activities of Florida Power's personnel
- Provides sufficient resources to implement the operational use of the system

c) Florida Power's System Administrator:

- Collaborates with the IPS Implementation Lead for system-specific training and implementation of backup, recovery, and archiving activities
- Monitors and configures the servers, workstations, and other interface systems
- Troubleshoots and files trouble reports as required
- Installs software upgrades
- Serves as a liaison for IPS field service personnel

d) Florida Power's Map Lead builds the graphics CAD map according to contract requirements.

e) Florida Power's Data Lead works with the IPS Map Lead and collects and verifies all agency-specific data (such as personnel, unit, and call-for-service data) for the system in conformance with information and direction provided by IPS.

f) The CAD Development Lead is responsible for all Florida Power-specific software development tasks related to the IPS CAD base product as defined in the contract.

g) The Map Construction Lead is responsible for the successful construction of the map data used by the I/CAD System. Specifically, this lead provides assistance in recommending procedures and providing tools necessary to construct the maps needed for the project in accordance with the level of effort proposed.

h) The Interface Development Lead is responsible for all software development activities related to system interfaces, including testing, installation, and support.

i) The Implementation Support Lead is responsible for providing the necessary technical expertise to implement the IPS project. This includes overseeing all system configuration activities, providing system administration training, supporting cutover activities, and installing the IPS system and related software.

j) The Training Support Lead provides the necessary instruction for the successful operation of the IPS system. The on-site standard system training courses taught prior to the I/CAD courses are provided by IPS trainers or

instructors or non-IPS trainers who depend on client-specific training requirements.

k) **The Field Service Lead** installs the hardware in the communications center and is responsible for the continued hardware maintenance and support services throughout the system's life, as long as the system is under a current maintenance contract.

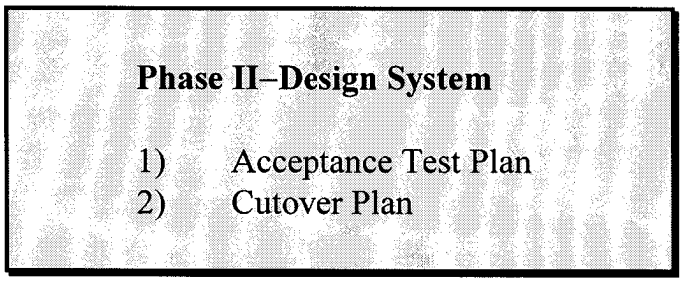
l) **The IPS Sales Support Representative** ensures a smooth transition from pre-contract to project start-up.

5) Training Plan

This deliverable ensures that all of the purchased classes and modules are provided during the project. The training classes and modules are scheduled according to their appropriate phase of the project. For example, the classes for building CAD tables must be scheduled before Florida Power begins building the tables, and operator training must be scheduled to ensure a smooth transition to live operations. The training plan also restates and reviews the training methods (such as Train-the-Trainer) that have been selected. Additional considerations for the training plan include classroom resources and personnel scheduling.

Phase II–Design System

During the Design System Phase, the project team defines the system construction and configuration, which becomes the blueprint for the project. Key components of this phase may include, but are not limited to, the following.



1) Acceptance Test Plan

IPS supplies an initial draft of the Acceptance Test Plan, which is revised for the customer, then baselined. This plan defines the functional testing methodology for the project. It is important that a robust test plan be developed and exercised, and that the documented results of the test be accepted by Florida Power after a successful test. The test plan must originate with the development of requirements and culminate with the completion of the design. The tests exercised in the Build System and Deliver System Phases are as defined in the test plan, which ensures that everyone involved is measuring the system by the same ruler.

2) Cutover Plan

This deliverable explains how to place the system into live operation with minimal impact to any existing operations.

Phase III–Build System

During the Build System Phase, the project team gathers input and performs system configuration activities to support Florida Power's unique operational workflow. The database is populated and the map is constructed during this phase. Key components of this phase are as follows.

Phase III–Build System

1) System Development
2) Staging and Testing
3) Documentation Customization
4) Configuration Management
5) Data Collection
6) Completed System

1) System Development

During System Development, IPS translates the requirements into usable hardware components, adaptable interfaces, and appropriate code. As noted earlier, the IPS breadth of off-the-shelf software makes this effort much easier and cost effective than a ground-up development effort.

2) Staging and Testing

Integration consists of staging the system, preparing the test platform, and testing the system. Together with development, these activities produce the required system.

3) Documentation Customization

Windows hypertext Help files are provided for all of the IPS CAD products, and these files become the baseline documentation.

4) Configuration Management

IPS builds the system in accordance with the configuration that has been defined. Configuration management includes not only maintaining baselined documentation, system configuration details, and baselined software, it also includes managing change. The IPS Project Manager is responsible for processing and maintaining change orders throughout the life of the project, and is also responsible for updating the initial configuration diagram provided with the proposal. By instituting an active configuration management process, IPS ensures

that the system development effort will move ahead, that critical baseline information is rigorously maintained, and that change requests are properly evaluated and effectively implemented when appropriate.

5) Data Collection

IPS works closely with customers to ensure that the data collection meets the system's requirements.

6) Completed System (Deliverable)

The Build System Phase culminates in the creation of the system.

Phase IV–Deliver System

During the Deliver System Phase, the system is tested and placed into live operations. The Acceptance Test Plan serves as a foundation for the system to be rigorously tested for correct operation prior to its actual use. Key components of this phase are as follows.

Phase IV–Deliver System

1) Operating Environment Creation
2) Training
3) Operation
4) Acceptance
5) Production System
6) System Acceptance Form
7) Cutover to Operations/Support

1) Operating Environment Creation

To create the system operating environment, IPS and the customer will:

1. Install the system
2. Establish the baseline operating environment
3. Set up the system with all product-related data, such as product administration accounts and product schema definitions
4. Initialize the system and bring it on-line according to the startup instructions

5. Load converted data and connect to any other external systems as required
6. Create, configure, and customize, as appropriate, the required user accounts

The system is now ready for customer acceptance testing.

2) Training

Although training will probably have started in the Build System Phase, completion of most of the required training will occur during this phase.

3) Operation

Although not necessarily in production, the system is now operational, and the next activity is acceptance testing.

4) Acceptance

The System Acceptance Test establishes that the system is ready to go into production. It is performed as documented in the previously developed Acceptance Test Plan. After it is complete, the customer can choose the timing for taking the system into full production use.

5) Production System (Deliverable)

This phase's deliverable is the installed, functional, tested, and signed-off system ready to go into production.

6) System Acceptance Form (Exit Criterion)

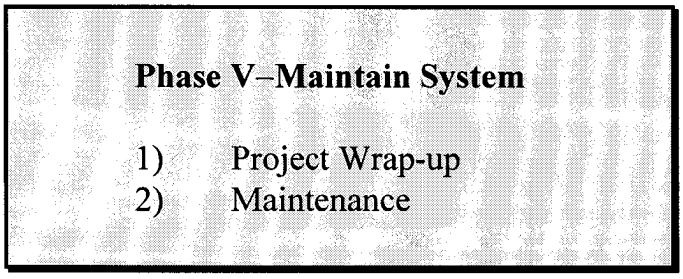
The exit criterion from this phase is a System Acceptance Test form that has been reviewed and approved by the customer and IPS.

7) Cutover to Operations/Support

After site acceptance, the development project is complete. The next step in the project management methodology is a transition to operations and support mode. This process normally begins after the System Acceptance Test or during the defined warranty period of the system.

Phase V– Maintain System

Maintenance is a vital part of any product and production system. Maintaining the developed system and providing a mechanism for expansion are both fundamental to maximizing the system's productive life. Key components of this phase are as follows.



1) Project Wrap-up

After customer acceptance, the procedures specified for project wrap-up complete this phase. Project wrap-up activities involve tasks that take place after System Acceptance but before the beginning of the Maintenance phase. Typical activities include:

- Resolving any system issues identified in a punch list at the conclusion of Acceptance Testing
- Verifying and documenting the final hardware and software configurations prior to initiating the Maintenance phase
- Resolving any outstanding invoices or credits associated with the project implementation
- Handing over the project to the Warranty/Maintenance organization

2) Maintenance

The IPS Project Manager begins this phase by reviewing the subsequent maintenance procedures with the customer. Maintenance personnel are available to address all questions about problems with the system. Calls for maintenance support go to the IPS Help Desk and are immediately handled by the support staff. The support staff analyzes the problem, and, if the problem is with the project-developed custom system, corrects the problem.

Regardless of the type of problem, there is a single organization, IPS, that is responsible for ensuring prompt resolution.

8.1 Project Management Conclusion

From initiation to completion of each project, IPS project managers employ:

- Project management procedures that form an IPS-customer partnership. This partnership ensures a mutual understanding and agreement of the tasks to be completed and the schedule to be observed. These procedures also require that the correct organizational structure for the project be established, that the proper resources for the project be identified and committed, and that the proper authority and accountability for the project be established
- Project planning methods that document the customer's expectations so that there are no false starts or wasted effort. The Project Plan-Schedule is maintained throughout the project, and it provides the baseline description against which project direction and status can be judged. The plan is also an outline for future work and can be used to minimize the impact of future changes
- Project control methods that synchronize the project with the contract. Good management control, deliverable product control, and technical acceptance reviews are the keys to successful project control. The IPS Project Manager will hold management reviews to help ensure that the project is properly focused on meeting the requirements and delivering a quality system. Deliverable product controls include internal reviews and configuration management and change control
- Project monitoring reviews, reports, and records. A complete record of the project's history will be maintained
- Project quality assurance (QA) techniques that orient the project team to produce a quality system during each phase, activity, and task of the project. The QA steps in the five phases provide formal opportunities for users to confirm the quality of the deliverables

9.0 SYSTEM IMPLEMENTATION WORKSHOPS

Upon contract award, the IPS Project Management Team immediately initiates implementation activities to ensure project success. Most of these activities are thoroughly covered in Section 8.0, Project Management.

However, during our years of experience in implementing the I/CAD System worldwide, IPS has designed two workshops critical to achieving smooth project implementation. Both workshops are conducted on-site and require the participation of Florida Power's Project Management Team members. The following subparagraphs delineate the purpose and member participation necessary to make these workshops a success.

9.1 The I/CAD Implementation and Configuration Workshop

The I/CAD Implementation and Configuration Workshop provides guidance to Florida Power's implementation team, serves as a starting point for the database and map creation phase, and is designed for leaders and decision makers who have day-to-day responsibility for making the communications center function properly. The main objective of the workshop is to define a functional plan for gathering data and implementing an operational (as opposed to technical) system. The plan will define participant responsibilities and tasks as well as designate milestones and significant dates. This workshop should be held early in the project–as soon after contract award as possible.

9.2 The I/CAD Data Model Workshop

The I/CAD Map Data Model Workshop, which is designed for Florida Power's CAD Implementation Team, focuses on effectively and efficiently building the I/CAD map and identifying the participation and relationship of IPS and Florida Power personnel in this activity. During this workshop, which should be held as soon after the I/CAD Implementation and Configuration Workshop as possible, IPS will define our understanding of Florida Power's CAD map requirements and responsibility breakdown as well as detail our understanding of IPS responsibility for translating the data to I/CAD format.

Other objectives of the workshop include:

- Outlining the technical map requirements for producing Florida Power's I/CAD map and communicating a basic understanding of their relationship to the functional I/CAD System
- Reviewing personnel, resource, and scheduling requirements impacted by the mapping effort

- Providing an overview of the workflow necessary to complete the map translation
- Reviewing the I/CAD database design and setup
- Describing existing map validation routines and process flows
- Discussing possible future enhancements

10.0 TRAINING

IPS proposes that initial CAD training be conducted by installing the hardware and software with a training dataset prior to cutover.

IPS offers complete training tailored to the customer's needs, which includes:

- Trainer or operator courses from IPS instructors
- Intergraph product and Microsoft product training from IPS instructors or Intergraph Corporate Training Services
- IPS-taught Microsoft Official Curriculum training for the Microsoft Windows NT platform and related dispatch server configurations. The IPS training staff maintains Microsoft Certified Trainer (MCT) and Microsoft Certified Professional (MCP) status; this ensures that IPS offers the best instruction available for the Windows NT operating system while orienting classes towards the dispatch environment
- ORACLE training provided from either Intergraph or third-party providers, such as local community colleges. In this case, IPS recommends that the customer select the ORACLE training program that best suits the needs and budget of Florida Power

The IPS course structure is modular, and the design of each course module is evaluated by the customer and IPS to ensure that the Training Plan objectives are met. In the past, IPS instructors, who customize their courses to meet different needs, have been required to develop flexible schedules, to provide specialized training in foreign languages, and to rely on their operational experience in emergency services to design training programs.

To meet the contract demands, IPS will establish an initial customer-driven Training Plan, then:

1. Train the designated Florida Power trainers, or
2. Train Florida Power operators, then
3. Create a Training Plan to be implemented at the center to fulfill ongoing requirements

10.1 Training Florida Power's Trainers

To establish in-house resources that can provide an ongoing training program, IPS recommends training designated primary Florida Power trainers. Following IPS-provided

training, Florida Power primary trainers can continue to offer the expertise, motivation, site knowledge, and resources to implement a higher quality of sustained training.

Specifically, in-house primary trainers enable Florida Power to:

- Train new personnel on an ongoing basis
- Implement and maintain a training dataset
- Develop site-specific Help files, training materials, and aids
- Implement refresher courses as required
- Implement new features or upgrade versions
- Diagnose and identify software problems
- Report software problems or issues related to application functions
- Evaluate and describe new feature requests
- Interact with the Intergraph Public Safety Customer User's Group

10.2 Training Florida Power Operators

The major challenge of providing an operator training approach is in conducting training sessions at the optimal time before cutover; the more operators to be trained, the more complex the logistical considerations that must be considered. A typical train-the-operator training session requires one instructor and takes one week to train 12 students (maximum number per session).

10.3 Creating a Training Plan

Training requirements vary widely, but the following courses are usually included in a plan.

10.3.1 Operator Training

Operator training courses include Introduction to Microsoft Windows NT, I/CAD I/Calltaker, I/CAD I/Dispatcher, and I/CAD Supervisor. The following subparagraphs provide general descriptions of these courses.

- **Introduction to Microsoft Windows NT**

  This course familiarizes users with the basics of the Microsoft Windows NT environment. Details of working with the GUI are covered, including the Desktop, Windows Explorer, and use of the mouse. Laboratory exercises are included to provide students with hands-on experience.

  - *Primary Learning Objective:* To become comfortable with Microsoft Windows NT terminology and the GUI
  - *Prerequisites:* Must be employed by a dispatch or governmental agency associated with the CAD system
  - *Who:* All operator levels, system administrators, mapping support personnel, database support personnel, and managers; class size limited to 12
  - *When:* All operator training should be completed two weeks before parallel operation or cutover. This course or its equivalent should be completed before attending the I/CAD I/Calltaker class.
  - *Duration:* 8 hours
  - *How:* On-site, hands-on workshop

- **I/CAD I/Calltaker**

  The I/CAD I/Calltaker course familiarizes personnel with the basic features of IPS workstations, terminology, forms, navigation, and event creation. Also covered are map use, utilities, and inquiries. Laboratory exercises are included with each module to provide additional experience in workstation operation.

  - *Primary Learning Objective:* To enter service requests into the I/CAD System and competently manage those calls
  - *Prerequisites:* Students must
    (a) be employed by a dispatch or governmental agency associated with the CAD system,
    (b) have knowledge of basic dispatch terminology, and
    (c) have knowledge or training in Windows NT
  - *Who:* All operator levels, system administrators, mapping support personnel, database support personnel, and managers; class size limited to 12
  - *When:* All operator training should be completed two weeks prior to parallel operation or cutover
  - *Duration:* 8 hours
  - *How:* On-site, hands-on workshop

- **I/CAD I/Dispatcher**

  This class expands upon the call taker course, emphasizing handling field units and personnel. Advanced map use, routing, utilities, and inquiries are also covered.

  - *Primary Learning Objective:* To dispatch service requests entered in I/CAD and to manage the calls and available resources
  - *Prerequisites:* Students must
    (a) be employed by a dispatch or governmental agency associated with the CAD system,
    (b) have knowledge of basic dispatch terminology,
    (c) have completed the calltaker course, and
    (d) have a working knowledge of, or training in, Windows NT
  - *Who:* Dispatchers and supervisors, system administrators, mapping support personnel, database support personnel, and managers; class size limited to 12
  - *When:* All operator training should be completed two weeks before parallel operation or cutover
  - *Duration:* 16 hours
  - *How:* On-site, hands-on workshop

- **I/CAD Supervisor**

  This course familiarizes participants with high-level CAD commands and report-writing utilities required to effectively supervise the daily activities of Florida Power's Outage Management operators.

  - *Primary Learning Objective:* To understand I/CAD system functionality and how it can best be used as a management tool
  - *Prerequisites:* Students must
    (a) be employed by a dispatch or governmental agency associated with the CAD system,
    (b) have knowledge of basic dispatch terminology,
    (c) have completed the call taker and dispatcher courses, and
    (d) have a working knowledge of, or training in, Windows NT
  - *Who:* Supervisors, system administrators, mapping support personnel, database support personnel, and managers; class size limited to 12
  - *When:* This training is offered on a request-only basis two weeks prior to parallel operation or cutover
  - *Duration:* 8 hours
  - *How:* On-site, hands-on workshop

10.3.2 Interface Training

Depending on the interface, this training includes courses on I/MDT, I/Mobile, and courses related to Florida Power specific interfaces. If offered with operator training, the interface must be installed prior to training time.

10.3.3 Unique Training Requirements

Unique training includes Administration of Microsoft Windows NT 4.0, Supporting Microsoft Windows NT 4.0–Core Technologies, and the I/CAD System Administrator course. We understand the Florida Power has a department with the necessary skills for Windows NT system administration but courses in I/CAD administration will be necessary. The information provided below describes these courses.

- **Administration of Microsoft Windows NT 4.0 (MS803)**

  This Microsoft Official Curriculum course is taught by a Microsoft Certified Trainer, and is intended for Florida Power personnel responsible for administering Windows NT Server and Windows NT Workstation. Course instruction includes management of accounts, account policies, disk resources, printers, servers, backups, configurations, and troubleshooting. This course provides students with the knowledge and skills necessary to perform post-installation and day-to-day administration tasks in either a single- or multiple-domain Windows NT-based network. This course can also help to prepare the student for certification in the Microsoft Certified Professional program.

  - *Primary Learning Objective:* To perform post-installation and day-to-day administrative tasks for a single- or multiple-domain Windows NT-based network
  - *Prerequisites:* Students must
    (a) be employed by a dispatch or governmental agency associated with the CAD system,
    (b) have completed the Intergraph Corporate Database and Mapping Classes,
    (c) have completed the Introduction to Windows NT course, or have equivalent knowledge of the Windows NT graphical user interface, and basic computer terminology
  - *Who:* System administrators, mapping support personnel, database support personnel, and trainers; class size limited to 5
  - *When:* This training should begin prior to operator classes, should be given in conjunction with the map building and data loading phase soon after hardware is delivered on-site; this course is taught on a request-only basis

- *Duration:* 24 hours
- *How:* On-site, hands-on workshop

- **Supporting Microsoft Windows NT 4.0–Core Technologies (MS922)**

  This Microsoft Official Curriculum course is taught by a Microsoft Certified Trainer and is intended for support professionals who install, customize, configure, and support Windows NT Workstation and Windows NT Server, version 4.0. This course provides the core foundation necessary to support the Microsoft Windows NT, version 4.0 operating system. In addition to the regular Microsoft curriculum content, this course is tailored to include configuration and support issues specific to the I/CAD System. This course can also help to prepare students for certification in the Microsoft Certified Professional program.

  - *Primary Learning Objective:* To install, configure, customize, optimize, network, integrate, and troubleshoot Windows NT 4.0
  - *Prerequisites:* Students must
    (a) be employed by a dispatch or governmental agency associated with the CAD system, and
    (b) have completed the Administration of Microsoft Windows NT 4.0 (MS803) course
  - *Who:* System administrators; class size limited to 5
  - *When:* This training should begin prior to operator classes, should be given in conjunction with the map building and data loading phase soon after hardware is delivered on-site; this course is taught on a request-only basis
  - *Duration:* 40 hours
  - *How:* On-site, hands-on workshop

- **I/CAD System Administrator**

  This intensive course is designed for those who are responsible for the administration, management, or support of an I/CAD System.

  - *Primary Learning Objective:* To perform the basic functions associated with the day-to-day operation and support of a dispatch system
  - *Prerequisites:* Students must
    (a) be employed by a dispatch or governmental agency associated with the CAD system,
    (b) have completed the Intergraph Corporate Systems, Database, and Mapping Classes
  - *Who:* System administrators, mapping support personnel, database support personnel, and trainers; class size limited to 5

- *When:* This training should begin after the above prerequisite courses, prior to operator classes, and should be given in conjunction with the map building and data loading phase; this course is taught on a request-only basis.
- *Duration:* 40 hours
- *How:* On-site, hands-on workshop

10.3.4 Facility and Resource Logistics

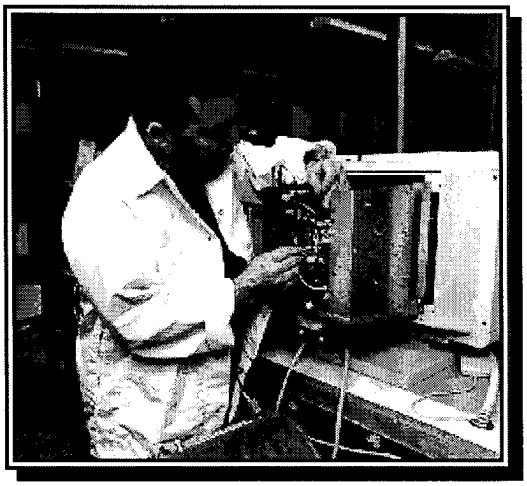
Based on detailed discussions with the client, the Training Plan will specify:

- The information to be included in lesson plans, course handouts, and laboratory sessions
- Training locations
- The equipment required for training, specifically: the data shell, overhead projectors, whiteboards, and workstations
- Trainers' access to Florida Power's training facilities before and after classroom hours
- How to minimize or avoid classroom interruptions

10.3.5 Tentative Schedule

The IPS Project Manager will include tentative scheduling options in the Training Plan, as well as in the Implementation Plan. These options can include multi-shift and flexible training sessions of 4, 6, and 8 hours at a time. IPS schedules courses so that the participants are primed for their actual duties. For example, operator training is conducted just prior to implementing parallel or cutover operations.

11.0 WARRANTY AND MAINTENANCE



IPS understands that warranty, maintenance and support for Dispatch systems must necessarily be different from that provided by the general computer hardware and software industries. Response to a problem must be timely. IPS has structured a warranty and maintenance program to provide a corresponding increase in level of service, beginning when it is needed operationally, and continuing indefinitely under a maintenance program.

Ongoing support from IPS is meaningful, when continuous operations are essential. We provide total support from a single vendor on every issue—a single source to address all problems. And, when such a service is obtained, it is clear who is responsible for problem resolution—IPS. IPS provides warranty, maintenance, and support for all products purchased from IPS.

For products not purchased from IPS, but that are included as part of the system, IPS will work together with the customer and the other vendor to resolve any issues, with each party having warranty, maintenance, availability, and response time responsibility for that part of the solution provided.

Approach

The IPS approach is to provide a non-mission-critical industry level of service up to the point of cutover to live operations. Prior to cutover, timely responses and resolution are required but not at the command-and-control mission-critical level. When the system is in productive operation, an increased level of support compatible with both the needs and budget of the customer is appropriate and required.

The components of this service are hardware, IPS software, third-party products, and total system support. These components must be addressed under the warranty and as ongoing maintenance that begins at the end of the warranty period. All these components must be addressed relative to cutover to live operation. The following table addresses them in this manner.

	Start Date	End Date	Includes	Response
Warranty				
Hardware	At installation	Year 1	Parts and Labor	Next Business Day
		Year 2	Parts and Labor	Return to factory
		Year 3	Parts and Labor	Return to factory
IPS Software	Begins at cutover	90 days after cutover	Fixes and Features Releases	Covered by system support
Third-Party Products	Pass through from the manufacturer	Pass through from the manufacturer	Pass through from the manufacturer	Covered by system support
System Support	At contract	90 days after cutover	Help Desk – single point of call	Critical - 7X24
				Other - Next day
Maintenance				
Hardware	Cutover	Continuous by annual contract	Parts and Labor (Labor is per call after hours)	7X24 with 8-hour response availability
IPS Software	90 days after cutover	Continuous by annual contract	Fixes and Features Releases	Covered by system support
Third-Party Products			Upgrades provided by customer	Covered by system support
System Support	90 days after cutover	Continuous by annual contract	Help Desk – single point of call	Critical - 7X24
				Other - Next day

When required, a longer warranty may be purchased, as part of the initial contract, in the form of additional maintenance. The maintenance program is designed to provide the equivalent service. The extended warranty may be purchased in increments of three (3) months with the same level of service as defined for Maintenance, above. IPS has many customers that prefer to purchase coverage through the first year after acceptance, as part of the initial contract.

System Support

To meet the requirements of mission-critical dispatch operations, IPS system support provides 24-hour-a-day/7-day-per-week software support for critical problems to all IPS customers. System support begins at contract signing and continues through the warranty period and then into the maintenance period if a maintenance contract is obtained. IPS provides the central point-of-contact and the first level of direct support for all products purchased from IPS as part of the contract. This includes IPS software, the operating system, database management system, development tools, report writers, productivity tools, networking software, and external interface software.

The pricing of system support is not a separate line item. System support is included in the pricing for the software component.

IPS Software Updates and Upgrades Included

IPS software maintenance coverage is excellent. IPS provides scheduled Fixes Releases and Features Releases, including the documentation, which is often an additional cost from other vendors.

- A Features Release is a major release of software that contains significant product enhancements and improvements designed to improve system operations. IPS encourages all customers to stay current with Features Releases. While doing so takes customer resources and effort, across time the IPS customer will stay up-to-date technologically and functionally and delay, if not completely avoid, the need to repeat the procurement cycle to get up-to-date

- A Fixes Release is a minor release of software that contains, primarily, error corrections. A Fixes Release may also contain limited improvements that do not affect the overall structure of the software. Fixes Releases of software are generally provided at 6-month intervals, and all customers are encouraged to stay current with Fixes Releases

When an IPS customer purchases software maintenance at the end of the warranty period, the customer continues to receive IPS product upgrades (with the appropriate license) to those products at no additional cost. Upgrades are not included for mass-market (commodity) products, including Oracle, Windows NT, Microsoft Office, ODBC Drivers, Microsoft Visual C++, and Microsoft Exchange. Purchasing commodity upgrades is the customer's responsibility, but IPS will continue to support the products through the maintenance agreement.

The IPS software releases are tested and certified before being released. These releases are the same as those that will be delivered to new customers.

An upgrade consists of delivery media, license, and documentation. Customers may implement these releases without assistance from IPS, or they may purchase implementation services to assist in the installation of the new release. Implementation services are priced when requested by the customer. The customer may also elect, at anytime, to purchase existing or future products not included in this proposal.

The product version for the upgraded IPS products is not time-critical and does not normally require product upgrades to coincide with third-party releases of the operating system, database, and other products. Third-party products continue to run on the next version of the operating system and with existing applications. In many cases, vendors do

not make new versions of products available at the same time the operating system is released. As a matter of policy, IPS waits to assess the stability of new products before committing to them for mission critical systems.

IPS provides compatibility in new versions of IPS software with existing versions of mass-market products, and plans to provide compatibility and new features consistent with new versions of the mass-market products and the operating system.

Software Problem Reporting and IPS Response

Support is the process by which the customer reports errors and IPS responds. Before reporting any problem, IPS requests that the System Administrator conduct a preliminary error review to verify a problem's existence and attempt to determine if the problem is with the hardware or software; then, the circumstances under which the problem occurred should be documented. The System Administrator should also attempt to duplicate the problem and attempt to determine the priority level of the problem before contacting IPS.

There are four levels of priority for reported problems:

Priority One: Critical *Reflects a problem that causes loss of data, data corruption, or prohibits productive execution of the I/CAD System, and for which no workaround is available*
Priority Two: No Release *Reflects a problem causing the primary purpose or productive execution of the I/CAD System to be significantly impacted, but not prohibited, and for which a workaround is generally not available. Priority Two problems include aborts, but not loss of data or data corruption*
Priority Three: Normal *Reflects a problem causing the I/CAD System to produce incomplete results. Priority Three problems do not include aborts, do not impact productive execution of the system, and workarounds are generally available*
Priority Four: Minor *Reflects a problem related to a function that is not a major requirement for I/CAD System execution and for which a workaround is generally available*

Any problems reported to IPS between 8:00 a.m. and 5:00 p.m. CST are responded to immediately by qualified personnel who staff a HelpDesk, ensuring that any customer problems are addressed immediately. The IPS HelpDesk personnel are able to perform the following functions remotely:

- Software diagnostics
- Database diagnostics
- CPU monitoring and diagnostics

- Memory usage and performance monitoring
- Operating system parameters analysis and diagnostics
- Remote downloading of software (fixes and features releases)
- Immediate response to calls

The I/CAD System includes a telephone modem, allowing IPS personnel to access system to perform remote diagnosis, verification, and correction of system problems. Access to the system via modem is completely under the security controls imposed by the customer. IPS agrees to work within the security framework for all access to the system.

After normal working hours and on weekends and holidays, response is provided by trained personnel who are available via digital pager. These support personnel have dial-in modem access to the system and can usually quickly isolate the problem. If, in working a problem, IPS deems that on-site software support is necessary, IPS will provide this.

Each error priority level, described in the table above, defines the actions that will be taken by IPS for Response Time, Resolution Time, and Resolution Procedure. The customer shall assign an initial priority level for each error reported, either verbally or in writing, based on the conditions described in the table above. IPS shall notify the customer of any upgrading or reducing of a particular error to a different priority level, if after examining the problem there is reason to do so.

Priority One and Two problems, which have no discernible workaround, are escalated to IPS upper management for resolution guidance. Skilled personnel will be assigned to aggressively address the problem until a resolution is found. Responses and resolutions for other problems are shown in the table below.

PRIORITY	RESPONSE TIME	RESOLUTION TIME	RESOLUTION
ONE: CRITICAL	Immediately during weekday hours of 8:00 a.m. and 5:00 p.m. CST. Within 30 minutes of notification after 5:00 p.m. CST	Within 12 hours of the notification	Program code correction or a procedure to work around the error condition
TWO: NO RELEASE	Immediately during weekday hours of 8:00 a.m. and 5:00 p.m. CST. Within one hour of notification after 5:00 p.m. CST	Within 48 hours of notification	Program code correction or a procedure to work around the error condition
THREE: NORMAL	Immediately during weekday hours of 8:00 a.m. and 5:00 p.m. CST. Within eight hours of notification after 5:00 p.m. CST	Resolution in a future Fixes Release	Program code correction
FOUR: MINOR	Immediately during weekday hours of 8:00 a.m. and 5:00 p.m. CST. Within two days of notification	Resolution in a future Fixes Release	Correct software or document as a permanent system limitation or restriction

Maintenance Plan Information

The proposal is for the level of service proposed in Plan 2 below. This is a plan that shares responsibility between the customer and IPS. Plan 1 can be provided, instead of Plan 2, for those customers that have access to existing hardware maintenance resources or maintenance contracts. Customers that desire IPS to train them to do their own hardware maintenance can also use it. The plan is oriented toward customers who want to supply more service themselves, and provides ongoing maintenance at a reduced cost.

Plan 3 below moves toward IPS providing more service through a plan that includes a resident engineer to assume more responsibility.

The following paragraphs present the three maintenance plans available from IPS. Plan 2 is priced and proposed. Pricing for Plan 1 or Plan 3 will be provided, if either is more attractive.

Plan 1: Customer Provided Hardware Maintenance

For equipment that is out of warranty, a per-call maintenance plan is available. Because of the system's reliability, open architecture, and modularity, many customers choose this plan in combination with a self-maintenance program. Under this plan, IPS will structure a self-maintenance agreement customized to the customer's requirements and will provide, on request, a training plan and prices for training personnel to maintain the equipment.

The proposed system architecture uses industry-standard, PC-based technology and is supportable by most third-party maintenance suppliers. The system architecture also allows any hardware component to fail without affecting the total system's capability to continue to provide dispatching service. If a server fails, the redundant server continues

to provide full functionality and the failed server is taken off-line. If a workstation fails, the other workstations can continue to provide service. This architecture allows remedial maintenance to be performed during the standard workday schedule without the expense of 24-hour-per-day/7-day-per-week personnel. The most expensive component of any maintenance program, particularly a 24-hour-per-day/7-day-per-week program, is the cost to provide continuously available personnel.

Plan 2: Full Service Maintenance Contract

IPS has proposed and priced a Full Service Maintenance Contract for a guaranteed response 24 hours per day, 7 days per week. This covers all replacement parts and labor charges within normal business hours for as long as the maintenance contract is in force. On-site response to calls for service outside of normal business hours will incur an additional charge at the current per-call rate. The maintenance costs associated with this level of support primarily reflect the cost of the personnel required to be on standby and backup to provide an immediate response to system hardware problems 24 hours per day, 7 days per week.

The plan provides for remedial on-site maintenance, including:

- Guaranteed call-back response times for major system malfunctions
- Guaranteed call-back response times for minor system malfunctions
- Mandatory Engineering Change Order (ECO) implementation
- Preventative maintenance
- Unlimited telephone calls to the IPS HelpDesk
- Help Desk point-of-call support

The nearest Intergraph hardware support office is located at Suite 100, 5405 Cypress Center Drive, Tampa, Florida.

The pricing for Plan 2 may be adjusted based on the requirements and budget of the customer. The Pricing Section has the pricing for Plan 2 with 7X24 response. IPS can provide a quote for a different level of service on request.

Plan 3: Resident System Maintenance

With the Resident System Maintenance Plan, the costs for a resident can be cost-effective when combined with normal maintenance costs. IPS passes any IPS reduction in the cost to provide maintenance by providing a resident at less than the normal cost of a person.

The Resident System Maintenance Plan represents the highest level of support available from IPS. In addition to providing hardware maintenance, it also provides for system software support and application system support. Additionally, rapid response to any

hardware, software, or system problem is available 24 hours per day, 7 days per week. Regardless of the nature of the problem, the Resident System Engineer will provide an initial response within 30 minutes and arrive on-site within one hour to correct any major problem that may cause an interruption of service.

Although the configured, industry-standard, Intel Pentium-based workstations and database servers are designed to provide uninterrupted operation, the failure of a system component can cause undue operational problems. These problems can be prevented or quickly remedied by the Resident System Engineer. Furthermore, the Resident System Maintenance Plan is an extremely cost-effective plan that is designed to provide round-the-clock maintenance, system availability, and an unparalleled depth of complimentary corporate support and expertise. Over its 29-year history, Intergraph has earned a distinguished reputation for customer support and maintenance that has become the industry benchmark.

Maintenance Plan 3 focuses on operational support and maintenance. The proposed system is based on a highly interactive, client/server architecture. The system relies on a local area TCP/IP network, is communications-intensive, and employs a sophisticated Oracle distributed database management model. With the Resident System Maintenance plan, a highly trained Resident System Engineer will be provided, ensuring continuous operational support of the system. The System Engineer will be skilled in all facets of hardware maintenance, system software management, database administration, application engineering, and network management. The System Engineer will also be responsible for providing operational support, system administration, and management of the I/CAD System 24 hours per day, 365 days per year. IPS resources will continually support the System Engineer in solving complex problems or providing remote support. Any extended absences will be filled by a qualified temporary replacement. Additional responsibilities of the on-site System Engineer include performing first line hardware maintenance by replacing a failed component with an on-site spare component. IPS believes that the described dedicated support can be prudent for continuous mission-critical operations, whether IPS or the customer provides it. The Resident System Engineer can:

- Provide a single point-of-contact for all hardware, software, communications, interfaces, configuration, and general support issues
- Manage, administer, and maintain the I/CAD System, ensuring continuous calltaking and dispatching operations
- Develop and implement a disaster recovery plan, ensuring continuity of calltaking and dispatching operations in the event of individual component failure
- Perform periodic testing of the I/CAD System's contingency and back-up plans and procedures

- Manage the security and access to the I/CAD System
- Develop and maintain the I/CAD System's support operating procedures
- Perform routine, daily operational tasks for remedial and preventative hardware maintenance
- Perform the first level of hardware maintenance, including using diagnostic tools to isolate problems and replace defective components to minimize downtime
- Provide the interface with the IPS second-level hardware maintenance engineer to expedite on-site support and to effectively manage all "return-to-factory" component repairs
- Perform routine, daily operational tasks applicable to software maintenance, such as purging system log files
- Perform the scheduling and administration of the backup and recovery of data and configuration files
- Monitor system loading and provide advice on efficient use of hardware and software
- Monitor system performance, tune the system for peak performance, and generate system performance reports
- Perform I/CAD System capacity planning studies
- Install and administer Windows NT software and utilities
- Administer user accounts and passwords
- Manage the network, including assigning TCP/IP addresses and monitoring network activity
- Perform Windows NT and application software upgrades, including training for the I/CAD System Administration staff
- Maintain I/CAD System documentation
- Administer the I/CAD database, including database recoveries, regular data integrity and consistency checks, and database upgrades
- Document any I/CAD System anomalies for inclusion into periodic site reports
- Manage any system problem reports using the Intergraph Fault Tracking System database
- Provide the interface to the IPS product development process to promote future software features to enhance operations
- Manage the interface with a map maintenance organization or supplier
- Provide map maintenance address verification failure reports

- Install and verify proper installation of map upgrades
- Provide custom management information reports, as needed, on events, calls for service, unit assignments, and operator workload

The System Engineer will work for and take day-to-day direction from the customers management and will maintain an on-site office.

The price for a resident will include negotiated spare parts, which avoids delays waiting for parts. As an example, a spare workstation will allow any component of a workstation to fail. The engineer can just swap machines, and allow the customer to continue operation, while the failed machine is being repaired. Depending on the location of the customer, spares could be an attractive option. This should be a valid consideration even without a resident.

APPENDIX A
MOBILE WORKSTATIONS

Intergraph Public Safety (IPS) has chosen L&E Mobile Computer Mounts, Inc. (L&E) as the supplier of mobile computers, modems, mounts, and installation for the Outage Management System proposal. In surveying suppliers for this equipment, we received direct recommendation of this supplier from Panasonic and their distributor MicroAge.

IPS will assume the complete responsibility to Florida Power for the implementation of the mobile computing environment. IPS will configure the mobile computers with all required software, test the computers, and work with L&E to install the computers in the vehicles. IPS will be the first line of support for all issues for the mobile computers. IPS will also be the point of contact for maintenance for the mobile computers. This proposal includes 10 additional mobile computers for use as a maintenance pool. IPS will assume full maintenance responsibilities.

Company Background

L&E is pleased to offer Florida Power a turn-key solution to mobilizing your communication systems. Our catalog highlights the best in mounting equipment for voice and data communication that is made of 3/16-inch electrostatically powercoated steel. For safety, all edges are milled and corners rounded. The design allows installation in minutes without drilling or modifying the vehicle. Our radio brackets are universal and simple to install and adjust. The system is air bag friendly when properly installed. The simplicity and strength of our design provide a margin of safety unsurpassed in the industry and ease of installation that saves you time and money.

From Consultation to completed installation, L&E can offer the value-based capabilities necessary for mounting your computer and other communication systems in your vehicles. L&E Emergency Equipment & Supply, Inc. started as a company dedicated to the emergency service field. L&E Emergency specializes in the lights, sirens, and most other equipment necessary for the conversions of emergency service vehicles in police, fire, ambulance, and towing fields. As part of this company, the manufacturing and supplying of equipment mounting systems was necessary.

As a result of the increased market for mobile computer mounts and the vast experience that L&E Emergency had acquired in the industry, L&E Mobile Computer Mounts, Inc. was formed. Taking with it the experience of the parent company, L&E Mobile is dedicated to the "integration" of turn-key solutions of

mounting communication systems and computers into vehicles. We are suppliers of vehicle computers, software, docking stations, mount systems, communication equipment, antennas, cable, power distribution centers, and our newest product "Voltage Armor" units nationwide.

Our latest product is ***the Complete Locking-Docking Station designed for the PANASONIC CF-25 Computer***. It includes a Built-In Port Replicator, Locking-Docking Tray, Tilt & Swivel Mechanism, and 12 Volt DC Power Supply. It comes completely assembled.

What makes L&E unique is that, not only are we suppliers of state-of-the art in computers to hardware, but our reputation for being ***"The Best Technical Installers"*** is supremely established. L&E maintains an installation facility outside of Philadelphia, with secured storage space for 200 vehicles. Also, with our unique mobility staff, we can travel anywhere in the United States and do first class work for you.

L&E is a young, aggressive company, with old fashion "work ethics", that make your communications mobilization as simple a process as it should be. We look forward to having the opportunity to further discuss what L&E can do for your company.

L&E will travel from Philadelphia, Pennsylvania with a Project Manager/Technician and professional Installers to the specified Utility Location. Pricing is configured at a minimum of 300 vehicles. L&E will install customer-supplied Panasonic CF-25 Computer, Docking Station, CDPD Modem with GPS, Antenna and Mounting Equipment in various specified International Harvester Small 3-Ton Vehicles with Buckets. L&E will pre-build wiring harnesses/mounts in Philadelphia and will travel to do installations of an estimated 10+ vehicles per day scheduled consecutively to minimize time vehicle taken out of service. Price is figured on a per vehicle basis, which includes all travel and living expenses of L&E Technicians.

L&E will provide the following equipment to this project:

1. **L&E** will supply a ***Panasonic CF-25, Mark III Laptop Computer, #CF-25LJF8EAM***, with Pentium 166MMX, 32MG, 2.2GB, 12.1" TFT Color Screen with Anti-Glare Option, 10x CDROM Module, 3-year warranty.

   Or Available*: Panasonic CF-25, Mark II Laptop Computer, #CF-25EGC4DAM/CF-VCD252,* with Pentium 133, 32MB, 1.35GB, 10.4"TFT Color Screen with Anti-Glare Option, 10x CDROM Module, 3-year warranty.

2. **L&E** will supply a **Utility Mount, LE-B-LIL**, with Powdercoated Steel Flat Floor/High Seat Mount Base with an extended Top Plate.

3. L&E will supply the ***Complete Panasonic DV-25 Locking-Docking Station*** with built-in Panasonic Port Replicator, 12 volt DC-to-DC Power Supply, CF-25 Locking-Docking Tray and Tilt/Swivel Device, 3-year warranty. (This docking station will mate to any type of mounting equipment you will select.)

4. **L&E** will supply the ***Voltage Armor Units*** with programmable On/Off Device from 15 minutes to 15 hours. These units give added protection to low- and high-voltage spiking, and reverse polarity protection.

5. **L&E** will supply the **Sierra Wireless *CDPD Modem with "GPS", Slide Tray* Mount *Kit, Serial Cable and Hard Mount Antenna.***

6. **L&E** will supply the a **Wiring Harness** for each vehicle for installation project, which includes all cable, wiring, fuses, connectors, etc.

L&E will also provide the services to install this equipment including:

- All power wire to supply the Panasonic CF-25 Computer Unit (20 AMP Service)
- All Power connectors
- Fusible Link (20 AMP)
- Standard Length Computer Cables (shelf items)
- Mount and Wire Panasonic DV-25 Docking Station
- Mount and Wire Voltage Armor Unit
- Mount and Wire Antenna
- Mount and Wire CDPD Modem, GPS antenna, and Slide Mount Tray
- Run all connecting wires to Antenna, Modem, and Voltage Armor Unit
- Mount all Vehicle Mounting Equipment
- Test Equipment/Function (Power To Unit, Modem To Transmit)

L&E's Project Manager will work with the IPS Project Manager and the Florida Power site supervisors to devise a mutually workable schedule for installations. They will work out a complete schedule for day-to-day installations with your staff. They can offer extended work hours if you desire, in an attempt to get the installations done in a shorter amount of time. Once we are out of town on a job, they are quite flexible with regard to working hours.

Following each week's installations, IPS will provide Florida Power a report giving the specific vehicle, and services provided including:

- Vehicle ID, Model, Year, and Serial #
- RF Modem Tag, Serial No. & IP Address
- Results of Modem Test: Signal Check, Registered, Approval Code#
- Installation Set: Visual and Functional Checks for Computer, Docking Station, Voltage Armor, Filter, Wiring, Antenna, Connectors
- Report of any problems, resolutions, and comments

*Please note: all vehicles scheduled for installation will be clean of ALL utility property, driver property, and trash prior to installation. The cleaning should be concerned only where the Installation Team will be working in the vehicle. If not, a $25.00 Fee will be added for that vehicle.

L&E requires that:

1. L&E requests all mounting hardware to be at L&E Mobile Computer Mounts, Inc. three (3) weeks prior to Installation Date (including mounting equipment, docking station, voltage armor, CDPD modems) for advance mounting preparation & wiring on Installation. ***(The advance preparation done in our Philadelphia Facility, then requires your vehicle to be out of service for only a short period of time, for the final install stage when organized as L&E prefers to do a job.)***

2. L&E will receive written notification schedule of vehicle type and quantity at least two (2) weeks prior to Installation, should vehicle type change.

3. All vehicles scheduled for Installation be in "Running Condition".

4. Each vehicle will be cleaned so that the Installation Team can have free access to required areas necessary to complete Installation.

5. L&E be provided with a Garage Facility area able to hold a minimum of two (2) vehicles or more, so that Installation can be completed in a timely manner.

6. The provided Garage Facility be heated and have electrical outlets to supply 110 volts and 20 amps. of service.

WORKING HOURS SCHEDULED PRICING:

L&E will be working on an eight (8) hour work schedule that conforms to all State and Federal Employment Laws. This "PRICE QUOTE" reflects a workday of

eight (8) hours starting between the hours of 8:00 a.m. and 11:00 a.m., Monday through Friday. If more convenient, L&E will be available for extended working hours.

WARRANTY

L&E Mobile Computer Mounts, Inc. warrants their installation work for a period of ninety (90) days from the date of installation. Any failures, problems, or deficiencies in the wiring or mechanical installation of the Panasonic CF-25 Computer System (Panasonic Docking Station, Voltage Armor, CDPD Radio Modem, and Pedestal Mount) not due to accident or abuse will be repaired or replaced at no cost.

Failures in the CDPD modem or in the vehicle electrical system not related to the Panasonic CF-25 Computer Vehicle system Installation are not the responsibility of L&E. Should Florida Power suspect a failure of the vehicle system, basic diagnostics and a description of the problem should be attempted before contacting the IPS Project Manager. The appropriate Florida Power manager will request that service personnel be dispatched as soon as possible to address the problem.

REFERENCES:

Bob Carr, Vice President, Panasonic	(201) 271-3179
Clint Nye, XL Computing, Inc. (PC Mobile)	(407) 589-7344
Don Paisley, President, Walkabout Computers, Inc.	(614) 882-0015
Ron Oklewicz, President, TelePad Corporation	(800) 736-7235
Steve Gower, North East Regional Rep., Panasonic	(508) 744-2331
Nick Zemlachenko, Director, Bell Atlantic NYNEX Mobile	(215) 638-5582
Jason Coenouver, Sierra Wireless	(604) 231-1100
Chief Thomas Stone, Norristown, PA Police Dept.	(610) 272-0977
Sgt. Russ James, Fleet Mgr., Bristol, CT Police Dept.	(860) 584-4865
Lt. James Sorrentino, New Haven, CT Police Dept.	(203) 946-7294
Lt. Ed Borrow, Mobile, AL Police Dept.	(334) 434-1994
Sgt. Godfrey Sohler, Bridgewater, NF Police Dept.	(908) 725-4044
Chief Thomas Daley, Plymouth Community Ambulance	(610) 368-6768
Lt. John Bennett, Fleet Mgr., Marple Twp. PA Police Dept.	(610) 356-1500

Philadelphia Police Dept., Mobile Data Computer Project
Harry Martin, Bell Atlantic, Project Manager (215) 575-8236
Chief Inspector, Charles Brennan (215) 686-3138
Installation Technical Support & Equipment
650 Police Vehicle Project

Dave Rand and Mike Pirylis, PSE&G – New Jersey
Public Service Electric & Gas Company (201) 912-3293
800+ Utility Vehicle Project
Installations, Technical Support and Equipment

Bay State Gas Company, Westborough, MA
Fred MacLennan, Project Manager (508) 836-7205
248 Vehicle Design, Equipment, Installations

Mike Martin, Ford, Factory Rep., Mt. Laurel, New Jersey (609) 727-3627
Ford Factory "Police/Computer Mount Package" Car
Conversions – 1995, 1996, 1997, 1998 "Factory" Show Cars

Details of the VOLTAGE ARMOR Automatic On/Off Timer Switch

The *Voltage Armor* automatic timer switch extends vehicle battery life by automatically switching your 2-way radio on and off. It can also be used with other vehicle electrical devices.

EASY TO INSTALL

No ignition switch connection.

- Complete – nothing else to buy
- Programmable: 15 min. to 15 hr.
- Can be located anywhere in the vehicle
- Protects the battery and radio equipment
- One-year limited warranty
- Made in USA

The *Voltage Armor* unit's built-in sensors automatically turn on a vehicle mobile radio when the engine is started. When the motor is turned off, the radio will stay on up to 15 hours – depending on how you program the *Voltage Armor* unit. Programming simply involves selecting the combination of DIP switch settings for the length of delay required – from 15 minutes to 15 hours.

The *Voltage Armor* unit mounts quickly and easily anywhere in the vehicle – provided it is wired directly to the battery.

Built in safeguards include:

LOW VOLTAGE PROTECTION

Low voltage disconnect (10V) takes priority over the delay timer and turns the unit off – regardless of the remaining delay before normal dropout. It automatically removes the *Voltage Armor* unit from the circuit for ultimate battery protection.

HIGH VOLTAGE PROTECTION

High voltage disconnect (17V) protects the radio equipment from erratic vehicle voltage regulators by disconnecting your electronic equipment *before* catastrophic failure occurs.

REVERSE POLARITY PROTECTION

Voltage Armor unit is electronically prevented from operating in reverse polarity.

Available in 12-Volt and 24-Volt Models.

SPECIFICATIONS: 12V/24V

Operating Voltage	13.6/27.2V
Low Voltage disconnect	10/20V
High Voltage disconnect	17/34V
Stand-by Current	7/14 MA
Operating Current	80/55 MA
Load Current Rating	30 Amp.
Minimum Time Delay	15 Min.
Emergency Bypass Time	15 Min.
Selectable Time Delay	1.15 Hr.
Weight	6 oz
Size	5 ¼ x 2 ¼ x 1 ¼
Operating Temp. Range	-50 deg. - +200 deg. F

Intergraph Public Safety, Inc. 2/22/98

Electric Utility Dispatch

Functional Design

Original Date: February 2, 1998

Revision Date:February 17, 1998

Author: Allen Acree
Title: Electric Utility Dispatch
Status: Proposed
Reference Number: FDD_Elec_Utility
Customer Name: Florida Power Corporation

Table of Contents

Section	Title	Page
1. Introduction		*4*
1.1.	**Purpose of Document**	**4**
1.2.	**References**	**4**
2. General Description		*5*
3. Glossary		*7*
4. Components		*8*
4.1.	**Batch Call Creation**	**8**
4.1.1.	User Interface	8
4.1.2.	Functions	8
4.1.3.	Interfaces	10
4.2.	**Trouble Analysis**	**10**
4.2.1.	User Interface	10
4.2.2.	Functions	10
4.2.3.	Interfaces	12
4.3.	**Additions to I/Dispatcher and I/Calltaker**	**12**
4.3.1.	User Interface	13
4.3.2.	Functions	14
4.3.3.	Interfaces	16
4.4.	**Additions to I/Mobile**	**17**
4.4.1.	Functions	18
4.5.	**Customer Data Interface**	**18**
4.5.1.	Functions	18
4.6.	**Equipment Data Interface**	**18**
4.6.1.	Interfaces	18
4.7.	**Additions to CSS**	**18**
4.7.1.	User Interface	18
4.7.2.	Interfaces	19
4.8.	**Additions to VRU**	**19**
4.8.1.	User Interface	19
4.8.2.	Interfaces	19
5. Functional Specification Cross Reference		*20*

List of Tables

Table	Title	Page
Table 1 Document References		*4*
Table 2 Functional Specification Cross Reference		*20*

List of Figures

Figure	Title	Page
Figure 1. System Interface Diagram		*6*

1. Introduction

1.1. Purpose of Document

The purpose of a I/EUD Functional Design (FD) is to define the high-level development implementation for the inclusion of a functional requirement(s) described in the corresponding I/EUD Requirements Document in affected products. An FD has three basic objectives: (1) to communicate to the requirement's author and all affected parties the intended implementation to ensure complete understanding of the requirement; (2) to identify user interface changes which will enable product documentation and literature to be updated; and (3) to more completely define the magnitude of the product change on users to enable organizations providing support to more accurately assess the change's impact on their resources.

This FDD describes the requirements for a dispatch system for the electric distribution utilities market, and the modifications and additions required for Intergraph Public Safety products to meet these requirements. The proposed system will be installed in two phases. Phase 1 is an initial operating capability, which will be implemented before other overall system components (FRAMME and WMS) are brought on line. Phase 1 will be based on a preliminary version of the FRAMME database, and will not include certain interfaces and functions. Phase 2 will be the final implementation, including all components. Functions and interfaces described in this document are proposed for Phase 1 except where explicitly noted.

1.2. References

The following documents, although not a part of this document, serve to amplify or clarify its contents.

Table 1 Document References

	Title of document	Version	Document number	Issue date
1.	Functional Specifications for an Outage Management System			**22-Dec-97**

2. General Description

The Intergraph Public Safety Computer Aided Dispatch (I/CAD) system has been developed over the years to meet a variety of needs for public safety service providers. These providers include police, fire, ambulance, and roadside assistance (auto club) customers, and multi-agency customers that provide multiple types of service. The core products in I/CAD are I/Calltaker and I/Dispatcher. The function of I/Calltaker is to support the person taking telephone calls from the public (or club members) and creating events (requests for service). The function if I/Dispatcher is to support the person communicating with the units in the field (fire trucks, patrolmen, etc.) and managing the assignment of events to units. Both products use a Graphical User Interface (GUI) and a digital map, and provide real-time status displays, database inquiry, and message facilities. Generally a calltaker takes calls from anywhere in the service area, and the resulting event is automatically sent to the appropriate dispatcher workstation based on the event type and location. All entered data is entered into a central Oracle database, and a subset of the data is broadcast on the local area network to update the real-time status displays of other workstations. The GUI and the database schema are highly configurable so that the system may be tailored for the terminology, workflow, and data processing requirements of a wide range of customers. Both I/Calltaker and I/Dispatcher use a high-speed map display to display geographic and situational information.

There is a large degree of overlap between the requirements of public safety customers and those of utility customers. The following differences have been identified:

- In public safety, the general rule is that one telephone calls leads to one dispatchable event. There are cases when the same occurrence is reported multiple times (like traffic accidents), and the I/CAD system detects nearby events and recommends to the calltaker that they may be collapsed into a single event. In a utility distribution system, the general rule is that multiple calls reporting a service outage need to be aggregated to a single dispatch to repair the failed piece of equipment upstream from the callers. This aggregation should be based not on geographic proximity, but rather on information about the distribution network and current knowledge about the equipment and the other outstanding outage reports. The aggregation may need to change as more information is obtained about equipment status and outages. Thus a new *Trouble Analysis* function will be needed for the I/CAD system, to perform the analysis to predict the equipment that needs repair, and to maintain the association between outage calls and repairs.
- In public safety, the two primary pieces of information in taking a call are the event location and the event type. From those, the agency response, dispatch group, and unit recommendations are computed. The event location may be entered as a street address, intersection, commonplace name, alarm identifier, or geographic coordinate. The location entry is converted to a map point and a response zone by the process of *location verification,* using the map and the geographic database. While some locations may have specific information or response plans stored for them, most do not. In a utility distribution system, the key is to identify a customer premise. The input may be a customer name, address, or account number. Each customer can be found in a customer database, with important additional information needed to process the call, such as the identification of the service transformer, and whether service has been cut off for nonpayment. Since this customer database is used for many other business purposes, it will remain external to the I/CAD system. Thus a new *Customer Data Interface* function will be needed for the I/CAD system, to supplement or replace the existing location verification function. This interface may also support other functions, such as recording outage repair times, inquiry of supplemental premise information, and the generation of a list of customers affected by an outage.
- In public safety, the displayed base map is primarily a street map with a dynamic overlay of unit and event location symbols. The street graphics are linked to database tables used for address verification, optimal routing, and road closures. Optional static overlays include building outlines, political and administrative boundaries, utilities, etc. These optional graphic levels may also be linked to database tables and interactively queried, but are not otherwise used in direct processing. In a utility distribution system, the distribution network is a core component of the base map, and the street network has less importance. The distribution network graphics should be linked to a network model that is either stored within the I/CAD system, or external in an AM/FM GIS. In addition, the map

should show an additional dynamic overlay for the status of the network based on SCADA information or other sources.

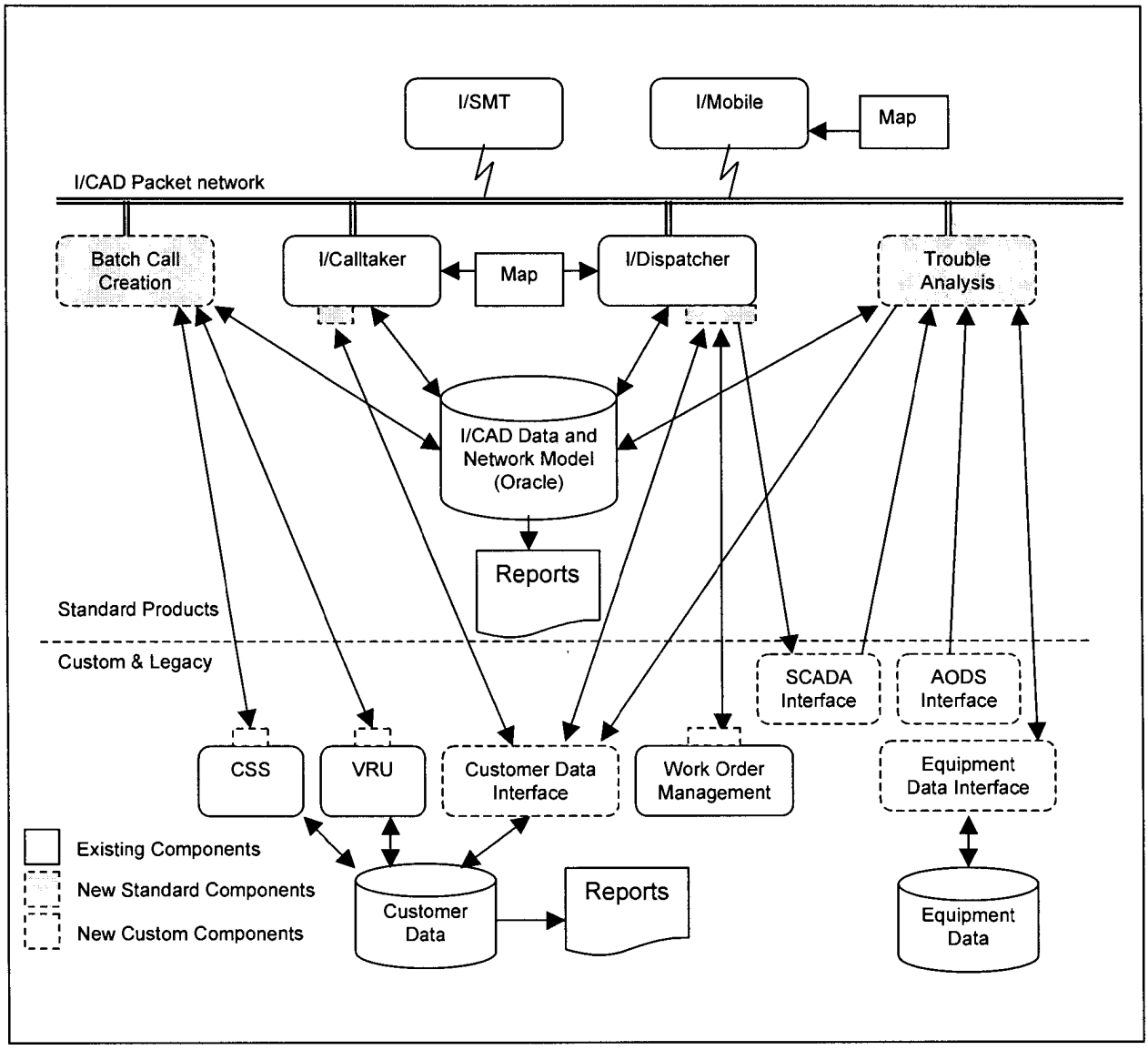


Figure 1. System Interface Diagram

3. Glossary

AODS	Automated Outage Detection System – An information system based on devices at customer locations that monitor power status and automatically make telephone calls to report changes.
CMI/C	The ratio of the number of Customer Minutes of Interruption divided by the total number of customers. This statistic is usually quoted for a year of service, and may exclude planned construction outages and outages due to hurricanes. It may be quoted for an entire system or a smaller service area.
CSS	Customer Service System
ERT	Estimated Response Time
FPC	Florida Power Corporation
GIS	Geographic Information System
IPS	Intergraph Public Safety
OMS	Outage Management System
POD	Probable Outage Device
SCADA	Supervisory Control and Data Acquisition
VRU	Voice Response Unit – allows customers to enter outage information via an automated telephone system ("press 1 for ...").
WMS	Work Order Management System

4. Components

4.1. Batch Call Creation

The Batch Call Creation component is a new standard IPS product. Its purpose is to provide a standard mechanism for external processes to create events in the I/CAD system. The external process would replace or supplement the standard I/Calltaker product as a mechanism for entering events into the I/CAD system. The Batch Call Creation component is a gateway to the I/CAD database and network protocols. The database fields that make up an event record are configurable to some degree in the I/CAD system. Certain fields must be present, but others may be added to meet the needs of specific customers. The component must support this configurability. This component will be useful in a variety of applications, so it may include capabilities that are not specifically required for the utility distribution industry.

4.1.1. User Interface

The Batch Call Creation component has no user interface.

4.1.2. Functions

4.1.2.1. Create Event

The Create Event function is used to add a new event to the I/CAD system. It performs the required insertions into the I/CAD database and sends the network packets notifying Dispatcher positions and other processes of the new event.

The Create Event function will have three parameters.

- A character string of the form "*fieldname1=value1; fieldname2=value2; ...*". Fields which allow NULL values in the database may be omitted from the string. . In order to simplify implementations, there will be a configurable translation between the field names in the parameter string and the actual database field names.
- A returned string containing the list of agency event identifiers separated by commas. (In the I/CAD system, a single event may generate subevents for multiple agencies. The master event has an integer identifier, and the agency events have alphanumeric string identifiers.)
- A returned string containing an error message, if the function fails.

The return value of the Create Event function will be a positive integer for the identifier of the created event, or zero if the function fails.

4.1.2.2. Query Event

The Query Event function is used to retrieve current information about an event. This may include information that was added to the event after it was created, such as estimated response times, additional remarks, and dispatch status.

The Query Event function will have three parameters.

- A character string containing the agency event identifier.
- A character string containing the list if field names to be returned, separated by commas, or "*" for all.
- A returned character string containing the data, in the form "*fieldname1=value1; fieldname2=value2; ...*".

The field names will be translated using the same configuration as Create Event.
The return value of the Query Event function will be one for success, or zero for failure.

4.1.2.3. Add Event Comments

The Add Event Comments function will have three parameters.

- A character string containing the agency event identifier.

- A character string containing the event comment(s) to be added.
- A scope parameter, indicating whether the comments are to be applied to all agency events for the same master event, or to just the one named.

The return value of the Add Event Comments function will be one for success, or zero for failure.

4.1.2.4. Update Event

The Update Event function will have three parameters.
- A character string containing the agency event identifier.
- A character string of the form "*fieldname1=value1; fieldname2=value2; ...*", listing the values to be modified.
- A returned string containing an error message, if the function fails.

The field names will be translated using the same configuration as Create Event.
The return value of the Update Event function will be one for success, or zero for failure.

4.1.2.5. Cancel Event

In I/CAD the Calltaker position usually cannot actually cancel an event, because a Dispatcher may already be working on the event. Instead, the Calltaker posts a cancellation request for the event. The Dispatcher is notified of the request, and may complete the cancellation. The mode selection parameter allows the Cancel Event function to work either way.

The Cancel Event function will have three parameters.
- A character string containing the agency event identifier.
- A mode selection, indicating whether to cancel the event immediately, or just request cancellation by a Dispatcher.
- A returned string containing an error message, if the function fails.

The return value of the Cancel Event function will be one for success, or zero for failure.

4.1.2.6. Verify Location

The I/CAD system has the capability to verify addresses and generate map coordinates. This function will allow an external process to use this capability. The process may need the coordinates to perform a nearby event test, prior to creating and event.

The Verify Location function will have five parameters.
- A character string containing the address.
- A returned string containing the parsed address, in field format. Missing components may be filled in which may be uniquely inferred from the input string.
- The returned X coordinate of the verified address.
- The returned Y coordinate of the verified address.
- A returned string containing an error message, if the function fails to match a unique address.

The return value of the Verify Location function will be one for success, or zero for failure.

4.1.2.7. Nearby Events

An external application may want to test if there are already events in the vicinity of a new report, prior to creating a new event, just as I/Calltaker does.

The Nearby Events function will have five parameters.
- The X coordinate to be tested.
- The Y coordinate to be tested.
- The range to search for nearby events (in map coordinate units), or zero for default I/CAD range testing.
- A returned string containing the list of agency event identifiers within range of the test point.

The return value of the Nearby Events function will be the number of nearby events found, or zero if none.

4.1.3. Interfaces

4.1.3.1. Network Interfaces

The Batch Call Creation component will generate standard I/CAD network packets for each event creation, update, and cancellation operation.

4.1.3.2. Database Interfaces

The Batch Call Creation component will insert, update, and query the I/CAD database tables holding event information. It will also query the geographic information tables for the Verify Location function.

4.1.3.3. External Interfaces

Each of the functions listed above will be available to external processes via a mechanism to be determined. Options at this time are:

- A Common Object Model (COM) server process interface.
- A Remote Procedure Call (RPC) server process interface.
- A low-level TCP/IP network packet protocol.

4.2. Trouble Analysis

The purpose of the new Trouble Analysis component is to analyze outage reports, and predict the likely equipment malfunction causing the outages. Based on this prediction, the component will create I/CAD events representing repair work orders. The component will function automatically, reacting to new outage call events in the system, and to Dispatcher requests and overrides. The trouble Analysis component will maintain a connectivity model of the distribution network to be used to trace circuits.

4.2.1. User Interface

The Trouble Analysis component has no direct user interface. Any user inputs are handled by the I/Dispatcher product, which will trigger Trouble Analysis processing via network packets.

4.2.2. Functions

4.2.2.1. Maintain Connectivity Model

The Trouble Analysis component will maintain and use a connectivity model containing all distribution lines, transformers, fuses, breakers, switches, and AODS and SCADA monitoring points. The data in the model will include customer counts, phase, normal load, design load limits, the normal operating state of the switches, and the current operating state of devices. The connectivity model will be stored in the I/CAD database where it will be available to I/Dispatcher.

The static part of the data will be loaded from the Engineering Data interface. The dynamic data (current operating state) will come from the SCADA interface, I/Dispatcher, and the AODS interface. AODS will be added in Phase 2.

4.2.2.2. New Outage

This function performs the analysis for a new outage call. It is initiated by a new event packet from I/Calltaker, I/Dispatcher, or the Batch Call Creation component. On the first call from an area, a new repair event (trouble ticket) will be created with no predicted equipment failure identified, only a list of upstream devices. An estimated time to repair will be added based on the assumption that the failing device is the last one on the line. When additional calls are received, the software will determine the Probable Outage Device (POD) and update the repair event (See 4.2.2.4).

4.2.2.3. Automatic New Outage

The Trouble Analysis component will automatically generate a new outage call when a power failure is reported by AODS. There will be a configurable time delay for this function to avoid creating outage calls for momentary interruptions. Once created, the automatic outage call will be processed just like any other. This function will be available in Phase 2.

4.2.2.4. Determine Probable Outage Device (POD)

When two or more outages are entered in an area, the software will trace the distribution network model to identify a probable outage device (POD). The algorithm to determine the POD will consider:

- The power phase utilized by the reporting customer
- The percentage of all customers downstream from the device which are reporting an outage
- The times of the outage reports
- Any available SCADA measurements of upstream demand changes
- The *a priori* reliability of the device type

The repair event will be updated with

- the new POD
- a corresponding estimated time to repair
- the number of customers downstream from the POD
- the normal load associated with the POD

4.2.2.5. Determine Estimated Time to Repair

The Trouble Analysis component will calculate an estimated time to repair based on a table look-up based outage type, outage area, time of day, day of week, holiday status, storm status. The outage area will be determined by a point-in-polygon lookup using the POD location and a set of polygon definitions maintained just for this purpose.

4.2.2.6. Updated Outage

If an outage call event is modified, the Trouble Analysis component will receive the network packet identifying the change. The software will determine if the modification could affect the POD, and if so, initiate a reanalysis of open outage calls and repair events.

4.2.2.7. Completed Repair

When the dispatcher closes a repair event, the Trouble Analysis component will receive the network packet identifying the change. The component will then automatically close all associated outage call events. It will also calculate the Customer Minutes of Interruption (CMI) for the outage, and add that data to the repair event. If the dispatcher has not manually set the outage start time from field reports, it will be calculated from the earliest associated outage call event, or the creation time of the repair event if there are no associated outage call events. If the dispatcher has not manually set the outage end time from field reports, it will be set to the time of closure of the repair event. The customer count for the CMI will already be in the repair event record. (See 4.2.2.4.)

4.2.2.8. Set Equipment Status

This function performs the new analysis of the "No Lockout" function. It is initiated by a network packet from I/Dispatcher requesting Override Equipment Status

4.2.2.9. Query SCADA Status

During outage analysis, The Trouble Analysis component will automatically query the external SCADA interface for the status of SCADA-equipped devices, if no recent updates have been received.

4.2.2.10. Set SCADA Mode

The Trouble Analysis component may be configured dynamically to automatically query the status of SCADA-equipped devices, or not.

4.2.2.11. Generate Switching Orders

The Trouble Analysis component will automatically generate recommended switching orders to isolate a section of equipment for repair, and to restore power after repair. This recommendation will be in response to a request for I/Dispatcher, and based on a configurable set of rules. These rules will consider the design limits and normal load for the circuits being switched. The recommended steps will be stored in the I/CAD database, and the copy of I/Dispatcher requesting the orders will be notified via a network packet of their availability.

4.2.3. Interfaces

4.2.3.1. Trouble Analysis to Engineering Data

The Trouble Analysis component will load its initial connectivity model from the customer's Engineering Data interface (FRAMME or equivalent). This information may be reloaded periodically, but there will be no real-time link to copy engineering changes as they happen.

4.2.3.2. Trouble Analysis to I/Dispatcher

The interface between Trouble Analysis and I/Dispatcher will be in the form of I/CAD network packets. Some of these will be existing packet protocols (like new event), and others will be new.

Each copy of I/Dispatcher can request SCADA updates for a geographic area. When the Trouble Analysis component receives updates from the SCADA system, those updates will be forwarded from Trouble Analysis to those copies of I/Dispatcher which are monitoring an area including the update.

I/Dispatcher can request recommended switching orders to isolate or restore power to a section of equipment. I/Dispatcher will be notified when the recommended switching orders are available in the database.

4.2.3.3. Trouble Analysis to SCADA

The Trouble Analysis component will accept real-time data from the SCADA system to track device operations and dynamic loads. Because of the large data volume, the SCADA system should not forward individual telemetry items to Trouble Analysis. It should bundle items into packets based on change thresholds and a configurable time interval.

The Trouble Analysis component will query data from the SCADA system as needed to determine the state of devices, if no recent updates have been automatically received.

Information from SCADA will be stored in the database in the connectivity model.

4.2.3.4. Trouble Analysis to AODS

The Trouble Analysis component will accept real-time notification from the AODS system. Each will contain customer identification, a time stamp, and a power status. This interface will be implemented in Phase 2.

4.3. Additions to I/Dispatcher and I/Calltaker

The I/Calltaker product is essentially a subset of the I/Dispatcher product, built without the functions dealing with the control of units. Both products have the capability to load custom software modules that add functions to the standard product. These custom modules have access to the data and functions in the standard product, so that new capabilities can be added

with a minimum of new code and a maximum reuse of proven product. The following changes will be needed to the base product to support the new add-on functions:

- In the map display, the ability to specify a TrueType® font name to be used for each font number in the original DGN files, to support symbol fonts.
- In the map display, the ability to register callback functions to be called before and after display updates, to support application-specific backdrops and overlays.
- In the network packet interface, the ability to register callback functions to handle specified new packet types, to support the addition of application-specific packets.

4.3.1. User Interface

The changes to the user interface for I/Dispatcher and I/Calltaker include changes to the map display, and addition of dialog-based commands.

4.3.1.1. Map Display

The map display in I/Dispatcher and I/Calltaker will include the graphics for the distribution network (FRAMME graphics), as well as a standard street network. The current map display uses only one font for text. The display of FRAMME data will require the ability to use a symbol font for the engineering symbols for distribution equipment such as transformers, breakers, and fuses.

A new capability will be added to the map display to allow the user to specify which events to display, based on event type, priority, and customer count.

4.3.1.2. SCADA Display

One of the map views will be required to display a dynamic overlay of real-time SCADA status. This information is received from the Trouble Analysis component, and will be immediately reflected in the map display when received. This overlay will contain:

- Status and quality indications for SCADA-equipped devices.
- Load measurements.
- Special symbology for lines that are not energized due to device operations.
- Active tags (Red, Yellow, Blue, White) from the network model.

4.3.1.3. Status Monitors

The tabular displays for pending events and unit status are implemented in I/Calltaker and I/Dispatcher as separate DLLs, to facilitate application-specific functions. The standard versions of these displays include most of the data required for this implementation, but a new version will be required to add the following fields:

- The number of customers affected.
- High priority customers affected.
- Time remaining to end of shift for logged-on unit.

The unit status monitor will indicate an alarm state when a unit is still logged on beyond the scheduled end of shift. This will be indicated by an initial audible alert (beep), and a hilighted button or text message on the status monitor dialog.

A new capability will be added to the pending event monitor to allow the user to specify which events to display, based on event type, priority, and customer count. (An analogous capability already exists for the unit status monitor – "Define Custom Display".)

4.3.1.4. New Dialog-based Commands

New dialogs will be added for each of the functions listed in section 4.3.2.

4.3.2. Functions

4.3.2.1. Verify Customer Information

As an alternative to the standard I/CAD address verification, the calltaker or dispatcher may verify a location through CSS by specifying a customer name, premise address, telephone number, account number, or meter number.

4.3.2.2. Create Event for Device

The calltaker or dispatcher will be able to create a new event at a location determined by selecting a device from the map display. The default event type in this will be configurable, typically to a type indicating that the device has failed and needs repair. The operator may override the event type.

4.3.2.3. Create Event for Customer Premise

The calltaker or dispatcher will be able to create a new event of any type at a premise location verified as in section 4.3.2.1.. The default event type in this will be configurable, typically to a type indicating a service outage. The operator may override the event type.

4.3.2.4. Display Customer Premise History

The calltaker or dispatcher will be able to query the CSS for customer premise history, and display the results. The customer my be identified by selecting an outage call event, or from a customer list (see 4.3.2.10), or by directly identifying the customer as in paragraph 4.3.2.1.

4.3.2.5. Override Equipment Status

This is the user interface to the "No Lockout" function. Send a message to the Trouble Analysis component to request a reanalysis assuming a specified piece of equipment has a particular status. This function is available only on I/Dispatcher.

4.3.2.6. Outage Restored

This function will close the Repair event (Trouble Ticket) and all of the cross-referenced Outage Call Events. The dispatcher may enter the actual time the outage was restored and any final information about the cause or conditions. This command is a convenient user interface to the existing Clear Event command, and is used to close multiple repair and outage events with one request. The outage start and end time and cause code will be passed to CSS along with a list of affected transformers, to be recorded for each affected customer. This function is available only on I/Dispatcher.

4.3.2.7. Outage Partially Restored

This function will may close all outages on a specified feeder circuit that are cross-referenced to a selected repair event, without closing the entire repair event. The dispatcher may enter the actual time the outage was restored and any final information about the cause or conditions. This command is a convenient user interface to the existing Clear Event command, and is used to close multiple outage events with one request. The outage start and end time and cause code will be passed to CSS along with a list of affected transformers, to be recorded for each affected customer. This function is available only on I/Dispatcher.

4.3.2.8. Display Outage Call List

Display a tabular report of Outage Call events cross-referenced to a selected Repair event. This function is available on I/Dispatcher and I/Calltaker.

4.3.2.9. Display Single Outage Call List

Display a tabular report of Outage Call events that have not been grouped with other outage calls by the Trouble Analysis module. These may represent transient circuit breaker operation rather than true outages, and may require just a telephone callback.

4.3.2.10. Display Customer List

Display a tabular report of customers downstream of a selected piece of equipment. The piece of equipment may be selected from the map, or may be the POD of a selected repair event. To generate the list, I/Dispatcher will query the connectivity model to determine the transformers downstream from the POD, and then query CSS for each transformer to get the list of customers served by that transformer.

4.3.2.11. Display Priority Customer List

Display a tabular report of high priority customers downstream of a selected piece of equipment. This function will work like Display Customer List, but will only display the customers marked as priority in the data returned from CSS.

4.3.2.12. Set SCADA Mode

Modify the SCADA mode of the Trouble Analysis component for a selected device, set of devices, or region. Normally, the Trouble Analysis component will automatically query SCADA-equipped devices for lockout status. If this function is turned off, the component will instead send a no lockout question to the responsible dispatcher. This function is available only on I/Dispatcher.

4.3.2.13. No Lockout Question

When the Trouble Analysis component determines that it needs to know the status of a device which is not configured for an automatic SCADA query, it will post a coded form of the question to the database, and send a message to the dispatch group responsible for the device. When the dispatcher receives the message, he should invoke the No Lockout Question command. This command will present a list of pending questions for the covered dispatch groups. The dispatcher may answer the questions, using a dialog. Each response will be stored in the database, and a network packet will be sent to the Trouble Analysis component indicating a new response. This function is available only on I/Dispatcher.

4.3.2.14. No Lockout Run

The new No Lockout Run command will allow the Dispatcher to initiate a new analysis of outage calls with an updated lockout state of specific devices. This function operates by sending a network packet to the Trouble Analysis component indicating the change. This function is available only on I/Dispatcher.

4.3.2.15. Edit Estimated Repair Time Table

A new dialog-based command in I/Dispatcher will allow an authorized operator to edit the values in the Estimated Repair Time table. (See 4.2.2.5.) This command will be implemented either as an external Visual Basic program or as a DLL-based add-in.

4.3.2.16. Populate Estimated Repair Time Table from History

A separate utility program will be developed to extract repair time history from the I/CAD database, and generate statistical estimates that will be used to automatically populate the Estimated Repair Time table. This utility will be implemented in Phase 2, so the table should be populated by manual editing for Phase 1.

4.3.2.17. Query Load for Line

The dispatcher will be able to query the design load on a line segment by selecting it from the map display.

4.3.2.18. Generate Callback List

The dispatcher will be able to request a list of a random selection of the customers affected by a POD. To do so, it will query the connectivity model to determine the transforms downstream from the POD, and then query CSS for each transformer to get the list of customers served by that transformer. It will then select a random fraction of the customers, based on the percentage

selected by the dispatcher. The list may be viewed online or printed. In Phase 2, an interface to an automatic calling system will be implemented for automatic callbacks.

4.3.2.19. Display Customer Outage Statistics

The dispatcher will be able to request a calculation of the outage count and the Customer Minutes of Interruption per Customer (CMI/C) for a device, feeder, or polygonal area, and a specified time period. The request may include a restriction of the cause codes to be included. I/Dispatcher will compute the list of service transformers for the query, and then retrieve the outage history from the database and compute the count and CMI/C.

4.3.2.20. Create Work Request

The dispatcher will be able to generate a work request for the Work Order Management System (WMS). This is a dialog-based command, with data content yet to be determined. A configurable set of fields may automatically be copied to the request from an open or closed I/CAD event. This function is available only on I/Dispatcher, and will be implemented in Phase 2.

4.3.2.21. Request Switching Orders

The dispatcher will be able to request recommended switching orders by specifying one or more pieces of equipment to be isolated or restored to power.

4.3.2.22. Review and Update Switching Orders

The dispatcher will be able to review the switching orders recommended by the Trouble Analysis component, and modify them as needed. The dispatcher will also be able to generate switching orders manually. The dispatcher will be ultimately responsible for the accuracy and safety of the switching orders.

4.3.2.23. Log Switching Orders

I/Dispatcher will allow the dispatcher to check off each step of the switching orders, and record the identity of the person receiving the orders. I/Dispatcher will record the times that the dispatcher indicates that each step was issued to the field, verified by the recipient, and completed. The dispatcher will be able to select the recipient be selecting either from a list of logged-on units, or a list of logged-on personnel. The log will be available for on-line review, and may be printed at the end of each shift for signature and archiving.

4.3.2.24. Initiate SCADA Control Actions

I/Dispatcher will allow the dispatcher to initiate control actions to be passed back to the SCADA system.

4.3.2.25. Manage Tags

The dispatcher will be able to create, query, edit, and remove tags from the network model. The dispatcher can select the tag to manipulate by picking it from the graphic SCADA display. These color-coded tags (red, yellow, blue, and white) represent physical tags that are placed in the field to communicate information about the equipment. For example, a lineman places a red tag on a switch when he de-energizes a line to work on it. No one else is allowed to close the switch while the red tag is there, and only the original lineman is authorized to remove the tag.

4.3.3. Interfaces

4.3.3.1. I/Dispatcher to Trouble Analysis

I/Dispatcher will send a network packet to the Trouble Analysis component when the SCADA view is changed, to specify a new request area for SCADA updates.

I/Dispatcher will accept SCADA update packets from the Trouble Analysis component, containing device status, and inferred power status of downstream lines.

4.3.3.2. I/Dispatcher to Customer Data Interface

I/Dispatcher will retrieve a list of customers served by a transformer from the Customer Data Interface.

I/Calltaker and I/Dispatcher will retrieve customer and premise information from the Customer Data Interface by name, address, phone, account number, or meter number.

I/Calltaker and I/Dispatcher will retrieve premise history information from the Customer Data Interface by address or meter number.

I/Dispatcher will send the outage start and end times and cause codes, with a list of affected service transformers, to the Customer Data Interface.

4.3.3.3. I/Dispatcher to VRU

During Phase 2, I/Dispatcher will be interfaced to a new Voice Response Unit (VRU) for automatic customer callback and crew callout. This VRU will be a separate system (with separate telephone lines) from the VRU used for customer outage reports.

For customer callbacks, the VRU should ask customers if their power has been restored. If any customers respond that their power is still off, the VRU should create new outage call events via the Batch Call Creation component.

For the crew callout function, the VRU should record whether each person called was available, not reached, or turned down the call-out. The results should be sent back to I/Dispatcher as an ASCII file.

4.3.3.4. I/Dispatcher to Human Resources System

I/Dispatcher will not have a direct interface to the customer's Human Resources system, but it will be possible to transfer personnel identification and skill information to the I/CAD Oracle database via an external utility program. The default interface will be via an ASCII file. The customer will be responsible for exporting the data from the HR system in a format to be specified. I/CAD will provide a utility to update the Oracle database from the ASCII file. During Phase 2 implementation, a direct database-to-database transfer may be possible.

4.3.3.5. I/Dispatcher to WMS

In Phase 2, I/Dispatcher will send work order requests to the WMS. These work requests will be in the form of records written to the appropriate table in the WMS Oracle database. (WMS periodically checks this table for additions.)

I/Calltaker and I/Dispatcher will not interface directly to WMS for lineup information, but in Phase 2 shift lineups may be imported into the I/CAD Oracle database from the WMS Oracle database using a transfer process written for that purpose.

4.3.3.6. I/Dispatcher to SCADA

I/Dispatcher will send control actions to the SCADA system for execution.

4.4. Additions to I/Mobile

I/Mobile currently supports updating only the information related to the unit associated with the mobile computer. Enhancements will be required to allow a field supervisor with a mobile computer to manage the information for other units and personnel under his control

4.4.1. Functions

4.4.1.1. Log On and Off Units

I/Mobile will be enhanced to allow a supervisor to log on and off units and personnel in other units. This will be a Phase 2 implementation.

4.4.1.2. Update Unit Information

I/Mobile will be enhanced to allow a supervisor to update information about other units. This will allow the supervisor to extend shifts. This will be a Phase 2 implementation.

4.5. Customer Data Interface

We assume that the customer database will be external to the I/CAD system, and will contain at a minimum the identification of the last piece of equipment (terminal device) in the primary distribution network leading to the customer.

4.5.1. Functions

4.5.1.1. Get Customers for Device

Retrieve a list of customers served by a specified terminal device (service transformer).

4.5.1.2. Get Customer Information

Retrieve information about a specified customer, specified by name, address, telephone number, account number, or meter number. The retrieved information will contain all of the above, plus customer priority and account status.

4.5.1.3. Set Connection Information

Record the fact that a customer service has been connected or disconnected for account reasons.

4.5.1.4. Add Outage History

Record the cause code and the times an outage began and service was restored for a customer, or for all customers served by a specified terminal device.

4.6. Equipment Data Interface

4.6.1. Interfaces

The Trouble Analysis component will load its initial connectivity model from the customer's Engineering Data interface (FRAMME or equivalent). This information may be reloaded periodically, but there will be no real-time link to copy engineering changes as they happen. The Equipment Data Interface must make the following data available for transfer: all distribution lines, transformers, fuses, breakers, switches, and AODS and SCADA monitoring points. The data will include map coordinates, customer counts, phase, normal load, design load limits, and the normal operating state of the switches.

4.7. Additions to CSS

4.7.1. User Interface

The requirements in this document do not directly require any user interface changes to CSS.

4.7.2. Interfaces

4.7.2.1. CSS to Batch Call Creation

CSS must send new outage call information to the Batch Call Creation component to be entered into the system.

4.7.2.2. CSS to Trouble Analysis

CSS must be modified to accept the Estimated Time to Repair (ERT) as an asynchronous input value at some time after the outage call is created. Typically this will available a few seconds after the call is send to Batch Call Creation.

4.8. Additions to VRU

4.8.1. User Interface

The requirements in this document do not directly require any user interface changes to VRU.

4.8.2. Interfaces

4.8.2.1. VRU to Batch Call Creation

VRU must send new outage call information to the Batch Call Creation component to be entered into the system.

5. Functional Specification Cross Reference

Table 2 contains the mapping of the requirements from the Functional Specifications for an Outage Management System to the requirements in this document. Requirements that are to be partially implemented or deferred to future versions are in **bold** type.

Table 2 Functional Specification Cross Reference

	OMS Requirement	Paragraph
1.1	The OMS will receive its connectivity model and landbase information from the GIS and perform circuit *tracing* to identify a probable outage device (POD).	4.2.3.1, 4.2.2.4
1.2	The OMS will determine the number of customers affected by a POD.	4.2.2.4
1.3	The OMS will determine the demand (load) affected by a POD. The demand may be modeled as a single number or a load profile, or it will be allocated from SCADA analog readings (Gemini ?).	4.2.2.4
1.3.1	The OMS will calculate the load on a line segment(s) or area defined by a polygon using the cumulative load stored in FRAMME.	4.3.2.16
1.4	The OMS will calculate an estimated restoration time (ERT) based on a table look-up which accounts for current outage level, time of day, day of week, holiday status, storm status. A table will be associated with any operating area defined by a polygon.	4.2.2.5
1.4.1	The OMS will allow user input of ERT information into the look-up table.	4.3.2.15
1.4.2	The OMS will allow dispatchers and mobile supervisors to override ERTs for individual outages.	Standard I/CAD function – Update Event
1.4.3	The ERT table information will be calculated for an area defined by a polygon.	4.2.2.5
1.4.4	The OMS will provide a mechanism for providing ERT historical information to populate the look-up tables.	4.3.2.16 **(Phase 2. Use manual entry for initial population.)**
1.5	The OMS will infer PODs utilizing *fuzzy* logic, by:	4.2.2.4
1.5.1	Comparing the POD's demand to SCADA demand changes.	4.2.2.4
1.5.2	Comparing the number of customers reporting an outage as a percentage of the total number of customers on a device. The percentage will be configurable by device.	4.2.2.4
1.5.3	Comparing the phase of all customers reporting outages.	4.2.2.4
1.5.4	Comparing the time when outages are reported.	4.2.2.4
2.1	The OMS will automatically generate an incident and incident number for each POD.	4.2.2.2
2.1.1	The OMS must support different incident types.	Standard I/CAD function
2.1.2	The incident must be routed to the appropriate dispatch group which can be assigned to any workstation based on location and incident type.	Standard I/CAD function
2.2	The OMS will recommend assignment of an incident to a mobile unit based on incident type, location, skill set, vehicle type, equipment, priority, and availability.	Standard I/CAD function

2.2.1	Incident types will include outage calls, device outages, PODs, pre-arranged outages, streetlight outages, line down, dig-ins, structural problems, nearby events by proximity, address, intersection (a.k.a. immediate outage ticket), and fire calls.	Standard I/CAD function – all incident types and subtypes are configurable.
2.3	The OMS will automatically assign incidents to a mobile unit based on incident type, location, skill set, vehicle type, equipment, priority, and availability.	**Optional implementation of the Autodispatch product.**
2.4	The OMS will randomly & automatically call customers back (VRU) to help eliminate embedded outages.	4.3.2.18 for call list creation. 4.3.3.3 **for Phase 2 VRU interface.**
2.5	OMS will have the capability of automatically calling personnel from a call-out list & record their response code (available, not reached, turned down). When required personnel have responded as available, the OMS will automatically assign the incident.	4.3.3.3 **for Phase 2 VRU interface. IPS currently offers a one-way automatic paging interface.**
2.6	The OMS will track log-in and log-off times and allow for a supervisor with a mobile computing terminal to log-in and log-out other equipment and personnel.	Tracking times is a standard I/CAD function, when the operation is performed by I/Dispatcher or I/Mobile. For new I/Mobile requirements, see 4.4.1.1
2.6.1	The OMS will allow a dispatcher or mobile supervisor to extend a work shift.	dispatcher – standard I/CAD function. Mobile: 4.4.1.2
2.6.2	The OMS will alarm when personnel are working into extended work hours.	4.3.1.3
2.6.3	Non-extended or regular work shifts will be configurable.	standard I/CAD function
2.7	The OMS will provide the mechanism for creating work requests which will be automatically routed to the WMS.	4.3.2.20 (**Phase 2)**
3.1	The OMS will dynamically calculate CMI/C by device, feeder, or geographic area defined by a polygon. The OMS will have the capability of reporting this information with user-definable filters for cause codes, including pre-arranged outage effects.	4.3.2.19
3.2	The OMS will log outage starting time, ending time, and CMI at the closure of each outage event.	4.2.2.7
3.3	Logging of starting and ending times will involve the comparison and reconciliation of customer calls, AODS records, and field reports.	4.2.2.7 **(AODS in Phase 2)**
3.4	The OMS will dynamically calculate number of interruptions by device, feeder, or geographic area defined by a polygon. The OMS will have the capability of reporting this information with user-definable filters for cause codes including pre-arranged outage	4.3.2.19
3.5	Momentary interruptions.	**need clarification of requirement**
3.6	Real time event and unit summaries & *ad hoc* reports.	The real-time summaries are standard I/CAD functions. *ad hoc* reports may be generated from the Oracle database using standard commercial tools.
3.7	The OMS will print a switching log at the end of each shift for signatures and archiving.	4.3.2.23
4.1	The OMS will display SCADA information on the facilities graphics display. SCADA information will include:	4.3.1.2
4.1.1	Real-time device status (tripped, closed, tagged)	4.3.1.2

4.1.2	Real-time analog data (watts, VARS, voltage).	4.3.1.2
4.1.3	Calculated values from analog data (power factor, % MVA).	4.3.1.2
4.1.4	Quality codes (scan disabled, communication failed, maintenance mode).	4.3.1.2
4.2	PODs will be highlighted and the downstream-connected network will change color to indicate status (energized or not).	4.3.1.2
4.3	Incidents will be displayed geographically.	Standard I/CAD function
4.3.1	Different incident types will use different & configurable symbols.	**This is planned as a future I/CAD enhancement, but will not be available for initial installation.**
4.3.2	The OMS will support the ability to dynamically select the incidents displayed geographically by incident type, level, priority, etc.	4.3.1.1, 4.3.1.3
4.4	Incidents will also be displayed tabularly.	Standard I/CAD function (status monitors)
4.4.1	Information displayed tabularly will include incident number, incident type, address or premise or customer name or customer revenues (user selectable), status, truck(s) assigned, priority, incident level, incident duration, number of customers affected.	4.3.1.3
4.4.2	The information displayed tabularly will be sorted hierarchically, on demand, by any field or number of fields (i.e. priority, incident duration, incident type, level, number of customers.	Standard I/CAD function
4.4.3	Tabular displays will be color coded by status (dispatched, unassigned, etc.).	Standard I/CAD function
4.4.4	Tabular incident displays will be differentiated by blinking, colors, fonts, or font size. This will be configurable by the fields reported in 4.4.1.	**I/CAD uses Colors only, with no blinking or font support. Different subsets may be displayed on different tabbed pages of the lists.**
4.5	Incidents can be created in the OMS.	Standard I/CAD function
4.5.1	Incidents can be entered by pointing to a device or premise.	4.3.2.2, 4.3.2.3
4.5.2	Incidents can be entered by entering grid or coordinate, or by pointing to a geographical location.	Standard I/CAD function
4.6	The OMS will allow for the creation and removal of tags (Red, Yellow, Blue, and White) anywhere on the connectivity model. Selecting the tag will display pertinent information regarding its placement.	4.3.2.24
4.7	The OMS will provide a training mode that does not affect the operational model and real time database. Outages may be entered by someone at another workstation in training mode.	Standard I/CAD function
4.8	The OMS will provide an interactive simulator that does not affect the operational model and real time database.	**Simple automated outage creation may be implemented in Visual Basic. IPS may offer a more comprehensive simulator as part of a future version.**
4.9	The OMS will allow for entry of information to close-out an incident (i.e. cause codes, phase, device) by both a dispatcher position and a mobile computing terminal.	Standard I/Dispatcher and I/Mobile functions.
4.10	The OMS will recommend switching orders to restore power and not violate equipment ratings and voltage profiles based on:	4.2.2.11

4.10.1	A single demand per node	4.2.2.11
4.10.2	Loadflow modeling	**This may be offered as a future enhancement. The initial system will use only a single demand per node.**
4.11	The OMS will allow for the entry, logging, storing, & retrieval of switching orders.	4.3.2.21, 4.3.2.22, 4.3.2.23
4.11.1	The current dispatcher and time will be captured automatically.	Standard I/CAD function
4.11.2	The field contact will be selectable through a pull-down menu which is populated with personnel for the current shift.	4.3.2.23
4.11.3	An on-line form will contain three fill-in areas for switching equipment out, issuing clearances, and restoring to normal.	4.3.2.23
5.1	Operational data will be captured in a standard, commercial, relational database (preferably Oracle).	Standard I/CAD function
5.2	OMS server and client software will remain current with RDBMS revisions.	Standard IPS practice. Details to be worked out contractually.
5.3	The OMS will support Windows NT 4.0 servers.	Standard I/CAD function
5.4	OMS server and client software will remain current with operating system revisions.	Standard IPS practice. Details to be worked out contractually.
5.5	The OMS will use NFS & TCP/IP for file sharing and networking.	I/CAD uses TCP/IP for network operations. File sharing is configurable.
5.6	The OMS must be certified Year 2000 compliant.	Standard I/CAD function
6.1	Device status will be polled or accepted unsolicited from SCADA for outage analysis and ticket grouping.	4.2.3.3
6.2	The OMS will accept a manually entered device status.	4.3.2.1
6.3	Device status and quality code data will be obtained and displayed from the SCADA system.	4.3.1.2
6.4	Analog and quality code data will be obtained and displayed from the SCADA system.	4.3.1.2
6.5	Control actions will be passed back to SCADA for execution.	4.3.2.24
6.6	The OMS will accept outage, momentary, restoration, and voltage anomalies from automated outage detection devices (AODS) and process this information for analysis or reporting purposes.	4.2.2.3, 4.2.3.4 **(Phase 2)**
6.7	The OMS will be interfaced into the Customer Service System (CSS) for accepting trouble calls and supplying estimated restoration times in real-time.	4.1.2.1, 4.2.2.5, 4.7.2.2
6.8	The OMS will be interfaced into the Customer Service System (CSS) to query customer information (search and validate name, address, premise, meter number).	4.3.2.1, 4.3.3.2, 4.5.1.2
6.9	The OMS will be interfaced into CSS to supply it with outage information (start, end, cause code, # of customers involved?) by station. This information will be used to calculate the number of interruptions experienced by a customer or customers.	4.3.2.6, 4.3.2.7
6.10	The OMS will be interfaced into a Voice Response Unit (VRU) for accepting trouble calls in real-time. This may be useful for large industrial customers or at such time when Energy Delivery responds to customers without aggregator intervention.	4.8.2.1
6.11	The OMS will be interfaced with the WMS to accept shift line-up information and to supply the WMS with start and stop	4.3.3.5 **(Phase 2)**

	times for employee shifts.	
6.12	The OMS will be interfaced with the WMS to supply it with work requests entered in the OMS.	4.3.3.5 **(Phase 2)**
6.13	The OMS will be interfaced with the HR system (PeopleSoft) for skills.	4.3.3.4 **(Phase 2)**
6.14	The OMS must accept proposed and as-built engineering changes from the GIS, while not overriding operational changes. Proposed facilities will have to be easily distinguishable from facilities that are in service.	**The connectivity model will be loaded from only the as-build data – see 4.2.3.1. The map display will show both proposed and as-built graphics, with different symbologies.**
6.15	The OMS will provide current outage, restoration, and vehicle information to a web server for internal and external viewing.	**The required information is accessible in the Oracle database. IPS may offer a standard web display product as part of a future version.**
6.16	The OMS will be able to query CSS for premise history information	4.3.2.4
6.17	The OMS will be able to interface with a Windows based radio & telephone console. Vehicle ID will be passed to the radio/telephone console through an API.	**Optional implementation of the I/Radio product.**
7.1	Technical and user support will be available from the supplier via a maintenance fee structure.	Standard IPS practice. Details to be worked out contractually.

Detailed Pricing

Intergraph Public Safety (IPS) is pleased to provide a detailed pricing specification for the Florida Power Corporation Outage Management System. Based on the fact that this project is a partnership between the two companies, we have included significant discounts to our normal list prices. A description of the discounts applied is listed below.

- A 50% discount on all IPS Commercial-Off-The-Shelf (COTS) software.
- A 20% discount on Utility Outage Software Development.
- A 0% discount on software interfaces that are specific to the Florida Power OMS project.
- IPS will waive software maintenance fees for Utility Outage Software developed for this project as long as IPS remains in the Utility Outage Software Business. This includes upgrades of functionality in future releases of the product.
- A 20% discount on Intergraph Hardware.

While this proposal defines a system with two complete sites that are capable of operating independently as well as providing backup for each other, this configuration requires significant duplication of server hardware and additional licenses of interface software to support independent operation. We have therefore provided pricing on three configurations that provide various levels of backup and redundancy. These configurations are described below.

The Baseline System

The baseline system includes 2 redundant database servers and a communication server at the western site. It also includes six dispatcher workstations at each site (east and west) where one workstation at each site is configured as a supervisor station.

In this configuration, the workstations at the eastern site operate remotely to the servers through Florida Power's wide area network (WAN). If there were a failure of the WAN, then the workstations at the eastern site would be unavailable for further OMS/Dispatch operations until the WAN is restored. The I/CAD system always stores live operation data on the dual redundant database servers. Operators at the western site could resume operations for the eastern coverage area by loading the eastern data from the database server. While the workload at the western site would be doubled, operations could continue.

The proposed system includes dual redundant database servers so that, if one server fails, operations resume on the other server. However, if the western site were destroyed or if it needed to be evacuated, both servers would be unavailable and OMS/Dispatch operations could not continue.

The performance of remote workstations is dependent upon the characteristics of the wide area network. Florida Power has an FDDI network supplying significant bandwidth between the CSS, eastern and western sites. While the raw bandwidth of the Florida Power WAN is more than sufficient to support the 6 remote workstations at the eastern site, the latencies introduced by this shared resource might interfere with the productive use of those workstations. IPS normally recommends 64kBps dedicated bandwidth to each remote workstation. This bandwidth gives an acceptable level of performance although it is noticeably slower than the operation of workstations at the server site for commands that require significant data transfers (i.e. queries returning large result sets). If Florida Power chooses the baseline configuration, then these issues must be resolved during detailed system design.

Option A

Option A adds a tertiary server and a backup communication server to the eastern site. These servers would be used when the western site is destroyed or must be evacuated. The tertiary server would contain a replicated copy of the database at the western site. The dispatchers at the eastern site would resume operations using the data on the tertiary server and using the backup communications server. They would cover both the eastern and western coverage areas. When the western site is restored, the operational data must be copied back to the western servers and operations would resume using the restored servers.

Option B

Option B adds a tertiary server to the western site and a primary and secondary database server to the eastern site in addition to those servers proposed in Option A. This is the complete configuration as described in the proposal. Each center is complete and independent. If either center is destroyed or must be evacuated, operations can continue for both coverage areas using the replicated data on the surviving side. If there is a failure of the WAN between the sites, both sites operate independently until the WAN is restored. The replication to the tertiary server on each side would continue undisturbed when the WAN was restored.

This configuration has the advantage that all workstations are local to their server. There are no latency issues introduced by remote workstations operating in the

WAN. Additionally, workstation could logon to the other site's database remotely to support the other site when the workload is greater at the remote site.

Optioned Pricing

The following schedules outline the pricing of each option. This includes details of the discounting described above. After those schedules, we include a detailed, item by item price (undiscounted) for the entire configuration.

West Site

Baseline System		LIST	DISCOUNTED
	CAD1, CAD2, Comms at West		
Software			
	IPS Product	$ 176,000	$ 88,000
	Other s/w	$ 17,278	$ 17,278
	Utility Outage	$ 474,375	$ 379,500
	FP Specific	$ 92,000	$ 92,000
	Subtotal	$ 759,653	$ 576,778
Services			
	Project Management	$ 75,000	$ 75,000
	Implementation	$ 60,000	$ 60,000
	Map	$ 17,250	$ 17,250
	Data Conversion	$ 12,500	$ 12,500
	Training	$ 52,750	$ 52,750
	Subtotal	$ 217,500	$ 217,500
Hardware			
	Servers	$ 77,615	$ 62,092
	Workstations	$ 36,882	$ 29,506
	Subtotal	$ 114,497	$ 91,598
Baseline System Total			
	Software	$ 759,653	$ 576,778
	Services	$ 217,500	$ 217,500
	Subtotal	$ 977,153	$ 794,278
	Hardware	$ 114,497	$ 91,598
	TOTAL	**$ 1,091,650**	**$ 885,876**

East Site

Baseline System		LIST	DISCOUNTED
Software			
	IPS Product	$ 91,000	$ 45,500
	Other s/w	$ 4,616	$ 4,616
	Utility Outage		$ -
	FP Specific		$ -
	Subtotal	$ 95,616	$ 50,116
Services			
	Project Management	$ 12,500	$ 12,500
	Implementation	$ 10,000	$ 10,000
	Map		
	Data Conversion		
	Subtotal	$ 22,500	$ 22,500
Hardware			
	Servers		$ -
	Workstations	$ 36,882	$ 29,506
	Subtotal	$ 36,882	$ 29,506
Baseline System Total			
	Software	$ 95,616	$ 50,116
	Services	$ 22,500	$ 22,500
	Subtotal	$ 118,116	$ 72,616
	Hardware	$ 36,882	$ 29,506
	TOTAL	**$ 154,998**	**$ 102,122**

20170272-DEF-OPC-POD 2-13-000119

Option A: Add Tertiary Server and backup Comms server at East

Software					Software			
	IPS Product		$ -			IPS Product	$ 25,000	$ 12,500
	Other s/w		$ -			Other s/w	$ 1,970	$ 1,970
	Utility Outage	$ -	$ -			Utility Outage		$ -
	FP Specific	$ -	$ -			FP Specific		$ -
	Subtotal	$ -	$ -			Subtotal	$ 26,970	$ 14,470
Services					Services			
	Project Management					Project Management	$ 12,500	$ 12,500
	Implementation					Implementation	$ 10,000	$ 10,000
	Map					Map		
	Data Conversion					Data Conversion		
	Training							
	Subtotal	$ -	$ -			Subtotal	$ 22,500	$ 22,500
Hardware					Hardware			
	Servers					Servers	$ 53,603	$ 42,882
	Workstations					Workstations	$ -	$ -
	Subtotal	$ -	$ -			Subtotal	$ 53,603	$ 42,882
Option A Total					Option A Total			
	Software	$ -	$ -			Software	$ 26,970	$ 14,470
	Services	$ -	$ -			Services	$ 22,500	$ 22,500
	Subtotal	$ -	$ -			Subtotal	$ 49,470	$ 36,970
	Hardware	$ -	$ -			Hardware	$ 53,603	$ 42,882
	TOTAL	**$ -**	**$ -**			**TOTAL**	**$ 103,073**	**$ 79,852**

20170272-DEF-OPC-POD 2-13-000120

Option B: Add Tertiary Server to West and CAD1 and CAD2 servers at East

Software					
	IPS Product	$	25,000	$	12,500
	Other s/w	$	1,970	$	1,970
	Utility Outage			$	-
	FP Specific			$	-
	Subtotal	$	26,970	$	14,470
Services					
	Project Management	$	12,500	$	12,500
	Implementation	$	10,000	$	10,000
	Map				
	Data Conversion				
	Training				
	Subtotal	$	22,500	$	22,500
Hardware					
	Servers	$	28,901	$	23,121
	Workstations			$	-
	Subtotal	$	28,901	$	23,121
Option B Total					
	Software	$	26,970	$	14,470
	Services	$	22,500	$	22,500
	Subtotal	$	49,470	$	36,970
	Hardware	$	28,901	$	23,121
	TOTAL	**$**	**78,371**	**$**	**60,091**

Software					
	IPS Product	$	85,000	$	42,500
	Other s/w	$	7,381	$	7,381
	Utility Outage			$	-
	FP Specific			$	-
	Subtotal	$	92,381	$	49,881
Services					
	Project Management	$	12,500	$	12,500
	Implementation	$	10,000	$	10,000
	Map				
	Data Conversion				
	Subtotal	$	22,500	$	22,500
Hardware					
	Servers	$	52,913	$	42,330
	Workstations			$	-
	Subtotal	$	52,913	$	42,330
Option B Total					
	Software	$	92,381	$	49,881
	Services	$	22,500	$	22,500
	Subtotal	$	114,881	$	72,381
	Hardware	$	52,913	$	42,330
	TOTAL	**$**	**167,794**	**$**	**114,711**

20170272-DEF-OPC-POD 2-13-000121

TOTALS

Baseline	$	1,091,650	$	885,876
Option A	$	-	$	-
Subtotal	$	1,091,650	$	885,876
Option B	$	78,371	$	60,091
Total	**$**	**1,170,021**	**$**	**945,966**

Baseline	$	154,998	$	102,122
Option A	$	103,073	$	79,852
Subtotal	$	258,071	$	181,974
Option B	$	167,794	$	114,711
Total	**$**	**425,865**	**$**	**296,685**

GRAND TOTAL BOTH SITES

Baseline	$	1,246,648	$	987,997
Option A	$	103,073	$	79,852
Subtotal	$	1,349,721	$	1,067,850
Option B	$	246,165	$	174,802
Total	**$**	**1,595,886**	**$**	**1,242,652**

ADDITIONAL S/W AND SERVICES FOR AVL/MDT

IPS s/w	*$*	*114,650*	*$*	*92,150*
TOTAL TOTAL	*$*	*1,825,186*	*$*	*1,426,952*

IPS s/w	*$*	*114,650*	*$*	*92,150*

20170272-DEF-OPC-POD 2-13-000122

Base Pricing **Florida Power Corporation Outage Management System**

Item Description	Purpose	Required or Optional	Qty	Unit Cost	Total Cost
Interserve 8000 2 (200Mhz) Pentium Pro Processor 512KB Cache 128 MB RAM, ECC 3 - 9.1 Gigabyte Drives RAID CD ROM Drive 100 Base-T Ready Keyboard and Mouse Microsoft Windows NT Server InterSite Server Monitor InterSite DiskKeeper Network Cable 15 Inch Monitor Modem for Support 136 Column Logging Printer	Primary Database Server (East and West)	R	2	$ 24,702	$ 49,404
Oracle SQL-Plus	Database Administration Tool	R	2	$ 495	$ 990
Oracle Workgroup Server Licenses	CAD Database Access	R	24	$ 295	$ 7,080
I/Executive	I/CAD Database Server Software	R	2	$ 35,000	$ 70,000
DiskAccess NFS Client (25 User License)	NFS Client Access	O	1	$ 5,281	$ 5,281
Interserve 8000 2 (200Mhz) Pentium Pro Processor 512 Cache 128 MB RAM, ECC 3 - 9.1 Gigabyte Drives RAID CD ROM Drive 100 Base-T Ready Keyboard and Mouse Microsoft Windows NT Server InterSite Server Monitor InterSite DiskKeeper Network Cable 9.1GB Backup Disk Drive 15 Inch Monitor 136 Column Logging Printer 14GB 8mmXL Internal Cartridge Tape	Secondary Database Server (East and West)	R	2	$ 28,211	$ 56,422
Oracle SQL-Plus	Administrative Tool	R	2	$ 495	$ 990
Oracle Workgroup Server Licenses	CAD Redundant Database	R	10	$ 295	$ 2,950
I/Executive2	I/CAD Database Server Software	R	2	$ 25,000	$ 50,000
Visual C++	Configuration Tool	R	2	$ 476	$ 952
Microsoft Office Developer edition	Administrative Tool	R	2	$ 900	$ 1,800
I/MARS Server	Analytical Reporting	R	2	$ 25,000	$ 50,000

Item Description	Purpose	Required or Optional	Qty	Unit Cost	Total Cost
Interserve 8000 2 (200Mhz) Pentium Pro Processor 512 Cache 128 MB RAM, ECC 3 - 9.1 Gigabyte Drives RAID CD ROM 100 Base-T Ready Keyboard and Mouse Windows NT Server InterSite Server Monitor InterSite DiskKeeper Network Cable 136 Column Printer 15 Inch Monitor	Server for Interface Communications	R	2	$ 24,702	$ 49,404
I/MDT	Server Side Mobile Data Product	R	2	$ 57,700	$ 115,400
I/Tracker	Server Side GPS Product	R	2	$ 56,950	$ 113,900
Interserve 8000 4 (200 Mhz) Pentium Pro Processor 512 Cache 256 MB RAM, ECC 3 - 9.1 Gigabyte Drives RAID CD ROM 100 Base-T Ready Keyboard and IntelliMouse Windows NT Server InterSite Server Monitor InterSite DiskKeeper Network Cable 136 Column Printer 14GB 8mmXL Int. Cartridge Tape 15 Inch Monitor	Terterary Database Server (Site Backup)	O	2	$ 28,901	$ 57,802
I/Backup	Offsite Backup/Replication	R	2	$ 25,000	$ 50,000
Oracle SQL-Plus	Database Administration Tool	R	2	$ 495	$ 990
Oracle Workgroup Server Licenses	Interface Database Access	R	10	$ 295	$ 2,950
NT Client Access Licenses	NT Client Access Licenses (Additional)	R	0	$ 40	$ -

Item Description	Purpose	Required or Optional	Qty	Unit Cost	Total Cost
TD-225B Workstation	Dispatch Workstations	R	10	$ 6,147	$ 61,470
300 MHz Pentium II					
64MB RAM					
Millennium II graphics					
5.2 Gigabyte Disk					
Network Ready					
Microsoft NT Workstation					
Microsoft Office '97 - Small Business Edition					
Keyboard and IntelliMouse					
Single to Dual Monitor Adapter					
Dual 21-Inch Multi-Sync Monitors					
50 Foot UTP Cat 5 Network Cable					
I/Dispatcher	IPS CAD Software	R	10	$ 15,000	$ 150,000

Item Description	Purpose	Required or Optional	Qty	Unit Cost	Total Cost
TD-225B Workstation 300 MHz Pentium II 64MB RAM Millennium II graphics 5.2 Gigabyte Disk Network Ready Microsoft NT Workstation Microsoft Office '97 - Small Business Edition Keyboard and IntelliMouse Single to Dual Monitor Adapter Dual 21-Inch Multi-Sync Monitors 50 Foot UTP Cat 5 Network Cable	Supervisor Workstations	R	2	$ 6,147	$ 12,294
I/Dispatcher	IPS CAD Software	R	2	$ 15,000	$ 30,000
I/MARS Client	Management Analysis and Reporting	R	2	$ 1,000	$ 2,000
MS Office Professional	Reporting Tool	R	2	$ 621	$ 1,242
Microstation	CAD Map Editing Tool	R	2	$ 3,995	$ 7,990
Panasonic CF-25 166 MHz Pentium w/MMX 32MB RAM 10X CD-ROM 1.35 Gigabyte Disk 10.4in TFT Screen Sierra Wireless CDPD Modem w/GPS Microsoft Windows 95 In-Vehicle Mounting Hardware Antennas Voltage Armour (Power Cond. and Auto Cutoff) In-Vehicle Mounting Services	Mobile Computer	R	310	$ 8,064	$ 2,499,871
I/Mobile	IPS Mobile Data Client Software	R	300	$ 2,067	$ 620,000
Outage Management Software	Software which can be Productized	R	1	$ 474,375	$ 474,375
Outage Management Software	Project Specific Software	R	1	$ 92,000	$ 92,000

Item Description	Purpose	Required or Optional	Qty	Unit Cost	Total Cost
Services:					
Project Management		R	1	$ 125,000	$ 125,000
CAD Implementation		R	1	$ 100,000	$ 100,000
CAD Map Implementation		R	1	$ 17,250	$ 17,250
Data Conversion Consultation		R	1	$ 12,500	$ 12,500
Training:					
I/CAD Train-the-Trainer		R	1	$ 12,500	$ 12,500
I/CAD Configuration & Imple. Training		R	1	$ 6,750	$ 6,750
I/CAD System Administrator Training		R	1	$ 6,750	$ 6,750
I/CAD CADDBM Training		R	1	$ 4,450	$ 4,450
I/CAD CADTools Training		R	1	$ 4,450	$ 4,450
CAD Map Fundamentals Workshop		R	1	$ 4,450	$ 4,450
CAD Map Maintenance		R	1	$ 5,500	$ 5,500
I/MARS Administrator Training		R	1	$ 5,100	$ 5,100
I/MARS User Training		R	1	$ 2,800	$ 2,800
Other:					
			1	$ -	$ -
Shipping and Insurance		R	1	$ 500	$ 500
Installation		R	1	$ 3,600	$ 3,600

TOTAL SYSTEM BASE PRICE:					
Tax (Prices are exclusive of tax)	Tax Exemption assumed				$ -
Sub-Total Exclusive of Options					**$ 4,949,157**
Base System Discount					$ -
Total Exclusive of Options					**$ 4,949,157**

System Maintenance for Florida Power Corporation Outage Management System

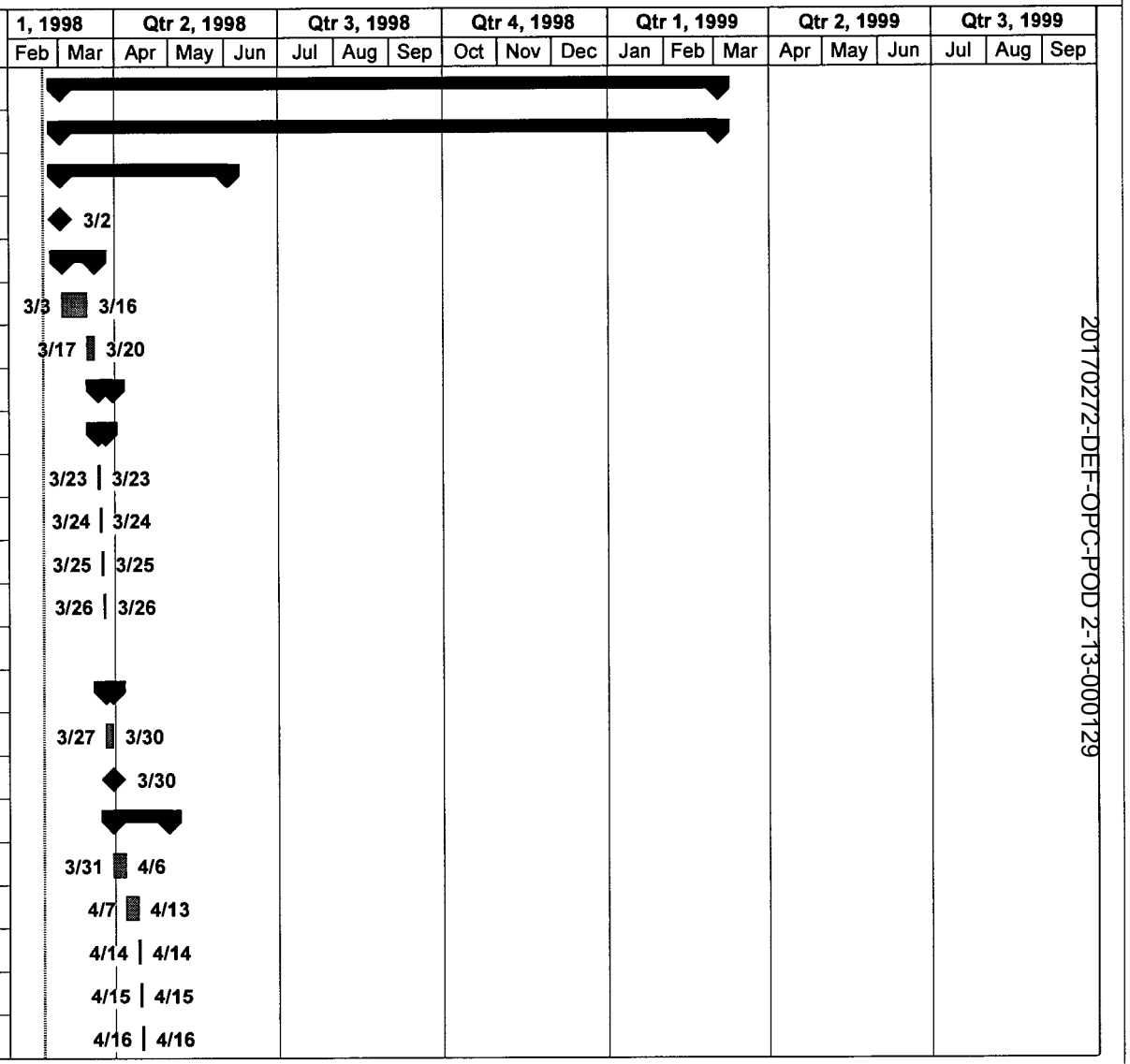
Plan 1 – Per Call Hardware Maintenance Rates (portal to portal):			
During PPM	per hour (minimum 2 hours) plus travel expenses	$	150
Outside PPM	per hour (minimum 2 hours) plus travel expenses	$	180

Plan 2 – Annual Full Service Plan (8 hour response)	
Base Configuration (1 set of servers)	
Intergraph Hardware	$22,348
IPS Software	$66,184
Base Configuration Plus Option A	
Intergraph Hardware	$29,670
IPS Software	$69,934
Base Configuration Plus Option A and B	
Intergraph Hardware	$40,590
IPS Software	$93,184
Mobile Computer System	
Intergraph I/Mobile Software	$93,000
Mobile Computer Hardware	$40,000

Plan 3 – Resident Engineer		
Resident Engineer	$	105,000

Florida Power Corporation OMS Implementation Schedule

ID	Task Name
1	**Florida Power Outage Management System Project**
2	**PHASE I BASE SYSTEMS**
3	**DEFINE PHASE**
4	***Contract Approved***
5	**Contract/Statement of Work Review**
6	Contract/Statement of Work Review (Internal)
7	Project Team Defined
8	**Project Requirements Review with Client**
9	**Requirements Review with Client**
10	Project Kickoff Meeting with Customer
11	Analysis of Schedule Requirements
12	Analysis of Deliverables Requirements
13	Establish Project Organizational Structure
14	Analysis of Training Requirements
15	**W.A. Review**
16	Confirm Materials and Services Match Contract
17	***Project Analysis Complete***
18	**Create Implementation Plan**
19	Draft for Internal Review
20	Internal Review
21	Resolution of Differences
22	Create Final Draft
23	Obtain Internal Approvals



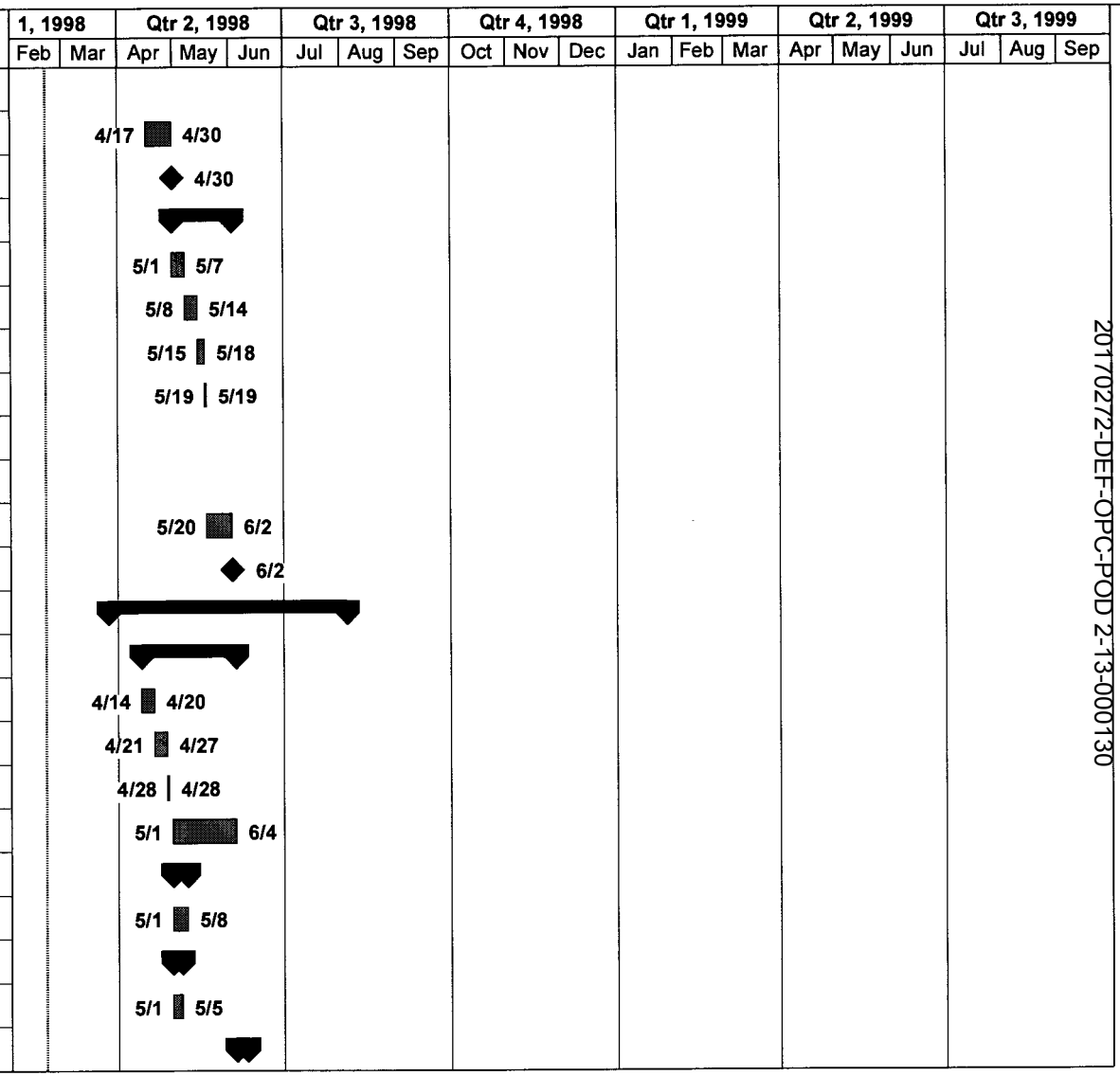
20170272-DEF-OPC-POD 2-13-000129

Florida Power Corporation OMS
Date: 2/20/98

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone ◇
Rolled Up Progress

Florida Power Corporation OMS Implementation Schedule

ID	Task Name	Start	Finish
24	Submit to Client		
25	Client Approval Process	4/17	4/30
26	*Implementation Plan Acceptance*	4/30	4/30
27	**Create Training Plan**		
28	Draft for Internal Review	5/1	5/7
29	Internal Review	5/8	5/14
30	Resolution of Differences	5/15	5/18
31	Create Final Draft	5/19	5/19
32	Obtain Internal Approvals		
33	Submit to Client		
34	Client Approval Process	5/20	6/2
35	*Training Plan Acceptance*	6/2	6/2
36	**DESIGN PHASE**		
37	**System Configuration Management**		
38	Develop/Modify Configuration Drawing	4/14	4/20
39	Internal Review by Project Team	4/21	4/27
40	Revise Configuration Drawing	4/28	4/28
41	Order Hardware (for CAD imp training)	5/1	6/4
42	**Facility Design**		
43	Verify Hardware Placement	5/1	5/8
44	**Map Design Overview**		
45	MAP Data Collection/Configuration Workshop	5/1	5/5
46	**I/CAD Overview**		



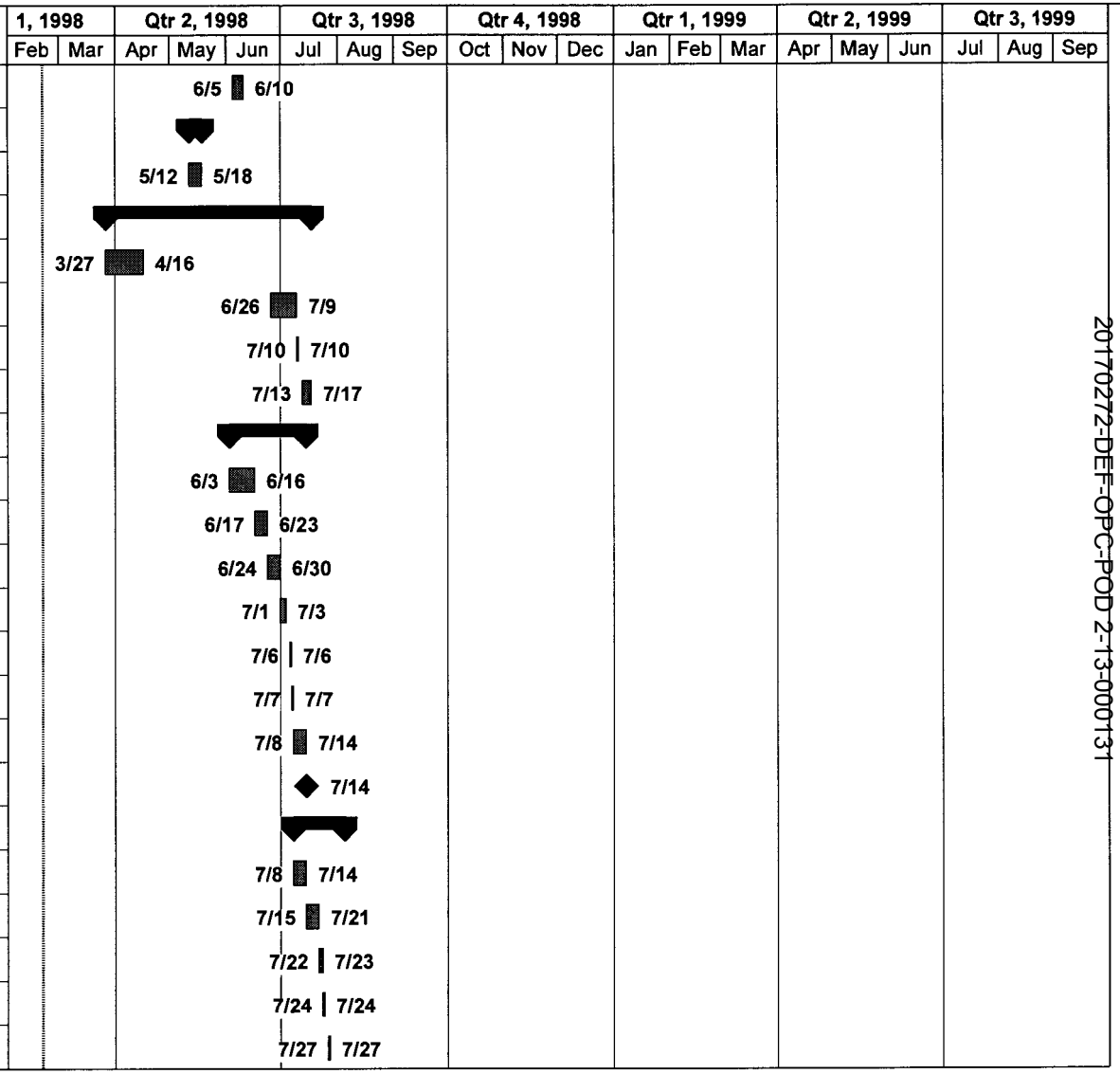
20170272-DEF-OPC-POD 2-13-000130

Florida Power Corporation OMS
Date: 2/20/98

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress

Florida Power Corporation OMS Implementation Schedule

ID	Task Name	Start	Finish
47	Configuration/Implementation Workshop	6/5	6/10
48	**OMS Design Overview**		
49	Conduct Final OMS Design Overview	5/12	5/18
50	**Data Conversion analysis**		
51	Review Existing Data	3/27	4/16
52	Prepare Data Conversion Plan	6/26	7/9
53	Submit Data Conversion Plan	7/10	7/10
54	Data Conversion Plan Approval	7/13	7/17
55	**Create Cut-Over Plan**		
56	Draft for Internal Review	6/3	6/16
57	Internal Review	6/17	6/23
58	Resolution of Differences	6/24	6/30
59	Create Final Draft	7/1	7/3
60	Obtain Internal Approvals	7/6	7/6
61	Submit to Client	7/7	7/7
62	Client Approval Process	7/8	7/14
63	***Cut-Over Plan Acceptance***	7/14	
64	**Create Acceptance Test Plan**		
65	Draft Acceptance Test Plan	7/8	7/14
66	Internal Review	7/15	7/21
67	Resolution of Differences	7/22	7/23
68	Create Final Draft	7/24	7/24
69	Obtain Internal Approvals	7/27	7/27



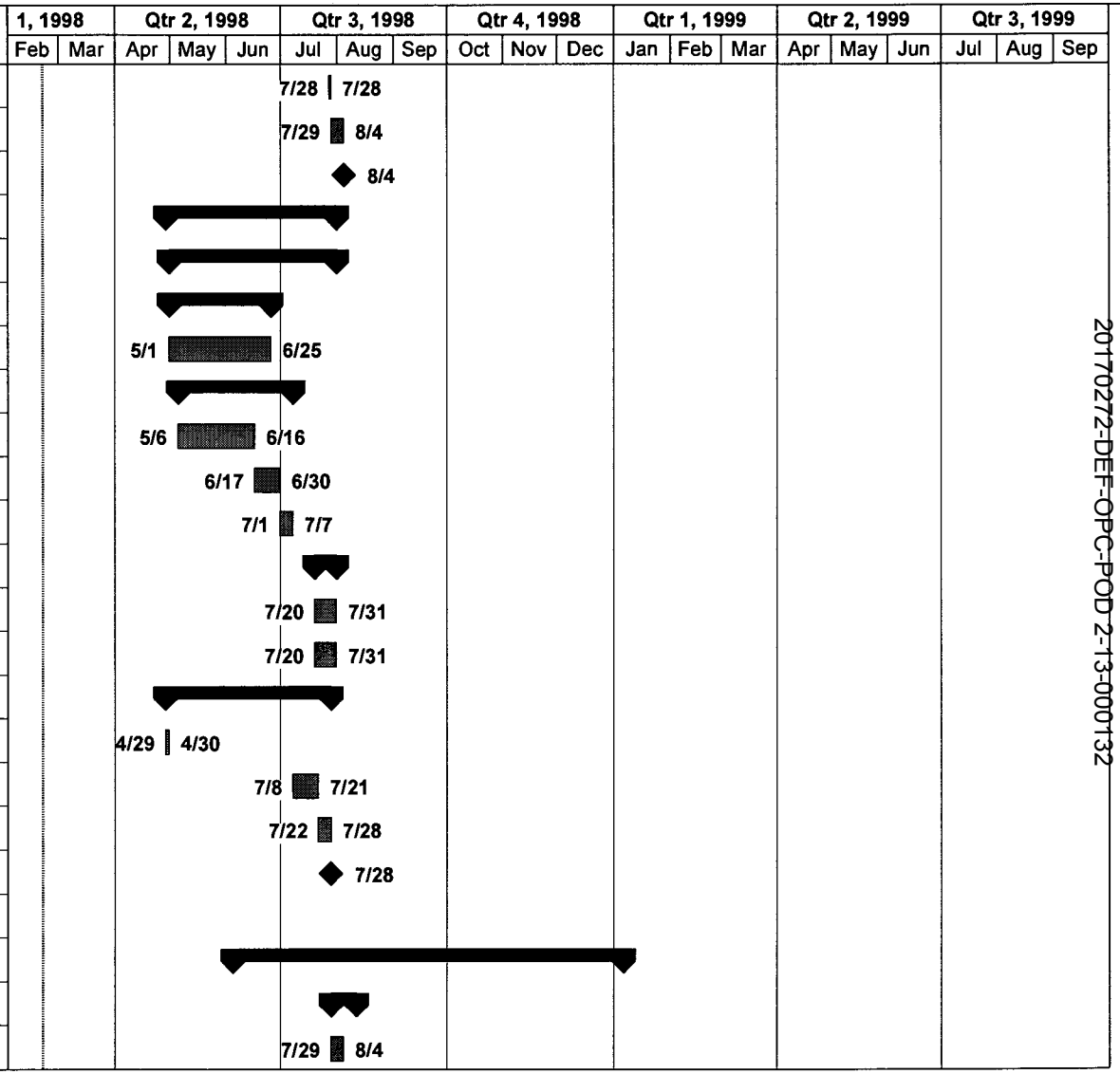
20170272-DEF-OPC-POD 2-13-000131

Florida Power Corporation OMS
Date: 2/20/98

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress

Florida Power Corporation OMS Implementation Schedule

ID	Task Name
70	*Submit to Client*
71	*Client Approval Process*
72	*Acceptance Test Plan Acceptance*
73	**BUILD PHASE**
74	**System Build and Development**
75	**I/CAD Development**
76	Prepare I/CAD Database
77	**I/CAD Map Development**
78	Prepare I/CAD Map
79	Review of Production Ready I/CAD Map
80	Load Production Ready Map in I/CAD
81	**Data Conversion Development/Implementation**
82	CAD
83	Frame/OMS
84	**Stage H/W & S/W**
85	Verify Configuration
86	Configure System
87	Verify Proper I/CAD Execution
88	**Staging Activities Complete**
89	
90	**DELIVER PHASE**
91	**Ship & Install H/W**
92	Hardware Shipment



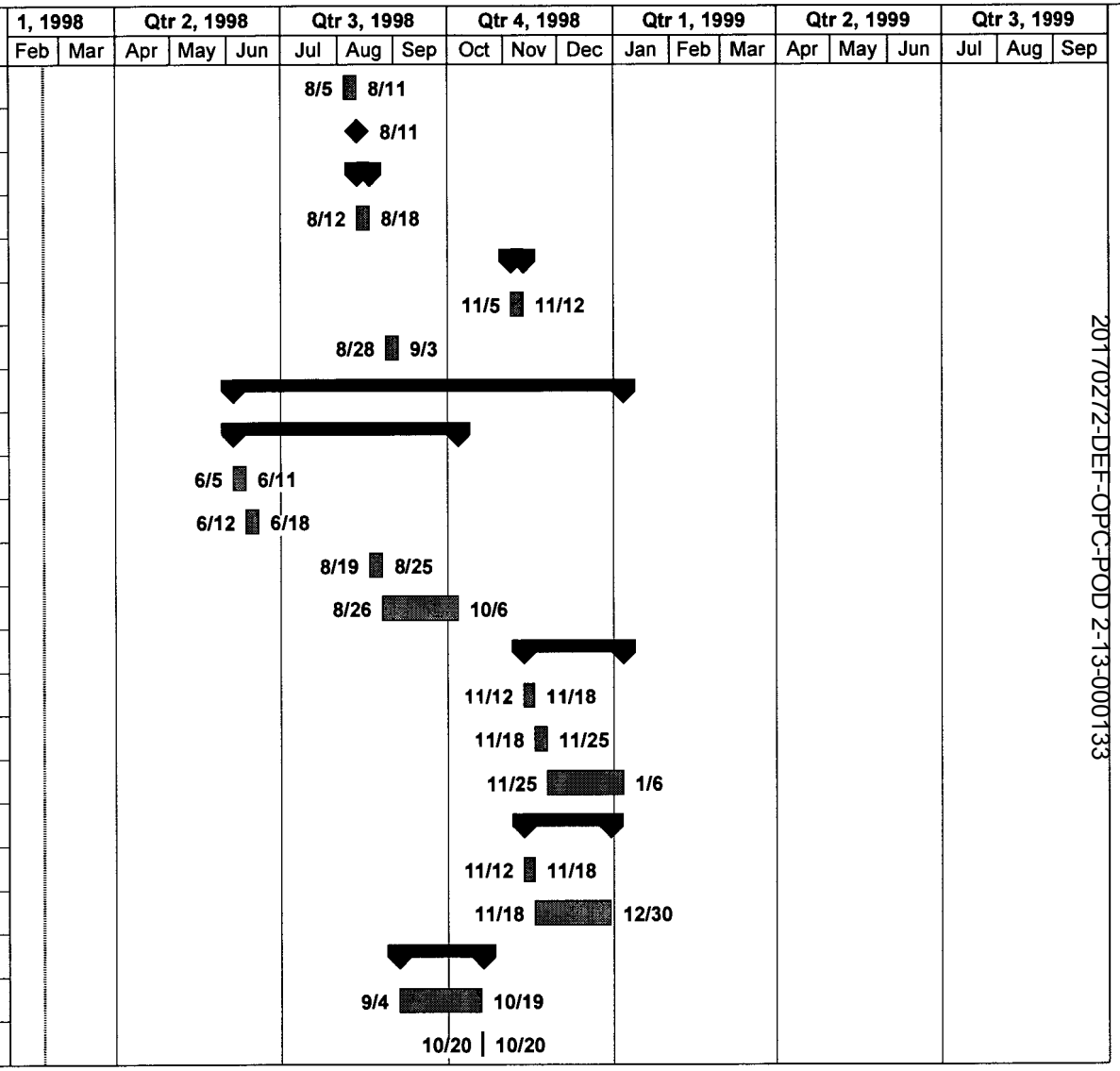
20170272-DEF-OPC-POD 2-13-000132

Florida Power Corporation OMS
Date: 2/20/98

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress

Florida Power Corporation OMS Implementation Schedule

ID	Task Name
93	Installation at Site
94	**Hardware Acceptance**
95	**Ship and Install I/CAD S/W**
96	***Install and Verify I/CAD S/W***
97	**Ship and Install OMS Software**
98	Install and Verify OMS Software
99	**Install and Verify I/MARS S/W**
100	**Execute Training Plan**
101	***I/CAD Training***
102	CADDBM/CADTOOLS
103	System Administrator
104	Train the Trainer
105	In-House Customer Training
106	**OMS Training**
107	System Administrator
108	Train the Trainer
109	In-House Customer Training
110	**I/Mobile Training**
111	Train the Trainer
112	In-House Customer Training
113	**I/MARS Training**
114	I/MARS Admin
115	I/MARS User

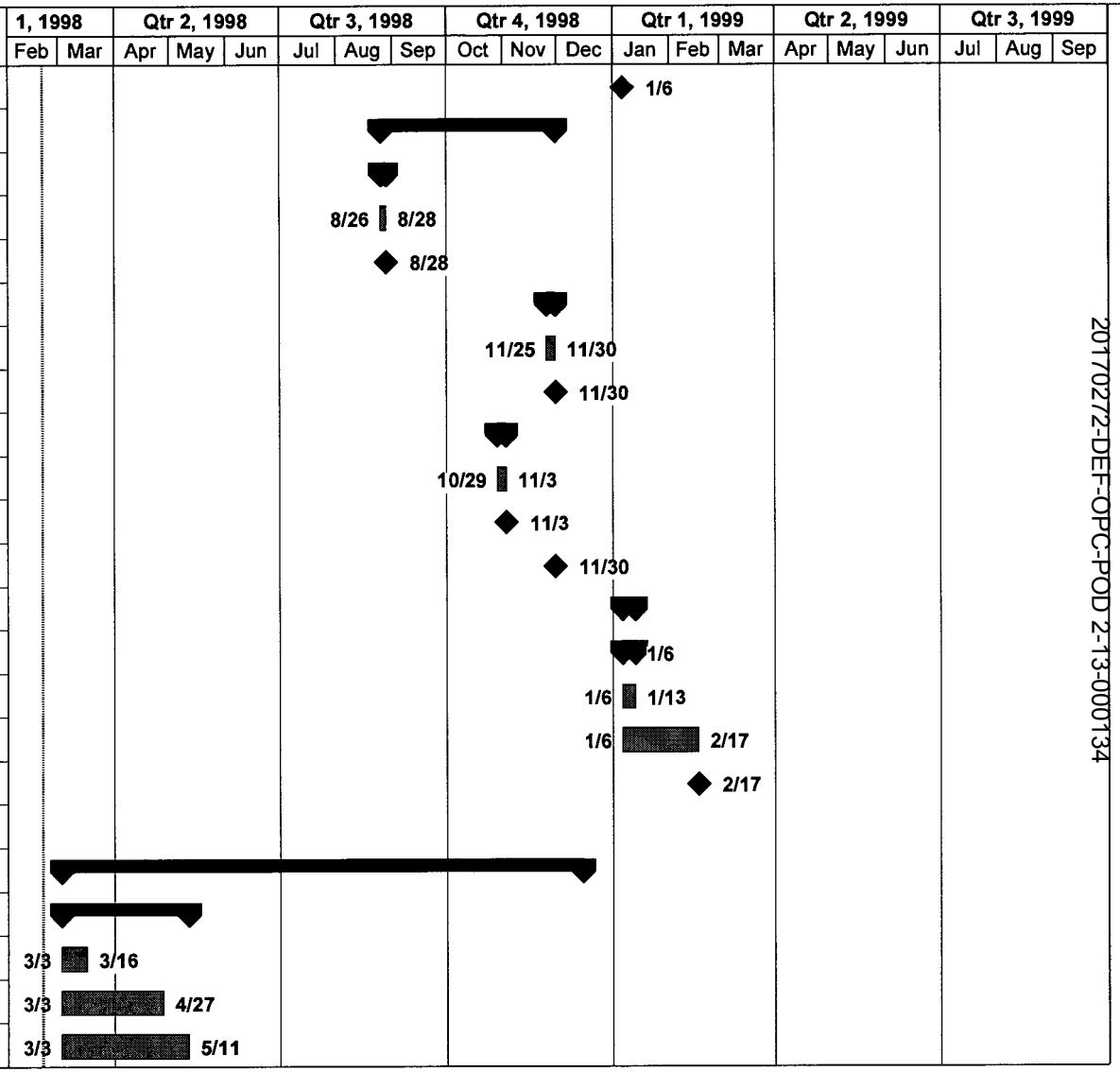


Florida Power Corporation OMS
Date: 2/20/98

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress

Florida Power Corporation OMS Implementation Schedule

ID	Task Name
116	*Training Complete*
117	**Execute Acceptance Test Plan**
118	**Execute I/CAD System Acceptance Test Plan**
119	I/CAD Functional Testing
120	*I/CAD Functional /System Test Acceptance*
121	**Execute OMS System Acceptance Test Plan**
122	OMS Functional Testing
123	*OMS Functional/System Test Acceptance*
124	**Execute I/Mobile Acceptance Test Plan**
125	I/Mobile Functional Testing
126	*I/Mobile Functional/System Test Acceptance*
127	**System Acceptance Test Complete**
128	**Ready for Live Operations**
129	**Ready for Live Operations**
130	Commence Cutover
131	**Acceptance Period**
132	**Base System Acceptance**
133	
134	**Outage Management Software Development**
135	**Design OMS Software**
136	Batch Call Creation
137	Trouble Analysis
138	Additions to I/Dispatcher

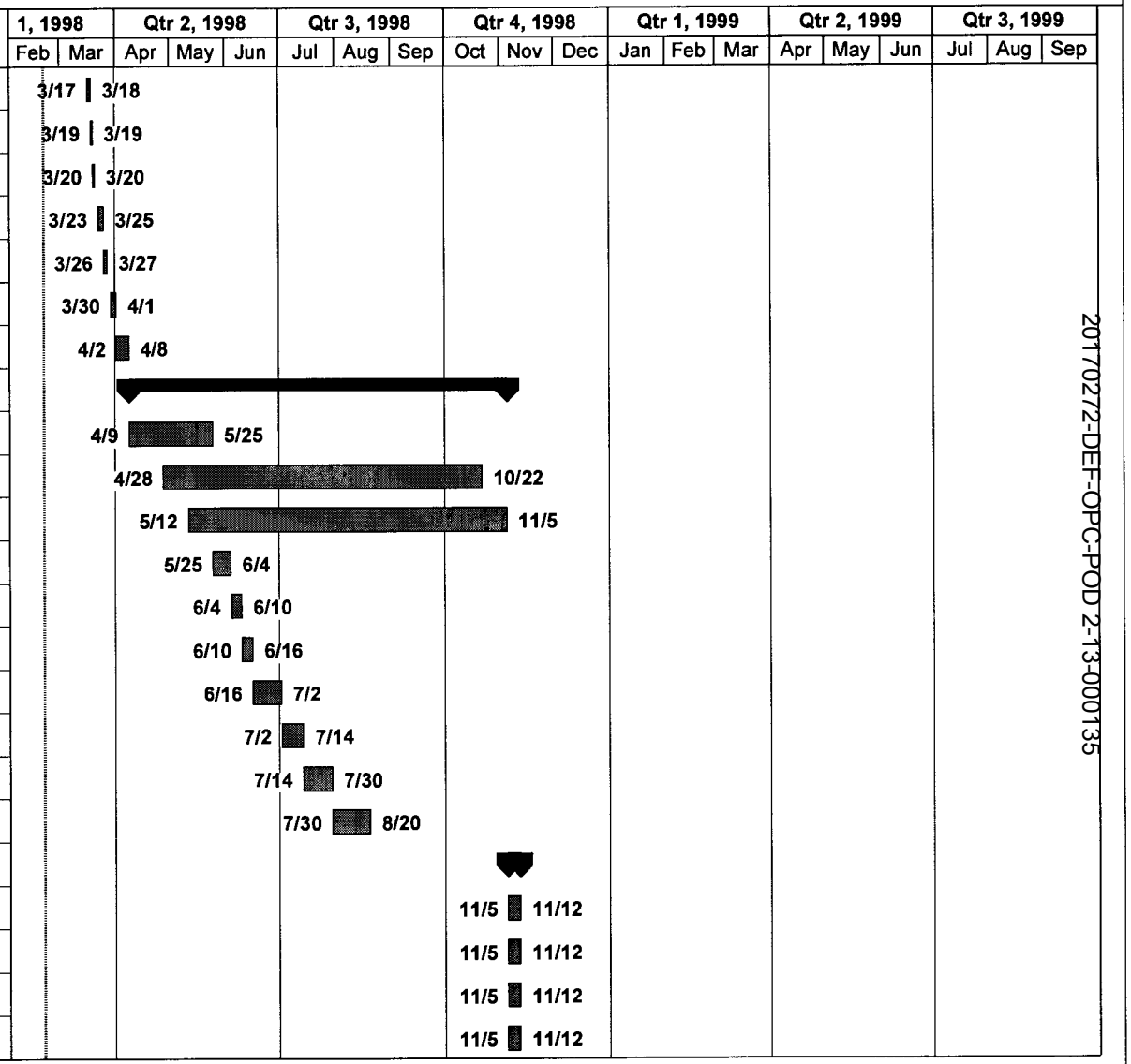


Florida Power Corporation OMS
Date: 2/20/98

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress

Florida Power Corporation OMS Implementation Schedule

ID	Task Name	Start	Finish
139	Interface to WMS	3/17	3/18
140	Interface to Human Resources Data	3/19	3/19
141	Interface to SCADA System	3/20	3/20
142	Interface to AODS System	3/23	3/25
143	Interface to CSS System	3/26	3/27
144	Interface to VRU System	3/30	4/1
145	Additions to I/Mobile and I/MDT	4/2	4/8
146	**Develop OMS Software**		
147	Batch Call Creation	4/9	5/25
148	Trouble Analysis	4/28	10/22
149	Additions to I/Dispatcher	5/12	11/5
150	Interface to WMS	5/25	6/4
151	Interface to Human Resources Data	6/4	6/10
152	Interface to SCADA System	6/10	6/16
153	Interface to AODS System	6/16	7/2
154	Interface to CSS System	7/2	7/14
155	Interface to VRU System	7/14	7/30
156	Additions to I/Mobile and I/MDT	7/30	8/20
157	**Deliver OMS Software**		
158	Batch Call Creation	11/5	11/12
159	Trouble Analysis	11/5	11/12
160	Additions to I/Dispatcher	11/5	11/12
161	Interface to WMS	11/5	11/12



Florida Power Corporation OMS
Date: 2/20/98

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone ◇
Rolled Up Progress

Florida Power Corporation OMS Implementation Schedule

ID	Task Name	1, 1998 Feb	Mar	Qtr 2, 1998 Apr	May	Jun	Qtr 3, 1998 Jul	Aug	Sep	Qtr 4, 1998 Oct	Nov	Dec	Qtr 1, 1999 Jan	Feb	Mar	Qtr 2, 1999 Apr	May	Jun	Qtr 3, 1999 Jul	Aug	Sep
162	Interface to Human Resources Data									11/5		11/12									
163	Interface to SCADA System									11/5		11/12									
164	Interface to AODS System									11/5		11/12									
165	Interface to CSS System									11/5		11/12									
166	Interface to VRU System									11/5		11/12									
167	Additions to I/Mobile and I/MDT									11/5		11/12									
168	**I/MDT, I/Tracker and I/Mobile Project Implementation**																				
169	Design Software Implementation						8/20		9/1												
170	Develop Software Implementation							9/1			10/15										
171	Install Software								10/15			10/29									
172	Install Mobile Computers									11/3			12/15								
173	**Reconcile/Close Project Files**													2/17	3/3						

20170272-DEF-OPC-POD 2-13-000136

Florida Power Corporation OMS
Date: 2/20/98

Task | Summary | Rolled Up Progress
Progress | Rolled Up Task
Milestone | Rolled Up Milestone

APPENDIX E

I/CAD SYSTEM OVERVIEW

1.0 INTRODUCTION

This overview contains supplemental information about the IPS/Computer-Aided Dispatch (I/CAD) System hardware configuration and software components. It is intended to provide integral information in order to enhance understanding of the Windows NT operating system, I/CAD and third-party software applications, and to provide a rationale for the system architecture.

In developing the I/CAD System, IPS selected both equipment and software that adhere to current industry standards and that provide on-going commercial viability. The long-term performance, reliability, future expandability, and system maintenance of the system depends upon the use of industry standard hardware and software and the commercial strength of each product component.

The IPS software solution for public safety is a proven performer. Each component is a standard application; no application product within the I/CAD System requires custom software designed for a single user, installed at a site-specific location. As standard software, I/CAD applications are updated regularly, and features are added to introduce new and improved procedures and processes, to take advantage of new standards and new radio and telephone technologies, to resolve problems addressed by the customer base, and to satisfy new government regulations. Every customer with a full maintenance agreement receives I/CAD software upgrades for no additional cost.

The I/CAD System hardware configuration is a network-based, distributed computing environment with each workstation running its own application software and having sufficient processor and disk capacity to run its tasks in isolation. These workstations communicate with, and through, the Database Server(s) and the Interface/Communications Server over a local area network (LAN) or a wide area network (WAN). This distributed approach avoids interdependence and leads to a simple and elegant solution.

The easiest way to explain the overall system architecture is to present it in layers or levels, which separately address the system hardware and software configurations. Section 2.0 of this document, System Architecture, provides a high level overview of the hardware environment and the system software. Section 3.0 provides a detailed discussion of the various software modules used to build the I/CAD software and operating environment; Section 4.0 addresses system security; Section 5.0 delineates the IPS hardware used to configure the system; and Section 6.0 provides a rationale for both

the selection of Windows NT as the IPS operating system and the for hardware architecture.

To ensure a mutual understanding of the features and characteristics of the I/CAD System, this addendum first defines specific terminology used throughout the document to discuss both the public safety environment and the I/CAD System.

1.1 Definitions

I/CAD and I/CAD System

I/CAD is an encompassing term, describing the suite of software products that constitute the complete Computer Aided Dispatch System from IPS. I/CAD does not refer to a specific software product, but to the software architecture that includes both IPS and third-party applications. An example of another software suite is Microsoft Office, which provides a set of products that creates a specific documentation environment.

I/CAD System refers to the complete hardware and software product from IPS, including the system architecture.

Event and Event Type

An I/CAD event is defined as an incident requiring action by Police, Fire, or Emergency Medical Services (EMS), such as a burglary, a home fire, or a medical emergency.

Event types are used to categorize calls by a user agency. Event types are entered during the call taking process and are validated against predefined event types in the I/CAD database. Each agency can specify the following event type parameters:

- Literal names of event types
- Event type codes (such as 10-codes)
- Approved abbreviations
- Yes/no responses indicating whether an agency should respond to an event type
- Event type priority assignments
- Appropriate unit assignments
- Event type timer alarms
- Pre-defined special instructions associated with an event type

- Whether or not a "location of interest" should be automatically performed for the event type

Unit

A unit represents a piece of apparatus used to respond to events, such as, a policeman's patrol car, a fire truck, or a specialized medical services vehicle.

For every unit entered into the system, a list of attributes exists. Attribute information that can be modified includes:

- Unit ID (usually unit IDs are assigned by radio call sign)
- Unit type (squad car, pumper, or Advanced or Basic Life Support ambulance, for example)
- Page group assignment
- Agency ID
- Station ID
- Dispatch group assignment
- Area/beat assignment
- Permanent deployment location (station or precinct)
- X-coordinate of a unit's location
- Y-coordinate of a unit's location
- Availability
  - via radio
  - at quarters or permanent deployment location
- Graphic map display symbol

In addition to the unit attributes, vehicle attributes can be added to the database. Vehicle attributes allow customers to specify:

- Vehicle ID
- Agency ID
- MDT address
- Availability
  - Voice
  - MDT
- Page code assignment

- Automatic paging
- Unit equipment list (up to eight)
- Vehicle maximums
  - Height
  - Width
  - Weight

Specifying unit and vehicle attributes allows the IPS software to effectively log units on and off, recommend the proper units for event handling, and locate units with special characteristics, such as skills or equipment.

Call for Service

An I/CAD Call for Service is a request for assistance.

Resources

Customers can organize physical and human resources into groups that relate to daily activity, including:

- Personnel rosters that include all available personnel resources
- Personnel lineups that are specific to personnel shift resources
- Deployment plans or variable response allocations
- Dispatch groups or related resources under the control of one dispatcher or of a group of dispatchers

The organization of data into I/CAD tables provides the application software with base information regarding available units and personnel and allows assignment of dispatch responsibilities and recommendations.

Agency

An I/CAD agency is an organizational entity that provides a service response in the public safety environment. Each participating agency is defined in the I/CAD database. This process specifies the following:

- Name, address, and type of each agency
- Point-of-contact name and number
- Area/beat and line-up plans for resources
- Agency-unique event and case number sequencing

Police, Fire, and Ambulance are obvious high-level examples of agencies. However, the agency definition can be extended to include

other special needs, such as a SWAT team, a special investigation team, or a drug task force squad. In fact, *an agency can be any physical or abstract entity that has resources and that has defined deployment plans, types of events, and priorities*. Agencies are automatically involved in the dispatching operation when an incident results in an event type that requires a response from that agency. For example, "burglary-in-progress" might be a code that requires a Police agency response. Event types are initially assigned during the call taking process but may be updated as more information becomes available.

The agency is a point of planning, with each having its own resource deployment plans stored in the I/CAD database. The deployment plan contains beat, backup beats, and dispatch group by Emergency Service Zone (ESZ). As shifts change or as special events occur, different deployment plans can be invoked by the operator. Larger agencies are normally broken into districts and dispatching occurs at that level.

Using the deployment plan for an agency at the ESZ level provides a great deal of flexibility. Special deployment plans can be created, moving assigned territories as shifts change or to meet special situations. For example, a customer could establish a special deployment plan for use during a major automobile racing event. This type of planning takes place at the agency level.

Dispatch Groups

When a dispatcher logs onto I/CAD, that dispatcher becomes a member of a dispatch group. Specific dispatch group assignments are made based on I/CAD username, password, and access privileges. The information used to make this determination is part of the system configuration, which also specifies the workstation(s) the operator can use.

Being made a member of a specific dispatch group results in the dispatcher being assigned to an agency and an area (district). The area is usually one that the dispatcher knows well. Incumbent within the agency assignment are resources, such as units, unit personnel and equipment, a resource deployment plan, and coding for types of incidents and priorities. Units can then be logged on and logged off as shifts change, and equipment can be added or removed from service as the dispatcher manages the assigned area and resources.

When a service call is received and the address verified, the I/CAD System immediately designates an area. The call taker need only specify the nature of the call (event type) to determine which agency or agencies should respond. Based on the area/agency determination, the call is assigned to a dispatch group, and, after the event is created by the call taker, is automatically sent by the I/CAD System to a dispatcher responsible for that dispatch group.

Dispatchers receive calls to dispatch, evaluate the resource(s) needed and the resources available for that area, and use the I/CAD System to dispatch accordingly. Dispatchers are literally in control of a geographic area using the resources that have been assigned. I/CAD assists dispatchers by displaying up-to-date information about the area on the map, in the Pending Events window, and in the Unit/Event Status window. Database information relevant to any map symbol, such as building footprints or utilities systems, can be accessed by simply clicking on the symbol, and the positions of units equipped with Automatic Vehicle Location (AVL) devices are updated on the map in near real-time. The event status is often shown on both the map and in a dialog box. In addition, I/CAD can assist dispatchers by making resource and routing recommendations. For example, the system can recommend the nearest unit to handle an accident and be intelligent as it does so, making sure that special skills of the personnel or special equipment needs are considered.

The use of dispatch groups seems obvious when one considers the task of dispatching, and, during system customization, the concept, can be extended. For example, if it were necessary for dispatchers at a designated secondary center to take over the dispatching responsibility for a primary center, the transfer of operations can be accomplished using dispatch groups. In this situation, special usernames, passwords, and dispatch groups would be set up at the secondary center, and operators would use them to log on. At log on, operators would then become members of a dispatch group designated to receive calls normally sent to the primary center.

This empowers the operators at the secondary dispatch center to perform the dispatching functions and to command the resources, as needed, to satisfy requests.

In a computer science sense, the practical concept of a "dispatch group" is a virtual capability and can be applied in many ways.

Response Lists

Response lists are used to generate specific levels of response for particular event types. Response lists determine the following, based on event type and priority:

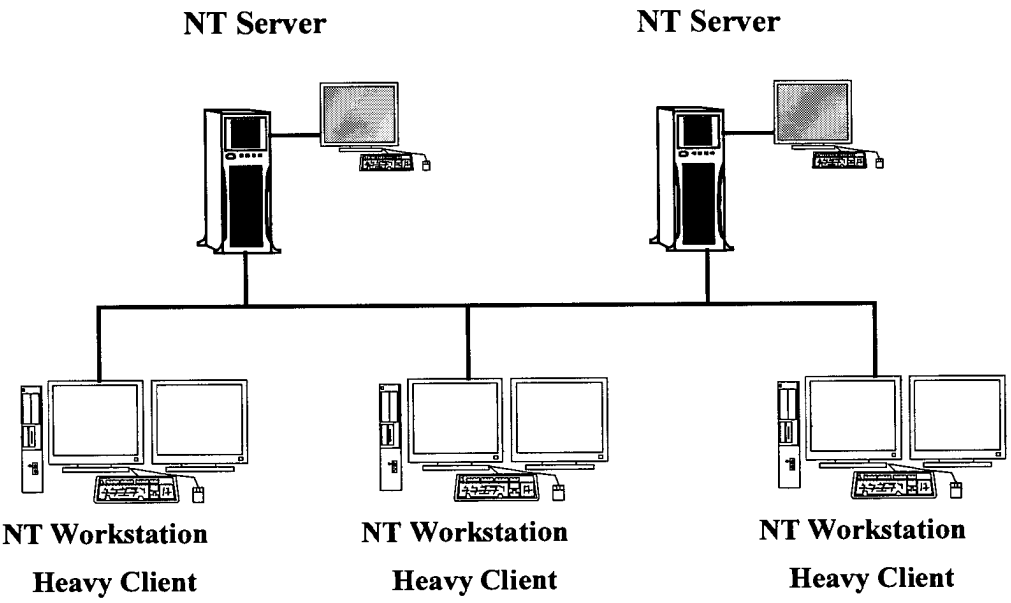
- Number of units to dispatch
- Types of units to dispatch, including specific attributes, skills, and equipment
- Alternate choices of unit types
- Other agency responses, if a multi-agency center

Because response lists specify unit types rather than specific units, the same list can be used for several different event types and by several different agencies. For example, in a Police Response List, the system administrator might create a list designated "A-1," which calls for two regular patrol cars and one detective to respond to a particular event type. Response list "A-1," therefore, could be associated with any agency or any police event requiring two patrol cars and one detective assignment. Also, agencies may have the same event types defined in I/CAD that result in the creation of multi-agency responses from a single call for service. For example, an "accident with injury and a fuel spill" can automatically create an event for Police, Fire, and Ambulance response.

2.0 SYSTEM ARCHITECTURE

2.1 Client/Server

The high-level overview of the I/CAD System architecture is a simple client/server topology using a LAN, as illustrated below.



High-Level Overview of the I/CAD System

This configuration consists of two types of machines: servers and clients. Each machine functions as a complete and powerful system with its own disk, memory, CPU, and other components. The software functionality within the configuration is located, as needed, to maximize the distribution of processing and availability. I/CAD System clients are not "thin clients" that have minimum functionality with most of the processing being done on the server. The IPS system does not resemble a mainframe with terminals. In the I/CAD System environment, each client workstation supports a large amount of the processing, hence the term "heavy client." The system allocates functionality where it is most needed. As an example, one or more servers provide the functionality of the Database Server, which centralizes and maintains the I/CAD database, guarantees the integrity of the data, and allows proper data sharing. An Interface/Communications Server is used to support peripheral processes.

I/Dispatcher is an example of client software; it is resident on each dispatch workstation and provides all dispatcher functionality locally. All hardware is more efficiently used because of this distributed processing system. In addition, the system is easy to expand by adding workstations as the need for more dispatcher positions grows. If activity on

one of the servers becomes too great, new servers can be added and processes moved accordingly.

The client/server topology maximizes functionality where it is needed, allows for system growth, and provides continuous processing in the event of a hardware failure. User functionality can be enhanced, frequently by adding client software at the workstation level and, often, by adding a server to the network.

2.2 Commercial-off-the-Shelf (COTS)

The I/CAD System is built from widely-used, standard products that are available from IPS, as well as from external sources. Most of the non-IPS products are commodity products. IPS software products are referred to as commercial-off-the-shelf (COTS) products and are designed to be available to the marketplace as a whole. All I/CAD System customers run standard COTS products, with each software system customized to meet specific needs by setting extensive user-definable parameters. If customers have an active full maintenance contract, all I/CAD enhancements are received at no cost. In this way, as technology advances and new software standards become available, the IPS customer keeps pace.

The reliability of the proposed I/CAD COTS software is demonstrated by the fact that as the product has evolved, the base product has repeatedly proven itself, with over seven years of testing at more than 50 sites (customers) around the world.

As opposed to COTS software, custom software creates a specific system for every customer, and each system is different. To upgrade custom software, each customer must bear the *full cost of the upgrade*, and a good deal of time and effort is required to move the customer forward. Such is not the case with the IPS I/CAD COTS software products.

2.3 Commodity-Based Open Systems

Another significant characteristic of the I/CAD System is that it is based on the most widely used set of products and the most advanced technology in the world. The operating system is Windows NT; the database is the Relational Database Management System (RDBMS) from ORACLE; and specialized reports are created using Microsoft Access. I/CAD does not require a proprietary report generator, backup, or administration tool. A report can be generated using Access and included in a Word document, along with embedded Excel spreadsheets and the I/CAD map.

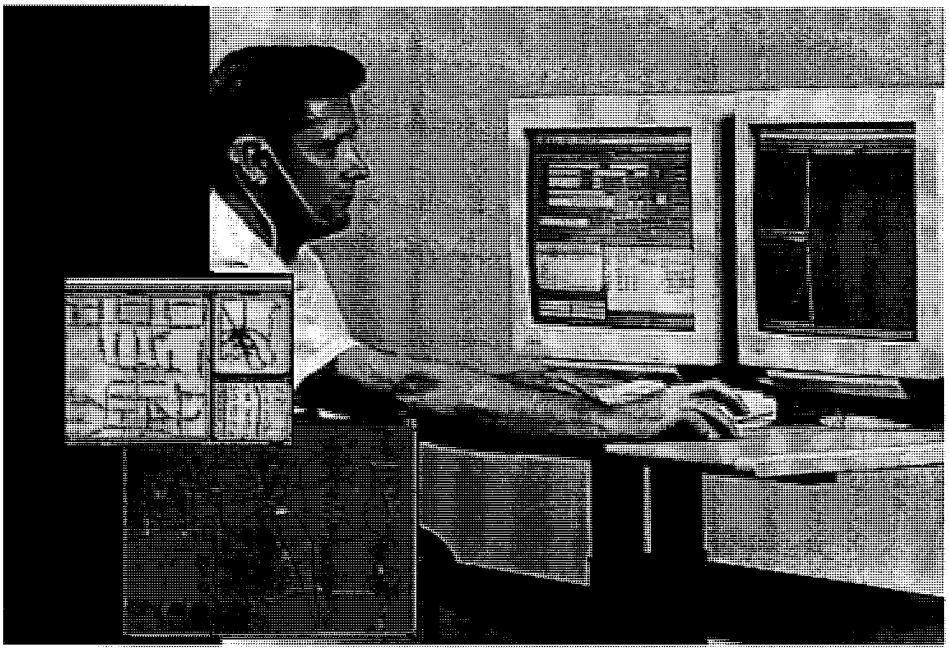
IPS offers a complete implementation of the Microsoft Windows graphical user interface (GUI). Because Microsoft Windows runs on more desktop computers than any other interface in the industry, applications that fully employ the Windows GUI tend to be easier to learn and use. While developing new or updated products and technology on a

biannual basis is an integral part of IPS corporate operations, user familiarity with the Windows operating system and products will continue to be leveraged to reduce training requirements.

3.0 I/CAD ENVIRONMENT

When dispatchers are responsible for handling both call taking and dispatching operations, the I/Dispatcher product is used; when the separation of call taking and dispatching duties is required, the I/Calltaker software module is proposed. I/Calltaker is essentially a subset of the I/Dispatcher software but retains only the commands needed to support call entry and event creation and the routing of calls to a dispatcher. It provides a low-cost product for customers desiring to separate the call taking and dispatching functions and can be supported using either a single- or dual-monitor workstation configuration. In either configuration, windows are used to display both data entry forms and the integrated graphical map.

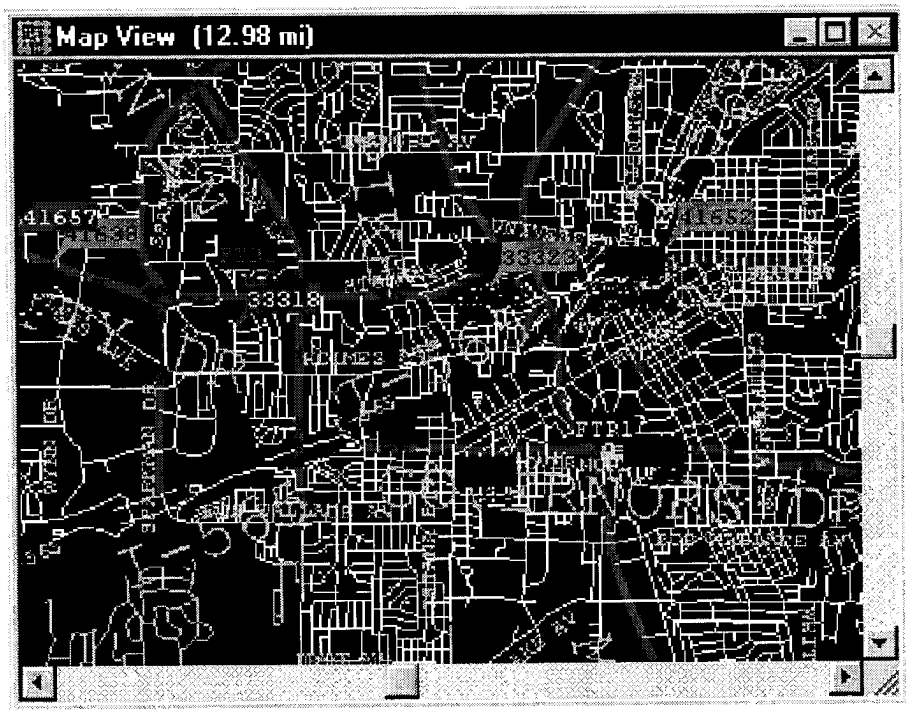
In the typical dispatch setting, a dual-monitor workstation is recommended, with one screen often displaying the graphical map and the other displaying dialog boxes, forms, or windows supporting the dispatching operation. The following picture illustrates the dual-monitor dispatching environment.



A single mouse and keyboard are used to communicate with both monitors. Windows and icons can be moved as operator needs dictate. Windows, including the map window, may also be dismissed, resized, and minimized. To activate a window, the operator simply clicks anywhere on the window and the title bar changes color to visually indicate that the window is active. The operator can also easily switch to another window by using the ALT/TAB keys to cycle through open applications.

The spatial relationship of emergency vehicles to incident locations is displayed on the map, complete with roadways and jurisdictional boundaries. Dispatchers can quickly identify the most appropriate response personnel and judge the fastest and safest route to the event. The I/CAD System uses both graphic and non-graphic information to determine real-time vehicle position, provide automatic dispatch recommendations, and assist in optimal path planning.

The I/CAD map is very robust. There is no practical limit to the amount of information that can be displayed on the fully interactive, intelligent map. In addition to streets and highways, the map can display building footprints, HazMat (hazardous information) flags, fire hydrants, power lines, rivers, lakes, and railroad lines. These intelligent maps are not just pictures on a screen—they are "smart" maps. All information regarding map features that has been stored in database records is available for immediate data recall. The operator can query the system by simply pointing and clicking on symbols on the map. Using the street network, the system can route units to locations by the shortest time, shortest distance, fewest turns or intersections, and minimum risk involved. When a dispatcher has closed a street, the system can route units around the closure.



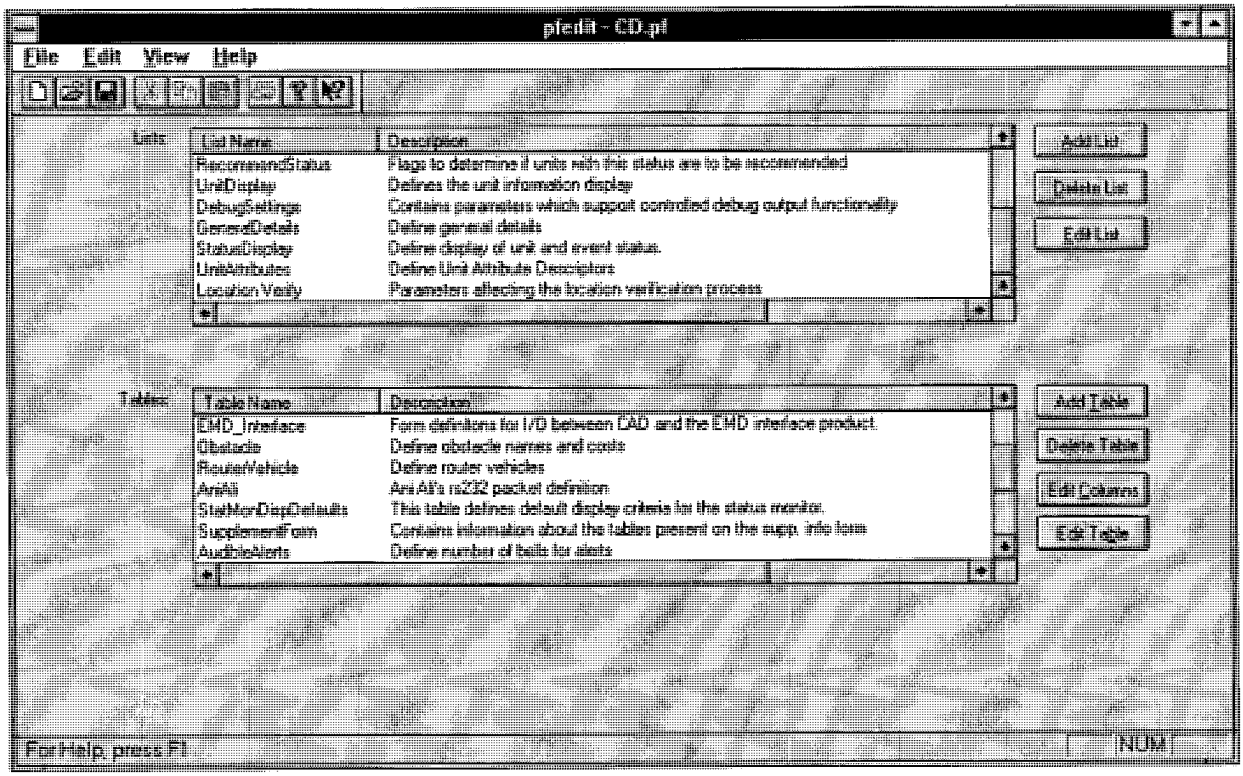
Dispatchers can easily understand the real-time, color display of streets, units, status, event markers, and stations on the map screen. Building floor plans can be retrieved and displayed; road closures are mapped and units routed around them; and locations of fire hydrants and utility poles, as well as gas, water, and sewer lines can be displayed.

Dispatchers can zoom in on views, window certain areas, attach related graphic files to expand their informational base, turn on and off different map layers to control the amount of data shown, display multiple views, and query the database about map symbols.

To an observer, the power of the map resembles a GIS. The mapping component of the system is not linked to a GIS, although the information required to produce the map may be taken from an existing GIS of the area. Instead, the capability, speed, intelligence, and integration of the map is purposefully designed to function as an integral part of I/CAD.

3.1 Configurability

Many vendor products require customers to change their standard operating procedures in order to accommodate the system. The I/CAD System minimizes the operational impact of implementing a new system by customizing the system to reflect the current operating procedures of the customer. To accomplish this, I/CAD makes extensive use of parameter files and tables designed to provide a flexible environment. Each workstation has parameter files and tables used to configure it to the user's needs. A sample form for setting parameters is shown in the following figure:



Sample Parameters Form

More than 600 I/CAD parameters allow the system to be customized without making software code changes. Depending on user requirements, the system can be extensively customized, or customization can be kept to a minimum. Items to be customized are user-determined. The I/CAD System comes complete with the utilities needed to perform customizations. Once customization items have been identified, they are implemented in a test environment and verified for proper operation prior to implementing the changes in the live system. A log of each implemented change is maintained by I/CAD for future reference in the event questions arise.

I/CAD customized software parameters are stored in tables and parameter files, which are used in the course of processing event information. During software upgrades or updates, these customized tables and parameters can be saved and applied to the newly installed version, thereby, eliminating the need to spend time redefining customizations.

The I/CAD System provides the capability to change customized parameters while the system remains operational. Once the desired changes are defined, an I/CAD command is executed to refresh the parameter settings, and the new settings become operational. In addition, exports of I/CAD database information are performed at system administrator-defined intervals, while the system remains operational. If a new software executable is needed, the new program can be moved to the proper directory on a workstation, and the operator need only exit and re-enter I/CAD to make use of the new executable.

Configuration files are local to each workstation. Therefore, changes can be made that apply only to certain machines, or configuration files can be shipped to other sites for use. It is recommended that system supervisors make and control configuration changes and distribution.

I/CAD provides for controlled access to all user-configurable parameters, and since the parameters are local to each workstation, the distribution of changes is simplified.

File maintenance programs provided with I/CAD utilize intuitive, user-friendly screens, but the appropriate authorization privileges are required before they can be used. All activities such as data archiving and report generation require proper operator access privileges.

3.2 I/CAD Database Redundancy

To ensure system reliability, the I/CAD System recommendation uses redundant database servers. Both servers maintain a copy of the database so that, in the unlikely event that one server fails, operations can continue without interruption. Each server maintains a mirrored copy of the database in real-time. When a workstation detects a problem with one of the database servers, all systems are discretely notified, all database operations are

diverted to the functional server, the system administrator is notified that failover has occurred, and database operations are terminated against the failed server. The operational server marks the point of failover for subsequent updating of the database on the failed server. This occurs automatically without operator intervention and without impacting production of call takers or dispatchers.

After the failed server is repaired, the administrator initiates the recovery process, and the failed server begins updating its database from the point of failure. The amount of time the update takes depends upon how long the server has been down. The process will continue until the databases of both servers are synchronized. There is no impact to call takers or dispatchers during recovery.

After recovery, the process continues by discretely notifying all I/CAD Systems that both servers are back on-line. All systems then return to the mirrored dual operation. And, again, this happens without impact to call takers or dispatchers. The failure of a server and the return to dual operation may, in fact, never be known to call takers and dispatchers.

The system is designed to provide continuous operation with a high level of availability. Additionally, the client/server architecture used by the I/CAD System allows for maintenance to be performed at individual positions with no effect on system operation.

Reliability analysis of I/CAD Systems around the world confirm that an availability rate greater than 99-percent is expected and achievable with the proposed configuration. The aim of the configuration and architecture is to provide continuous operation for the control center.

Redundant Array of Independent Disks (RAID) technology is also used, meaning that a disk failure can occur and be corrected without causing failover. A disk may, in fact, be replaced with no impact on that server if hot swappable drives are used.

For fault isolation, each CPU in the system has its own memory, system clock, and a copy of its own operating system. The system comprises duplicate subsystems, ensuring that critical functions are maintained at all times because there is no single point of component failure.

Fault-tolerant hardware; symmetrical multiprocessors (SMP); RAID technology; dual power supplies; local graphics processing at each terminal; and conditioned power, form a robust hardware environment that is currently employed by IPS in safety-critical sites throughout the world. The hardware redundant configuration is an essential foundation of an overall fail-safe strategy.

IPS expends considerable effort in configuring the redundant capability of the I/CAD System to suit the operational and financial imperatives of its customers.

3.3 I/CAD Software Products

Having introduced a high-level understanding of the I/CAD System and the client/server architecture, the following section covers the software products that support the public safety environment. The software tables in Item 24, paragraph 3.22.2 of this response lists the proposed server and client software and provides a brief description of each product. This section provides additional discussion of available I/CAD software. Some of the following applications may be beyond the scope of an initial implementation, but the information contained will promote further understanding of the potential capabilities and expandability of the dispatching and call taking environment within I/CAD.

For ease of reference, the IPS-developed products are presented in alphabetical order, followed by third-party software. The products that were not proposed are marked optional for future consideration.

3.3.1 I/Alarm (Optional)

I/Alarm provides connectivity between the dispatch environment and third-party alarm system controllers, and allows alarms to be automatically generated and inserted into the dispatch environment without an operator manually creating an incident. This software includes utilities for defining location, event type, and contact information regarding the alarm so that the externally generated incidents appear in the dispatch environment as either new or advised (closed) incidents. As with internally created incidents, alarms are logged into the database.

3.3.2 I/Backup (Optional)

The I/Backup product uses database replication technology to provide support for an off-site, near real time backup of the I/CAD database server over a medium to low speed communication link. This support is normally used in the following situations:

Offsite Server

The primary database server site is evacuated, disabled, or destroyed and there is a need to resume operations with as little disruption as possible.

Multi-Center Dispatching

There is a requirement for multiple regional dispatch centers that operate autonomously but that must provide backup for each other in the case of failure of one center.

Switching from the primary dispatch center to the backup site requires manual failover, and prior provisions must be made to establish special usernames and passwords that enable dispatchers to shift control of resources from the primary center to the secondary site. When access to the primary center is restored, tools are provided to facilitate database synchronization prior to resuming normal operations at the primary center.

3.3.3 I/Calltaker

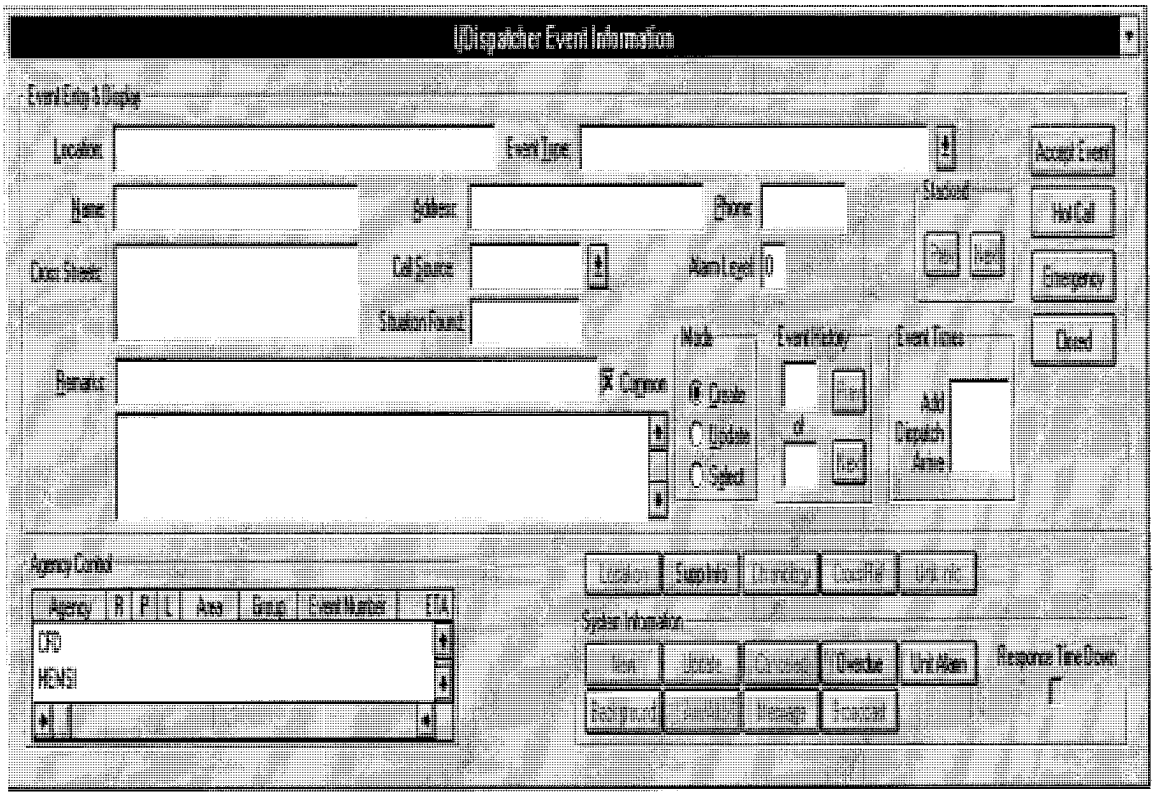
I/Dispatcher combines the functionality of call taker and dispatcher positions, accommodating a CAD environment that merges call taker/dispatcher responsibilities. I/Calltaker is offered as a low-cost solution intended to serve call takers given a dispatch environment that separates call taker and dispatcher positions. I/Calltaker basically consists of a subset of I/Dispatcher features.

Call taking features provide the capabilities required to enter and validate information received from an emergency call. The call taking functionality of the software is intended for operators responsible for interfacing with the public over the telephone, accumulating information, and forwarding the call to an appropriate dispatcher.

Throughout I/CAD, the following interchangeable methods can be used for invoking commands:

- Selecting a command from the pulldown menu
- Selecting a command button
- Typing information into the command line
- Pressing a programmed function key or shortcut keys

Upon answering a call, call takers use the "Create Event" command to open the Event Information dialog box and enter base information about the reported event. This main form is used by all agencies, and each text field, text box, button, and option on the dialog box is labeled. The Event Information dialog box initially appears in review-only mode. To begin entering information, the operator must select the create or update mode. The following figure provides an illustration of the Event Information dialog box. The data fields and controls available for call entry and dispatching are described following this figure. Any operator may create and accept events for any dispatch group.



Event Information Dialog Box

I/CAD forms and dialog boxes may be customized to accommodate local methods of gathering and recording information. These easy-to-use forms lead operators through the process of recording information, dramatically reducing human error and increasing productivity.

3.3.3.1 Event Information Dialog Box Fields and Controls

The following table lists the fields on the Event Information dialog box and describes their use. Both call takers and dispatchers use the Event Information dialog box to gather event information; however, Location and Event Type field information is the minimum information necessary to create an event and is generally entered by a call taker.

Event Information Dialog Box Fields	
Location	When calls for service are received, location is the primary information necessary for the call taker to gather in order to initiate a service response. During I/CAD development, extensive research was conducted into the most common methods by which a caller provides location information to a call taker. The purpose of this research was to enable the system to automatically convert the caller-provided, "real-world" location to a system location that can be used by dispatchers. Many methods are included as standard functionality in I/CAD. When an address is entered in I/CAD, a single command searches the database to validate the address by street name, jurisdiction, prefix or suffix, direction, and range. If the event location, as entered, is insufficient for positive identification, a list of likely choices is displayed. If the location is verified, the map zooms in on the location, to within a range configured by the system administrator, and a temporary pointer is placed at the location. This gives immediate feedback on current activity in the area. The "Verify Location" command provides call takers with information on station or beat, proposed dispatcher assignment, jurisdiction, and subdivision. If the event is accepted, the map pointer becomes a labeled event flag pointing to the location, and an x and y coordinate, in relation to the map, is recorded in the database for the event. Six methods for entering locations include: ANI/ALI; keyed-in specific addresses; street intersections; commonplace names; catalogued alarms; or graphic location entry. These methods are the same for Police, Fire, and EMS events.

Location (continued)	The ANI/ALI interface receives telephone company information via an RS-232 port, and both lights an indicator button and emits an audible signal to notify the operator that an E9-1-1 call has been received. When the operator selects the indicator button, I/CAD automatically loads all available telephone company information into the Event Information dialog box, and the Location field and the Address field both display the same address. If the location is different than the caller address, the call taker can override the incorrect address by typing in the correct one. Or, by configuration, I/CAD allows automatic population of the Location field to be turned off, forcing manual entry of location information. Whether automatic population of the Location field is toggled to on or off, if the operator is processing a call and another call is queued to that workstation, the system prompts the user for a decision to stack or to abandon the current event. If an event is created, all raw data from E9-1-1 is logged to the database, and all event and logged information is associated. The system records the date and time the E9-1-1 call was received in the event record. E9-1-1 calls are recorded in the I/CAD database by call source. This information may be recalled with a command that returns all available telephone company information. Because of the differences in telephone company database structures, the precise contents of the recall form are determined by the individual customer. Street addresses are extensively used and, in order to accommodate ambiguous or unclear caller details, can include "Soundex" searches, "wild-card" substitutions, and aliasing, providing quick or extended matches for a caller-supplied location. Addresses may be stored in the database as ranges relating to a road segment or as specifically known, or "geocoded," locations, such as property point locations. When a location is entered into the I/CAD, the "Verify Location" command attempts to verify the complete address string as entered. If unsuccessful, I/CAD then attempts to minimally match the

Location (continued)	input. A street name minimally matches input when each street component entered matches the corresponding street name component. "Bishop," therefore, minimally matches "Bishop Cir," "Bishop St," and "Bishop Ave." Wild cards can be used as input so that "Bis% A%" minimally matches only "Bishop Ave." If the system finds only one match, the unspecified data is entered, and the location is verified. If two or more possible locations are returned, the user is prompted to choose the correct data, after which the specified location is verified. If no location matches are returned, the street name is Soundexed, and a resulting list of locations is presented from which the user may choose or the operator may modify the location via the Verify Location dialog box. If no matches are returned, an error message appears. If the street address is found to be an alias of another street, a substitution is automatically performed, and the correct primary street name is displayed as the verified location. If the user entered only a street name as a location, it is possible that the address will be verified without accessing the Verify Location dialog box. If the street is in only one ESZ, the user need not enter a address number to provide the system with minimum routing information (area and dispatch group). If there is a commonplace name associated with one location on the street, the system loads that precise location into the Event Information dialog box Location field, however the user may delete it if incorrect. In the case of a single ESZ for the street, the first segment located in the geofile is used to indicate the event location on the map, because the street may comprise many street segments. If the street name matches using the Soundex algorithm, a dialog box is returned and selections may be made. Address ranges appear in the text boxes of the dialog box, and an approximate location may be given for routing purposes. When the street is comprised of more than one ESZ, the dialog box is returned, and the user selects an approximate location. Once the user accepts the dialog box, the corresponding ESZ, area, and dispatch group are retrieved and entered in the appropriate fields in the Event Information dialog box. The operator can always override any system-generated information and type information directly into the Event Information dialog box.

Location (continued)	When an address has been verified without an address number, an event flag is placed on the map to indicate the start of the appropriate street segment. If the street name entered has been verified, but no address number has been provided, the appropriate street segment is highlighted and the map zooms in to display the highlighted area. The user is then prompted to select a subsegment and street side. Cross-street locations or intersections are commonly used to verify locations in the system and undergo similar Soundex, alias, and wild-card searches to match normal street addresses and accommodate ambiguous or unclear details. An intersection is represented by using "/" in between the two intersecting streets. If the full address string cannot be verified, intersection verification uses the same minimal match concept as does street address verification. I/CAD creates a list of minimally matching streets for street 1 and street 2, then presents a list of all intersections between the streets on this list that occur in the optionally specified area and municipality. If one intersection is found, this becomes the verified location. If two or more intersections are found, the list is displayed in the Verify Intersection dialog box, and the user selects one. If no intersections are found, the lists for street 1 and street 2 are constructed using the Soundex algorithm and the intersections of the streets in these two lists are shown in the Verify Location dialog box for the user to select. Verification also supports aliases for intersection street names, and if one or both streets are aliases, the primary street names are substituted for the verified intersection. Commonplace names are another regularly used method of caller-provided location identification. The extent of the list of commonplace names may be agency-specific. A commonplace name used as an address is designated by placing a "@" before the name in the Location field. If the input is enough to identify the commonplace name uniquely, that name becomes the commonplace name to be verified. It is possible to have more than one location for the same commonplace name, for example, a Domino's or McDonald's. If only one location is in the database for the commonplace name, that location is chosen. Otherwise, the Commonplace Location dialog box prompts users to select the correct location.

Location (continued)	Catalogued alarms can be used for automatic alarms by using a coded alarm number in the Location field. This is represented by placing a "#" before the alarm number. Once the code is verified, I/CAD displays the location of the alarm, the type of alarm, the contact person name and phone number, and additional information based on the alarm. The system can also be configured to use an alphanumeric street directory or rural road directory reference number, such as 68 C5, to assist dispatchers or call takers in locating the event. Finally, the operator can geographically identify an event location using any map geographic detail as a point of reference, assuming the inclusion of natural or man-made features in the geographic data and that the proximity or distance to an event can be measured.
Event Type	Event types vary by jurisdiction and agency, allowing each agency to customize the event types it uses. Experienced call takers may type in codes; less experienced call takers can bring up an associated list from which to make a selection. Entering an event type supplies call takers with information on priority and response (police, fire, medical, or a combination of agencies) and provides valuable information for use by the dispatcher. Call takers always have the option of overriding the priority, agency response, or dispatcher responsible, based on the call. Event type is a mandatory field, and, as with all mandatory fields, the field name appears in bold to visually distinguish it from a non-mandatory field. Event types that require a response from more than one agency automatically route the information to all designated agencies. In addition, the call taker can route events to an agency that usually does not receive that type of event by marking the Agency column in the Agency Control panel of the Event Information dialog box. If an agency not initially assigned to the call is requested by responding units, event information can be copied to the requested agency without retyping. Each agency event is assigned its own agency event number, which is linked by a system number and shown in the records as cross-referenced to the other agency events.

Caller Name, Address, Phone Number	The caller's address may, or may not, be the same as the event location. The caller name, address, and phone number are automatically downloaded to the Event Information dialog box when an E9-1-1 call is received, and the fields can be configured using any format.
Cross Streets	If cross streets exist for the location, the nearest intersection automatically populates the Cross Street field once location of the event has been verified.
Call Source	The Call Source field contains a list of valid call sources that indicate how a call originated. I/CAD provides a standard list of call sources, which can be expanded during customization, or operators can ignore the list and type a call source into this field.
Remarks	Unlimited comments concerning an event can be added in the Remarks field. Each line is automatically date and time stamped, and the operator's personnel ID and terminal ID also appears. Once the operator presses the Enter key, remarks are loaded into the non-editable text box below the Remarks field. Once entered, remarks cannot be deleted or changed.
Agency Control	The system automatically populates the Agency Control panel columns once the event location is successfully verified. To view the Agency Control panel extents, arrows and a scroll bar are provided. Information relevant the Agency Control panel is displayed or used by the system as follows: • The Area column displays the jurisdiction (beat, zone, or district) for the event location. If the location cannot be verified through I/CAD due to a non-existent address in the geofile (for example, a new subdivision), the call taker may manually enter the area of the call. When the area is added, the Group column automatically populates.

Agency Control (continued)	• The Group column defines the dispatch position to which the event will be routed. If the location of the event is verified, the dispatch group is automatically defined. If the location cannot be verified, the call taker can manually enter the dispatch group. The assigned Area and Group determine which dispatcher will receive the new event for processing. • When an Event Type is selected, the system populates the R[esponse] and P[riority] columns. R[esponse] determines which agency will respond to the event, and P[riority] references the priority of the new event. **Note:** The operator may override any of the information in the editable columns (R[esponse], P[riority], L[ocation], Area and Group). After the event is accepted, the software completes the remaining columns of the Agency Control panel.
Mode	Before information can be manually entered in the Event Information dialog box, the operator must set the mode to the Create or Update option.
Situation Found	The Situation Found field is used to record instances in which the originally reported event varies markedly from the actual situation encountered by the field unit, but it is not appropriate to change the event type. Using this field, the system maintains an audit trail showing that, as an example, the originally reported event type was a high-priority event, but the actual event was not an emergency. The original information is retained, but database records are established to indicate the changes made, who made the changes, and the time the changes were made.

Mandatory information needed by a call taker to create an event in I/CAD is location and event type. Once the location is verified and the event type is determined, the event can be accepted. Or, upon completion of event entry, the call taker can determine the type of acceptance for the event. The following table describes the Event Entry & Display panel acceptance buttons provided on the Event Information dialog box. Selection of any of these buttons forwards the event information to the appropriate dispatcher.

Event Information Dialog Box Acceptance Buttons	
Accept Event	This command creates the event and assigns a priority.
Hot Call	By selecting the Hot Call button, an operator simultaneously creates an event and assigns a hot call priority to that event. If the normal event type priority assignment would determine a lower priority, selecting the Hot Call button automatically upgrades the priority level. In addition, the Hot Call button allows call takers to accept an event after having location and event type information only, so that the dispatcher immediately receives the minimum information. Even though the event has already been created, the call entry fields remain in edit mode so that the call taker can gather additional information, then transfer that information to the dispatcher.
Emergency	The Emergency button automatically assigns an event an emergency priority. Once the event has been accepted and routed, every dispatch position receives notification of the emergency event, and any dispatcher can immediately review that event.
Closed	The Closed button is used to enter event information collected after an event has been closed. Selecting the Closed button opens the Closed Event dialog box, which enables the operator to append any information required.

The following table briefly explains the function of the Event Information dialog box indicator buttons used by both call takers and dispatchers during call processing. As pertinent information becomes available, each indicator button turns red. This visual indicator informs the operator of additional information that may require attention.

Event Information Dialog Box Indicator Buttons	
Location	When a call taker enters a new event, by default, the software automatically initiates a Location of Interest (LOI) search. If LOI information is available, the Location button activates (turns red). An LOI search looks for, and returns, specific location information, such as hazardous materials, medical histories, or past events at that address.
Supp Info	The Supplemental Event Information (Supp Info) button is always active so that the operator can add supplemental event information at any time. When supplemental information already exists for an event, the button turns red. Selecting the Supp Info button opens the Supplemental Information dialog box used to organize additional event information by vehicle, person, tow, contact, or property. While information can also be added in the Remarks field of the Event Information dialog box, using the Supplemental Information dialog box makes information available for later searches. Fields in the Supplemental Information dialog box are highly configurable and can be changed to accommodate agency-specific data capture, such as parking violations, animal control, or patient information.
Chronology	The Chronology button activates as soon as an event is accepted. Selecting the Chronology button displays a full, chronological audit trail from event creation through to the last update of the event history.
Cross Ref	The Cross Reference Event (Cross Ref) button is always available. Selecting this button enables the operator to view events related to a selected event.
Unit Info	Selecting the Unit Information (Unit Info) button displays a history of all units assigned to the event and all unit status. This button turns red once a unit has been dispatched.

New	An active (red) New button notifies the operator that an event has been added to the Pending Events window. Selecting the New button accesses the pending event information.
Update	A red Update button indicates that the operator has an event to update.
Canceled	An active Canceled button indicates that the operator has received a request to cancel an event and should review the request to determine whether or not to do so.
Overdue	If a event has been pending for longer than a predefined time, the Overdue button activates.
Unit Alarm	An active Unit Alarm button indicates a unit emergency.
Background	If the Background button activates, background information about the current event is available and can be accessed by selecting the button.
Ani/Ali	A active ANI/ALI button indicates that ANI/ALI information is available.
Message	An active Message button notifies the operator of a message.
Broadcast	An active Broadcast button indicates that broadcast information is present and has not been read.
Response Time Down	This is a checkbox. The system automatically places an "X" in the checkbox if the response time for a unit to reach an event may not be able to be met.

3.3.3.2 Time Stamping

Performing any of the following call taking activities causes all information to be date and time stamped, as well as appending the terminal ID to the event history log:

- Receiving E9-1-1 calls
- Creating events
- Adding remarks
- Accepting events

- Stacking calls
- Updating events
- Reading LOI information
- Canceling events

3.3.3.3 Duplicate Call Search

I/CAD notifies the call taker (or dispatcher) of events within a defined range, such as 0.5-mile radius, which is specified in the system's parameter file. If other events occur within the defined range, the Nearby Events dialog box appears listing the event number, location, event type, priority, and current status.

In this way, the operator can review the details of any nearby event to determine whether the current call is a duplicate. If it is duplicate, I/CAD appends all of the information from the current call onto the original event, preventing the call taker from having to re-enter the call information.

3.3.3.4 Hazard/Flag Alerts

The LOI function in I/CAD provides specific location information, such as hazardous materials or patient histories, as well as recent events for that location.

By default, I/CAD automatically initiates an LOI search once a location has been verified and an event is accepted. This process runs in the background, searching both premises and recent incidents information, and returns results if a historical record is found for the event location *or surrounding area*. I/CAD-based LOI searches entail more than looking up and down the same block or the adjacent block, as with most CAD systems. Using powerful graphics-based location processing, I/CAD actually searches the neighborhood.

After LOI is completed, any operator looking at an event can access this information by selecting the red LOI button on the Event Information dialog box. HazMat records, known health problems, active warrants, and major call records become available at the touch of a button. The I/CAD storage and retrieval information system functions whether data was entered manually or captured automatically by the system.

In addition, I/CAD presents a form listing summary information for all searches pertinent to a location, including whether the notation is for a recent event or for a special situation. Selecting an entry from this list displays the full details of the entry. Special situations can be defined in I/CAD and can include dangerous or hazardous situations for any agency. These circumstances are generally temporary, but can be designated as permanent in the database maintenance program.

The database maintenance program can also be used to enter and associate remarks to special addresses or locations. Using this feature, when an incident occurs at that location, the verification process appends these remarks, such as field unit warnings, to the Event Information dialog box Remarks field.

When an LOI search has been completed, a line of comments is added to the Remarks field. After the operator reads the returned LOI information, another line is added to Remarks field with the date, time, operator personnel ID, and terminal ID.

LOI searches may also be configured to require manual initiation.

3.3.3.5 Suspect/Vehicle Description Information

Suspect and vehicle information are recorded in the Supplemental Information dialog box. By entering specific person and vehicle information into this form, this data becomes available during searches of past events involving that person or vehicle.

3.3.3.6 Placing/Resuming Calls on Hold

I/CAD provides the flexibility to take partial information on a low-priority call, set the call aside, and answer a higher priority call. Once a call is "stacked" or put on hold, the call taker can complete the higher priority call. Stacked calls have a predefined time limit and are monitored by I/CAD. If a call is on hold beyond this time limit, the operator is alerted. Call takers can stack more than one call and recall any calls in any order. All information previously taken on the call is saved, unless the call is abandoned, in which case no information is to be recorded. Each stacked call is date and time stamped for future reference and analysis.

3.3.4 I/Dispatcher

In addition to retaining all call taking functionality, I/Dispatcher provides full dispatching capabilities using a color, dual-screen workstation, and interactive mapping that provides both dispatching and monitoring functions. The map display is fully integrated with information forms and dialog boxes so that all information entered is accessible and visible to dispatchers, assisting the decision-making process. From the dispatch position, operators can dispatch services effectively, monitor units and events, and control the operations of all emergency service vehicles. Because visual information is so readily assimilated, dispatchers can make decisions in routine and emergency situations quickly, accurately, and with confidence, knowing that they have the best information available.

In the typical setup, one screen is used to display the map, while the other screen displays the Event Information Dialog Box, a Pending Events window, a Unit/Event Status window, as well as temporary forms and dialog boxes used to display or collect

information. The Pending Events and Unit/Event Status windows are color-coded, allowing dispatchers to monitor the status of units and events in their control at a glance. The same color coding applied to the map is also applied to I/CAD forms.

Timers, set by the system administrator, notify dispatchers, both visually and audibly, before problems develop. For example, a timed alarm sounds if a unit is out of communication longer than expected or if a low-priority incident, which had been stacked for later dispatch, needs attention.

In the typical I/Dispatcher configuration, one of the two workstation monitors is primarily used for displaying the street map. Some of command buttons on this monitor can be used to issue the same dispatching commands available on the forms screen, but others control the appearance of the map display. Using these buttons, dispatchers can zoom-in, window certain areas, attach related graphic files to expand their informational base, turn on and off different map layers to control the amount of data shown, and query the database about map symbols.

The data in both the forms windows and the map windows remain current and synchronized. Regardless of the source of the data, as new information is entered into I/CAD, it becomes available to the user.

The following sections cover operations for tracking pending and assigned events and for monitoring unit status. These procedures are the same for Police, Fire, and EMS events.

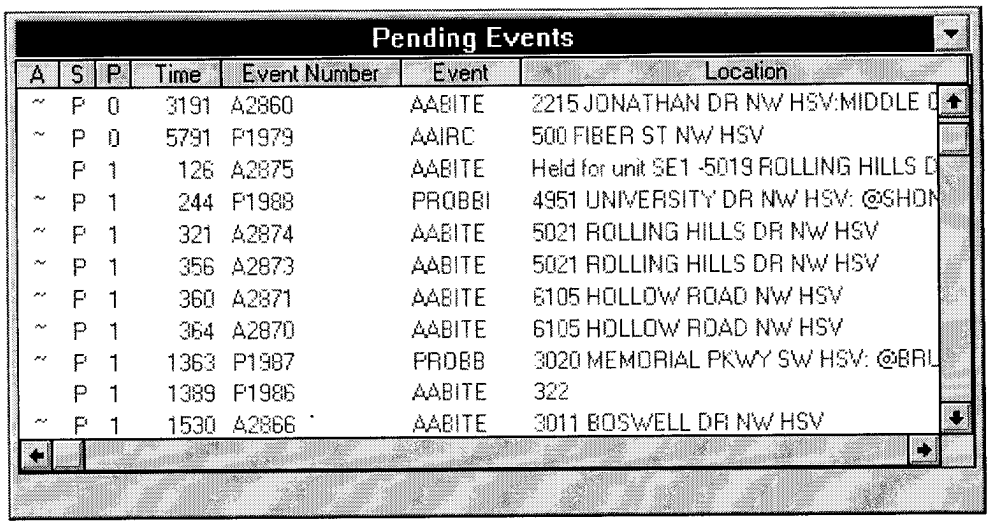
3.3.4.1 Pending Events

By default, the Pending Events window continuously displays the unassigned events relevant to each dispatcher position. However, the window can also be configured to display all unassigned agency events. The status of each event, whether new, pending, held, or station alerted, is distinguished by color.

Pending Events window information is automatically updated without operator request, appears in a tabular format, and displays information in the following columns:

- Event alarm timer (A)
- Event status (S)
- Event priority (P)
- Time in pending (Time)
- Event number

- Event type (Event)
- Event location (Location)



As new calls for service arrive, dispatchers receive meaningful summaries, plus an easy-to-view graphic representation of event area activity. The New indicator button on the Event Information dialog box activates to denote new event information, and the touch of a button displays the new event.

Scroll bars, located on the side of the Pending Events window, serve to indicate the relative number of events hidden from view, and dragging the scroll bar enables the user to page to specific information. The window size can also be temporarily maximized to view more events at one time.

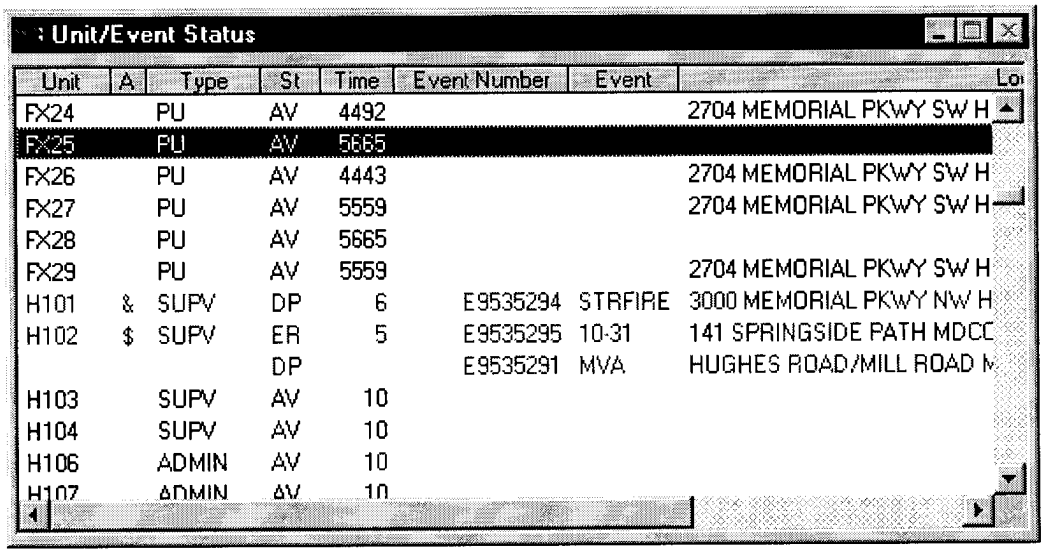
The Pending Events window can be sorted to appear in any order preferred by the dispatcher, with the standard display showing the "oldest" event of the highest priority at the top of the list. Operators can sort the window as often as desired, in any manner desired. A default sort style is originally defined in the database for all workstations, but the default sort can be changed on-line for each workstation.

These windows are user-configurable and provide options for style, color, size, and display location.

3.3.4.2 Unit/Event Status

As calls come into the system and are accepted, they move to the Pending Events window for the appropriate dispatch group. When a call is dispatched, the event moves into the Unit/Event Status window. This window contains all of the units for that dispatch group, as well as the events that have a unit assigned and being worked. Both the map and the Unit/Event Status window show the events and the units that are active, and how they relate to each other.

The Pending Events form and the Unit/Event Status form are the two forms that frame events. All events are in one of these forms, but never both.



Unit	A	Type	St	Time	Event Number	Event	Lo
FX24		PU	AV	4492			2704 MEMORIAL PKWY SW H
FX25		PU	AV	5665			
FX26		PU	AV	4443			2704 MEMORIAL PKWY SW H
FX27		PU	AV	5559			2704 MEMORIAL PKWY SW H
FX28		PU	AV	5665			
FX29		PU	AV	5559			2704 MEMORIAL PKWY SW H
H101	&	SUPV	DP	6	E9535294	STRFIRE	3000 MEMORIAL PKWY NW H
H102	$	SUPV	ER	5	E9535295	10-31	141 SPRINGSIDE PATH MDCC
			DP		E9535291	MVA	HUGHES ROAD/MILL ROAD M
H103		SUPV	AV	10			
H104		SUPV	AV	10			
H106		ADMIN	AV	10			
H107		ADMIN	AV	10			

3.3.4.3 Unit Assignment

I/CAD allows dispatchers to select units for assignment in a number of different ways. For example, the dispatcher can manually assign a unit to an event by issuing the "Dispatch Unit" command, then use the graphical interface, the command line, or hot keys to designate the unit. Each of these methods speeds the process of dispatching units, once the event is selected. In addition, a unit can be dispatched by selecting the unit ID from the Unit/Event Status window or by entering the unit ID. Multiple units can be assigned to a single event by dispatching each unit separately or by invoking a separate "Assist" command.

Multiple events can also be assigned to the same unit, and the system can be configured to show all of the assignments for that unit in the Unit/Event Status window, or it can be configured to return all but the first incident to the Pending Events window. If returned to

the Pending Events window, the events are coded as assigned to a unit, and the unit ID number is listed with the event.

3.3.4.4 Unit Reassignment

Units can also be exchanged, switching unit status, as well as assignments; or units can be pre-empted from one assignment and given another. A change of original assignment can be performed in several ways, such as returning the event to the Pending Events window and holding it for the original unit, returning the event to the window and reassigning it to the next available unit, or immediately reassigning the event to another unit.

3.3.4.5 Unit Recommendation

A unit can be assigned to an event by unit recommendation, which considers several factors, such as the geographical area as well as information contained in various database tables, to determine which unit(s) a dispatcher should use.

The Event Type table determines which agency or agencies should respond to a given event type code, and each event type code is tied to an associated response list record in the Response List table. I/CAD uses the response lists to determine unit response based on the event type code.

In addition to the information retrieved from the Event Type and the Response List tables, I/CAD retrieves information from the Deployment Plan table concerning the proper station order or specific unit order associated with a given geographical area. The Deployment Plan table maintains records that indicate when a given event type for a specific geographical area should use a response list recommendation different from the normal response list. This feature accommodates the requirements of special recommendations, such as nursing homes, hospitals, schools, and churches.

All system-configured conditions are taken into account when units are automatically recommended for response. The proper recommendation, based on conditions, is displayed in the Recommend Units form, which further lists the units in the recommended order of response. The list highlights one, or a number of units, as system recommendations, and can be accepted by selecting a single button, which automatically dispatches all highlighted units. If a unit is currently assigned to an event with a lower priority, yet fits the recommendation parameters, it appears as unhighlighted on the list. To dispatch an unavailable unit, the dispatcher must highlight the unit prior to accepting the Recommend Units form. Of course, regardless of the recommendation, dispatchers can always send a specifically chosen unit.

In addition to a list of units, the Recommend Unit dialog box provides Task Force assignment, special instructions, information about the area or the location, and procedures to follow for the particular event type.

I/Dispatcher provides several methods by which dispatchers can recommend units, but beat and station order are the standards for most responses. When required, however, I/Dispatcher can also make recommendations by the closest unit (real travel distance, not "as the crow flies") or by special equipment needs.

3.3.4.6 Time Stamping in Dispatching

Any unit assigned through manual dispatch, unit recommendation, or through a unit status change is date and time stamped, with the terminal ID appended. All unit status changes are recorded in the unit history record, and a full audit trail can be given on the activities of a unit while on duty.

3.3.4.7 Queue Timers

By default, calls for service are sorted in the Pending Events window by priority and each event is monitored by the queue timer. In this way, if three priority-one calls exist simultaneously, they will be listed together in the Pending Events window, with the "oldest" call listed first.

Based on the event type, call priority, and a predefined time limit, notification timers may be established and loaded into the system. When an event remains in pending status longer than the time allowed for that event type and priority, a notation appears in the alarm column, an alarm sounds, and an indicator button lights. In this manner, operators are reminded to assign a call or to transfer a call to another dispatch group, preventing any call from being neglected without the operator being aware of it. Timer notifications are also displayed to supervisors monitoring the dispatch group.

When an event times out, the time-out information is recorded and can be derived in a management report.

There is also set of queue timers that work the same way for the Unit/Event Status form, so that alarms may be established for active events and the units assigned to them.

3.3.4.8 Complaint Disposition

When the first unit clears an event, a disposition can be assigned. Based on the event type, the disposition may be required or optional. If a disposition is required, I/CAD prompts the operator to enter a code. Valid disposition codes are predefined in the database and are displayed to dispatchers.

3.3.4.9 Complaints/Events Generated from the Street

The "Field Event" command creates events initiated by field units; the operator is then prompted to enter the event type, unit, location, and remarks. After accepting this information, the unit is automatically assigned to the event with the status of arrived. The unit history record shows a one-second time-stamp delay between the dispatch, enroute, and arrived status codes to preserve the proper order of unit history records if they are subsequently retrieved from the database.

Four other options can be used with the "Field Event" command: Traffic Stop, Traffic Pursuit, Subject Stop, and Subject Pursuit. When an operator selects any of these options, the event type field is populated based on the predefined code for each option. Selecting any of these options automatically assigns the relevant unit to the event and places the unit in the arrived status.

3.3.4.10 Vehicle Stops

Vehicle stops are handled using the Traffic Stop option of the "Field Event" command, allowing the operator to specify the unit that stopped the vehicle and enter the vehicle's location, license number, state, license year, and license type. Additional remarks can also be added. The vehicle information is automatically entered into the vehicle supplemental information table. By accepting this information, the unit is immediately assigned to the traffic stop and marked as arrived at the location. Once the traffic stop event is created, I/CAD has the capability to perform a Vehicle of Interest search based on the license number. If previous events are found based on that same license number, the dispatcher is notified and allowed to review the historical information.

3.3.4.11 I/Dispatcher Supervisory and Reporting Capabilities

By assigning supervisory privileges to special log on names and passwords, supervisors can monitor ongoing event activity from any workstation that runs the I/Dispatcher software module, and the fact that an event is being monitored is transparent to dispatchers and call takers.

In addition, supervisory privileges can be granted that allow managers to analyze center activity over time by accessing records stored in the system's ORACLE database. This I/Dispatcher reporting functionality prints 17 standard reports covering dispatch center activity. Other reports may be written on-site using system-provided tools. The following subparagraphs briefly describe the standard reports delivered with I/Dispatcher:

Event Snapshot

The Event Snapshot report provides a snapshot of pending events, unit status, and a chronology of events, comments, and unit activity over a specified timeframe.

Events by Type

This report calculates the number and type of events, per agency, that have been processed within a user-specified timeframe. The data is ordered by event type code within the agency.

Events by Source and Priority

The Events by Source and Priority report provides the number of incidents by agency, priority, and call source that have occurred within a user-specified timeframe.

Events by Source, Day of Week, and Hour of Day

This report compiles a listing of events by the day of the week and the hour of day in which the events occurred, according to the agency and call source. The reporting timeframe can be user-defined.

Event Handling Time

The Event Handling Time report lists the number and type of events, per agency, computing the average and maximum times used to address the events. The reporting timeframe can be user-defined.

Event Register

The Event Register report catalogs detailed information, by agency, including providing the event type, location, event receipt time, beat, emergency service zone (ESZ), and the dispatch group that addressed the event. Unit information is also delineated, including the units assigned to each event, unit dispatch time, unit arrival time, time the unit became available, and the personnel staffing the units.

Calls per Agency

The Calls per Agency report lists, by agency, the number of calls for service during a user-specified timeframe.

Calls for Service

The Calls for Service report lists the number of calls for service by day of week for a user-specified timeframe.

Calls per Hour of Day

This report provides, by agency, an hourly breakout of the number of calls for service received over a user-specified timeframe.

Average Response Time per Hour of Day

This report computes, by agency and hour of day, a summary of the number of calls received and the average length of time that was required to respond. The reporting timeframe can be user-defined.

Logged On Duty Time

The Logged On Duty Time report calculates the amount of time operators have been logged onto the I/CAD System. The information is reported by agency, operator name, and day of the week within a user-specified timeframe.

Logged On Duty Position

This report provides information on operator position assignments over a user-specified period of time. The information is reported by operator, terminal identification (ID), and day of week of the assignments.

Unit Workload

The Unit Workload report lists, by agency, each unit and the number of events that unit has responded to over a user-specified timeframe.

Units' Time In Service

This report chronicles, by agency, the logged on time, time spent on assignment, and the time spent out of service for each unit. The reporting timeframe can be user-defined.

Operator/Officer History

The Operator/Officer History report provides a historical listing of the events that specific operators or officers have addressed within a user-specified period of time. The information is listed by operator/officer ID and contains event data, such as the event number, date and time of event, and any remarks associated with the event.

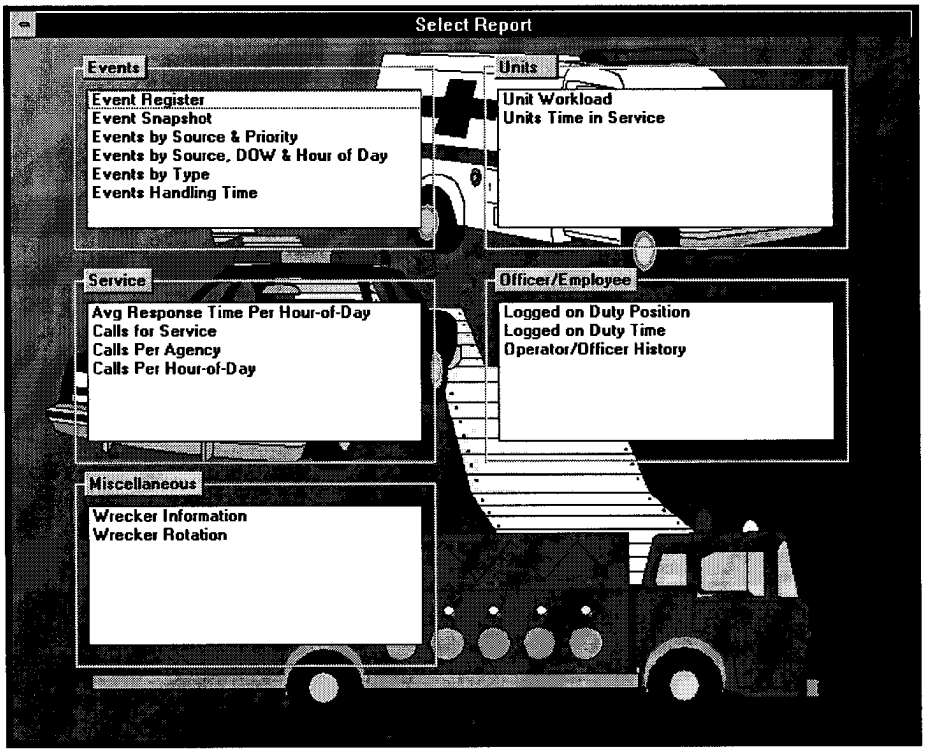
Wrecker Rotation

The Wrecker Rotation report provides an index of wrecker companies that are available for service calls. The report lists the companies in the order in which they should be called by placing the wrecker company with the oldest date at the top of the list.

Wrecker Information

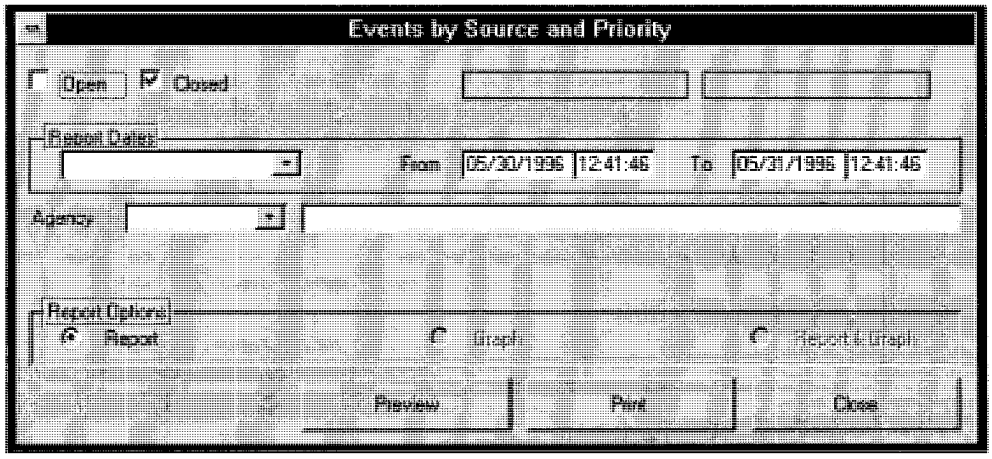
The Wrecker Information report itemizes wrecker company services. Information provided includes company name, equipment, phone number, date last used, and availability.

The main menu used for the reporting applet is illustrated below:



Select Report Menu

After selecting the desired report, an associated form appears for the operator to use in supplying additional information that specifically defines the report. The following dialog box illustrates the information requested for the "Events by Source and Priority" report.



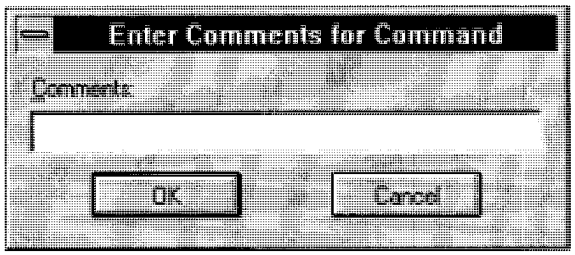
Events by Source and Priority

In addition to the standard reporting utility provided with I/Dispatcher, IPS recommends the Intergraph Public Safety/Management Analysis and Reporting System (I/MARS) to enhance reporting and provide trend and statistical analyses capabilities. I/MARS is discussed in detail later in this overview.

3.3.4.12 Additional I/Dispatcher Commands

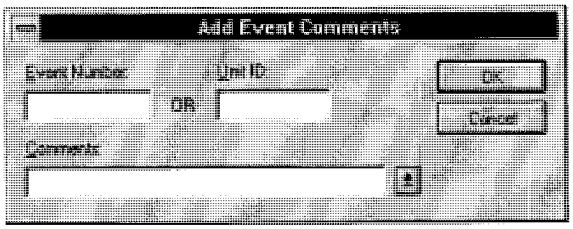
In addition to the commands covered during the previous discussions of I/Dispatcher, the following section briefly describes auxiliary I/Dispatcher commands.

Accept Advised Event Records an event that does not need a unit response, but does require entry into the database, for example, a call to the wrong jurisdiction or an information-only report.



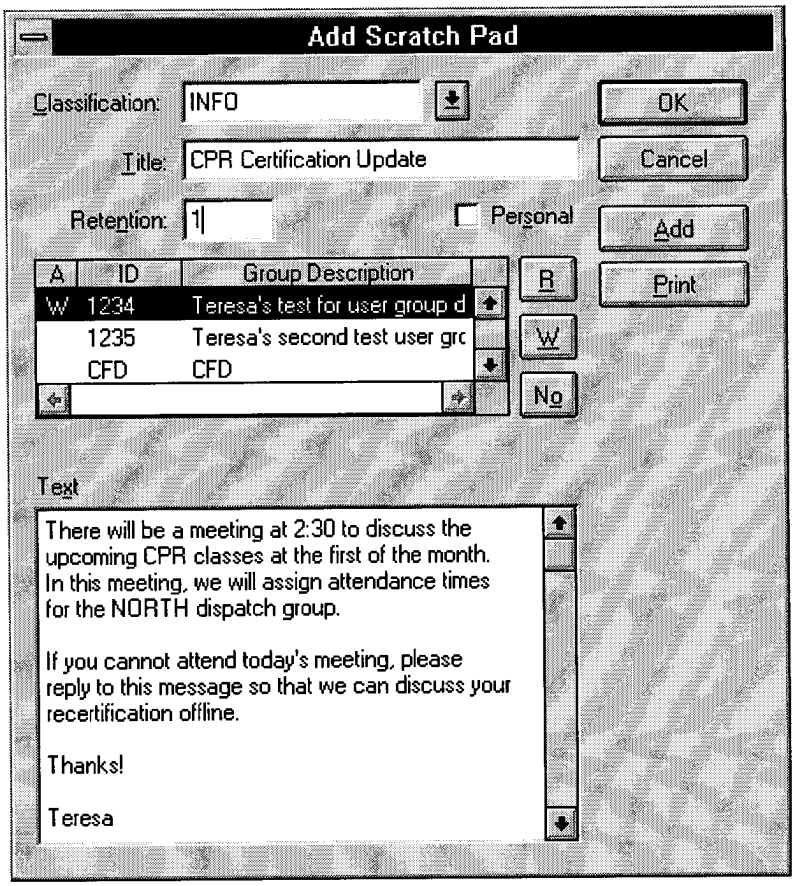
Add Event Comments

Used when one event is active and comments need to be added to another. Using this command allows the operator to append comments to an inactive event without deactivating the active event.



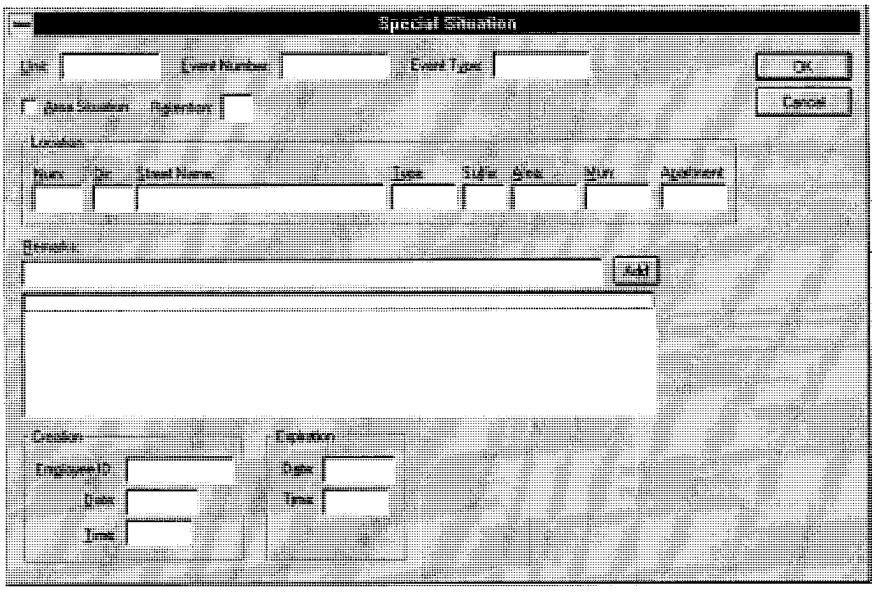
Add Scratch Pad

Used to enter information which is primarily of interest in the communications center. The system stores this information in a notes format maintained by category or subject—the operator may recall the information when needed. Because such information may be sensitive, this command has security restrictions.



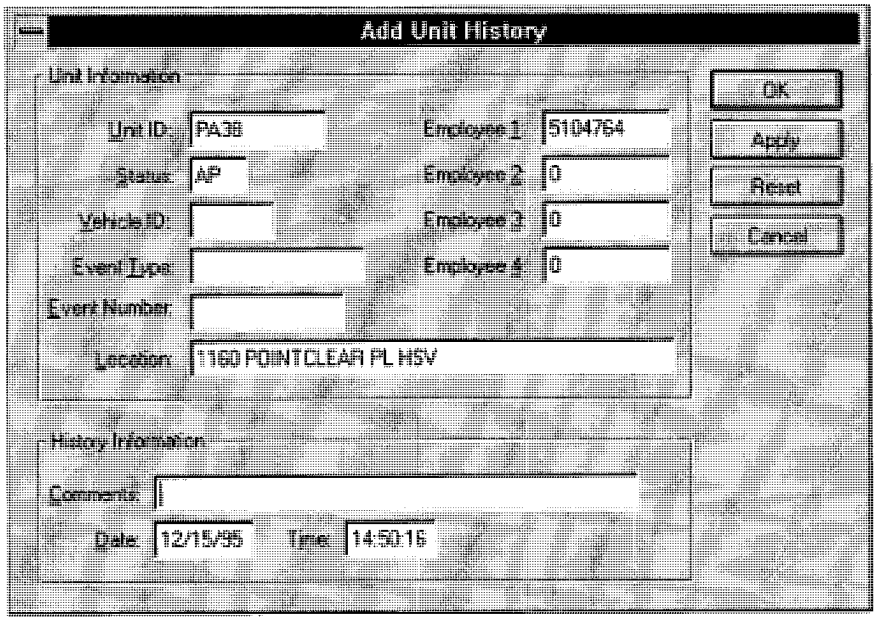
Add Special Situation

When information is received about a location of special interest, but is probably temporary, this command can used to add the information to the database. If it is later determined that the special information is permanent, the systems administrator can change the temporary status.



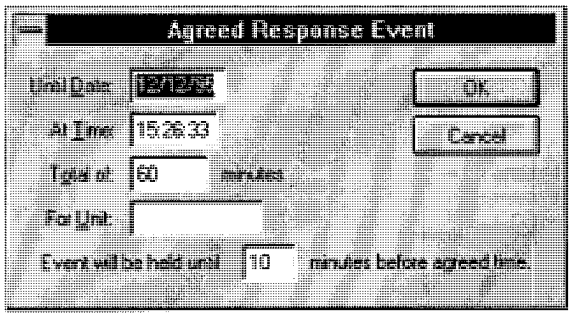
Add Unit History

Writes information, such as personnel or vehicle changes, to a unit history record.



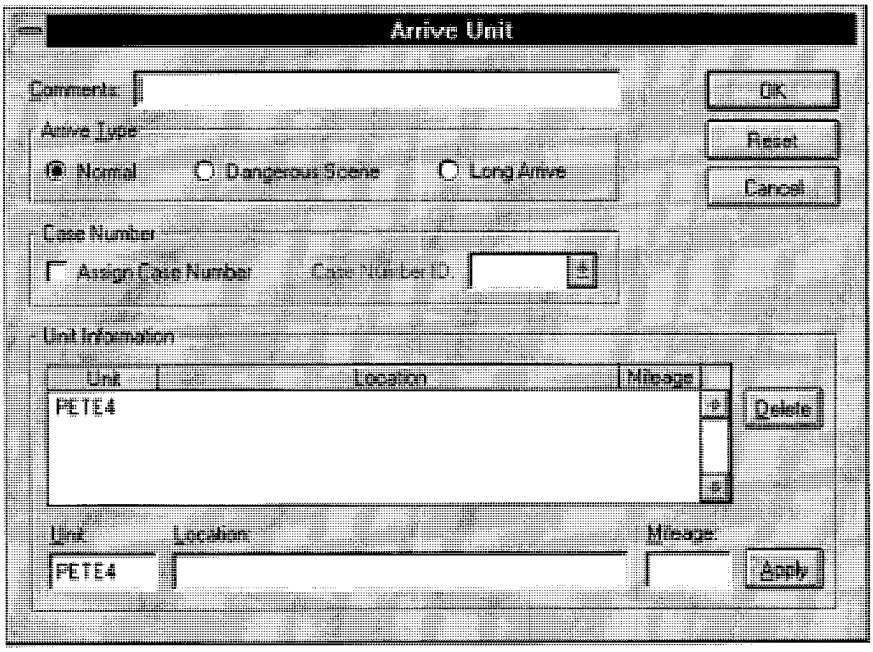
Agreed Response

Used for any new event that does not require immediate response and for which the complainant agrees to meet the responding unit at an agreed-upon time.



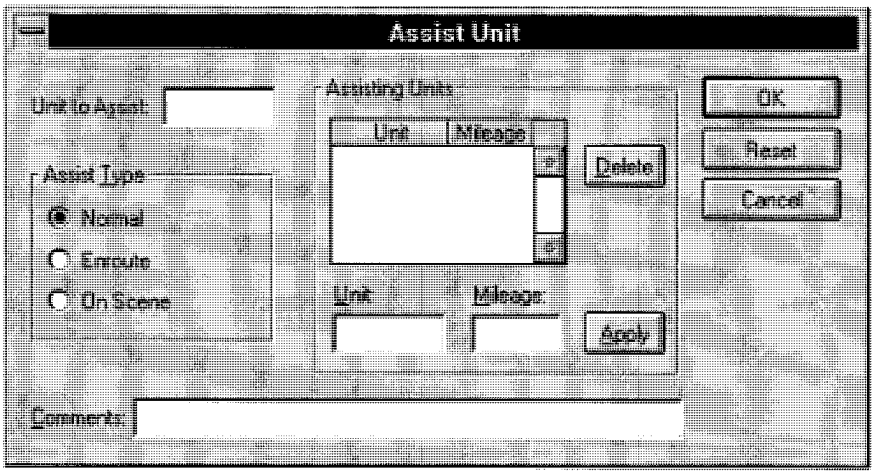
Arrive Dangerous Scene

Units that have arrived at an incident can be marked with the status of "arrive dangerous scene." This status records the arrival time of the unit and indicates that the unit will wait for back-up or an escort before proceeding or will wait until it is safe to proceed.



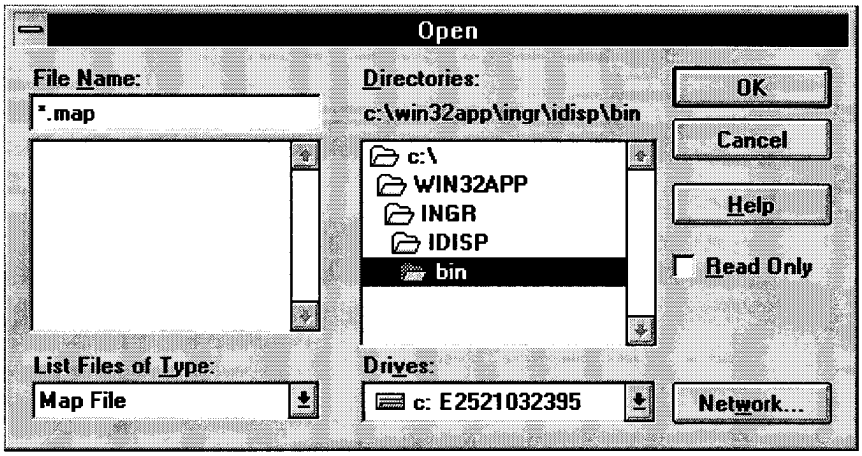
Assist Unit

Used to send back-up or additional units to a dispatched event, even if the dispatched unit is not yet on the scene.



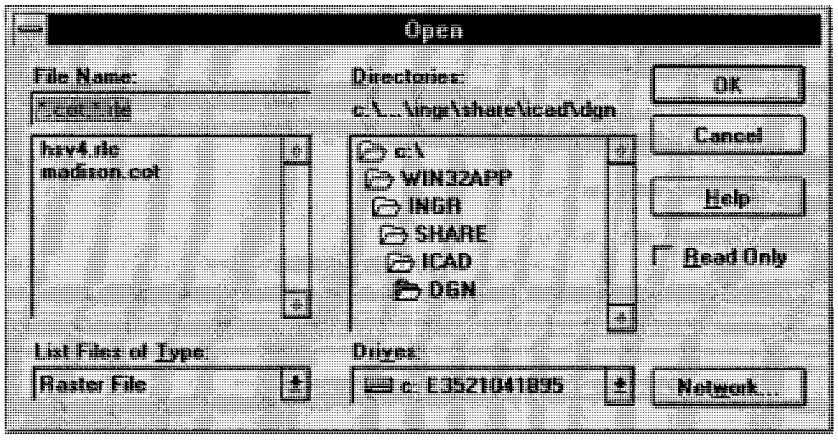
Attach Reference File

Attaches one or more map files to the current map file. When a reference file is attached, the file is drawn on the map monitor, overlaying the active design file. The reference file can be manipulated in the same way the active file is manipulated (for example, the user can zoom in or out). The attached file remains attached until the "Detach Reference File" command is selected.



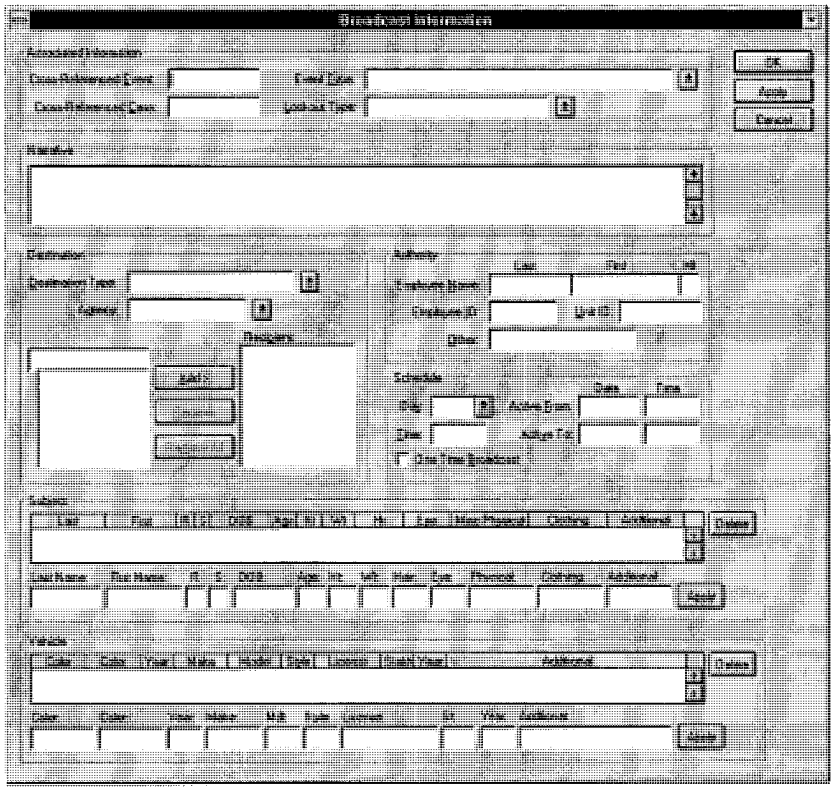
Attach Raster File

Attaches one or more raster files as a backdrop to the map. The attached raster file can be manipulated in the same way that the active file is manipulated (for example, the user can zoom in or out). The attached raster file remains attached until the "Detach Raster File" command is selected.



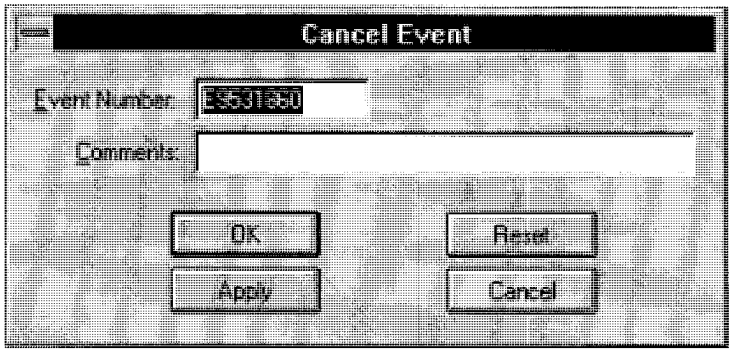
Broadcast Information

Issues bulletins and other agency-wide information, regardless of priority or event relationship.



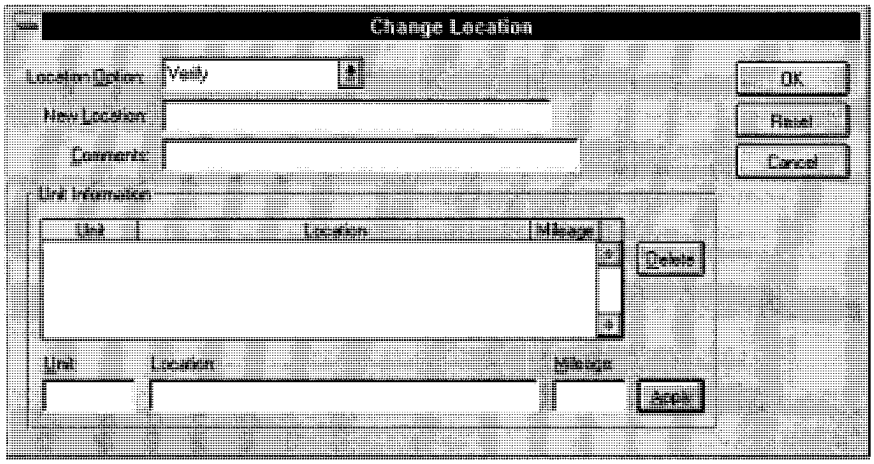
Cancel Event

Used to cancel an active, unassigned event.



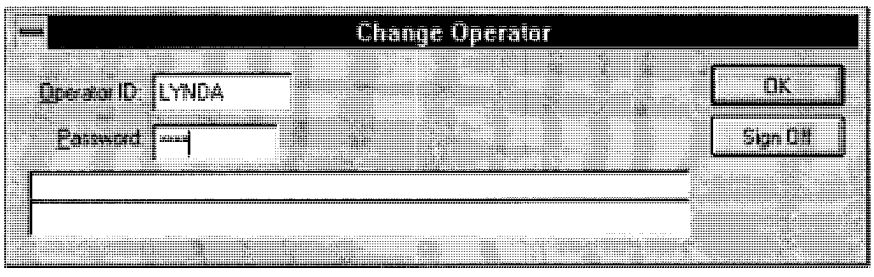
Change Location

Tracks the changes when a unit moves to a secondary location while still assigned to an event. For example, a police unit moves from an event location to another address for further investigation. The "Change Location" command can also be used for unassigned units. Map symbols of units can also be dragged and dropped to a new location on the map display, and the database will automatically reflect the updated location.



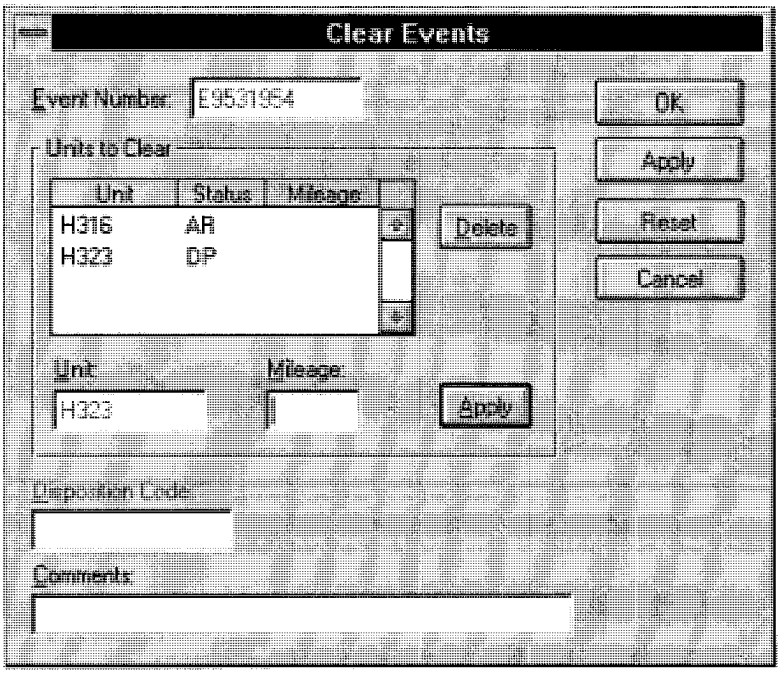
Change Operator

Allows operators to change positions without signing off of the system. Typically, this is performed when one operator relieves another.



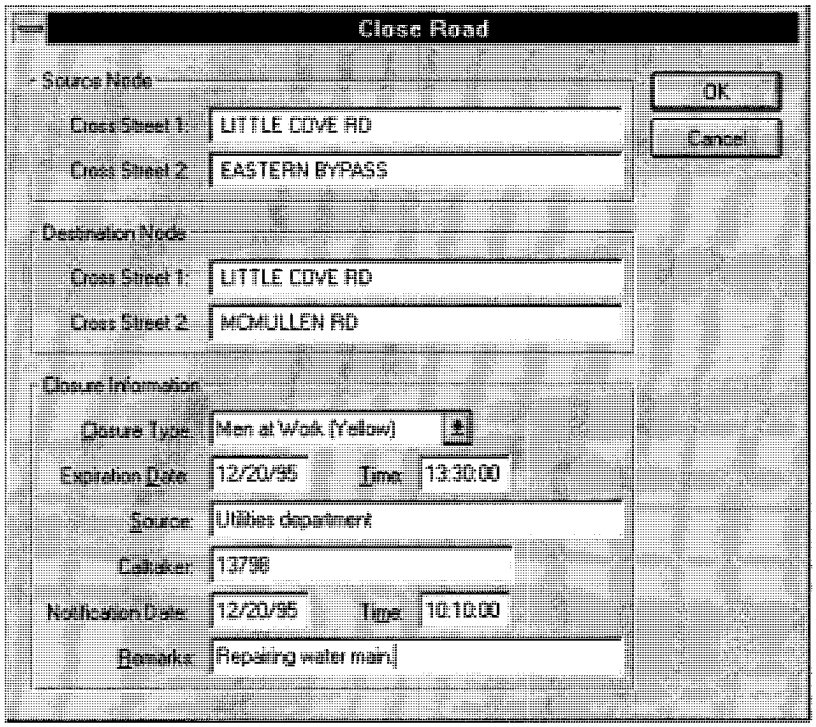
Clear Event

Clears all units and/or agencies assigned to an event.



Close Road

Allows an operator to close a road. The map displays the closed roads, and the database captures the information for queries and processing. The road remains closed on the map until it is re-opened.

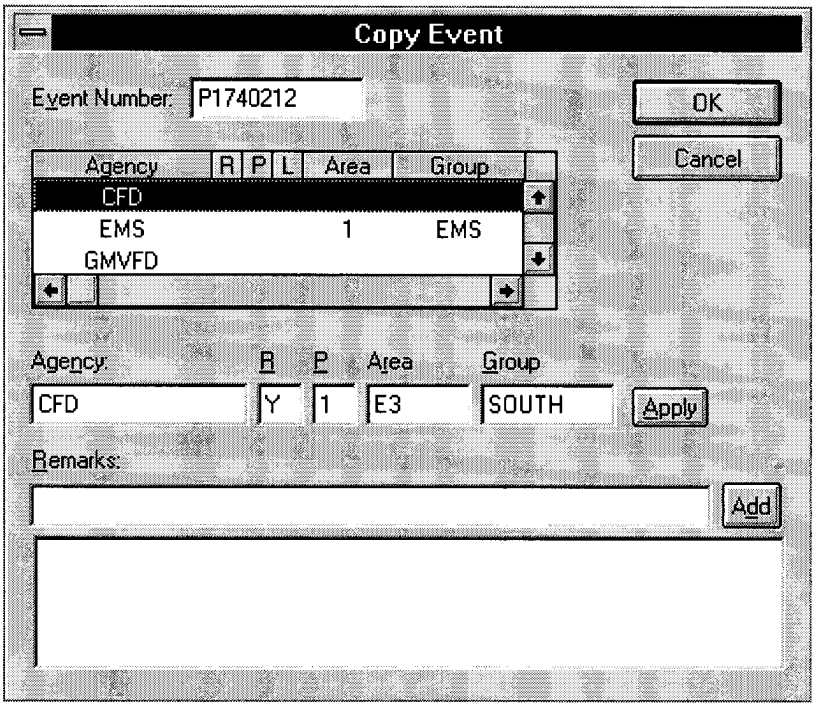


Copy Event

Allows information to be copied to another agency, to multiple agencies, or to another dispatch group in the same agency. This is especially useful when an active event requires a response from more than one agency or from more than one dispatch group within an agency.

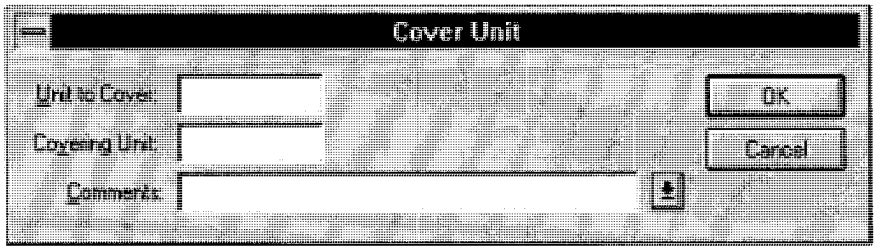
For example, a traffic accident is automatically a police event. If the accident involves injuries, it is also an EMS event. If the accident involves spilled fuel, it is a fire event as well. The "Copy Event" command allows the user to copy the police event to the fire department and EMS agencies and avoid re-entering the information.

Note: The "Create Associated Event" command can also be used to copy events to dispatch groups in the same agency, as well as to other agencies.



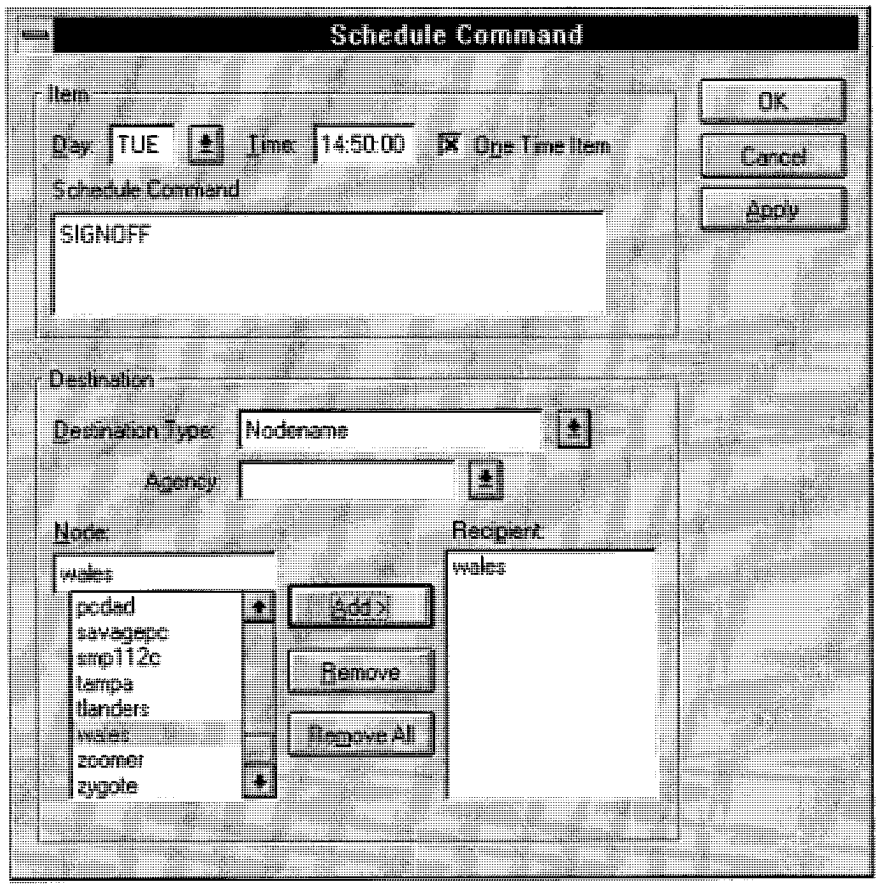
Cover Unit

Used when a unit temporarily assumes the responsibility of another unit.



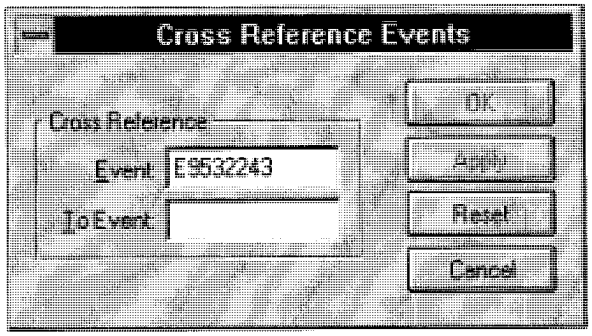
Create Scheduled Event

Used to schedule a non-emergency run, usually for an EMS agency. For example, it can be used to schedule a run for a dialysis patient each Monday, Wednesday, and Friday at 1030 hours. In this example, an ambulance must be scheduled to pick up the patient in time to make the appointment, and the same, or another ambulance, must be scheduled to return the patient after treatment.



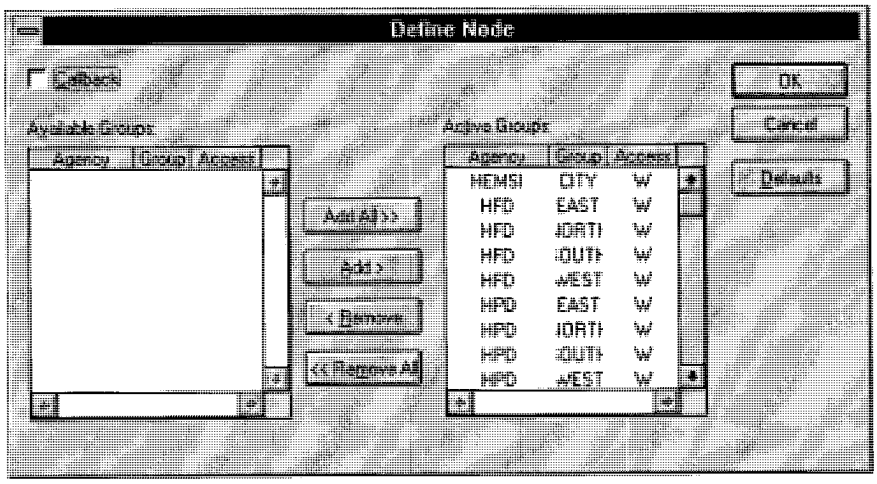
Cross Reference Event

Cross references two or more events that appear to be related, creating entries in the history records of each event.



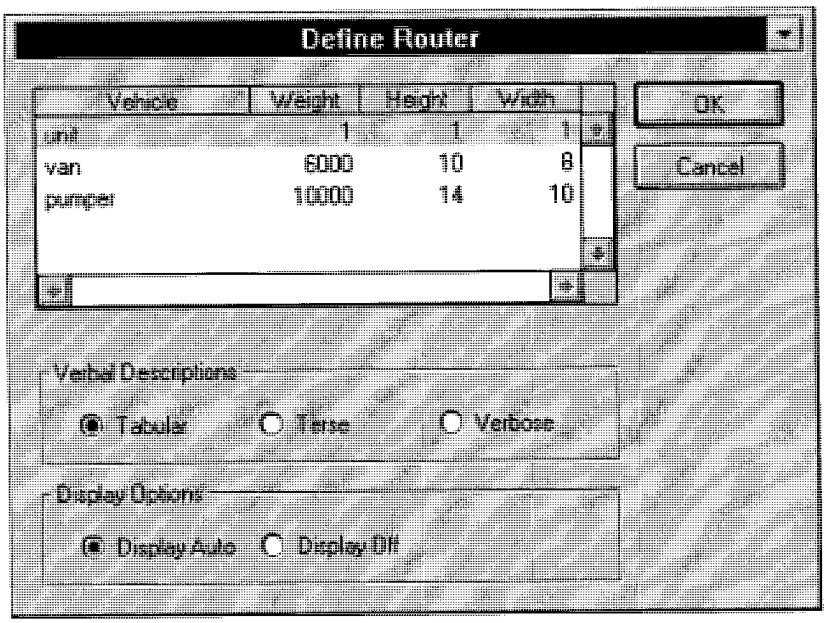
Define Node

Defines the agency/dispatch groups to be loaded or changed on an operator's workstation; also used to make the workstation a call-back station.



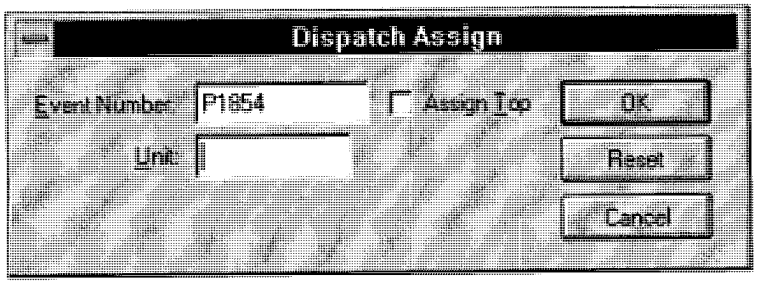
Define Router

Notifies I/CAD how routes are to be drawn. At configuration, the system has a default definition, or description, which the operator may want to change. By defining the router, the operator can specify vehicle types, how to format the verbal directions, whether the route is to be drawn fast or slow, and whether the route should display in the foreground or the background.



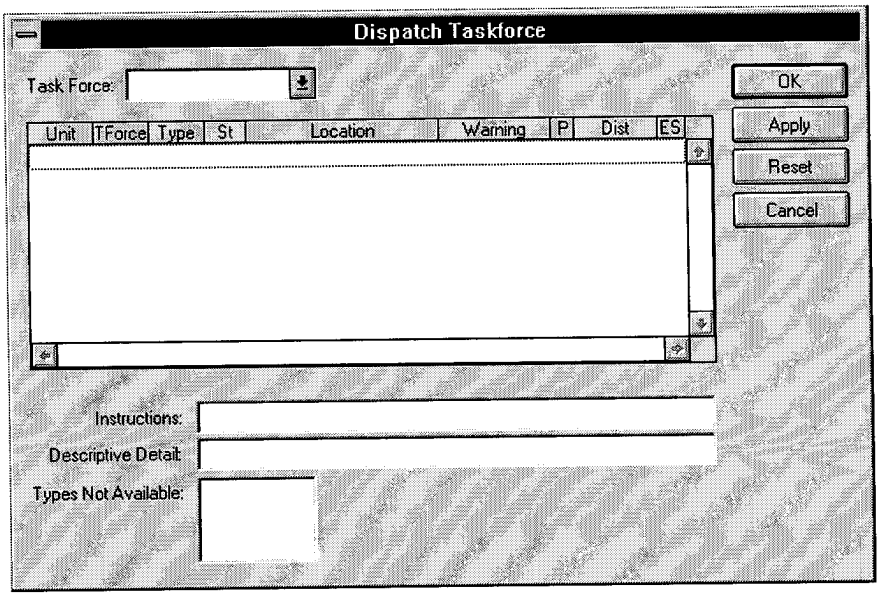
Dispatched Assigned

Stacks an event to a unit, allowing the operator to assign multiple events to one unit.



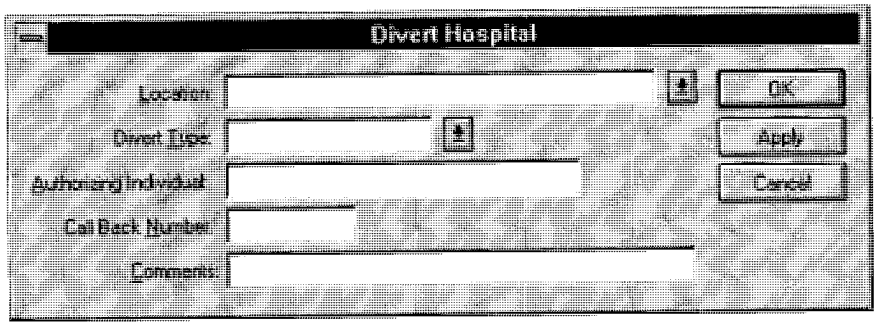
Dispatch Task Force

Allows the user to dispatch a task force, which is a group of units that can be dispatched as a single entity.



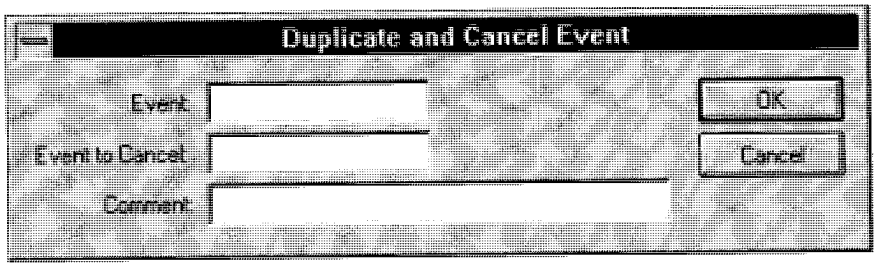
Divert Hospital

Hospitals sometimes notify EMS agencies of existing conditions that restrict their ability to accept more patients. The hospital may be full or it may have restrictions in one area that would exclude certain types of patients (for example, cardiac patients). The "Divert Hospital" command maintains the status of each hospital. An operator will receive a warning if a unit starts to transport to a hospital on diverted status.



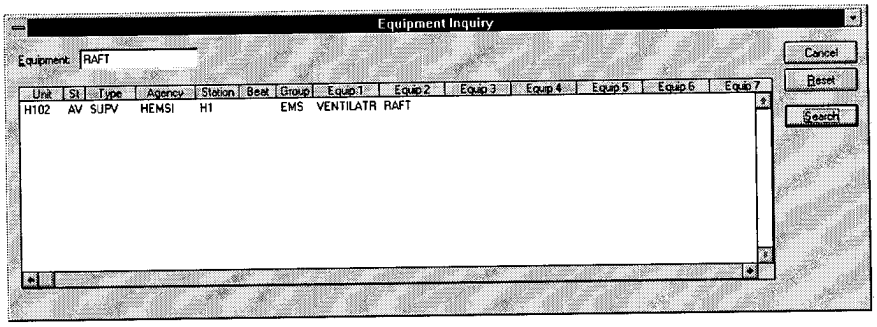
Duplicate and Cancel

When it is recognized that two events are actually the same event reported by two different parties, the "Duplicate and Cancel" command is used to record and cross-reference the incidents and cancel one of them.



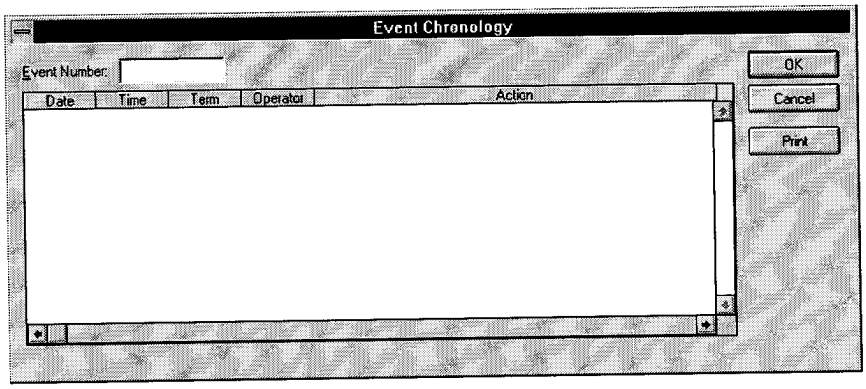
Equipment Inquiry

Allows the operator to locate units that have special equipment such as the "Jaws of Life" or "Life-Pak."



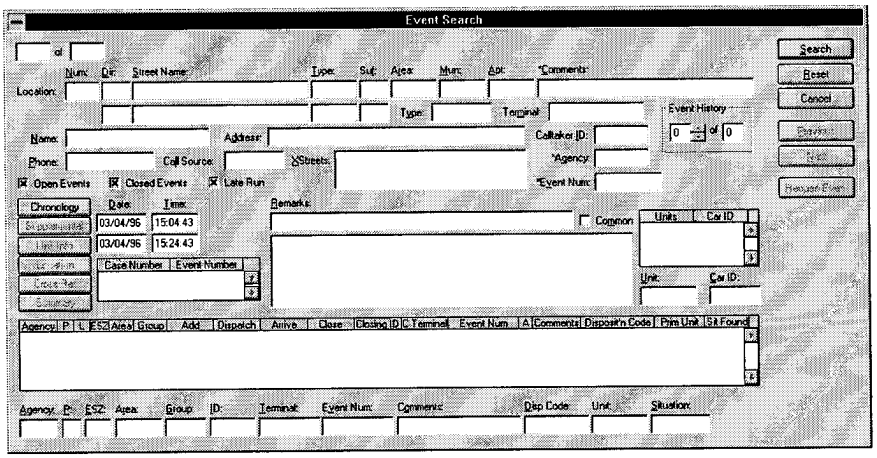
Event Chronology

Displays an event lifecycle summary that is arranged chronologically.



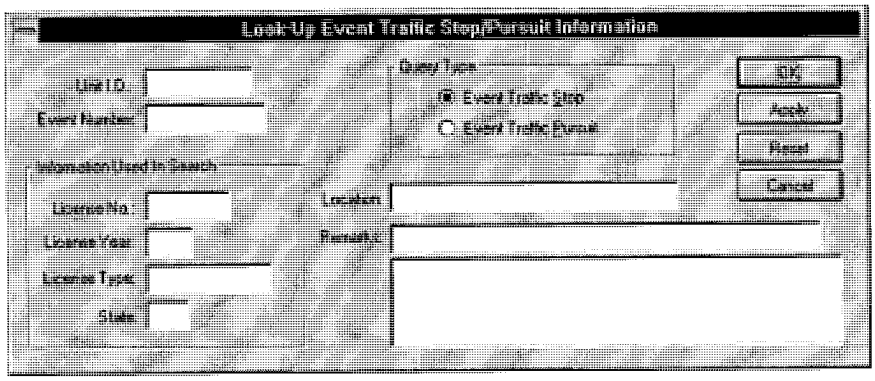
Event Search

Allows the operator to search for an event when the event number is not known. Because "Event Search" is a background command, any other I/CAD command can be executed while waiting for the search to be completed. There are several fields available to set the search criteria.



Event Traffic Pursuit

Records and maintains traffic pursuits as specific types of events. An Event Traffic Pursuit must be related to an event; in other words, it must occur in conjunction with a previously assigned event. The system appends the information from this command to the original assigned event rather than creating a new event.

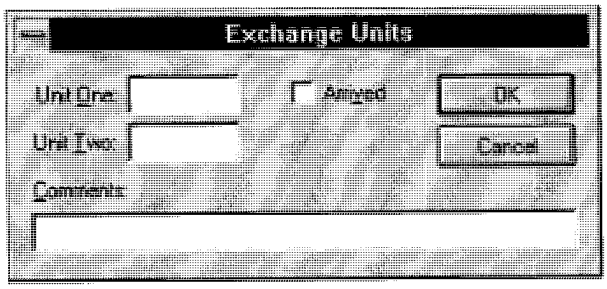


Event Traffic Stop

Records and maintains traffic stops as specific types of events. An Event Traffic Stop must be related to an event; in other words, it must occur in conjunction with a previously assigned event. The system appends the information from this command to the original assigned event rather than creating a new event. This command uses the same form as the "Event Traffic Pursuit" command.

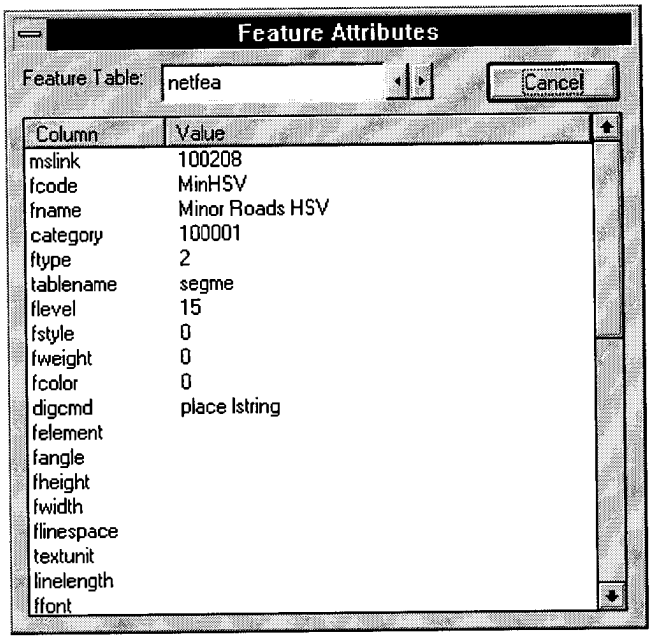
Exchange Unit

Allows two units to be identified and their assignments and status's swapped.



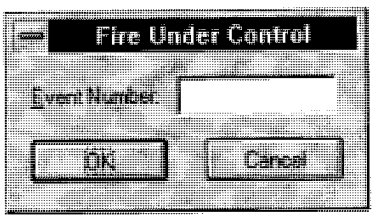
Feature Attributes

Reviews attributes of a particular graphic entity on the map. An attribute is a quality or characteristic of a feature; for example, an attribute of a particular street might be the street name or the zip code of the identified block.



Fire Under Control

Allows the operator to record the date and time in the database when units advise that a fire event has reached the "under control" stage.

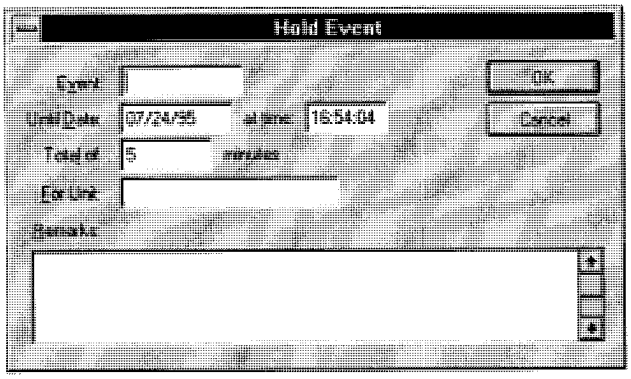


Greater Alarm

Raises the alarm level of an active event. Each time the "Greater Alarm" command is selected, the alarm level is increased by one. Using the "Unit Recommend" command will recommend units needed for that alarm level.

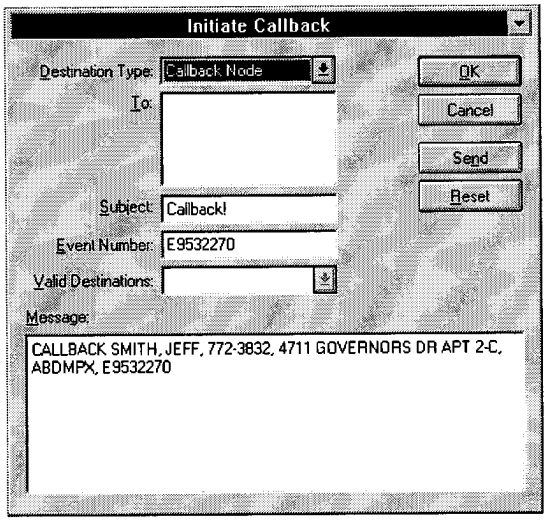
Hold Event

Used to place a non-critical event on hold. An event can be held for a certain time, date, or specified unit, or any combination of the three. If more than one condition is specified, all of the conditions must be met. In other words, if an event is held for a certain time and a specific unit, both the time and unit constraints must be met before the event goes off hold.



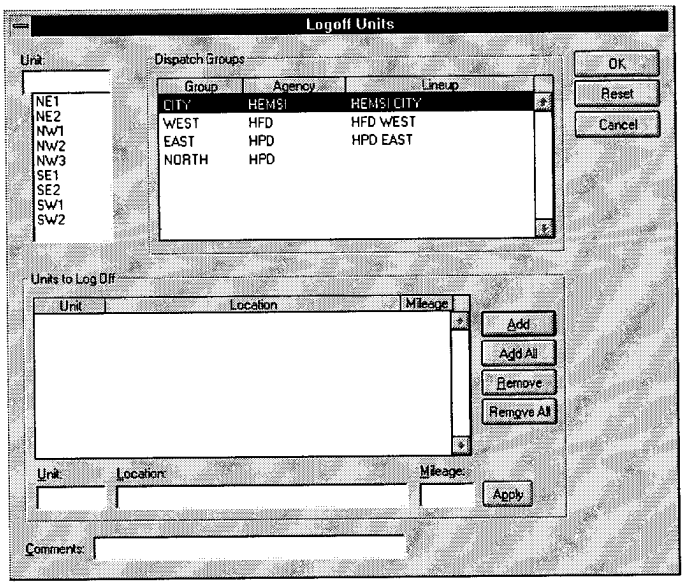
Initiate Callback

Sends a message to the originating workstation (if it is designated as a callback workstation) to recontact the reporting party of an event. This command displays a dialog box loaded with the existing complainant information.



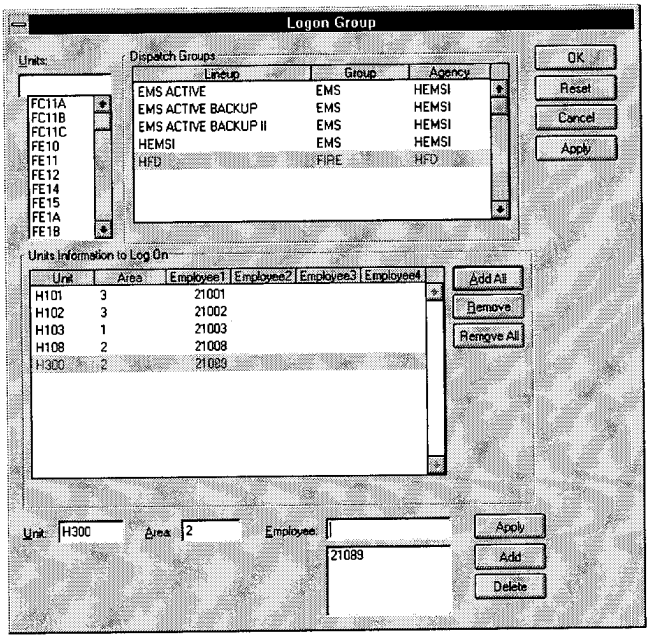
Logoff Unit

Used to log off units either individually or as a group. When units that have dispatch-assigned events log off, the dispatch-assigned events are returned to the Pending Events dialog box. Units working one event, but with other dispatch-assigned events, are marked as "awaiting logoff," and the dispatch-assigned events are returned to the Pending Events dialog box.



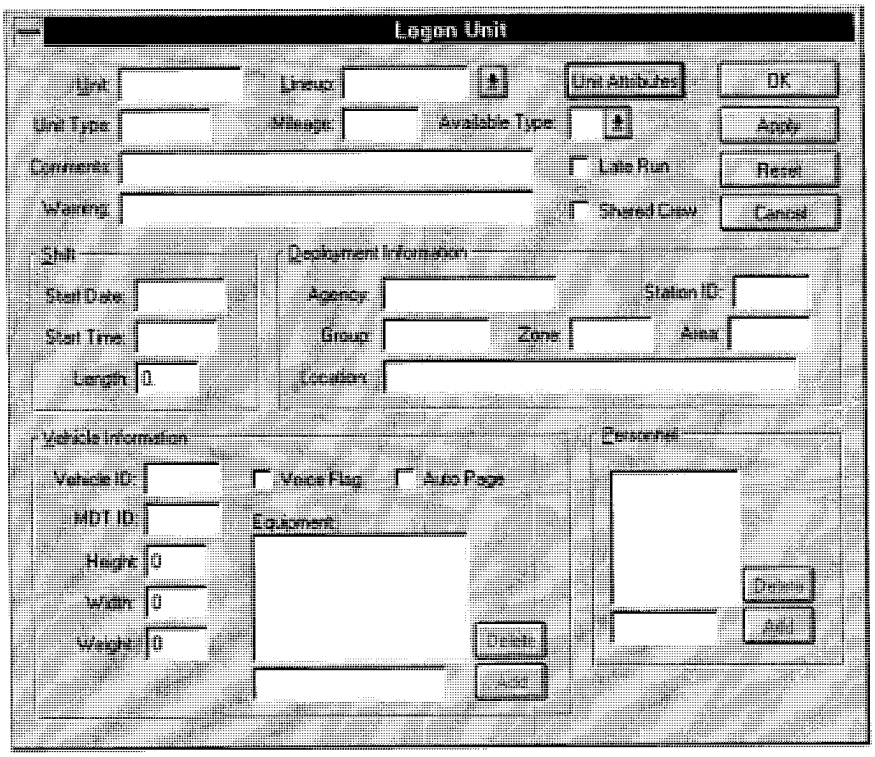
Logon Group

Logs on an entire dispatch group simultaneously. It is usually used in agencies where a supervisor informs communications that an entire group of units may be logged on.



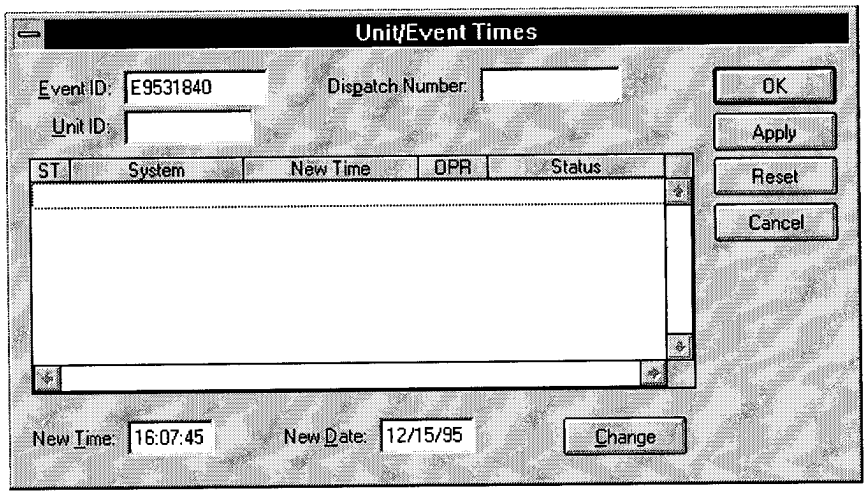
Logon Unit

Allows the operator to log on individual units.



Manual Times

Used to enter unit and event times manually. This typically occurs when there is heavy radio traffic or the unit is not able to communicate its times immediately.



Minimum Distance

Draws a route between two specified points on the map that passes over the shortest distance, taking one-way streets, closures, and possible turns into account.

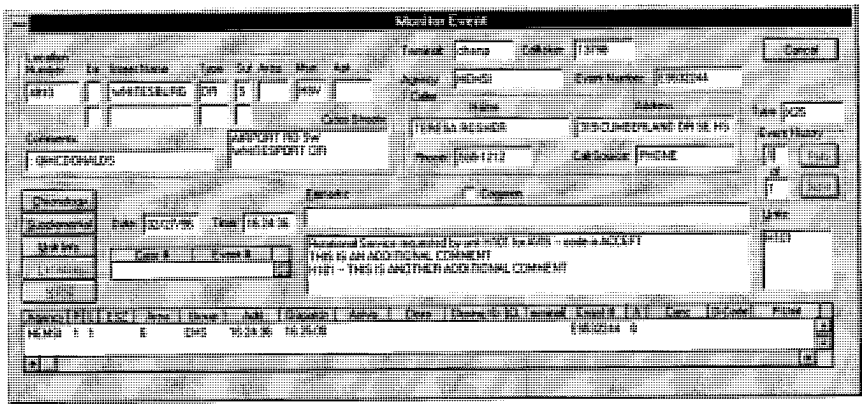
Minimum Intersections Draws a route between two specified points on the map that passes through the fewest intersections, taking into account intersections, closures, and one-way streets.

Minimum Risk Draws a route between two specified points on the map that has the lowest risk for the unit, taking into account risks associated with the street segment, speed limits for the street segments, stop signs and signals, closures, one-way streets, and intersections.

Minimum Time Draws a route between two specified points on the map that takes the shortest time possible, taking into account speed limits for the street segments, stop signs and signals, closures, and intersections.

Minimum Turns Draws a route between two specified points on the map that contains the fewest turns, taking into account the number of turns, closures, one-way streets, and intersections.

Monitor Event Allows an operator to watch the processes of another event as they occur in real-time.

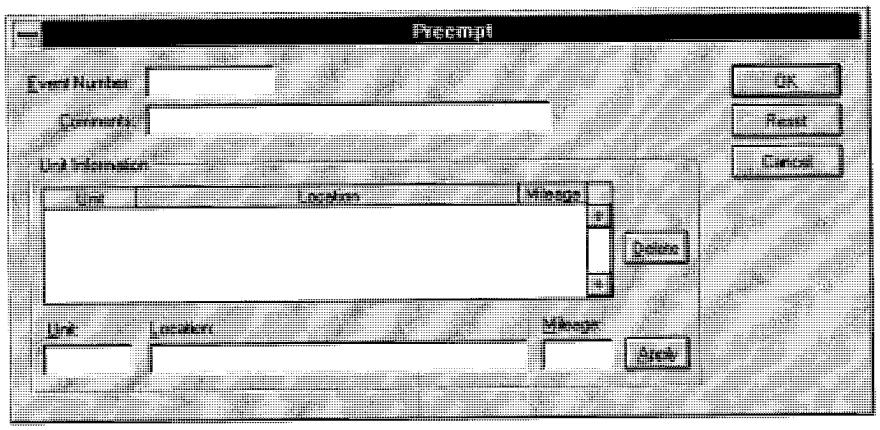


Open Road Re-opens a road listed in the database as closed.

Preempt Unit

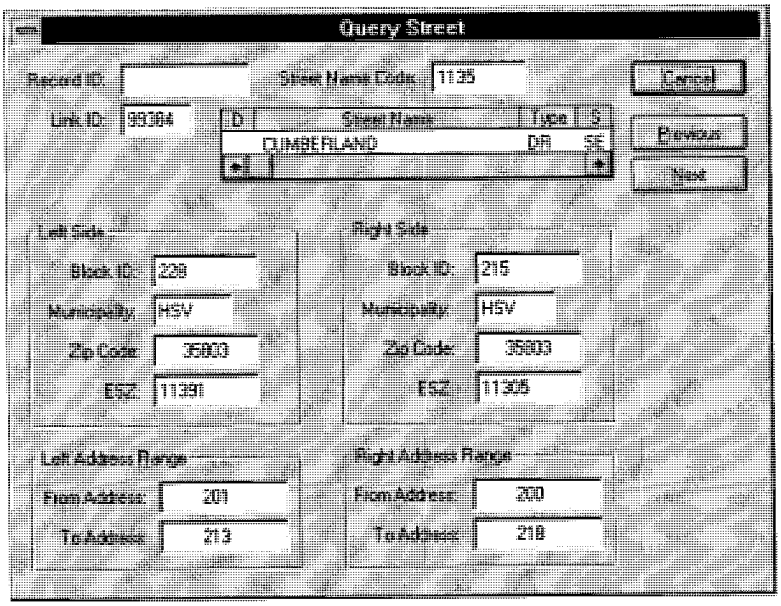
Pre-empts a unit from an event. When a unit is pre-empted, that unit is separated from the event to which it is assigned. When a unit is pre-empted that is not the only unit on the event, the unit is released from the event and is available for dispatch again. When it is pre-empted and is the only unit on the event, the Pre-empt Warning dialog box appears and presents the following options:

- Return the event to the Pending Events dialog box
- Hold the event for the unit (same as selecting the "Hold Event" command), which returns the event to the Pending Events dialog box as an event held for that unit
- Dispatch assign the event to the unit (same as selecting the "Dispatch Assigned" command)
- Place the dispatch assigned event at the top of the list (same as selecting the "Move Assigned Top" command)



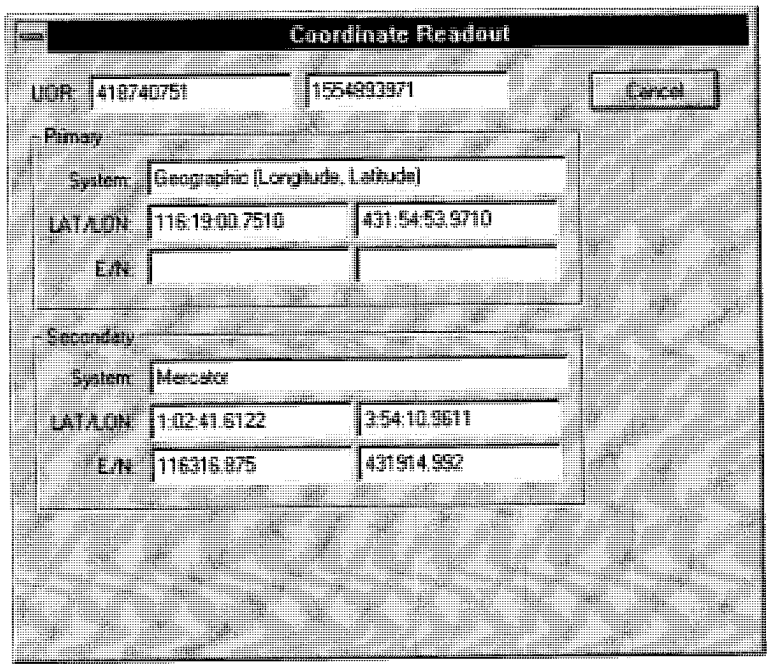
Query Street

Retrieves information about streets and street segments.



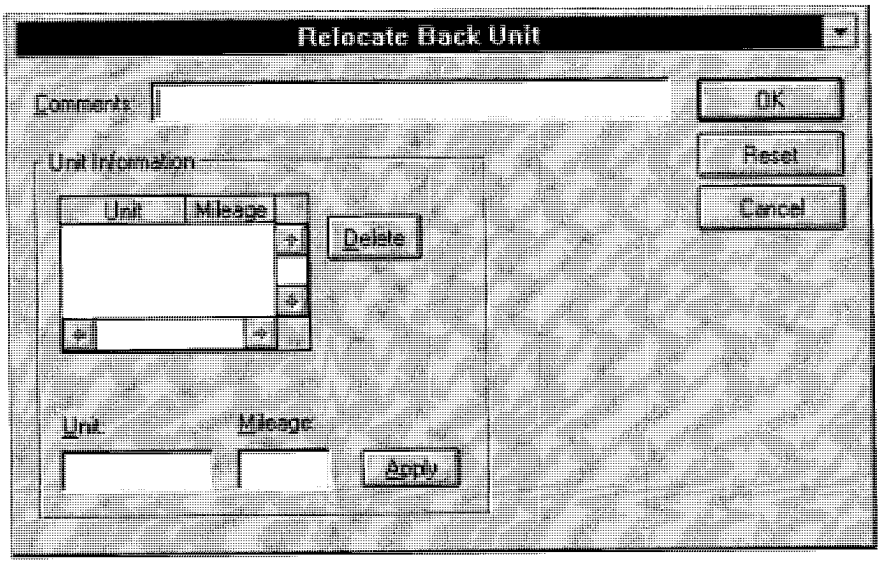
Readout

Allows the operator to display the coordinates of a specified point on the map. The Coordinate Readout dialog box provides spaces to display the major coordinate systems (for example, Mercator or Longitude/Latitude), and the presence or absence of data depends upon the coordinate systems that have been established for the I/CAD database.



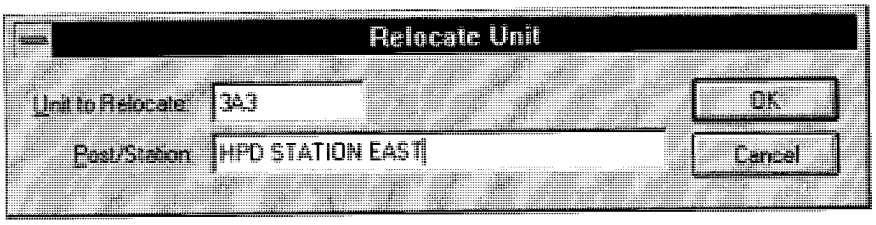
Relocate Back

Returns a unit to its home quarters.



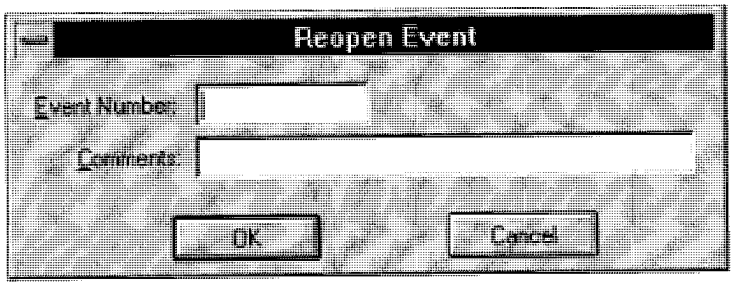
Relocate Unit

Temporarily moves a unit from its home quarters or station to another station.



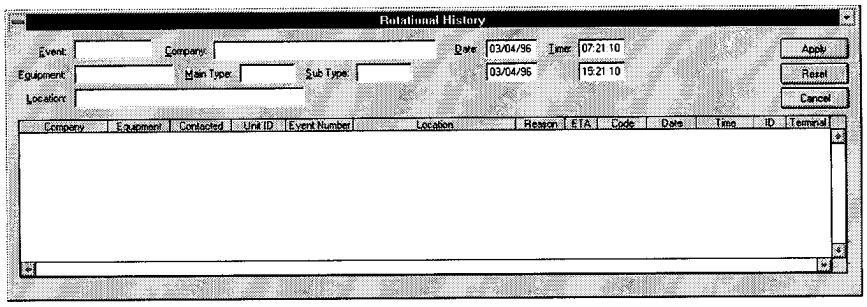
Reopen Event

Used to re-open a closed event rather than having to create a new event that is cross-referenced to the closed event.



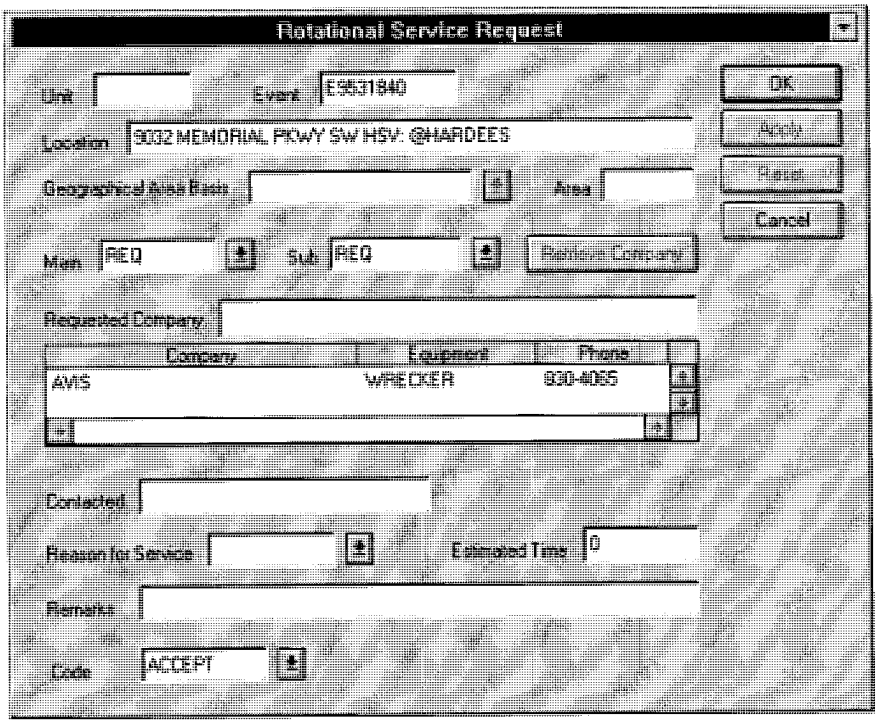
Rotational History

Allows the operator to inquire about contacts made to commercial contractors, such as tow services and private ambulances, called upon through a rotational policy.



Rotational Service Request

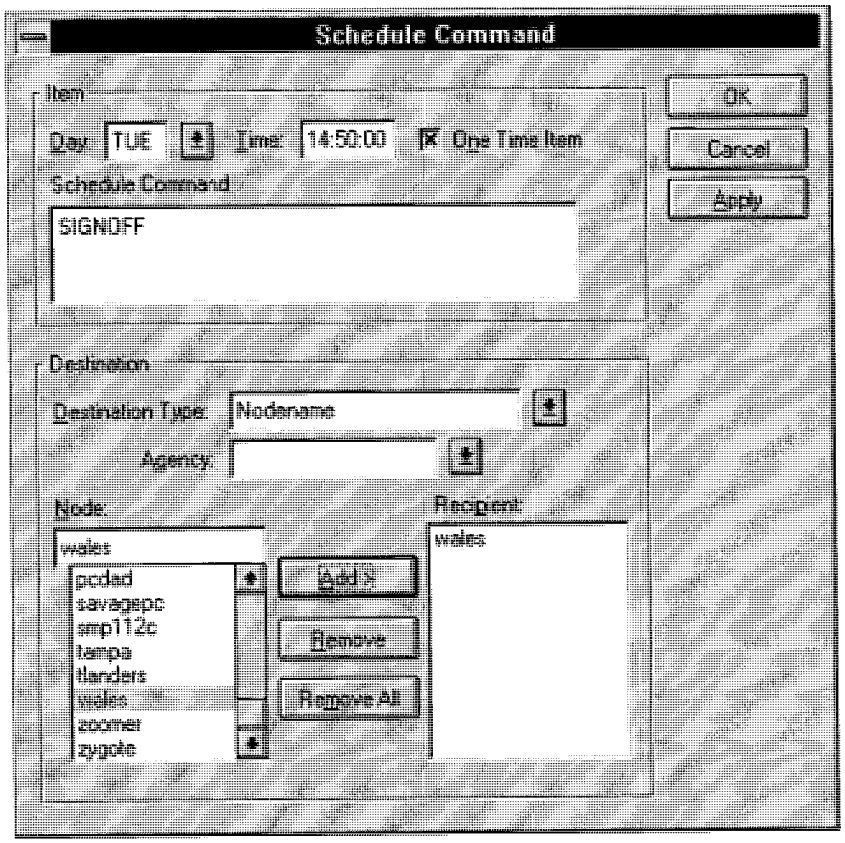
Used to select a commercial contractor that provides a specific service. A Rotational Service Request in I/CAD is a request to call a commercial contractor, such as a tow service—I/CAD maintains a rotating list of these contractors.



Schedule Command

Schedules any valid command for automatic execution on a particular day and at a particular time, or every day at a specified time. Commands most commonly scheduled are:

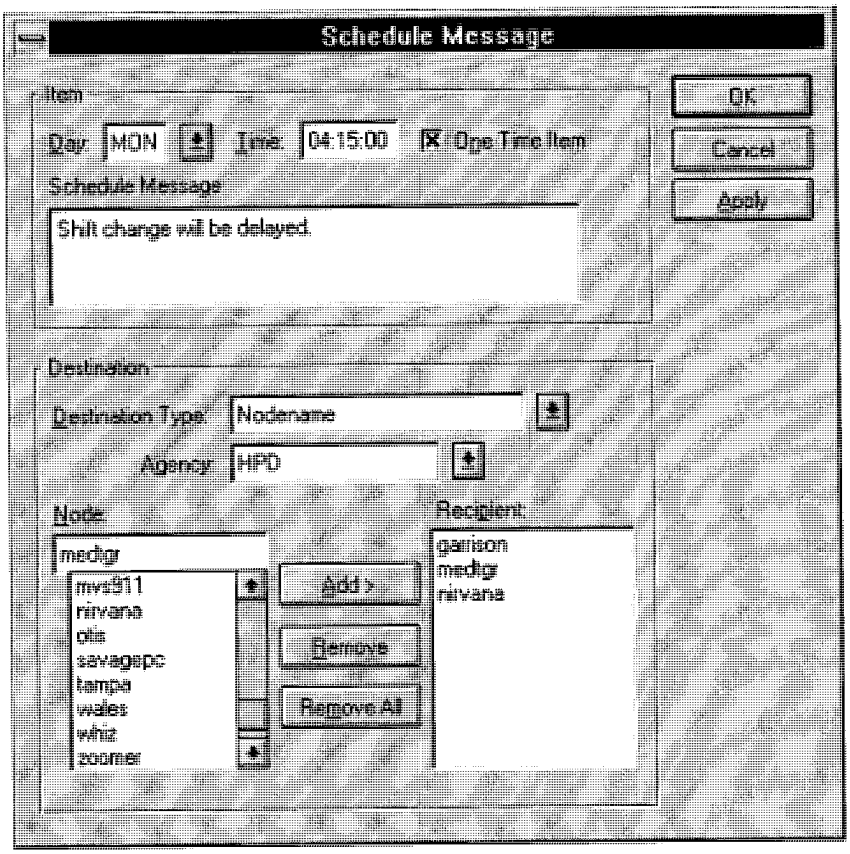
- Automatic deployment plan changes
- Unit logons
- Unit logoffs



Schedule Message

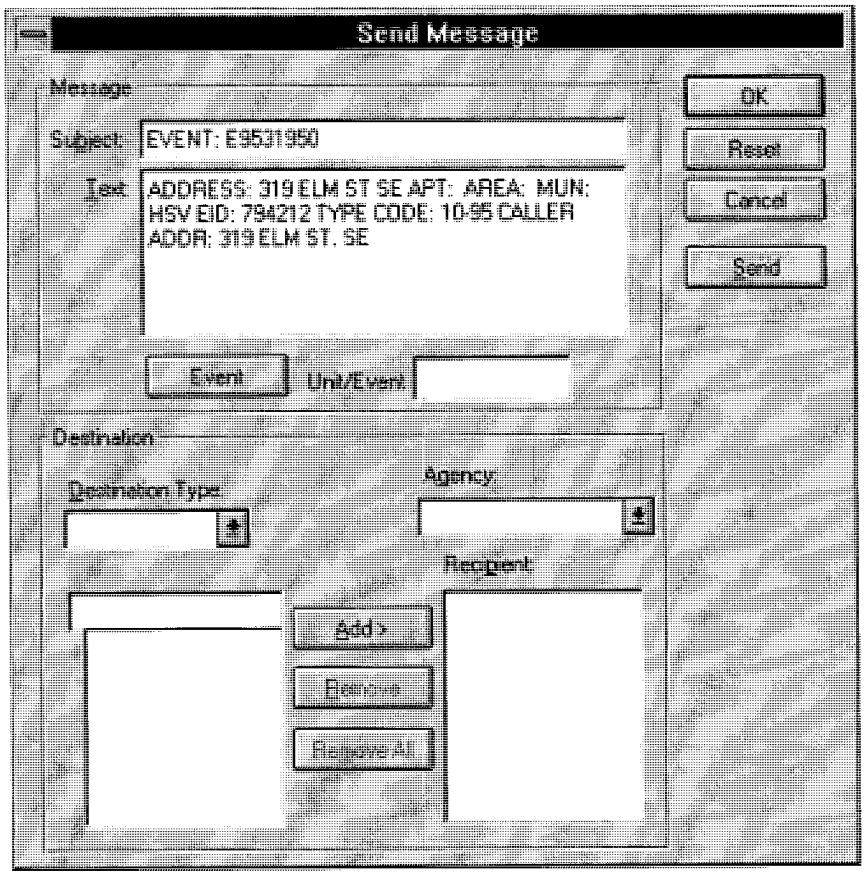
Allows a message to be automatically displayed on a specified day and at a specified time or every day at a specified time. A list of recipients can be preselected. Commonly scheduled messages include the following:

- Broadcast bulletins
- Administrative announcements
- Training announcements
- New procedures
- Schedules (vacation, meals, and holidays)



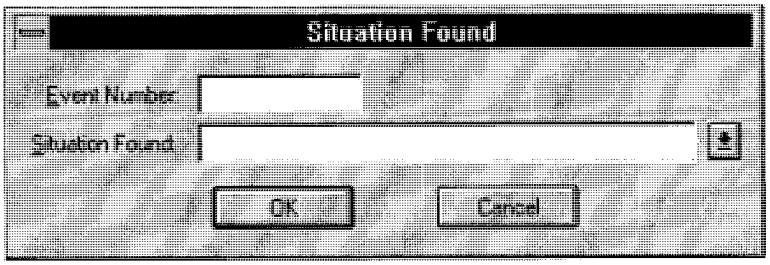
Send Message

Used to send information, primarily between workstations in the communications center, informing personnel of information such as meetings and policy changes. It can also send information from the center to MDT-equipped units—in those instances, event-related information is sent.



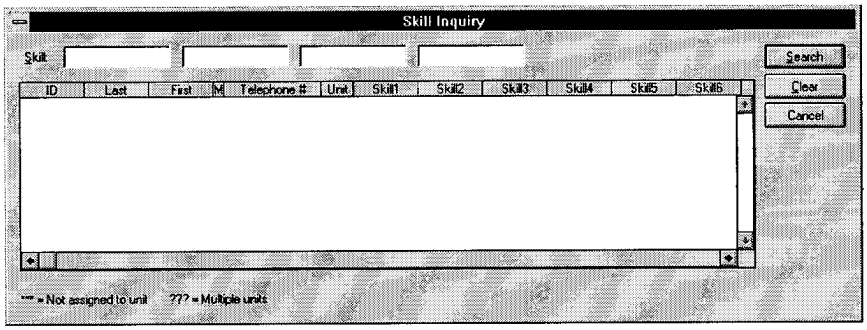
Situation Found

Used to record instances in which the originally reported incident varies markedly from the actual situation found by the field unit, but it is not appropriate to change the event type. With this command, the system maintains an audit trail showing that, as an example, the originally reported event type was a high-priority event, but the actual event was not an emergency. The "Situation Found" command retains the original information, but with database records established to show the changes made, by whom, and the time of the changes.



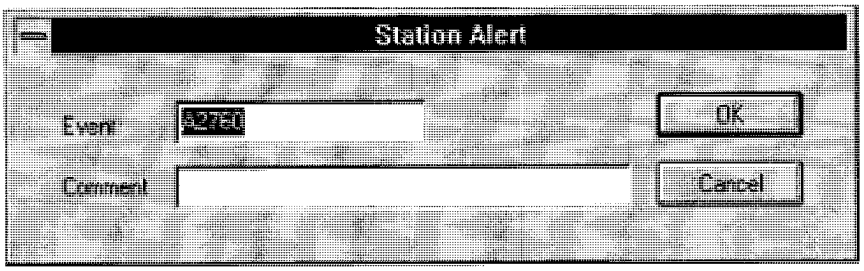
Skill Inquiry

Locates personnel with special skills, such as foreign language skills, CPR, or sign language.



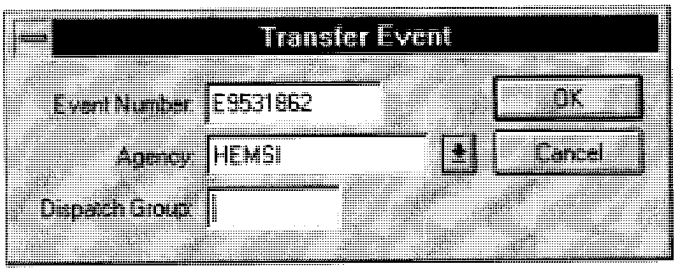
Station Alert

Creates a system time stamp and marks that the station was notified of a new event. Typically, Station Alert is used in jurisdictions served by volunteer fire departments.



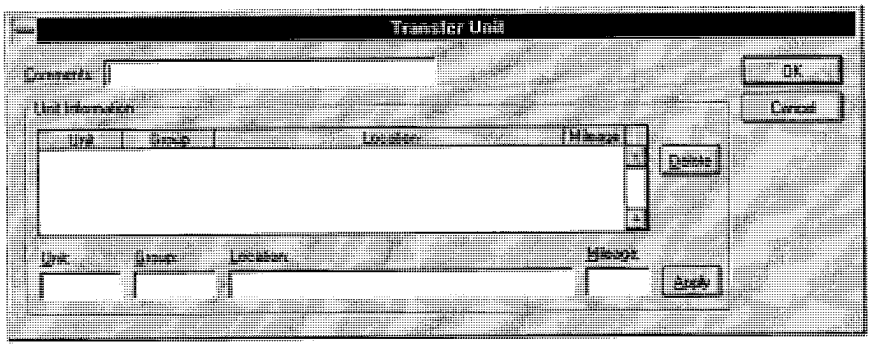
Transfer Event

Transfers an event and all of its associated assigned units to another dispatch group, regardless of status.



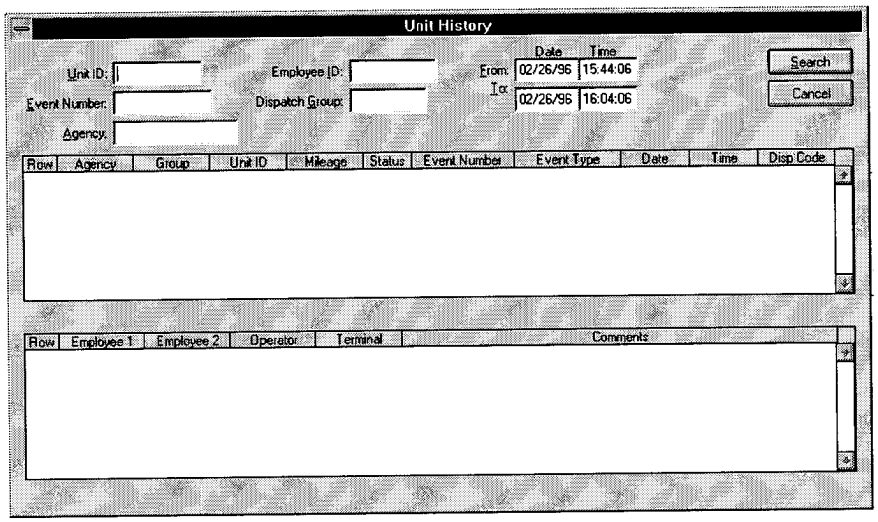
Transfer Unit

Allows an operator to lend a unit to another dispatch group.



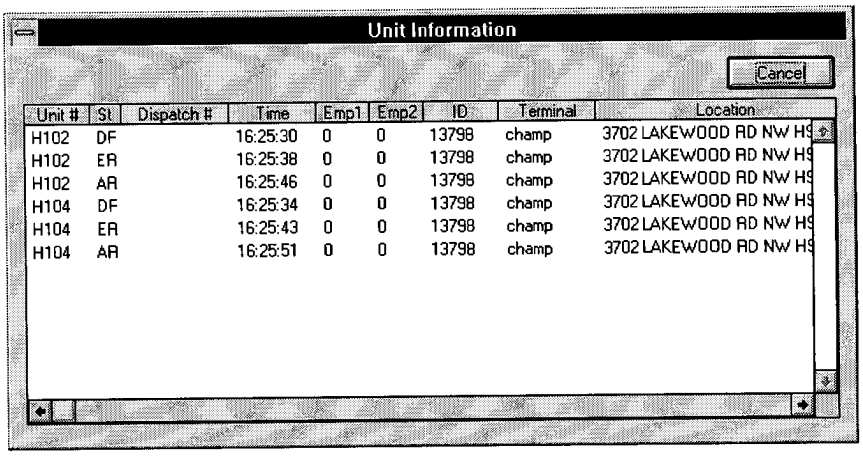
Unit History

Allows the operator to review a historical display of all unit activities based on the defined search criteria.



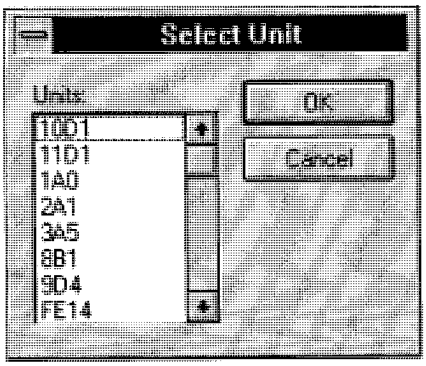
Unit Information

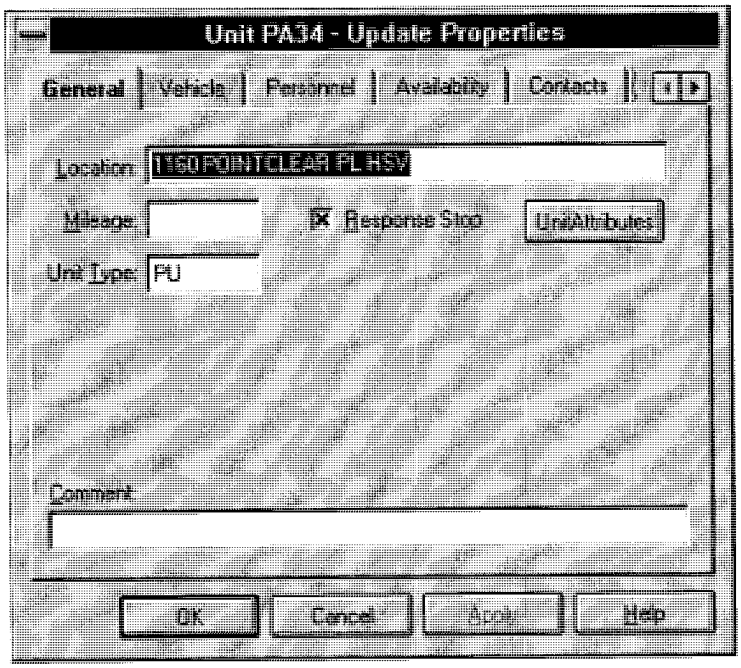
Allows an operator to review a list of the current unit history record for each unit assigned to a selected event.



Unit Properties

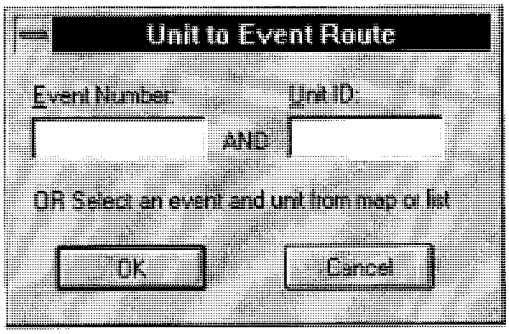
Allows the operator to make changes to unit information. The rosters and lineups contain information about the characteristics of a unit at logon. If that information changes, it may be updated on-line, without creating a new record or logging the unit off and back on.





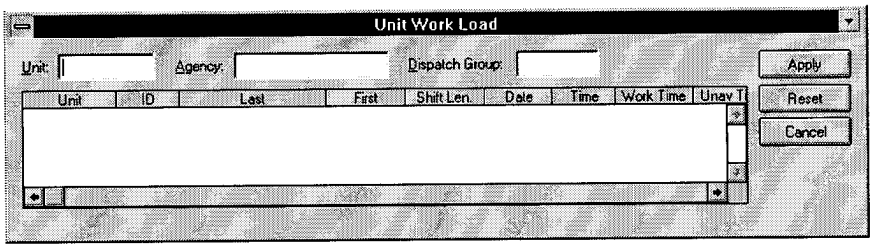
Unit to Event

Starts the "Minimum Distance" command and draws a route between a unit symbol and an event flag identified on the map.



Unit Work Load

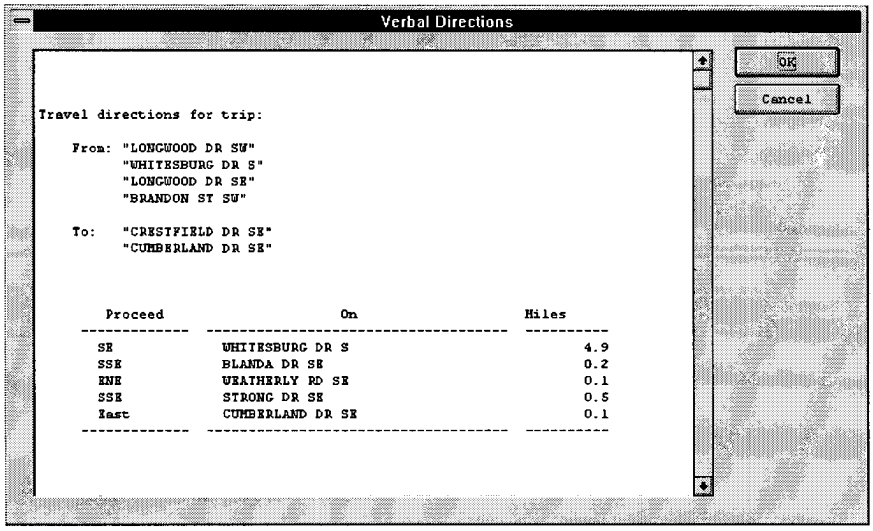
Some agencies have units working shifts of different lengths, commonly 8-, 10-, 12-, or 24-hour shifts. Because different units may be working different shifts at any one time, a user may need to know the length of a shift for each unit and what its workload has been during its present shift. It may be expected that a unit working an 8-hour shift be assigned to calls during most of that 8-hour period (80-percent utilization), whereas a unit working a 24-hour shift is expected to have some time for rest. The assignment expectation for a 24-hour unit is, therefore, about 25-percent of its shift. The "Unit Work Load" command is used to review these figures for units before they are dispatched. If a crew has changed unit ID numbers during the shift, the workload data for the crew carries to the new unit ID number.



Verbal Directions

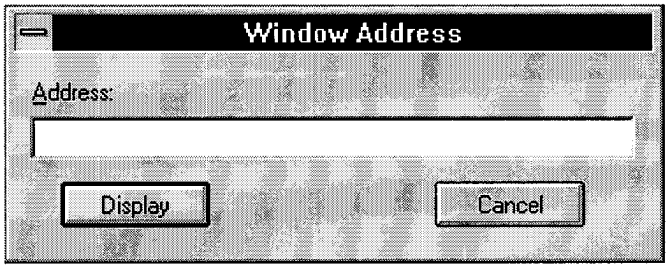
Creates verbal instructions for a route. The following formats are available for verbal instructions:

- Tabular
- Terse
- Verbose



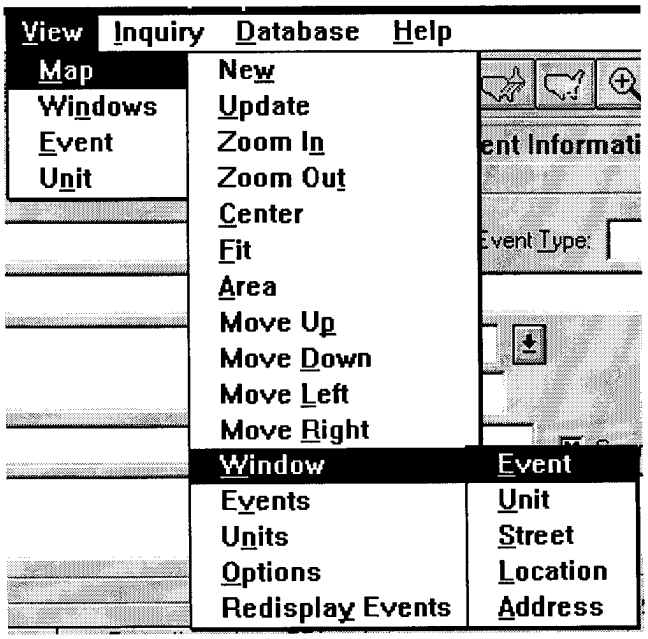
Window Address

Used to isolate and zoom in on a particular address or intersection.



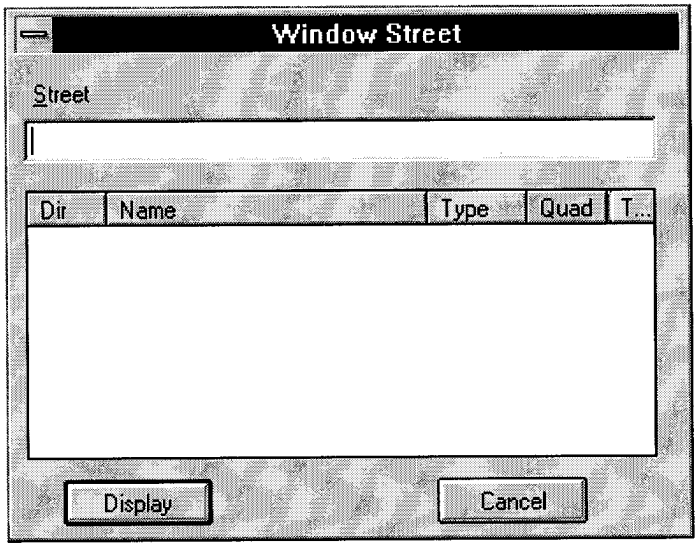
Window Event

After an event is identified, the map zooms in on that event to a predefined range.



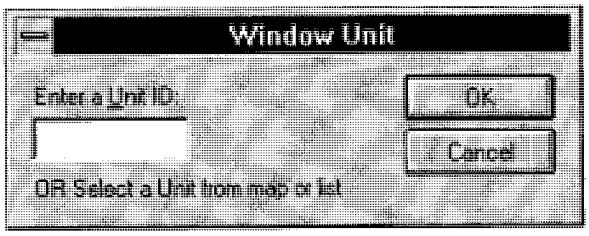
Window Street

Allows the operator to view street segments with the same name in a magnified portion of the map.



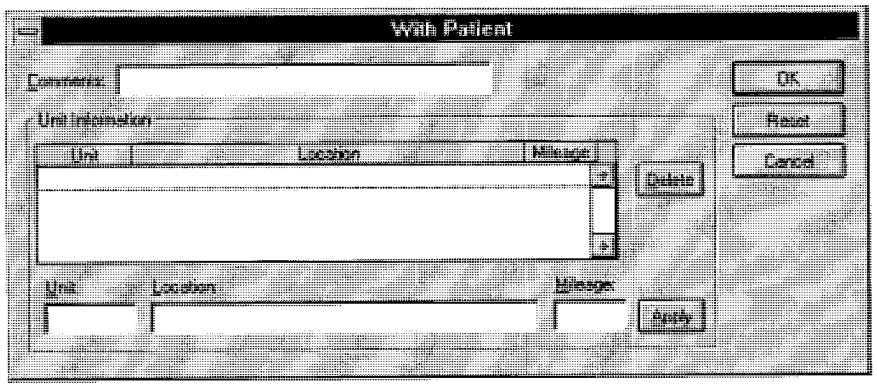
Window Unit

Allows the operator to identify a unit, and have the map zoom in on that unit's location to a predefined range.



With Patient

Tracks a unit's status while it is with a patient on the scene of an event. This command usually follows the "Arrive Dangerous Scene" command, which indicates that the unit is on the scene and the ambulance crew is waiting to leave the vehicle until an escort arrives or until the situation no longer requires an escort. The "With Patient" command indicates that they have entered the building and located the patient.



3.3.5 I/Executive and I/Executive 2

I/Executive and Executive 2 both provide the same functionality; however, I/Executive 2 is offered at a discount to encourage communications centers to incorporate redundant database servers in their system architecture.

The I/Executive software coordinates all IPS software modules and passes information between the I/MDT and I/Informer interfaces and the various client workstations, ensuring the correct transfer of data. In addition, I/Executive and I/Executive 2 includes map maintenance utilities.

In the event of a database server failure, I/Executive discreetly notifies all nodes of failover, automatically redirects network traffic to the functioning database, and alerts designated users of server failure. Following recovery, I/Executive resynchronizes the failed database, then notifies all nodes that dual server operation has resumed.

The I/Executive security tool kit is used to fine-tune access and control privileges to external public safety databases, such as the NCIC.

3.3.6 I/Major Incident (Optional)

A Major Incident is any emergency that requires implementing special arrangements by one or all of the emergency services for the following:

- The rescue and transport of large numbers of casualties
- The involvement, either directly or indirectly, of large numbers of people
- The handling of a large number of inquiries most likely to be generated from the public and news media
- The mobilization of large-scale, combined forces of the main emergency services
- The mobilization and organization of the emergency services and supporting organizations to respond to the threat of death, serious injury, or homelessness to a large number of people

I/Major Incident provides a facility for storing major incident plans that meet any of the above criteria and for linking the plans to specific event types. Major Incident plans are made up of relevant Action Lists plus any other information needed to facilitate the handling of a major incident and are designed to aid call takers and dispatchers in completing the tasks in an orderly manner. Plans may also be entered for event types that have the potential of escalating to Major Incident status. Operators are able to access these plans, quickly and easily, and to carry out the tasks outlined in the plans, checking off action items as they are completed.

3.3.7 I/Management Information and Reporting System (I/MARS) (Optional)

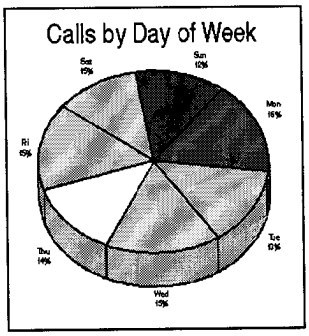
I/MARS–Server

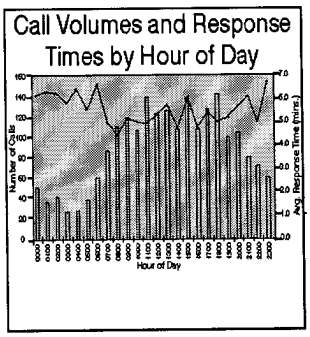
I/MARS is a generalized management tool that facilitates the generation of performance reports and provides crime and incident analyses from a geographic perspective. Capabilities include analyzing the geographic distribution and requests for service by time of day and by response time.

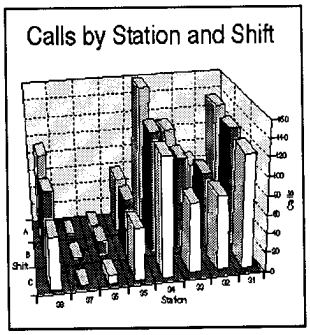
I/MARS also provides tools for creating deployment plans that consider the number of available resources by time of day or by the day of the week.

Query results can be returned as printed lists, in spreadsheet format, displayed on the same map seen by call takers or dispatchers, or can be output as graphs, bar charts, or

histograms. Selected datasets can be manipulated by many functions, including: filter, sort, trend analyses, univariate or multivariate analyses, and dynamic analyses.







Example I/MARS Query Results

I/MARS-S incorporates the Analysis and Administrator utilities that, respectively, define output options/selection criteria and fine-tune security restrictions for I/MARS users.

Default I/MARS reports are divided into two categories: Center Performance, which assists decision makers in the management of resources, and Resource Utilization, which assists management in the utilization and deployment of field resources.

The default reports within the area of Center Performance are as follows.

Time to Enter Events

This report measures the performances of call takers by calculating the time required by an operator to enter data associated with an event. Time to Enter Events is defined as the amount of time elapsing between the time the event is accepted and the time the event is created.

Calltaker Accuracy

The Calltaker Accuracy report computes the number of modifications to event data entered by the call taker. Counts of the number of event type code changes and the number of address re-entries are provided.

Calltaker Workload

This report calculates the number of events handled by call takers from a designated logged on time.

Time to Dispatch

The Time to Dispatch reports measure the performances of dispatchers by calculating the amount of time required to send the first unit to an event after receiving a notification of the call from the call taker.

Total Time to Dispatch

This report measures the overall performance of center personnel by calculating the time required to dispatch the first unit to an event after the initial call is received.

Dispatcher Workload

Dispatcher Workload reports the number of events handled by a dispatcher from a designated logged on time.

Event Statistics List

This report groups a designated number of events by any combination of the defined selection criteria.

Event List

This report provides a textual display of detailed information related to an event.

Event Chronology

This report displays key occurrences in the progression of an event from creation to closure.

The default reports within the Resource Utilization area are as follows.

Unit Workload

The following Unit Workload reports may be generated:

- Available by Agency
- Available Time by Dispatch Group
- Available Time by Unit
- Events Dispatched by Day of the Week
- Events Dispatched by the Hour of the Day
- Transports by Day of the Week
- Unit Response by Day of the Week

Demand Analysis

The Demand Analysis report measures unit demand during each hour of the day. This report also displays the average event completion time during each hour of the day.

Planned Coverage
The Planned Coverage report correlates planned unit load to actual unit load for each hour of a specified day.

Event Handling Time
This report provides an indication of the efficiency of unit personnel by computing the time elapsed between unit arrival at an event site and the time the event is cleared.

Response to Emergency Events
This report calculates the time elapsed between a dispatcher's assignment of a unit to an event and the time the unit actually leaves enroute to the event.

First Responding Unit Time
The First Responding Unit Time report calculates the time elapsed between the dispatch of units to the event site and the time the first unit arrives on site.

Arrival to Transport Time
This report calculates the amount of time elapsed between the arrival time of a unit and the time transport begins.

Transport to Clear Time
The Transport to Clear report computes the amount of time elapsed between the beginning of a unit's transport of a patient to a hospital and the unit's arrival at the hospital.

Create to Transport Arrive
This report computes that amount of time elapsed between initial receipt of a call and delivery of a patient to the hospital.

Hospital Diversion
The Hospital Diversion report displays the times in which units were diverted from primary hospitals to secondary hospitals.

Event Statistics List
This report displays the number of events that meet defined selection criteria.

Event List
The Event List report details event information.

Event Chronology
The Event Chronology report provides a historical synopsis of event progression.

I/MARS–Client

I/MARS-C provides the client workstation with a GUI interface to the I/MARS-S software located on the Interface/Communications Server. I/MARS-C enables performance reporting and provides crime and incident analyses from a geographic perspective.

I/MARS also provides tools for creating deployment plans that consider the number of available resources by time of day or by the day of the week.

Query results can be returned as printed lists, in spreadsheet format, displayed on the same map seen by call takers or dispatchers, or can be output as graphs, bar charts, or histograms. Selected datasets can be manipulated by many functions, including: filter, sort, trend analyses, univariate or multivariate analyses, and dynamic analyses.

3.3.8 I/Mobile

The I/Mobile software resides on each MDT, connecting the mobile user to the I/CAD System and to other mobile MDTs. The MDT software also interfaces with automatic vehicle location hardware.

I/Mobile communicates with the I/CAD System through the Interface/Communications Server based I/MDT product. Messages are sent and received asynchronously. I/Mobile allows units to access a subset of I/Dispatcher commands and provides an interface to external databases for queries like vehicle license checks.

Although certain operations are handled locally by the unit, ultimate event and unit management is handled at the dispatch center. In this way, I/Mobile mainly facilitates and supports the overall I/CAD System. Without communications back to the center, the usefulness of the MDT is severely limited, but not totally lacking. Some local database queries can still be useful and, as a general-purpose personal computer, additional software can be used. By and large, however, I/Mobile serves as a mobile user interface to the I/CAD System, empowering remote personnel with the ability to deal with units, events, people, and locations.

I/Mobile runs on a Window/95 or Windows/NT operating system and can, therefore, run concurrently with other software, such as an editor for report capture. I/Mobile does not preclude additional software from running on the operating system so long as it does not interfere with I/Mobile operation. I/Mobile provides a mechanism to allow:

- The dispatch center operator to provide information to the unit
- The dispatch center operator to make inquiries about the I/Mobile unit

- Field personnel to feed information to the I/CAD System
- Automatic vehicle location
- Field personnel to query the I/CAD database
- Field personnel to query external databases, such as the NCIC
- Field personnel to communicate with other units

3.3.9 I/Mobile Data Terminal (I/MDT)

I/MDT runs on the Interface/Communications Server and provides the communication services between the dispatch environment and the vehicle-based mobile data terminals (MDTs). By way of this connection, MDTs are capable of reviewing and updating event data; as well as unit, personnel, and equipment information maintained in the dispatch centers database.

3.3.10 I/Page Message

I/Page Message enables the dispatch environment to connect to third-party paging terminals. This product extends dispatcher functionality by allowing transmission of alphanumeric messages to be sent from the dispatch center to destination paging terminals. I/Page Message must be customized to adapt to the third-party paging terminals available.

3.3.11 I/Page Tone (Optional)

I/Page Tone interfaces with third-party paging encoders to allow the dispatcher to work with personnel names and mobile vehicle identifiers and to send an alerting tone to request further voice communication. I/Page Tone converts the dispatcher's symbolic destination to the proper coded sequence, allowing the paging encoder to route the transmission to the proper pager.

3.3.12 I/Push to Talk (I/PTT) (Optional)

I/PTT interfaces to a radio controller, identifying the field unit transmitting to the dispatch environment by displaying a banner on the workstation monitor. I/PTT also supports a Unit Emergency signal from a PTT radio.

The following configurations can be used to customize the display of incoming message notification:

- banners that scroll vertically down the workstation monitor
- banners that scroll horizontally across the workstation monitor
- all I/PTT transmissions display to all workstation monitors
- banners appear only on agency and dispatch group monitors

3.3.13 I/Question and Answer (I/QA) (Optional)

The I/QA software provides a utility designed to assist users in developing scripted series of questions and answers that support call takers and dispatchers in the process of collecting information. By scripting question and answer trees, the I/QA product allows call takers or dispatchers to enhance their ability to quickly assist a caller or to make decisions regarding the disposition of a call. Predefined lines of questions can be manipulated (inserted, changed, or deleted) and answers have an associated action, such as setting the event type or raising the priority of the selected incident. I/QA provides a robust GUI using built-in icons, buttons, and comment boxes to assist the operator.

Using I/QA, dispatchers follow a hierarchical set of questions that, when responded to, rapidly records pertinent information concerning an incident. Each response entered determines the next question to be asked. For example, a "Yes" response to Question 4 cues the system to ask Question 5, but a "No" response cues the system to skip to Question 9. This treed or conditional branching logic is useful for calls where, for example, a burglary is in progress and the operator is immediately prompted to pursue a line of questions specifically designed to determine from the caller if the suspect is armed. This vital information can then be relayed to a dispatched police unit.

As the questions are asked and answered, I/QA automatically date and time stamps each entry to the I/CAD database. Later, the user can query a report that lists each question in the order asked, with the corresponding "Yes" or "No" answer and any comments recorded.

I/QA interfaces with the database in real-time and updates the records as information is entered. In addition, I/QA's flexibility ensures that it can be tailored to any specific requirement. I/QA can be configured to automatically run with each call or can be started at a call taker or dispatcher's discretion. Questions that are responded to with a "Yes" may require that a comment be added—if configured differently, a comment may be entered as an option.

I/QA consists of a server component, called I/QA Builder, and a client component that integrates the question and answer session into the dispatch environment. I/QA Builder uses the Microsoft Access database management system through an ODBC driver. A license for both Microsoft Access and ODBC are required for each workstation that builds I/QA question and answer scripts. An I/QA client license is required for each workstation that makes use of the question and answer databases.

3.3.14 I/Radio (Optional)

I/Radio provides automatic management of talk groups, such as units, incidents, dispatch groups, and all active units and dispatchers. A unit talk group encompasses all radios for that unit, including hand-held radios. An incident talk group includes all units currently assigned to an incident, as well as the dispatchers responsible for the incident. A dispatch talk group represents all units and dispatchers of a given agency responsible for incidents of a particular type in a given geographic area. An active units and dispatchers talk group includes all personnel currently signed on. These talk groups are managed dynamically as personnel sign on and off the system and as units are dispatched.

Dispatchers can also manually create new talk groups by combining individual radios and the automatic talk groups defined above. For speaking, a dispatcher can identify a Unit, Incident, Dispatch group, or manually created talk group and with a single keystroke, select that group.

Dispatchers can also monitor multiple talk groups. When simultaneous communication by multiple talk groups occurs, a priority scheme is maintained. By default, automatically created dispatch groups are arranged by incidents in priority order, however, dispatchers can manually rearrange the priority.

3.3.15 I/Roster (Optional)

I/Roster provides an advanced tool for generating rosters based on specified criteria entered by the user; however, rosters generated using this module can be manually edited and changed at any time prior to the roster start date. Using the fundamental unit of a "shift" as the basis for generating rosters, shifts are organized into sequences called "cycles," which can be replicated as far into the future as required.

The specified criteria used to generate rosters are called "constraints," and constraints are expressed by users as "rules" that are simplified to hide the complexity of the process. Example rules are:

Only allow these particular ranks to staff a particular shift.
The total hours worked in 14 days must be between 60 and 100 hours.

Once all rules are defined for a specified period and assuming 24-hour coverage, I/Roster then generates a sequence of shifts that satisfy the input criteria. If it is not possible to satisfy the criteria with the available staff, I/Roster will notify the user.

If used in conjunction with I/Skill, I/Roster can include additional skills criteria in staffing profiles.

Once I/Roster has generated the roster and the user accepts the output, the software automatically populates the I/CAD database with the appropriate resources at the beginning of each shift. This function eliminates the need for dispatchers to manually log on staff allocated to each unit at the start of shifts.

3.3.16 I/Satellite (Optional)

I/Satellite–Server

I/Satellite–Server provides an interface to the I/CAD system for all I/Satellite clients. The Interface/Communications server performs the insert, query, and notifications of events data to the clients.

I/Satellite–Client

I/Satellite–Client provides limited I/CAD functionality for occasional users running a Microsoft Windows NT or Windows 95 operating system. This product is offered as a low-cost alternative to complete I/CAD functionality and is intended for use by remote personnel. Functionality included in I/Satellite includes the ability to create events, monitor active events, display event details, monitor units, and support I/CAD messaging. I/Satellite does not support a map.

3.3.17 I/Skill (Optional)

I/Skill allows organizations to efficiently plan for and track training requirements by consolidating the following related systems:

- Course and schedule administration
- Automatic setting and management of training budgets
- Automatic forward planning of courses and resources
- Venue planning
- Monitoring an organization's personnel skill base

Specific advantages accrued through the use of I/Skill include:

- Managerial ability to easily monitor the skill level of staff members. Information for future operational planning and management of growth and projected needs is readily available. Managers can interrogate skills levels and training needs based on event trends and operational requirements. Standards are maintained with responsibility arenas, whether centralized or local.
- Individual personnel have access to an ongoing training plan, and staff can maintain a clear picture of group progress. While providing an overall assessment of group progress, I/Skill supports the career aspirations and prospects of individuals.
- Training departments maintain a constant picture of current and future course schedules, including costs. I/Skill generates budgets and tracks year-to-date costs, considering both operational needs and competency requirements.

Courses can be scheduled for specific locations or can include self-paced study. Training resources and materials are allocated to courses, and the system tracks usage and cost, including costs associated with non-material resources, such as the students, assessors, and instructors.

3.3.18 I/Status Message Terminal (I/SMT) (Optional)

The I/SMT runs on the Interface/Communications Server and supports the exchange of unit status information between the dispatch environment and mobile resources equipped with status message terminals. I/SMT also allows the dispatch center to transmit messages to status message terminals. However, transmitted information is limited to the display available on a single workstation screen.

3.3.19 I/System Status Monitor (I/SSM) (Optional)

I/SSM is a server process that monitors activity and resources and notifies dispatchers and supervisors when available resources fall below a pre-defined level. Using the CADDBM utility provided in I/Executive, a baseline resource level that delineates the number of units necessary to conduct business is established. This baseline includes plans that identify station locations of additional resources if needed. Using these plans, when the number of resources falls below the established level, dispatchers and supervisors are notified and may request that additional units be "moved up," which involves moving units from one location to another to sustain baseline resources. I/SSM assists dispatchers and supervisors by calculating and recommending the optimum units to be moved up.

3.3.20 I/Telephone (Optional)

I/Telephone is a Computer Telephony Integration (CTI) product that provides the link between the phone system and the I/Dispatcher product. It is an extension to the I/Dispatcher product that is being proposed to provide this functionality. The product consists of a server component that resides on the External Interface Communications Server and a client component that resides on the operator's workstation. I/Telephone uses the Microsoft Telephony API (TAPI) – to communicate with the phone system PBX. A service provider may control the PBX and reside on a server, or it may control an individual phone board and handset residing on a workstation.

Using the same GUI seen in the I/Calltaker and I/Dispatcher software, I/Telephone moves telephone operations to the computer screen, minimizing the number of operator actions necessary for dispatchers and call takers to control their telephones. When a call is received at the workstation the Active Call dialog box displays the call, and answering the call requires a single operator action performed at the workstation screen. The Call Control dialog box allows the operator access to all call operations including placing calls, answering calls, and controlling operations such as call hold, call transfer, and call conference. Calls can be placed by keying in the numbers using the Call Control dialog box, by selecting a call for call back from the Call History display, or by selecting a speed dial key or a number from an on-line directory.

I/Telephone can co-exist with a traditional automatic call distribution (ACD) or can replace the traditional ACD and provide additional capability such as mapping calls to call groups based on the geographic location of the call.

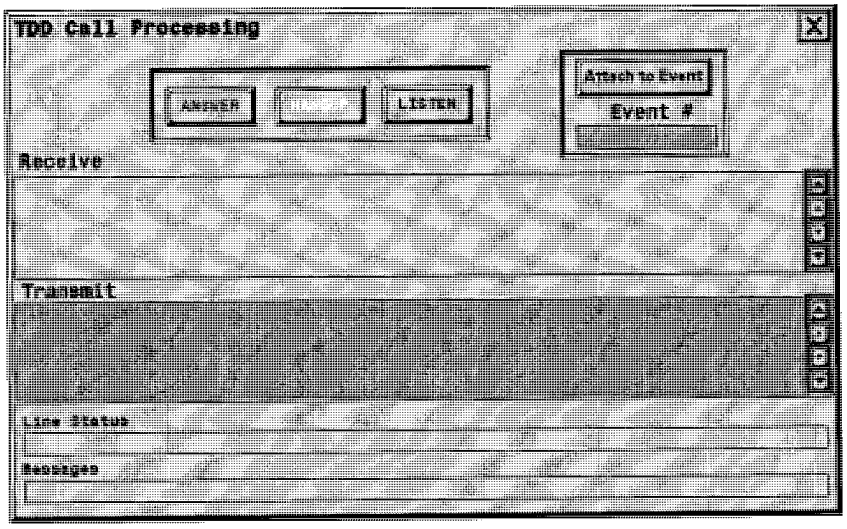
I/Telephone interfaces with the I/TDD product to support communication with hearing or speech impaired callers.

If a local caller database is present, calls arriving without ALI information trigger an automatic search of the local address database to determine the address and translate it to a geographic location for reference on the map enabling the call to be assigned to the correct geographic call group.

3.3.21 I/Telephone Device for the Deaf (I/TDD) (Optional)

The IPS I/TDD software provides an interface to a Zetron Model 3030 device through an RS-232 port.

This software detects a TDD call from a hearing- or speech-impaired person via Baudot tone and allows the operator to converse with the caller using the TDD form displayed below.



Upon initial detection of Baudot tones, the I/TDD signals the call taker with an audible alert, then automatically opens the TDD Call Processing window. This I/TDD conversational window displays both sides of a TDD conversation. A single button option appends the complete conversation to the incident record, ensuring transfer of the conversation to the dispatcher position.

Call takers and dispatchers can move seamlessly between TDD operation and incident data entry by selecting the window/field in which to enter data or by using the <ALT><TAB> key combination to toggle between windows.

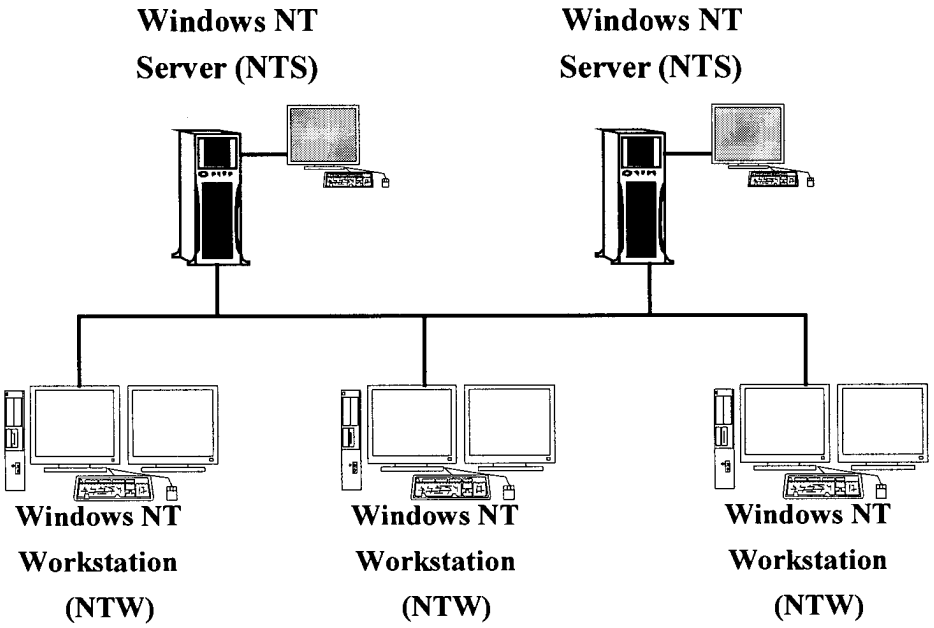
3.3.22 I/Tracker (Optional)

I/Tracker accepts incoming vehicle location data received from an Automatic Vehicle Location (AVL) controller and/or from I/MDT when global positioning system (GPS) data is sent by an in-vehicle MDT. This product enables unit location information to be periodically updated on the map displays in the dispatch center.

When AVL systems accept commands to control the frequency of locations updates from an external system, I/Tracker interfaces with the external system to set the frequency of location reporting based on a unit's type and status and the incident type.

3.4 I/CAD System Third-Party/Commodity Software Products

3.4.1 Windows NT



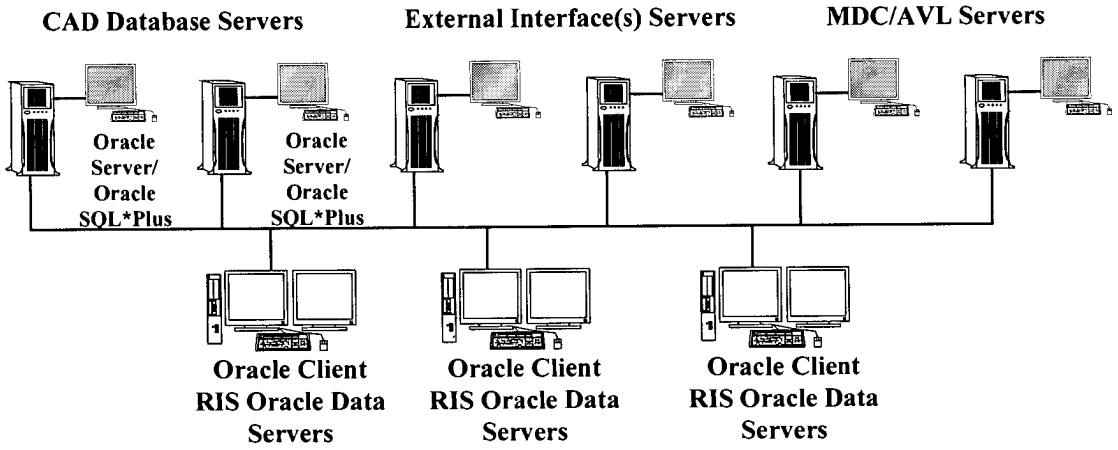
Distribution of Windows NT Operating System Software

The I/CAD System operates under the Windows NT operating system. The servers use Windows NT Server (NTS) and the workstations use Windows NT Workstation (NTW).

Section 6.0 compares the Windows NT operating system design to UNIX and provides additional information to assist in a more complete understanding of the Windows NT operating system environment, including coverage of Window NT security features.

3.4.2 ORACLE Relational Database Management System (RDBMS)

Having presented the basic client/server topology and redundant database strategy used to provide the reliability imperative in a public safety environment, some discussion should be focused on ORACLE and how this industry-standard Relational Database Management System (RDBMS) is used in the I/CAD System. Basically, a client portion of ORACLE resides on each client workstation, and the server (or main) portion of the RDBMS resides on each of the redundant database servers.



I/CAD ORACLE Software Architecture

The I/CAD functionality that resides on the clients uses the ORACLE RDBMS to create standard ORACLE transactions for both database servers. If one of the servers fails, failover occurs and transactions are issued to the functional server until there is a return to dual operation.

All transactions for ORACLE are standard. Either every update within a single transaction is recorded, or none of the updates are recorded.

While referential integrity exists in the I/CAD System, the primary logic for it is in the applications, rather than in using features of the database itself. Such features as embedding logic in the database, are avoided in order to maintain some degree of independence should there ever be a need to use a different RDBMS.

The structure of the database includes event and resource histories, which are maintained by the Database Servers as changes take place. Each change is date and time stamped and shows the operator involved. It is possible to take these histories and reconstruct what happened and when by moving forward or backward; thus, one can track, step-by-step, what happened during a particular emergency. Information can also be used to analyze activity during a specified time period, such as measuring responses or the performance of specific units.

The ORACLE RDBMS is a structured query language database management system based on the relational database model for storing corporate data. It is built on an adaptable, self-tuning, multi-threaded architecture, achieving high performance through the elimination of a central processing unit (CPU), input/output (I/O), memory, and operating system bottlenecks. Database processes dynamically adjust to the workload, ensuring quick response time for all users, with minimum utilization of system resources.

With support for stored procedures, declarative referential integrity, and full cursor support, ORACLE handles the demanding client/server I/CAD environment.

Features of the ORACLE environment include the following:

- Multi-threaded server architecture
- Scaleable SMP performance
- SQL Optimizer
- Unrestricted row-level locking concurrency control
- On-line backup by file, table space, or database
- On-line recovery
- Parallel recovery
- Parallel backup/restore utility
- Checksums on database and redo log file blocks
- Dynamic resizing of database files
- 100-percent ANSI/ISO SQL 92 entry level compliance
- ANSI/ISO standard pre-compiler API
- Robust SQL extensions
- Choice of internal or Windows NT user authentication
- Encrypted passwords
- Fine-grained database privileges
- Hierarchical role-based security for group-level access control
- ANSI/ISO SQL3 security standard via role-based security hierarchy
- Site-customized DBA roles
- US TCSEC C2 and European ITSEC E3 evaluations
- Automatic auditing on per-session or per-object basis
- Easy-to-use Service Manager GUI, menu-driven utility for Windows NT
- Secure remote database administration
- User-account administration

3.4.3 ORACLE SQL*Plus

ORACLE SQL*Plus is included to provide an easy-to-use environment for querying, defining, and controlling data. ORACLE SQL*Plus delivers full implementation of ORACLE SQL and PL/SQL, along with a rich set of extensions. ORACLE SQL*Plus features allow users to:

- Perform database activities easily
- Create ad hoc queries
- Retrieve and format data

3.4.4 Microsoft Visual C++

The use of C++ at the customer site is normally not for customization or for coding new features, but to configure the system to meet specific needs.

Visual C++ 4.0 also provides features that promote code reuse, allowing developers to write code once and easily reuse it many times in several projects. Various tools promise code reuse, but Visual C++ is the first C++ product to deliver several concrete features that make code reuse a reality.

The Component Gallery, an intelligent storage and management system for OLE Controls and C++ components, allows developers to easily store C++ classes, resources, and header files as C++ components for reuse or for sharing with other developers. It also provides an ideal system for managing third-party OLE Controls. Visual C++ 4.0 includes a variety of ready-to-use C++ components and OLE Controls.

Visual C++ 4.0 includes MFC 4.0, an industry-standard application framework for Windows-based application development. New features include support for all Win32 API common controls, including rich-text edit controls and enhanced support for multi-threaded applications.

Adherence to language standards is a must for serious C++ developers. The Visual C++ 4.0 compiler supports significant new C++ language features from the current working papers of the ANSI/ISO X3J16 committee on C++, including namespaces and run-time type information (RTTI).

3.4.5 Microsoft Access

Microsoft Access provides the tools to create, package, and distribute Access applications. Features include the following:

- Set-up Wizard to package Access applications for distribution
- Access runtime license for distributing applications to multiple desktops
- Replication manager

Within I/CAD, Access is used to customize reports, to create new reports and to distribute those reports to other machines, and to customize the question/answer logic trees used by the I/QA software.

3.4.6 Microsoft Office Small Business Edition

The Microsoft Office Small Business Edition software suite includes Word, Excel, Publisher, and Outlook; these full-featured programs work together and work alike. Users can manage key contacts in Microsoft Outlook and drop their addresses into Microsoft Word with the click of a button. Customers can use a Wizard to turn reports into PowerPoint presentations, convert a list in Microsoft Excel into a relational database in Microsoft Access, or create a report with Access and include the report in a Word document, along with an Excel spreadsheet and the I/CAD map. These are just four examples of the ease of use and integration between these products.

3.4.7 InterSite (Included with Intergraph hardware only)

InterSite is a suite of hardware and software tools used for server and site management. InterSite includes tools to automate a variety of tasks including the following:

- System monitoring to alert system managers to a variety of events, such as power supply, disk, or memory failure and excessive temperatures. In addition, hundreds of user-selectable events, such as memory usage, failed log-in attempts, and file usage, can be monitored, allowing designated personnel to be alerted. The server can alert personnel by dialing a pager or by dialing a remote system.
- System management, such as software distribution, remote help, remote diagnostics, asset control, and remote system reboot
- Router management

The modularity of InterSite tools makes it easy to choose the management tools needed at initial installation. Appropriate tools can be added later as needs change.

3.4.8 Server Remote Access Service (RAS)

As networks become prevalent, dial in access becomes increasingly important. The Windows NT Server Remote Access Service (RAS) application allows Windows NT users to extend the network to phone lines. RAS provides both mobile and remote users with seamless access to the I/CAD network and is a cost-effective and easy-to-use. Using RAS, the Windows NT user works via a standards-based, dial-up server that enables client/server computing for remote terminals. RAS is compatible with different protocols, and most computers already include software that supports RAS for end-users.

RAS supports all of the mainstream networking clients, including the following:

- Windows for Workgroups-based clients
- LAN Manager-based clients
- Windows 95-based clients
- Windows NT Workstation-based clients
- Windows NT Server-based clients
- UNIX-based clients
- Macintosh-based clients
- NetWare clients
- OS/2-based clients

With RAS, remote users can access files and printers, run applications across distances, and expand client/server computing to a wide area network (WAN).

RAS is based on Point-to-Point Protocol (PPP), the industry standard for dial-up access services and also supports industry standards for authentication and encryption. Users may dial up across phone lines, ISDN, or X.25 and access TCP/IP-, IPX-, or NetBEUI-based LANs.

RAS is the most scaleable dial-up access server in the industry today. Organizations can use a single Windows NT Server-based system to provide dial-up facilities for up to 256 concurrent users.

3.4.9 Optivity For Hewlett-Packard's (HP) OpenView For Windows

Optivity for Hewlett-Packard's (HP's) OpenView for Windows provides a powerful solution for managing mixed Ethernet, frame switched, and Token-Ring internetworks comprised of high-speed backbones, geographically-dispersed domains, and a variety of

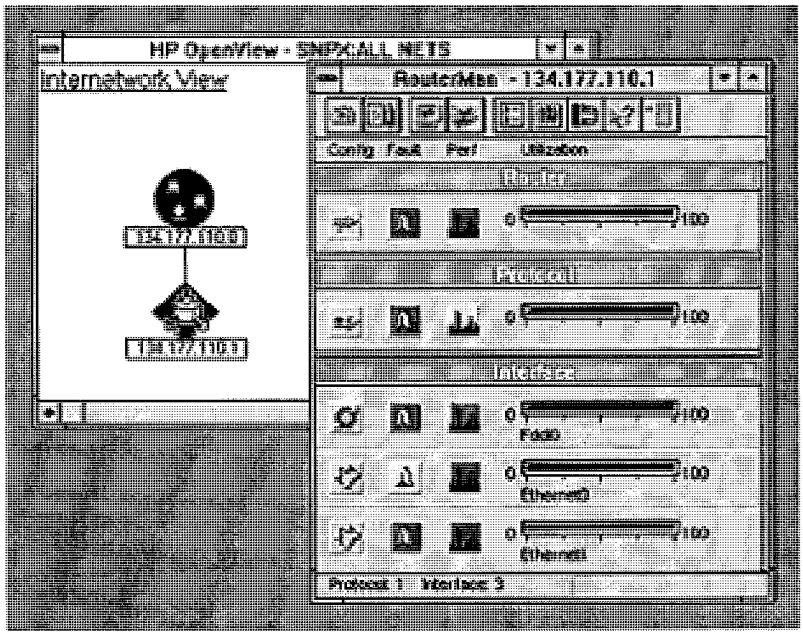
cabling media—all from a single workstation. Compatible with the Simple Network Management Protocol (SNMP), this application delivers complete configuration management, performance monitoring, fault analyses, and troubleshooting capabilities for the enterprise network.

3.4.9.1 System-Level Focus

Optivity delivers a complete set of tools for managing the network fabric—the LAN's flexible, underlying physical infrastructure—as a single, cohesive system, instead of as a collection of unrelated devices. By managing the relationship between hubs, switches, routers, bridges, and end-stations, Optivity delivers a global overview of the enterprise for complete system-level control.

Seamlessly integrated with the OpenView for Windows platform, Optivity allows managers to monitor, control, configure, and troubleshoot a network comprised of switched and shared-media solutions. Integrated router management and RMON support allows users to gather detailed fault, performance, and diagnostic data anywhere in the network, while a unique dynamic mapping feature offers unprecedented visibility into the system for precise, port-level control.

The application supports Bay Networks' full line of product solutions, including the System 800, System 2000, System 3000, Distributed 5000, and System 5000 hub families. It also supports Access Node (AN), Access Node Hub (ANH), Access Stack Node (ASN), Backbone Node (BN) routers and LattisSwitch System 28000 Fast Ethernet switching hubs.



Optivity's router management application, running on top of the host platform, provides complete monitor and control capabilities for all Bay Networks, Cisco, and other MIB II devices.

3.4.9.2 Dynamic Network Discovery

Optivity's systems approach begins with the patented Autotopology dynamic mapping feature. Autotopology extends OpenView's global Internet view by automatically discovering the network's primary building blocks (hubs, switches, routers, bridges, and end-stations) and their physical relationship throughout the system. These discovered devices are seamlessly integrated with the OpenView platform view, providing a series of increasingly detailed maps that offer unprecedented visibility into the network infrastructure.

Network managers can navigate through the network views to collect and store performance data, such as MAC-layer (Media Access Control) diagnostics, errors, and utilization levels throughout the system. Configuration changes are automatically reflected in these displays, ensuring that the manager always has an accurate network blueprint.

- Flat Network View displays Ethernet or Token-Ring segments or rings connected by bridges or switches and bounded by routers, showing the physical relationship between bridged or switched segments. Color-coded displays quickly guide managers to lower-level problems.
- Segment View shows the physical relationship between hubs in an Ethernet or Token-Ring segment bounded by bridges or switches. Hierarchical (Ethernet) or logical ring (Token-Ring) displays report how devices are physically linked, with connections identified by slot location and media type, assisting in troubleshooting and network reconfiguration operations.

3.4.9.3 Software-Based Configuration

Optivity includes the LANarchitect application, which revolutionizes the network configuration process. Working with the System 5000, Distributed 5000, and LattisSwitch System 28000 product families, LANarchitect allows managers to assign individual ports, slots, or clusters to specific workgroups (such as segments and rings), regardless of their physical location. The result is a highly-flexible, software-based "logical" configuration that makes the most of available resources.

LANarchitect, launched from a Model 5000, Distributed 5000, or LattisSwitch System 28000 switching hub icon on the network map, employs a unique file-folder model to display all LAN workgroups in the hub. Opening a folder reveals all ports and clusters contained in the workgroup and, through an intuitive drag-and-drop operation, managers can easily add new ports or clusters, move ports between LANs, or create entirely new workgroups. Connections are established and maintained through the embedded

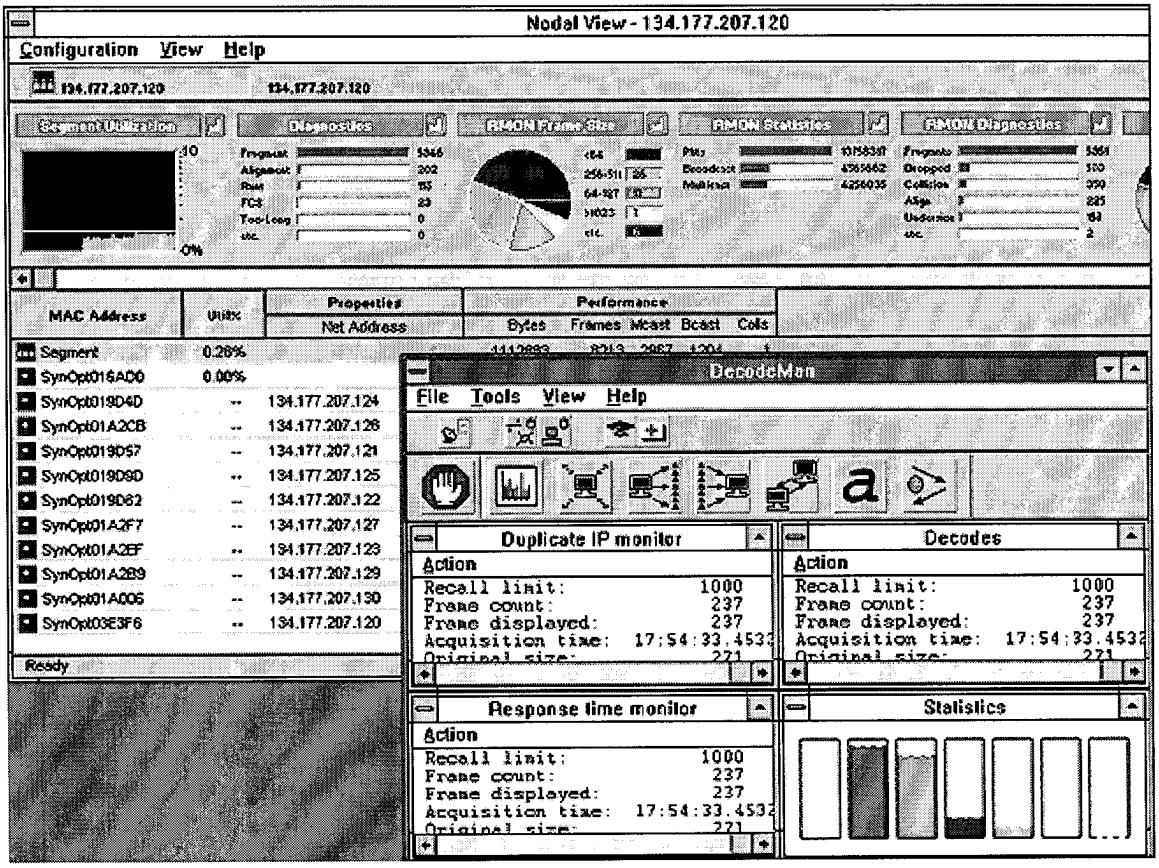
management software, eliminating the need to physically reconfigure the network every time a change is made.

Through LANarchitect, network managers can also assign Data Collection Engines (DCEs) on Model 5000 and Distributed 5000 network management modules to specific segments or rings to perform detailed packet analyses and processing. This "roving" capability, combined with a structured network design, provides the manager with additional flexibility for selectively analyzing segments or rings anywhere in the network.

3.4.9.4 Integrated Router Management

Optivity includes an integrated router management application, allowing users to monitor and control all Bay Networks (Wellfleet® and SynOptics®), Cisco, and other MIB II routers from a central console.

The router management application gathers detailed fault, performance, and configuration data from routers throughout the network and displays it as part of a simple, color-coded interface, simplifying SNMP and MIB management operations. All protocols and interfaces supported by the router are automatically displayed, enabling managers to easily determine device, protocol, or interface status at a glance. Alarms and alerts provide early problem notification, improving network reliability through rapid fault identification and resolution. In addition, a configuration management feature provides an audit trail of network changes, allowing managers to review previous configurations to identify the optimum network design.



Optivity applications such as Nodal View and DecodeMan provide detailed RMON-based fault detection, performance, and troubleshooting tools.

3.4.9.5 RMON-Based Analyses and Performance Management

Optivity offers advanced industry-standard RMON applications that provide detailed fault detection, performance, and troubleshooting tools for Ethernet and Token-Ring networks.

DecodeMan, a powerful RMON-based troubleshooting tool developed for Bay Networks by Network General, allows managers to decode and analyze network traffic on remote LANs. Based on Network General's Foundation Manager, DecodeMan provides full 7-layer decodes for all major protocols, including IP, IPX, AppleTalk, DECnet, Vines, OSI, SNA, and NetBios, enabling problems on remote segments to be resolved quickly and easily from a central location.

- The DecodeMan application leverages the "probe in a hub" capabilities provided by the Bay Networks Advanced Analyzer agent to obtain detailed diagnostic data throughout the network. In a Model 5000 or Distributed 5000 environment, network managers can use the LANarchitect application to rove DCEs with

Advanced Analyzer agents anywhere in the network, targeting DecodeMan at specific segments for detailed packet capture operations.

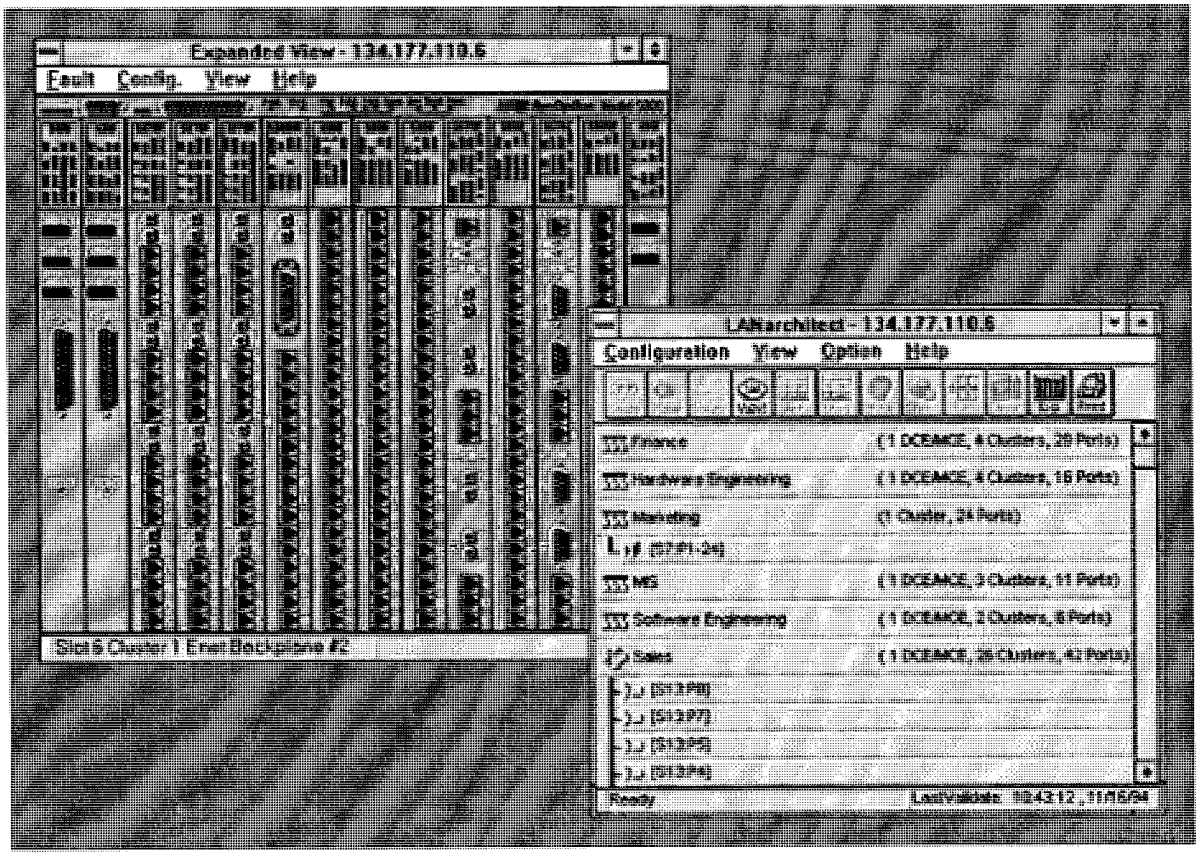
- Nodal View offers a powerful tool for collecting detailed RMON-based fault and performance statistics, such as utilization, errors, or protocol distribution from all stations on an Ethernet or Token-Ring segment or ring. End-stations appear within a concise, color-coded window, allowing managers to quickly determine their status and to identify potential trouble spots. Display options are user-definable and can be listed by username, network address, or network location, enabling managers to quickly and easily identify network resources.

A Sort feature also allows the manager to display data based on traffic levels, errors, IP addresses, and other criteria, allowing users to quickly identify top talkers, error-prone stations, gaps in the addressing scheme and other network conditions. Performance information for the segment or individual nodes can also be flexibly displayed as graphs, pie charts, or strip charts, providing a graphic interpretation of the data.

3.4.9.6 Proactive Fault Analyses and Troubleshooting

Optivity also supports proactive management capabilities to detect problems before they actually occur and adversely affect network performance.

Thresholds allow the network manager to establish and enforce specific error, performance, and activity levels for Ethernet and Token-Ring networks. If a threshold is crossed, the system automatically generates an event report to notify the manager. These RMON events, or alarms, can also trigger user-defined responses, such as partitioning a port, sounding an alarm, sending an e-mail message, or dialing a beeper.



The LANarchitect application supports Optivity's revolutionary configuration switching capabilities, while Expanded View offers a real-time image of any selected hub.

3.4.9.7 Real-Time Device Management

To complement the system-level tools, Optivity also offers industry-leading, real-time device management capabilities for monitoring and controlling hubs at the port level.

The patented Expanded View GUI provides an accurate, real-time display of any selected hub, complete with installed modules and active LEDs. Managers may obtain a variety of information via Fault, Performance, or Configuration menus to monitor activity and review status down to the port level. Connections can also be enabled, disabled, or temporarily partitioned for precise network control.

3.4.9.8 Powerful Management Tools and Utilities

Optivity offers several additional tools that assist managers in quickly and easily identifying and locating network problems, finding users, and controlling access to the network.

- The Find Nodes feature assists managers in rapidly locating network users and isolating elusive problems. Using only summary data such as MAC addresses or alias names, Find Nodes immediately identifies subjects by their hub, slot, and port location. Managers can also launch Segment, Nodal, or Expanded views within Find Nodes, allowing them to "zoom in" on the problem at any network level.
- Agent Manager automates the process of distributing or downloading new and upgraded software agents across the enterprise. The application also automatically inventories all hub-based agents running on the system, providing the manager with a complete list, including network management module type, agent version, and firmware version. Additional Agent Manager tools are available for creating, modifying, and customizing agent configuration templates.
- Allowed Nodes security enables managers to determine who may access the network. If an unauthorized station attempts to enter the network, the system can be programmed to either send a warning or to automatically wrap/partition the port.
- The Show Nodes tool compiles a protocol-independent list of all nodes attached to a hub, identified by network, MAC address, or username, assisting managers in identifying resources for baselining, fault recovery, and network planning.

3.4.10 XNTP

XNTP is used to update the servers' system clocks and to permit time synchronization throughout the dispatch environment.

3.4.11 Microsoft SNA

Together, the Microsoft SNA Server and Client licenses provide connectivity to IBM mainframes and AS/400 applications and data for the purpose of accessing external databases that use these structures.

4.0 SYSTEM SECURITY

4.1 Database Security

The database is a standard ORACLE RDBMS using standard ORACLE permissions. The security for the database is user-defined, in accordance with the customer's needs, as part of initial system configuration.

4.2 Application Security

The IPS suite of CAD products builds on the Windows NT foundation, which is covered in Section 6.6. Using Windows NT as the operating system, any operator must necessarily pass through the Windows log-on security to access a CAD application. Some users may enter the system at this level only and perform administrative tasks without physically entering the I/CAD applications. In this case, the protections defined for system and database security are in effect, resources are protected, and permissions are based on those set by the security administrator. For call taking and dispatching, the operator is required to enter a second username and password to access the I/CAD applications. Permissions established by the administrator will determine application access.

I/CAD usernames and passwords go a step further in enhancing security within the CAD environment. At this level, the username and password is used to classify the type of user. As an example, the I/CAD user log on classifies the user as a call taker or as a dispatcher, and if a dispatcher, the user will be assigned to a particular dispatch group. The particulars of a classification and the permissions granted is part of configuring the system for each specific customer. Classifying users in this manner determines the commands and functionality available for that particular user. Security within the CAD environment is defined by job function. And since a dispatcher becomes a member of a dispatch group, privileges are based on the resources for that geographic area.

5.0 HARDWARE

5.1 Servers

All of the proposed servers in the configuration are based on symmetric multiprocessing (SMP) computers featuring four 200-megahertz Intel Pentium Pro processors that are easily upgradeable. The client/server architecture also allows new servers to be added and applications easily moved across servers.

5.1.1 InterServe-8000

A third-generation Pentium® Pro server, the InterServe 8000 sets a new standard in scalability for departmental servers based on the Windows NT® platform. Offering up to four 200 MHz processors, the InterServe 8000 integrates industry-standard components to deliver outstanding performance at an affordable price.

Essentially, the InterServe 8000 is based on the same technology as our award-winning IS660, a previous rackmount-only, enterprise-designed server. By leveraging those robust features, the InterServe 8000 offers the most expansion in its class at much lower price points. The design also offers customers the flexibility in getting the exact feature set required while maintaining investment protection due to numerous in-the-field upgrade options. In addition to the InterSite™ hardware monitoring card and redundant network interface controller options, you can choose from one to four CPUs, select single or dual power supplies, go with RAID or non-RAID disk subsystems, and decide on deskside or rackmount configurations.

Intergraph backs the InterServe 8000 with a complete array of hardware and software solutions, including 3D graphics PCs and workstations, InterSTOR™ mass storage and network backup offerings, as well as the InterCon-X™ family of LAN and WAN network products. In addition, Intergraph ensures comprehensive, world-class service and support.

Standard Features

Supported software

- Microsoft Windows NT Server 4.0 (standard)
- Microsoft Windows NT Server 4.0 Enterprise Edition (option)
- Citrix Winframe 1.7 (available from authorized Citrix dealers)

Chassis style
Deskside tower, can also be rackmounted. In a rack environment two systems can be mounted side by side in a 17u rack

Racks options
40u rack holds up to 4 systems with space for additional options; 17u rack holds 2 systems

CPU
1 - 4 Pentium Pro, 200 MHz; 512 KB or 1 MB synchronous four-way associative, write-back, L2 cache for each processor

Chipset
Intel 82450GX

Memory
Industry-standard SIMM technology (5V, 60ns, fast page mode, single- or double-sided); 288-bit ECC architecture; 2- or 4-way interleaved; min./max. config. 128 MB - 4 GB

I/O bus
Three PCI buses with a combined bandwidth of 264 MB/s

Disk Controller

CD-ROM and tape
Onboard Ultra SCSI controller supports synchronous transfers up to 20 MB/s. Used for tape and CD-ROM devices only.

Non-RAID
Dual-channel Ultra-Wide SCSI-3 controller, peak bandwidth 80 MB/s, uses one PCI slot.

RAID
PCI-based with two Ultra-Wide SCSI-3 channels, peak bandwidth 80 MB/s; on-board Intel processor with 8 MB cache; supports RAID levels 0, 1, 3, 5, 0+1, 0+3 and 0+5. Four additional RAID controllers supported for maximum external expansion.

Drive bays
Eight 1.6-inch high drive bays. Five bays free in all configurations. All drive bays support UltraWide SCSI-3 drives.

Additional drive bays
Three 5.25-inch half height bays, one used for CD-ROM. All bays are front accessible.

Disk Drives

4 GB: 9.0 ms seek; 13.2 ms access; 7,200 rpm; 6.0 to 9.5 MB/s internal transfer rate
9 GB: 9.0 ms seek; 13.2 ms access; 7,200 rpm; 7.0 to 11.0 MB/s internal transfer rate

All drives are UltraWide SCSI-3 and SMART compatible.

Floppy drive
3.5-inch form factor; supports dual density, 1.44 MB/720 KB (formatted) capacity media

CD-ROM
24X SCSI; Integrated controller; 115 ms random seek time; 120 ms random access time; 1.8 MB/s sustained transfer rate

Network interface
PCI 10/100BaseT (uses one slot), supports full duplex operation, RJ45 style connector. Optional second 10/100BaseT NIC provides a redundant network interface.

Cards slots
13 total: 9 PCI, 3 ISA, 1 shared

External I/O Ports
Two DB9 buffered serial ports; Single DB25 enhanced parallel port/extended capabilities port (EPP/ECP); PS/2 keyboard and mouse ports; Ultra SCSI (50 pin) connector for external tape and optical devices

Keyboard
101-key rack-mount keyboard or 104-key Windows 95-compatible keyboard; both available in five languages

IntelliMouse™
Three-button and traditional two-button mouse support

Graphics Adapter
Matrox Millennium with 2 MB of WRAM; onboard PCI device; supports standard SVGA monitors

Power supply

- Dual hot swappable or single fixed supply
- 550 W for each hot swappable supply
- 540 W for the fixed supply
- 100-120 VAC/220-240 VAC Autosensing
- 50/60 Hz Autosensing
- 1.2 K Va UPS recommended

5.2 Workstations

The proposed workstations are high-performance Intergraph TD-225 personnel computers based on 300-megahertz Pentium II processors. To complement the high-performance workstations and enhance the robust I/CAD work environment, the 17-inch monitor is recommended. However, other monitor sizes are available.

5.2.1 TD-225 Desktop Workstation

The TD-225 PCs integrate industry-standard components with a custom-designed motherboard. By doing so, Intergraph has created a distinctive high-bandwidth architecture for the TD-225 that sustains interactive on-screen response for production computer-aided design and publishing applications running under the Windows NT operating system. Intergraph eliminates bottlenecks that prevail in contending graphics systems, complementing the TD-225's Pentium II processor with advanced subsystem design and integration. In addition, Intergraph bundles only upscale, high-performance peripherals with the TD-225.

These PCs undergo an unusually high degree of testing. They are also tested by the National Software Testing Laboratories (NSTL), ensuring adherence to a variety of hardware and software standards and performance criteria. The IPS proposed system has been engineered to run day and night, in mission-critical environments, 365 days per year. Heat buildup in the base has been carefully studied, and the component layout has been specifically designed for maximum uptime. Only components that meet the highest specifications and quality standards are used. Even the keyboards are produced to withstand day and night, continuous operation, every day of the year.

TD-225 Specifications:

- 300-megahertz Intel Pentium II processor
  - 8-kilobyte, two-way set associative instruction and data caches
  - 256-kilobyte pipelined burst
  - Level 2 cache

- 64 megabytes of EDO random access memory, upgradeable to 256 megabytes
  - Two 32-megabyte SIMM modules
- System I/O Bus
  - PCI, 120 megabytes per second bandwidth
  - Plug-and-play compatibility
- System Disk Drive
  - 1.7 gigabytes EIDE
  - 3.5-inch form factor
  - Mode 4-enhanced
- Floppy Drive
  - 3.5-inch, dual-density floppy disk drive with a 1.44-megabyte/720-kilobyte formatted capacity
- Audio
  - Creative Labs Vibra 16C; motherboard-integrated FM synthesize; midi/joystick interface; standard line-in/line-out and mic-in connections
  - Portable speakers and microphone optionally available
- Miscellaneous I/O Ports
  - Two DB9 serial ports
  - One DB25 enhanced parallel port/extended capabilities port (EPP/ECP)
- 104-key, Windows 95-compatible keyboard; three-button, PS/2 mouse
- Peripheral slots and bays
  - Motherboard card slots; 7 total card slots (3 PCI; 3 ISA; 1 Shared)
  - Peripheral bays: 6 total (3 internal 3.5-inch; 1 external 3.5-inch; 2 external 5.25-inch)
  - Card and peripheral options: networking, Fast SCSI-2 controller and drives, plug-in PCMCIA assembly supporting two Type I or II PC cards or one Type III card
- Three-button Intellimouse PS/2 mouse
- Onboard 32-bit Ethernet controller with standard 10Base-T

5.2.1.1 Color Monitor

Intergraph has 17-, 19-, 21-, 24-, and 28-inch monitors available. All monitors provide a crisp, brilliant display. A non-interlaced resolution of up to 1,280 by 1,024 pixels, edge-to-edge display, and a dot pitch of 0.27 mm provide a clear, detailed view. Text is easy to read at small point sizes, and thin vectors are readily distinguishable. A 75-hertz refresh rate assures that the screen will not flicker, even at maximum resolution. At lower resolutions, the refresh rate can run as high as 160 hertz.

5.3 Peripherals

5.3.1 14-Gigabyte, 8-Millimeter, Internal, Extended Length Cartridge Tape Drive

The 14-gigabyte, 8-millimeter, internal, extended length (XL) cartridge tape drive, with an integrated, single-ended, Small Computer Systems Interconnect (SCSI) controller, is a cost-effective choice for data exchange and hard disk backup. It uses a removable and rewritable 8-millimeter tape cartridge. Advanced helical scan technology ensures high recording density and data storage capacity in compressed and uncompressed modes. With a 2:1 compression ratio and 160-meter XL tape, the drive can store up to 14 gigabytes of data; while in native mode, 7 gigabytes may be stored on each tape. Using standard 112-meter tape, the drive can store up to 10 gigabytes with 2:1 compression or 5 gigabytes in native mode. The actual compression ratio varies depending upon the type of data; 2:1 compression is typical.

5.3.2 Dot Matrix Printer

The dot matrix printer is a 136-column, 9-pin printer with an RS-232-C serial interface. The printer offers speeds of 300 characters per second (cps) in draft mode, 250 cps in utility mode, and 63 cps near letter-quality mode. Print can be accomplished at 10, 12, 17.1, or 20 characters per inch (cpi). The printer accepts cut-sheet paper in widths of 7.2 to 14.3 inches and tractor feed paper in widths of 3 to 16 inches.

5.4 Networking

5.4.1 BayStack 10Base-T Hub

The BayStack 10Base-T Hub offers a simple, scaleable solution to support small and growing Ethernet networks. Delivering industry-standard IEEE 802.3i 10Base-T connectivity to support 10-megabit-per-second (Mbps) Ethernet over unshielded twisted pair (UTP) cabling, the hub provides a robust, expandable foundation for networks anticipating future growth. The hub includes two option slots, one for a media adapter to support additional end users or backbone connections to centralized hubs, switches, or routers and an option slot for network management. It includes 12 RJ-45 ports.

As more users join the workgroup, additional BayStack 10Base-T hubs can be added. Up to 10 hubs can be stacked to support a total of 260 nodes. The hub stack can be divided into three distinct network segments. Individual hubs can be selectively assigned to any of the three segments to improve network performance by eliminating bandwidth congestion.

5.4.2 BayStack 10Base-T Standard SNMP Network Management Module

The BayStack 10Base-T Standard SNMP Network Management Module (NMM) can be installed on any BayStack 10Base-T Hub's rear-panel expansions to add full management capabilities. The NMM enables the Optivity Network Management for HP OpenView application to manage the hub by providing full SNMP-based management.

The NMM provides high-speed core statistics gathering and reporting for all segments in a stack, including isolated hubs. Using the hub's stack management bus, the NMM supports SNMP over both IP and IPX and collects detailed fault, configuration, and performance data throughout the network. The Standard NMM also supports, via a GUI, a detailed real-time image of the hub or stack on the Optivity console for precise port-level management.

A single NMM manages all hubs by providing complete monitoring and control for all 260 ports in the hub stack. Management functionality can also be extended to remote hubs in a managed stack through standard unshielded twisted-pair (UTP) patch cables that are connected to management extension ports on the hub's back panel.

Features:

- Comprehensive performance, configuration, and fault management of the BayStack products
- Powerful drag-and-drop operations for simple, intuitive configuration
- Windows support
- In-band management of remote sites

Benefits:

- Easy additions, moves, and changes
- End-to-end management of switched Ethernet networks

6.0 COMPARISON OF MICROSOFT WINDOWS NT AND UNIX OPERATING SYSTEMS

Section 6.0 contains excerpts from a White Paper published by the Microsoft Corporation. This document delineates the advantages of the Windows NT operating system and client/server environment by comparing it to a traditional UNIX host-based terminal environment.

6.1 A Tale of Two Operating Systems

It was the best of operating systems, it was the worst of operating systems, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of light, it was the season of darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, in short, we had UNIX.

Life with UNIX has been/is a love-hate relationship, with most people or organizations falling strongly on one side or the other. This section discusses Windows NT, which has roots that stretch back almost as far as those of UNIX. It is an operating system that, like most, owes much to UNIX. But it also differs markedly from UNIX in both design and philosophy.

Windows NT and UNIX address the same world, but from very different points of view. It is a mistake to assume that Windows NT provides a direct, feature-for-feature replacement for UNIX. It does not. It represents a different perspective, a paradigm shift, and, as such, offers fresh solutions to some very old, chronic problems.

6.2 Operating System Basics

6.2.1 Overview and Philosophy

Windows NT was designed for client/server computing; UNIX was designed for host-based terminal computing. Each operating system represents a different computing paradigm. Windows NT is not a multi-user operating system in the usual sense of the word (although it can be with additional third-party products). Users do not work from limited-function dumb terminals, dumb terminal emulators, or X-terminals connecting to a Windows NT-based host. Instead, users work on single-user, general-purpose workstations (clients) that connect to multi-user, general-purpose servers, and the processing load is shared between both. The distinction between the two environments is subtle, but understanding it is key to understanding Windows NT.

6.2.2 UNIX, X, and Server/Client

Windows NT follows what has become the industry-standard terminology (paradigm) for the client/server relationship, with the client residing on the user's desktop and the server being in the back office. Unfortunately, there is a portion of the UNIX world in which this relationship is reversed; the client is the server, and the server is the client.

The most common graphical user interface on UNIX is X, which was developed at the Massachusetts Institute of Technology (MIT) as part of Project Athena. In X, client software resides on the computer that performs the processing, and the server software resides on the computer that displays the output. This effectively makes the desktop the server, not the client.

6.2.3 Kernel Mode vs. User Mode

In modern operating systems, applications are kept separate from the operating system. This setup enables the operating system code to run in a privileged processor mode, known as kernel-mode, and provides access to system data and hardware. Applications run in a non-privileged processor mode, known as user-mode, and have limited access to system data and hardware through a set of tightly controlled application programming interfaces (APIs).

Windows NT is a micro-kernel-based operating system, which shares similarities to Mach, a micro-kernel-based operating system developed at Carnegie Mellon University. One of the primary design goals of Windows NT was to keep the base operating system as small and as tight as possible. This goal was accomplished by allowing only those functions that could not reasonably be performed elsewhere to remain in the base operating system. The functionality that was pushed out of the kernel ended up in a set of non-privileged servers known as the protected subsystems. The protected subsystems provide the traditional operating system support to applications through a feature-rich set of APIs.

This design results in a very stable base operating system. Enhancements occur at the protected subsystem level. In fact, new protected subsystems can be added without modification to either the base operating system or to other existing protected subsystems. Contrast this with traditional UNIX systems where the kernel has become the dumping ground for any and all functionality.

In addition to the micro-kernel design, a number of other theoretical models influenced the design of Windows NT. Three of the most important ones were: the client/server model; the object-oriented model; and the symmetric multiprocessing model. These models provide a framework for understanding the inner workings of Windows NT.

6.2.4 Client/Server

Windows NT is a natural fit for the world of client/server computing. Not only does it live in this world, but its internal design is based on client/server principles. For example, the applications that an user runs are clients that request services from the protected subsystems, which are servers. The idea is to divide the operating system into several discrete processes, each of which implements a set of cohesive services such as process creation or memory allocation. These processes communicate with their clients, with each other, and with the kernel by passing well-defined messages back and forth.

The client/server approach results in a modular operating system. The servers are small and self-contained. Because each runs in its own protected, user-mode subsystem, a server can fail without taking down the rest of the operating system. The self-contained nature of the operating system components also makes it possible to distribute subsystems across multiple processors on a single computer (symmetric multiprocessing) or even multiple computers on a network (distributed computing).

6.2.5 Object-Based

Windows NT is not an object-oriented system in the strictest sense of the term, but it does use objects to represent internal system resources. Software objects are a combination of computer instructions and data that model the behavior of things, real or imagined, in the world. Objects are composed of three entities:

1) attributes, in the form of program variables that collectively define the object's state;
2) behavior, in the form of code modules or methods that can modify attributes; and
3) an identity that distinguishes one object from all others.

Objects interact with each other by passing messages back and forth. The sending object is known as the client and the receiving object is known as the server. The client requests and the server responds, and often times in the course of conversation the client and server roles alternate between objects.

One of the hidden powers behind UNIX is the file metaphor. In UNIX, devices such as printers, tape drives, keyboards, and terminal screens all appear as ordinary files to both programmers and users. This simplifies many routine tasks and is a key component in the extensibility of the system. Windows NT capitalizes on this metaphor and expands it. Windows NT uses an object metaphor that is pervasive throughout the architecture of the system. Not only are all of the items in the UNIX file metaphor viewed as objects by Windows NT, but so are commodities such as processes and threads, shared memory segments, and access rights.

6.2.6 Symmetric Multiprocessing

Multitasking and multiprocessing are two terms that are closely related and easily confused. Multitasking is an operating system technique that shares a single processor among multiple threads of execution. Multiprocessing, on the other hand, refers to computers with more than one processor. A multiprocessing computer is one that is able to execute multiple threads simultaneously, one for each processor in the computer. A multitasking operating system *appears* to execute multiple threads at the same time; a multiprocessing operating system actually does it, executing one thread on each of the computer's processors.

Multiprocessing operating systems can be either asymmetric or symmetric. The main difference is in how the processors are used. In asymmetric multiprocessing (ASMP), the operating system typically sets aside one or more processors for its exclusive use. The remainder of the processors run user applications. In symmetric multiprocessing (SMP), any processor can run any type of thread. The processors communicate with each other through shared memory.

SMP systems provide better load-balancing and fault-tolerance. Since the operating system threads can run on any and all processors, the chance of hitting a CPU bottleneck is reduced over the ASMP model. A processor failure in the SMP model will only reduce the computing capacity of the system. In the ASMP model, it can easily take down the whole computer if it happens to be one of the operating system processors that fails.

SMP systems, such as Windows NT and many flavors of UNIX, are inherently more complex than ASMP systems. A tremendous amount of coordination must take place within the operating system to keep everything synchronized. For this reason, SMP systems are usually designed and written from the ground up. Their ASMP counterparts typically are not.

6.2.7 Open Systems

Finally, before delving into the inner workings of Windows NT, we need to touch on the subject of Open Systems and Industry Standards. Unfortunately, the concept of an open system means many different things to many different people. However, the goal of open systems is the same regardless of the definition. Its primary aim is to give the customer cost-effective choices in a multi-vendor world that is in a constant state of change.

The subject of industry standards is every bit as perilous as the subject of open systems. There are two categories of standards: de jure and de facto. De jure standards are those that have been created by standards bodies such as the American National Standards Institute (ANSI), the Institute of Electrical and Electronic Engineers (IEEE), and the

International Standards Organization (ISO). Examples of de jure standards are the ANSI American Standard Code for Information Interchange (ASCII) character encoding standard, the IEEE Portable Operating System Interface for UNIX (POSIX) standard, and the ISO Open System Interconnection (OSI) reference model for computer networks. De facto standards are those that have been widely adopted by industry, but not originally endorsed by any of the standards bodies. An example of a de facto standard is the Transmission Control Protocol/Internet Protocol (TCP/IP) network communications protocol. De facto standards have arisen either to fill gaps left by the implementation specifications of the de jure standards or because no standard had yet been defined for the particular area.

It is safe to say that open systems based solely on de jure industry standards have yet to be fully realized, and it is doubtful that they ever will be. At the heart of the problem is the very different natures of the computer industry and the academic standards process. The speed with which the technology is changing is staggering, and the formal standards process is inherently unable to keep pace with it. It is similar to what happens when an all-powerful force meets an immovable object, one or the other has to give way. In this case the all-powerful force is the market, which always has its way. So, is there no hope for open systems?

The utopian "de jure"-centric world of open systems has largely given way to the newer, reality-based recognition that real-world open systems cannot live on de jure standards alone. In today's open systems, both de facto and de jure standards are combined to create inter-operable systems. It is the strategic combining of both types of standards, this middle-of-the-road approach, that enables open systems to keep pace with the rapidly changing nature of technology.

One key element of this approach is the use of strategically-placed layers of software that allow the upper and lower adjoining software layers within the operating system to be loosely coupled. These tightly controlled software layers provide a standardized and well-publicized set of APIs to both the software above and below. A good example is the Network Device Interface Specification (NDIS) that was developed jointly by Microsoft and 3Com in 1989. Another is the Desktop Management Interface (DMI) created by the Desktop Management Task Force (DMTF), an industry organization with more than 300 vendor members including Microsoft, Intel, IBM, and Novell.

The beauty of this architecture is that it allows for plug-and-play of modules above and below the isolation layer, and that means you can start out with a module that implements a de facto standard and later supplement or replace it with one that implements a de jure standard. In effect, you end up with the best of both worlds; open systems and industry standards.

6.2.8 Executive

The Windows NT executive is the kernel-mode portion of Windows NT and, except for a user interface, is a complete operating system unto itself. It differs dramatically in architecture from the UNIX kernel, and unlike the UNIX kernel, the Windows NT executive is never modified and recompiled by the system administrator.

The Windows NT executive is actually a family of software components that provide basic operating system services to the protected subsystems and to each other. The executive components are completely independent of one another and communicate through carefully controlled interfaces. This modular design allows existing executive components to be removed and replaced with ones that implement new technologies or features. As long as the integrity of the existing interface is maintained, the operating system runs as before.

6.2.8.1 Object Manager

The Object Manager creates, manages, and deletes Windows NT executive objects. Executive objects are abstract data types used to represent operating system resources such as shared memory segments, files and directories, and processes and threads. The Object Manager manages the global namespace for Windows NT, which is modeled after the hierarchical file system where directory names in a path are separated by a backslash (\). As with other Windows NT components, the Object Manager is extensible and modular so that new object types can be defined as technology advances.

6.2.8.2 Process Manager

A program is a static sequence of computer instructions. A process is the dynamic invocation of a program along with the system resources needed for the program to run. A Windows NT-based process differs from a UNIX-based process in that it is not an executable entity. A Windows NT-based process contains one or more executable entities known as threads, and it is these threads and not the process that the Windows NT kernel schedules for execution. Remember that Windows NT supports symmetric multiprocessing. In order for an SMP system to work, processes must be dividable into multiple threads of execution.

The process model for Windows NT works in conjunction with the security model and the Virtual Memory Manager to provide inter-process protection. The Process Manager is the Windows NT-based component that manages the creation and deletion of processes. It provides a standard set of services for creating and using threads and processes in the context of a particular protected-subsystem environment. Beyond that, the Process Manager does little to dictate rules about threads and processes. It does not

impose any hierarchy or grouping rules for processes, nor does it enforce any parent/child relationships. Instead, these design decisions are left for the protected subsystems to implement. For example, the parent/child relationship that exists between UNIX processes is implemented in the POSIX protected-subsystem of Windows NT.

6.2.8.3 Virtual Memory Manager

Both Windows NT and UNIX implement 32-bit linear memory addressing and demand-paged virtual memory management. Under Windows NT, each process is allocated a four gigabyte (2^{32} bytes) virtual address space, with half of it reserved for program storage and half of it reserved for system storage. The Virtual Memory Manager maps virtual addresses in the process' address space to physical pages in the computer's memory. In doing so, it hides the physical organization of memory from the process's threads. This ensures that the thread can access its process' memory as needed, but not the memory of other processes.

An ordinary machine today typically has much less than four gigabytes of physical memory. When physical memory becomes full, the Virtual Memory Manager transfers, or pages, some of the memory contents to disk. Windows NT and many UNIX systems share a common page size of 4K. The process that the Virtual Memory Manager uses to determine which pages to move to disk is referred to as the paging policy.

The primary goal of any paging policy is to allow as many processes or threads as possible to use the machine's memory without adversely impacting the overall performance of the system. It is a very fine balancing act. On one side you have wasted machine resources, on the other you have a situation in which the memory manager uses up most of the CPU cycles by swapping things back and forth from memory to disk, a condition known as thrashing.

The Windows NT Virtual Memory Manager uses a paging policy known as local first in, first out (FIFO) replacement. With local FIFO replacement, the Virtual Memory Manager must keep track of the pages currently in memory for each process. This set of pages is referred to as the process's working set.

One of the most important features of this paging policy is that it enables Windows NT to do some unattended performance tuning. When physical memory runs low, the Virtual Memory Manager uses a technique called automatic working-set trimming to increase the amount of free memory in the system. Roughly speaking, this is a process whereby the Virtual Memory Manager attempts to equitably allocate memory to all of the processes currently on the machine. As it cuts the amount of memory to each process it also monitors their page-fault rates and works to strike a balance between the two.

6.2.8.4 Local Procedure Call Facility

Applications and the protected subsystems have a client/server relationship. That is, the application (client) makes calls to the protected subsystem (server) to satisfy a request for some type of system service. In general, clients and servers communicate with each other through a series of well-defined messages. When the client and server are both on the same machine, the Windows NT executive uses a message-passing mechanism known as the Local Procedure Call (LPC) facility. LPC is an optimized version of the industry-standard Remote Procedure Call (RPC) facility used by clients and servers communicating across networks.

6.2.8.5 Input/Output (I/O) Manager

The Input/Output (I/O) Manager is the part of the Windows NT executive that manages all input and output for the operating system. It is made up of a series of sub-components such as the file systems, the network re-director and server, the system device drivers, and the cache manager. A large part of the I/O Manager's role is to manage the communications between drivers. To simplify the task, it implements a well-defined, formal interface that allows it to communicate with all drivers in the same way, without any knowledge of how the underlying devices actually work. In fact, the I/O model for Windows NT is built on a layered architecture that allows separate drivers to implement each logically distinct layer of I/O processing. The I/O Manager is the Windows NT executive component that makes the most use of the software isolation layers mentioned above in the open systems discussion.

In addition to the uniform driver model, the I/O Manager works with other Windows NT executive components, most notably the Virtual Memory Manager, to provide asynchronous I/O, mapped file I/O, and file caching.

File caching bears special mention. It is controlled by a sub-component of the I/O Manager called the Cache Manager. While most caching systems allocate a fixed number of bytes for caching files in memory, the Windows NT cache dynamically changes size depending on how much memory is available. This load-balancing feature is provided by the Cache Manager and is another example of automatic self-tuning within Windows NT.

6.2.8.6 Security Reference Monitor

The Security Reference Monitor, in conjunction with the Log-on Process protected-subsystem and the Security protected-subsystem, forms the security model for Windows NT. In a multitasking operating system, applications share a variety of system resources including physical memory, I/O devices, files and directories, as well as the system processor(s). Applications must have proper authorization before being allowed to access any of these system resources, and the components of the security model for Windows NT enforce this policy.

With UNIX, security of this nature usually comes in the form of an expensive add-on such as Kerberos™. Kerberos, which gets its name from the three-headed dog that guards the entrance to Hades in Greek mythology, was developed at MIT as part of Project Athena. It has become a de facto standard for network security and is expected to be incorporated into a future version of Windows NT.

In the meantime, the Security Reference Monitor acts as the watchdog, enforcing the access-validation and audit-generation policy defined by the local Security protected-subsystem. It provides run-time services to both kernel-mode and user-mode components for validating access to objects, checking for user privileges, and generating audit messages. As with other components in the Windows NT executive, the Security Reference runs exclusively in kernel-mode.

6.2.8.7 Kernel

The Kernel is at the core of the layered architecture for Windows NT and manages only the most basic of the operating system functions. The micro-kernel design enables this component to be small and efficient. The Kernel is responsible for thread dispatching, multiprocessor synchronization, and hardware exception handling.

6.2.8.8 Hardware Abstraction Layer (HAL)

The Hardware Abstraction Layer (HAL) is an isolation layer of software provided by the hardware manufacturer that hides, or abstracts, hardware differences from higher layers of the operating system. Because of the HAL, the different types of hardware all look alike to the operating system, removing the need to specifically tailor the operating system to the hardware with which it communicates. The goal for the HAL was to provide routines that allow a single device driver to support the same device on all platforms.

HAL routines are called from both the base operating system (including the Kernel) and from the device drivers. The HAL enables device drivers to support a wide variety of I/O architectures without having to be extensively modified. The HAL is also responsible for hiding the details of symmetric multiprocessing (SMP) hardware from the rest of the operating system.

6.2.9 Protected (Environment) Subsystem

The protected subsystems are user-mode servers started when Windows NT is booted. There are two types of protected subsystems: integral and environment. An integral subsystem is a server that performs an important operating system function, such as security. An environment subsystem is a server that provides support to applications native to different operating system environments. Windows NT currently ships with three environment subsystems: the Win32® subsystem, the POSIX subsystem, and the OS/2® subsystem. The Win32 subsystem is the "native-mode" subsystem of Windows NT. It provides the most capabilities and efficiencies to its applications and, for that reason, is the subsystem of choice for new software development. The POSIX and OS/2 subsystems provide "compatibility-mode" environments for their respective applications and, by definition, are not as feature-rich as the Win32 subsystem.

6.2.9.1 Win32

The Win32 subsystem is the most critical of the Windows NT environment subsystems. It provides the graphical user interface and controls all user input and application output. It is the server for Win32-based applications and implements the Win32 API. Not all applications are Win32-based, and the Win32 subsystem does not control the execution of non-Win32-based applications. It does, however, get involved. When the user runs an application that is foreign to the Win32 subsystem, it determines the application-type and either calls another subsystem to run the application or creates an environment for MS-DOS® or 16-bit Windows in which to run the application.

The subsystems for MS-DOS and 16-bit Windows run in user-mode in the same way the other environment subsystems do. However, unlike the Win32, POSIX, and OS/2 subsystems, they are not server processes, per se. MS-DOS-based applications run within the context of a process called a Virtual DOS Machine (VDM). A VDM is a Win32-based application that establishes a complete virtual computer running MS-DOS. The 16-bit Windows environment is a hybrid application, one that runs within the context of a VDM process, but calls the Win32 API to do most of its work. This feature of running 16-bit Windows within Win32 is known as WOW, which is short for Windows On Win32.

Creating environments for MS-DOS and 16-bit Windows as user-mode subsystems affords them the same protection that the other subsystems have. They cannot interfere with the operation of each other, the other protected-subsystems, or the Windows NT executive.

6.2.9.2 POSIX

POSIX, which stands for Portable Operating System Interface for UNIX, began as an effort by the IEEE community to promote the portability of applications across UNIX environments by developing a clear, consistent, and unambiguous set of standards. POSIX is not limited to the UNIX environment and has been implemented on non-UNIX operating systems, such as Windows NT, VMS, MPE™/iX, and CTOS.

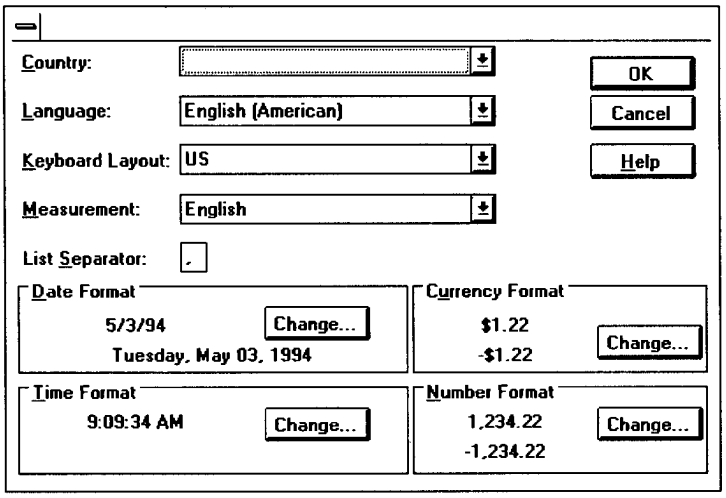
POSIX actually consists of a set of standards that range from IEEE 1003.0 to 1003.22 (also known as POSIX.0 to POSIX.22). However, most of these standards are still in the proposed state. The POSIX subsystem on Windows NT supports 1003.1, which is also known as the international ISO/IEC IS 9945-1:1990 standard. This standard defines a C-language, source-code-level API to the operating system environment. All POSIX standards are based on specifications for which there is no binary reference implementation.

6.2.9.3 OS/2

The OS/2 subsystem supports 16-bit graphical and character based applications. It provides these applications with an execution environment that looks and acts like a native OS/2 system. Internally, the OS/2 subsystem calls the Windows NT executive to do most of the work, as the Windows NT executive services provide general-purpose mechanisms for doing most operating system tasks. However, the OS/2 subsystem implements those features that are unique to its operating environment.

6.2.10 Internationalization

Microsoft builds products that are *world-ready*; Windows NT is no exception. There are currently 15 international versions of Windows NT: Brazilian, Chinese, Danish, Dutch, Finnish, French, German, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, and Swedish. A process called localization is used to create these different versions.



Specifying International Settings

When installing Windows NT, the user selects a language to use and is assigned a default locale. The default locale gives the culturally-correct defaults for keyboard layout, sorting order, currency, and date and time formatting. Of course, these defaults can be overridden by the user.

At its most basic level, a locale consists of a language, a country, and the binary codes used to represent the characters of a particular language. The latter is referred to as the code set. The United States has traditionally adopted the ASCII standard for representing data. However, ASCII is woefully inadequate for other countries because it lacks many symbols and punctuation. For example, the British pound sign and the diacritical marks used in French, German, Dutch, and Spanish are missing.

To address these shortcomings, Windows NT employs the new Unicode™ standard for data representation. Unicode is a de jure standard for encoding international character sets. The Unicode standard was developed by the Unicode Consortium, a consortium of vendors including Microsoft, IBM, Borland, and Lotus. Unicode separates the "essence" of a character from the font and formatting information used to display it. It employs a 16-bit character coding scheme, which means that it can represent 65,536 (2^{16}) individual characters. This is enough to include all languages in computer commerce today, several archaic or arcane languages with limited applications (such as Sanskrit, and, eventually, Egyptian hieroglyphics), all punctuation marks, mathematical symbols, and other graphical characters. With all of this, there is still plenty of room for future growth.

Unicode is the native code set of Windows NT, but the Win32 subsystem provides both ASCII and Unicode support. Character strings in the system, including object names, path names, and file and directory names, are represented with 16-bit Unicode characters.

The Win32 subsystem converts any ASCII characters it receives into Unicode strings before manipulating them. It then converts them back to ASCII, if necessary, for output.

Localization is only one part of the effort that goes into ensuring that an operating system can be used effectively in a world-wide environment. A *world-ready* operating system must also provide services to support the use of international applications and to support the global market by making the application developer's job easier. For example, some of the language issues that international users and application developers face are:

From the user's perspective–
Some users need to include more than one language in a document. For example, they might be translating from English into Russian, or they might be writing a product instruction manual in many different languages. When using more than one language, users must deal with a series of obstacles. For example, they must repeatedly switch to another keyboard layout on-the-fly. When using a database, users face the problem of sorting the information in the correct order for a given language.

From the developer's perspective–
When localizing a product, developers are faced with several questions, such as:

- What is the correct sorting order for French?
- How is a date represented in Germany?
- If a document contains text in more than one language, is there some way for the software to distinguish the different languages?
- Can information in a multilingual document be cut and pasted into another application?

Many developers try to address these issues in their applications and fall short, creating problems for the users, their support organization, and their own development team.

Microsoft is incorporating international language support at the operating system and API level. Built-in, international language support adds functionality that provides solutions for developing and using software and for exchanging documents around the world.

6.3 Networking/Communication

6.3.1 Overview

Windows NT is a complete operating system with fully integrated networking, including built-in support for multiple network protocols. These capabilities differentiate it from other operating systems such as MS-DOS and most versions of UNIX. With other

operating systems, network capabilities are either installed separately from the core operating system as an add-on or the range of supported network protocols is restricted. With some operating systems, both limitations exist.

Windows NT offers built-in support for both peer-to-peer and client/server networking. It provides inter-operability with, and remote dial-in access to, existing networks; support for distributed applications; file and print sharing; and the ability to add networking software and hardware.

6.3.1.1 ISO OSI Model

The International Standards Organization (ISO) developed a seven-layer, theoretical model called the Open Systems Interconnection (OSI) reference model. It is used to describe the flow of data between the physical connection to the network and the user application. This model is the best known and most widely used model to describe networking environments, and we will use it as the framework to discuss the networking components for Windows NT.

In the OSI model, the purpose of each of the seven layers is to provide services to the next higher layer, shielding the higher layer from the details of how the services are actually implemented. The layers are abstracted in such a way that each layer believes it is communicating with the same layer on the other computer. In reality, each layer communicates only with adjacent layers on the same machine.

Layer 0, which is not officially a layer in the OSI model, is commonly used to define the underlying transmission media, such as cables or fiber, that interconnect each of the computers on the network. Layer 0 is known as the Media Layer.

6.3.1.2 Network Adapter/Network Interface Card (NIC)

The Network Adapter or Network Interface Card (NIC) connects the internal communication bus of the computer with the external network. It acts as a bridge between the Media Layer (Layer 0) and the Physical Layer (Layer 1) in the OSI model. Windows NT views the NIC as a peripheral device and controls it through a device driver.

6.3.1.3 Network Device Interface Specification (NDIS)

The IEEE 802 project further defined sub-layers of the Data Link Layer (Layer 2) in the OSI model. The two sub-layers are the Media Access Control (MAC) and the Logical Link Control (LLC). The MAC sub-layer communicates directly with the NIC and is responsible for delivering error-free data between two computers on the network.

In 1989, Microsoft and 3Com jointly developed a specification defining an interface for communication between the MAC sub-layer and protocol drivers higher in the OSI model. This standard is known as the Network Device Interface Specification (NDIS), and is a key isolation layer of software. NDIS isolates the details of the NIC from the transport protocols and vice versa.

6.3.1.4 Transport Protocols

The transport protocols reside primarily in the Network Layer (Layer 3) and the Transport Layer (Layer 4) of the OSI model and communicate with the NIC(s) through an NDIS-compliant device driver. Windows NT ships with the following transport protocols: TCP/IP; NBF, derived from NetBEUI; NWLink, an NDIS-compliant version of Novell® Internetwork Packet Exchange (IPX/SPX); Microsoft Data Link Control (DLC); and Appletalk®.

6.3.1.5 STREAMS

STREAMS was originally developed by AT&T for UNIX System V, Release 3.2. It is an isolation layer of software that wraps around STREAMS-based transport protocols. Calls to the transport protocol driver must first go through the upper layer of the STREAMS device driver to the protocol, then back through the lower layer of STREAMS to the NDIS device driver. The STREAMS environment allows the many STREAMS-based transport protocol drivers that already exist to be plugged into Windows NT with little or no modification. New transport protocol drivers, however, should be written to the newer, more versatile Transport Driver Interface.

6.3.1.6 Transport Driver Interface (TDI)

The Transport Driver Interface (TDI) is another isolation layer of software that falls at another strategic breakpoint in the OSI model, namely between the Transport Layer (Layer 4) and the Session Layer (Layer 5). The TDI is not a single piece of software but rather a protocol specification to which the upper bounds of the transport protocol device drivers are written. It enables a single version of a session-layer component, such as a network re-director or server, to use any available transport mechanism loaded on the machine, for example TCP/IP or IPX/SPX.

6.3.1.7 Windows Sockets (WinSock)

In network programming, a socket provides an endpoint to a connection; two sockets form a complete path. A socket works as a bi-directional pipe for incoming and outgoing data between networked computers.

Windows Sockets (WinSock), a session-layer interface, is a de facto standard for Windows-based network programming. Version 1.1 of Windows Sockets was developed by a group of 30 vendors, including Microsoft, and released in January 1993. This original version is compatible with the UC Berkeley (BSD) Sockets APIs, which are a de facto standard for UNIX network programming. Version 1.1 provided independence from the underlying TCP/IP protocol stack. As long as the TCP/IP stack was WinSock-compliant, an application written to the WinSock APIs would run on it.

Version 2.0 of Windows Sockets provides true transport protocol independence by extending support to additional protocols, including IPX/SPX, DECnet™, and OSI. It has also been extended to support additional network technologies, such as ATM, wireless, and telephony.

6.3.1.8 NetBIOS

The Network Basic Input/Output System (NetBIOS) is a session-layer interface similar in function to Windows Sockets. It is used by applications to communicate with NetBIOS-compliant transports such as NetBEUI Frame (NBF). The NetBIOS interface is responsible for establishing logical names on the network, establishing a connection between any two of those names, and supporting reliable data transfer between computers once the connection has been established. The network re-director is an example of a NetBIOS application.

6.3.1.9 Re-Director/Server

The re-director and server are integral subsystems that are key components of the network architecture for Windows NT. The re-director is the network component responsible for sending, or redirecting, I/O requests across the network when the file or device to be accessed is not on the local machine. The server is the network component on the remote machine that entertains connection requests from the client-side re-directors and provides them with access to the desired resources. Under Windows NT, multiple re-director/server pairs can concurrently execute, enabling transparent, multi-server access.

Both of these components reside above the TDI and are implemented as file system drivers. This has several benefits. Applications can call a single API to access both local and remote files, and, from the I/O Manager's perspective, there is no difference between accessing files stored on a remote networked computer and accessing those stored on a local hard disk. This transparent resource access is, in many ways, similar to the functionality provided by remote file systems under UNIX, such as the Network File System (NFS) and the Andrew File System (AFS).

6.3.1.10 Provider

For each re-director in the Session Layer (Layer 5) there is a corresponding component known as a *provider* in the Application Layer (Layer 7) of the OSI model. A provider establishes Windows NT as a client of a remote network server. When an application issues a request, a software component known as the Multiple Provider Router (MPR) determines the appropriate provider and routes the request to it. The provider then passes the request on to the corresponding re-director for transmission across the network. Typical operations performed by a provider are establishing and releasing network connections, transferring data across the connection, and printing remotely. The Windows NT File Manager is an example of an application that uses the services provided by the provider(s).

While Windows NT includes integrated networking, its open design provides for transparent access to other networks. Windows NT supplies provider/re-director pairs for its own network as well as others. For example, it includes the Client Service for NetWare® with Windows NT Workstation and the Gateway Service for NetWare with Windows NT Server, with which a computer running Windows NT can connect as a client to a NetWare network. You can also install third-party provider/re-director pairs to expand the connectivity of Windows NT beyond what is already supported "out of the box."

6.3.1.11 Named Pipes

Though not compatible with UNIX Named Pipes, Windows NT Named Pipes are conceptually similar. Named pipes provide a high-level interface for passing data between two processes, regardless of network location. Named pipes, like files, are implemented as file objects in Windows NT and operate under the same constraints and security mechanisms as other NT executive objects. The named pipe file system driver is a pseudo-file system that stores pipe data in memory and retrieves it on-demand. When processing local or remote named pipe requests, it functions like an ordinary file system.

6.3.1.12 Remote Procedure Call (RPC)

The Remote Procedure Call (RPC) facility is the backbone of true distributed computing and is rapidly becoming the Inter-Process Communication (IPC) method of choice for software developers. Much of the original design work for an RPC facility was started by Sun Microsystems. It has continued with the Open Software Foundation (OSF) as a core part of their Distributed Computing Environment (DCE) standard.

The Microsoft RPC is compatible with the OSF® DCE® RPC. Being compatible is not the same as being compliant. Compliance, in this case, means starting with the OSF

source code and building upon it. The key element here is not compliance; it is inter-operability. If the software is inter-operable, it does not need to be compliant, and the Microsoft RPC facility is completely inter-operable with other DCE-based RPC systems, such as those from Hewlett-Packard and IBM.

The RPC facility is unique because it relies on other IPC mechanisms to transfer functions and data between the client and the server. In the case of Windows NT, RPC can use named pipes, NetBIOS, or Windows Sockets to communicate with remote systems and the LPC facility to communicate with systems on the local machine. This IPC-independence makes RPC the most flexible and portable of the IPC mechanisms for Windows NT.

6.4 File Systems

6.4.1 Overview

Windows NT automatically supports multiple file systems. The two most commonly used are:

Windows NT File System (NTFS)–
The Windows NT File System (NTFS) is a new, advanced file system that supports file recovery, extremely large storage media, and long file names. NTFS provides the highest level of security and is the file system of choice on Windows NT.

File Allocation Table (FAT)–
The File Allocation Table (FAT) is the file system used by the MS-DOS and Windows operating systems. FAT does not provide security

A computer running Windows NT can use one or more of these file system on its disks and partitions. This is referred to as multiple active file systems.

6.4.1.1 NTFS

Journaling file systems are based on the transaction processing concepts found in database theory. NTFS is a journaling file system with fast file recovery. Internally, it resembles a relational database more than a traditional file system. It is comparable in function to the Veritas file system found on some UNIX implementations, and the really good news is you do not have to deal with **fsck** or **lost+found**.

NTFS was designed to provide recoverability, security, and fault tolerance through data redundancy. In addition, support was built into NTFS for large files and disks, Unicode-based names, bad-cluster re-mapping, multiple data streams, general indexing of file attributes, and POSIX. All of these contribute to making NTFS an extremely robust file system.

6.4.1.2 Fault Tolerance

Fault tolerance is the ability of a system to continue functioning when part of the system fails. The expression *fault tolerance* is typically used to describe disk subsystems, but it can also apply to other parts of the system or the entire system.

6.4.1.3 Redundant Arrays of Independent Disks (RAID)

Fault-tolerant disk systems are standardized and categorized in seven levels known as Redundant Arrays of Independent Disks (RAID) level 0 through level 6. The RAID levels are somewhat loosely defined, and details on performance or disk use vary from one configuration to the next. Depending on the implementation, definitions may overlap or be combined. Each level offers various mixes of performance, reliability, and cost. Windows NT supports RAID levels 0 through 5.

The major difference between RAID and earlier, more expensive large-disk technologies (also called Single Large Expensive Disks, or SLED) is that RAID combines multiple disks with lower individual reliability ratings to reduce the total cost of storage. The lower reliability of each disk is offset by the redundancy.

RAID Level 0–
This strategy is commonly known as disk striping without parity and uses a disk file system called a stripe set. Data is divided into blocks and spread in fixed order among all of the disks in the array. RAID Level 0 may enhance disk performance, but it does not provide redundancy. For that reason, it is not considered to be a true RAID level, nor does it qualify as fault tolerant.

RAID Level 1–
This strategy is commonly known as disk mirroring, disk duplexing, or disk shadowing. It provides an identical twin for a selected disk; all data written to the primary disk is also written to the twin, or mirrored, disk. This strategy provides the best performance when a member fails, but it is also the most expensive to implement due to the two-for-one disk space requirements.

RAID Level 2–
This strategy is commonly known as disk striping with error correcting code (ECC). This method achieves redundancy with ECC. It employs a disk striping strategy that breaks a file into bytes and spreads it across multiple disks. At the same time, the ECC data is spread across multiple check disks. In the event of data loss, the ECC information can be used to reconstruct the lost data.

RAID Level 3–
This strategy is the first in the series of levels that provides disk striping with parity. It employs the same striping method used in Level 2 but replaces the ECC method with a parity-checking scheme that requires only one disk on which to store the parity information.

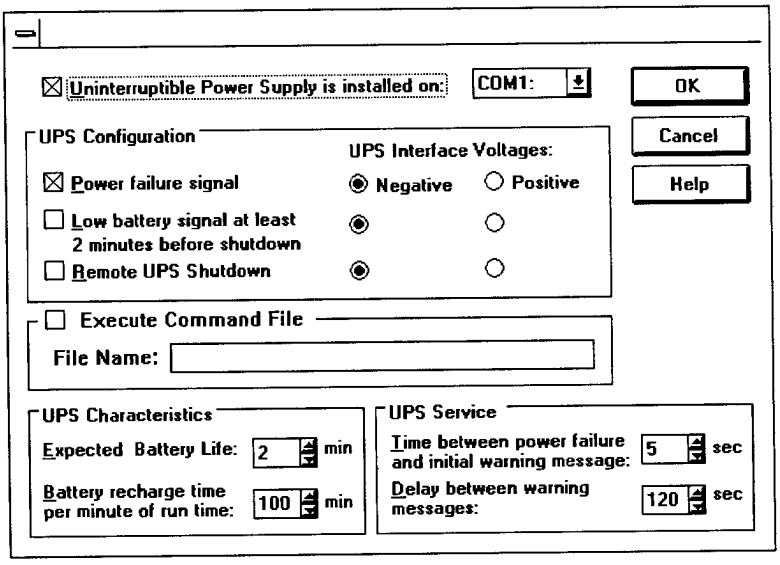
RAID Level 4–
This strategy is similar to Level 3 in that it stores the parity information on a separate check disk. Where it differs is in the striping. This method stripes data in much larger chunks.

RAID Level 5–
This has become the most popular strategy for recent fault-tolerant designs. Like Level 4, it stripes data in big chunks. Unlike Level 4, it does not use a separate check disk for parity information. Rather it stripes the parity across the disks as well. The data and parity information are arranged on the disk array so that the two are always on different disks.

RAID Level 6–
This is essentially Level 5 with the addition of redundant hardware such as disk controllers and power supplies.

6.4.1.4 Uninterruptible Power Supplies

An uninterruptible power supply (UPS) provides power when the local power fails. It is usually rated to provide a specific amount of power for a specific period of time. This power comes from batteries that are kept charged while main power is available. The main power is converted from AC voltage to the DC voltage used to charge the battery. When needed, the DC power is converted to an AC voltage compatible with the computer power supply. Usually, all that is needed from a UPS is time to shut down the system in an orderly fashion by terminating processes and closing sessions.



Configuring UPS Under Windows NT

Many UPS devices offer the ability to interface with operating systems, enabling the operating system to notify users automatically of the pending shutdown process or to provide notification that the power has been restored and a shutdown is no longer necessary. Windows NT provides an interface for these types of UPS devices through a serial port connection. Communication is handled in much the same way as hardware handshaking is handled on a normal RS-232C connection. Hardware signals are translated into power-state messages that are then interpreted by Windows NT software.

For example, during a power failure, the UPS service for Windows NT immediately pauses server access for Windows NT to prevent any new connections and sends a message to notify users of the power failure. The UPS service then waits a specified interval of time before notifying users to terminate their sessions. If power is restored during that interval, another message is sent to inform users that power has been restored and normal operations have resumed.

6.5 Distributed Computing–Directory Services

6.5.1 Overview

The goal is distributed computing. Directory Services is one key piece of that goal, but it is only a means to an end, not the end in itself. Distributed computing can be thought of as a seamless extension of the desktop where information is readily available at your fingertips. It goes far beyond the file and print sharing services common today.

A complete distributed computing infrastructure will be constructed from a variety of technologies and components. One essential component is a micro-kernel-based operating system as the foundation. A micro-kernel-based operating system

accommodates the heterogeneous nature of today's networks and provides the flexibility and the building block for tomorrow's networks. Another essential component is directory services. However, to make distributed computing truly seamless, directory services will need to be built on, and tightly integrated with, the micro-kernel-based operating system. It needs to be something more than adding X.500 on top of UNIX. Both the micro-kernel-based operating system and the directory services will also need to support a widely accepted and well integrated set of APIs for application development. In the case of directory services, strategic isolation layers of software will also need to be defined and accepted.

Because directory services are an important component of a distributed computing infrastructure, it is important to understand the continuing evolution of directory services. Fully functional directory services are an important element of the larger distributed computing picture, and their arrival will be the harbinger of a fundamental change in the network computing model as we know it. Along with distributed and object-oriented file systems, security services, and object-oriented development frameworks, directory services will ultimately enable a distributed computing environment that changes the way people use networks.

While the directory services provided by today's network operating systems have increased in functionality over the last several years, they are still primarily used in single-purpose administrative roles, such as electronic mail, multi-user accounting applications, and work-group applications. From a functional point of view, these directory services are designed to make the network operating system environment more manageable.

It is important to realize, however, that the vision of distributed computing cannot be fulfilled with directory services that have such limited scope. For example, next-generation directory services will not be deployed as subsets of other applications and services; they will be implemented as an integral part of the operating systems that serve as the foundation for distributed computing. Instead of being exposed as a separate database, as current-generation directories are, next-generation directories will be integrated with the network file system. The operating system, the network file system, and the directory services will be one single, unified package rather than disparate pieces loosely glued to each other.

Next-generation directories will contain all of the information on the network—in the form of *objects*—and not just the user profiles, access control lists, and other administrative information found in today's directories. As a result, users will be able to use the query capabilities of the directory to search for more than the name of a given server or printer. They will be able to search for any and all types of information on the

network and, hence, also contained in the directory. The information will be much more accessible, so that users can focus on their work, rather than on how the network works.

Next-generation directories must also provide significant levels of inter-operability with the existing administrative directories deployed as part of other applications and operating systems. This seamless inter-operability will allow system administrators to unify the implementation, access, and management of all network resources, including current-generation directory services, within the next-generation directory itself.

6.5.1.1 Domains and Trust Relationships

The Windows NT Domain should not be confused with a UNIX Domain. In UNIX, a domain refers to how a particular computer is named on a TCP/IP Internetwork. In Windows NT, a domain is a group of servers running Windows NT Server that share common security policy and user account databases. Therefore, the Windows NT Domain is the basic unit of security and centralized administration for Windows NT, and the servers in the domain, in some ways, can be viewed as a single system.

One computer running Windows NT Server acts as the Primary Domain Controller (PDC), which maintains the centralized security databases for the domain. Other computers running Windows NT Server in the domain function as backup domain controllers and can authenticate log-on requests. Users of a Windows NT Domain are authenticated by the PDC or by a backup domain controller. Domains can also contain computers running Windows NT Server that are not domain controllers, server computers that are not running Windows NT Server, and client computers such as those running Windows NT Workstation, Windows® for Workgroups, and MS-DOS.

The other key concept in Windows NT Domains is the trust relationship. A trust relationship is a link between two domains that enables a user with an account in one domain to have access to resources in another domain. When you establish a trust relationship between domains, one domain (the trusting domain) trusts the other domain (the trusted domain). Trust relationships are unidirectional. Bi-directional trusts are created with two unidirectional ones. In addition, trust relationships are not transitive. For example, if Domain A trusts Domain B, and Domain B trusts Domain C, Domain A will not trust Domain C by default. If Domain A needs to trust Domain C, a separate trust relationship must be set up between the two domains.

Domains and trust relationships are the key components in the Windows NT Directory Services. By combining domains and trusts, you are able to strike a balance between access, control, and administration for your particular network requirements. There are four common ways of combining domains and trust relationships into what are known as

domain models. They are: Single Domain, Master Domain, Multiple Master Domain, and Multiple Trust.

Single Domain–
In the single domain model, there is only one domain. Because there are no other domains, there are no trust relationships to administer. This model is best for organizations with fewer than 40,000 users in which establishing trust relationships among departments is not an issue. In an organization with multiple departments where there is no need to share information among them, the best configuration is often multiple single domains.

Master Domain–
In an organization with fewer than 40,000 users in which establishing trust relationships among departments is an issue, the master domain model is a suitable option. In this model, one domain, the master domain, is trusted by all non-master sub-domains, but does not trust any of them. The master domain contains the user accounts database and provides authentication services to the trusting sub-domains. This model offers the benefits of both central administration and multiple domains.

Multiple Master Domain–
In this model, there is more than one master domain. All of the master domains trust each other, and all are trusted by the non-master sub-domains, but none of the master domains trusts any of the sub-domains. This model works best when computer resources are grouped in some logical fashion, such as by department or by location. Each master domain can support as many as 40,000 users, so this model works well in large organizations. And because all the master domains trust each other, user accounts need only exist in one of them.

Multiple Trust–
In the multiple trust model, all domains trust each other. There are no master domains. This model is sometimes referred to as the complete trust model and is the simplest to understand. As with the multiple master domain model, the multiple trust model is scaleable as the organization grows, and because each domain has full control over its own user accounts, it can work well for a company without a centralized information services (IS) department.

6.5.1.2 Name Resolution

A computer on a network usually has both a name and an address. Take TCP/IP, for example. It requires an IP address and computer name, which are unique identifiers for the specific computer on the network. Computers use the IP addresses to identify each other, but people usually find it easier to work with the computer names. Therefore, a

mechanism must be available to convert computer names into their corresponding IP addresses. This mechanism is known as name resolution.

A computer running Windows NT can use one or more of the following methods to ensure accurate name resolution in TCP/IP internetworks:

- **Windows Internet Name Service (WINS)** is a NetBIOS over TCP/IP (NBT) mode of operation as defined in RFC 1001/1002 as p-node.
- **Broadcast Name Resolution** is a NetBIOS over TCP/IP (NBT) mode of operation as defined in RFC 1001/1002 as b-node.
- **Domain Name System (DNS)** is defined in RFCs 1034 and 1035.
- A **HOSTS file** is a flat file used to specify the DNS computer name and IP address mapping.
- An **LMHOSTS file** is a flat file used to specify the NetBIOS computer name and IP address mapping.

6.5.1.3 Dynamic Host Configuration Protocol (DHCP)

To fully understand the power of WINS, it is necessary to first know something about the Dynamic Host Configuration Protocol (DHCP). DHCP relieves the administrative burden associated with assigning and maintaining IP addresses. It offers dynamic configuration of IP addresses for computers. DHCP provides safe, reliable, and simple TCP/IP network configuration, ensures that address conflicts do not occur, and helps conserve the use of IP addresses through centralized management of address allocation. DHCP services for Windows NT are implemented under RFCs 1533, 1534, 1541, and 1542.

DHCP uses a client/server model and is based on leases for IP addresses. The system administrator controls how IP addresses are assigned by specifying address allocation ranges and lease durations. It is also possible to have static IP addresses, which are addresses with leases that do not expire. During system startup, a DHCP client computer sends a "discover" message that is broadcast to the local network and might be relayed to all DHCP servers on the private internetwork. Each DHCP server that receives the discover message responds with an offer message containing an IP address and valid configuration information for the client that sent the request.

The DHCP client collects the configuration offerings from the servers, chooses one of the configurations, and sends a request message to the DHCP server for the selected configuration. The selected DHCP server sends an acknowledgment message to the client. The DHCP acknowledgment message contains the IP address originally sent with the offer message, a valid lease for that address, and the appropriate TCP/IP configuration

parameters for use by the client. After the client receives the acknowledgment, it enters a bound state and can now participate on the TCP/IP network and complete its system startup.

Client computers save the received address for use during subsequent system startups. By default, the client attempts to renew its lease with the DHCP server when 50% of the lease time has expired. If the current IP address lease cannot be renewed, a new IP address is assigned.

As an example of how maintenance tasks are made easy with DHCP, consider the case in which a computer is moved from one sub-net to another. The IP address is released automatically for the DHCP client computer when it is removed from the first sub-net, and a new address is automatically assigned to it when it is attached to the new sub-net. Neither the user nor the system administrator needs to intervene to update the configuration information.

6.5.1.4 Windows Internet Name Service (WINS)

The Windows Internet Name Service (WINS) provides a dynamic database for registering and querying name-to-IP address mappings in a routed network environment. When a DHCP client moves from one sub-net to another, the IP address change is automatically updated in the WINS database. As with DHCP, no intervention is required of either the user or the system administrator to update the configuration information.

WINS consists of two components: the WINS server, which handles name queries and registrations; and the client software, which queries for computer name resolution. WINS servers support multiple replication partners in order to provide increased service availability, better fault tolerance, and load balancing. Each WINS server must be configured with at least one other WINS server as its replication partner. These partners can be configured to be either pull partners or push partners depending on how replications are to be propagated. WINS can also provide name resolution service to certain non-WINS computers through proxies, which are WINS-enabled computers that act as intermediaries between the WINS server and the non-WINS clients.

6.5.1.5 Domain Name System (DNS)

The Domain Name System (DNS) is a distributed database that provides a hierarchical naming system for identifying hosts on the Internet. A UNIX Domain is synonymous with a DNS Domain. DNS was developed to solve the problems that arose when the number of hosts on the Internet grew dramatically in the early 1980s. Although DNS might seem similar to WINS, there is a major difference: DNS requires static

configuration for computer name-to-IP address mapping, while WINS is dynamic and requires far less administration.

The DNS database is a tree structure called the domain name space, where each domain (node in the tree structure) is named and can contain sub-domains. The domain name identifies the domain's position relative to its parent domain in the database. A period (.) separates each part of the name. For example, tsunami.microsoft.com could be the name of a computer owned by Microsoft. The root of the DNS database is managed by the Internet Network Information Center. The top-level domains were assigned organizationally and by country. These domain names follow the ISO 3166 standard.

DNS uses a client/server model, where the DNS servers contain information about a portion of the DNS database and make this information available to clients, called resolvers, that query the name server across the network. DNS name servers are programs that store information about parts of the domain name space called zones. The domain administrator sets up name servers that contain database files with all the resource records describing all hosts in their zones. DNS resolvers are clients that are trying to use name servers to gain information about the domain name space. Windows NT includes all the resolver functionality necessary for using DNS on the Internet.

6.6 Security

6.6.1 Overview

The security model for Windows NT is designed to meet both national and international security criteria. In the United States it is the C2-level criteria as defined by the US Department of Defense *Trusted Computer System Evaluation Criteria* document (DOD 5200.28-STD, December 1985). This document is commonly referred to as the *Orange Book*. The C2-level security rating requires what is known as Discretionary Access Control and is one in a range of seven levels of security specified by the DOD. Some of the most important requirements for C2 are:

- **Identification and Authentication.** Each user must identify herself or himself by typing a unique log-on name and password before being allowed access to the system. The system must be able to use this unique identification to track the user's activities.
- **Discretionary Access Control.** The owner of a resource (such as a file) must be able to control access to the resource.
- **Object Reuse.** The operating system must protect objects so that they are not randomly reused by other processes. For example, the system protects memory so

that its contents cannot be read after it is freed by a process. In addition, when a file is deleted, users must not be able to access the file's data.

- **Audit.** System administrators must be able to audit security-related events. Access to this audit data must be limited to authorized administrators.
- **System Architecture.** The system must protect itself from external interference or tampering, such as modifications to the running system or system files stored on disk.

In the European community, the rough equivalent of the *Trusted Computer System Evaluation Criteria (TCSEC)* document is the *Information Technology Security Evaluation Criteria (ITSEC)* document. ITSEC is the product of the Common Criteria Editorial Board, an international standards body made up of representatives from various countries including France, Germany, the Netherlands, the United Kingdom, and the US. Because of the differences in criteria, there is no direct, one-to-one rating between the TCSEC document and the ITSEC document. A TCSEC rating of C2 translates roughly into an ITSEC rating of F-C2, E2. The higher TCSEC rating of B1 translates roughly into an ITSEC rating of F-B1, E3. Windows NT is currently being evaluated for an ITSEC rating of F-C2, E3, which is a mixture of the TCSEC B1 and C2 ratings.

The security model for Windows NT is made up of the following components:

- **Log-on Processes**, which accept log-on requests from users. These include the initial interactive log-on, which displays the log-on dialog box to the user and remote log-on processes, which allow access to server processes within Windows NT by remote users.
- **Local Security Authority**, which ensures that the user has permission to access the system. This component is the center of the security subsystem. It generates access tokens, manages the local security policy, and provides interactive user authentication services. The Local Security Authority also controls audit policy and logs the audit messages generated by the Security Reference Monitor.
- **Security Account Manager (SAM)**, which maintains the user accounts database. This database contains information for all user and group accounts. SAM provides user validation services, which are used by the Local Security Authority.
- **Security Reference Monitor,** which checks to see if the user has permission to access an object and perform whatever action the user is attempting. This component enforces the access validation and audit generation policy defined by the Local Security Authority. It provides services to both kernel and user mode to ensure that the users and processes attempting access to an object have the

necessary permissions. This component also generates audit messages when appropriate.

Together, these components are known as the security subsystem. This protected subsystem is an integral subsystem rather than an environmental subsystem because it affects the entire Windows NT operating system.

6.6.1.2 Users and Groups

Under Windows NT, any person who needs access to resources on the network must have a valid user account on a domain that allows or is allowed that access. The Windows NT user account contains the following information:

- **Username.** The unique name the user types when logging on.
- **Password.** The user's secret password.
- **Full Name.** The user's full name.
- **Log-on Hours.** The hours during which the user is allowed to gain access to the resources on the network.
- **Log-on Workstations.** The computer names of the workstations from which the user is allowed to work.
- **Expiration Date.** A future date when the account automatically becomes disabled.
- **Home Directory.** A directory on the server that is private to the user; the user controls access to this directory.
- **Log-on Script.** A batch or executable file that runs automatically when the user logs on.
- **Profile.** A file containing a record of the user's desktop environment, such as program groups, network connections, and screen colors, that follows the user from one workstation to another. The system administrator can also set up standard profiles that users are not allowed to modify.
- **Account Type.** For most, if not all, user accounts, the type will be global.

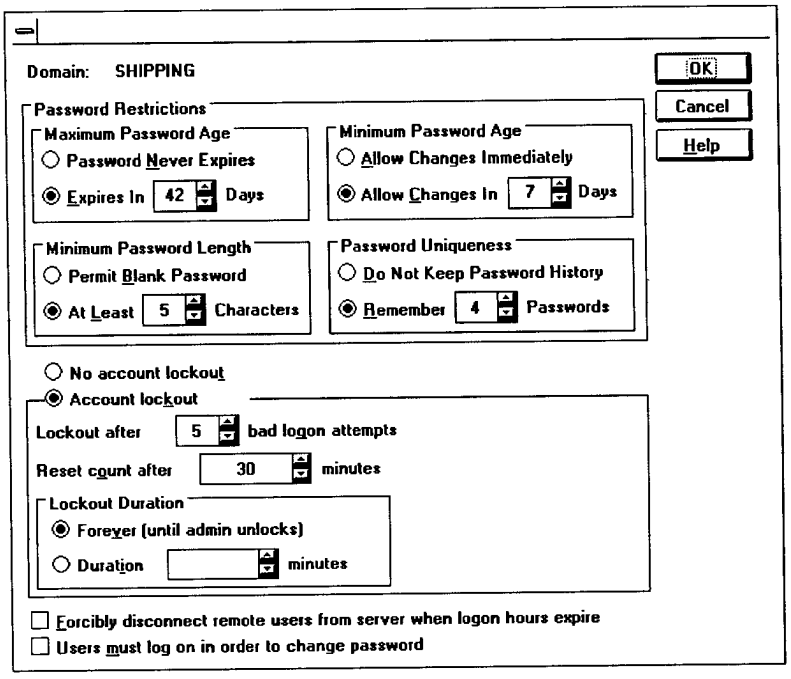
Like UNIX, Windows NT supports the concept of groups. With groups, you can sort users who have similar jobs and resource needs. Groups make granting rights and resource permissions easier; giving a right or permission to a group gives that right or permission to all present and future members of that group.

Even though they are conceptually similar, groups within Windows NT are inherently more powerful than groups within UNIX. Windows NT provides a set of built-in groups that gives members rights and abilities to perform various tasks, such as backing up the computers or administering the network printers. Examples of these built-in groups are: Administrators, Backup Operators, Print Operators, Power Users, Users, and Guests. It is also possible for the system administrator to define new types of groups, although the built-in groups cover most of the standard combinations of rights and permissions you would expect to find. User accounts can belong to more than one group at the same time and will share the combined rights and permissions of all groups to which they belong.

6.6.1.3 Passwords

Windows NT provides features that enable a system administrator to create a very robust account policy. The password policy can set the following limits on user passwords:

- **Maximum Password Age.** Specifies how long a user can use a password without changing it. By default, this setting is 42 days. It can be set to any value from 1 to 999 days, or it can be set to never expire.
- **Minimum Password Age.** Specifies how long a user must wait after changing a password before the user can change it again. By default, users can change their passwords immediately. This setting can be changed to any value between 1 and 999 days.
- **Minimum Password Length.** Specifies how many characters a password must contain. By default, Windows NT permits blank passwords. Many system administrators, however, change this option. A recommended minimum is six characters, but it can be set as high as 14 characters
- **Password Uniqueness.** Specifies how many different passwords a user must use before being allowed to reuse one. With the default setting, a user can immediately reuse an expired password. This setting can be changed to require users to create from 1 to 24 unique passwords before reusing one.



Setting Account Policy

Windows NT has no equivalent to the UNIX **/etc/passwd** file. With Windows NT, passwords are not hashed and stored in a flat file; they are instead integrated into the security model. No direct access to passwords, hashed or otherwise, is provided under Windows NT. Only the system administrator can reset a user's password.

Windows NT also provides an account lockout feature. When this feature is enabled, a user account becomes locked if there are a number of incorrect attempts to log on to that account within a specified amount of time. Locked accounts cannot log on. A locked account remains locked until an administrator unlocks it, or until a specified amount of time passes, depending on how the account lockout feature has been configured. By default, account lockout is disabled.

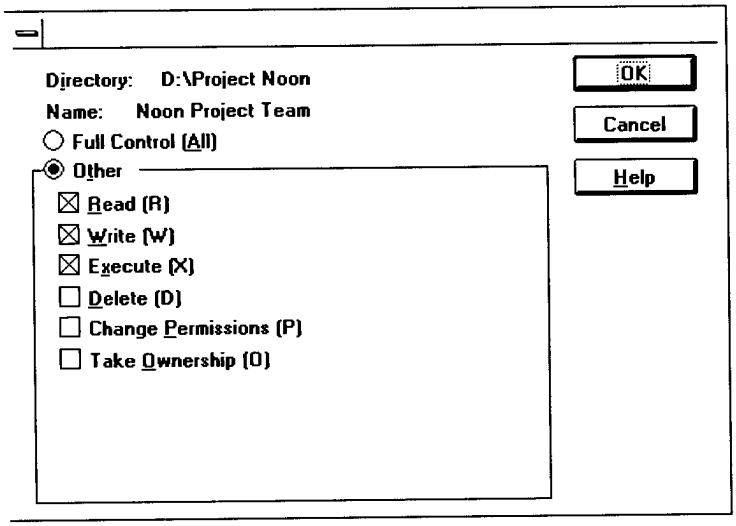
6.6.1.4 File Access (NTFS)

Windows NT supports multiple file systems. The two most commonly used are: the Windows NT file system (NTFS) and the file allocation table (FAT) file system. Permissions work differently on NTFS volumes than they do on FAT volumes. Security is much more powerful on NTFS volumes, and, for that reason, NTFS is the file system of choice for Windows NT.

Windows NT offers a set of standard permissions for files and directories in NTFS volumes. These standard permissions offer useful combinations of specific types of access, which are called individual permissions. Individual permissions are somewhat analogous to UNIX permissions, and consist of: Read (R), Write (W), Execute (X),

Delete (D), Change Permissions (P), and Take Ownership (O). These permissions can be specified either directly, as individual permissions, or indirectly, as standard permissions. Examples of standard permissions are: Read (RX), Change (RWXD), No Access (None), and Full Control (All). As with the built-in groups, it is possible for the system administrator to create new types of standard permissions, although most of the combinations that you would expect to find are covered in the existing ones.

UNIX supports three sets of file and directory permissions: owner, group, and world. This is the familiar -rwxrwxrwx that shows up in the output from the UNIX **ls -al** command. With Windows NT, permissions can be granted to either individual users or to groups. The big difference between Windows NT and UNIX is that, with Windows NT, multiple sets of permissions can be granted to multiple combinations of groups and/or individual users. You are not limited to just three sets.



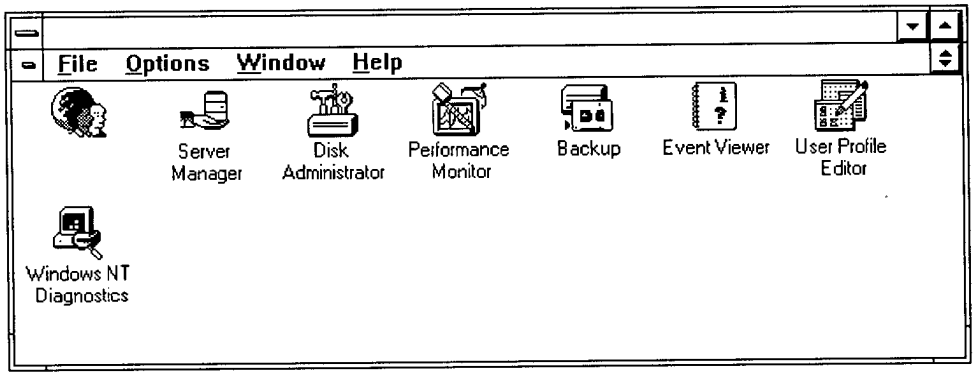
Setting Special Directory Permissions or Taking Ownership

Every file and directory on an NTFS volume has an owner. The owner controls how permissions are set on the file or directory, and can grant permissions to others. File ownership provides a way for users to keep private files private. This is another area where Windows NT differs significantly from UNIX. A system administrator can take ownership of any file on the system, but cannot then transfer the ownership to others, as can be done with UNIX. Therefore, if an administrator wrongly takes ownership of someone's files, that administrator cannot subsequently transfer ownership back to the original owner, and the original owner can easily find out who the new owner is.

6.7 System Administration

6.7.1 Overview

System administration differs significantly between Windows NT and UNIX. Two factors contribute heavily to this difference. First, Windows NT is based on the client/server model rather than the host-based terminal model. This is inherently a more decentralized model, which dramatically alters many of the tasks usually associated with system administration in a host-based terminal environment such as UNIX. Second, Windows NT is fully integrated with its Windows-based, graphical user interface (GUI). Virtually everything a system administrator does on the machine is GUI-based. This is in stark contrast to the command line user interface (CLUI) common for UNIX. There are X-based, system administration tools available on many of the UNIX implementations. However, these GUI-based tools were added as an afterthought, are not well integrated, and, in general, are specific to a particular flavor of UNIX.



Windows NT Administrative Tools

System administration is perhaps the most difficult area in which to make the paradigm shift. It is very hard to move from the "raw power" of the command line interface into the safer, standardized realm of the graphical user interface. There is a feeling of loss of control, and it is at this point that it becomes critical to remember that client/server environment is a different world, requiring different tools and strategies.

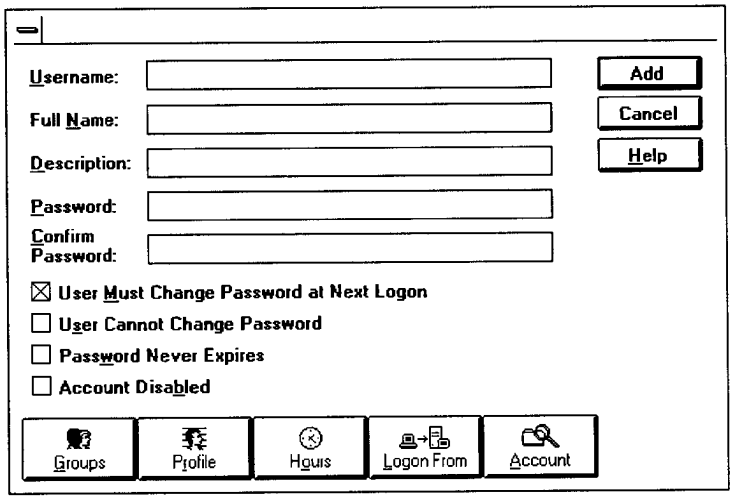
6.7.1.1 Account Management

User Accounts–
Through the magic of domains and trust relationships, users have a single log-on to the network, which gives them access to their resources from any available workstation. This not only reduces the administrative burden on system administrators, but it also directly benefits the users in that they have only one log-on name and one associated password to

remember. In addition, their desktop environments follow them as they move from workstation to workstation.

In Windows NT, user accounts are established and maintained with a Windows-based tool known as User Manager for Domains. It is a far cry from the UNIX method in which you typically use **vi** to manually edit the **/etc/passwd** and **/etc/groups** files. You can use User Manager for Domains to:

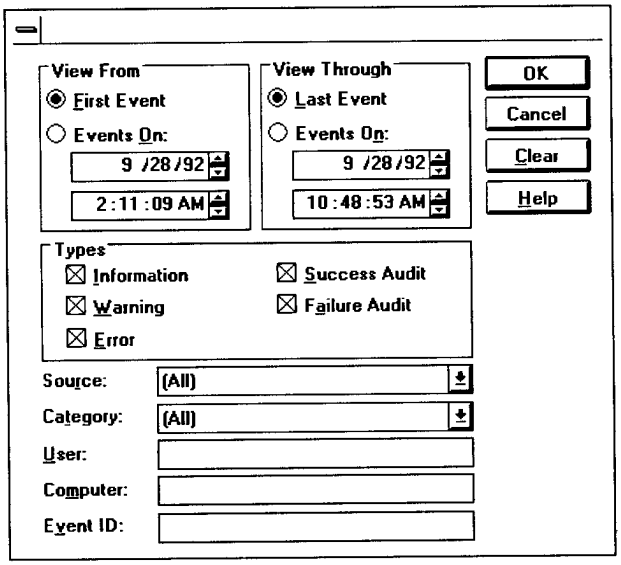
- **Maintain User Accounts.** You can add, modify, rename, disable, and delete users. You can establish and maintain password policy, as well as reset forgotten passwords. You can set up log-on hours, log-on workstations, and account expiration dates.
- **Maintain User Environment Profile.** You can set up or modify the path to the user's profile. You can establish a log-on script for the user, and you can specify the user's home directory. This is similar to setting up **.profile** and **.kshrc** files, and establishing **$HOME** environment variables for users under UNIX.
- **Maintain Groups.** You can add, modify, or delete groups, and you can add or remove users from groups.
- **Maintain the Security Policies.** You can manage the Account Policy, which controls the way passwords must be used by all user accounts and whether user accounts are locked out after so many bad log-on attempts. You can manage the User Rights Policy, which controls the rights assigned to groups and user accounts, and you can manage the Audit Policy, which defines the security events that will be logged.



User Manager for Domains—New User Dialog Box

User Profile policy is established and maintained with another Windows-based tool: User Profile Editor (although it can also be accessed through User Manager for Domains). User Profile Editor is somewhat analogous to using **vi** to modify the **/etc/profile** file on UNIX. However, User Profile Editor gives you complete control over all user profiles on the system, not just the default, global one.

Accounting Information–
Accounting information is also less of an issue with client/server based computing than it is with host-based terminal computing. With auditing enabled, you can use the filter function of Event Viewer to see when a particular user last logged on to the domain. This is how you identify inactive user accounts. With another tool, Server Manager, you can see who is connected to a server, how long they have been connected, and what resources they have open. You can also view this information in different formats. You can see which resources are currently being used, or, if you are interested in just one resource, you can view information specific to it, such as who is connected and for how long.



Filtering with Event Viewer

6.7.1.2 Server Management

Remote Administration–
The client/server model, coupled with domains, trust relationships, and single network log-on accounts, makes it possible for system administration to take place anywhere on the corporate network. Remote dial-in access is provided by a built-in feature of Windows NT known as Remote Access Services (RAS). With RAS, system administration can happen from virtually any location that has access to a telephone.

RAS for Windows NT is based on a client/server architecture, in which a remote RAS client connects to a local RAS server. TCP/IP, IPX, and NetBEUI are all supported, which means you can integrate RAS for Windows NT into existing Microsoft, UNIX, or NetWare networks using the PPP remote access standard.

Further inter-operability is possible. Non-Microsoft PPP clients using TCP/IP, IPX, or NetBEUI can also access a Windows NT-based RAS server, and Windows NT-based RAS clients can connect to existing SLIP-based remote access servers (typically UNIX servers). Microsoft RAS protocol is a proprietary remote access protocol supporting the NetBIOS standard. It has been largely superseded by the newer PPP remote access standard.

Two requirements must be met to make a RAS server:

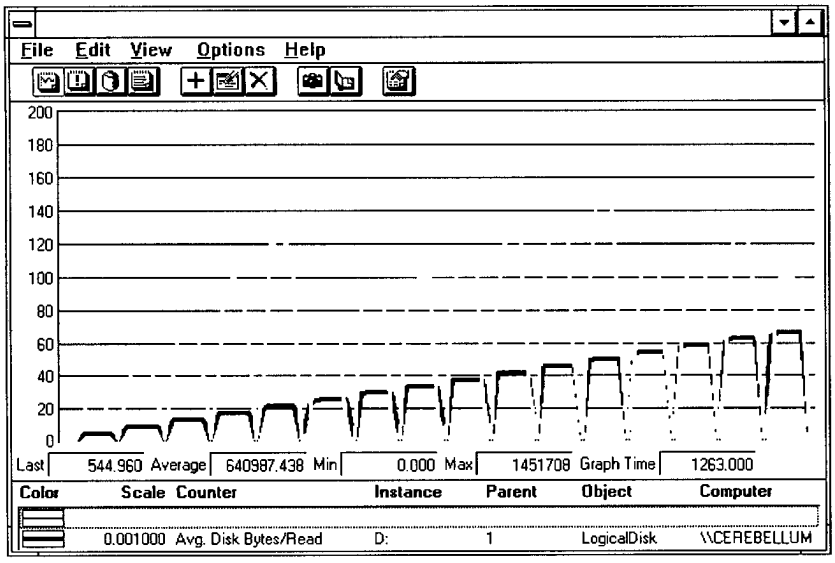
1) the proposed server must be a computer running Windows NT and RAS, and
2) the proposed server must have either a multi-port adapter or modem(s).

When a remote RAS client connects to the RAS server, the RAS server checks to see if the RAS client is using a pre-assigned IP address. If not, the RAS server automatically assigns an IP address to the RAS client from the static range of addresses owned by the RAS server.

Once the connection has been made, the RAS client becomes a full-fledged node on the corporate network, not just a dumb terminal dialing in. The remote system administrator can then use the same Windows-based tools as a local system administrator to access resources such as files, printers, electronic mail, and databases.

Performance Monitoring–
A major design goal of Windows NT was to eliminate the many obtuse parameters that characterized earlier systems. Adaptive algorithms were incorporated in the design so that correct values are determined by the system as it runs. The result is that Windows NT has fundamentally changed how computers will be managed in the future. The task of optimizing the system is not the art of manually adjusting many conflicting parameters. It is a process of determining what hardware resource is experiencing the greatest demand, and then adjusting the operation to relieve that demand.

Windows NT includes a Windows-based tool for tracking computer performance called Performance Monitor, which is similar to tools on UNIX, such as **top** and GlancePlus from Hewlett-Packard. Performance Monitor is based on a series of counters that track such things as the number of processes waiting for disk time, the number of network packets transmitted per second, and the percentage of processor utilization.



Performance Monitor—Chart View

Performance Monitor displays information graphically (through Charts) or as text (through Reports). Data can be displayed in real-time or collected in logs for later display as a graph or report. You can also configure Performance Monitor to generate alert logs. Alert log entries are posted every time a counter exceeds or falls below a user-specified value. They can also be used to trigger Performance Monitor to generate network messages or run programs based on the value of the log entry.

In addition to Performance Monitor, other tools are available for Windows NT. The *Windows NT Resource Kit* is a four-volume set of books with accompanying software. Volume 4, *Optimizing Windows NT*, provides over 600 pages of practical advice on performance tuning for Windows NT, along with additional software tools that compliment the features of Performance Monitor.

File Backup/Restore–
Windows NT supplies a Windows-based, Backup tool, which is similar to the X-based tools found on some versions of UNIX. Its salient capabilities include:

- Backing up and restoring both local and remote files on an NTFS or FAT file system from a local computer with an attached tape drive
- Selecting files for backing up or restoring by volume, directory, or individual filename and viewing detailed file information, such as size or modification date
- Selecting an optional verification pass to ensure reliable backups or restores
- Performing any of the following common backup operations: Normal, Copy, Incremental, Differential, and Daily

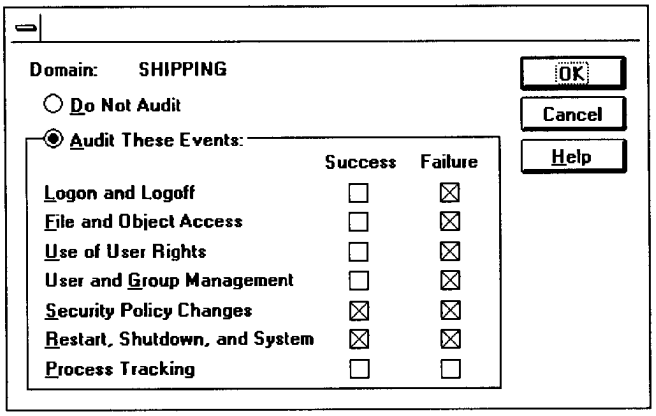
- Placing multiple backup sets on a tape, and spanning multiple tapes with both backup sets and files, since there is no restriction on file size
- Automating the backup with a batch file and the scheduler service
- Viewing a full catalogue of backup sets, directories, and individual files
- Controlling a destination drive and directory for the restore
- Saving log information on tape operations to a file

The Backup tool also provides a Backup Status dialog box that shows the active status of the tape operation. Or, you can use another Windows-based tool, Event Viewer, to view the backup history in the system event logs.

Disk Allocation–
The primary tool for day-to-day administering of files and directories is File Manager. It is a powerful, Windows-based tool that, among other things, enables you to selectively view file listings sorted by name, type, size, or date and time of last modification. Windows NT also includes a command language that is a superset of the MS-DOS batch commands. It provides a scripting capability that is similar to the UNIX shell scripts. With it, you can do finer granularity sorts on files and directories and see additional information, such as date and time of creation or last access.

Currently, Windows NT does not support the concept of disk quotas per se. It is possible to do something similar with judicious use of disk partitions and shared directories, and there are third-party products, such as Quota Manager from New Technology Partners, that provide traditional disk quota features.

Auditing–
Windows NT can record a range of event types, from a system-wide event such as a user logging on, to an attempt by a particular user to access a specific file. Both successful and unsuccessful attempts to perform an action can be recorded.



Setting System-Wide Audit Policy

System-wide audit policy is established and maintained with User Manager for Domains. Individual object access auditing is controlled with either File Manager, for files and directories, or Print Manager, for printers. The audit log entries are examined and manipulated with Event Viewer.

Windows NT records events in three kinds of logs:

- The **System Log** records events logged by the system components of Windows NT. For example, the failure of a driver or other system component to load during startup is recorded in the system log.
- The **Application Log** records events logged by applications. For example, a database program might record a file error in the application log.
- The **Security Log** records security events. This helps track changes to the security system and identify any possible breaches in security. For example, attempts to log on to the system can be recorded in the security log, depending on the Audit settings in User Manager for Domains.

After you select a log for display in Event Viewer, you can view, sort, filter, and search for details about events. You can also archive logs in various file formats.

The following types of events can be audited:

- **Log-on and Log-off.** Entries record successful and unsuccessful log-on attempts, log-off attempts, and the making or breaking of a network connection to a server.
- **File and Object Access.** Entries record attempted access of directories or files set for auditing in File Manager, or system printers set for auditing in Print Manger.
- **Use of User Rights.** Entries record successful uses of user rights and unsuccessful attempts to use rights not assigned to users.

- **User and Group Management.** Entries record changes to groups and user accounts, including changes to passwords.
- **Security Policy Changes.** Entries record changes made to the User Rights, Audit, or Trust Relationship policies.
- **Restart, Shutdown, and System.** Entries record shutdowns and restarts of the computer, the filling up of the audit log, and the discarding of audit entries if the audit log is already full and rollover has been enabled.
- **Process Tracking.** Entries record starts and stops of processes on the computer. These events provide detailed tracking information and are enabled under very rare circumstances.

Background Job Scheduling–
At the time of this writing, the Microsoft corporate data center is using Windows NT to run over 1,000 batch jobs daily on 340 servers world-wide; this includes backing up more than a terabyte of data. The built-in job scheduling features of Windows NT are comparable to UNIX commands, such as **cron** and the **at** command. Windows NT also has a built-in **at** command, and the *Windows NT Resource Kit* has a graphical utility known as the Command Scheduler. These are basic tools, as are their UNIX counterparts. For more sophisticated tools, the kind of tools you need for data center operations, third-party products are available.

6.7.1.3 Network Management

Windows NT combines a sophisticated computer operating system with a fully integrated network operating system (NOS), and the synergy created by this marriage provides the system administrator with an unparalleled wealth of resources for managing the corporate network. We have already covered how DHCP and WINS work together to automate the tasks of IP address administration and name resolution on the network. Additional administrative tools include: Server Manager, Performance Monitor, Event Viewer, Control Panel, Network Client Administrator, and License Manager. All of these enable system administrators to monitor and control various aspects of the corporate network. The *Windows NT Resource Kit* supplies even more tools to compliment the list, such as Net Viewer, Domain Monitor, Browser Monitor, and Process Viewer.

6.8 Desktop Management

Microsoft Systems Management Server–
Installing and maintaining software is a major cost to corporations with distributed networks. Often, the system administrator must install, upgrade, and configure each computer manually. For a large corporation with locations across a wide geographical

area, these installation and support costs may increase exponentially. In fact, most of the cost-of-ownership for a corporate computer system comes not from the initial purchase price of the software, but from software installation, support, and maintenance costs.

If a corporation already has a distributed network in place, it makes sense to take advantage of its wide-area connectivity for managing software for the entire corporation. But, before software can be installed over the network, you must know where it is going. Before software can be maintained, you must know where it is. You need to know what computers are on the network. And, after you find out what computers you have, you need to know information about the computers so you can install or maintain your software correctly. You need to know what hardware they have, what software is already installed, and how the computers are configured. In short, you need an inventory. If you have many computers, you also need a logical way to group them so you can recognize them more easily, such as by location or configuration. You need a structured way to look at the entire corporate network.

Enter Systems Management Server. Microsoft Systems Management Server provides system administrators with a method for centrally managing software and hardware for their corporate networks. It is based on client/server architecture. The server runs on a Windows NT Server-based machine; the clients need not. Systems Management Server is an easy-to-use, integrated system that:

- Maintains an inventory of hardware, software, and configuration of computers across a corporate network
- Distributes, installs, and updates software and files
- Manages network applications (applications run over the network from servers)
- Provides integrated support utilities, including a network monitor, that enables system administrators to view diagnostic information for remote clients and take direct control of them if need be

Systems Management Server maintains a database containing system information and inventory, carries out distribution and installation jobs, monitors the progress of these jobs, and alerts you to important system events. With Systems Management Server you can distribute and install software on clients and servers across your corporate network, set up network applications, automatically collect and maintain hardware and software inventory, provide direct support to users, and monitor your network.

6.9 User Interface and Environment

6.9.1 Overview

Windows NT will be familiar to anyone who has used Windows. The Windows NT, Windows for Workgroups, and Windows 3.1 operating systems all share a common graphical user interface. This interface has become ubiquitous in industry and is standard on more than 70 million desktops world-wide. Virtually all of the tools and facilities of Windows NT use this interface, including the on-line help engine and the print manager.

Windows 95 sports an object-oriented user interface that provides users with a work environment that closely models a traditional office. A good example of the change is illustrated by the task of opening a document for word processing. With the former interface, users selected an icon representing the word processor then, once the program started, selected a file on which to work. By contrast, the new interface represents each document in the directory structure by its own icon. When a user selects the document icon, the word processor initializes and automatically loads the file. Users no longer need be concerned about which programs to run in order to access files. This interface has also been used with the release of Windows NT 4.0.

The transition from the UNIX command line to Windows NT graphical user interface takes some getting used to. One of the keys to successful system administration on UNIX is knowing which flat file to edit for any given configuration change. With Windows NT, configuration information is centrally stored in a database known as the Registry, and virtually all configuration changes are handled with Windows-based tools. The key, then, to system administration on Windows NT is knowing which tool to run, and it is a much easier task than searching the entire file system for an obscure configuration file with equally obscure configuration entries.

However, for typical users on an X-terminal or workstation, the transition to Windows NT can come as welcome relief. If users are already running Windows, Windows NT will be second-nature. For those whose only exposure to a graphical environment has been X, the transition will still be straightforward. However, Windows NT is far more standardized than X. The graphical user interface permeates not only the Windows NT operating system, but also the applications that run on it. In addition, the GUI provides a true graphical environment, not just a graphical shell that overlays the command line. The typical user running Windows NT will never have reason to see or use anything on the command line. Contrast this with the typical X user and the beloved **xterm** window. Routine tasks such as printing and getting help also tend to be much easier for the user. These services are graphics-based and standardized across both the operating system and the applications.

6.9.2 Workstation

A workstation running Windows NT is an intelligent device. It consists of a CPU, memory, and disk, along with a monitor, keyboard, and mouse or other pointing device. On the surface, it bears a resemblance to an X-terminal, but is more akin to a UNIX workstation running X. It runs its own independent operating system, typically Windows NT Workstation, and participates as a client on the network. In general, it is a smaller machine in terms of CPU, memory, and disk, than its server counterparts, but this need not be the case. When compared to a UNIX workstation running X, it is also typically less expensive, both in terms of hardware and software.

6.9.3 Multi-User Support

Windows NT is not a multi-user operating system in the traditional sense of the word. Multi-user is a concept that comes from the one computer, many users paradigm, which is also known as host-based computing. Client/server is a different world. Users connect to client computers, and client computers connect to server computers. The relationship between users and clients is one-to-one; the relationship between clients and servers is many-to-many. So, in a way, a server is multi-user, it is just that the users are client computers, not people.

6.9.4 Log-On Names

The administrator account on Windows NT is the closest thing to super-user or **root** on UNIX. It is the most powerful log on to the system but does not have the carte blanche powers of **root**. Windows NT also provides a **guest** account that is disabled by default.

Log on names for Windows NT can be up to 20 characters in length. Uppercase and lowercase characters are permitted, but the names are not case sensitive. For example, user names, marcg, Marcg, MarcG, and MARCG, all represent the same user. However, if the user is added as MarcG, then that is the way the name appears in listings on the system. The user, however, can log on with any of the case combinations shown. Log on names for Windows NT also differ from those for UNIX in that they cannot contain unprintable characters such as backspace or tab. Other illegal characters are

- [
-]
- ?
- >
- <

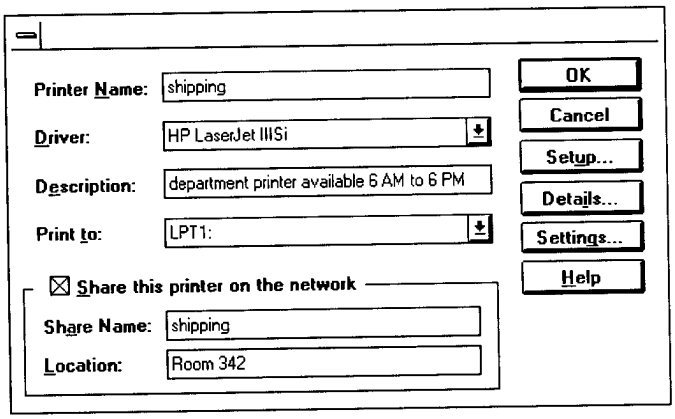
Passwords have similar limitations. Passwords can be up to 14 characters in length, cannot contain unprintable characters, but can contain the illegal characters defined for log on names. Unlike log on names, passwords are case sensitive.

6.9.5 Applications

Most packages written for Windows 3.x or Windows 95 run on Windows NT. This means that there are literally thousands (over 11,000 at last count) of shrink-wrapped, off-the-shelf packages available today, and they all share a common user interface. The same cannot be said for UNIX; any software count depends on which version of UNIX you are running. You can be sure, however, that the user interface between UNIX applications will not be the same, or even similar, in most cases.

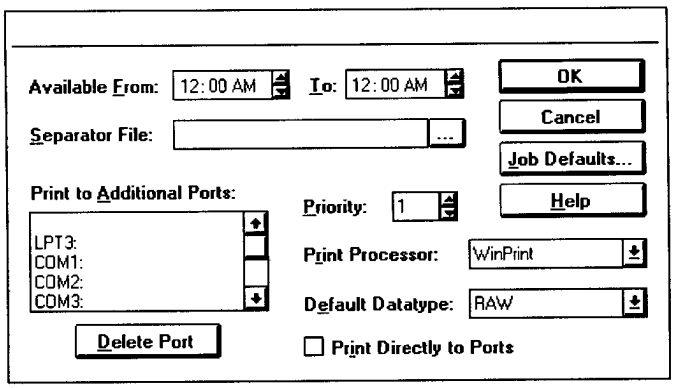
To compliment Windows NT, an integrated suite of Microsoft add-on applications, called BackOffice, provides enterprise functionality, such as a relational database server (SQL Server™), IBM connectivity (SNA Server), enterprise mail messaging (Mail Server), and desktop workstation management (Systems Management Server).

6.9.6 Printing



Print Manager—Printer Properties Dialog Box

Windows NT currently ships with built-in support for over 950 printers. Printers are set up and controlled graphically on Windows NT via the Control Panel and Print Manager applications. Printers can be connected locally to a workstation or, more typically, remotely on the network. With the exception of naming conventions, network printers and local printers function identically. Once the printers are configured, all applications in Windows NT have access to them, and, for the user, printing involves little more than clicking on the Print icon or making a menu selection.



Print Manager—Printer Details Dialog Box

System administration tasks are simplified by the Windows-based tools as well. With the Windows NT Print Manager, system administrators can configure and control the following features:

- The hours a printer is available
- Whether or not to print a separator page showing who submitted the print job along with the date and time
- The creation a pools of printers
- Printer priorities
- The specification of a custom print processor

In addition, system administrators can manage local and remote printers from any workstation on the network. The capabilities include:

- Viewing a list of printers and their respective print jobs
- Purging jobs waiting for a printer
- Holding or releasing a print job
- Restarting a print job from the beginning
- Deleting a print job
- Stopping a job that is currently printing
- Pausing and continuing a printer
- Removing a printer

Printers can also be audited and have usage tracked. For any printer, system administrators can specify which groups or users and which actions to audit. An action's success, as well as its failure, can also be audited.

LPR, LPD–
LPR is one of the network protocols in the TCP/IP protocol suite. It was originally developed as a standard for transmitting print jobs between computers running Berkeley UNIX. The LPR standard is published as Request For Comment (RFC) 1179. Windows NT complies with this standard, as do most implementations of Berkeley UNIX. However, most UNIX System V implementations do not comply with this standard. Consequently, in most cases, Windows NT will not be able to send print jobs to or receive print jobs from System V computers. Exceptions are System V computers that are configured to accept BSD jobs; these computers can accept print jobs from Windows NT.

Using LPR protocol, a client application on one computer can send a print job to a print spooler service on another computer. The client application is usually named "LPR" and the service (or daemon) is usually named "LPD." Windows NT supplies a command line application, the **lpr** utility, and it supplies the LPR Port print monitor. Both act as clients sending print jobs to an LPD service running on another computer. Windows NT also supplies an LPD service, so it can receive print jobs sent by LPR clients, including computers running UNIX and computer running Windows NT.

6.9.7 Getting Help

Getting help on Windows NT is much less of an adventure than getting help on UNIX. There are no **man** pages in Windows NT. Rather, there is a unified, hypertext help system that follows a single, consistent model, and that is used by all programs throughout the system. Windows NT provides both general and context-sensitive help, as well as keyword and topic search capabilities. It also provides the capability to set bookmarks, annotate the text, cut and paste, and print selected topics off-line.

In addition, Microsoft has a technical support line, forums on most of the major on-line services, and ftp, gopher, and Web sites on the Internet. There are also CD-ROM subscription services available, such as the Microsoft Developer Network (MSDN) and the Microsoft TechNet CD.

6.10 Hardware Platforms

6.10.1 Overview

Windows NT is a platform-independent, scaleable operating system. It is designed to take full advantage of the advanced computing capabilities of either the x86 or RISC-based processors on which it runs. In addition, it supports both single processor and symmetric multiprocessor (SMP) systems. There are actually two Windows NT-based operating systems that share a common source-code base: Windows NT Server and

Windows NT Workstation. This is similar to UNIX, which runs on both server and workstation. Typically, the workstation is a scaled-down version of the server in terms of both hardware and software, especially software for system administration. The same holds true for Windows NT.

Hardware requirements for Windows NT can be broken into three main areas: processor, memory, and disk space. As a general rule, you will need more of each for Windows NT Server than for Windows NT Workstation. The minimum processor requirements are a 32-bit x86-based microprocessor (such as Intel® 80386/25 or higher), Intel Pentium®, PowerPC, or other supported RISC-based processor, such as the MIPS® R4000® and Digital Alpha™ AXP™. The minimum memory requirement is 16 MB, although Windows NT Workstation will run with 12 MB on x86-based systems. In general, the minimum disk space requirements for the operating system are in the 100 MB range. This varies by processor type and whether the operating system is Windows NT Workstation or Windows NT Server. For Windows NT Workstation requirements are: 75 MB for x86 and 92 MB for RISC. For Windows NT Server requirements are: 90 MB for x86 and 110 MB for RISC. Additional disk space is required for applications.

6.10.2 Choice

Windows NT is a portable operating system in the true sense of the word. It runs on many different hardware platforms and supports a multitude of peripheral devices; Windows NT gives you choice.

This was the dream of UNIX, which is largely unrealized. In reality, there is no such thing as UNIX; there are flavors of UNIX, and each is slightly different than, and generally incompatible with, the others. Sometimes there are even incompatibilities within different versions of UNIX from the same vendor. For example, an application software bought to run on a workstation version of UNIX will not run "as-is" on the server version of UNIX. To run the application there, a different copy of the same application must be purchased. In most cases, the same holds true with UNIX itself. Once you buy UNIX, you are often locked in to a single-vendor hardware solution, and that vendor is usually the same one that sold you the copy of UNIX.

6.10.3 Cost versus Performance

In the UNIX world, servers tend to be large and to host multiple applications. With Windows NT, the servers are not as large, and there are generally more of them. A single UNIX-based server running a dozen applications might translate into two or three Windows NT-based servers with the applications split among them.

Because it is not an apples-to-apples comparison, cost versus performance analyses become quite difficult. Much depends on the specifics of your environment, such as number of workstations, number and type of applications, and whether or not there is an existing base of one or the other type of system. General data is available from industry research firms, such as the Gartner Group, the Burton Group, the META Group, and International Data Corporation (IDC). Unfortunately, no one-size-fits-all right answer exists, and you must balance the available data with knowledge of your own particular business environment.

6.10.4 Operating System Installation and Configuration

In comparison to UNIX, installing and configuring Windows NT is a walk in the park. You do not mess with the kernel, nor do you "hand" edit obscure files scattered throughout the system. Instead, you simply boot the computer from the setup disk, and setup instructions guide you step-by-step through the process. Setup is a GUI-based program that uses standard dialog boxes to solicit configuration information at various points throughout the process. For example, you are asked which network protocols to install and which file system to use on a specific disk partition. Once setup is complete, all configuration information is centrally stored in the Windows NT Registry database, and installation of the operating system is complete. The entire process, from start to finish, takes roughly 45 minutes for a complete install and roughly 20 minutes to upgrade a previous version of the operating system.

Many common peripheral device drivers are included with Windows NT. Adding a new printer to the system, for instance, is usually a matter of running Print Manager and answering questions in a series of dialog boxes. In other situations, you may need to install additional software. This involves running a setup program and answering a series of configuration questions in dialog boxes. This is the common theme for system administrators. Virtually everything you do involves the same process: run a program, and answer questions in dialog boxes. Contrast this with UNIX in which every new installation of a peripheral device or software is an adventure unto itself.

Because Windows NT is portable, system administration for Windows NT is portable. The tools and processes remain the same no matter where you are. This standardization is one of the most significant differences between Windows NT and UNIX. With UNIX, virtually no standardization for system administration tools or techniques exists across the different versions, and this lack of commonality is glaring.

System administrators can make different versions of UNIX appear similar to the user, but the same cannot be said for system administration. For example, a tool such as the Windows NT Performance Monitor has no common, analogous tool within UNIX. While such tools exist, the names differ from version to version, as do the features, the user

interface, the command structure, and, worst of all, the type of data they present. So, even if you can find and run it, you still might not be able to make any sense of the output, based on your previous experience with similar tools.

6.10.5 Application Software Installation and Configuration

Application software installation and configuration for Windows NT follows the same pattern outlined in the section on installing the operating system. At no time do you touch the kernel or "recompile" the operating system. You run setup and answer questions in dialog boxes. To change configurations, you typically select an *options* menu entry and answer more questions in dialog boxes. If you have ever installed a software package under Windows, you know the process. It is the same one used by Windows NT.

6.10.6 Error Handling

UNIX provides little feedback. When problems occur, more often than not, UNIX simply stops doing what it was doing without so much as a wave good-bye. This is especially true with X. If you set an invalid configuration, X simply ignores it and moves on. It does not indicate anything to you about the problem; you must figure it out, which is, again, an adventure.

Windows NT takes a different approach. Instead of editing flat configuration files, configuration changes are made through carefully controlled dialog boxes. This control significantly reduces the chances of error. And, when an error does occur, Windows NT provides a descriptive error message in a dialog box. Once the message is acknowledged, Windows NT attempts to recover gracefully from the error condition. If it is an application error, the application is terminated, and its resources returned to the system.

NOTICE

Intergraph and Intergraph Logo are registered trademarks of Intergraph Corporation.

FRAMME, InterServe, and TD are trademarks of Intergraph Corporation.

Intel and Pentium are registered trademarks and MMX is a trademark of Intel Corporation.

Microsoft, MS-DOS, Windows, Windows NT, Visual Basic, and Visual C++ are registered trademarks of Microsoft Corporation.

NFS and PC-NFS are registered trademarks of Sun Microsystems Incorporated.

MicroStation is the registered trademark of Bentley Systems, Incorporated. Other brands and product names are trademarks of their respective owners.

The supplemental attachments to DEF'S Response to OPC question #14 are confidential. Specifically, attachments listed below by bates numbers are confidential:

20170272-DEF-OPC-POD 2-14-000235 through
20170272-DEF-OPC-POD 2-14-0000256

Unredacted documents have been filed with the Commission along with DEF's Notice of Intent to Request Confidential Classification dated June 28, 2018.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: January 22, 2019

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO
CITIZENS' THIRD SET OF INTERROGATORIES (NOS. 65-66)

Duke Energy Florida, LLC ("DEF") incorporates the objections filed contemporaneous with this response and responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") Third Set of Interrogatories to DEF (Nos. 65-66) as follows:

INTERROGATORIES

65. Please identify the person or persons employed by you (or any affiliate and working on your behalf) having overall responsibility and knowledge about the management and oversight of non-DEF line crew vendor contracts and contract compliance and DEF's maintenance and organization in any accounting system, of the non-DEF line crew vendor invoices submitted for restoration work performed in the immediate aftermath of Hurricane Irma including but not limited to, the actual preparation of the invoice (including the format used by the vendor and the format used or required by DEF) and how DEF controls or regulates the invoice being ultimately submitted for payment.

Answer:
Amy DeZonia – Director CD Resource & Work Management
Tess Roebuck – Manager Work Management
Sharon Bogdanos – Contract Manager/Mutual Aid
Tim Fouty Manager, Alliance Strategy and Management
Jay Shawver – Director Sourcing
Brentton Holly –Lead Sourcing Specialist
Lisa McMillian – Transmission invoice review

66. Please identify the person or persons employed by you (or any affiliate and working on your behalf) having overall responsibility and knowledge about DEF's review and processing of the line crew vendor invoices submitted for payment for restoration work performed in the immediate aftermath of Hurricane Irma, including, but not limited to, verification of the correctness of the billing and appropriateness of payment by DEF pursuant to the contractual arrangement that governs the rights and obligation of the vendor and DEF.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 12
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Shawver and Fouty 65, 66
Shawver and Fouty 65, 66

Answer:
Amy DeZonia – Director CD Resource & Work Management
Tess Roebuck – Manager Work Management
Lisa McMillian – Transmission invoice review

AFFIDAVIT

STATE OF _____

COUNTY OF _____

I hereby certify that on this _____ day of _____, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared Jay Shawver, who is personally known to me, and has acknowledged before me that he/she provided the answers to interrogatory number(s) 65 and 66 of OPC'S THIRD SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 65-66) in Docket No. 20170272-EI, and that the responses are true and correct based on his/her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2019.

_____
JAY SHAWVER

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

AFFIDAVIT

STATE OF _____

COUNTY OF _____

I hereby certify that on this _____ day of _____, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared Tim Fouty, who is personally known to me, and has acknowledged before me that he/she provided the answers to interrogatory number(s) 65 and 66 of OPC'S THIRD SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 65-66) in Docket No. 20170272-EI, and that the responses are true and correct based on his/her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2019.

_____
TIM FOUTY

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: January 23, 2019

DUKE ENERGY FLORIDA, LLC'S AMENDED RESPONSE TO CITIZENS' THIRD SET OF INTERROGATORIES (NOS. 65-66)

Duke Energy Florida, LLC ("DEF") incorporates the objections filed on January 22, 2019 and amends its response to the Office of the Public Counsel's Third Set of Interrogatories to DEF (Nos. 65-66) as follows:

INTERROGATORIES

65. Please identify the person or persons employed by you (or any affiliate and working on your behalf) having overall responsibility and knowledge about the management and oversight of non-DEF line crew vendor contracts and contract compliance and DEF's maintenance and organization in any accounting system, of the non-DEF line crew vendor invoices submitted for restoration work performed in the immediate aftermath of Hurricane Irma including but not limited to, the actual preparation of the invoice (including the format used by the vendor and the format used or required by DEF) and how DEF controls or regulates the invoice being ultimately submitted for payment.

Answer:
Amy DeZonia – Director CD Resource & Work Management
Tess Roebuck – Manager Work Management
Sharon Bogdanos – Contract Manager/Mutual Aid
Tim Fouty Manager, Alliance Strategy and Management
Jay Shawver – Director Sourcing
Brentton Holly –Lead Sourcing Specialist
Brian Sawyer – Director, Transmission Contractor Operations
Saurabh Vyas – Manager, Transmission Engineering

66. Please identify the person or persons employed by you (or any affiliate and working on your behalf) having overall responsibility and knowledge about DEF's review and processing of the line crew vendor invoices submitted for payment for restoration work performed in the immediate aftermath of Hurricane Irma, including, but not limited to, verification of the correctness of the billing and appropriateness of payment by DEF pursuant to the contractual arrangement that governs the rights and obligation of the vendor and DEF.

Answer:
Amy DeZonia – Director CD Resource & Work Management
Tess Roebuck – Manager Work Management (Distribution)
Brian Sawyer – Director, Transmission Contractor Operations
Saurabh Vyas – Manager, Transmission Engineering

AFFIDAVIT

STATE OF _____

COUNTY OF _____

I hereby certify that on this _____ day of _____, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared Jay Shawver, who is personally known to me, and has acknowledged before me that he/she provided the answers to interrogatory number(s) 65 and 66 of OPC'S THIRD SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 65-66) in Docket No. 20170272-EI, and that the responses are true and correct based on his/her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2019.

_____
JAY SHAWVER

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

AFFIDAVIT

STATE OF _____

COUNTY OF _____

I hereby certify that on this _____ day of _____, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared Tim Fouty, who is personally known to me, and has acknowledged before me that he/she provided the answers to interrogatory number(s) 65 and 66 of OPC'S THIRD SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 65-66) in Docket No. 20170272-EI, and that the responses are true and correct based on his/her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2019.

_____
TIM FOUTY

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

20170272 – DEF Response to OPC 3rd ROGs (65-66)

&

20170272 – DEF Amended Response to OPC 3rd ROGs (65-66)

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF _____

I hereby certify that on this 28 day of January, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JAY SHAWVER, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 65 and 66 of OPC'S THIRD SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 65-66) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 28 day of January, 2019.

JAY SHAWVER

CLAIRE CLARK
Notary Public
Mecklenburg
County
My Comm. Exp
10-22-2021
NORTH CAROLINA

Notary Public
State of Florida, at Large

My Commission Expires: 10.22.2021

AFFIDAVIT

STATE OF NORTH CAROLINA

COUNTY OF Mecklenburg

I hereby certify that on this 30th day of January, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared TIMOTHY FOUTY, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 65 and 66 of OPC'S THIRD SET OF INTERROGATORIES TO DUKE ENERGY CAROLINA, LLC (NOS. 65-66) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 30th day of January, 2019.

Timothy Fouty

TIMOTHY FOUTY

Patricia W. Townsend

Notary Public
State of North Carolina, at Large

My Commission Expires:
June 24, 2019

PATRICIA W. TOWNSEND
Notary Public, North Carolina
Mecklenburg County
My Commission Expires
6/24/2019

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: February 7, 2019

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO CITIZENS' FOURTH SET OF INTERROGATORIES (NOS. 67-100)

Duke Energy Florida, LLC ("DEF") incorporates the objections filed contemporaneous with this response and responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") Fourth Set of Interrogatories to DEF (Nos. 67-100) as follows:

INTERROGATORIES
REDACTED

67. [redacted]

Answer: [redacted]

68. [redacted]

Answer: [redacted]

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 13
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Buckler (72, 73, 77-81, 85-87, 90-95, 97, 98)Olivier (71, 74, 75, 76, 82, 83, 88, and 89)

[redacted]

69. [redacted]

Answer: [redacted]

[redacted]

70. [redacted]

Answer: [redacted]

[redacted]

71. Vegetation Management. Refer to the response to Citizens' Interrogatory No. 3. Provide for any rate filing after the 2010 case the amount of vegetation management that was requested in the MFRs. To the extent that the filing was settled identify whether vegetation management costs were discussed and/or adjusted as part of the settlement. If adjusted provide the respective adjustments.

Answer: DEF has not filed MFRs since the 2010 test-year rate case, and the only settlements that have taken place prior to the 2017 hurricanes were the 2012 Stipulation and Settlement Agreement followed by the 2013 Revised and Restated Stipulation and Settlement Agreement. Vegetation management costs were neither discussed nor adjusted in either of those Agreements.

72. Vegetation Management. Are tree crews paid for mobilization and/or demobilization? If so, explain how they bill for it, specifically how this billing is separate and different from work billing.

Answer: Mobilization and demobilization, if paid, will either be specifically identified in the contract as a line(s) item, or will be paid as travel expense/cost should Duke Energy request the contractor to move their resources outside their assigned area(s), such as with a major storm response effort. In that case, travel expenses are paid (labor and equipment) for those specifically requested resources responding to the storm. That travel cost will be from the time they leave their home base location until they reach their assignment location. The same applies once those resources are released from the storm from the time of their release until they reach their home base location. These expenses will be based on hourly and mileage (equipment where applicable) rates depending on the distance traveled based on each contractor's contract language regarding major storm procedures.

73. Poles. Refer to the response to Citizens' Interrogatory No. 5. For each year provide the cost of replacements for each named storm referenced.

Answer: Distribution:

ESTIMATED CAPITAL POLE INSTALLATION COSTS:							
Material Components:	**Debby**	**Isaac**	**Hermine**	**Matthew**	**Irma**	**Total**
Capital Materials - Units of Property	$13,238	$2,081	$11,382	$35,158	$330,955	$392,815
Capital Materials - Warehouse Burdens	$ 1,324	$ 208	$ 1,138	$ 3,516	$ 33,096	$39,282
Working Stock materials	$ 1,986	$ 312	$ 1,707	$ 5,274	$ 49,643	$58,922
Capital Materials - Units of Property incl Burdens	16,548	2,602	14,228	43,948	413,694	$491,019
Labor Components:						
Labor & Burdens to install Units of Property	$170,937	$13,444	$148,560	$421,910	$4,251,139	$5,005,991
Contractor/Affiliate adder	$104,033	$8,182	$83,156	$236,164	$2,329,601	$2,761,136
Overhead Allocation - applied to Labor only	$ 34,187	$ 2,689	$ 38,844	$ 107,648	$ 1,240,110	$ 1,423,478
Fleet Loading - applied to Labor only	$ 42,734	$ 3,361	$ 37,243	$ 103,558	$ 1,281,576	$ 1,468,471
Capital Labor on UOP incl Loading items	$ 351,892	$ 27,677	$ 307,803	$ 869,280	$ 9,102,426	$ 10,659,077
Distribution Capital Cost	**$ 368,439**	**$ 30,279**	**$ 322,031**	**$ 913,227**	**$ 9,516,120**	**$ 11,150,096**
# of Poles	**89**	**7**	**75**	**213**	**2,130**	**2,514**

74. Payroll. Refer to the responses to Citizens' Interrogatories Nos. 27 and 29. Please provide as requested the amount of base payroll and the amount of overtime, separately, allowed as part of the decision in the Order No. PSC-10-0131-FOF.

Answer: DEF requested total base payroll of $398,328,277 in MFR C-35 in DEF's 2010 test-year rate case. In Order No. PSC-10-0131-FOF, the Commission disallowed salary and position increases of $13,601,404. Therefore, total base payroll included in both capital and O&M was $384,726,873. Order No. PSC-10-0131-FOF allowed total overtime costs of $40,860,669.

75. Payroll. Refer to the responses to Citizens' Interrogatories Nos. 27 and 29. Please provide the amount of base payroll and the amount of overtime, separately, included in the MFRs in each base rate filing after the 2010 case. Please identify the amounts by Docket Number. To the extent that the filing was settled, identify whether payroll costs were discussed and/or specifically adjusted as part of the settlement. If adjusted, provide the respective adjustments.

Answer: DEF has not filed MFRs since the 2010 test-year rate case, and the only settlements that have taken place prior to the 2017 hurricanes were the 2012 Stipulation and Settlement Agreement followed by the 2013 Revised and Restated Stipulation and Settlement Agreement. Payroll and overtime costs were neither discussed nor adjusted in either of those Agreements.

76. Payroll. Refer to the responses to Citizens' Interrogatories Nos. 28 and 30. Explain how the responses as provided differentiate between base O&M and overtime O&M. Please provide as requested for each of the years 2012, 2016, and 2017 the amount of actual base payroll and the amount of actual overtime for each year separately.

Answer: The responses to Interrogatory Nos. 28 and 30 were system totals for O&M labor by year, per FERC Form 1. DEF did not break out those amounts between base and overtime because the FERC Form 1 does not provide that level of information. However, DEF's Accounting Department has performed additional research. While DEF is not able to provide the breakout between base and OT payroll for 2012 due to system conversions, DEF is able to provide the following breakout for 2016 and 2017:
2016: Base O&M = $208,149,323. Overtime O&M = $29,644,705
2017: Base O&M = $205,616,272. Overtime O&M = 29,415,400

77. Outside Contractors. Refer to the response to Citizens' Interrogatory No. 38. Is the audit of invoices done by internal or external personnel? Is there any documentation to support audit findings?

Answer: The reviewing of invoices submitted for storms is primarily completed by internal employees. If the size of the storm requires significant resources acquired that subsequently produces a volume of invoices larger than our invoice team can reasonably review and pay in a timely manner, we will supplement our internal invoice staffing with contractors on-site. They are led by our internal invoice team members at the same work location. Yes, appropriate documentation is kept on every invoice submitted for payment.

78. Non-Incremental. Refer to testimony of Bryan Buckler at page 6, lines 4-8. Provide a summary of specific adjustments by storm and a detailed explanation how the amounts were determined (*e.g.* - what was the payroll benchmark, what was used for vegetation, etc.).

Answer:

Duke Energy Distribution Response:

Non-Incremental (000's)	Debby	Isaac	Colin	Hermine	Matthew	Irma	Nate	Total
Regular Payroll	$ 376	$ 165	$ 75	$ 150	$ 250	$ 1,145	$ 14	$ 2,174
Labor Burdens	$ 80	$ 78	$ 57	$ 125	$ 141	$ -	$ 8	$ 489
Overtime Payroll	$ 91	$ 25	$ 32	$ 40	$ 74	$ 467	$ 4	$ 734
Incentives	$ 154	$ 61	$ 24	$ 192	$ 216	$ 1,711	$ 14	$ 2,373
Overhead Allocations	$ -	$ -	$ 388	$ 1,125	$ 287	$ 26	$ 28	$ 1,853
Internal Fleet Costs	$ 100	$ 63	$ 83	$ 99	$ 462	$ -	$ 9	$ 815
Vegetation Management	$ 419	$ 248	$ 510	$ 685	$ 413	$ 1,806	$ 0	$ 4,082
Other	$ -	$ -	$ 0	$ 1	$ -	$ 245	$ -	$ 246
	$ 1,220	**$ 641**	**$ 1,169**	**$ 2,417**	**$ 1,844**	**$ 5,400**	**$ 76**	**$ 12,766**
Capital	$ 1,149	$ 103	$ -	$ 1,182	$ 1,917	$ 20,248	$ -	$ 24,599

Explanations of Adjustments:

- **Regular Payroll** – All payroll with responsibility centers associated with Duke Energy Florida are included in a calculation highlighted in the schedule provided in POD 19. The intent of the calculation is to determine what portion of the payroll charged would be considered non-incremental based on an average of payroll charging related to the month in which the storm occurred.
- **Overtime** – All overtime with responsibility centers associated with Duke Energy Florida are included in a calculation highlighted in the schedule provided in POD 19. The intent of the calculation is to determine what portion of the overtime charged would be considered non-incremental based on 3-year averages of overtime charging related to the month in which the storm occurred.
- **Burdens/Incentives** – On the BB-2 this is grouped, but our calculations are done separately. POD 19 will show the calculations related to labor burdens and incentives.
- **Overhead Allocations** – All non-capitalized DEF originating overhead allocations were categorized as Non-Incremental, where Affiliate overhead allocations are categorized as Incremental.
- **Internal Fleet Costs** –All non-capitalized DEF fleet costs that have gone through the calculation to determine what is not Fuel are categorized as Non-Incremental, where Affiliate fleet costs outside of DEF costs are categorized as Incremental.
- **Vegetation Management** – the 3-year average of Vegetation Management costs (for the month in which the storm occurred) were calculated and compared to the storm month's actuals. In the event the storm month's actuals were less than the respective 3-year average of the same month, the difference was determined to be Non-Incremental.
- **Other** – Costs that did not fit the categories above and were determined Non-Incremental to charge against the storm reserve were reflected here.
- **Capital** – This calculation takes into consideration the units of property, the costs of those materials, estimated hours to install those units, average labor rates for internal / external resources, fleet, material and overhead allocations to extrapolate the estimated costs of capital per storm.

Duke Energy Transmission Response

See a summary of Transmission's storm adjustments below:

Non-Incremental Costs	Debby	Isaac	Colin	Hermine	Matthew	Irma	Nate	Total
Regular Payroll	(114)	(70)	(24)	(80)	(102)	(1,140)	(3)	**(1,532)**
Overtime Payroll	-	-	-	-	-	(194)	-	**(194)**
Burdens/Incentives	(23)	(5)	(9)	(88)	(99)	(1,126)	(3)	**(1,353)**
Overhead Allocations	-	-	(0)	(3)	(0)	(229)	(25)	**(258)**
Internal Fleet Costs	(78)	(37)	-	-	-	(66)	(0)	**(182)**
Vegetation Management	-	-	(12)	(72)	(62)	(289)	-	**(435)**
Other	-	-	-	-	-	(12)	-	**(12)**
Subtotal	(214)	(113)	(45)	(243)	(263)	(3,057)	(31)	**(3,967)**
Capital	(527)	-	-	-	(6)	(6,143)	-	**(6,675)**
Total Non-Incremental	**(741)**	**(113)**	**(45)**	**(243)**	**(269)**	**(9,200)**	**(31)**	**(10,642)**

As detailed and provided in Transmission's Response to OPC's POD 19, all storm costs charged to storm codes are identified by the following:

- Region - jurisdictional origination (e.g., Duke Energy Florida, Duke Energy Carolinas, Duke Energy Indiana, etc.) by Responsibility Center
- Cost category – each cost has an associated Resource Type, which identifies what type of cost it is (e.g., Payroll, Overtime, Materials, Contractor, Employee Expenses, etc.)

Once the costs are properly categorized, non-incremental amounts are calculated by the following:

- **Regular Payroll** – All non-capitalized DEF originating payroll are categorized as Non-Incremental, where Affiliate payroll outside of DEF costs are categorized as Incremental.
- **Overtime** – All non-capitalized overtime is initially categorized as Incremental. For Hurricane Irma, DEF's allowable overtime is factored against an average of routine workload overtime. This portion of overtime is determined to be the Non-Incremental amount.
- **Burdens/Incentives** – All non-capitalized Burdens and Incentives were categorized as Non-Incremental.
- **Overhead Allocations** – All non-capitalized DEF originating overhead allocations were categorized as Non-Incremental, whereas Affiliate overhead allocations are categorized as Incremental.
- **Internal Fleet Costs** – All non-capitalized DEF originating fleet costs are categorized as Non-Incremental, where Affiliate fleet costs outside of DEF costs are categorized as Incremental. DEF Transmission's fleet costs also included fuel; however, it was insignificant and treated as non-incremental.
- **Vegetation Management** – the 3-year average of Vegetation Management costs (for the month where the storm occurred) were calculated and compared to the storm month's actuals. In the event the storm month's actuals were less than the respective 3-year average of the same month, the difference was determined to be Non-Incremental.

- **Other** – Any costs not fitting the categories above were captured as Other and were subsequently Non-Incremental or were capitalized.
- **Capital** – During storm response, Transmission creates storm specific capital projects, where all applicable labor, Contractor costs, materials, and other costs are charged to that project during restoration. This allows a clean and separate account of storm restoration O&M costs versus capitalized restoration costs, with minimal calculations needed.

79. Non-Incremental. Refer to testimony of Bryan Buckler at page 7, lines 16-24 and page 8, lines 1-7 and Exhibit BB-2. For each storm, provide a breakdown of the amount on the Labor Burdens/Incentive line of Exhibit BB-2 and explain why the testimony states that non-incremental labor burdens have been removed yet there is no adjustment shown for non-incremental labor burdens on Exhibit BB-2.

Answer:

Duke Energy Distribution Response:

Distribution								
Labor Burdens / Incentives (000's)								
	Debby	**Isaac**	**Colin**	**Hermine**	**Matthew**	**Irma**	**Nate**	**Total**
Labor Burdens	$ 295	$ 230	$ 221	$ 871	$ 1,228	$ 6,251	$ 61	9,156
Incentives	$ 154	$ 61	$ 24	$ 144	$ 208	$ 1,428	$ 14	2,035
	$ 449	**$ 291**	**$ 245**	**$ 1,015**	**$ 1,436**	**$ 7,679**	**$ 76**	**$ 11,191**

Above is the breakout of the Labor Burdens/Incentives reflected on the BB-2 schedule.

For Distribution, any adjustments related to non-incremental labor burdens were grouped under Regular Payroll (or part of capital calculations) and that is why it is not broken out separately in the non-incremental section of the BB-2.

Duke Energy Transmission Response:

After Transmission categorizes costs (as explained in ROG 78), all DEF non-capitalized labor burdens and incentives were categorized as non-incremental, or "Disallowed". On BB-2, line 19 – in "Incentives", the costs reported include both non-capitalized incentives and labor burdens.

See a breakdown of Transmission's incentives below:

2016-2017 Storms

Row Labels	1 - Colin	2 - Hermine	3 - Matthew	4 - Irma	5 - Nate
Labor Burdens/Incentives	**9,000**	**87,737**	**99,439**	**1,138,152**	**2,765**
Disallowed	9,000	87,737	99,439	1,125,847	2,765
Capital				12,305	
Grand Total	**9,000**	**87,737**	**99,439**	**1,138,152**	**2,765**

2012 - Debby

Row Labels	Transmission
Disallowed	**$ 23,079**
Labor Loaders/Incentives	$ 23,079
Grand Total	**$ 23,079**

2012 - Isaac

Row Labels	Sum of Transaction Amount
Disallowed	**5,249**
Labor Loaders/Incentives	5,249
Grand Total	**5,249**

80. Non-Incremental. Refer to testimony of Bryan Buckler at page 8, lines 9-22 and Exhibit BB-2. For each storm, provide a breakdown of the amount of the Overhead Allocations associated with DEF employees and the Overhead Allocations associated with Duke Energy employees to verify the Overhead Allocation amount on Exhibit BB-2.

Answer:

Duke Energy Distribution Response:

Overhead Allocations (000's)						
	Colin	**Hermine**	**Matthew**	**Irma**	**Nate**	**Total**
Duke Energy Florida	$ 388	$ 1,233	$ 478	$ 2,284	$ 28	$ 4,411
Affiliate	$ -	$ 52	$ 110	$ 3,223	$ 1	$ 3,386
	$ 388	**$ 1,285**	**$ 587**	**$ 5,508**	**$ 28**	**$ 7,797**

Above is the schedule that breaks out overhead allocations between Duke Energy Florida Employees and Affiliates.

Duke Energy Transmission Response

After Transmission categorizes costs (as explained in ROG 78), all non-capitalized DEF labor overheads were determined to be non-incremental, or "Disallowed". See a breakdown of Transmission's Overhead Allocations below:

2016-2017 Storms

Sum of Monetary Amount JD	Column Labels				
Row Labels	1 - Colin	2 - Hermine	3 - Matthew	4- Irma	5 - Nate
Overhead Allocations	**83**	**2,786**	**619**	**1,188,339**	**26,039**
Allowed			**206**	**402,491**	**593**
Duke Energy Carolinas			206	98,434	
Duke Energy Kentucky				737	
Duke Energy Ohio				737	
Duke Energy Progress				302,584	593
Capital				**493,801**	
Duke Energy Business Services				16	
Duke Energy Carolinas				49	
Duke Energy Florida				493,736	
Disallowed	**83**	**2,786**	**413**	**292,047**	**25,445**
Duke Energy Florida	83	2,786	413	292,047	25,445
Grand Total	**83**	**2,786**	**619**	**1,188,339**	**26,039**

When providing data for ROG 21 and ROG 22, capital projects did not have overhead allocated as the estimates were being trued up in late May. As a result, portions of DEF originating Overhead Allocations (RT 78000) was moved to Irma's capital projects from the Irma storm code. The May filing reported the correct disallowance amount of $229k. To stay consistent with data used in the filing, the preadjustment overhead allocation data is used in this support.

Debby

Row Labels	Sum of amount
Overhead Allocations	22,148
Grand Total	**22,148**

All of Debby's overhead allocations were capitalized, thus not recoverable.

81. Non-Incremental. Refer to testimony of Bryan Buckler at page 8, lines 9-22 and Exhibit BB-2. Explain how it was determined that all Duke Energy Affiliate employees costs allocated to the storm were incremental, explain how those costs were separately accounted for such that any Duke Energy employee costs in base rates were not captured as storm costs.

Answer:

The vast majority of Duke Energy affiliate employee costs were associated with linemen from Duke Energy affiliates in the Carolinas and Midwest that were utilized in lieu of third party contractors, and as such, they are incremental to DEF or were part of the capitalized amounts for the units of property replaced. These affiliates would not have worked on DEF's distribution system under normal circumstances due to their location. They are essentially replacing contractors that would have been hired at a higher cost,

and since these affiliate employees would not have charged to DEF absent the storm response efforts, these costs were deemed to be incremental.

Affiliate costs are identified based on the following:

- **Region** - jurisdictional cost origination (e.g., Duke Energy Florida, Duke Energy Carolinas, Duke Energy Indiana, etc.) are identified by Responsibility Center. In other words, the Responsibility Center code specifically identifies from where which Affiliate costs originated. All Responsibility centers not part of Duke Energy Florida are considered Affiliates.
- **Cost category** – each cost has an associated Resource Type, which identifies what type of cost it is (e.g., Payroll, Overtime, Materials, Contractor, Employee Expenses, etc.)

82. Affiliate Costs. Provide the amount of costs for Duke Energy Affiliate employees that was allowed in base O&M rates in the 2010 rate case Order No. PSC-10-0131-FOF.

Answer:

DEF has searched the testimony and discovery in the 2010 rate case docket and is unable to ascertain the amount of Duke Energy Affiliate employee costs that were included in the MFRs. This amount is not reported separately in MFRs.

83. Affiliate Costs. Provide the amount of costs for Duke Energy Affiliate employees that was include in the MFRs for any rate case filing subsequent to the 2010 rate case Order No. PSC-10-0131-FOF. For each, identify the filing, and to the extent that the filing was settled, identify whether the Affiliate costs were discussed and/or adjusted as part of the settlement. If adjusted provide the respective adjustments.

Answer:

DEF has not filed MFRs since the 2010 test-year rate case, and the only settlements that have taken place prior to the 2017 hurricanes were the 2012 Stipulation and Settlement Agreement followed by the 2013 Revised and Restated Stipulation and Settlement Agreement. Duke Energy affiliate employee costs were neither discussed nor adjusted in either of those Agreements.

84. Contractor Cost. Refer to testimony of Bryan Buckler at page 9, lines 6-9 and Exhibit BB-2. For each storm, provide a summary of contractor costs separating the costs by the various categories discussed in the testimony. Also, explain in detail what services and/or products were provided by any of the "other outside contractors" as referenced in the testimony.

Answer:

Duke Energy Distribution Response:

Distribution Contractor Costs (000's)								
Type of Contractors	**Debby**	**Isaac**	**Colin**	**Hermine**	**Matthew**	**Irma**	**Nate**	**Total**
Line Contractors	$4,116	$2,576	$1,571	$10,020	$18,064	$245,130	$ 930	$282,407
Staging and Logistic Contractors	$ -	$ -	$ -	$ 4,025	$ 3,801	$ 65,780	$1,584	$ 75,191
Tree Trimming Contractors	$ 922	$ 408	$ 510	$ 2,028	$ 2,044	$ 26,862	$ 0	$ 32,774
Other Outside Contractors	$ 144	$ 508	$ (15)	$ 3,250	$ 1,991	$ 17,291	$1,870	$ 25,039
	$5,182	**$3,492**	**$2,066**	**$19,323**	**$25,900**	**$355,063**	**$4,385**	**$415,411**

The above schedule represents the summary of Contractor Costs by category. The "Other Outside Contractors" represent a variety of vendors used during the storm. This relates to companies used to do damage assessment, vendors that provided fueling services, vendors that assisted with materials, vendors that provided security (staging sites, material yards, parking areas, operating centers, etc.), vendors that provided transportation services, vendors that provided flagging and traffic control services and various other rental/service companies.

Duke Energy Transmission Response:

For Transmission, any vendor considered "Other" would be for costs/services charged to the contractor resource type that fall outside of any other category.

A summary of contractor costs is attached bearing Bates Numbers 20170272-DEF-OPC-ROG 4-84-0001 through 20170272-DEF-OPC-ROG 4-84-0004. The attachment is confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

85. Internal Fleet Costs. Refer to testimony of Bryan Buckler at page 9, lines 16-17 and Exhibit BB-2. Explain how the Company determined what costs were incremental and non-incremental and how the accounting was able to track the costs to distinguish between fuel and vehicle overhead costs being charged to storm costs.

Answer:

Duke Energy Distribution Response:

The fleet costs that are charged to the storm project are an allocation done at the end of the month through our financial systems based on internal labor charges. The rate is comprised of 4 components: Leasing/Ownership Costs, Depreciation, Repair Labor & Parts, Fuel. These four pieces make up respective percentages that add up to 100%. Only the fuel percentage is considered incremental and the other components are considered part of base rates and are deemed non-incremental. The non-incremental piece is reduced related to the estimated fleet costs associated with the capital estimate and that remaining amount is reflected on the non-incremental schedule. All Affiliate fleet costs were considered incremental.

Duke Energy Transmission Response:

After Transmission categorizes costs (as explained in Interrogatory 78), all non-capitalized fleet costs originating from Duke Energy Florida were determined to be non-incremental, where fleet costs originating from Duke Energy Affiliates were determined to be incremental. DEF Transmission's fleet costs also included fuel; however, it was insignificant and treated as non-incremental.

86. Uncollectibles. Refer to testimony of Bryan Buckler at page 9, lines 19-20 and Exhibit BB-2. What is the specific factual basis for including this cost in storm restoration, and identify the provision in Rule 25-6.0143, F.A.C. that authorizes such recovery.

Answer:

With Commission approval, uncollectible accounts expense is permitted to be charged to Account No. 228.1 pursuant to Rule 25-6.0143(1)(g)2., F.A.C.. As Mr. Buckler explained (see page 18, lines 5-16), the incremental uncollectible accounts expense is the difference between actual account charge-offs for January, February, and March 2018 versus the forecasted amounts for those same periods.

87. Uncollectibles. Refer to testimony of Bryan Buckler at page 18, lines 3-12 and Exhibit BB-2. Explain in detail how the estimated amounts were determined.

Answer:

The estimated Charge-Offs amounts were determined by comparing the actual Charge-offs incurred to the amount of chargeoffs predicted by our Charge-Off Model, that forecasts future chargeoffs. For 2018, the Model predicted chargeoffs of $12.92 million through August, compared to actual gross Chargeoffs of $12.78 million (an accuracy rate of 98.9%).

88. Uncollectibles. Provide the amount of Uncollectibles for Duke Energy that was allowed in base O&M rates in the 2010 rate case Order No. PSC-10-0131-FOF.

Answer:

$13,815,000

89. Uncollectibles. Provide the amount of Uncollectibles for Duke Energy that was include in the MFRs for any rate case filing subsequent to the 2010 rate case Order No. PSC-10-0131-FOF. For each, identify the filing, and to the extent that the filing was settled, identify whether the Uncollectibles amount was discussed and/or adjusted as part of the settlement. If adjusted provide the respective adjustments.

Answer:

DEF has not filed MFRs since the 2010 test-year rate case, and the only settlements that have taken place prior to the 2017 hurricanes were the 2012 Stipulation and Settlement Agreement followed by the 2013 Revised and Restated Stipulation and Settlement Agreement. Uncollectible expense was neither discussed nor adjusted in either of those Agreements.

90. Uncollectibles. Refer to testimony of Bryan Buckler at page 18, lines 13-16 and Exhibit BB-2. Explain how the use of forecasted charge-offs is considered a proper benchmark for the level of Uncollectibles actually included in base O&M expense and as part of rates in existence.

Answer:

The amount of Uncollectibles currently included in base O&M rates is $13.815 million. This amount was set during our last rate case in 2010, and was reasonable at the time it was set. However, because the Uncollectibles amount was set so long ago, we believe it no longer provides a good benchmark. We believe our Chargeoffs budget provides the most recent indication of expected Uncollectibles expense, and therefore provides a better benchmark.

91. Uncollectibles. Refer to testimony of Bryan Buckler at page 18, lines 3-12. Are the costs requested in Account No. 186 or have they been charged to Account No. 228.1? If charged to Account No. 228.1, provide or identify the Commission approval required to make that transfer of costs.

Answer:

The costs requested are in Account No. 186.

92. Capitalized Cost. Refer to testimony of Bryan Buckler at page 15, lines 18-24. For each storm, provide the average number of hours for DEF's employees to install items by Unit of Property ("UOP") type and the number of line resources needed. Also, for each storm, provide the total hours for DEF's employees to install UOP. Finally, in each response provide the associated employee cost(s) capitalized.

Answer:

Duke Energy Distribution Response:

Below is the chart used to estimate how many hours would be needed to install a unit of property under normal conditions and the estimated number of resources per unit of property. We do not distinguish between an DEF employee or Contractor resource for the time of installation.

UOP	# of People	# of Hours	Total Hours	Coversion
Transformer - Pole	2.00	2.00	4.00	
Transformer - Padmount	2.00	3.00	6.00	
Wire - ft	2.00	2.00	4.00	200 ft per span
Cutout	2.00	1.00	2.00	
Pole	4.00	8.00	32.00	
Cable - Underground - ft	2.00	2.00	4.00	75 ft
Arrester	2.00	1.00	2.00	
Switchgear	4.00	8.00	32.00	
Luminaire	1.00	1.00	1.00	
Recloser	4.00	6.00	24.00	
Regulator	4.00	8.00	32.00	
Streetlight Pole	2.00	4.00	8.00	

Below is the total estimated DEF employee & labor burden cost (highlighted in yellow) and total estimated number of hours (DEF employee/Contractor – also highlighted in yellow) to install the units of property.

Summary of Capital Costs							
Distribution Capital Storm Estimate							
CAPITAL PROJECT							
Material Components:		Debby	Isaac	Hermine	Matthew	Irma	Total
	Capital Materials - Units of Property	$ 261,667	$ 20,835	$ 261,178	$ 300,197	$ 2,917,499	$ 3,761,376
	Capital Materials - Warehouse Burdens	$ 26,167	$ 2,084	$ 26,118	$ 30,020	$ 291,750	$ 376,138
	Working Stock materials	$ 39,250	$ 3,125	$ 39,177	$ 45,030	$ 437,625	$ 564,206
	Capital Materials - Units of Property incl Burdens	$ 327,084	$ 26,044	$ 326,472	$ 375,246	$ 3,646,873	$ 4,701,720
Labor Components:							
	Labor & Burdens to install Units of Property	$ 399,362	$ 37,228	$ 412,737	$ 748,331	$ 7,753,275	$ 9,350,933
	Contractor/Affiliate adder	$ 243,054	$ 22,657	$ 231,029	$ 418,877	$ 4,248,752	$ 5,164,369
	Overhead Allocation - applied to Labor only	$ 79,872	$ 7,446	$ 107,919	$ 190,932	$ 2,261,726	$ 2,647,895
	Fleet Loading - applied to Labor only	$ 99,841	$ 9,307	$ 103,469	$ 183,678	$ 2,337,352	$ 2,733,646
	Capital Labor on UOP incl Loading items	$ 822,129	$ 76,638	$ 855,153	$ 1,541,818	$ 16,601,106	$ 19,896,844
	Distribution Capital Cost	$ 1,149,213	$ 102,682	$ 1,181,626	$ 1,917,065	$ 20,247,979	$ 24,598,564
A	Labor hours estimated	6,654	620	6,668	12,089	124,311	150,342

Duke Energy Transmission Response:

As discussed in Bryan Buckler's testimony at page 14, lines 5-13, Transmission creates storm specific capital projects, where all applicable labor, Contractor costs, materials, and other costs

are charged to that project during restoration. This allows a clean and separate account of storm restoration O&M costs versus capitalized restoration costs, with minimal calculations needed. The hours analysis used to capitalize employee and contactor labor is not applicable for Transmission.

Below are the capitalized employee labor costs:

Irma

Row Labels	Sum of Monetary Amount JD
Regular Payroll	20,621

Debby

Row Labels	Sum of amount
Regular Payroll	166,566

93. Capitalized Cost. Refer to testimony of Bryan Buckler at page 16, lines 1-10. For each storm, provide the average number of hours necessary for DEF's contractors to install by type of UOP and the number of line resources needed. Also, for each storm, provide the total hours necessary for DEF's contractors to install UOP. Finally, in each response provide the associated contractor cost(s) capitalized.

Answer:

Duke Energy Distribution Response:

See DEF's Response to question 92 – the table provided is the estimate for DEF Employees or Contractors for average number of hours to install a unit of property and number of resources. As stated in Bryan Buckler's testimony page 16, lines 15-18 the Company is not able to determine with precision the portion of capital Distribution work completed by DEF employees versus contractors. Therefore, our calculation to install a unit of property starts with estimating DEF employee labor costs and then taking the net difference between our estimated Contractor costs and recording that as our "Contractor/Affiliate adder" as highlighted in yellow below.

Summary of Capital Costs							
Distribution Capital Storm Estimate							
CAPITAL PROJECT							
Material Components:		Debby	Isaac	Hermine	Matthew	Irma	Total
	Capital Materials - Units of Property	$ 261,667	$ 20,835	$ 261,178	$ 300,197	$ 2,917,499	$ 3,761,376
	Capital Materials - Warehouse Burdens	$ 26,167	$ 2,084	$ 26,118	$ 30,020	$ 291,750	$ 376,138
	Working Stock materials	$ 39,250	$ 3,125	$ 39,177	$ 45,030	$ 437,625	$ 564,206
	Capital Materials - Units of Property incl Burdens	$ 327,084	$ 26,044	$ 326,472	$ 375,246	$ 3,646,873	$ 4,701,720
Labor Components:							
	Labor & Burdens to install Units of Property	$ 399,362	$ 37,228	$ 412,737	$ 748,331	$ 7,753,275	$ 9,350,933
	Contractor/Affiliate adder	$ 243,054	$ 22,657	$ 231,029	$ 418,877	$ 4,248,752	$ 5,164,369
	Overhead Allocation - applied to Labor only	$ 79,872	$ 7,446	$ 107,919	$ 190,932	$ 2,261,726	$ 2,647,895
	Fleet Loading - applied to Labor only	$ 99,841	$ 9,307	$ 103,469	$ 183,678	$ 2,337,352	$ 2,733,646
	Capital Labor on UOP incl Loading items	$ 822,129	$ 76,638	$ 855,153	$ 1,541,818	$ 16,601,106	$ 19,896,844
	Distribution Capital Cost	$ 1,149,213	$ 102,682	$ 1,181,626	$ 1,917,065	$ 20,247,979	$ 24,598,564
A	Labor hours estimated	6,654	620	6,668	12,089	124,311	150,342

Duke Energy Transmission Response:

As discussed in Bryan Buckler's testimony at page 14, lines 5-13, Transmission creates storm specific capital projects, where all applicable labor, Contractor costs, materials, and other costs are charged to that project during restoration. This allows a clean and separate account of storm restoration O&M costs versus capitalized restoration costs, with minimal calculations needed. The hours analysis used to capitalize employee and contactor labor is not applicable for Transmission.

Below are the capitalized contractor costs:

Irma

Row Labels	Sum of Monetary Amount JD
Contractor Costs	3,787,320

Debby

Row Labels	Sum of amount
Contractor	93,702

94. Capitalized Cost. Refer to testimony of Bryan Buckler at page 13, lines 14-24 through page 16, line 24 and Exhibit BB-2. For each storm, provide a summary of capitalized costs by topic as discussed (*e.g.* - material, employee labor, contractors and Duke Energy Affiliate labor, etc.) showing whether or not the total matches the amount shown on Exhibit BB-2.

Answer:

Duke Energy Distribution Response:

Below is the summary of the estimated capital costs which tie to the BB-2 schedule – use yellow highlighted line to tie back to row 26 on each respective storm's "Less: Capitalizable Costs" found in the BB-2.

Summary of Capital Costs							
Distribution Capital Storm Estimate							
CAPITAL PROJECT							
Material Components:		Debby	Isaac	Hermine	Matthew	Irma	Total
	Capital Materials - Units of Property	$ 261,667	$ 20,835	$ 261,178	$ 300,197	$ 2,917,499	$ 3,761,376
	Capital Materials - Warehouse Burdens	$ 26,167	$ 2,084	$ 26,118	$ 30,020	$ 291,750	$ 376,138
	Working Stock materials	$ 39,250	$ 3,125	$ 39,177	$ 45,030	$ 437,625	$ 564,206
	Capital Materials - Units of Property incl Burdens	$ 327,084	$ 26,044	$ 326,472	$ 375,246	$ 3,646,873	$ 4,701,720
Labor Components:							
	Labor & Burdens to install Units of Property	$ 399,362	$ 37,228	$ 412,737	$ 748,331	$ 7,753,275	$ 9,350,933
	Contractor/Affiliate adder	$ 243,054	$ 22,657	$ 231,029	$ 418,877	$ 4,248,752	$ 5,164,369
	Overhead Allocation - applied to Labor only	$ 79,872	$ 7,446	$ 107,919	$ 190,932	$ 2,261,726	$ 2,647,895
	Fleet Loading - applied to Labor only	$ 99,841	$ 9,307	$ 103,469	$ 183,678	$ 2,337,352	$ 2,733,646
	Capital Labor on UOP incl Loading items	$ 822,129	$ 76,638	$ 855,153	$ 1,541,818	$ 16,601,106	$ 19,896,844
	Distribution Capital Cost	$ 1,149,213	$ 102,682	$ 1,181,626	$ 1,917,065	$ 20,247,979	$ 24,598,564

Duke Energy Transmission Response:

Below are the summarized capitalized costs:

Irma

Row Labels	Sum of Monetary Amount JD
Contractor Costs	3,787,320
Fleet Costs (Internal)	8,857
Labor Burdens/Incentives	12,305
Materials & Supplies	1,748,715
Other	0
Other Employee Expenses	579
Overhead Allocations	556,584
Overtime Payroll	7,838
Regular Payroll	20,621
Grand Total	**6,142,820**

Debby

Row Labels	Sum of amount
Contractor	93,702
Materials & Supplies	105,229
Other	137,008
Other Employee Expenses	1,864
Overhead Allocations	22,148
Regular Payroll	166,566
Grand Total	**526,517**

95. Recovery. Refer to the response to Citizens' Interrogatory No. 13. Explain how the response to this question is consistent with Rule 25-6.0143(1)(d) wherein it states "All costs charged to Account 228.1 are subject to review for prudence and reasonableness by the Commission."

Answer:

DEF agrees that the incremental costs DEF incurred and charged to the storm reserve as a result of Tropical Storms Debbie and Colin and Hurricanes Isaac, Hermine, and Matthew are "subject to review for prudence and reasonableness by the Commission" and DEF has presented those costs in its filings and supported those costs with its discovery responses. However, as discussed in DEF's response to Citizens' Interrogatory No. 13, DEF did not and does not believe that the terms of the Rule and the 2017 Second Revised and Restated Settlement Agreement require the Commission to identify the costs for each of those storms as specific issues in this docket; rather DEF is of the opinion that they can be subsumed within other issues. That said, if parties or staff propose specific issues on those topics, DEF will not object.

96. Contractors. Refer to the response to Citizens' Production of Documents No. 6. Based on the response and the inclusion of the listing identified as invoices over $25,000 is this document offered as a reliable summary of all the invoices provided in response to POD No. 6? If not, explain the purpose of the listings provided as part of this response.

Answer:

Duke Energy Distribution Response:

The document does not represent all the invoices over $25,000 for Distribution. This was due to the company still processing and paying invoices. The file attached, bearing Bates Numbers 20170272-DEF-OPC-ROG 4-96-0006 through 20170272-DEF-OPC-ROG 4-96-00021 reflects the complete listing of all invoices over $25,000 for Distribution. The attachment is confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Duke Energy Transmission Response:

Transmission's list of invoices over $25,000, supporting Citizens' Production of Documents No. 6, was produced in April 2018, at a time when costs were still being identified or accrued without invoices. After the May 2018 filing, Transmission updated the list. The list is attached as a response to this question. This list should supersede the list provided for POD No. 6. The attached list bears Bates Numbers 20170272-DEF-OPC-ROG 4-96-0001 through 20170272-DEF-OPC-ROG 4-96-0005. The attachment is

confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

97. Contractors. Refer to the response to Citizens' Interrogatory No. 43. Does the Company agree that the totals on the respective attachments can be verified by cross-referencing the amounts reflected on the corresponding lines of each of the respective pages 1-7 of Exhibit BB-2? If not, explain why not.

Answer:

Duke Energy Distribution Response:

Yes. Interrogatory 43 for Distribution will tie to the grouping "Contractor Costs" on Exhibit BB-2.

Duke Energy Transmission Response:

Transmission's summary of costs (listing each invoice) by function, by contractor should agree to the totals listed as Contractor Costs on Exhibit BB-2.

98. Contractors. Refer to the response to Citizens' Interrogatory No. 43. Explain why for several vendors the invoice amounts listed appear to be identical round amounts, and why the invoices often are exact fractions of the total amount billed. If this invoice breakdown is based on a contractual agreement the Company had with these vendors, explain when such agreement was reached, including whether it was before, during, or after the storm impacted the service territory.

Answer:

Due to the volume of invoices incurred from Irma, and the in-depth review of invoices for accuracy that would occur prior to payment in full of the final amount DEF determined to be appropriate, DEF offered pre-payment standards. This pre-payment offer was approved after the storm impacted the service territory in order to alleviate cash flow issues for the contractors supporting DEF's unprecedented storm response. The following terms were communicated to the vendors:

- For all invoices $100K and greater, DEF would permit the contactor to provide an initial invoice representing a set percentage of the contractor's total invoice amount that DEF would approve for payment immediately;
- A second invoice for the remaining balance would then be submitted by the contractor and DEF would pay 90 days after receipt of all supporting documentation and the opportunity to review for consistency with the contract, accuracy, etc., as discussed herein.
- All invoices less than $100K would be processed as normal

99. Contractors. Refer to the response to Citizens' Interrogatory No. 43. Explain what vendors and/or costs totaling $15,488,308 are included in the "Not Grouped" classification. Identify each vendor(s) for which the supporting documents were included in the response Citizens' Production of Documents No. 6.

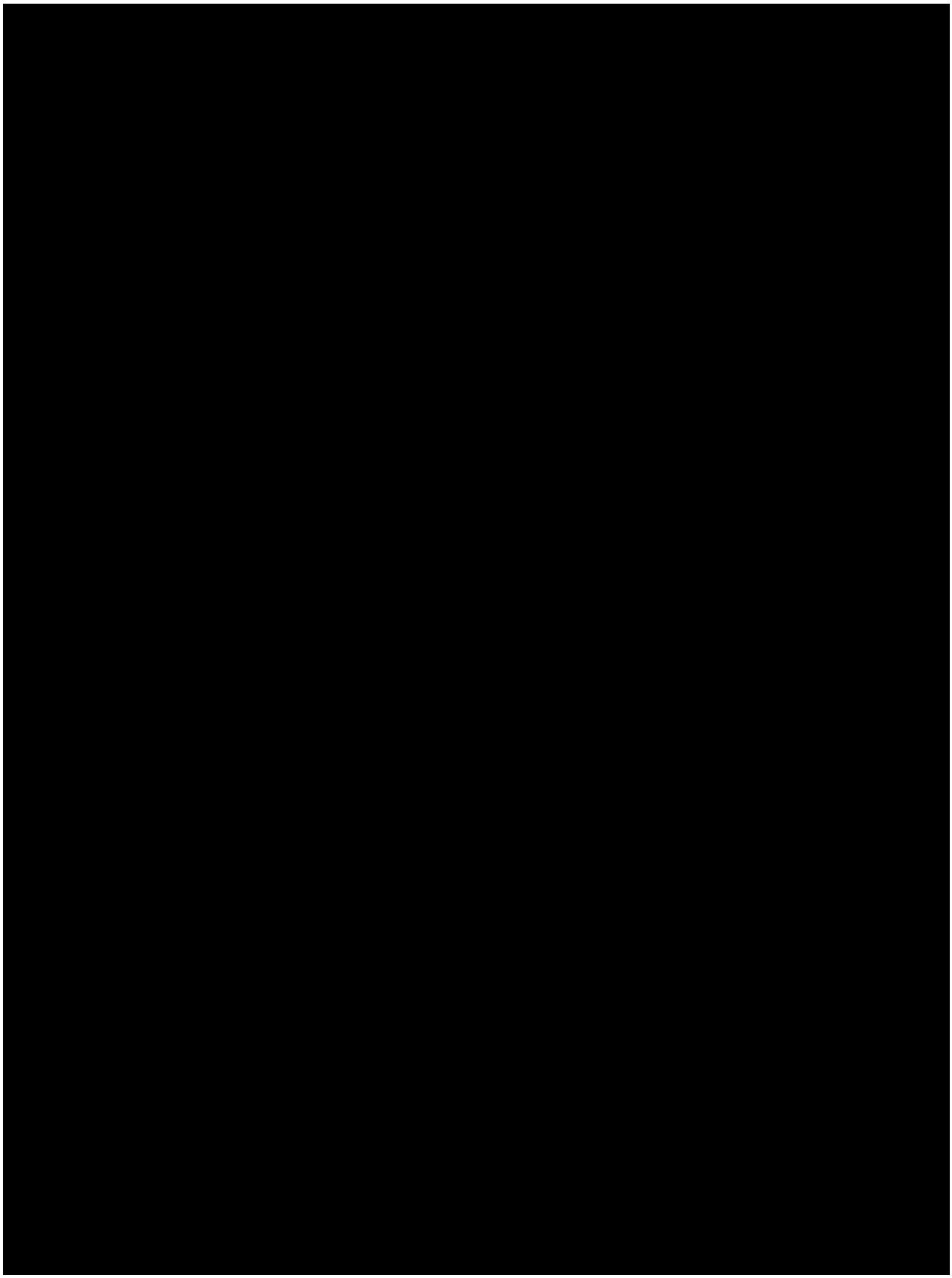
Answer:

Duke Energy Distribution Response:

Please see the attached documents bearing Bates Numbers 20170272-DEF-OPC-ROG 4-99-0000001 through 20170272-DEF-OPC-ROG 4-99-0000009. The attachments bearing Bates Numbers 20170272-DEF-OPC-ROG 4-99-0001 through 20170272-DEF-OPC-ROG 4-99-0000009 are confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019. The remaining documents for this response will be provided at a later date.

100. [redacted]

[redacted]



[redacted]

Answer:

Duke Energy Distribution Response:

There are 3 reasons why POD 6 and ROG 43 are different. First is that the POD 6 represented a point in time that was being used to pull invoices before we had processed all the invoices. Second, POD 6 reflects all $25k *or greater* invoices regardless of the cost driver grouping that was used. ROG 43 requested *all invoices* (including ones less than $25k) related to "Contractor Costs" which we took as our cost driver Contractors. We do have vendors that provided service during the storm, but their costs would have been picked up under Materials, Employee expenses (hotels, rental cars, etc.) and fleet. Third, POD 6 requested all invoices over $25k and ROG 43 did not have that threshold and therefore all invoices were included. An updated list of all $25k or greater invoices is attached. See the attachments bearing Bates Numbers 20170272-DEF-OPC-ROG 4-100-0001 through 20170272-DEF-OPC-ROG 4-100-000910. The attachments are confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Slipsheet - Question 67

Attachments bearing Bates Numbers 20170272-DEF-OPC-ROG 4-67-0001 through 20170272-DEF-OPC-ROG 4-67-000118 are confidential. Unredacted copies have been filed with the Commission along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Slipsheet - Question 84

Attachments bearing Bates Numbers 20170272-DEF-OPC-ROG 4-84-0001 through 20170272-DEF-OPC-ROG 4-84-0004 are confidential. Unredacted copies have been filed with the Commission along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Slipsheet - Question 96

Attachments bearing Bates Numbers 20170272-DEF-OPC-ROG 4-96-0001 through 20170272-DEF-OPC-ROG 4-96-00021 are confidential. Unredacted copies have been filed with the Commission along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Slipsheet - Question 99

Attachments bearing Bates Numbers 20170272-DEF-OPC-ROG 4-99-0001 through 20170272-DEF-OPC-ROG 4-99-0000009 are confidential. Unredacted copies have been filed with the Commission along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Slipsheet - Question 100

Attachments bearing Bates Numbers 20170272-DEF-OPC-ROG 4-100-0001 through 20170272-DEF-OPC-ROG 4-100-000910 are confidential. Unredacted copies have been filed with the Commission along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

AFFIDAVIT

STATE OFNORTH CAROLINA

COUNTY OF MECKLENBERG

I hereby certify that on this _____ day of _____, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BRYAN BUCKLER, who is personally known to me, and has acknowledged before me that he/she provided the answers to interrogatory number(s) 67 through 70, 72, 73, 77 through 81, 84 through 87, 90 through 100 of OPC'S FOURTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 67-100) in Docket No. 20170272-EI, and that the responses are true and correct based on his/her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2019.

_____
BRYAN BUCKLER

_____
Notary Public
State of Florida, at Large

My Commission Expires:_____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of _____, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and he acknowledged before me that she provided the answers to interrogatory number(s) 71, 74, 75, 76, 82, 83, 88, and 89 of OPC'S FOURTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 67-100) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2019.

_____
MARCIA OLIVIER

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

20170272 – DEF Response to OPC 4th ROGs (67-100)

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 12 day of February, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and he acknowledged before me that she provided the answers to interrogatory number(s) 71, 74, 75, 76, 82, 83, 88, and 89 of OPC'S FOURTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 67-100) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 12 day of February, 2019.

Marcia Olivier
MARCIA OLIVIER

Susan D. Reed
Notary Public
State of Florida, at Large

My Commission Expires:

SUSAN D. REED
Commission # GG 130296
Expires August 27, 2021
Bonded Thru Budget Notary Services

AFFIDAVIT

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

I hereby certify that on this 12th day of February, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BRYAN BUCKLER, who is personally known to me, and has acknowledged before me that he/she provided the answers to interrogatory number(s) 67 through 70, 72, 73, 77 through 81, 84 through 87, 90 through 100 of OPC'S FOURTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 67-100) in Docket No. 20170272-EI, and that the responses are true and correct based on his/her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 12th day of February, 2019.

Bryan Buckler

BRYAN BUCKLER

ALOMA M. FELDER NOTARY PUBLIC CABARRUS COUNTY, N. C.

Aloma M. Felder

Notary Public
State of ~~Florida~~, at Large
North Carolina

My Commission Expires: July 21, 2020

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: February 7, 2019

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO CITIZENS' FOURTH REQUEST TO PRODUCE DOCUMENTS (NOS. 18-26)

Duke Energy Florida, LLC ("DEF"), responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") Fourth Request to Produce Documents (Nos. 18-26) as follows:

PRODUCTION OF DOCUMENTS

18. Outside Contractors. Refer to the response to Citizens Interrogatory No. 38. Provide any documentation to support the referenced audit and its findings, including all findings regarding invoice accuracy.

Response:

Per discussion with OPC, responsive documents will be provided at a later date.

19. Non-Incremental. Refer to testimony of Bryan Buckler at page 6, lines 19-24 and page 7, lines 1-4 and Exhibit BB-2. Provide the calculation of the non-incremental regular payroll amounts on each page/tab of the exhibit.

Response:

Distribution Response:
See excel schedule attached. There is a separate tab for each Storm. The summary section in cells F1-I8 on each storm tab reflects the numbers that tie back to the BB-2. The documents bear Bates Numbers 20170272-DEF-OPC-POD 4-19-0001 through 20170272-DEF-OPC-POD 4-19-00078. The attachments are confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Transmission Response:

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 14
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Buckler (23-26)

See the attached files bearing Bates Numbers 20170272-DEF-OPC-POD 4-19-00079 through 20170272-DEF-OPC-POD 4-19-000205. The attachments are confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

20. Non-Incremental. Refer to testimony of Bryan Buckler at page 7, lines 6-14 and Exhibit BB-2. Provide the calculation of the non-incremental overtime payroll amounts on each page/tab of the exhibit.

Response:

Distribution Response:
See the excel schedule that was submitted with POD 19. There is a separate tab for each Storm. The summary section in cells F1-I8 on each storm tab reflects the numbers that tie back to the BB-2.

Transmission Response:
See the attached files bearing Bates Numbers 20170272-DEF-OPC-POD 4-20-0001 through 20170272-DEF-OPC-POD 4-20-000244. The attachments are confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

21. Non-Incremental. Refer to testimony of Bryan Buckler at page 7, lines 16-24 and page 8, lines 1-7 and Exhibit BB-2. For each storm, provide supporting documents showing the amount of incentives originally included in the costs reported.

Response:

Distribution Response:
See excel schedule that was submitted with POD 19. There is a separate tab for each Storm that includes the total amount of incentives charged to the respective storm (cell D8 in each tab). The summary section in cells F1-I8 on each storm tab reflects the numbers that tie back to the BB-2.

Transmission Response:
See the attached files bearing Bates Numbers 20170272-DEF-OPC-POD 4-21-0001 through 20170272-DEF-OPC-POD 4-21-0001347. The attachments are confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida

Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

22. Non-Incremental. Refer to testimony of Bryan Buckler at page 8, lines 9-22 and Exhibit BB-2. For each storm, provide supporting documentation for the amount of Duke Energy employee overhead costs included in this request.

Response:

Distribution Response:
See the schedule below and the attached file bearing Bates Numbers 20170272-DEF-OPC-POD 4-22-0001 through 20170272-DEF-OPC-POD 4-22-00019. The attachments are confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Distribution Overhead Allocations (000's)

	Colin	Hermine	Matthew	Irma	Nate	Total
Duke Energy Florida	$ 388	$ 1,233	$ 478	$ 2,287	$ 28	$ 4,414
Affiliate	$ -	$ 52	$ 110	$ 3,223	$ 1	$ 3,386
Total Overhead Allocations	**$ 388**	**$ 1,285**	**$ 587**	**$ 5,511**	**$ 28**	**$ 7,800**
Non-Incremental						
Duke Energy Florida	$ 388	$ 1,125	$ 287	$ 26	$ 28	$ 1,853
Affiliate	$ -	$ -	-	-	-	-
Total Non-Incremental Overhead Allocations	**$ 388**	**$ 1,125**	**$ 287**	**$ 26**	**$ 28**	**$ 1,853**

Highlighted amounts were adjusted by the capital calculation related to the overhead allocations

Transmission Response:
See the attached files bearing Bates Numbers 20170272-DEF-OPC-POD 4-22-00020 through 20170272-DEF-OPC-POD 4-22-0001272. The attachments are confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

23. Capitalized Cost. Refer to testimony of Bryan Buckler at page 15, lines 18-24. For each storm, provide a separate sample calculation for the capitalization of poles and wires.

Response:

Distribution Response:

	SAMPLE CALCULATION OF POLES												
	Material Components:				**Debby**		**Isaac**		**Hermine**		**Matthew**		**Irma**		**Total**
X		Capital Materials - Total Direct Cost of Poles		$	13,238	$	2,081	$	11,382	$	35,158	$	330,955	$	392,815
Y		Capital Materials - Warehouse Burden	10%	$	1,324	$	208	$	1,138	$	3,516	$	33,096	$	39,282
Z		Working Stock Materials	15%	$	1,986	$	312	$	1,707	$	5,274	$	49,643	$	58,922
	(X*Y)+(X*Z)+X=	Capital Materials - Units of Property incl Burdens			**16,548**		**2,602**		**14,228**		**43,948**		**413,694**		**$491,019**
	Labor Components:														
A		# of Poles			**89**		**7**		**75**		**213**		**2,130**		**2,514**
B		Estimated # of hours to install each pole			**8**		**8**		**8**		**8**		**8**		
C		Estimated # of resources needed to install each pole			**4**		**4**		**4**		**4**		**4**		
D		Blended Internal Labor rate		**$**	**60**	**$**	**60**	**$**	**62**	**$**	**62**	**$**	**62**		
E		Contractor/Affiliate adder (Difference between Avg Contract Rate and Blended Internal Labor Rate)		**$**	**37**	**$**	**37**	**$**	**35**	**$**	**35**	**$**	**34**		
F	AxBxCxD=	Labor & Burdens to install Units of Property		$	170,937	$	13,444	$	148,560	$	421,910	$	4,251,139	$	5,005,991
G	AxBxCXE=	Contractor/Affiliate adder		$	104,033	$	8,182	$	83,156	$	236,164	$	2,329,601	$	2,761,136
H		Overhead Allocation %			20%		20%		26%		26%		29%		
I		Fleet Loading %			25%		25%		25%		25%		30%		
	FxH=	Overhead Allocation - applied to Labor only		$	34,187	$	2,689	$	38,844	$	107,648	$	1,240,110	$	1,423,478
	FxI=	Fleet Loading - applied to Labor only		$	42,734	$	3,361	$	37,243	$	103,558	$	1,281,576	$	1,468,471
	F+G+H+I=	Capital Labor on UOP incl Loading items		$	351,892	$	27,677	$	307,803	$	869,280	$	9,102,426	$	10,659,077
		Distribution Capital Cost		**$**	**368,439**	**$**	**30,279**	**$**	**322,031**	**$**	**913,227**	**$**	**9,516,120**	**$**	**11,150,096**
	SAMPLE CALCULATION OF WIRE														
	Material Components:				**Debby**		**Isaac**		**Hermine**		**Matthew**		**Irma**		**Total**
X		Capital Materials - Total Direct Cost of Poles		$	79,881	$	6,136	$	37,565	$	58,020	$	597,220	$	778,823
Y		Capital Materials - Warehouse Burden	10%	$	7,988	$	614	$	3,757	$	5,802	$	59,722	$	77,882
Z		Working Stock Materials	15%	$	11,982	$	920	$	5,635	$	8,703	$	89,583	$	116,823
	(X*Y)+(X*Z)+X=	Capital Materials - Units of Property incl Burdens			**99,852**		**7,670**		**46,957**		**72,525**		**746,525**		**$973,528**
	Labor Components:														
		Feet of Wire			**132,791**		**11,143**		**116,190**		**169,548**		**1,715,421**		**2,145,093**
A		Feet of Wire converted into 200 foot sections			**885**		**56**		**581**		**848**		**8,577**		
B		Estimated # of hours to install			**2**		**2**		**2**		**2**		**2**		
C		Estimated # of resources needed to install			**2**		**2**		**2**		**2**		**2**		
D		Blended Internal Labor rate		**$**	**60**	**$**	**60**	**$**	**62**	**$**	**62**	**$**	**62**		
E		Contractor/Affiliate adder (Difference between Avg Contract Rate and Blended		**$**	**37**	**$**	**37**	**$**	**35**	**$**	**35**	**$**	**34**		
F	AxBxCxD=	Labor & Burdens to install Units of Property		$	212,536	$	13,376	$	143,843	$	209,900	$	2,139,816	$	2,719,472
G	AxBxCXE=	Contractor/Affiliate adder		$	129,351	$	8,141	$	80,516	$	117,491	$	1,172,608	$	1,508,106
H		Overhead Allocation %			20%		20%		26%		26%		29%		
I		Fleet Loading %			25%		25%		25%		25%		30%		
	FxH=	Overhead Allocation - applied to Labor only		$	42,507	$	2,675	$	37,611	$	53,555	$	624,211	$	760,559
	FxI=	Fleet Loading - applied to Labor only		$	53,134	$	3,344	$	36,060	$	51,520	$	645,083	$	789,141
	F+G+H+I=	Capital Labor on UOP incl Loading items		$	437,528	$	27,536	$	298,030	$	432,467	$	4,581,717	$	5,777,278
		Distribution Capital Cost		**$**	**537,380**	**$**	**35,206**	**$**	**344,987**	**$**	**504,991**	**$**	**5,328,242**	**$**	**6,750,807**

Transmission Response:

As discussed in Bryan Buckler's testimony at page 14, lines 5-13, Transmission creates storm specific capital projects, where all applicable labor, Contractor costs, materials, and other costs are charged to that project during restoration. This allows a clean and separate account of storm restoration O&M costs versus capitalized restoration costs, with minimal calculations needed. The hours analysis used to capital employee and contactor labor is not applicable for Transmission.

24. Capitalized Cost. Refer to testimony of Bryan Buckler at page 16, lines 1-10. For each storm, provide a separate sample calculation for the capitalization of poles and wires.

Response:

Distribution Response:
See POD 23. The sample calculation shows the components requested in POD 23 and POD 24.

Transmission Response:

As discussed in Bryan Buckler's testimony at page 14, lines 5-13, Transmission creates storm specific capital projects, where all applicable labor, Contractor costs, materials, and other costs are charged to that project during restoration. This allows a clean and separate account of storm restoration O&M costs versus capitalized restoration costs, with minimal calculations needed. The hours analysis used to capital employee and contactor labor is not applicable for Transmission.

25. Capitalized Cost. Refer to testimony of Bryan Buckler at page 16, lines 5-9. For each storm, provide separately the calculations performed to determine capitalized costs.

Response:

Distribution Response:

Summary of Capital Costs								
Distribution Capital Storm Estimate								
CAPITAL PROJECT								
Material Components		**Debby**	**Isaac**	**Hermine**	**Matthew**	**Irma**	**Total**
	Capital Materials - Units of Property	$ 261,667	$ 20,835	$ 261,178	$ 300,197	$ 2,917,499	$ 3,761,376
	Capital Materials - Warehouse Burdens	$ 26,167	$ 2,084	$ 26,118	$ 30,020	$ 291,750	$ 376,138
	Working Stock materials	$ 39,250	$ 3,125	$ 39,177	$ 45,030	$ 437,625	$ 564,206
	Capital Materials - Units of Property incl Burdens	$ 327,084	$ 26,044	$ 326,472	$ 375,246	$ 3,646,873	$ 4,701,720
Labor Components:							
	Labor & Burdens to install Units of Property	$ 399,362	$ 37,228	$ 412,737	$ 748,331	$ 7,753,275	$ 9,350,933
	Contractor/Affiliate adder	$ 243,054	$ 22,657	$ 231,029	$ 418,877	$ 4,248,752	$ 5,164,369
	Overhead Allocation - applied to Labor only	$ 79,872	$ 7,446	$ 107,919	$ 190,932	$ 2,261,726	$ 2,647,895
	Fleet Loading - applied to Labor only	$ 99,841	$ 9,307	$ 103,469	$ 183,678	$ 2,337,352	$ 2,733,646
	Capital Labor on UOP incl Loading items	$ 822,129	$ 76,638	$ 855,153	$ 1,541,818	$ 16,601,106	$ 19,896,844
	Distribution Capital Cost	**$ 1,149,213**	**$ 102,682**	**$ 1,181,626**	**$ 1,917,065**	**$ 20,247,979**	**$ 24,598,564**
A	Labor hours estimated	6,654	620	6,668	12,089	124,311	150,342
B	Avg Labor Hour Cost	$60	$60	$62	$62	$62	$62
C	Avg Contractor Rate	$ 96.55	$ 96.55	$ 96 55	$ 96 55	$ 96.55	$ 96.55
	Ax(C-B)=	$ 243 054	$ 22 657	$ 231 029	$ 418 877	$ 4 248 752	$ 5 164 369

Transmission Response:

As discussed in Bryan Buckler's testimony at page 14, lines 5-13, Transmission creates storm specific capital projects, where all applicable labor, Contractor costs, materials, and other costs are charged to that project during restoration. This allows a clean and separate account of storm restoration O&M costs versus capitalized restoration costs, with minimal

calculations needed. The hours analysis used to capital employee and contactor labor is not applicable for Transmission.

26. Uncollectibles. Refer to testimony of Bryan Buckler at page 18, lines 3-12 and Exhibit BB-2. Provide all workpapers and/or calculations supporting the amount requested as "uncollectibles.".

Response:

See the attached files bearing Bates Numbers 20170272-DEF-OPC-POD 4-26-0001 through 20170272-DEF-OPC-POD 4-26-0003.

Respectfully submitted,

/s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC.
299 First Avenue North
St. Petersburg, FL 33701
T: 727.820.4692
F: 727.820.5041
E: Dianne.Triplett@duke-energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 East College Avenue
Suite 800
Tallahassee, Florida 32301
T: 850.521.1428
F: 727.820.5041
E: Matthew.Bernier@duke-energy.com

CERTIFICATE OF SERVICE
(Dkt. No. 20170272-EI)

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished to the following by electronic mail this 7th day of February, 2019, to all parties of record as indicated below.

/s/ Matthew R. Bernier
Attorney

Rachel Dziechciarz / Ashley Weisenfeld Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 RDziechc@psc.state.fl.us aweisenf@psc.state.fl.us J. R. Kelly / C. Rehwinkel / T. David Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us david.tad@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com

Redacted Slipsheet - Question 19

Attachments bearing Bates Numbers 20170272-DEF-OPC-POD 4-19-0001 through 20170272-DEF-OPC-POD 4-19-000205 are entirely confidential. Unredacted copies have been filed with the Commission along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Redacted Slipsheet - Question 20

Attachments bearing Bates Numbers 20170272-DEF-OPC-POD 4-20-0001 through 20170272-DEF-OPC-POD 4-20-0001244 are entirely confidential. Unredacted copies have been filed with the Commission along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Redacted Slipsheet - Question 21

Attachments bearing Bates Numbers 20170272-DEF-OPC-POD 4-21-0001 through 20170272-DEF-OPC-POD 4-21-0001347 are entirely confidential. Unredacted copies have been filed with the Commission along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Redacted Slipsheet - Question 22

Attachments bearing Bates Numbers 20170272-DEF-OPC-POD 4-22-0001 through 20170272-DEF-OPC-POD 4-22-0001272 are entirely confidential. Unredacted copies have been filed with the Commission along with DEF's Notice of Intent to Request Confidential Classification dated February 7, 2019.

Pre Hurricane Forecast

	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Gross	$ 1,625,692	$ 1,248,381	$ 1,655,628	$ 1,649,348	$ 1,030,217	$ 990,975	$ 809,331
Final Bill	August	September	October	November	December	January	February
30+ Arrears	July	August	September	October	November	December	January
Actual	**Sept**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Gross	$773,331	$1,798,909	$1,467,206	$1,502,328	$1,615,833	$1,341,873	$1,514,430
Hurricane?	No	No	No	No	Yes	Yes	Yes
Increase in C/O due to Hurricane					$585,616	$ 350,898	$ 705,099

Hurricane C/O $1,641,613 TOTAL JAN, FEB, MAR

Collections stopped 9/11/17; phased back in 10/17/17

C/O off from 9/11; on 10/17. Oct c/o's combo of charge offs from August & September final bills (not hurricane related)

Cycle cuts resumed 11/9; defaulted arrangement cuts phased in 11/9 - 11/27. **First month charge off for delinquent accounts after hurricane is January 2018**

As far as November & December charge offs, there could have been some customers who voluntarily requested service off after the hurricane and failed to pay in 2017. However, the 4 year average of gross for the months September - December is 46.2% of total and September - December 2017 average is 45.6%. No dollars from 2017 will be designated as hurricane forgiveness.

All hurricane impacts will be calculated from January 2018 forward, based on gross (as recoveries are collections from prior periods, and not pertinent to this excercise.

The Increase in C/O due to the hurricane will be calculated as the difference between the forecast and the actual gross. (For the past 5 years, the accuracy of the model has averaged 96%)

Hurricane Irma Impacts to 2018 Charge Off

Background:

Accounts Receivable developed and maintains a model to forecast future charge offs. The model assumes a percentage of the present 30+ day arrears balances will write off in the proceeding 90 days. Performance and percentages are based on historical information since 1999, and adjusted annually if necessary. Through August 2017, the model has predicted gross charge offs of $12,923,878 with actual gross charge offs of $12,780,794, a difference of $143,084 (or 98.9% accuracy) year to date.

For the past five years, the accuracy of the model in forecasting gross has averaged 96%.

Prior to the storm, Duke Energy Florida was positioned favorably. August month end credit metrics indicated a positive trend, and reflected:

- Decreased delinquent balances (down 1.8%), albeit increased revenues (up 2.9%)
- Net dollars charged off as a percent of revenue static (.13%)

Hurricane Strategy:

All collection activities were stopped September 11, and were phased in starting with the mailing of notices on October 17, followed by outbound call campaigns on October 25, and assessing late payment charges on October 27. Non-pay disconnects resumed November 2 and collection activity for defaulted arrangements was phased in by Operations Center beginning November 9 through November 27.

In addition to the standard short-term credit extension, extended monthly installment payment terms were offered through January 2018. The two extended monthly installment terms were:

- 3 monthly installments with 1st installment due with current bill
- 4 monthly installments with 25% down now

Duke Energy Florida realized a steady increase in arrears. First month charge off for delinquent accounts after the hurricane was January. Duke Energy Florida anticipates an increase in charge offs in subsequent months due to the increase in dollars from defaulted payment terms and the catch up on non-pay disconnects on delinquent accounts, which were suspended as a result of the storm.

Methodology:

- All hurricane impacts will be calculated from January 2018 forward, based on gross (as recoveries are collections from prior periods, and not pertinent to this exercise)
- The increase in charge off due to the hurricane will be calculated as the difference between the forecast and the actual gross

Caveats:

- Monthly forecast based on 'today's' arrears balances and future projections change monthly
- Model is dynamic and will reflect changes to charge off if customers pay and arrears balances decline
- Uncertainty of customers paying or terminating service
- No experience with a catastrophic hurricane that impacted the entire state, the impact it has on customers staying and curing or leaving the state and terminating customer relationship

- Potential likelihood of increase in residential consumers filing for bankruptcy due to the cost of home owner's insurance deductibles coupled with homestead property exemption from bankruptcy assets

Assumptions:

- Field meets cut targets (February 2018 was first month DEF met cut targets since storm)
- CCO enforce down payments when granting extended terms
- Arrears balances levelize by March 2018 and fluctuate within range as in past 5 years as predicted

Elaine McCallister

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: March 4, 2019

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO CITIZENS' FIFTH SET OF INTERROGATORIES (NOS. 101-104)

Duke Energy Florida, LLC ("DEF") incorporates the objections filed contemporaneous with this response and responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") Fifth Set of Interrogatories to DEF (Nos. 101-104) as follows:

INTERROGATORIES

101. With regard to the crew identified on Bates numbered page 20170272-DEF-OPC POD 1-6-0056560 for the date of September 15, 2017, please answer the following:

a. State the beginning and ending time of the crew's restoration work for that day;
b. State whether the work hours represent overtime work for that day (Reference 20170272- DEF-OPC POD 1-6-0056560);
c. State, for the activities shown on 20170272-DEF-OPC POD 1-6-0056562, whether the total time spent on the activities that relate to the time stamp of 08:27 PM were included in the calculation of overtime hours on September 15, 2017 for all 6 members of the crew;
d. State whether the crew performed restoration work after 08:27 PM on September 15, 2017;
e. State with specificity what additional work, if any, was done after 08:27 PM, given the logistics of leaving the location and driving to a storm work restoration job site;
f. State how much total time was associated with the activity associated with the time stamp of 08:27 PM, from the time the crew began to travel toward that location where they were at 08:27 PM until they actually left the location;
g. State whether DEF adjusted the invoice at 20170272-DEF-OPC POD 1-6-0056555 for any of the hours reported on the time sheet at 20170272-DEF-OPC POD 1-6-0056560;
h. State the reason for any adjustment made before February 15, 2019, if any, related to the activities shown on 20170272-DEF-OPC POD 1-6-0056562;
i. State when the "Duke Approval" was given for the activity at 20170272-DEF-OPC POD 1-6-0056562, including whether such approval was given prior to the activity being undertaken:
j. State why approval was given for the activity represented at 20170272-DEF-OPC POD 1- 6-0056562;

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 15
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Cutliffe (101, 102)Bogdanos (103, 104)

k. State the purpose of the documentation at 20170272-DEF-OPC POD 1-6-0056560 and whether it was verified by Duke;
l. State when "Duke Approval" was given for the documentation at 20170272-DEF-OPC POD 1-6-0056561;
m. State whose signature appears next to "Duke Approval" at 20170272-DEF-OPC POD 1-6- 0056561 and 20170272-DEF-OPC POD 1-6-0056562;
n. State the general work location to which the crew was assigned;
o. State the number of customer in that specific crew's assigned general work location area who were awaiting service restoration at 6:30 PM on September 15, 2017; and
p. State the number of meals provided by Duke for the crew that day.

Answer:

a. In response to significant events such as hurricanes that requires mobilization of mutual assistance resources, Duke Energy establishes a 16hr daily work schedule with a 5am start time and 9pm end time. The goal is to maximize productivity during the daytime hours and allow for 8 hours of rest and recovery before returning to work each day.

b. Yes, all hours for 9/15 are overtime. The contractor met their 40-hour straight time requirement for the week. All additional hours are overtime.
c. Yes. Those hours are included in the overtime hour calculations on 9/15.

d. No, the crew did not perform restoration work after the 8:27pm time referenced on September 15, 2017.

e. Based on the start time of 5am and the 16hr work schedule, the crew would have completed restoration task prior to 8:27pm, consumed their evening meal and completed their workday as of 9pm. They would be off the clock for 8hours before returning to work the next day.

f. The crew completed restoration work, consumed their meal at 8:27pm and lodged (coded off for 8hrs) within Volusia County on September 15, 2017.

g. DEF would not adjust an invoice. The revision of the invoice was made by the contractor. The original timesheets did not provide the crew member's names, only job classifications, therefore they could not be cross referenced against rosters. The vendor sent the updated timesheets back with names and found billing errors which resulted in the submission of a revised invoice of $183,031.81 (Original amount of $185,320.21).

h. Not aware of any adjustments made to the activities shown on 20170272-DEF-OPC POD 1-6-0056562.

i. Approval was communicated to the Crew Leadership during on initial onboarding and adjusted, as needed, by their Duke Energy Field Coordinator daily during the restoration efforts.

j. The primary strategy within Duke Energy's response plans are to feed resources at the active base camps. During Irma based on the level of magnitude, logistics support plans

for the over 12,000 resources were expanded to include multiple feeding options that included eating at base camps, assigned hotels for lodging and available restaurants.

k. In order to compete the review of the invoice and validate hours, detailed timesheets with employee's names and hours by day were needed. This timesheet was based on Bates numbered page 20170272-DEF-OPC POD 1-6-0056561.

l. Resource Acquisition confirms the straight-time and overtime policies with the mutual assistance company, as part of the acquisition and onboarding process. Logistics plans and approval were communicated to the crew leadership during the initial onboarding, confirmed daily by their Duke Energy field leader daily during the restoration efforts.

m. The signature that appears next to "Duke Approval" is Greg Briley (Contractor Resources Manager).

n. Volusia County.

o. This crew was assigned to support the Volusia County restoration efforts on 9/15.

DUKE ENERGY. **Florida Outages by County Report**

9/15/17 6:00 PM

County	Customers Served	Customers Out	Customers Restored	Estimated Restoration Time
Alachua	4,880	427	3,276	Midnight on Sunday, Sept. 17
Bay	2,273	173	1,391	Midnight on Sunday, Sept. 17
Brevard	16	1	8	Midnight on Sunday, Sept. 17
Citrus	46,697	4,712	33,273	Midnight on Sunday, Sept. 17
Columbia	566	45	362	Midnight on Sunday, Sept. 17
Dixie	1,800	148	1,185	Midnight on Sunday, Sept. 17
Flagler	16	2	12	Midnight on Sunday, Sept. 17
Franklin	10,202	-	7,276	Restored
Gilchrist	1,637	131	1,049	Midnight on Sunday, Sept. 17
Gulf	6,470	-	4,538	Restored
Hamilton	2,927	240	1,930	Midnight on Sunday, Sept. 17
Hardee	2,661	374	2,467	
Hernando	11,357	1,161	8,196	Midnight on Sunday, Sept. 17
Highlands	54,209	36,265	20,945	
Hillsborough	25	3	18	Midnight on Sunday, Sept. 17
Jefferson	4,639	371	2,980	Midnight on Sunday, Sept. 17
Lafayette	845	68	548	Midnight on Sunday, Sept. 17
Lake	84,056	7,955	54,250	Midnight on Sunday, Sept. 17
Leon	61	5	38	Midnight on Sunday, Sept. 17
Levy	3,702	343	2,538	Midnight on Sunday, Sept. 17
Madison	3,811	313	2,513	Midnight on Sunday, Sept. 17
Marion	65,525	7,609	52,147	Midnight on Sunday, Sept. 17
Orange	369,171	31,578	201,684	Midnight on Sunday, Sept. 17
Osceola	48,065	3,347	22,910	Midnight on Sunday, Sept. 17
Pasco	139,992	14,356	103,049	Midnight on Friday Sept 15
Pinellas	540,933	59,808	409,592	Midnight on Friday Sept 15
Polk	100,519	9,278	65,634	Midnight on Sunday, Sept. 17
Seminole	156,103	16,227	104,220	Midnight on Sunday, Sept. 17
Sumter	10,171	1,227	8,351	Midnight on Sunday, Sept. 17
Suwannee	797	65	522	Midnight on Sunday, Sept. 17
Taylor	6,026	487	3,911	Midnight on Sunday, Sept. 17
Volusia	81,055	9,510	62,054	Midnight on Sunday, Sept. 17
Wakulla	6,814	536	4,306	Midnight on Sunday, Sept. 17
Total	1,768,021	206,765	1,187,173	

p. The crew was provided 2 meals and approved to secure their dinner meal on September 15, 2017. The normal strategy is for crews to be provided 3 meals per day (breakfast, lunch, and dinner) out of the active base camp locations. If a base camp cannot support the feeding of resources, the Duke Energy representative overseeing the crews informs

the crews they should eat at local eating establishments and bill Duke Energy for the transactions. In the alternative, the crew may be finishing a project that requires them to miss the meal at the base camp, so the crew would inform base camp that they will be responsible for procuring their meal.

102. With regard to the crew identified on Bates numbered page 20170272-DEF-OPC POD 1-6- 0056564 for the date of September 15, 2017, please answer the following:

a. State the beginning and ending time of the crew's restoration work for that day;
b. State whether the work hours represent overtime work for that day (Reference 20170272- DEF-OPC POD 1-6-0056563);
c. State, for the activities shown on 20170272-DEF-OPC POD 1-6-0056565, whether the total time spent on the activities that relate to the time stamp of 07:50PM (with special note of the time stamp at 07:06 PM) were included in the calculation of overtime hours on September 15, 2017 for all 7 members of the crew;
d. State whether the crew performed restoration work after 07:50 PM on September 15, 2017;
e. State with specificity what additional work, if any, was done after 07:50 PM given the logistics of leaving the location and driving to a storm work restoration job site;
f. State how much total time was associated with the activity associated with the time stamp of 07:50 PM, from the time the crew began to travel toward that location where they were at 08:27 PM until they actually left the location;
g. State whether DEF adjusted the invoice at 20170272-DEF-OPC POD 1-6-0056555 for any of the hours reported on the time sheet at 20170272-DEF-OPC POD 1-6-0056563;
h. State the reason for any adjustment made before February 15, 2019, if any, related to the activities shown on 20170272-DEF-OPC POD 1-6-0056565;
i. State when the "Duke Approval" was given for the activity at 20170272-DEF-OPC POD 1-6-0056565, including whether such approval was given prior to the activity being undertaken;
j. State why approval was given for the activity represented at 20170272-DEF-OPC POD 1- 6-0056565;
k. State the purpose of the documentation at 20170272-DEF-OPC POD 1-6-0056563 and whether it was verified by Duke;
l. State when "Duke Approval" was given for the documentation at 20170272-DEF-OPC POD 1-6-0056564;
m. State whose signature appears next to "Duke Approval" at 20170272-DEF-OPC POD 1- 6-0056564 and 20170272-DEF-OPC POD 1-6-0056565;
n. State the general work location to which the crew was assigned;
o. State the number of customer in that specific crew's assigned general work location area who were awaiting service restoration at 6:30 PM on September 15, 2017; and
p. State the number of meals provided by Duke for the crew that day.

Answer:

a. In response to significant events such as hurricanes that requires mobilization of mutual assistance resources, Duke Energy establishes a 16hr daily work schedule with a 5am start time and 9pm end time. The goal is to maximize restoration efforts during the daytime hours and allow for 8 hours of rest and recovery before returning to work each day.

b. Yes, all hours for 9/15 are overtime. The contractor met their 40-hour straight time requirement for the week. All additional hours are overtime.

c. Yes. Those hours are included in the overtime calculations on 9/15.

d. No, the crew did not perform restoration work after the 7:50 (7:06) pm time referenced on September 15, 2017.

e. Based on the start time of 5am and the 16hr work schedule, the crew would have completed restoration task prior to 7:50 (7:06) pm, consumed their evening meal and completed their workday as of 9pm. The crew would be off the clock for 8hours before returning to work the next day.

f. The crew in referenced was part of the over 12,000 resources engaged in restoration efforts. The crew completed restoration activities, were released to secure dinner that was consumed at 7:50 (7:06) pm, return to their lodging location, be off the clock for 8hrs on September 15, 2017 and return to work the next day.

g. DEF would not adjust an invoice. The revision of the invoice was made by the contractor. The original timesheets did not provide the crew member's names, only job classifications, therefore the invoices could not be cross referenced against rosters. The vendor sent the updated timesheets with names and found billing errors which resulted in the submission of a revised invoice of $183,031.81 (Original amount of $185,320.21).

h. Not aware of any adjustments made to activities shown on 20170272-DEF-OPC POD 1-6-0056565.

i. Approval would have been communicated to the crew leadership during initial onboarding and adjusted, as needed, by their Duke Energy field leader daily during the restoration efforts.

j. The primary strategy within Duke Energy's response plans are to feed resources at the active base camps. During Irma based on the level of magnitude, logistics support plans for the over 12,000 resources were expanded to include multiple feeding options that included eating at base camps, assigned hotels for lodging and available restaurants. This crew referenced in 20170272-DEF-OPC POD 1-6-0056565 was mobilized from restoration efforts in Davenport, Polk County area to restoration efforts in the Deland, Seminole and Volusia County area.

k. In order to compete the review of the invoice and validate hours, detailed timesheets with employee's names and hours by day were needed. This timesheet was based on Bates numbered page 20170272-DEF-OPC POD 1-6-0056564.

l. Duke Energy confirms the straight-time and overtime policies with the mutual assistance company, as part of the acquisition and onboarding process. Approval of hours worked are confirmed daily by their Duke Energy field leader daily during the restoration efforts.

m. The signature that appears next to "Duke Approval" is Greg Briley (Contractor Resources Manager).

n. This crew would have been part of the restoration efforts in Polk, Seminole and Volusia counties.

o. The Crew was enaged in restoration efforts in Polk, Seminole and Volusia Countues on Setemper 15, 2017.

DUKE ENERGY. **Florida Outages by County Report**

9/15/17 6:00 PM

County	Customers Served	Customers Out	Customers Restored	Estimated Restoration Time
Alachua	4,880	427	3,276	Midnight on Sunday, Sept. 17
Bay	2,273	173	1,391	Midnight on Sunday, Sept. 17
Brevard	16	1	8	Midnight on Sunday, Sept. 17
Citrus	46,697	4,712	33,273	Midnight on Sunday, Sept. 17
Columbia	566	45	362	Midnight on Sunday, Sept. 17
Dixie	1,800	148	1,185	Midnight on Sunday, Sept. 17
Flagler	16	2	12	Midnight on Sunday, Sept. 17
Franklin	10,202	-	7,276	Restored
Gilchrist	1,637	131	1,049	Midnight on Sunday, Sept. 17
Gulf	6,470	-	4,538	Restored
Hamilton	2,927	240	1,930	Midnight on Sunday, Sept. 17
Hardee	2,661	374	2,467	
Hernando	11,357	1,161	8,196	Midnight on Sunday, Sept. 17
Highlands	54,209	36,265	20,945	
Hillsborough	25	3	18	Midnight on Sunday, Sept. 17
Jefferson	4,639	371	2,980	Midnight on Sunday, Sept. 17
Lafayette	845	68	548	Midnight on Sunday, Sept. 17
Lake	84,056	7,955	54,250	Midnight on Sunday, Sept. 17
Leon	61	5	38	Midnight on Sunday, Sept. 17
Levy	3,702	343	2,538	Midnight on Sunday, Sept. 17
Madison	3,811	313	2,513	Midnight on Sunday, Sept. 17
Marion	65,525	7,609	52,147	Midnight on Sunday, Sept. 17
Orange	369,171	31,578	201,684	Midnight on Sunday, Sept. 17
Osceola	48,065	3,347	22,910	Midnight on Sunday, Sept. 17
Pasco	139,992	14,356	103,049	Midnight on Friday Sept 15
Pinellas	540,933	59,808	409,592	Midnight on Friday Sept 15
Polk	100,519	9,278	65,634	Midnight on Sunday, Sept. 17
Seminole	156,103	16,227	104,220	Midnight on Sunday, Sept. 17
Sumter	10,171	1,227	8,351	Midnight on Sunday, Sept. 17
Suwannee	797	65	522	Midnight on Sunday, Sept. 17
Taylor	6,026	487	3,911	Midnight on Sunday, Sept. 17
Volusia	81,055	9,510	62,054	Midnight on Sunday, Sept. 17
Wakulla	6,814	536	4,306	Midnight on Sunday, Sept. 17
Total	1,768,021	206,765	1,187,173	

p. The crew refenced was not provided any meals out of active base camps and were approved to secure their breakfast, lunch and dinner meals at available restaurants on September 15, 2017 as the crew was mobilized from Polk to Seminole and Volusia counties. Duke Energy's logistics plans include crews to be provided 3 meals per day (breakfast, lunch, and dinner) out of active Base Camp locations. If a base camp cannot

support the feeding of resources, the Duke Energy representative overseeing the crews informs the crews they should eat at local eating establishments and bill Duke Energy for the transactions. In the alternative, the crew may be finishing a project that requires them to miss the meal at the base camp, so the crew would inform base camp that they will be responsible for procuring their meal.

q.

103. Please describe the policy that Duke established (or contracted for) with regard to line restoration (distribution and transmission) crews, vegetation management crews and damage assessors (teams or crews) eating non-Duke-provided meals, including the policy relating to "sit-down" restaurant meals with wait service (e.g. whether they are allowed and if allowed under what circumstances such as duration, driving distance and if they are reimbursed by Duke, both as to time spent and the cost of meals) during billed work time.

Answer:

Regarding questions 103 and 104, there is not a policy that specifically states whether or not a contractor can be reimbursed for a "sit down" meal or not. Duke Energy adheres to the following guidelines regarding meals:

Contractors are responsible for making their own arrangements during travel to Duke Energy, and their return trip home. (Pre- and Post-Storm) Contractors are able to bill Duke Energy for these expenses. During restoration, contractors will be supplied or reimbursed for all meals within reason. If a meal is offered to a contractor, but the contractor chooses to make other arrangements, the contractor will not be reimbursed. However, there may be times when a crew is still performing restoration for Duke Energy's customers and are unable to safely break away during a regular meal service time. If we are not able to get the meals to the crew, the crew would be allowed to purchase a meal at a local eating establishment and bill Duke Energy for it. A Duke Energy representative is normally with the crews in the field and would be able to ensure it isn't taking more than a reasonable amount of time.

When contractors submit their rate sheets for a storm contract, contractors are asked to define how they will "bill for meals when not provided by Duke Energy." The response is varied. For ex.: Union based contractors are obligated to follow union based rules regarding travel compensation. Some contractors submit receipts as a "pass through" cost, some mark up 10% or more. Other contractors have a daily or per meal rate, etc. It really depends on each specific contractor on the amount that is entitled to. Regardless of the amount, Duke Energy only reimburses if the meal is not provided by Duke Energy.

104. Please describe the policy that Duke ***enforced*** with regard to line restoration (distribution and transmission) crews, vegetation management crews and damage assessors (teams or crews) eating non-Duke-provided meals, including the policy relating to "sit-down" restaurant meals with wait service (e.g. whether they are allowed and if allowed under what circumstances such as duration, driving distance and if they are reimbursed by Duke, both

as to time spent and the cost of meals) during billed work time, to the extent that such enforced policy is different than the established (or contracted for) policy.

Answer:

Please see the response to Q 103.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory number(s) 101 and 102 of CITIZENS' FIFTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 101-104) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of March, 2019.

_____
Jason Cutliffe

_____
Notary Public
State of Florida, at Large

My Commission Expires:_____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared SHARON BOGDANOS, who is personally known to me, and has acknowledged before me that she provided the answers to interrogatory number(s) 103 and 104 of CITIZENS' FIFTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 101-104) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of March, 2019.

_____
Sharon Bogdanos

_____
Notary Public
State of Florida, at Large

My Commission Expires: _____

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: March 6, 2019

NOTICE OF FILING VERIFIED AFFIDAVITS

Duke Energy Florida, LLC, ("DEF") hereby gives notice of filing the verified affidavits of Sharon Bogdanos and Jason Cutliffe in support of DEF's Response to the Office of the Public Counsel's Fifth Set of Interrogatories (Nos. 101-104), filed on March 4, 2019, via electronic mail to Charles Rehwinkel, Office of Public Counsel, (rehwinkel.charles@leg.state.fl.us), this 6th day of March, 2019.

/s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, FL 33701
T: 727. 820.4692
F: 727.820.5041
E: Dianne.Triplett@Duke-Energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 E. College Avenue, Suite 800
Tallahassee, FL 32301
T: 850.521.1428
F: 727.820.5041
E: Matthew.Bernier@Duke-Energy.com

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 6th day of March, 2019.

/s/ Matthew R. Bernier
Attorney

Rachel Dziechciarz / Ashley Weisenfeld Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 RDziechc@psc.state.fl.us aweisenf@psc.state.fl.us J. R. Kelly / C. Rehwinkel / T. David Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us david.tad@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 4th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared SHARON BOGDANOS, who is personally known to me, and has acknowledged before me that she provided the answers to interrogatory number(s) 103 and 104 of CITIZENS' FIFTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 101-104) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 4th day of March, 2019.

Sharon L. Bogdanos
Sharon Bogdanos

Janet Lee King
Notary Public
State of Florida, at Large

My Commission Expires: 8/2/2022

JANET LEE KING
Notary Public - State of Florida
Commission # GG 245258
My Comm. Expires Aug 2, 2022
Bonded through National Notary Assn.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 5th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory number(s) 101 and 102 of CITIZENS' FIFTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 101-104) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 5th day of March, 2019.

Jason Cutliffe

Jason Cutliffe

Janet Lee King

Notary Public
State of Florida, at Large

My Commission Expires: 8/2/22

JANET LEE KING
Notary Public - State of Florida
Commission # GG 245258
My Comm. Expires Aug 2, 2022
Bonded through National Notary Assn.

20170272 – DEF Response to OPC 5th ROGs (101-104)

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 4th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared SHARON BOGDANOS, who is personally known to me, and has acknowledged before me that she provided the answers to interrogatory number(s) 103 and 104 of CITIZENS' FIFTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 101-104) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 4th day of March, 2019.

Sharon L. Bogdanos
Sharon Bogdanos

Janet Lee King
Notary Public
State of Florida, at Large

My Commission Expires: 8/2/2022

JANET LEE KING
Notary Public - State of Florida
Commission # GG 245258
My Comm. Expires Aug 2, 2022
Bonded through National Notary Assn.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 5th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory number(s) 101 and 102 of CITIZENS' FIFTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 101-104) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 5th day of March, 2019.

Jason Cutliffe

Jason Cutliffe

Janet Lee King

Notary Public
State of Florida, at Large

My Commission Expires: 8/2/22

JANET LEE KING
Notary Public - State of Florida
Commission # GG 245258
My Comm. Expires Aug 2, 2022
Bonded through National Notary Assn.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: March 13, 2019

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO
CITIZENS' FIFTH REQUEST TO PRODUCE DOCUMENTS (NOS. 27-40)

Duke Energy Florida, LLC ("DEF"), responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") Fifth Request to Produce Documents (Nos. 27-40) as follows:

PRODUCTION OF DOCUMENTS

27. Please provide copies of all contracts, agreement, purchase orders, work orders, and all other agreements or documents that show the rates for any embedded vendor's crew that worked for you at any time or in any capacity during 2014, 2015, 2016, 2017, and 2018. The term "embedded vendor" means a vendor providing storm restoration services using distribution line restoration and repair crews, transmission repair, restoration and construction crews, and vegetation management crews, and which vendor also performs similar or additional types of services for you in non-storm-restoration (non-emergency) conditions on a year-round basis.

Response:
Subject to and without waiving the foregoing objection, please see DEF's Response to OPC's Third Request for Production of Documents numbers 16 and 17 and DEF's Response to OPC's Eighth Set of Interrogatories number 124.

28. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 119.

Response:
Please see documents provided in response to Interrogatory number 124.

29. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 120.

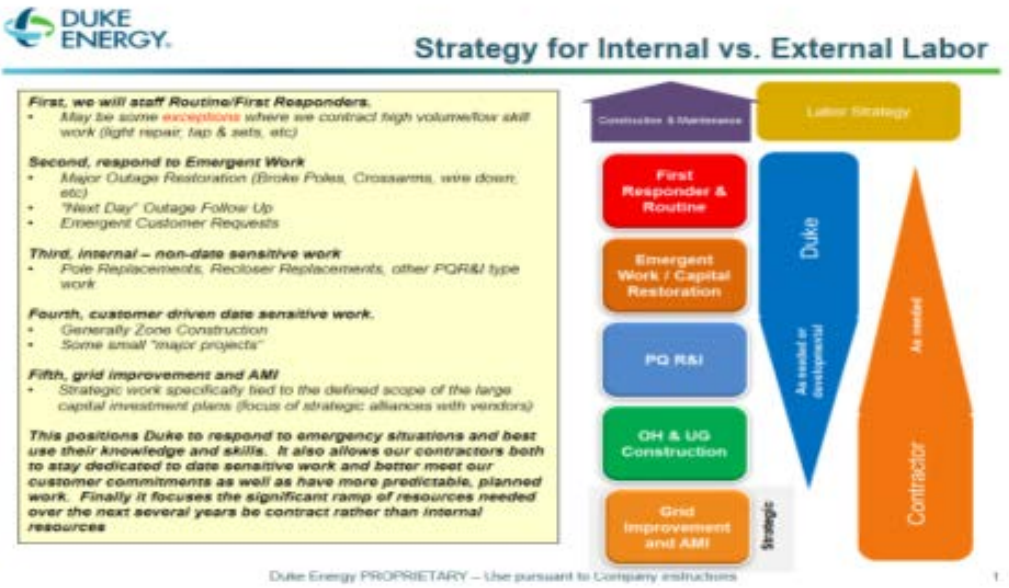
Response:

Please see documents provided in response to Interrogatory number 124.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 16
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Cutliffe and Matthews (30-32, 34, 35) Olivier (36-40)

30. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 121.

Response:



Work types (outages, routine customer work, Etc.)	Internal Duke Energy workforce
Capex projects, Grid Investment Plan, Customer Additions, ug, etc.	Strategic Contract Partners (Strategic Alliance) These are the major outsourced labor providers, who will scale workforce and participate in joint planning, training, reporting, etc. Performance-based relationships, long term, stable. Shared risk and benefit
Specialists (lighting, etc.)	Niche Contractors These suppliers provide niche services that are specialized, ie lighting, locates, ug replacement, traffic control, engineering Move these contractors to alliances wherever possible
Define scope	Regional Contractors These are gap providers which operate locally and are not needed across 1DF

31. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 122.

Response:
DEF does not have any documents responsive to this request.

32. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 123.

Response:
DEF does not have any documents responsive to this request.

33. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 124.

Response:
Please see documents provided in response to Interrogatory number 124.

34. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 125.

Response:
DEF does not have any documents responsive to this request.

35. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 126.

Response:
DEF does not have any documents responsive to this request.

36. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 127.

Response:
Please see documents provided in response to interrogatory numbers 119, 120 and text response for 121.

37. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 128.

Response:
Please see the attached documents bearing bates numbers 20170272-DEF-OPC-POD 5-37-000001 through 20170272-DEF-OPC-POD 5-37-000005.

38. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 129.

Response:
Please see documents provided in response to Request for Production number 37.

39. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 130.

Response:
Please see documents provided in response to Request for Production number 37

40. Please provide a copy of all documents that you rely on to support your answers to Interrogatory 131.

Response:

Please see documents provided in response to Request for Production number 37

Respectfully submitted,

/s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC.
299 First Avenue North
St. Petersburg, FL 33701
T: 727.820.4692
F: 727.820.5041
E: Dianne.Triplett@duke-energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 East College Avenue
Suite 800
Tallahassee, Florida 32301
T: 850.521.1428
F: 727.820.5041
E: Matthew.Bernier@duke-energy.com

DEF Storm Docket no. 20170272
Summary of Payroll Dollars in Discovery

Payroll ($1,000's)	2016 FF1		2017 FF1		2018 FF1	
O&M - Base	208,149	(b)	205,616	(b)	211,598	(f)
O&M - OT	29,645	(b)	29,415	(b)	27,744	(g)
O&M - Other	56,763	(c)	29,160	(c)	45,047	(c)
O&M - Total	294,557	(a)	264,192	(a)	284,389	
Capital - Base	132,443		155,660		173,086	
Capital - OT	19,247		29,100		25,749	
Capital - Other	16,858	(c)	17,264	(c)	18,258	(c)
Capital - Total	168,548	(a)	202,024	(a)	217,093	
Total - Base	340,593		361,276		384,684	
Total - OT	48,892		58,515		53,493	
Total - Other	73,621		46,424		63,305	
Total Payroll	463,105	(a)	466,216	(a)	501,482	
OT - O&M Total (Incl Storm)	48,892	(g)	58,515	(g)	53,493	(g)
OT - O&M Storm	4,820		13,357		3,277	
OT - O&M Total less Storm	44,072	(g)	45,158	(g)	50,216	(g)

O&M - Base	208,149	(b)	205,616	(b)	211,598
Capital - Base	132,443		155,660		173,086
Total - Base	340,593		361,276		384,684

(a) ROG 28 response
(b) ROG 76 response
(c) Includes primarily incentives and severance
(d) ROG 74 response
(e) ROG 105 response
(f) ROG 128 response
(g) ROG 130 response

DEF Storm Docket no. 20170272
Summary of Payroll Dollars in Discovery

Payroll ($1,000's)	2016 FF1	2017 FF1	2018 FF1
Total - Base	340,593	361,276	384,684

DEF Storm Docket no. 20170272
Summary of Payroll Dollars in Discovery

Payroll ($1,000's)	Average 2016-2018
Total - Base	362,184

DEF Storm Docket no. 20170272
Summary of Payroll Dollars in Discovery

Payroll ($1,000's)	2016 FF1	2017 FF1	2018 FF1
OT - O&M (Not Including Storm)	44,072	45,158	50,216
OT - O&M (Storm)	4,820	13,357	3,277
OT - O&M Total (Incl Storm)	48,892	58,515	53,493

DEF Storm Docket no. 20170272
Summary of Payroll Dollars in Discovery

Payroll ($1,000's)	Average 2016-2018
O&M - OT	28,935
Capital - OT	24,699
Total - OT	53,633

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: March 7, 2019

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO CITIZENS' SIXTH SET OF INTERROGATORIES (NOS. 105-111)

Duke Energy Florida, LLC ("DEF") responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") Sixth Set of Interrogatories to DEF (Nos. 105-111) as follows:

INTERROGATORIES

105. Refer to the response to Citizen's Interrogatory No. 74. Provide a breakdown of the allowed payroll of $384,726,873 between capital and O&M, if the overtime of $40,860,669 was all O&M so state otherwise provide a breakdown of that amount between capital and O&M and state whether the overtime allowed was part of the $384,726,873.

ANSWER:
Of the $384,726,873 base payroll, $109,938,604 was capital and $274,788,269 was O&M. The $40,860,669 overtime was all O&M. This amount was not part of the $384,726,873.

106. Refer to the response to Citizen's Interrogatory No. 77. The request for support was regarding any documentation of the audit being done in the form of a report or with respect to comments and questions raised. Does that type of documentation exist in support of the review process? If so, what type of documents exist?

ANSWER:
Documentation exists in the form of spreadsheets showing the reviewers notes for each invoice. These documents are being produced in excel format in response to OPC POD 18.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 17
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Olivier (105)Dezonia (106)Buckler (107-111)

107. Refer to the response to Citizen's Interrogatory No. 78. The response references a use of a 3-year average for Overtime and Vegetation Management but only an average for Regular Payroll. What average was used for Regular Payroll and provide the calculations used.

ANSWER:

A 3-year average was used. Below is the schedule that shows the averages for each storm.

Distribution Labor Averages

	IRMA					NATE				
2014- 2016	September					October				
3 Year Avg Actuals	**Capital**	**O&M**	**Total**	**% Capital**	**% O&M**	**Capital**	**O&M**	**Total**	**% Capital**	**% O&M**
Regular Payroll - Bargaining unit	$ 1.1	$ 1.7	$ 2.8	38%	62%	$ 1.3	$ 2.0	$ 3.3	40%	60%
Overtime - Bargaining Unit	0.4	1.3	$ 1.7	24%	76%	0.5	1.1	$ 1.6	29%	71%
Total Bargaining Unit Payroll	$ 1.5	$ 3.0	$ 4.5	33%	67%	$ 1.8	$ 3.1	$ 4.8	36%	64%
Regular Payroll - Non Bargaining	$ 0.8	$ 0.3	$ 1.0	75%	25%	$ 0.8	$ 0.3	$ 1.0	73%	27%
Overtime-Non Bargaining Unit	0.0	0.0	$ 0.0	55%	45%	0.0	0.0	$ 0.0	41%	59%
Total Non-Bargaining Unit Payroll	$ 0.8	$ 0.3	$ 1.0	74%	26%	$ 0.8	$ 0.3	$ 1.1	73%	27%
Total Payroll	$ 1.8	$ 2.0	$ 3.8	48%	52%	$ 2.1	$ 2.2	$ 4.3	48%	52%
Total Overtime	$ 0.4	$ 1.3	$ 1.7	24%	76%	$ 0.5	$ 1.1	$ 1.6	29%	71%

	COLIN					HERMINE					MATTHEW				
2013- 2015	June					September					October				
3 Year Avg Actuals	**Capital**	**O&M**	**Total**	**% Capital**	**% O&M**	**Capital**	**O&M**	**Total**	**% Capital**	**% O&M**	**Capital**	**O&M**	**Total**	**% Capital**	**% O&M**
Regular Payroll - Bargaining unit	$ 0.9	$ 1.4	$ 2.3	39%	61%	$ 1.0	$ 1.5	$ 2.5	40%	60%	$ 1.4	$ 2.0	$ 3.4	41%	59%
Overtime - Bargaining Unit	0.2	1.1	$ 1.3	18%	82%	0.2	1.1	$ 1.4	18%	82%	0.4	1.1	$ 1.5	25%	75%
Total Bargaining Unit Payroll	$ 1.1	$ 2.5	$ 3.6	31%	69%	$ 1.2	$ 2.6	$ 3.9	32%	68%	$ 1.8	$ 3.1	$ 4.9	36%	64%
Regular Payroll - Non Bargaining	$ 0.6	$ 0.4	$ 1.0	60%	40%	$ 0.6	$ 0.4	$ 1.1	60%	40%	$ 0.7	$ 0.5	$ 1.1	59%	41%
Overtime-Non Bargaining Unit	0.0	0.0	$ 0.0	40%	60%	0.0	0.0	$ 0.0	45%	55%	0.0	0.0	$ 0.1	39%	61%
Total Non-Bargaining Unit Payroll	$ 0.6	$ 0.4	$ 1.1	60%	40%	$ 0.6	$ 0.4	$ 1.1	59%	41%	$ 0.7	$ 0.5	$ 1.2	58%	42%
Total Payroll	$ 1.5	$ 1.8	$ 3.3	45%	55%	$ 1.6	$ 1.9	$ 3.5	46%	54%	$ 2.1	$ 2.5	$ 4.5	45%	55%
Total Overtime	$ 0.3	$ 1.1	$ 1.4	19%	81%	$ 0.3	$ 1.1	$ 1.4	18%	82%	$ 0.4	$ 1.2	$ 1.5	25%	75%

	DEBBY					ISAAC				
2009- 2011	June					August				
3 Year Avg Actuals	**Capital**	**O&M**	**Total**	**% Capital**	**% O&M**	**Capital**	**O&M**	**Total**	**% Capital**	**% O&M**
Regular Payroll - Bargaining unit	$ 1.0	$ 1.7	$ 2.8	38%	62%	$ 1.0	$ 1.9	$ 3.0	34.8%	65.2%
Overtime - Bargaining Unit	0.3	1.0	$ 1.3	22%	78%	0.3	1.0	$ 1.3	22.9%	77.1%
Total Bargaining Unit Payroll	$ 1.3	$ 2.7	$ 4.1	33%	67%	$ 1.3	$ 2.9	$ 4.3	31.2%	68.8%
Regular Payroll - Non Bargaining	$ 1.0	$ 1.3	$ 2.3	46%	54%	$ 1.2	$ 1.3	$ 2.5	48.1%	51.9%
Overtime-Non Bargaining Unit	0.1	0.1	$ 0.1	52%	48%	0.1	0.1	$ 0.2	51.3%	48.7%
Total Non-Bargaining Unit Payroll	$ 1.1	$ 1.3	$ 2.5	46%	54%	$ 1.3	$ 1.4	$ 2.6	48.3%	51.7%
Total Payroll	$ 2.1	$ 3.0	$ 5.1	41%	59%	$ 2.2	$ 3.2	$ 5.4	40.8%	59.2%
Total Overtime	$ 0.4	$ 1.1	$ 1.4	25%	75%	$ 0.4	$ 1.1	$ 1.5	26.2%	73.8%

Storm Month	**Description**	**3 Year Average of Normal Vegetation Costs Charged in the Respective Month of Storm**	**Actual Vegetation Costs Charged to Normal Vegetation Operations in the Month of the Storm**	**Difference between Average and Actual Amount**	Distribution Vegetation Costs Charged to the Storm	Non-Incremental Vegeation Costs
June 2012	TS Debby	$ 1,988,350	$ 1,569,717	$ 418,633	$ 921,810	$ 418,633
August 2012	TS Isaac	$ 2,731,216	$ 2,482,728	$ 248,488	$ 408,185	$ 248,488
June 2016	2016 TS Colin	$ 2,891,090	$ 1,944,700	$ 946,390	$ 510,110	$ 510,110
September 2016	Hurricane Hermine	$ 2,715,364	$ 2,030,321	$ 685,043	$ 2,027,830	$ 685,043
October 2016	Hurricane Matthew	$ 3,508,642	$ 3,095,468	$ 413,174	$ 2,043,861	$ 413,174
September 2017	Hurricane Irma	$ 2,591,741	$ 785,587	$ 1,806,154	$ 26,861,539	$ 1,806,154
October 2017	Hurricane Nate	$ 3,463,228	$ 1,391,444	$ 2,071,783	$ 219	$ 219

108. Refer to the response to Citizen's Interrogatory No. 78. The response references a use of a 3-year average for Overtime and Vegetation Management. Provide the calculations of the averages relied on.

ANSWER:

Please refer to Interrogatory No. 107 to see support for Distribution's Overtime and Vegetation Management.

Transmission's storm costs charged to storm codes are identified by the following:

- **Region** - jurisdictional cost origination (e.g., Duke Energy Florida, Duke Energy Carolinas, Duke Energy Indiana, etc.) are identified by Responsibility Center. In other words, the Responsibility Center code specifically identifies from where which Affiliate costs originated.
- **Cost category** – each cost has an associated Resource Type, which identifies what type of cost it is (e.g., Payroll, Overtime, Materials, Contractor, Employee Expenses, etc.)

Overtime

For Hurricane Irma, DEF Transmission's non-capitalized overtime was factored against a DEF 2-year average of routine workload overtime to calculate a portion of non-incremental overtime. See the Transmission Overtime Non-Incremental spreadsheet attached bearing bates numbers 20170272-DEF-OPC- POD 5-108-000001.

Vegetation Management

The 3-year average of Vegetation Management costs (for the month where the storm occurred) were calculated and compared to the storm month's actuals. In the event the storm month's actuals were less than the respective 3-year average of the same month, the difference was determined to be "Disallowed". See the Transmission Vegetation Management Non-Incremental spreadsheet attached bearing bates numbers 20170272-DEF-OPC POD 5-108-000002 through 20170272-DEF-OPC POD 5-108-000003.

109. Refer to the responses to Citizen's Interrogatory No. 78 and 79. Explain why the distribution non-incremental amount for incentives is different for Hermine, Matthew and Irma.

ANSWER:

The schedule provided in Interrogatory No. 79 had a formula error and was not picking up all the incentive amounts. The schedule below has been corrected and reflects the correct amounts that tie to the schedule provided on Interrogatory No. 78

Distribution								
Labor Burdens / Incentives (000's)								
	Debby	**Isaac**	**Colin**	**Hermine**	**Matthew**	**Irma**	**Nate**	**Total**
Labor Burdens	$ 295	$ 230	$ 221	$ 824	$ 1,220	$ 5,968	$ 61	8,818
Incentives	$ 154	$ 61	$ 24	$ 192	$ 216	$ 1,711	$ 14	2,373
	$ 449	**$ 291**	**$ 245**	**$ 1,015**	**$ 1,436**	**$ 7,679**	**$ 76**	**$11,191**

110. Refer to the response to Citizen's Interrogatory No. 81. Provide the incremental amounts for Duke Energy affiliate employees included in the filing by cost type listed on Exhibit BB-2.

ANSWER:

Duke Energy Distribution Response:

All storm costs charged to storm codes are identified by the following:

- **Region** - jurisdictional cost origination (e.g., Duke Energy Florida, Duke Energy Carolinas, Duke Energy Indiana, etc.) are identified by Responsibility Center. In other words, the Responsibility Center code specifically identifies from where which Affiliate costs originated.
- **Cost category** – each cost has an associated Resource Type, which identifies what type of cost it is (e.g., Payroll, Overtime, Materials, Contractor, Employee Expenses, etc.)

See a breakdown of incremental affiliate cost categories below:

Incremental Affiliate Costs (000's thousands)

	Colin	Hermine	Matthew	Irma	Nate	Total
Regular Payroll	$ 1	$ 70	$ 213	$ 2,528	$ 0	$ 2,813
Overtime Payroll	$ 3	$ 159	$ 738	$ 7,823	$ 20	$ 8,743
Labor Burdens	$ 2	$ 95	$ 396	$ 3,674	$ 11	$ 4,179
Overhead Allocations	$ -	$ 52	$ 110	$ 3,223	$ 1	$ 3,386
Employee Expense	$ -	$ 60	$ 2,618	$ 1,219	$ 3	$ 3,899
Contractor Cost	$ -	$ 314	$ 38	$ 8,266	$ 4	$ 8,622
Materials	$ -	$ 367	$ 611	$ 8,771	$ 166	$ 9,914
Internal Fleet Costs	$ -	$ 1	$ 99	$ 442	$ 2	$ 544
Other	$ -	$ -	$ 0	$ 22	$ -	$ 22
	$ 7	**$ 1,118**	**$ 4,822**	**$ 35,969**	**$ 205**	**$ 42,121**

Incentives related to Affiliate employees were not considered incremental and were removed and are part of the Non-incremental schedule reflected on BB-2.

Duke Energy Transmission Response:

All storm costs charged to storm codes are identified by the following:

- **Region** - jurisdictional cost origination (e.g., Duke Energy Florida, Duke Energy Carolinas, Duke Energy Indiana, etc.) are identified by Responsibility Center. In other words, the Responsibility Center code specifically identifies from where which Affiliate costs originated.
- **Cost category** – each cost has an associated Resource Type, which identifies what type of cost it is (e.g., Payroll, Overtime, Materials, Contractor, Employee Expenses, etc.)

See a breakdown of incremental affiliate cost categories below:

Category *(in the 000s)*	**Debby**	**Isaac**	**Hermine**	**Matthew**	**Irma**	**Nate**
Regular Payroll	-	-	4	2	225	0
Overtime Payroll	-	-	5	7	780	1
Labor Burdens/Incentives	-	-	-	-	-	-
Overhead Allocations	326	-	-	0	402	1
Employee Expenses	-	-	0	-	1,388	1
Contractor Costs	-	-	1	2	1,144	1
Materials & Supplies	-	-	5	88	141	-
Internal Fleet Costs	-	-	-	-	76	-
Uncollectible Account Expenses	-	-	-	-	-	-
Other	-	-	-	-	-	-
Incremental Affiliate Total	**326**	**-**	**15**	**100**	**4,157**	**3**

Note: Colin did not incur Affiliate related costs for Transmission.

111. Refer to the response to Citizen's Interrogatory No. 86. Provide the calculation of the amount classified as incremental in the Company's request.

ANSWER:

Please see DEF's response to OPC Request for Production of Documents #26.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 5th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory number 105, of OPC'S SIXTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 105-111) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 5th day of March, 2019.

Marcia Olivier
MARCIA OLIVIER

Notary Public
State of Florida, at Large

MONIQUE WEST
MY COMMISSION # FF 244727
EXPIRES: June 28, 2019
Bonded Thru Notary Public Underwriters

My Commission Expires:
June 28, 2019

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 5th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared AMY DEZONIA, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory number 106, of OPC'S SIXTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 105-111) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 5th day of March, 2019.

AMY DEZONIA

NATALIE D. HANEY
MY COMMISSION # GG 259402
EXPIRES: September 17, 2022
Bonded Thru Notary Public Underwriters

Notary Public
State of Florida, at Large

My Commission Expires:
9/17/2022

AFFIDAVIT

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

I hereby certify that on this 5th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BRYAN BUCKLER, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory numbers 107, 108, 109, 110, and 111 of OPC'S SIXTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 105-111) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 5th day of March, 2019.

Bryan Buckler
BRYAN BUCKLER

Aloma M. Felder
Notary Public Aloma M. Felder
State of North Carolina

My Commission Expires: July 21, 2020

ALOMA M. FELDER NOTARY PUBLIC CABARRUS COUNTY, N. C.

Category	Resp Center Location	Resource Type ID CB	Sum of Monetary Amount JD
Overtime Payroll	DEF TO DEF	12000	**32,750**
		12004	**950,199**
		13000	**376,567**
Overtime Payroll Total			**1,359,516**
Grand Total			**1,359,516**

DEF Employees Overtime			Overtime Percentage	
1,359,516	Irma DEF Overtime	2017	14.36%
14.30%	DEF 2 year OT average	2016	14.24%
		Average	14.30%
194,360	Overtime to Disallow from Storm		

		Tree Trimming				
Storm Month	Description	3-year Average	Actual	Favorability	Total Storm Veg Costs	Non-Incremental Veg
June 2012	TS Debby	241,451	1,193,173	-	-	-
August 2012	TS Isaac	359,281	221,890	137,391	-	-
June 2016	2016 TS Colin	813,723	411,533	402,189	11,804	11,804
September 2016	Hurricane Hermine	451,803	344,012	107,791	72,232	72,232
October 2016	Hurricane Matthew	620,289	304,964	315,325	62,056	62,056
September 2017	Hurricane Irma	433,240	143,745	289,496	1,897,232	289,496
October 2017	Hurricane Nate	510,591	529,481	-		-

Total Costs

	January	February	March	April	May	June	July	August	September	October	November	December	Total
2017	87,094	515,282	388,392	351,852	259,601	201,745	218,310	399,842	143,745	529,481	600,201	228,659	3,924,203
2016	256,803	414,319	571,799	401,758	370,319	411,533	394,489	500,666	344,012	304,964	399,504	796,151	5,166,317
2015	430,050	629,830	624,418	666,505	549,386	542,355	441,114	344,642	328,108	366,659	285,422	807,528	6,016,019
2014	367,549	361,613	259,313	684,061	239,473	1,247,732	599,546	568,982	627,601	860,151	590,842	328,993	6,735,857
2013	624,005	378,579	193,737	250,201	20,620	651,081	471,582	510,731	399,699	634,058	757,298	735,760	5,627,351
2012	(134,530)	668,976	212,183	218,271	311,649	1,193,173	85,764	221,890	325,218	528,377	437,022	360,831	4,428,824
2011	8,341	830,203	424,374	342,904	259,421	365,922	111,780	369,366	478,699	354,072	673,667	1,115,245	5,333,994
2010	270,008	99,312	299,929	242,587	485,471	31,572	175,789	335,949	239,399	162,254	15,910	1,055,793	3,413,973
2009	266,663	206,234	74,967	156,624	360,609	326,860	309,478	372,528	365,898	529,789	166,519	823,320	3,959,489

Storm Month	Description	5-year Averag	Actual
June 2012	TS Debby	241,451	1,193,173
August 2012	TS Isaac	359,281	221,890
June 2016	2016 TS Colin	813,723	411,533
September 2016	Hurricane Hermine	451,803	344,012
October 2016	Hurricane Matthew	620,289	304,964
September 2017	Hurricane Irma	433,240	143,745
October 2017	Hurricane Nate	510,591	529,481

20170272 DEF Response to OPC 6th ROGs (105-111)

AFFIDAVIT

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

I hereby certify that on this 5th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BRYAN BUCKLER, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory numbers 107, 108, 109, 110, and 111 of OPC'S SIXTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 105-111) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 5th day of March, 2019.

Bryan Buckler
BRYAN BUCKLER

Aloma M. Felder
Notary Public Aloma M. Felder
State of North Carolina

My Commission Expires: July 21, 2020

ALOMA M. FELDER NOTARY PUBLIC CABARRUS COUNTY, N. C.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 5th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared AMY DEZONIA, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory number 106, of OPC'S SIXTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 105-111) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 5th day of March, 2019.

AMY DEZONIA

NATALIE D. HANEY
MY COMMISSION # GG 259402
EXPIRES: September 17, 2022
Bonded Thru Notary Public Underwriters

Notary Public
State of Florida, at Large

My Commission Expires:
9/17/2022

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 5th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory number 105, of OPC'S SIXTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 105-111) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 5th day of March, 2019.

Marcia Olivier
MARCIA OLIVIER

Notary Public
State of Florida, at Large

MONIQUE WEST
MY COMMISSION # FF 244727
EXPIRES: June 28, 2019
Bonded Thru Notary Public Underwriters

My Commission Expires:
June 28, 2019

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: March 11, 2019

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO CORRECTED CITIZENS' SEVENTH SET OF INTERROGATORIES (NOS. 112-118)

Duke Energy Florida, LLC ("DEF") responds to the Corrected Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") Seventh Set of Interrogatories to DEF (Nos. 112-118) as follows:

INTERROGATORIES

112. Capitalization. Refer to Rule 25-6.0143, Florida Administrative Code ("F.A.C.") and Accounting Standards Codification ("ASC") 980. Specifically identify the section(s) of ASC 980 that would allow a utility to capitalize storm restoration costs at a cost based on normal cost absent a storm, as opposed to recognizing the actual costs incurred during the storm restoration process.

Answer:

ASC 980 discusses, among other things, the ability of a regulated utility to capitalize a cost if it is probable that future recovery of that cost will occur. DEF is following Rule 25-6.0143(1)(d), F.A.C., which discusses the Incremental Cost and Capitalization Approach (ICCA) methodology, and states as follows:

> "In addition, capital expenditures for the removal, retirement and replacement of damaged facilities charged to cover storm-related damages shall exclude the normal cost for the removal, retirement and replacement of those facilities in the absence of a storm."

113. Capitalization. Refer to Rule 25-6.0143, Florida Administrative Code ("F.A.C.") and Accounting Standards Codification 980. Specifically identify the section(s) of ASC 980 that would allow a utility to capitalize plant or facilities by using a method other than actual cost.

Answer:

Please see DEF's response to Question 112.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 18
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Buckler (112 – 116)Olivier (115, 116)Cutliffe (118)

114. Payroll. Refer to Rule 25-6.0143(f)(1), Florida Administrative Code ("F.A.C.") and Accounting Standards Codification 980. Specifically identify the section(s) of ASC 980 that would allow a utility to use a method of determining whether payroll is incremental or non-incremental based on a methodology (i.e. using budget or historical dollars) different from the method referenced in the Rule, (i.e., what is included in base rates).

Answer:

ASC 980 does not discuss methodologies for determining whether payroll is incremental or non-incremental. In determining which storm costs are incremental, DEF complies with Rule 25-6.0143(1)(d), F.A.C., which states:

> "In determining the costs to be charged to cover storm-related damages, the utility shall use an Incremental Cost and Capitalization Approach methodology (ICCA). Under the ICCA methodology, the costs charged to cover storm-related damages shall exclude those costs that normally would be charged to non-cost recovery clause operating expenses in the absence of a storm. Under the ICCA methodology for determining the allowable costs to be charged to cover storm-related damages, the utility will be allowed to charge to Account No. 228.1 costs that are incremental to costs normally charged to non-cost recovery clause operating expenses in the absence of a storm."

Rule 25-6.0143, F.A.C., Sections (1)(f)1 and (1)(f)3 describe certain "base rate recoverable" expenses that are prohibited from being charged to the storm reserve, but the storm rule does not define "base rate recoverable" as the amount that was included in base rates at the time of the last setting of base rates. In fact, Section (1)(d), as quoted above, defines non-incremental costs as "costs normally charged to non-cost recovery clause operating expenses in the absence of a storm."

Rule 25-6.0143, F.A.C., Section (1)(f)8 is an area that clearly specifies that tree trimming costs incurred during the month(s) of storm restoration must be compared to a historical 3-year average of these costs in the same month(s) rather than comparing these costs to tree trimming expenses included in a utility's last setting of base rates.

As a result, DEF has used the historical 3-year average for base payroll, overtime and vegetation management to determine the "costs normally charged to non-cost recovery clause operating expenses in the absence of a storm."

115. Payroll. Refer to Rule 25-6.0143(f)(1), Florida Administrative Code ("F.A.C."). Does the company agree that the term "base rate recoverable" means the amount of payroll cost that was included in base rates when rates were last established? If no, provide the definition the company uses for the term "base rate recoverable" and identify any final order that would support the company's definition.

Answer:

No, DEF does not agree that the term "base rate recoverable" means the amount of payroll cost that was included in base rates when rates were last established. Rule 25-6.0143(1)(d), F.A.C., discusses the Incremental Cost and Capitalization Approach (ICCA) methodology, which is based on a comparison of costs incurred for storm restoration efforts to "costs that normally would be charged to non-cost recovery clause operating expenses in the absence of a storm."

Based on the entirety of Rule 25-6.0143, F.A.C., "base rate recoverable" is clearly synonymous with "non-cost recovery clause operating expenses in the absence of a storm". Nowhere in rule does it say the utility shall exclude costs that were approved in the utility's last rate case.

116. Storm Costs. Refer to Rule 25-6.0143, Florida Administrative Code ("F.A.C."). Identify the particular costs that can be determined to be "incremental" using budgeted costs under the Rule, and site for each respective cost a reference to the section of the Rule on which you relied.

Answer:

Uncollectible account expenses are the only costs that DEF compared to budgeted costs in determining the amount of incremental costs. The Rule doesn't specifically designate how to calculate the amount of incremental uncollectible account expenses, but as explained in the direct testimony of Bryan Buckler, page 18, and in response to OPC's interrogatory nos. 87 and 90, DEF finds that this comparison is the appropriate way to calculate the most accurate amount of charge-offs.

117. Refer to Document 20170272-DEF-OPC POD 1-6-0017757 provided in response to 2nd Supplemental Response to OPCs 1st PODS 1-10 Q-6 Distribution pt 2, located in the 17-Irma folder, Ameren folder. Does the Company have any additional supporting documentation beyond the single page provided? Please provide the additional support for the $6,490,253.26.

Answer:

Please see additional supporting documentation attached bearing bates number 20170272-DEF- OPC-ROG 7-117-000001 through 20170272-DEF- OPC-ROG 7-117-000032. The attachments are confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated March 11, 2019.

118. Refer to page Document 20170272-DEF-OPC POD 1-6-0001585 provided in response to 2nd Supplemental Response to OPCs 1st PODS 1-10 Q-6 Distribution pt 1, located in the 12- Debby folder, Burford folder. Please explain whether the time on June 26, June 27, and June 28 is standby since the time sheet indicates mobilization from TN to FL on June 25 and June 29.

Answer:

DEF believes that the time on June 26, 27, and 28 was not standby time, but that the crew was performing work on the referenced days.

REDACTED

DEF's attachments responsive to interrogatory number 117, bearing bates number 20170272-DEF- OPC-ROG 7-117-000001 through 20170272-DEF- OPC-ROG 7-117-000032 are confidential. Unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated March 11, 2019.

AFFIDAVIT

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

I hereby certify that on this 8th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BRYAN BUCKLER, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory numbers 112, 113, 114, 115, and 116 of OPC'S SEVENTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 112-118) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 8th day of March, 2019.

Bryan Buckler

BRYAN BUCKLER

Aloma M. Felder

Notary Public Aloma M. Felder
State of North Carolina

My Commission Expires: July 21, 2020

ALOMA M. FELDER
NOTARY
PUBLIC
CABARRUS COUNTY, N. C.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory number 118 of CITIZENS' SEVENTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 112-118) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of March, 2019.

_____
Jason Cutliffe

_____
Notary Public
State of Florida, at Large

My Commission Expires:_____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory numbers 115 and 116, of OPC'S SEVENTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 112-118) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of March, 2019.

_____
MARCIA OLIVIER

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF ORANGE

I hereby certify that on this _____ day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared TESS ROEBUCK, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory number 117, of OPC'S SEVENTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 112-118) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of March, 2019.

_____
TESS ROEBUCK

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: March 19, 2019

NOTICE OF FILING VERIFIED AFFIDAVIT

Duke Energy Florida, LLC, ("DEF") hereby gives notice of filing the verified affidavit of Marcia Olivier in support of DEF's Response to the Office of the Public Counsel's Corrected Seventh Set of Interrogatories (Nos. 112-118), filed on March 11, 2019, via electronic mail to Charles Rehwinkel, Office of Public Counsel, (rehwinkel.charles@leg.state.fl.us), this 19th day of March, 2019.

/s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, FL 33701
T: 727. 820.4692
F: 727.820.5041
E: Dianne.Triplett@Duke-Energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 E. College Avenue, Suite 800
Tallahassee, FL 32301
T: 850.521.1428
F: 727.820.5041
E: Matthew.Bernier@Duke-Energy.com

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 19th day of March, 2019.

/s/ Matthew R. Bernier
Attorney

Rachel Dziechciarz / Ashley Weisenfeld Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 RDziechc@psc.state.fl.us aweisenf@psc.state.fl.us J. R. Kelly / C. Rehwinkel / T. David Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us david.tad@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 19th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory numbers 115 and 116, of OPC'S SEVENTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 112-118) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 19th day of March, 2019.

Marcia Olivier
MARCIA OLIVIER

MONIQUE WEST
MY COMMISSION # FF 244727
EXPIRES: June 28, 2019
Bonded Thru Notary Public Underwriters

Notary Public
State of Florida, at Large

My Commission Expires:
June 28, 2019

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: March 18, 2019

NOTICE OF FILING VERIFIED AFFIDAVITS

Duke Energy Florida, LLC, ("DEF") hereby gives notice of filing the verified affidavits of Jason Cutliffe and Tess Roebuck in support of DEF's Response to the Office of the Public Counsel's Corrected Seventh Set of Interrogatories (Nos. 112-118), filed on March 11, 2019, via electronic mail to Charles Rehwinkel, Office of Public Counsel, (rehwinkel.charles@leg.state.fl.us), this 18th day of March, 2019.

/s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, FL 33701
T: 727. 820.4692
F: 727.820.5041
E: Dianne.Triplett@Duke-Energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 E. College Avenue, Suite 800
Tallahassee, FL 32301
T: 850.521.1428
F: 727.820.5041
E: Matthew.Bernier@Duke-Energy.com

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 18th day of March, 2019.

/s/ Matthew R. Bernier
Attorney

Rachel Dziechciarz / Ashley Weisenfeld Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 RDziechc@psc.state.fl.us aweisenf@psc.state.fl.us J. R. Kelly / C. Rehwinkel / T. David Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us david.tad@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 15th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory number 118 of CITIZENS' SEVENTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 112-118) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 15th day of March, 2019.

Jason Cutliffe

Jason Cutliffe

Notary Public
State of Florida, at Large

My Commission Expires: 6/28/19

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF ~~ORANGE~~ Pinellas

I hereby certify that on this 15th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared TESS ROEBUCK, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory number 117, of OPC'S SEVENTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 112-118) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 15 day of March, 2019.

Tess Roebuck

TESS ROEBUCK

MONIQUE WEST
MY COMMISSION # FF 244727
EXPIRES: June 28, 2019
Bonded Thru Notary Public Underwriters

Monique West

Notary Public
State of Florida, at Large

My Commission Expires:
June 28, 2019

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: March 18, 2019

NOTICE OF FILING VERIFIED AFFIDAVITS

Duke Energy Florida, LLC, ("DEF") hereby gives notice of filing the verified affidavits of Jason Cutliffe and Tess Roebuck in support of DEF's Response to the Office of the Public Counsel's Corrected Seventh Set of Interrogatories (Nos. 112-118), filed on March 11, 2019, via electronic mail to Charles Rehwinkel, Office of Public Counsel, (rehwinkel.charles@leg.state.fl.us), this 18th day of March, 2019.

/s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, FL 33701
T: 727. 820.4692
F: 727.820.5041
E: Dianne.Triplett@Duke-Energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 E. College Avenue, Suite 800
Tallahassee, FL 32301
T: 850.521.1428
F: 727.820.5041
E: Matthew.Bernier@Duke-Energy.com

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 18th day of March, 2019.

/s/ Matthew R. Bernier
Attorney

Rachel Dziechciarz / Ashley Weisenfeld Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 RDziechc@psc.state.fl.us aweisenf@psc.state.fl.us J. R. Kelly / C. Rehwinkel / T. David Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us david.tad@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 15th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory number 118 of CITIZENS' SEVENTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 112-118) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 15th day of March, 2019.

Jason Cutliffe

Jason Cutliffe

Notary Public
State of Florida, at Large

My Commission Expires: 6/28/19

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF ~~ORANGE~~ Pinellas

I hereby certify that on this 15th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared TESS ROEBUCK, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory number 117, of OPC'S SEVENTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 112-118) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 15 day of March, 2019.

Tess Roebuck

TESS ROEBUCK

MONIQUE WEST
MY COMMISSION # FF 244727
EXPIRES: June 28, 2019
Bonded Thru Notary Public Underwriters

Monique West

Notary Public
State of Florida, at Large

My Commission Expires:
June 28, 2019

20170272 – DEF Response to OPC 7th ROGs (112-118)

AFFIDAVIT

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

I hereby certify that on this 8th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BRYAN BUCKLER, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory numbers 112, 113, 114, 115, and 116 of OPC'S SEVENTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 112-118) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 8th day of March, 2019.

Bryan Buckler

BRYAN BUCKLER

Aloma M. Felder

Notary Public Aloma M. Felder
State of North Carolina

My Commission Expires: July 21, 2020

ALOMA M. FELDER
NOTARY
PUBLIC
CABARRUS COUNTY, N. C.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: March 13, 2019

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO CITIZENS' EIGHTH SET OF INTERROGATORIES (NOS. 119-131)

Duke Energy Florida, LLC ("DEF") incorporates the objections filed contemporaneous with this response and responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") Eighth Set of Interrogatories to DEF (Nos. 119-131) as follows:

INTERROGATORIES

For the purposes of Interrogatories 119 through 127, the term "embedded vendor" means a vendor providing storm restoration services using distribution line restoration and repair crews, transmission repair, restoration and construction crews, and vegetation management crews, and which vendor also performs similar or additional types of services for you in non-storm-restoration (non-emergency) conditions on a year-round basis.

119. Did you contract with embedded vendor crews that worked throughout the calendar years 2014, 2015, 2016, 2017 and 2018 doing non-storm work? If the answer is yes, please provide a list of all such embedded vendors that worked for you.

Answer:

Yes, DEF Transmission and Distribution has contracts with vendors that are utilized during non-storm / non-emergency on a year-round basis, that also get activated to perform storm restoration services. Please see the list of vendors bearing bates number 20170272-DEF-OPC-ROG 8-119-000001 through 20170272-DEF-OPC-ROG 8-119-000002.

120. For the embedded vendors listed in question 1, provide a detailed description of the type of work each embedded vendor performed for your company by calendar year.

Answer:

Please see attachments provided in response to interrogatory number 119 for description of vendors' work type.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 19
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Bogdanos (119-123)Cutliffe (125-127)Olivier (128-131)

121. Does the size of a construction project dictate when your company would hire or utilize an embedded vendor's crew(s)? If the answer is yes, please provide a detailed list of the types of construction projects such embedded vendor crews would perform.

Answer:

Distribution: Project size and scope are one of several factors considered when determining whether to engage native contractors (embedded vendors) or Duke Energy employee crews. Other considerations include geographic location, construction skill level required, planned versus emergent work, degree of direct customer coordination required, and need for specialized tools or equipment. As an example, a majority of streetlight repair is assigned to contractors who employee lineman qualified for secondary voltage, a skill set less costly than Duke Energy journeyman linemen qualified to work on secondary and primary voltage. Another example is underground cable installation, which requires specialized drilling equipment. In general work is assigned to contractors where it will maximize customer satisfaction and minimize cost.

Transmission: The size / scope of the project is one of several factors considered when determining whether to engage native/on-system contractors (embedded vendors) or DEF Transmission employee crews. Volume of work, budgetary requirements, schedule requirements, timing/duration of project, specialty equipment / skills, environmental / geographic requirements, and other criteria influence the decisions around utilizing internal or contract resources. If DEF Transmission does not have the internal resources to complete work projects, vendor resources are considered. If vendor resources are needed, DEF Transmission assigns or bids the work according to DEF sourcing guidelines and based on current contracts.

122. Do you have embedded vendor crews perform normal maintenance such as street light maintenance, or outage repairs?

Answer:

Transmission uses native/on-system contract crews (embedded vendor crews) for some maintenance activities:

- DEF Transmission organization does not use contractors in the Substation facilities to perform inspections.
- DEF Transmission Line facilities use contractors to perform the inspections as per asset management procedures
- DEF uses contractors to perform transmission vegetation management activities. Contractors performing work must follow the processes, policies, tracking, and

scheduling described in DEF Transmission Vegetation Management process and as per contract.

123. Do you have embedded vendor crews perform normal construction work such as pole or transformer replacement?

Answer:
Transmission uses native/on-system contract crews (embedded vendor crews) for some construction activities:

- DEF Transmission organization uses contractors in the Substation facilities to perform construction and equipment change outs
- DEF Transmission Line facilities use contractors to perform the construction / line & pole change outs
- DEF uses contractors to perform transmission vegetation management activities. Contractors performing work must follow the processes, policies, tracking, and scheduling described in DEF Transmission Vegetation Management process and as per contract.

124. Please identify all non-storm contract rates for any embedded vendor crews that you hired or utilized during 2014, 2015, 2016, 2017, and 2018.

Answer:

Please see table of vendors provided in response to interrogatory number 119, as well as the attached confidential documents bearing bates number 20170272-DEF-OPC ROG-8 124-000001 through 20170272-DEF-OPC ROG 8-124-000099. The attachments are confidential; a redacted slip sheet is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated March 13, 2019.

125. Please describe in detail any criteria the company uses to determine if and/or when to engage an embedded vendor's crew in your operations. (These criteria should include the size of a construction project, the location of the project, etc.).

Answer:
Distribution: Embedded vendor's crews are engaged in restoration (augmenting Duke Energy employee crews) when it is determined that their participation will significantly and cost effectively reduce overall customer outage time.

Transmission: Please see the response to Q121 for Operations "blue sky" construction work.

Contract vendors are utilized and deployed for Storm / Emergency restoration work when the capacity for restoration utilizing internal Duke crews has been exhausted and/or the volume of restoration work exceeds the ability of Duke Transmission crews to get service restored in a timely fashion. In Florida, this has historically occurred during major storm events such as named hurricanes.

126. Please state what factors determine when and whether an embedded vendor's crew transitions from emergency storm restoration work at the higher rate (and greater than 40-hour work week) to a lower rate with limitations on the amount of overtime or premium time billing.

Answer:
Distribution: Embedded vendor crews transition from unscheduled emergency storm restoration to normal work following completion of their last assigned outage. Consideration is given to the priority, urgency, and customer impact of their scheduled projects.

Transmission: Embedded vendor's crews transition from emergency storm restoration work to normal work once they have completed their last assigned outage.

127. Please provide a detailed list of all the types of projects or the types of functions which your company has used embedded vendors' crews.

Answer:
Please see attachments provided in response to Q119, Q120, and text response provided for Q121.

128. Please provide your regular base payroll costs (i.e. do not include incentive compensation) for each of the last three years (2016, 2017, and 2018).

Answer:

Payroll ($1,000's)	2016 FF1	2017 FF1	2018 FF1
Total - Base	340,593	361,276	384,684

129. Please provide the historical average for regular base payroll (i.e. do not include incentive compensation) for the last three years (2016, 2017, and 2018).

Answer:

Payroll ($1,000's)	Average 2016-2018
Total - Base	362,184

130. Please provide your overtime payroll costs for each of the last three years (2016, 2017, and 2018). Please provide overtime payroll with storm-related overtime included and excluded from the amounts.

Answer:

Payroll ($1,000's)	2016 FF1	2017 FF1	2018 FF1
OT - O&M (Not Including Storm)	44,072	45,158	50,216
OT - O&M (Storm)	4,820	13,357	3,277
OT - O&M Total (Incl Storm)	48,892	58,515	53,493

131. Please provide the historical average for overtime payroll for the last three years (2016, 2017, and 2018). Please provide the historical average for overtime payroll with storm-related overtime included and excluded from the amounts.

Answer:

Payroll ($1,000's)	Average
OT - O&M (Not Including Storm)	46,482
OT - O&M (Storm)	7,151
OT - O&M Total (Incl Storm)	53,633

REDACTED

DEF's attachments responsive to interrogatory number 124, bearing bates number 20170272-DEF- OPC-ROG 8-124-000001 through 20170272-DEF- OPC-ROG 8-124-000099 are confidential. Unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Notice of Intent to Request Confidential Classification dated March 13, 2019.

2014-2018 Distribution Line Contractors and Contract Numbers (Passport/Maximo)	Powertown	Irby	Team Fishel	Primoris T&E (Formerly Willbros)	Pike	F&H Contractors (UG Contractor)	Mastec (UG Contractor)	ALS (Lighting)	LE Myers	T&D Solutions	Southern Electric	Heart Utilities (Lighting)	Service Electric
Type of Work Performed	OH Distribution Line Work	OH Distribution Line Work	OH Distribution Line Work	OH Distribution Line Work	OH Distribution Line Work	UG Distribution Line Work	UG Distribution Line Work	Lighting	OH Distribution Line Work	OH Distribution Line Work	OH Distribution Line Work	Lighting	OH Distribution Line Work
2014	738948	162913	741413	741559	454579	738947	162908	672940	807102	30174	X	X	X
2015	738948	162913	741413	741559	454579	738947	162908	672940	807102	30174	796504	X	776148
2016	738948	162913 738946	741413	741559	454579	738947	162908	672940	807102	30174	796504	X	X
2017	738948	738946	741413	741559	454579	738947	162908	672940 20528	X	30174	796504 813213	812390	X
2018	20309	20167 23066	20168 23056	22131 22167 23053	454579 23064	20159 23057	22209 23062	20528	X	X	796504 813213	X	X

2014-2018 Transmission Line Contractors and Contract Numbers (Passport/Maximo)		Service Electric	Irby	C&C		Elite	Service Electric	C&C	HEATs Inc.	Reliable Substation Services		HEATs Inc.	Power Grid		Burfords Tree	Davey Tree LLC	Lewis Tree LLC	Trees LLC
Type of Work Performed		Transmission Line Work	Transmission Line Work	Transmission Line Work		T-Substation C&M	T-Substation C&M	T-Substation C&M	T-Substation C&M	T-Substation C&M		Relay	Relay		Veg	Veg	Veg	Veg
Master Contract#		7746	7094	7751		7745	7746	7751	8575	20630		8575	8313		609800 (Passport)	513330 (Pasort) 22396 (MAXIMO)	609804 (Passport) 22403 (MAXIMO)	725547 (Passport)
2014 ?		N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A		N/A	N/A		See Upload files	See Upload files	See Upload files	See Upload files
2015 ?		N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A		N/A	N/A		See Upload files	See Upload files	See Upload files	See Upload files
2016 (Hermine/Matthew)		Hermine/Matthew	N/A	Hermine/Michael		N/A	N/A	N/A	N/A	N/A		N/A	N/A		See Upload files	See Upload files	See Upload files	See Upload files
2017 (Nate/Irma)		Nate/Irma	N/A	Nate/Irma		Irma	N/A	Irma	Irma	N/A		Irma	N/A		See Upload files	See Upload files	See Upload files	See Upload files
2018 (Michael)		Michael	Michael	Michael		N/A	N/A	N/A	N/A	N/A		N/A	N/A		See Upload files	See Upload files	See Upload files	See Upload files

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 13th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared SHARON BOGDANOS, who is personally known to me, and has acknowledged before me that she provided the answers to interrogatory numbers 119, 120, 122, and 123 of CITIZENS' EIGHTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 119-131) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 13th day of March, 2019.

Sharon L Bogdanos
SHARON BOGDANOS

MONIQUE WEST
MY COMMISSION # FF 244727
EXPIRES: June 28, 2019
Bonded Thru Notary Public Underwriters

Notary Public
State of Florida, at Large

My Commission Expires: 6-28-19

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory numbers 119, 120, 121, 125, 126, and 127 of CITIZENS' EIGHTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 119-131) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of March, 2019.

_____
Jason Cutliffe

_____
Notary Public
State of Florida, at Large

My Commission Expires: _____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory numbers 128, 129, 130, and 131, of OPC'S EIGHTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 119-131) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of March, 2019.

_____
MARCIA OLIVIER

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared TESS ROEBUCK, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory number 119, 120, 121and 127, of OPC'S EIGHTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 119-131) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of March, 2019.

_____
TESS ROEBUCK

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

20170272 – DEF Response to OPC 8th ROGs (119-131)

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 13th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared SHARON BOGDANOS, who is personally known to me, and has acknowledged before me that she provided the answers to interrogatory numbers 119, 120, 122, and 123 of CITIZENS' EIGHTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 119-131) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 13th day of March, 2019.

Sharon L Bogdanos
SHARON BOGDANOS

MONIQUE WEST
MY COMMISSION # FF 244727
EXPIRES: June 28, 2019
Bonded Thru Notary Public Underwriters

Notary Public
State of Florida, at Large

My Commission Expires: 6-28-19

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 15th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory numbers 119, 120, 121, 125, 126, and 127 of CITIZENS' EIGHTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 119-131) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 15 day of March, 2019.

Jason Cutliffe

Jason Cutliffe

Notary Public
State of Florida, at Large

My Commission Expires: 6/28/19

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 19th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory numbers 128, 129, 130, and 131, of OPC'S EIGHTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 119-131) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 19th day of March, 2019.

Marcia Olivier
MARCIA OLIVIER

MONIQUE WEST
MY COMMISSION # FF 244727
EXPIRES: June 28, 2019
Bonded Thru Notary Public Underwriters

Monique West
Notary Public
State of Florida, at Large

My Commission Expires:
June 28, 2019

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 15th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared TESS ROEBUCK, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory number 119, 120, 121and 127, of OPC'S EIGHTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 119-131) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 15 day of March, 2019.

Tess Roebuck

TESS ROEBUCK

MONIQUE WEST
MY COMMISSION # FF 244727
EXPIRES: June 28, 2019
Bonded Thru Notary Public Underwriters

Monique West

Notary Public
State of Florida, at Large

My Commission Expires:
June 28, 2019

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: March 20, 2019

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO CITIZENS' NINTH SET OF INTERROGATORIES (NOS. 132-143)

Duke Energy Florida, LLC ("DEF") incorporates the objections filed contemporaneous with this response and responds to the Citizens of the State of Florida, through the Office of the Public Counsel's ("Citizens" or "OPC") Ninth Set of Interrogatories to DEF (Nos. 132-143) as follows:

REDACTED

INTERROGATORIES

[For the responses to interrogatories 132-135, the OPC requests that you please insert into the questions and answers the withheld information that you have been made aware of in prior correspondence and the referenced documents prior to the service of the official request (and file under Request for Confidentiality- if required)].

132. Refer to Document 20170272-DEF-OPC POD 1-6-0018397 provided in response to 2nd Supplemental Response to OPCs 1st PODS 1-10 Q-6 Distribution pt 2, located in the 17-Irma folder, [redacted] folder. The document states [redacted]

a) Was the Company aware of the requirement of [redacted] for emergency storm work prior to the storm? If not, why not?

b) Is the Company aware of any other union requirements, not referred to in this email, regarding [redacted] relating to the payment of hours, expense, etc.? If so, please summarize.

Answer:

a) Yes, this has been a part of the [redacted] contract for several years. [redacted] uses this with all utilities.

b) Duke Energy is not aware of other union requirements.

133. Refer to page Document 20170272-DEF-OPC POD 1-6-0006773 provided in response to 2nd Supplemental Response to OPCs 1st PODS 1-10 Q-6 Distribution pt 2, located in the 16- Hermine folder, [redacted] folder. The document states [redacted]

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 20
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Ghent (136-140)Roebuck (141-143)

[redacted]

a) Is it typical that the Company would allow for this withheld circumstance described herein above?

b) Please provide all instances of such billing included in the filing.

Answer:

a) DEF does allow for this in certain cases. The Company often proposes [redacted]. In the wake of major storms, Duke Energy endeavors, to the best of its ability, to provide adequate lodging for the contractor workforce such that this is not typical. Often, hotels are either closed or oversaturated in the wake of a major storm, so this may not always be possible but this is the intent.

b) The storm invoices are submitted through paper (CAPS) process and are audited by hand. As such, a summary is not available without extensive research and time to compile.

134. Refer to Document 20170272-DEF-OPC POD 1-6-0006773 provided in response to 2nd Supplemental Response to OPCs 1st PODS 1-10 Q-6 Distribution pt 2, located in the 16-Hermine folder, [redacted] folder. The document states [redacted]

a) Is this standard Company procedure to allow for the [redacted] instead of another amount of time?

b) Why was the [above herein withheld term] permitted when 20170272-DEF-OPC POD 1-6-0006772 states that a normal day is considered to be the [redacted]?

Answer:

a) It is standard operating procedure in the wake of a major storm. Contractors and Duke Energy resources alike frequently work extended hours post-storm.

b) A normal (e.g., "blue sky") workday is a [redacted] workday. Processes are different in the wake of major storms. The [redacted] in a storm context would exemplify this. Other examples would include pricing sheets, the process of negotiating terms and conditions, etc.

135. Refer to Document 20170272-DEF-OPC POD 1-6-0006773 provided in response to 2nd Supplemental Response to OPCs 1st PODS 1-10 Q-6 Distribution pt 2, located in the 16-Hermine folder, [redacted] folder. The document states [redacted]

[redacted]

a) Please provide all instances of such billing included in the filing.

Answer:
Please see response to 133-b.) above.

136. In the documents ranging from 20170272-DEF-OPC POD l-6-0041450-41505, by way of example, please explain why DEF is paying for food receipts related to a logistics firm in Cary, North Carolina and Apex, North Carolina from September 3 through September 29, 2017?

Answer:

The logistics firm in question is located in Apex, NC; approximately 7 miles from Cary, NC. All food receipts for this location are for its resources working in the logistics firm's Support Centers. The dates range from 9/3/17 to 9/27/17 to support mobilization, restoration, and demobilization activities.

137. See POD 1-6-0041493, POD 1-6-0041506 through POD 1-6-004510. Please explain why DEF is paying for hotel rooms in Apex, North Carolina from September 6 to October 27, 2017?

Answer:

All hotel receipts for this location are for lodging the logistics firm's resources working in its Support Centers. The dates range from 9/6/17 to 10/27/17 to support mobilization, restoration, and demobilization activities. The firm's resources work following demobilization of sites to handle equipment returns and inventory, administrative activities, and invoice closeouts.

138. See POD 1-6-041492. Please explain why DEF is paying for a hotel in Cary, North Carolina from September 26 to October 3, 2017?

Answer:
Cary, NC is approximately 7 miles away from the logistics firm's Support Center in Apex, NC. These hotel receipts are for the logistics firm's resources working in the firm's Support Centers. The dates range from 9/26/17 to 10/03/17 to support demobilization activities such as inventory, administrative and invoice closeouts.

139. See POD 1-6-0041460. Why is DEF paying for a gas receipt in Labelle, FL on 9/5/17?

Answer:

This fuel charge is from travel expenses incurred by a resource for the logistics firm's during mobilization activities.

140. See POD 1-6-0041460. Who is Susan Kent and why is DEF paying for a hotel room for her on 9/6/17 in Jacksonville, FL?

Answer:

Susan Kent was a resource for the logistics firm discussed above, working both in its Support Centers and in the field during the Irma Recovery Event. This hotel charge is from travel expenses incurred during mobilization activities.

141. Does DEF have a summary sheet which lists or analyzes all receipts paid as a part of Hurricane Irma damage invoice payments? If so, please provide.

Answer:

DEF utilized the review templates provided in response to OPC's 3rd POD, number 18, to verify receipts per invoice, but did not utilize a summary sheet to analyze all receipts.

142. Did DEF pay all receipts submitted as a part of Hurricane Irma damage invoice payments even when they are not legible?

Answer:

DEF did not pay all receipts submitted. The invoice review process consisted of two-levels of review; noting any questionable or illegible items, and then calculating that amount against the initial invoice amount.

143. What criteria did DEF use to determine if a receipt attached to a Hurricane Irma damage invoice should be paid?

Answer:

DEF looked at the date to verify it was within the restoration period, the location of the establishment to verify it was within the restoration area or an area a vendor would have had to travel through to reach DEF's service territory (or return home), the expense type to verify it was a reimbursable expense per the terms of the contractor's/vendor's agreement, and the dollar amount to verify it was reasonable

AFFIDAVIT

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

I hereby certify that on this 20 day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JAY SHAWVER, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory number(s) 132 through 135 of CITIZENS' NINTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 132-143) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 20 day of March, 2019.

Jay Shawver

CLAIRE CLARK
Notary Public
Mecklenburg
County
My Comm. Exp.
10-22-2021
NORTH CAROLINA

Notary Public
State of North Carolina

My Commission Expires: 10.22.2021

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF POLK

I hereby certify that on this 19th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared LAQUITTA GHENT, who is personally known to me, and has acknowledged before me that she provided the answers to interrogatory numbers 136 through 140 of CITIZENS' NINTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 132-143) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 19th day of March, 2019.

LaQuitta Ghent

Notary Public
State of Florida

Notary Public State of Florida
[illegible]
My Commission GG 103597
Expires 05/20/2021

Notary Public State of Florida
Linda Kimbrough
My Commisalon GG 103597
Expires 05/20/2021

My Commission Expires: 6/20/2021

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF ORANGE

I hereby certify that on this _____ day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared TESS ROEBUCK, who is personally known to me, and has acknowledged before me that she provided the answers to interrogatory numbers 141 through 143 of CITIZENS' NINTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 132-143) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of March, 2019.

_____
Tess Roebuck

_____
Notary Public
State of Florida

My Commission Expires:_____

20170272 – DEF Response to OPC 9th ROGs (132-143)

AFFIDAVIT

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

I hereby certify that on this 20 day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JAY SHAWVER, who is personally known to me, and has acknowledged before me that he provided the answers to interrogatory number(s) 132 through 135 of CITIZENS' NINTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 132-143) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 20 day of March, 2019.

Jay Shawver

CLAIRE CLARK
Notary Public
Mecklenburg
County
My Comm. Exp.
10-22-2021
NORTH CAROLINA

Notary Public
State of North Carolina

My Commission Expires: 10 22 2021

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF POLK

I hereby certify that on this 19th day of March, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared LAQUITTA GHENT, who is personally known to me, and has acknowledged before me that she provided the answers to interrogatory numbers 136 through 140 of CITIZENS' NINTH SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 132-143) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 19th day of March, 2019.

LaQuitta Ghent

Notary Public
State of Florida

My Commission Expires: 6/20/2021

Notary Public State of Florida
[illegible]
My Commission GG 103597
Expires 05/20/2021

Notary Public State of Florida
Linda Kimbrough
My Commission GG 103597
Expires 05/20/2021

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: June 8, 2018

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO
STAFF'S FIRST SET OF INTERROGATORIES (NOS. 1-12)

Duke Energy Florida, LLC ("DEF"), responds to the Staff of the Florida Public Service Commission ("Staff") First Set of Interrogatories to DEF (Nos. 1-12) as follows:

For questions 1-5, please refer to DEF's response to OPC Interrogatory No. 6, attachment 20170272-DEF-OPC-ROG 1-6-00001.

1. Based on DEF's response, the cost for streetlight poles replaced during Hurricane Irma ranged from $637 to $22 per pole. Please explain why the per pole cost varied by more than $600 per pole.

Answer: Street light pole costs can vary significantly based on both size and material. A "Fluted" streetlight pole costs approximately $1,100; a 14' Fiberglass streetlight pole costs approximately $200. In addition, total costs in October were reduced by the return of unused streetlight poles, at which time the material costs that would have been charged to storm reserve were credited back. A more accurate method of computing an average unit cost would be on an overall storm basis, not by a month-by-month comparison.

2. Please explain why the per pole cost for streetlight poles is greater than the per pole cost for non-streetlight poles.

Answer: Decorative streetlight poles cost more than a standard wood distribution pole due to the materials used to construct decorative poles (aggregated concrete, fiberglass, aluminum, etc.) as well as the manufacturing process itself.

3. Based on DEF's response, the cost of wire replaced during Hurricane Hermine ranged from $0.26 per foot of wire in September to $0.75 per feet of wire in October for Hurricane Hermine. Please explain why the per foot of wire cost varied by almost $0.50.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 21
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Cutliffe (1-12)

Answer: Wire costs can vary significantly based on both size and material. In September there was a variety of wire issued and returned that impacted the average unit cost. In October, only one type of wire was issued, Copper 4 AWG, which cost $0.75 cents per foot. A more accurate method of computing an average unit cost would be on an overall storm basis, not by a month-by-month comparison.

4. Based on DEF's response, the cost for crossarms replaced during Hurricane Irma was $113 per crossarm for September and $115 per crossarm for October. The average price for crossarm replacements for the other storms and months listed was $35 per crossarm.

   a. Please explain why the cost per crossarm during Irma was significantly greater the cost per crossarm replacement during other storms.

Answer: The type of cross arms used in 2016 versus 2017 have changed. In 2016, wood cross arms were used, but the standard changed in 2017 to fiberglass arms. This change was created to increase safety, reliability and asset life. The average cost per wood cross arm is approximately $35, the average costs for fiberglass cross arms is $115.

5. Based on DEF's response, the costs for pad mounted transformers replaced during Hurricane Irma were $4,304 per transformer in September and $891 per transformer in October. Please explain why the described costs varied by more than $3,000 per transformer.

Answer: Transformer costs can vary significantly based on both size and voltage. A single phase 25 kva 120/240 transformer costs approximately $1,400; a three phase 1500 kva 277/480 transformer costs approximately $19,000. In addition, total costs in October were reduced by the return of unused transformers, at which time the material costs that would have been charged to storm reserve were credited back. A more accurate method of computing an average unit cost would be on an overall storm basis, not by a month-by-month comparison.

For questions 6-12, please refer to DEF's response to OPC Production of Documents Request No. 4, attachment 20170272-DEF-OPC-POD 1-4-00001 through 20170272-DEF-OPC-POD 1-4-000050.

6. Please explain how the other utilities considered in the Benchmarking Comparison were determined to be appropriate for comparison purposes.

Answer: Accenture's storm benchmarking database contains restoration performances from utilities who were effected by severe thunderstorms, snow/ice storms, tropical storms, and hurricanes from the last 20 years. This analysis selected all category 1-5 hurricanes collected in the database, highlighting restorations performed by Progress Energy and Duke Carolinas.

7. Were the other utilities used for the "storm benchmark database" similar in size and geographical location?

Answer: 5 of the 26 companies benchmarked were of similar size to DEF. (Between 1M-2M customers served)

8. Do the other utilities have transmission and distribution facilities (i.e., percent hardened and percent underground) similar to DEF?

Answer: There are utilities included in this benchmarking that have similar transmission and distributions facilities. Due to the selection of all category 1-5 hurricanes as discussed in response to question 6, most of the utilities selected fall on the eastern and southern coasts of the United States.

9. It appears that 15 of the 26 utilities used in the benchmark have a smaller customer based size than DEF. Please explain why these utilities were included in the benchmark

Answer: Smaller utilities were included but comparisons were normalized beforehand. Looking at the percentage of customers out or poles replaced per customers out at peak allows for a more accurate comparison then just comparing the number of poles replaced or the number of customers out.

10. Does DEF's GIS contain its full inventory of poles? If not, why not?

Answer: Yes.

11. Were any of the 59 percent of broken poles that had attachments, overloaded?

Answer: No.

12. When was DEF's last joint use audit?

Answer: DEF completes an annual Wind Loading audit every year that looks at approximately 55,000 joint use poles to determine existing loading. This cycle is completed over 8 years.

In addition, DEF also completes a full system joint use attachment audit every 5 years with the last completed in 2017. This audit scope counts the number of joint use attachments on distribution poles across the DEF system.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 8th day of JUNE, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 1through 12 of STAFF'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 1-12) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 8th day of JUNE, 2018.

Jason Cutliffe

JASON CUTLIFFE

ALNOOR KURJI
Notary Public - State of Florida
Commission # GG 022837
My Comm. Expires Aug 25, 2020
Bonded through National Notary Assn.

Notary Public
State of Florida, at Large

My Commission Expires:
AUG 25, 2020

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: July 19, 2018

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO STAFF'S FIRST REQUEST FOR PRODUCTION OF DOCUMENTS (NO. 1)

Duke Energy Florida, LLC ("DEF"), responds to the Staff of the Florida Public Service Commission's ("Staff") First Request for Production of Documents (No. 1) as follows:

PRODUCTION OF DOCUMENTS

1. Please refer to the direct testimony of witness Cutliffe, page 3, lines 15-16. Please produce any documents identifying best practices and/or lessons learned from Hurricanes Irma and Nate.

Response:
Please see the attached documents bearings Bates Numbers 20170272-DEF-STAFF-POD 1-1-00001 through 20170272-DEF-STAFF-POD 1-1-000056.

SUBMITTED this 16th day of July, 2018.

s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, FL 33701
Telephone: (850) 521-1428
Facsimile: (850) 521-1437
Attorneys for Duke Energy Florida, LLC

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 22
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Cutliffe (1)

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 16th day of July, 2018.

/s/ Matthew R. Bernier
Attorney

Kyesha Mapp Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 kmapp@psc.state.fl.us J. R. Kelly / C. Rehwinkel Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com George Cavros, Esq. Southern Alliance for Clean Energy 120 E. Oakland Park Blvd., Suite 105 Fort Lauderdale, FL 33334 george@cavros-law.com

1DF'S SUMMARY OF RECEIVED COMMENTS FOR HURRICANE IRMA

Positive Comments Received:

1) Written IAP and plans so field personnel can understand what is being planned higher

2) Briefing content/cadence much better than past events. Allowed for more regimented schedule and kept meetings to the time frame scheduled

3) Use of MY WORLD made navigating around the system area much easier, made tracing out circuits easier than using line drawings and provided some outage information not being received due to OMS not fully functioning

5) Continued/"Off-Season" collaboration that occurred between the regional staffs and commands resulted in good working relationships between the ICs and the staff Chiefs had built common methods of doing planning and logistic support so they were able to assist each other. Overall, the continued cross talk between regional staffs and the command level led to each region effectively supporting the overall 1DF plan.

Opportunity Comments Received:

1) Consider streamlining admin procedures and requirements from a logistics standpoint to avoid crews having to leave worksites.

2) A better tool than ROD must be brought into use. There are numerous products that effectively track off system resources, internal resources and make it easier to input crew information to conduct planning.

2) Crew support in the base camps , specifically handing out hotel keys to individual resources is cumbersome..

3) While the senior level of leadership at the Regions had good planning time, too much time was used by the senior staffs. The extra time Regional staffs used meant the less time the front line leaders had to make a plan.

4) The development of the 1DF staff needs more clarity in how it will operate with each region as well as operate with the IST. Clearly define how the 1DF Staff supports the ability of the CDO to make decisions and provide planning guidance and operational planning to the regional staffs.

5) A full time logistics person(s) is needed within the 1DF structure whose main and only focus is the preparing of sites, vendor management, and ramping up staging/base camps for storms. Logistics is a complex orchestration of competing logistics.

6) Preparing current and relevant information for the PIO/LNO structure is critical to informing our customers and government agencies of current work ongoing, locations(s) that work is occurring and providing the best planning information for customers and government agencies to make decisions. The 0700 report must have relevant information that is current as of that day, that the previous day when the IAP was created.

7) Examine the data used in setting ETRs and the process as documented currently. Determine the best sets of data to make decisions from the multiple sets currently available and determine the priority for relying on that data in terms of setting ETRs. Use the data, as well as feedback from the field, to provide a complete as possible "INTEL" picture before making setting final ETRs and releasing public information.

8) All DA personnel, both leadership and support roles, need additional training. OMS & myWorld training and practice sessions addressing all three OMS platforms should be conducted on a recurring, regular basis, and involve C&M leadership, engineering personnel (including leadership) and back office (admin) personnel.

9) Daily work shifts should not be altered unless the restoration has conclusively reached the very last day of activity.

10) Prepare Standard Briefing Formats for all meetings and products produced to the field. The IAP is a great format to focus on future planning and needs, but does not adequately address the daily operational requirements. Focus on more coordinating instructions in an operations plan, a clearly articulated logistics support plan and provide IC intent and purpose.

Other Action Items to Fold into the ERO:

1) Pushing autonomy/control as low as possible so lower levels can operate quicker

2) The coming of ADMS and using the same procedures throughout each region

3) Ensuring that we have adequate manual back-ups in case automation is not available.

4) Develop Family care plans for single parents that remain on file and kept up to date. This not only prepares lineman to deploy quicker, but also helps the leadership should there be a hardship that prevents an employee from being able to get home to their family.

5) Prepare what criteria must be in place and what parameters must be met to set Go/No Go criteria to deploy crews across the system in support of other regions. Ensure there is clearly stated guidance who provides those answers and make sure they are all answered before making final decisions.

6) The Public Information Office must be used during crew travel so that we can put out good news stories/positive news coverage of our crews deploying.

7) Likewise if PIO is provided a roster of who is traveling and where they are from, that would be very helpful for generating potential media stories.

8) Business Continuity/Contingency Plans need to be revised/updated/created for unexpected happenings such as automation platforms and other relied upon systems not functioning.

9) Crews movements by smaller serials need to be created so that crews move in smaller groups. It makes feeding and fueling easier, especially if relying on commercial support during movements

10) Positioning internal fuel support assets with the travel parties is great and allows fueling to happen quicker

11) Consider whether self-contained teams should be modified or revamped to ensure consistency among regions.

12) Company DA personnel (engineering personnel) should be equipped with smartphones instead of flip phones. Having better technology will provide those doing the DA Surveys greater navigation and communication capabilities and easier exchange of information.

Irma Lessons Learned & OpEx - Supply Chain

Group	Category	Lesson Learned	Op Ex achievement	Op Ex new idea	Op Ex cnhancement	Comments / Status
ICS / BU	Communication	Participation in various ICS teams and daily calls - distribution of the "Daily Irma" report	Y			Supply Chain rep's were present on sub team and overall ICS calls . . . . The distribution of a Daily Irma that communciated key aspects of the storm recovery, shared information related to the flow of materials into the field, and gave feedback continuously was a positive for the event.
ICS / BU	Communication	Early engagement and communication with supply chain		Y	Y	Develop a checklist that includes cut off's for daily orders, runs, etc. and contact information. Allow for emergency runs, but strive to create an orderly deployment for order, pick and deliver activities. (example: once base camp crews leave the location, we should survey the kits, make orders and have the delivery made in time for them to restock overnight, etc.)
ICS / BU	Communication	Base camp improvements to process.		Y	Y	Base Camp set up notifications should clearly specify if restoration materials are to be included at the site. There needs to be a clear communication on which base camps need materials and which ones don't . . . . There was change to sites during the recovery. Improve communication on set ups when decided to ensure coverage. There was adequate coverage during this event.
ICS / BU	Communication	The new ICS structure has the materials organization joining the Logistics team calls. During such a large team call . . . Issues that need detailed work should be taken offline to allow for the entire agenda to be covered.		Y		This is an efficiency idea to be sure all agenda items are covered. Single point of contact for materials. Manager Material Planning or an identified Material Planner.
ICS / BU	Communication	Improve distribution Damage Assessment equipment damage data to impacted parties (i.e. Supply Chain)			Y	The data from the damage assessments that listed estimated number of poles down, etc. was not shared for 2 days. During this time, supply chain would be securing additional supplies and putting logistics plans in place. There were only minor shortages of some parts during the storm, these were usually resolved in the same day and did not impact restoration times.
ICS / BU	Communication	Ask resources to report to sites when they are expected to begin work			Y	Clearly communicate the need to stage in resources to move people efficiently and work to provide awareness so folks are able to use of time onsite.
ICS / BU	Damage Assessment	DA leads should receive more detailed circuit maps			Y	
ICS / BU	Resources	Using the scale of Duke Energy provided skilled resources to the needed region . . . Quick response, already trained, understand our safety culture, etc.	Y			Within Supply Chain, we leveraged our regional employees and national suppliers to bring additional resources to the affected area and were able to work safely, efficiently and effectively due to standard practices, systems, etc.
ICS / BU	Resources	Use local DE line workers to lead out of town crews.		Y		

Irma Lessons Learned & OpEx - Supply Chain

Group	Category	Lesson Learned	Op Ex achievement	Op Ex new idea	Op Ex cnhancement	Comments / Status
ICS / BU	Communication	Participation in various ICS teams and daily calls - distribution of the "Daily Irma" report	Y			Supply Chain rep's were present on sub team and overall ICS calls . . . . The distribution of a Daily Irma that communciated key aspects of the storm recovery, shared information related to the flow of materials into the field, and gave feedback continuously was a positive for the event.
ICS / BU	Communication	Early engagement and communication with supply chain		Y	Y	Develop a checklist that includes cut off's for daily orders, runs, etc. and contact information. Allow for emergency runs, but strive to create an orderly deployment for order, pick and deliver activities. (example: once base camp crews leave the location, we should survey the kits, make orders and have the delivery made in time for them to restock overnight, etc.)
ICS / BU	Communication	Base camp improvements to process.		Y	Y	Base Camp set up notifications should clearly specify if restoration materials are to be included at the site. There needs to be a clear communication on which base camps need materials and which ones don't . . . . There was change to sites during the recovery. Improve communication on set ups when decided to ensure coverage. There was adequate coverage during this event.
ICS / BU	Resources	Fly DE line resources to scene and let them use local line trucks (these lineman would be leading out of town crews)		Y		If you can leverage local worker knowledge, we may be able to see if any additional trucks could be used by other DE workers.
ICS / BU	Resources	Improve crew assignments on restoration tasks			Y	Improve crew assignments on restoration tasks.DA recognizing needs for climbing crews in applicable areas Optimize time between completion of damage assessment and crews working Consider increasing supervisory contact with resources, especially those from other areas.
ICS / BU	Tech/IT	Improve ROD system for workers			Y	Supply Chain teammates in ROD had to secure their own accommodations. System issue.
ICS / BU	Trucking	Escort for material delivery convoy?		Y		In certain events, we should have an ability to call for law enforcement escorts for incoming materials similar to the movement of line crews. While we didn't need this during the storm, for future use, might be good to have as a resource.
Supply Chain	Communication	MIQ - Clear communications on when Duke needs driver teams to avoid shipment delays due to driver rest requirements.		Y		Improve communications on inbound mateirals to ensure sufficient driver teams and DOT compliance when needed. We did not have any issues with this storm.
Supply Chain	Communication	Clarify scope of duty regarding supply of water, Wesco or Storm Logistics (3rd Party)			Y	
Supply Chain	Environmental	Develop better processes for handling leaking transformers at staging sites & operation centers.			Y	Better ways to bag and tag leaking equipment and ability to move it

Irma Lessons Learned & OpEx - Supply Chain

Group	Category	Lesson Learned	Op Ex achievement	Op Ex new idea	Op Ex cnhancement	Comments / Status
ICS / BU	Communication	Participation in various ICS teams and daily calls - distribution of the "Daily Irma" report	Y			Supply Chain rep's were present on sub team and overall ICS calls . . . . The distribution of a Daily Irma that communciated key aspects of the storm recovery, shared information related to the flow of materials into the field, and gave feedback continuously was a positive for the event.
ICS / BU	Communication	Early engagement and communication with supply chain		Y	Y	Develop a checklist that includes cut off's for daily orders, runs, etc. and contact information. Allow for emergency runs, but strive to create an orderly deployment for order, pick and deliver activities. (example: once base camp crews leave the location, we should survey the kits, make orders and have the delivery made in time for them to restock overnight, etc.)
ICS / BU	Communication	Base camp improvements to process.		Y	Y	Base Camp set up notifications should clearly specify if restoration materials are to be included at the site. There needs to be a clear communication on which base camps need materials and which ones don't . . . . There was change to sites during the recovery. Improve communication on set ups when decided to ensure coverage. There was adequate coverage during this event.
Supply Chain	Integrated Supplier	Our Integrated Supplier greatly expanded the capacity of the supply chain to provide uninterrupted supply of materials to crews.	Y	Y	Y	Leveraged our national scale supplier provided additional warehousing space, resources and materials to efficiently flow materials from supplier to crews. They functioned in our storm calls and meetings as an integral part of the team. Find ways to expand their capability during storms to continue to increase service levels. Increase use of this supplier for non-Integrated supplier materials, they have national prescence and may be stocking items across the country.
Supply Chain	Inventory	Use of existing inventory	Y			Substitutions of items in inventory - with business unit approval - provided additional materials to keep crews productive and use existing inventory vs. purchasing new
Supply Chain	Inventory	Storm simulation model		Y		Review storm model and keep current to standards. Use process similar to inventory reviews for slower moving materials.
Supply Chain	Inventory	Review storm materials stocking levels at distribution centers		Y		Work with BU to see how we can adjust for storm season and then consume our way through the inventory by year end. Using new data analytics, we may be able to bring seasonality to materials stocking levels to move materials more efficiently and reduce double handling.
Supply Chain	Purchasing	Adequate materials were provided during storm restoration	Y			Through our contracts with suppliers, Duke Energy had access to adequate materials to keep crews restoring power. There were some minor shortages, but nothing significant.
Supply Chain	Purchasing	Expediting - Increase details on ETA (date AND time) for items			Y	
Supply Chain	Purchasing	Review and update listing of supplier vendor stocking quantities for storm items			Y	Utilize storm support inventory at suppliers as well as our sites, incorporate into sourcing process. We have this in place for some categories.

Irma Lessons Learned & OpEx - Supply Chain

Group	Category	Lesson Learned	Op Ex achievement	Op Ex new idea	Op Ex cnhancement	Comments / Status
ICS / BU	Communication	Participation in various ICS teams and daily calls - distribution of the "Daily Irma" report	Y			Supply Chain rep's were present on sub team and overall ICS calls . . . . The distribution of a Daily Irma that communciated key aspects of the storm recovery, shared information related to the flow of materials into the field, and gave feedback continuously was a positive for the event.
ICS / BU	Communication	Early engagement and communication with supply chain		Y	Y	Develop a checklist that includes cut off's for daily orders, runs, etc. and contact information. Allow for emergency runs, but strive to create an orderly deployment for order, pick and deliver activities. (example: once base camp crews leave the location, we should survey the kits, make orders and have the delivery made in time for them to restock overnight, etc.)
ICS / BU	Communication	Base camp improvements to process.		Y	Y	Base Camp set up notifications should clearly specify if restoration materials are to be included at the site. There needs to be a clear communication on which base camps need materials and which ones don't . . . . There was change to sites during the recovery. Improve communication on set ups when decided to ensure coverage. There was adequate coverage during this event.
Supply Chain	Resources	Optimize Supply Chain staffing level at Op Center and base camps			Y	Determine how company operations centers fit into the storm support with the base camps - likely a function of number of resources supporting restoration.
Supply Chain	Storm Kit	Share Storm Kits across Duke Energy regions		Y		We are working to standardize and better identify the items in the storm kits. There might be a "core set" of storm kits that apply to all regions with some specialized kits that apply for certain jurisdictions (voltage differences, etc.). Ensure that additional tools/equipment needed for storm boxes i.e. shrink wrap and tool, zip ties, green banding/tool, and basic hand tools (hammer, screw driver, side cutters, adjustable wrenches etc..) Create a standard for the number of line crews/storm kit that can be supported.
Supply Chain	Tech/IT	Provide technology to resources supporting storms			Y	Need access to our electronic ordering systems. Mifi devices should be a standard part of the base camp setup. May include MiFi, iphone, GPS, additional chargers, etc.
Supply Chain	Tech/IT	Tablet issues when ordering W/S - pop up blocker would not let order process (Clemson & Anderson)			Y	confirm no underlying IT issue - otherwise was this a spot issue?
Supply Chain	Trucking	Material Runners and trucks (pick-ups) at the DC (for smaller emergent deliveries)		Y		Have a capability for small and emergent needs
Supply Chain	Warehouse operations	Develop schedule early that includes cutoff times for orders and associated delivery times / schedule. This to allow for improved organization with logistics / trucking		Y		Develop a cadence for main w/h operations that supports the base camps, operations centers and receiving activities. This will ensure smooth flow of activities, from inbound trucks to outbound trucks to remove bottlenecks at the locations.

Irma Lessons Learned & OpEx - Supply Chain

Group	Category	Lesson Learned	Op Ex achievement	Op Ex new idea	Op Ex cnhancement	Comments / Status
ICS / BU	Communication	Participation in various ICS teams and daily calls - distribution of the "Daily Irma" report	Y			Supply Chain rep's were present on sub team and overall ICS calls . . . . The distribution of a Daily Irma that communciated key aspects of the storm recovery, shared information related to the flow of materials into the field, and gave feedback continuously was a positive for the event.
ICS / BU	Communication	Early engagement and communication with supply chain		Y	Y	Develop a checklist that includes cut off's for daily orders, runs, etc. and contact information. Allow for emergency runs, but strive to create an orderly deployment for order, pick and deliver activities. (example: once base camp crews leave the location, we should survey the kits, make orders and have the delivery made in time for them to restock overnight, etc.)
ICS / BU	Communication	Base camp improvements to process.		Y	Y	Base Camp set up notifications should clearly specify if restoration materials are to be included at the site. There needs to be a clear communication on which base camps need materials and which ones don't . . . . There was change to sites during the recovery. Improve communication on set ups when decided to ensure coverage. There was adequate coverage during this event.
Supply Chain	Warehouse operations	When to go 24/7 at Distribution Center(s) and base camps			Y	Using the intensity of storm and/or damage assessment, establish a criterial for around the clock operations.

FHO Emergency Event After-Action Report - Improvement Plan

(Enclosure Page 1 of 4)

Instructions: Immediately following an emergency event the incident commander or their designee shall gather feedback from the personnel who participated in the emergency event response. In the blanks below document the results of this review and forward a copy of this to your **Site Emergency Response Coordinator.**

If applicable, enter these action items into your station action tracking tool.

Site Emergency Response Coordinator: Once this report has been reviewed and finalized forward a copy to Mark Blinson, FHO Emergency Program Manager.

Station & Responding Operations Team:	Emergency Event Date:	Event Start Time: 0800
FHO	September 7, 2017	Event End Time: 2400

Summary of Emergency Event*: (Identify what happened: how the emergency was discovered, what specific information was gathered include all known facts associated with the emergency event)*

Hurricane Irma path over Florida, and associated power plants.

FHO Emergency Event After-Action Report - Improvement Plan

(Enclosure Page 2 of 4)

What was done to respond to the emergency? (What level was the emergency classified, who was notified, what actions were taken)

Pre-hurricane checklists were complete at Florida and Carolinas' FHO stations, as per the Natural Disaster Emergency Response Procedures. Each station's incident management team, as well as the Florida regional incident management team were briefed, and placed on standby to provide incident command structure (ICS) response to affected facilities. A level 2 emergency, hurricane threat imminent, was declared, and the Incident Support Team (IST) was activated. Daily briefings were provided to the IST as to the status and ultimate recovery of Florida facilities. No facility was significantly impacted, such that an on-site incident management team, was necessary for station recovery.

FHO Emergency Event After-Action Report - Improvement Plan

(Enclosure Page 3 of 4)

Participating External Organizations / Emergency Responders	
Federal Agencies	None
State Agencies	None
Local Agencies	None

What things went well?	What things need to be improved?
• Recent completion of emergency training and exercises across fleet prepared personel well to respond • Communication across the organization • Utilization of standardized emergency procedures • Completion of hurricane checklists	• Anclote emergency diesel generator was not able to load • Procure satellite telephones for regions

DUKE ENERGY.

FHO Emergency Event After-Action Report - Improvement Plan

(Enclosure Page 4 of 4)

	Issue or Area for Improvement	Recommended Action	Who's Responsible to Complete this Action	Due Date
1	Emergency Diesel Functionality	Ensure emergency diesel generators are being load tested to verify functionality.	Brandon Sipe	
2	Satellite Telephones	Procure regional satellite telephones for emergency use by different business units.	IT or Enterprise Preparedness Services	
3				
4				
5				

AAR/IP Form Completed by:	Date Completed:
Joe Miller	10/16/2017

Hurricane Irma Florida Recap

November 9, 2017



DUKE ENERGY®

Storm Review

Agenda

- Storm Summary and Restoration Accomplishments
- Top Issues in Irma experience
  - Estimated Time of Restoration
  - Outage Management System
  - Decision Hierarchy
  - Communications and Customer
  - Other Lessons Learned
- Corrective Actions
- Appendix
  - Chronology
  - Glossary

Methodology

An independent review team worked with the responsible line organizations to determine strengths, lessons learned, and action items as a result of Hurricane Irma response efforts.

Storm Summary and Restoration Accomplishments

Storm Summary

- Record outages affecting approximately 1.3 of 1.8 million customers in all 35 counties served in Florida
- Unprecedented damage pattern with outages occurring indiscriminately versus in large patterns

Restoration Accomplishments

- 1 million customers restored in 3 days
- 96% of Pinellas and Pasco county customers restored by original estimated restoration time
- 1841 distribution poles replaced
- 141 transmission poles replaced
- 178 miles of wire replaced (800 additional miles spliced and repaired)
- 1106 transformers replaced
- 71 substations returned to service
- 2,132,836 Florida calls handled by Customer Care Operations in 10 days

Estimated Time of Restoration (ETR)

ETRs were set before initial damage assessment was sufficiently complete. Contributing to this action was:

- A perceived sense of urgency
- Experience bias
- Unusual storm damage pattern
- Challenges with crew mobilization

Once initial ETRs were published, priorities focused on restoration efforts and not on verifying or further refining ETRs.

Corrective Actions

- Revise governance to include more formality and organizational transparency regarding the process, information, roles and responsibilities, decision making and oversight for establishing ETRs
- Revise governance to include a feedback loop to allow for revising and refining ETRs as restoration proceeds

Outage Management System (OMS)

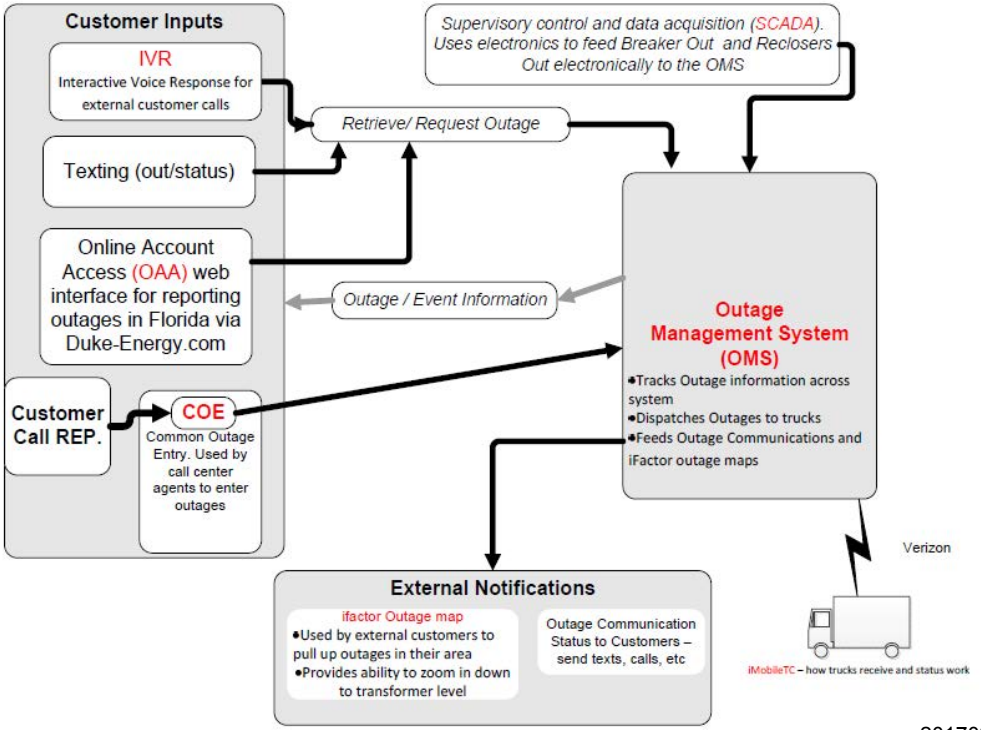
Multiple aspects of the OMS system failed. Although system failures did not impede overall power restoration, the failures did impact downstream processes used to communicate with customers.

Corrective Actions

- Complete thorough analysis of OMS failures and corrective actions to preclude recurrence
- Complete infrastructure (inputs/outputs) review of OMS to improve process/data flow and associated corrective actions
- Perform fully integrated system test of the Customer Outage Reporting and Notification systems
- Complete in-flight project to replace OMS

Outage Management System

Customer Outage Reporting and Notification



Decision Hierarchy

In some cases during the storm event, the decision-making hierarchy structure was unclear. There was some confusion associated with decision/approval authority in certain areas during the storm.

Corrective Actions

- Incorporate Irma experience into Crisis Management Team (CMT) and Incident Support Team (IST) manuals, including revisiting activation criteria for storms and whether approval authority is transferred to these teams when they are fully activated
- For decisions that should be made outside an Incident Management Team (such as billing), determine appropriate governance, including pre-determined decisions
- Develop guidance to ensure clear ownership and authority over all aspects of storm response
- Develop and implement storm response exercises that test all applicable aspects of tool capabilities and ICS implementation
- Develop guidance to ensure executive management is updated with pertinent information in cases when IST and/or CMT are not activated

Communications and Customer

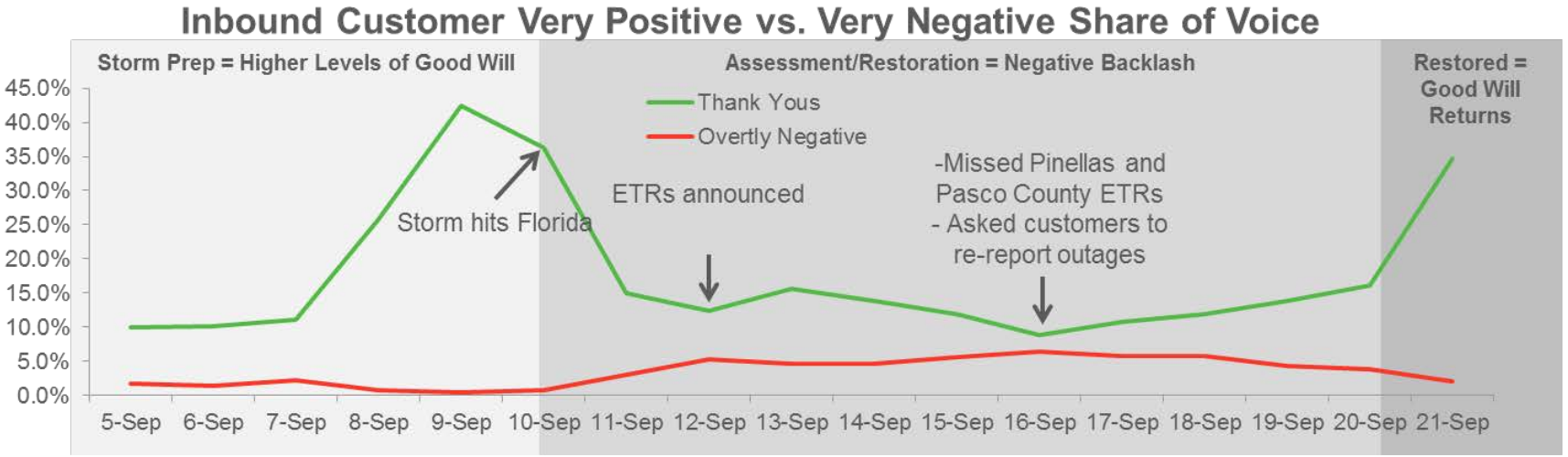
Customer-facing communications throughout the event were not always effective due to (1) inaccurate ETRs, (2) failures of the OMS and (3) decision-making hierarchy.

Corrective Actions

- Joint Information Center – move key Corporate Communications and Customer Communications personnel to affected jurisdiction
- Develop communications contingencies for technology failures (OMS, phone, website, email, etc.)
- Address performance and capacity issues with duke-energy.com
- Address phone capacity issue for call centers
- Expand the base of pre-designated and pre-trained resources to assist call centers and with social media during storms
- Develop governance with clear roles and responsibilities among corporate communications, customer communications, 1DF, Transmission, Customer Contact Center and ICS/storm center
- Revise pre-storm messaging to influence customer restoration expectations

Overall Customer Response

Social Media – Inbound Conversation Sentiment



Other Lessons Learned

Additional actions to address lessons learned include:

- Develop restoration contingency plans for loss of storm-critical systems
- Improve ‘Resource on Demand’ tool usage to manage dispatched resources
- Improve logistics for dispatched resources to ensure adequate housing, food, etc. are provided
- Develop plan to support public response entities to provide convenience products like charging stations and heating/cooling for customers in affected areas
- Ensure proper checks and balances exist to prevent incorrect estimated billing, particularly during storm recovery

Corrective Actions

	Corrective Action	Area+	Owner	Due Date	Timing*
1	Revise governance to include more formality regarding the process, information, roles and responsibilities, decision making and oversight for establishing ETRs	ETR	Michael Lewis	12/31/17	I
2	Revise governance to include organizational transparency regarding the process, information, roles and responsibilities, decision making and oversight for establishing ETRs	ETR	Michael Lewis	5/31/18	H
3	Revise governance to include a feedback loop to allow for revising and refining ETRs as restoration proceeds	ETR	Michael Lewis	12/31/17	I
4	Complete thorough analysis of OMS failures and corrective actions to preclude recurrence	OMS	Chris Heck	11/30/17	I
5	Complete infrastructure (inputs/outputs) review of OMS to improve process/data flow and associated corrective actions	OMS	Chris Heck	3/31/18	H
6	Perform fully integrated system test of the Customer Outage Reporting and Notification systems	OMS	Chris Heck	3/31/18	H
7	Complete in-flight project to replace OMS	OMS	Chris Heck	2021	LT

+ ETR – related to Estimated Time of Restoration process; OMS – related to OMS issues; DM – related to decision-making; C – related to Communications; O – other improvement opportunity

* I – before ice storm season (by January 15, 2018); H – before 2018 hurricane season (by June 1, 2018); LT – long term

Corrective Actions

	Corrective Action	Area+	Owner	Due Date	Timing*
8	Develop restoration contingency plans for loss of storm-critical systems and ensure they are rehearsed and exercised	OMS	Michael Lewis	5/31/18	I
9	Incorporate Irma experience into Crisis Management Team (CMT) and Incident Support Team (IST) manuals, including revisiting activation criteria for storms and whether approval authority is transferred to these teams when they are fully activated	DM	Ben Waldrep	3/31/18	I
10	For decisions that should be made outside an Incident Management Team (such as billing), determine appropriate governance, including pre-determined decisions	DM	Ben Waldrep	3/31/18	H
11	Develop guidance to ensure clear ownership and authority over all aspects of storm response	DM	Ben Waldrep	3/31/18	H
12	Develop storm response exercises that test all applicable aspects of tool capabilities and ICS implementation	DM	Ben Waldrep	3/31/18	H
13	Implement storm response exercises that test all applicable aspects of tool capabilities and ICS implementation	DM	Ben Waldrep	5/31/18	H
14	Develop guidance to ensure senior management is updated with pertinent information in cases when IST and/or CMT are not activated	DM	Ben Waldrep	3/31/18	H

Corrective Actions

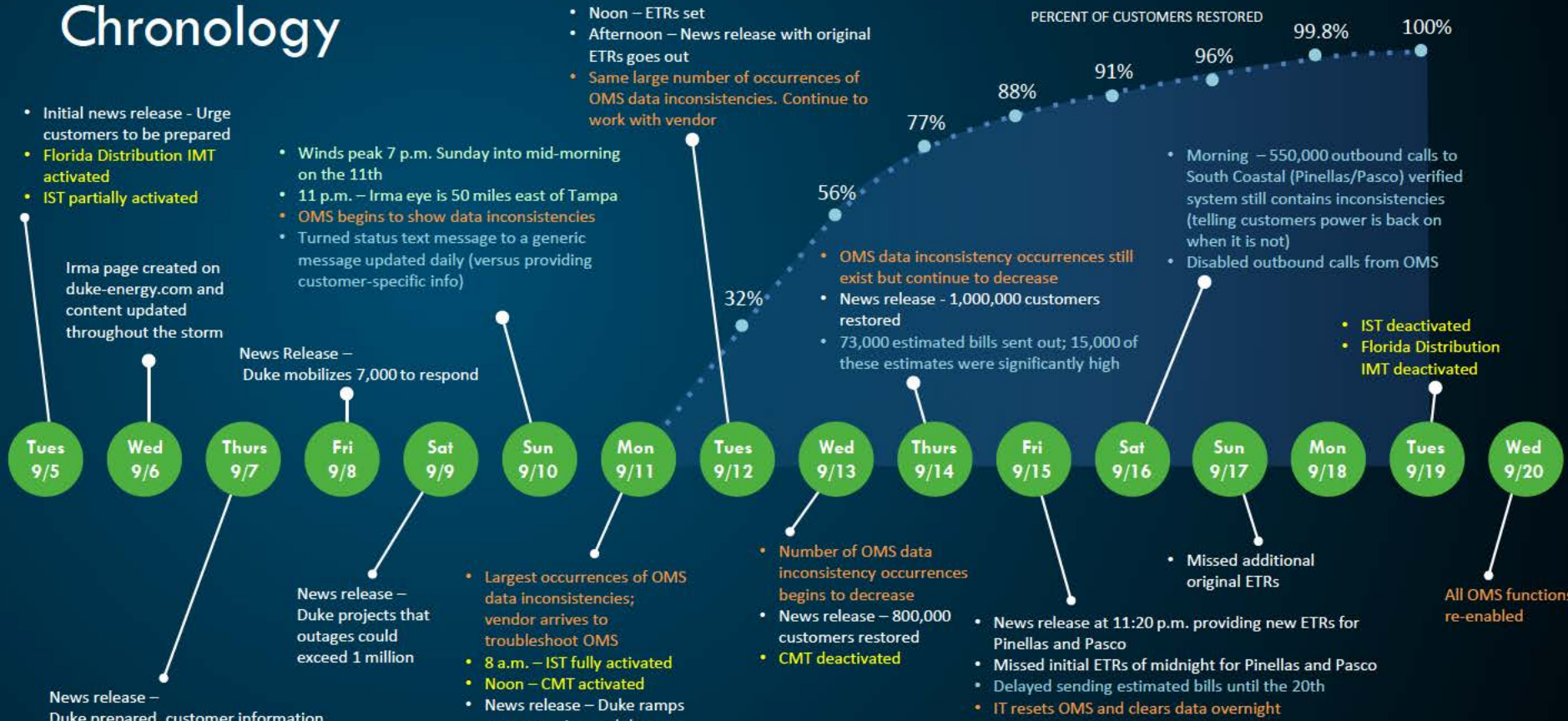
	Corrective Action	Area+	Owner	Due Date	Timing*
15	Joint Information Center – move key Corporate Communications and Customer Communications personnel to affected jurisdiction	C	Selim Bingol Barbara Higgins	12/31/17	I
16	Develop communications contingencies for technology failures (OMS, phone, website, email, etc.)	C	Gayle Lanier Joni Davis	3/31/18	H
17	Address performance and capacity issues with duke-energy.com	C	Chris Heck	3/31/18	H
18	Address phone capacity issue for call centers	C	Chris Heck	5/31/18	I
19	Expand the base of pre-designated and pre-trained resources to assist call centers during storms.	C	Gayle Lanier	3/31/18	H
20	Develop governance with clear roles and responsibilities among corporate communications, customer communications, 1DF, Transmission, Customer Contact Center and ICS/storm center	C	Selim Bingol Barbara Higgins	11/30/17	I
21	Revise pre-storm messaging to influence customer restoration expectations	C	Selim Bingol	12/31/17	I
22	Expand the base of pre-designated and pre-trained resources to assist with social media response during storms	C	Barbara Higgins	3/31/18	H

Corrective Actions

	Corrective Action	Area+	Owner	Due Date	Timing*
23	Review and determine if the Assess, Isolate, Restore and Document (AIR-D) process is appropriate and applicable to all of 1DF	O	Michael Lewis	1/15/18	I
24	Develop layouts for all templated base camps. Procure Duke owned assets to increase response time for base camp command and control. Continue refining crew support feeding and hotel/bed assignment.	O	Michael Lewis	4/1/18	H
25	Complete the review and updating of standards and contracts for Damage Assessment (DA) resources	O	Michael Lewis	1/15/18	I
26	Improve 'Resource on Demand' tool usage to manage dispatched resources	O	Michael Lewis	3/31/18	H
27	Improve logistics for dispatched resources to ensure adequate housing, food, etc. are provided	O	Michael Lewis	3/31/18	H
28	Develop plan to support public response entities to provide convenience products like charging stations and heating/cooling for customers in affected areas	O	Joni Davis	3/31/18	H
29	Ensure proper checks and balances exist to prevent incorrect estimated billing, particularly during storm recovery	O	Gayle Lanier	3/31/18	H
30	Verify appropriate closure of corrective actions	O	Ben Waldrep	5/31/18	H

Appendix

Chronology


PERCENT OF CUSTOMERS RESTORED
32%
56%
77%
88%
91%
96%
99.8%
100%
Tues 9/5
Initial news release - Urge customers to be prepared
Florida Distribution IMT activated
IST partially activated
Wed 9/6
Irma page created on duke-energy.com and content updated throughout the storm
Thurs 9/7
News release – Duke prepared, customer information, outage reporting, etc.
Fri 9/8
News Release – Duke mobilizes 7,000 to respond
Sat 9/9
News release – Duke projects that outages could exceed 1 million
Sun 9/10
Winds peak 7 p.m. Sunday into mid-morning on the 11th
11 p.m. – Irma eye is 50 miles east of Tampa
OMS begins to show data inconsistencies
Turned status text message to a generic message updated daily (versus providing customer-specific info)
Largest occurrences of OMS data inconsistencies; vendor arrives to troubleshoot OMS
8 a.m. – IST fully activated
Noon – CMT activated
News release – Duke ramps up restoration and damage assessment
Irma moves out of Florida service area in the afternoon
Mon 9/11
Tues 9/12
Noon – ETRs set
Afternoon – News release with original ETRs goes out
Same large number of occurrences of OMS data inconsistencies. Continue to work with vendor
Wed 9/13
Number of OMS data inconsistency occurrences begins to decrease
News release – 800,000 customers restored
CMT deactivated
Thurs 9/14
OMS data inconsistency occurrences still exist but continue to decrease
News release - 1,000,000 customers restored
73,000 estimated bills sent out; 15,000 of these estimates were significantly high
Fri 9/15
News release at 11:20 p.m. providing new ETRs for Pinellas and Pasco
Missed initial ETRs of midnight for Pinellas and Pasco
Delayed sending estimated bills until the 20th
IT resets OMS and clears data overnight
Sat 9/16
Morning – 550,000 outbound calls to South Coastal (Pinellas/Pasco) verified system still contains inconsistencies (telling customers power is back on when it is not)
Disabled outbound calls from OMS
Sun 9/17
Missed additional original ETRs
Mon 9/18
Tues 9/19
IST deactivated
Florida Distribution IMT deactivated
Wed 9/20
All OMS functions re-enabled
LEGEND
OMS issues
Media relations
IMT/IST/CMT
Weather
Customer communications

Glossary

Acronym	Full Name	Definition/ Function
CMT	Crisis Management Team	Senior Management Committee activated to quickly and effectively respond to a crisis of severe impact to the enterprise so that the impact on Duke's customers, shareholders, employees, other stakeholders, corporate assets, and corporate reputation is minimized.
COE	Common Outage Entry	Web front end for Call Center agents to enter outages
ETR	Estimated Time of Restoration	A time estimate of power restoration provided to customers and stakeholders
ICS	Incident Command System	A standardized approach to the command, control, and coordination of on-scene incident management, providing a common hierarchy within which personnel from multiple organizations can be effective.
iFactor	Outage Map	Used by external customers to view outages in their area
i/Mobile/TC	Mobile Work System for Florida	How trucks receive and status work
IMT	Incident Management Team	Management of emergency response actions to an incident by site personnel or emergency responders.
IST	Incident Support Team	Centralized emergency management team that both supports activated IMTs through coordination and prioritization and ensures an integrated and comprehensive company response.
IVR	Interactive Voice Response	Allows users to report outage or get outage status via phone
OAA	Online Account Access	WEB interface for reporting an outage for customers in Florida
OMS	Outage Management System	InService from Integraph for Florida
SCADA	Supervisory Control and Data Acquisition	Sends breaker and recloser data to the OMS


DUKE
ENERGY®

1DF'S SUMMARY OF RECEIVED COMMENTS FOR HURRICANE IRMA

Positive Comments Received:

1) Written IAP and plans so field personnel can understand what is being planned higher

2) Briefing content/cadence much better than past events. Allowed for more regimented schedule and kept meetings to the time frame scheduled

3) Use of MY WORLD made navigating around the system area much easier, made tracing out circuits easier than using line drawings and provided some outage information not being received due to OMS not fully functioning

5) Continued/"Off-Season" collaboration that occurred between the regional staffs and commands resulted in good working relationships between the ICs and the staff Chiefs had built common methods of doing planning and logistic support so they were able to assist each other. Overall, the continued cross talk between regional staffs and the command level led to each region effectively supporting the overall 1DF plan.

Opportunity Comments Received:

1) Consider streamlining admin procedures and requirements from a logistics standpoint to avoid crews having to leave worksites.

2) A better tool than ROD must be brought into use. There are numerous products that effectively track off system resources, internal resources and make it easier to input crew information to conduct planning.

2) Crew support in the base camps , specifically handing out hotel keys to individual resources is cumbersome..

3) While the senior level of leadership at the Regions had good planning time, too much time was used by the senior staffs. The extra time Regional staffs used meant the less time the front line leaders had to make a plan.

4) The development of the 1DF staff needs more clarity in how it will operate with each region as well as operate with the IST. Clearly define how the 1DF Staff supports the ability of the CDO to make decisions and provide planning guidance and operational planning to the regional staffs.

5) A full time logistics person(s) is needed within the 1DF structure whose main and only focus is the preparing of sites, vendor management, and ramping up staging/base camps for storms. Logistics is a complex orchestration of competing logistics.

6) Preparing current and relevant information for the PIO/LNO structure is critical to informing our customers and government agencies of current work ongoing, locations(s) that work is occurring and providing the best planning information for customers and government agencies to make decisions. The 0700 report must have relevant information that is current as of that day, that the previous day when the IAP was created.

7) Examine the data used in setting ETRs and the process as documented currently. Determine the best sets of data to make decisions from the multiple sets currently available and determine the priority for relying on that data in terms of setting ETRs. Use the data, as well as feedback from the field, to provide a complete as possible "INTEL" picture before making setting final ETRs and releasing public information.

8) All DA personnel, both leadership and support roles, need additional training. OMS & myWorld training and practice sessions addressing all three OMS platforms should be conducted on a recurring, regular basis, and involve C&M leadership, engineering personnel (including leadership) and back office (admin) personnel.

9) Daily work shifts should not be altered unless the restoration has conclusively reached the very last day of activity.

10) Prepare Standard Briefing Formats for all meetings and products produced to the field. The IAP is a great format to focus on future planning and needs, but does not adequately address the daily operational requirements. Focus on more coordinating instructions in an operations plan, a clearly articulated logistics support plan and provide IC intent and purpose.

Other Action Items to Fold into the ERO:

1) Pushing autonomy/control as low as possible so lower levels can operate quicker

2) The coming of ADMS and using the same procedures throughout each region

3) Ensuring that we have adequate manual back-ups in case automation is not available.

4) Develop Family care plans for single parents that remain on file and kept up to date. This not only prepares lineman to deploy quicker, but also helps the leadership should there be a hardship that prevents an employee from being able to get home to their family.

5) Prepare what criteria must be in place and what parameters must be met to set Go/No Go criteria to deploy crews across the system in support of other regions. Ensure there is clearly stated guidance who provides those answers and make sure they are all answered before making final decisions.

6) PIO needs to be used during crew travel so that we can put out good news stories/positive news coverage of our crews deploying.

7) Likewise if PIO is provided a roster of who is traveling and where they are from, that would be very helpful for generating potential media stories.

8) Business Continuity/Contingency Plans need to be revised/updated/created for unexpected happenings such as automation platforms and other relied upon systems not functioning.

9) Crews movements by smaller serials need to be created so that crews move in smaller groups. It makes feeding and fueling easier, especially if relying on commercial support during movements

10) Positioning internal fuel support assets with the travel parties is great and allows fueling to happen quicker

11) Consider whether self-contained teams should be modified or revamped to ensure consistency among regions.

12) Company DA personnel (engineering personnel) should be equipped with smartphones instead of flip phones. Having better technology will provide those doing the DA Surveys greater navigation and communication capabilities and easier exchange of information.

Access to specific information	Hierarchical; small group of individuals, cascading communication which limits speed to market. Work flow is consolidated through single owner (Corp Comm/Ops)	Flatter organizational structure to allow for quick, distributed communication of key facts, with clear accountability for who takes action on what.	Paige Layne/Valerie Patterson & Joni Davis/ Taryn Sims Christine Wyche & Patty Jasper By 11/30/2017	From CEO approving ETOR to publication/communication: 4 ½ hours on 9/12 From approving revised ETORs to publication/communication: 9 hours on 9/17 • Clearly delineate JIC storm roles/responsibilities in our procedures and process manuals to specifically address storm response. • Provide specific checklists for each position to be required for storm response, with an emphasis on fully incorporating Customer Communications organization. • Also, develop a JIC staffing plan that anticipates a multi-day, multi-state response
Message development	Corp Comm drafts press release; all other communication embargoed until press wording and daily key messaging is approved	• Corp Comm drafts positioning and key message points; HR uses to build employee-facing communications; CXT uses to build reactive responses for CCO and social media. Corp Comm drafts press release and updates web assets • Enhance JIC storm roles/responsibilities in our procedures/process manuals to specifically address storm response instead of the current descriptions that more nuclear or all hazards focused. Provide specific checklists for each position to be required for	Tina Worley Mike Keller By 12/31/2017	Positioning, tone and form factor vary greatly between channels. While attention needs to be given to anything that will reside in the public domain, press wording is not well accepted by customers and the current time to complete does not meet customers needs

		storm response. • Implement formal rumor control process for storms similar to the one used for nuclear rumor control, leveraging the same tool. • Partner with technology owners to develop approved transparent messages that can be used when technology fails (storms and normal operations).		
Timely communication	All communication synchronized to be released at time of press release. Approval process is slow with numerous approvers in the chain. Communications that is based on approved key messages must be approved by PIO.	• Customer questions should be answered as soon as answers are known. CCO and social media responders should update responses instantaneously once new information is known • Work within ICS structure to refine how/when approved data is provided to Corporate Communications and to establish processes that enhance information flow across response and oversight organizations (IMT/IST/CMT/JIC, etc.). • Pu a refreshed message on the website every XX hours (recommend every 3 hours at a minimum). • We should develop more robust outage reporting matrix – updated regularly with more data points.	Tina Worley Mike Keller By 12/31/2017	Press release, official website updates should be carefully coordinated. More flexibility is needed within ICS structure for data/information flow and approval. Examples of concerns include: approved information provided once/day, multilayered process for information gathering and approval, etc Even if not much new information, a new time stamp and altered message would make customers feel like we were telling them something. If communications have the essence of key messages, they should not need PIO approval. A SMC representative is now in the approval chain for press releases. Messages have to be tailored to the channel in which they are being used so slight variations in the message should be acceptable and not need further approval. Email approval averages approximately 3-5 hours

				for development, coding to approval. Email on 9/13: 5 hours
Communication channels	Focus on contact center – phone numbers published on press releases, web site, etc.	• Focus on digital/social media - no limit to communication capacity, and much faster transaction time than call center. • Consider adding a form for social media to intake locations of potential damage/customer concerns to deliver to field.	Tim Pettit Brittany DuBose By 11/30/2017	AT&T trunks and web site overwhelmed by volume with repeated capacity issues . Kept pushing customers to overwhelmed channels, degrading performance. Main objective should be to handle customer once, not pass them from channel to channel, handling multiple times. Incorrect information was inadvertently sent to customers because multiple communications systems (IVR status ETRs, outage maps, Proactive Outage information) were all tied to system that was presenting incorrect information, until the issue was realized and corrected.
Physical layout of center	Separate tables, physically proximate but not co-creating content. Tools available within center were different by room (maps, information on white boards, etc) Field command center proximate but not connected to JIC	• Create round table structure with assigned representatives from key functions (press, website, social media, IDF, contact center, SMB, large accounts, HR) • Provide automated display of what customers are seeing on our website as well as on Facebook. • Eventually, some kind of data trend display on a TV would be helpful…highest number of repeat words per hour on social media hits (eg restoration time, slow systems, etc). Number of social media hits per hour versus calls, number of hits to webpage etc	Selim Bingol/DCC leader (Jeff Corbett?) By Q1 2018	Physical co-location and co-creation will increase speed to end product. It would help provide the context for the customer comments we are getting and would also be a way to keep focus on providing timely updates to our websites and social media presence. Contact centers generally have information boards highlighting volume and key statistics. Emulate an operating environment in the JIC.

Physical location of resources	Maintained communications resources centrally in the JIC	Update CC storm process to establish a "forward JIC" by moving a core team of Corp Comm leaders to the affected region to provide oversight and guidance when a major storm will affect jurisdictions outside of the Carolinas	Selim Bingol By TBD	
Process	We asked customers to report outages and relied on OMS to see whether outages had been previously reported or not. Customers provided very individual information that may have been useful to the field – what process can we use to not have the customer contact us again? Specific issues were sent to "ICanHelp" – was that the right location?	• In catastrophic situations, should waive the need to report and immediately communicate on web, IVR and social media. Once restoration has matured, can then implement requirement for reporting. • Need specific connection to the DCC and Revenue Services for up to the minute decisions and to think through implications of process changes	Michael Lewis State Presidents By TBD	Need to determine thresholds to activate plan. Increased call volume because customers felt they needed to report the outage. JIC has direct connection to the DCC – what can the social media team do to leverage this?
Role clarity and chain of command	Multiple individuals from same organization resulting in concentrated staffing. Multiple individuals weighing in on what should be communicated and where (eg, "rumors" or "scam warnings")	• Re-evaluate staffing needs and develop bench strength for major/multi-jurisdictional storm response and events that could last for extended periods. • Assign single representation from leadership level for each function and rotate every 6 – 8 hours to remain fresh. Clear accountability should be established to control what is said to employees (HR), press media (Corp Comm) and customers (social media, CCO)	Selim Bingol/Jeff Corbett By 1/30/18	Would allow for continuous coverage or extended coverage, as well as ensure refreshed and well rested staff. Clear accountability could control strategy for what Duke communicates vs what other local authorities should handle (eg, FEMA and rumor control: https://www.fema.gov/hurricane-irma-rumor-control) Both departments should refine their respective response plans to incorporate lessons learned from Irma and to ensure the purpose, strategy, goals, objectives,

				general tactics and channels are clearly stated and complementary. This communication plan is shared with key internal stakeholders/departments
Technical capacity	Finite set trunk capacity at contact center; web page view limitations; limited to 20 concurrent responders on social media Technology issues from OMS, web, IVR, Proactive outage service made it very difficult to navigate communications.	• Create increased capacity during emergency situations – increase trunk capacity at contact center to handle 20,000 (vs 10,000) concurrent calls; increase web views from 7.000 to 20,000 or more; increase Sprinklr license capacity to 50 concurrent users from 20. • Need ability to test communications capability in each jurisdiction. • Formalize Web Support Plan - Formalize plan for when to move web platform to other companies for support ahead of projected high use times. • Determine the back-up plans for any channels that have technical issues. Define roles for Tech Support and IT to provide early indicators of channel failures and full architecture of how each channel is configured. Develop contingency plans by channel and across channels • Improved training and development of downtime and manual processes. Identify critical systems: OMS, CIS, COE, IVR, proactive notification, web site, iFactor maps, mobile • Need centralized dashboard	Gayle Lanier, Joni Davis, Patty Jasper By Q1 2018	While we would prefer to channel customers to our internal assets, they failed us during the initial storm and response periods. Improvement in the capacity of all channels is required, as is a clear strategy across channels. Need to develop robust business continuity plans in the event of channel service degradation or failure

		showing what systems are up and what systems are down per region, similar to what was created on white board.		
Customer support plan	Did not have specific focus on customers beyond customer-facing communication channels (including social media)	• For extended outages, provide local access for customers in affected areas supporting customer needs: o Charging stations for electronic devices o Cooling or heating stations • Determine key trigger points to stand up relief efforts • Partner with large customers whose footprint spans service territories (eg, Publix, Wal-Mart); invest in capabilities within retail space vs standalone mobile units • All customer communication channels under oversight of Customer Engagement team	Joni Davis Q1 2018	Need to work with C&I business team to develop approach to work with large customers

FL ICS Liaison and PIO Section Corrective Actions

Action by Section	Owner	Additional Notes	Status	Alignment with ECA	Key Collaborative Internal Partners
Liaison – Melissa Seixas					
1. Increase EOC staffing by 12 resources and provide training	Palomar-Walsh	Expands coverage of county EOCs to ensure support for system-wide event (35 counties)	Underway	NA	• Emergency Mgr • CRM • LAM • Various depts
2. Increase EOC overnight phone support by 5 resources and provide training	Palomar-Walsh	Expands resources to ensure 24 hour support of county EOCs	Underway	NA	• Emergency Mgr • Various depts
3. Increase Op Center Liaisons (OCLS) staffing by 10 resources	Palomar-Walsh	Adds depth for shifts and extended day restorations	Underway	NA	• Emergency Mgr • Distribution
4. Create new admin support role for OCLs and staff with 10 resources; provide training	Palomar-Walsh	Intended to offload admin support from OC	Underway	NA	• Emergency Mgr • Various depts
5. Further develop road clearing processes (both admin and field ops processes)	Goldsmith/Seixas	Needed to meet increasing county expectations on road clearing support	Underway	NA	• Distribution Contract Resources Mgr • Emergency Mrg
6. Simplify the road clearing process and differentiate among wire down and other EOC priorities (critical customers)	Guzman/Stagg	Make It Safe terminology caused confusion with external partners	Underway	NA	• Distribution Contract Resources Mgr • Emergency Mgr
7. Identify and implement communication processes between op centers and transmission org	O'Keefe	Improved communication with transmission group	Completed	NA	Transmission
8. Identify and implement communication methods for specific needs of EOC reps and OCLs	Seixas		Underway	NA	• Corp Comm • Distribution
9. Train state EOC reps on use of Issues Tracker	Palomar-Walsh		Underway	NA	• State Public Affairs
10. Identify and implement process for critical customer list review by county EOCs	Guzman/Arroyo		Underway	NA	
				NA	

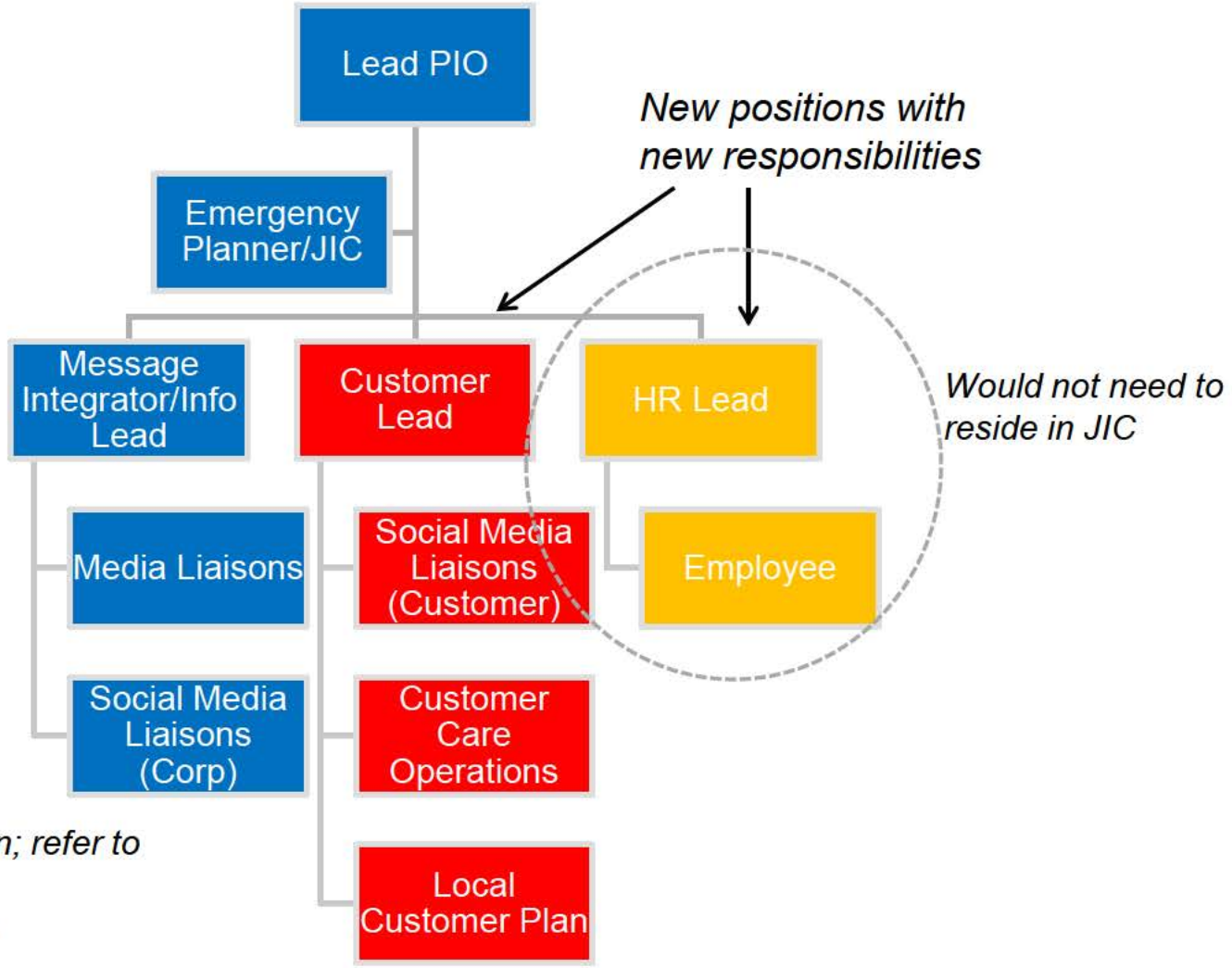


Emergency Response Roles & Responsibilities

DRAFT

October 12,2017

Emergency Response Structure

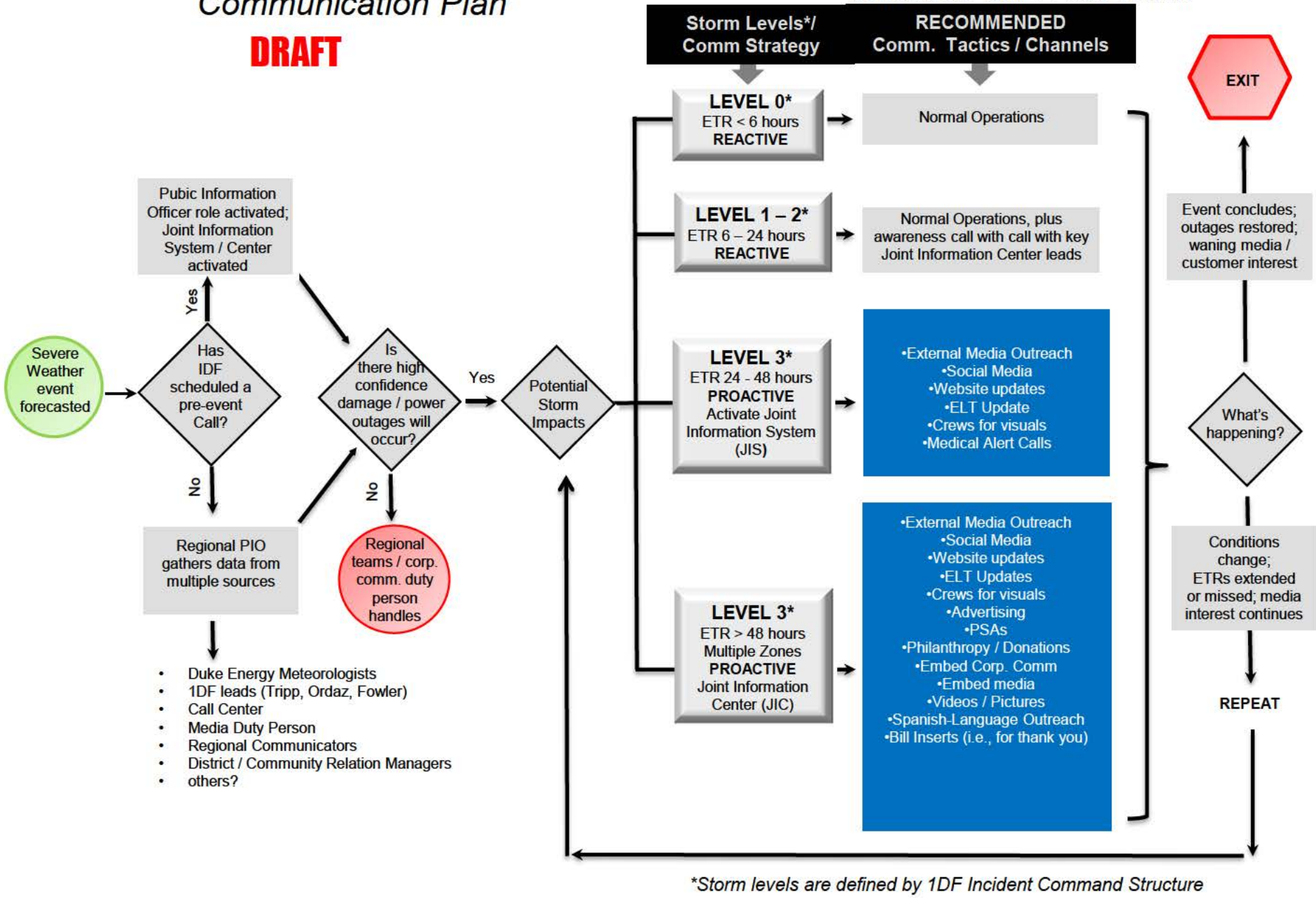


Partial structure shown; refer to PIO for full Corporate Communications plan

Corporate Communications *General Storm Response Communication Plan*

20170272-DEF-STAFF-POD 1-1-000041

DRAFT

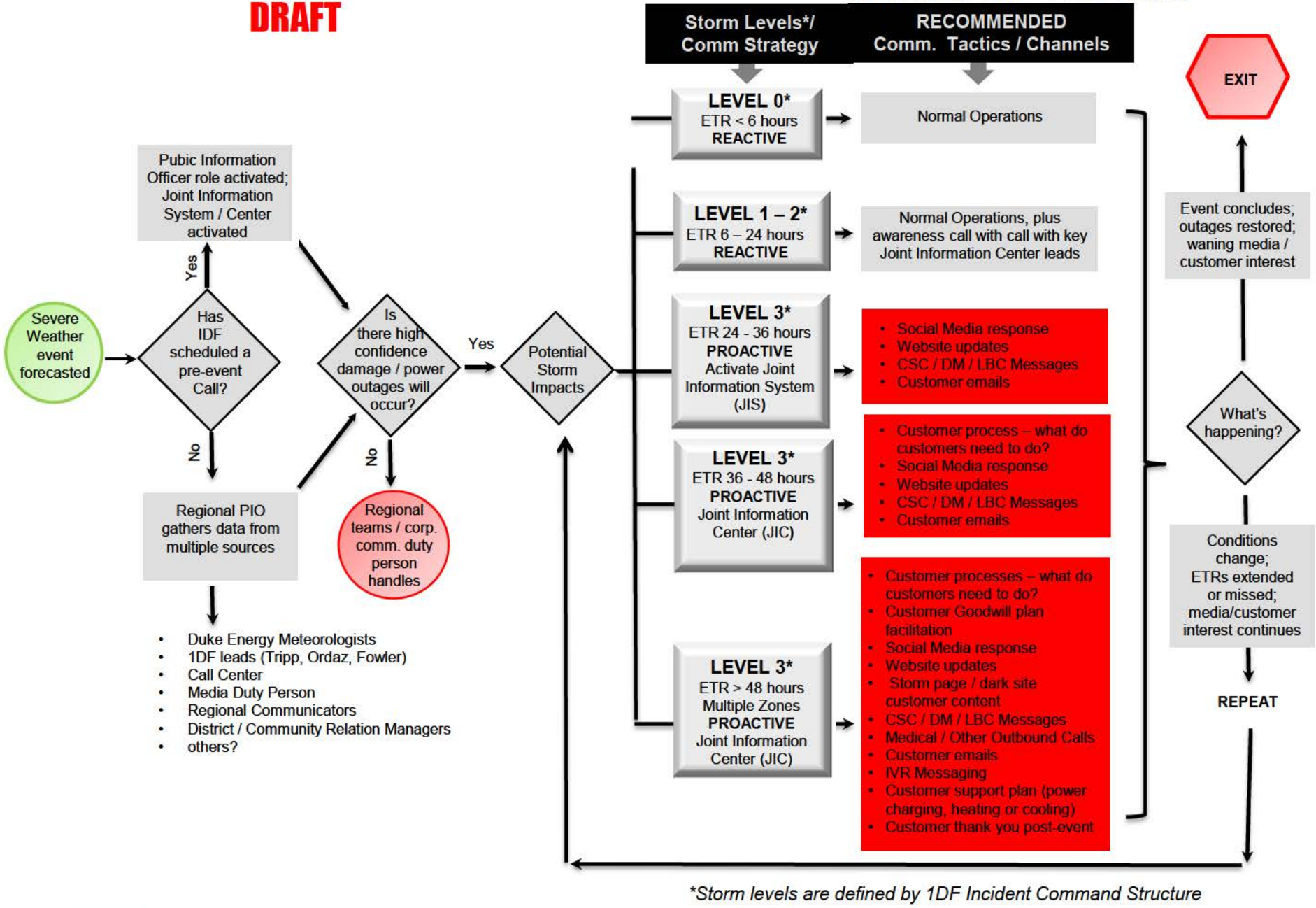


**Storm levels are defined by 1DF Incident Command Structure*

Customer Experience *General Storm Response Communication Plan*

20170272-DEF-STAFF-POD 1-1-000042

DRAFT

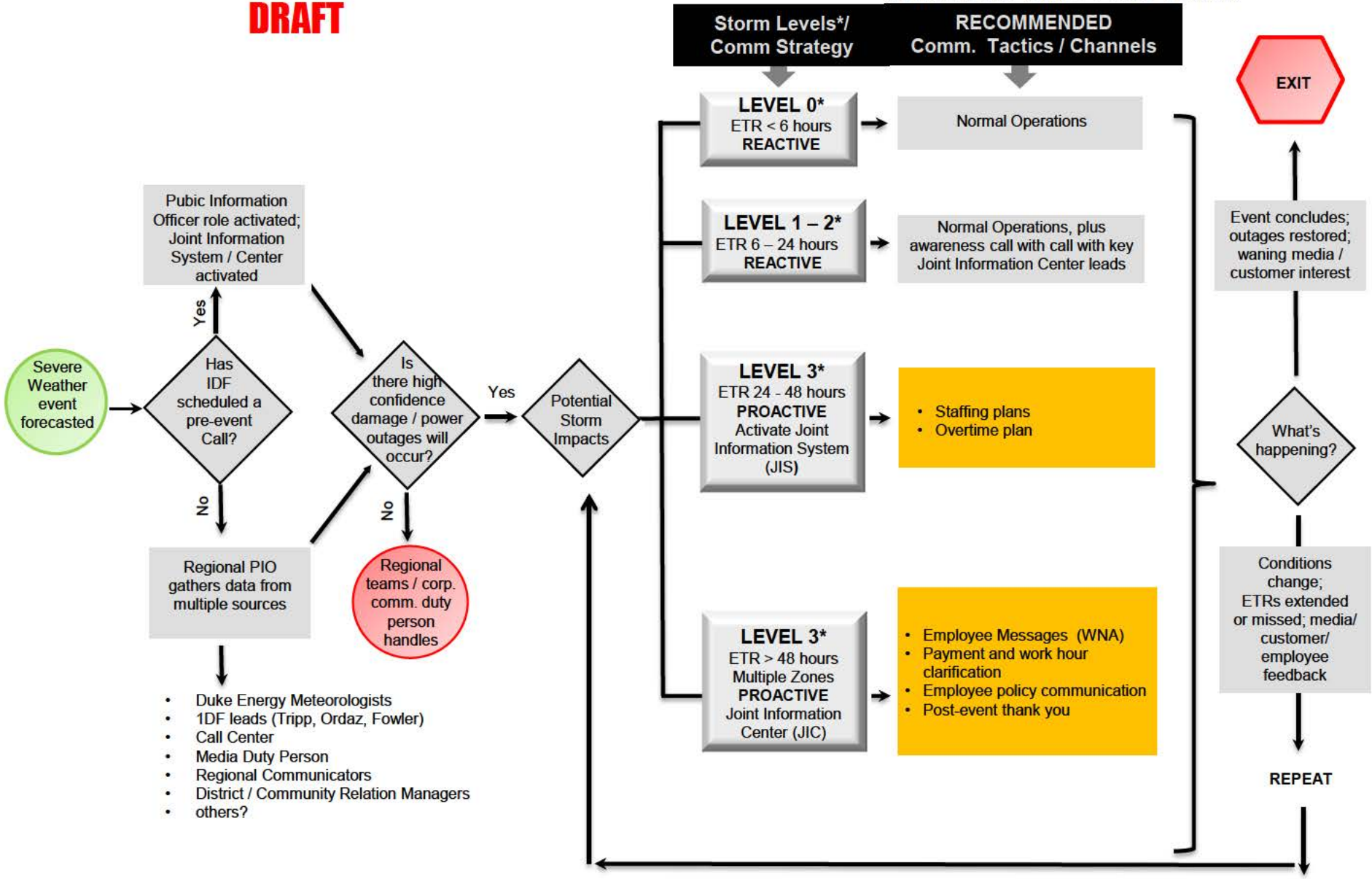


**Storm levels are defined by 1DF Incident Command Structure*

Employee *General Storm Response Communication Plan*

20170272-DEF-STAFF-POD 1-1-000043

DRAFT

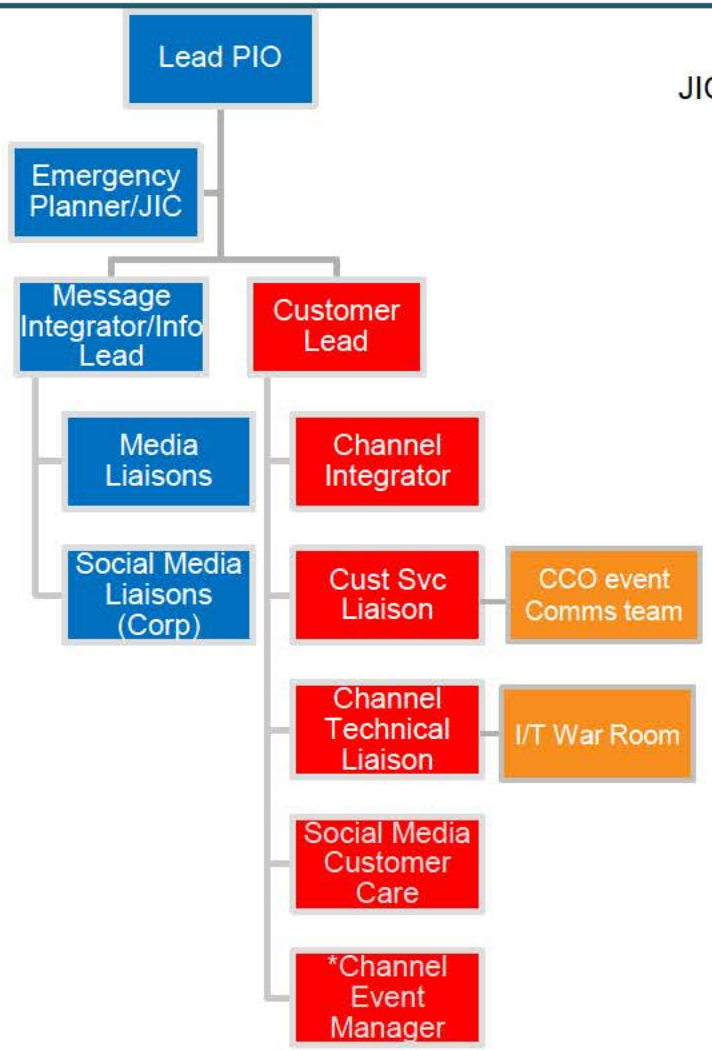


**Storm levels are defined by 1DF Incident Command Structure*

Joint Information Center Storm Response Structure

"**Customer**" Role Definitions:

- **Customer Lead**: Works in concert with the Public Information Officer. Responsible for customer response and development of customer communications based on the storm communications strategy and approved messaging. Leads message synchronization and cadence for direct to customer comms to ensure timely and accurate information in the appropriate channel(s). Activates channel contingency plans in the event of technology issues; oversees customer experience during an event and coordinates with customer care organization and revenue services on policy adjustments and/or support plans needed.
- **Channel Integrator**: Develops and ensures delivery of integrated customer messages across channels (web, email, outbound call scripts, text, etc); understands which channels available to communicate in the event of technology issues and integrates status with customer care organization.
- **Customer Service Center (CCO) Liaison**: Partners with CCO event communications team to share key messages from Joint Information Center with CS specialists and volunteers. Captures rumors and customer needs for key message development.
- **Channel Technical Liaison**: Liaison between IT and Customer Lead/Channel Integrator to provide updates on channel performance and technology issues. Provides real time system updates for Customer Lead/Channel Integrator to more rapidly prepare messaging; enable contingency plans; bring channels back to service.
- **Social Media Customer Care**: Triages and directs inbound social media inquiries to social media storm volunteers. Works closely with JIC social media team and CCO social media to share messages and respond to customers who are engaging in this channel.
- ****Channel Event Manager**: TBD – would activate this role in failure of numerous channels; responsible for working closely with Customer Lead/Channel Integrator to facilitate calls between IT/CCO and other stakeholders to bring channels back to service.



JIC Forward (Regional JIC)



JIC Forward: When the PIO moves to manage the storm on a regional level; the customer experience team member travels to coordinate with PIO. In this regional model, a customer lead/integrator will be "on the ground" to lead these two roles with **direct support** from the core customer team in the Charlotte-based JIC.

20170272-DEF-STAFF-POD 1-1-000044

Key "Customer Contacts"

Updated May 2018

Customer Roles -- Assigned Team Members who can serve in these roles

- Customer Lead: Joni Davis, Taryn Sims, Brittany DuBose
- Channel Integrator: Mike Keller, Laura Price, Stephanie Tucker
    - Regional Customer Lead/Channel Integrator:
      (Carolinas) Mike Keller, Laura Price
      (Midwest) Terry Heath, Laura Price, Nancy White
      (Florida) Mike Keller, Lola Stein, Will Rodgers
- Customer Service Center (CCO) Liaison: Stephanie Tucker; Laura Price, Gwen McCarthy
- Channel Technical Liaison: Meko Hunter, Tia Huff, Jeff Barnett
- Social Media Customer Care: Brittany DuBose; Maddy Piercy, Jake Hill
- **Channel Event Manager: Paul Watkins, Scott Abbott

**For nuclear drills – the CCO Liaison and Social Media Customer Care roles are staffed to participate on behalf of customer experience.

IT Application Portfolio
OMS (Outage Management System) • OMS Florida – InService is the product and Intergraph is the vendor • OMS Carolinas - CADDOPS • Carolina West and Midwest - DOMS • Tracks Outage information across system • Rolls up outage information to highest level common component • Dispatches Outages to trucks • Feeds Outage Communications and iFactor outage maps
COE (Common Outage Entry) • Web front end for call center to enter outages
iFactor Outage Map • Used by external customers to pull up outages in their area • Provides ability to zoom in down to transformer level
Outage Communications Broker • Provides call back to customers with update information related to reported outages.
IVR (Interactive Voice Response) • Handles largest percentage of outage reporting volume • Allows customer to check status of a reported outage
i/Dispatcher • Used by DCC to dispatch/disperse work to trucks in Florida
i/Mobile/TC (Fla Only) • How trucks receive and status work
OLS (Online Services) • WEB interface for reporting an outage for customers in the Carolinas and Midwest OAA (Online Account Access) • WEB interface for reporting an outage for customers in Florida
SwampFox • Outbound Communication Manager • Manages templates for voice, text, and email communications
Acronyms: ITR – Initial Time of Restoration ETR – Estimated Time Restoration

Timeline of Service Disruption Events (SDE)
September

Sunday 10th Irma strikes Florida	Monday 11th	Tuesday 12th	Wednesday 13th	Thursday 14th	Friday 15th	Saturday 16th	Sunday 17th	Monday 18th	Tuesday 19th
OMS Data Distribution Control Center (DCC) provides example of outages that cannot be closed due to Outage Management System (OMS) error.	IT and Vendor work on how to resolve the OMS error message as a result of how the modeling was performed.	IT working to understand why outages are not rolling to breakers. Continued work with the vendor to see how to clean up outages affected by modeling. Numbers on OMS status are not changing based on feeders being closed in the field.	After most crews shut down for the day, tried to clear 10,000 rows from the OMS system, however system would only allow 200. Continued work the vendor to see how to clean up outages affected by modeling.	Continued to work on resolving OMS data issues.	Cleared Zephyrhills data from OMS and began dispatching to Zephyrhills as an OMS event. Overnight cleared all data from OMS	OMS repopulated from customer calls	Work to close outages in the field catching up to back office updates.	Validate numbers in OMS status	Continued to check calls from customer against calls in OMS sytstem.
SDE 1 (7:13PM to 3:02AM – 8 hours) All jurisdictions Online Services (OLS) and Common Outage Entry (COE) slowness – All systems impacted which initiate outage requests (e.g. Interactive Voice Response (IVR), OLS, COE)			SDE 6 (6:42 AM to 5:43 PM – 11 hours) – Florida OMS is Auto generating initial Time of Restoration (ITRs) – Customers were given incorrect ITRs	SDE 10 (5:42AM to 7:30AM – 2 hours) – DEF users unable to access I/Mobile TC – Field Technicians unable to access I/ Mobile TC.	Determination being made of how to deal with customer bills.	SDE 11 (1:00PM to 4:30PM – 25 hours) – DEF OMS DB Copy issue causing slowness – Impacted OMS reporting capabilities		SDE 13 (3:50PM to 11:04PM – 7 hours) – DEP DEF GIS not available for Geographical info – Eastern Carolinas DEP and Florida DEF do not have Geographical Information Systems available for locating physical elements such as substations, power poles, buildings.	
	SDE 2 (9:09AM to 1:00PM – 28 hours) – Slow response with duke-energy.com – Internal and external customer cannot access the Duke-Energy home page or outage page.		SDE 7 (9:40AM to 10:28AM - <1 hour) – OLS login issues observed – Customers could not report outages via WEB				SDE 12 (6:15AM to 8:30AM – 2 hours) – OLS login issues observed – Customers could not report outages via WEB		
	SDE 3 (9:52AM to 9:59PM – 12 hours) – DEF Kathleen substation down – Loss visibility to Telecom field assets. 81 SCADA RTU sites and 19 radio sites	SDE 5 (9:18AM to 12:30PM – 3 hours) – OLS login issues observed – Customers could not report outages via WEB	SDE 8 (11:02AM to 11:35AM – 25 hours) – DEF COE Outage Ticket History missing – Call Center agents could not view ticket history in COE at times for previously reported outages.						
	SDE 4 (3:30PM to 8:30AM – 89 hours) – OMS active transformer out process is failing – Outage map was incorrect for FL								
			SDE 9 (11:35AM to 2:55PM – 3 hours) – Duke Energy Florida (DEF) Bayside voice is down- internal business calls could not be completed at Bayside nor could the Public Service Commission (PSC) reach that center. Incoming customer calls were not affected.						

Legend:
OSM SDE's
All Other SDE's

Questions we asked ourselves during this assessment.

- What things went well?
- Were the systems current on patches/fixes?
- Did we have the appropriate level of resources?
- Did we have disciplined “change control” in place?
- Are the Business Continuity Plans sufficient?
- Did we track and complete prior lessons learned?
- Were we efficient in how we deployed resources across different structures (IST, IT “war room”, Distribution IMT’s, DCC, etc.)
- Are our systems sized for a full volume outage event?
- Which IT systems did not perform as expected and why?
- How do our IT systems interact with one another?
- How did we lose confidence in the Outage Management System data?
- How did not having accurate outage data impact communicating to our customers?
- Where did we experience a lack of clarity around decision owners?

STORM Ogranization: Information Technology Systems

Hurricane/System Name: 2017 Irma					
What went well					
Item 1	Good collaboration across IT and business				
Item 2	IT War Room call – provided good central source of needed resources				
Item 3	IT having a physical presence at business locations (IT CIO - at ground zero)				
Item 4	Telecomm Switch and IVR performed well; design allowed us to enable and disable functions in a timely fashion per Customer requests				
Item 5	Early during storm an option was put up front on IVR enabling customer to speak with rep quicker				
Item 6	CIO Update – daily scheduled mtgs				
Item 7	CIO Staff dispersed to different war rooms				
Item 8	CA APM (Wylie) – centralized monitoring – dashboard helped with troubleshooting				
Item 9	Lessons Learned from Hurricane Matthew – that were applied – made systems better (all high value items have been implemented)				
Item 10	Pre-meeting (proactive call) looked at all systems and prepped systems				
Item 11	75 changes made to these systems between Matthew and IRMA - improved performance				
Item 12	Pre-meeting with IT and the business prior to the storm				
Item 13	Agile changes made right before the storm				
Item 14	More than 1 million inbound communications received – much larger than ever before in Fla. –systems performed well to handle the volume				
Item 15	Increased usage of texting capability for our customers utilized --- provided 114K outbound texts				
Item 16	HP practices during trouble-shooting (enabled us to get changes correct on first pass)				
Item 17	Corp Comm staff co-located with DCC and ICS leadership				
Item 18	Utilization of resources across all Jurisdictions (including vendors) - Leveraged resources from all jurisdictions & Piedmont to support Fla.				
Item 19	1600 specialists (CSC Employees only)handling calls – largest number ever				
Item 20	More than 500K customers able to speak with rep (if they chose to)				
Item 21	Largest number of corporate volunteers ever				
Item 22	OMS Vendor support engaged and readily available (24 x7) throughout the storm				
Item 23	21st Century handled more volume than ever – without issue (inbound and outbound)				
Item 24	Every Florida phone number was redirected to IVR				
Outage Management Systems (OMS) Improvements					
	Identified Gap	**Owner**	**Actions**	**ST or LT**	**Completion**
Item 1	OLS and COE slowness	Patty Jasper	Improve error messages for transactions that timed out.	ST	12/31/2017
Item 2	OMS Active Transformer Out process not completing - Ifactor outage maps and Outage communications were not accurate	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	Review the architecture of the integration between the OMS and Ifactor and Outage Communications system. Provide recommendation on changes to improve data flow and processing	LT	3/31/2018
Item 3	Data integrity issue with OMS data	Jane Brown	Work with business and vendor to fully understand the process that should be used to prepare the system for Damage Assessment. Install new version of Integraph software that has a fix for the bug that was found around "Prefer Job" processing.	ST	12/31/2017
Item 4	ensure work done on paper is updated to the OMS system on a daily basis.	Jane Brown	Work with the business to ensure outages restorations are captured and updated in a timely manner when being done via paper.	LT	3/31/2018
Item 5	Call center agents not seeing outage history for some customers	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	Re-architect the integration between the backend entry systems and OMS. Improve error messaging for transactions that timed out.	LT	3/31/2018
Item 7	Florida OMS autogenerating incorrect ITR's	Jane Brown	Implement Intergraph provided software patch for the OMS to fix the ability to turn off IVRs	ST	11/30/2017
Item 8	Florida OMS autogenerating incorrect ITR's (continued)	Jane Brown	Verify functionality exist to turn off ITRs in CADOPS in Car-East	ST	11/30/2017
Item 9	Florida OMS autogenerating incorrect ITR's (continued)	Jane Brown	Verify functionality to turn off ITRs in DOMS in Car-West/Mid-West	ST	11/30/2017
Item 10	Florida OMS autogenerating incorrect ITR's (continued)	Patty Jasper	Provide Sustainability team a requirement to provide a feature to manage the ability to not pass ITRs to all channels	ST	11/30/2017

Item 11	Based on the item above. Disabled config table in IVR (for Fla customers [based on phone # customer calls]. Removed the DNIS overrides to keep customers from hearing or seeing the system-generated ITRs from the Florida OMS system.	Jane Brown	Need to capture this as a work around until the fix for the bug in the above item is provided by the vendor	ST	12/31/2017
Item 12	DEF OMS DB Copy Issue causing slowness - storm reporting metrics were negatively affected	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	Re-architect the copying of data to the non-realtime OMS database so that future issues will not be seen during high volume outage conditions	LT	3/31/2018
Item 13	Lack of DBA knowledge specific to OMS	Jane Brown	Dedicated DBA for all OMS's. Durable team concept	ST	12/31/2017
Duke-Energy.com Improvements					
	Identified Gap	**Owner**	**Actions**	**ST or LT**	**Completion**
Item 1	Sitecore code	Richard Donaldson /Michelle Littlejohn	Modify Site Header: • Rework page layout, Refactor Navigation in stages, Reduce jurisdiction checks • Refactor CustomTokenManager to remove thread locking • Change renderings to AJAX on My Account page • Reduce usage of StringBuilder & String.Compare • Eliminate passing arrays as parameters (use arrays in method only)	ST	3/31/2018
Item 2	Sitecore configuration tuning	Richard Donaldson /Michelle Littlejohn	Change thread timeout setting from 600 seconds to 60 seconds. Modify cache sizing and usage to avoid large instances of trash collection	ST	12/31/2017
Item 3	Environmental	Patty Jasper / Keith Jenkins	Enable X-Forward-By on production servers to allow for logging of visitor IP address. Complete smart health checking functionality and run performance testing on solution (current backlog task already)	ST	12/31/2017
Item 4	Storm Mode	Richard Donaldson /Michelle Littlejohn	Automated & manual switchover. Jurisdictional trigger. Content & layout changes to improve speed & provide better customer experience	LT	6/30/2018
Item 5	Monitoring, Logging & Analysis	Patty Jasper / Keith Jenkins	Reexamine advanced health monitoring and alerting through Introscope and other standard tools. Further explore capabilities of CA APM Team Center and establish regular use. Leveraging code analysis tools during development process. Validate adequate logging and monitoring of all devices	ST	12/31/2017
Item 6	Sitecore Upgrade	Richard Donaldson /Michelle Littlejohn	Perform the upgrade. Replace GSA(Google Search Appliance) with Coveo (or selected search tool). Research CDN (Content Delivery Network).	LT	12/31/2018
Item 7	Other Performance Tuning Opportunities	Patty Jasper	Carbon Black threat management – how the solution impacts CDP. OMS relationships.	LT	6/30/2018
Online Services (OLS) Improvements					
	Identified Gap	**Owner**	**Actions**	**ST or LT**	**Completion**

Item 1	use of tools for queries	Patty Jasper	Use of the query hint "OPTIMIZE FOR UNKNOWN"	ST	11/30/2017
Item 2	use of complicated queries in OLS	Patty Jasper	Rewrite the query to simplify it so that the SQL Server Query Optimizer can do a better job.	ST	11/30/2017
Item 3	Query performance	Patty Jasper	Use batch process or SQL stored procedure to create a pre-populated view of the data request so that OLS can perform a simple query to select from a single view.	LT	2/28/2018
Telecomm Improvements					
	Identified Gap	**Owner**	**Actions**	**ST or LT**	**Completion**
Item 1	Customers were calling leveraging legacy lines	Frank Cook	Implement a redundant solution for all toll free numbers and decommission the local numbers 407 (Lake Mary) and 727 (Bayside)	LT	3/31/2018
Item 2	Carrier lines were full	Frank Cook	Investigate how to grow capacity on demand	LT	3/31/2018
Item 3	Design of the Florida trunk lines	Frank Cook	Redesign the Florida trunk lines	LT	3/31/2018
Item 4	Documentation for the direct connection of the Florida Utility Commision phone line	Frank Cook	A process document should be created to describe steps that should be taken to redirect the Florida Utility Commission toll free number to another location in the event of a service interruption. Voice and Data Delivery support staff should be trained on the contents of the document and where it can be retrieved.	ST	10/27/2017
Item 5	Re-direction of the commission phone line	Frank Cook	Implement methods to automatically redirect the Florida Utility Commission toll free number to another location in the event of a service interruption.	ST	1/2/2018
Item 6	Alarms cleared for power outage without the power being restored.	Frank Cook	Per recommendations from the Vendor, additional memory should be purchased and installed for the Telenium network monitoring system. Furthermore, the system should be audited by the manufacturer and recommendations made to ensure that it is sufficiently sized to handle peak demands during significant storm events.	ST	11/27/2017
Item 7	Power lost at telecommunications hub. Power fed by local Co-op.	Frank Cook	A request should be made to the Transmission organization to have a Duke Energy transformer installed at the Kathleen substation to provide power to Duke Energy's equipment.	ST	11/27/2017
Item 8	Power lost at telecommunications hub	Frank Cook	An alternative power source (i.e. generator) should be purchased and installed at the Kathleen location to provide power to mission critical Duke Energy equipment during extended power outages.	LT	4/27/2018
Change Process Improvements					
	Identified Gap	**Owner**	**Actions**	**ST or LT**	**Completion**

Item 1	Change made under service request and not Change Request	Frank Cook	Conduct a review of the IT Change Management policy and set expectations with staff to ensure clarity regarding 1) appropriate use of Service Request verses Standard and/or Emergency changes, 2) Risk Levels of Changes, 3) distinct change records for different environments,)	LT	3/31/2018
Item 2	Change request lists does not include changes that span across days	Frank Cook	Implement steps in the daily IT War Room bridge process for the designated lead to review all changes scheduled within the 24 hour period (should include changes which span the window as well as those which start/end within the window).	ST	12/29/2017
Item 3	Daily review of IT changes scheduled during storms	Frank Cook	Evaluate change management process as it relates to Storm Prep and Storm mode to add rigor to criteria for extracting changes for review. Extracts should include changes that occur during next 7 days as well as those risk level 3 or above changes which span the 7 day window.	ST	12/29/2017
Item 4	accuracy of evaluation of impact of changes	Frank Cook	Conduct an assessment of the IT Organization's understanding of the change and configuration management processes around effective impact analysis. Identify and document gaps / deficiencies which contribute to incomplete/ineffective impact analysis. This evaluation / assessment should include areas such as the discovery process for CIs as well as the mapping process.	LT	1/5/2018
Item 5	implementation of assessment	Frank Cook	Develop plan and implement identified improvements from the assessment in the item above to close gaps / deficiency and aid in further maturing the configuration management process, specifically around effective impact analysis.	LT	3/15/2018
Other SDE During Storm Improvements					
	Identified Gap	**Owner**	**Actions**	**ST or LT**	**Completion**
Item 1	Unable to access i/Mobile TC	Jane Brown	Determine if can monitor I/Mobile connection to detect need to restart services. Determine if vendor has fixed the issue.	ST	12/31/2017
Item 2	Unable to logon to SS9	Patty Jasper	Implement monitoring to detect ldap corruption.	ST	12/31/2017
IT War Room Improvements					
	Identified Gap	**Owner**	**Actions**	**ST or LT**	**Completion**
Item 1	One leader for the room.	Frank Cook	Have designated lead on each shift.	ST	12/31/2017
Item 2	Should be the entry point and dispatching point of elevated IT issues	Frank Cook	Process defined to elevate and track issues	ST	12/31/2017
Item 3	Use of conference bridges in the room	Frank Cook	Conf. bridge – need to separate business discussions from IT Technical discussions	ST	12/31/2017
Item 4	Storm Dashboards	Frank Cook	Improve the storm monitoring Dashboard	ST	12/31/2017
Item 5	Be more proactive	Frank Cook	Define health checks, monitor for long running queries, etc	ST	12/31/2017

Item 6	Improve troubleshooting and support in the room	Frank Cook	Have pre-mapped diagrams for troubleshooting available in room. Also ensure that knowledgeable resources are in the room.	ST	12/31/2017
Item 7	Limited number of knowledgable folks (IT and Business) of the systems	Frank Cook	Increase bench strength (IT and business) for systems across the board	ST	12/31/2017
Item 8	Location of IT folks in the storm	Frank Cook	Have support teams in War room and IT SME's in the field	ST	12/31/2017
Item 9	Use of external bridge lines during the storm is confusing	Frank Cook	Clarify that the bridge for the War room is an external bridge line not the Duke internal line	ST	12/31/2017
Item 10	Simplify call in process for scheduled storm updates	Frank Cook	Add one touch sequence to daily calls to help for folks calling in from cell phones	ST	12/31/2017
Item 11	Lack of formal turnover process for shift change	Frank Cook	Need formal turnover process for each shift	ST	12/31/2017
Item 12	Unclear of exit criteria and return to normal operation	Frank Cook	Need clear exit criteria and return to normal operations	ST	12/31/2017
Integrated Testing Improvements					
	Identified Gap	**Owner**	**Actions**	**ST or LT**	**Completion**
Item 1	Integrated system testing scope	Richard Donaldson	Scope of test needs to be: Blue Sky for baseload, largest storm to date and 100% system outage	LT	3/31/2018
Item 2	Shared infrastucture	Richard Donaldson	Need to account for business processes that would stress shared infrastructure in normal operation jurisdicitions while storm happeningin others. For example finance doing month end close while storm happening.	LT	3/31/2018
Item 3	Antiquated data in QA and test systems	Richard Donaldson	Ensure a periodic data refresh is done as a part of comprehensive testing.	LT	3/31/2018
Architecture/System Improvements					
	Identified Gap	**Owner**	**Actions**	**ST or LT**	**Completion**
Item 1	Consistent data flow to meet customer needs	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	Review OMS data architecture to ensure consistent flow of data to meet customer needs. Review to include but not limited to: Infrastructure design and CPU. Need to ensure all 4 OMS systems in the review.	LT	3/31/2018
Item 2	OMS architectue to support near real time	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	Review integrated OMS architecture and modify to support real-time or near real time access for peripheral applications including Transformer file performance, iFactor, COE, EOC Reporting and Maps, Mobile Outage Reporting, Proactive Outage notification, DBCOPY/Archive, IVR/ Digital Channels	LT	3/31/2018
Item 3	end to end flow from calling channels to OMS	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	Review architecture and infrastructure to improve end to end workflow from calling channels to OMS. More information through WM and MQ. Determine if providing an off-line process to handle high volume outage reporting is appropriate.	LT	3/31/2018
Item 4	Systems reporting conflicting data. OMS Status and Mobile Outage reporting tool were not showing the same data.	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	One authoritative source of data.	LT	3/31/2018

Item 5	COE dependent on OMS. COE enter and wait on OMS for feedback. Causes delay.	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	Investigate can the COE link to OMS be rearchitected.	LT	3/31/2018
Item 6	COE slowness and availabality caused multiple outage tickets to be emailed to DCC	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	Review COE architecture to see if more CPU/hardware is needed to support higher volume than expected users (600 expected versus 1600 actual)	LT	3/31/2018
Other Improvements					
	Identified Gap	**Owner**	**Actions**	**ST or LT**	**Completion**
Item 1	IT given conflicting direction from Senior management during the storm	Chris Heck	Clearly defined owner with business partner to escalate issues	ST	12/31/2017
Item 2	OMS server located in Florida Regional HQ	Jane Brown	Review location of critical infrastructure	LT	3/31/2018
Item 3	Storm prep manual	Frank Cook	Investigate ability to automate any portions of storm prep	LT	3/31/2018
Item 4	Reliance on data link to Florida	Frank Cook	Investigate the consequences and develop plan for loss of the data link to Florida during storm. (Lose communications to core OMS at FL. Reg. HQ. Lose Charlotte to FL.	LT	3/31/2018
Item 5	Lack of storm execution practice	Chris Heck	Conduct annual table top exercises for storms	LT	3/31/2018
Item 6	Key decisions that need to be made prior to the storm	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	Codify the prestorm checklist made prior to Irma	ST	12/31/2017
Item 7	outbound communication options	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	Should we send out outage notification when restoration time changes (sooner)	LT	3/31/2018
Item 8	Agile changes and system health	Patty Jasper/ DT Thomas / Steve Neglia (Reliability Team)	How do we ensure systems stay healthy as we implement changes in agile methodology.	LT	3/31/2018
Item 9	Managing expectation for information. Constant request for updates from technical teams distracting to restoring service	Frank Cook	Have request for updates flow through the leader of the IT War room. Determine cadence for updates to business partners and communicate updates on the cadence.	LT	3/31/2018
Item 10	Efficiency in deploying resources across War rooms	Frank Cook	Detemine where to deploy CIO staff across business areas (IT War room, DCC, TCC, IST, call centers, impacted regions)	LT	3/31/2018
Item 11	Lack of communications plan	Frank Cook	Enact an overall daily communication plan of activities - IST, DCC, IT, Corp. Comm., Call Center	LT	3/31/2018
Item 12	Formal process to track and review actions	Chris Heck	Create a formal process to track and review quality of completed actions from lessons learned.	ST	12/31/2017

Glossary – Core Customer Related Systems			
System	**Full Name**	**Vendor**	**Definition**
CBIS	Customer Billing Information System	Internal	DEC West Carolinas Customer Billing System
CMS	Customer Maintenance System	Internal	DEMW Customer Maintenance System
CSS	Customer Service System	Internal	DEF Florida Customer Service System
CIM	Customer Information Management	Internal	DEP Carolinas East Customer Information Management
IVR	Integrated Voice Response	Internal	Integrated Voice Response
OAA	Online Account Access	Internal	DEP & DEF Online Account Access
OLS	Online Services	Internal	DEC & DEMW authenticated online access
IC	Interaction Center	Avaya	Avaya soft phones used by call center specialists
Customer Contact Citrix		Citrix	Citrix interface used by 3rd party vendor for CIS handling
Openway	Openway	Itron	DEE Platform for capturing AMI (Automated Metering Interface) data
MDM	Meter Data Management	Oracle	DEE platform for managing and storing smart meter data produced by AMI
EDMS	Energy Data Management System	Oracle	DEO platform for managing and storing smart meter data produced by AMI
IEE	Itron Enterprise Edition	Itron	DEC meter data collection and management for large customers
MV90	MV90	Itron	DEP/DEF meter data collection and management for large customers
FCS	Field Collection System	Itron	DEE meter data collection system for non-AMI meters (drive-by, walk by)
DOMS Carolina	Distribution Outage Management System	Oracle	DEC Outage Management System. This System includes DOMS Duke Call Entry SE and DOMS Web Workspace Carolinas
DOMS MW	Distribution Outage Management System	Oracle	DEM Outage Management System. This System includes DOMS Duke Call Entry MW and DOMS Web Workspace MW
InService	InService	Intergraph	DEF Outage Management System
TCA CADOPS (NMS)	CADOPS	ABB	DEP Outage Management System. This System includes CADOPS and Common Outage Entry
DMS/SCADA	Distribution Management System	GE	DEC SCADA and Distribution Management System

Carolina			
DMS/SCADA MW	**Distribution Management System**	**GE**	**DEM SCADA and Distribution Management System**
DMS/SCADA DEP	**Distribution Management System**	**Schneider**	**DEP SCADA and Distribution Management System**
DMS/SCADA DEF	**Distribution Management System**	**Schneider**	**DEF SCADA and Distribution Management System**
Service Suite	**Service Suite**	**Ventyx**	**DEE Mobile Work Management System**

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: July 16, 2018

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO
STAFF'S SECOND SET OF INTERROGATORIES (NOS. 13-27)

Duke Energy Florida, LLC ("DEF"), subject to and without waiving the contemporaneously served objections to these requests, responds to the Staff of the Florida Public Service Commission ("Staff") Second Set of Interrogatories to DEF (Nos. 13-27) as follows:

13. Please refer to the direct testimony of witness Cutliffe, page 5, lines 19-20. Please define native and non-native contractors.

Answer:
Native contractors are resources that are currently working for Duke Energy Florida (i.e., in a non-storm response function). Non-native contractors are any resources that are not currently in a working relationship with Duke Energy Florida and were therefore brought onto the system solely for storm response support.

14. Please refer to the direct testimony of witness Cutliffe, page 5, line 25 and page 6, lines 1-2. Witness Cutliffe testified that depending on the projected event timing and intensity, some resources would be mobilized and pre-positioned ahead of the impact. Does DEF's Emergency Response Plan specify a time frame for the mobilization and pre-positioning of resources?

a. If so, what is that time frame?
b. If not, why not?

Answer:
a. It can vary depending on the origination of the tropical threat, but generally the decision for mobilization and prepositioning takes place at approximately 72 hours from potential landfall.

b. N/A

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 23
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Matthews (25-27)Cutliffe (13-24)

15. Please refer to the direct testimony of witness Cutliffe, page 6, lines 10-11. Please explain whether or not the additional 1,667 persons utilized during Hurricane Irma were sufficient to address customer contacts.

Answer: DEF was sufficiently staffed to address customer contacts during our Hurricane Irma response. Our staffing included in-house Customer Care Specialists, third party vendor specialists and internal staff augmentation, allowing us to answer 2.6 million customer contacts, ~600,000 of which were handled outside of technology (live voice). Our staffing plan ensured we could respond to customers during peak periods as well as support customer needs 24 hours a day.

16. Please refer to the direct testimony of witness Cutliffe, page 8, lines 12-14. Please identify how often customers the participated in DEF's outage communications program received updates.

Answer:
Outage Alerts: With outage alerts, we proactively notify customers by text, voice message or email when they have an outage.

We'll also send status updates and estimated restoration times.

Customers can sign up and manage contact information online.

Customers receive: Restoration time & status updates; Information about outage causes; Notification when power is restored

Customers can text **REG to 57801 to register for outage alerts service**: Once enrolled, other commands include:

Text **OUT** to report an outage; Text **STATUS** to get updates on existing outages; Text **HELP** for instructions and a customer service number; text **STOP** to stop receiving outage alert texts; Text **RESUME** to receive outage alert texts again.

In general, proactive outage texts are triggered to customers when crews update ETRs and other information in OMS. In addition, customers can text **STATUS** to us and they receive a return status update text with the details the crews have entered into OMS. However, during Irma, this functionality was not available due to the technical issues OMS experienced.

17. Please refer to the direct testimony of witness Cutliffe, page 11, lines 24-25 and page 12, lines 1-2. Witness Cutliffe testified that DEF has converted 67 miles of primary lines and completed 31 feeder ties.

a. As of what date did DEF accomplish the conversion of the 67 miles of primary lines and the completion of the 31 feeder ties?
b. How many more miles of primary lines does DEF plan to convert? Please provide a timeline for DEF's plan to convert.
c. How many more feeder ties does DEF plan to complete? Please provide a timeline for DEF's plan to complete.

Answer:

a. These totals were current as of March 1, 2018.

b. DEF plans to continue the converting primary lines as part of the storm hardening plan. Future plans will be filed by May 1st, 2019 as part of the 3 year storm hardening plan for 2019-2021.

c. DEF plans to continue feeder ties as part of the storm hardening plan. Future plans will be filed by May 1st, 2019 as part of the 3 year storm hardening plan for 2019-2021.

18. Please refer to the direct testimony of witness Cutliffe, page 12, lines 6-13. Witness Cutliffe testified to the number of wooden poles inspected since 2006.

a. How many poles were replaced and repaired as a result of the inspections?
b. What is the typical type of pole used for replacement?
c. Please provide a description of the treatment and reinforcement used by DEF to extend pole life.
d. How does DEF determine if a pole needs replacement versus a treatment?

Answer:

a.

Year	Poles Replaced
2006	1,156
2007	1,130
2008	1,903
2009	3,018
2010	3,070
2011	2,887
2012	4,670
2013	5,722
2014	5,597
2015	8,420
2016	4,429
2017	2,654

DEF began tracking pole reinforcements separately in 2016.

Year	Poles Reinforced
2016	3,248
2017	763

b. CCA treated wood pole

c. TREATMENTS:
Cobra rods are a copper boron rod that are inserted into the pole through a ½" treatment hole drilled into the pole at a 30 degree downward angle. The hole is then sealed with a tight fitting plastic plug. Over time the copper boron rod will dissolve and dissipate through the wood.
MP-500-Ext Paste is a brush on paste applied to poles from the groundline, down to a depth of 18" below grade. The paste is a copper borax compound that is brush on, then wrapped with a vapor barrier.

REINFORCEMENTS:
CTRUSS metal brace

d. A pole with remaining circumference between 50% and 87% of original is a candidate for reinforcement or replacement, dependent upon field conditions as identified by field inspector; a pole with less than 50% remaining circumference of original is a candidate for replacement only.

19. Please refer to the direct testimony of witness Cutliffe, page 17, line 22, through page 18, line 3. Please explain how DEF determines the number of mutual aid workers that will be needed for the restoration process.

Answer:
Duke Energy uses the latest available forecast information (winds, track and intensity) provided by our meteorologist to populate modeling tools to estimate potential damage by location and estimated number of line, tree and DA resources required above our native Duke Energy Florida resources.

20. Please refer to the direct testimony of witness Cutliffe, page 18, lines 11-16. Witness Cutliffe testified to how DEF uses the information from predictive storm models.

a. What is the typical time frame to begin securing commitments for restoration prior to the storm impacting DEF's service territories?
b. Is this time frame part of DEF's Emergency Response Plan?
c. If not, what is the time frame in DEF's Emergency Response Plan and why did DEF deviate from its Plan?

Answer:

a. It can vary depending on the origination of the tropical threat, but generally the decision to begin securing commitments takes place at approximately 72 hours from potential landfall.

b. Yes

c. N/A

21. Please refer to the direct testimony of witness Cutliffe, page 19, lines 16-18. Witness Cutliffe testified to opening mustering sites and base camps.

a. How far in advance of a storm impacting DEF's service territory are mustering sites and base camps established?
b. Is this time frame part of DEF's Emergency Response Plan?
c. If not, what is the time frame in DEF's Emergency Response Plan and why did DEF deviate from its Plan?

Answer:

a. It can vary depending on the origination of the tropical threat, but generally the decision takes place at approximately 72 hours from potential landfall. Setup and activation takes place once the storm exits impacted areas and conditions are safe.

b. Yes.

c. N/A

22. Please refer to the direct testimony of witness Cutliffe, page 21, lines 5-22, page 22, lines 12-24, and page 23, lines 1-5. Witness Cutliffe testified as to how DEF responds after a storm passes its service territory.

a. Approximately how soon after a storm passes through DEF's territory do the damage assessment teams report their findings to the outage management system?
b. How are the findings reported, for example, via tablets while still in the field?
c. Approximately how soon after the damage assessment teams report their findings are restoration crews dispatched for repairs?
d. Is this time frame part of DEF's Emergency Response Plan?
e. If not, what is the time frame in DEF's Emergency Response Plan and why did DEF deviate from its Plan?

Answer:

a. Damage Assessment teams begin assessing damage once the "all clear" is reported. Once assessed, the teams return completed damage forms to the Field Coordinators for creation of work packets; dependent upon distance and amount of damage, this can take anywhere from two to six hours.

b. Findings are reported electronically via tablets, laptops or smart phones.

c. Crews are dispatched for repairs to the largest outages prior to DA being completed while DA is focusing on smaller outages, ensuring that all resources are productive once the "all clear" is reported.

d. Yes

e. N/A

23. Please refer to the direct testimony of witness Cutliffe, page 24, lines 13-23 and page 25, lines 1-12. Witness Cutliffe testified that after restoration efforts are concluded, DEF conducts electrical and physical condition sweeps of the feeders and identifies the issues that require mitigation to return the distribution system to its pre-storm condition.

a. When restoring service, do restoration crews report what equipment still needs repair but is working safely?
b. If so, are these reports a starting point for the sweep of the system in identifying where repairs should be made?
c. If not, what is the starting point?

Answer:

a. During restoration efforts, crews focus on restoring service as quickly and safely as possible; therefore, crews do not document additional issues identified that will later require repair, rather those issues are identified during the system sweeps performed after restoration efforts are completed.

b. N/A

c. Any feeder that went through the Assess, Isolate, Restore process is assigned for final sweep as well as any other areas identified by the ICS that would warrant additional review.

24. Please refer to the direct testimony of witness Cutliffe, Exhibit JC-1.

a. Is this the same assessment study that was provided in response to OPC's first request of production of documents, number 4?
b. Please identify the primary cause or major causes of pole failures determined by Accenture Consulting.
c. Please identify any lessons learned to date to mitigate pole damage in the future.

Answer:

a. Yes

b. While no predominate causal factor was identified, nearly seventy-two percent (71.8%) of pole failures involved a tree. The Accenture report noted that, "Results from both simple and multiple analyses did not have a high correlation with the actual cause of pole failures. This suggests that other causal factors contributed to pole failures, e.g., damage to surrounding vegetation and additional loading on distribution facilities."

c. The report validated DEF's prior conclusion that trees and vegetation outside of the right of way is one of the most significant risks to the distribution grid. The report validated that the DEF Pole Inspection and Replacement program is working and that pole age or deterioration were not causal factors for broken poles.

25. Please refer to the direct testimony of witness Matthews, page 14, lines 1-2. Please explain what is meant by "grid security."

Answer:
The use of 'grid security' references prioritizing transmission lines within the grid in FL as 'secured and stabilized' based on the overall condition of the State's grid (multiple transmission providers-FERC/NERC oversight) as well as DEF's transmission lines. It is not a defined term, it was used in testimony to state the nature of prioritization of the transmission system; DEF coordinates with other utilities, adhering to FRCC policies and procedures and NERC reliability requirements, to establish DEF's transmission system priorities and ensure the safe-guarding and securing of DEF and the State's electrical grid.

26. Please refer to the direct testimony of witness Matthews, page 17, lines 1-9. Witness Matthews testified as to when and how DEF implements its Transmission Department Storm Plan.

a. How is it determined which resources, helicopters or truck patrols, should be deployed first?
b. What is the time frame before the second patrol is sent out to assess damage?

Answer:
a. Typically, helicopters are deployed first, however, weather (wind speeds) dictates if/when any damage assessment patrols may begin. Truck / Ground patrols are done simultaneously to air patrols, based on outages, expediency and safe mode to travel, and the ability to get to facilities.

b. As noted in testimony and Q26a, the truck / ground patrols can be conducted simultaneously, as soon as it is safe to travel, and immediately upon notification of outages impacted areas, the air and ground patrols commence.

27. Please refer to the direct testimony of witness Matthews, page 21, lines 13-16. Witness Matthews testified that following the restoration effort, DEF would conduct sweeps of the transmission system to identify further storm-related damage that needs repair or replacement.

a. When restoring service, do the restoration crews report that equipment still needs repair but is working safety?
b. If so, are these reports a starting point for the sweep of the system in identifying where repairs should be made.
c. If not, what is the starting point?

Answer:
During the restoration phase, transmission receives notifications of the facilities that were out of service, dispatches appropriate assessment resource and then schedules crews to fix based on prioritization. During the repair process, if additional damage is discovered, it is reported and prioritized for repair as well. At the conclusion of the restoration process, DEF then "sweeps" (detailed patrol) the Transmission system via helicopter to identify any unknown potential future causes of an outage. In some instances, where DEF is satisfied that an area of the system was not impacted by a storm, a sweep will not be conducted on this portion of the system.

a. Yes. If restoration resources identify a system component, or item, which is able to continue to provide electrical service, yet may cause a future outage, it will be reported to the respective area storm center. The issue will then be moved into the list of identified restoration items to be addressed according to its priority.

b. No, these reports are not the 'starting point' for identifying where repairs should be made.

c. 'Starting point' for the final sweep is when all known (identified and prioritized) restoration work is complete.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF Seminole

I hereby certify that on this 16 day of July, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared ROBERT MATTHEWS, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 25 through 27, of STAFF'S SECOND SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 13-27) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 16 day of July, 2018.

ROBERT MATTHEWS

Notary Public
State of Florida, at Large

My Commission Expires:

KAROL ANN CARR
MY COMMISSION # GG010042
EXPIRES July 10, 2020
(407) 398-0153 FloridaNotaryService.com

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this _____ day of _____, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 13 through 24 of STAFF'S SECOND SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 13-24) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of _____, 2018.

_____
JASON CUTLIFFE

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: July 23, 2018

NOTICE OF FILING VERIFIED AFFIDAVIT

Duke Energy Florida, LLC, ("DEF") hereby gives notice of filing the verified affidavit of Jason Cutliffe in support of DEF's Response to the Staff's Second Second of Interrogatories (Nos. 13-27), filed on July 17, 2018, via electronic mail to Kyesha Mapp, Office of General Counsel, (kmapp@psc.state.fl.us), this 23rd day of July, 2018.

/s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, FL 33701
T: 727. 820.4692
F: 727.820.5041
E: Dianne.Triplett@Duke-Energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 E. College Avenue, Suite 800
Tallahassee, FL 32301
T: 850.521.1428
F: 727.820.5041
E: Matthew.Bernier@Duke-Energy.com

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 23rd day of July, 2018.

/s/ Matthew R. Bernier
Attorney

Kyesha Mapp Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 kmapp@psc.state.fl.us J. R. Kelly / C. Rehwinkel Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com George Cavros, Esq. Southern Alliance for Clean Energy 120 E. Oakland Park Blvd., Suite 105 Fort Lauderdale, FL 33334 george@cavros-law.com

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 17th day of July, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number(s) 13 through 24 of STAFF'S SECOND SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 13-24) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 17th day of July, 2018.

John Jason Cutliffe

JASON CUTLIFFE

TYLER PARKER
Notary Public - State of Florida
Commission # FF 946558
My Comm. Expires Dec 28, 2019
Bonded through National Notary Assn.

Notary Public
State of Florida, at Large

My Commission Expires:
Dec 28, 2019

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: August 17, 2018

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO STAFF'S SECOND REQUEST FOR PRODUCTION OF DOCUMENTS (NO. 2)

Duke Energy Florida, LLC ("DEF"), responds to the Staff of the Florida Public Service Commission's ("Staff") Second Request for Production of Documents (No. 2) as follows:

PRODUCTION OF DOCUMENTS

2. Please refer to Exhibit JC-1, Forensic Analysis of Storm Damage to DEF's Distribution System as a Result of Hurricane Irma ("Accenture Report"). Did Accenture Consulting perform a forensic analysis of storm damage to DEF's transmission system as a result of Hurricane Irma?

   a. If so, please provide a copy of that report.
   b. If not, did DEF or another company perform a forensic analysis of DEF's transmission system following Hurricane Irma? If so, please provide a copy of that report.

Response:

a. No, Accenture did not perform a forensic analysis of the damage to DEF Transmission System.
b. Yes, see the attached reports bearing Bates numbers 20170272-DEF-STAFF-POD 2-2-0001 through 20170272-DEF-STAFF-POD 2-2-000170.

SUBMITTED this 17th day of August, 2018.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 24
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Cutliffe (2)

/s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC

299 First Avenue North
St. Petersburg, FL 33701
Telephone: (850) 521-1428
Facsimile: (850) 521-1437
Attorneys for Duke Energy Florida, LLC

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 17th day of August, 2018.

/s/ Matthew R. Bernier
Attorney

Kyesha Mapp Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 kmapp@psc.state.fl.us J. R. Kelly / C. Rehwinkel Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com

PICKETT
SURVEYING • ENGINEERING

Forensic Analysis of Avon Park – Desoto City 69kV Transmission Line Structures AD-12 to AD-22

Hurricane Irma

November 30, 2017

DUKE ENERGY®

Table of Contents:

1.0 Executive Summary 2
2.0 Maintenance Data 13
3.0 Weather Data 13
4.0 Conclusion 17
5.0 Restoration 18
Appendix A: Additional Photos 19
Appendix B: 69kV Avon Park – Desoto City Plan and Profile Drawings 49
Appendix C: Weather Data 52

1.0 Executive Summary

Structures: Avon Park to Desoto City 69kV Transmission Line Structures AD-12 to AD-22
Location – Northwest Highlands County, FL (27°34'19.84"N; 81°29'38.08"W to 27°33'54.39"N; 81°29'38.17"W)
Date of Failure – 09-10-17
Time of Failure – 21:10 EST
Site Visit Date – 09-16-17

Structures AD-11 to AD-22 are tangent and running angle wood poles ranging from 70' – 80' in length and from class 1 to H1. The poles also contain a distribution underbuilt circuit with a neutral wire. A power outage on the Avon Park to Desoto City line occurred at 9:10 pm EST, on Sunday, September 10th, 2017. The power outage most likely coincides with the failure of poles AD-12 to AD-22. At the time of the collapse, 69 mph wind velocities were reported in the vicinity by the National Oceanic and Atmospheric Administration (NOAA). The collapse occurred approximately 1.5 hours in advance of the hurricane being at a location nearest to the poles. Hurricane Irma's eye passed approximately 25 miles west of poles AD-12 to AD-22 on Sunday, September 11th, 2017 at 10:30 pm EST. 99 mph maximum wind velocities were reported at that time.

Damage to the failed AD-12 to AD-22 structures was caused by Hurricane Irma's high wind velocities, 69 mph at the time of the outage. The hurricane also affected structures AD-8 and AD-24 and structures AFC-6 to AFC-7 where the 69kV Avon Park – Desoto City underbuilds on the 230kV Avon Park - Fisheating Creek transmission line.

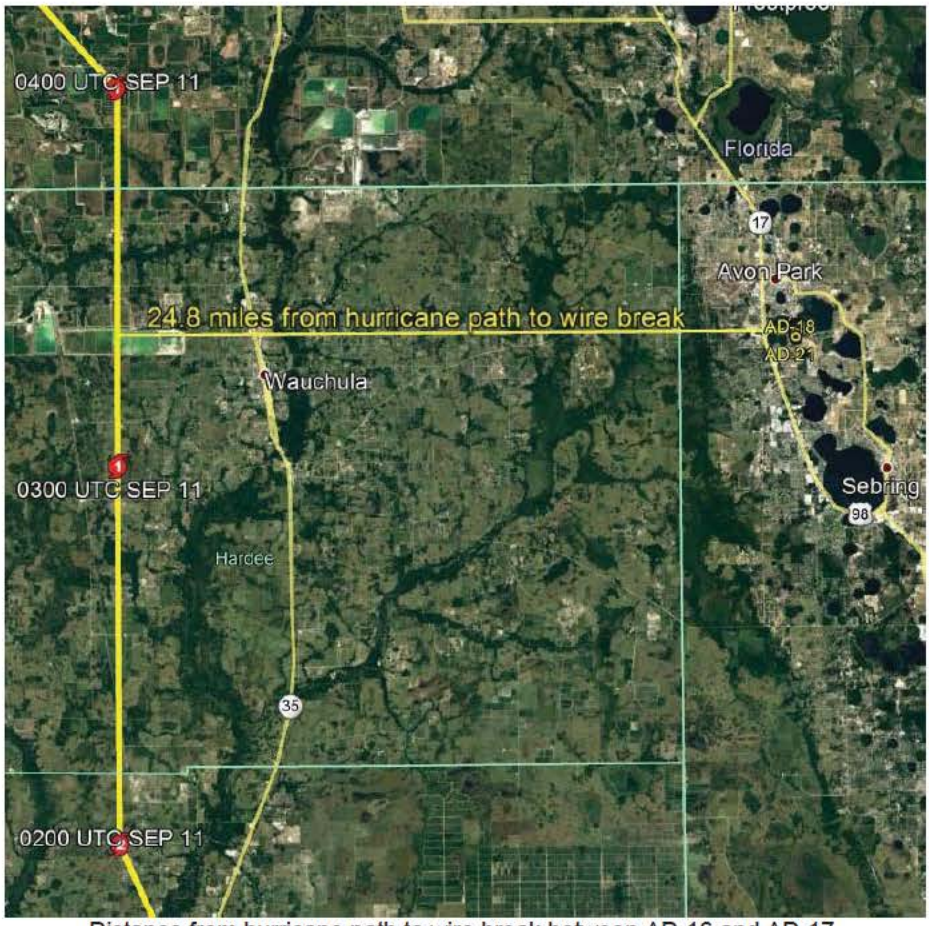
The cause of the outage appeared to be wood pole AD-18 collapse and conductor failure between wood poles AD-17 and AD-18. The conductor failure caused a dynamic longitudinal load resulting in a cascading failure of structures AD-16 to AD-12 to the north and AD-19 to AD-22 to the south. Pole AD-17 did not collapse; however, it was leaning significantly and needed a replacement.

In addition to the collapsed poles, structure and wire hardware damage extended up to steel poles AFC-6 to the north and AD-23 to the south. AD-23 dropped a distribution wire due to post insulator failure. Post insulator damage also occurred at structures AD-11 to AD-9, AFC-7 and AFC-6. Structures AD-11 and AD-10 dropped transmission wires. Wood pole AD-8 has a large split above the overhead ground wire hardware and is need of maintenance.

Steel pole AD-23 most likely prevented further cascading failures. AD-23's 69kV post insulator hardware was bent in a longitudinal direction because of adjacent structures collapsing. The steel pole was leaning slightly west, towards S. Memorial Drive.

Many of the downed poles fell to the west onto South Memorial Drive. The pole failure direction is consistent with the KFLSEBRI25, Sebring, FL weather stations reported west-northwest wind direction and hurricane's counter-clockwise rotation. Many of the downed poles and wires were relocated off the South Memorial Drive as part of the storm cleanup effort. The wires across the railroad were cut and moved from the railroad right of way prior to the site visit.

Wood rot was noticed in the following poles: AD-12, AD-13 in the bottom portion of the pole, AD-14, AD-18, AD-19 contained slight wood rot, AD-20 was significantly rotted & had a wood pecker hole near the OHGW attachment, AD-21 and AD-22 contained slight wood rot. Poles AD-15 and AD-16 did not contain wood rot. According to the maintenance records, poles AD-15 and AD-20 were last serviced on 11/09/2013. The maintenance records do not specify what service was preformed but it does provide MX Order numbers.



Distance from hurricane path to wire break between AD-16 and AD-17.

PICKETT
SURVEYING • ENGINEERING



Broken wire, tensile failure. Between wood pole AD-17 and AD-18.



Failed wood pole AD-12. Looking northwest



Failed wood pole AD-13. Looking north.



Failed wood pole AD-14. Looking northwest.



Failed wood pole AD-15. Pole was cut and relocated during the storm cleanup. Looking north.



Failed wood pole AD-16. Looking south.



Damaged wood pole AD-17. Looking north.



Failed wood pole AD-18. Looking southwest.



Failed wood pole AD-19. Looking northeast.



Failed wood pole AD-20. Looking south.



Failed wood pole AD-21. Looking northwest.



Failed wood pole AD-22. Looking southeast.



Leaning steel pole AD-23. Looking north.



Steel pole AFC-6 post insulator hardware damage. Looking north.



Steel pole AFC-7 post insulator hardware damage. Looking north.

2.0 Maintenance Data

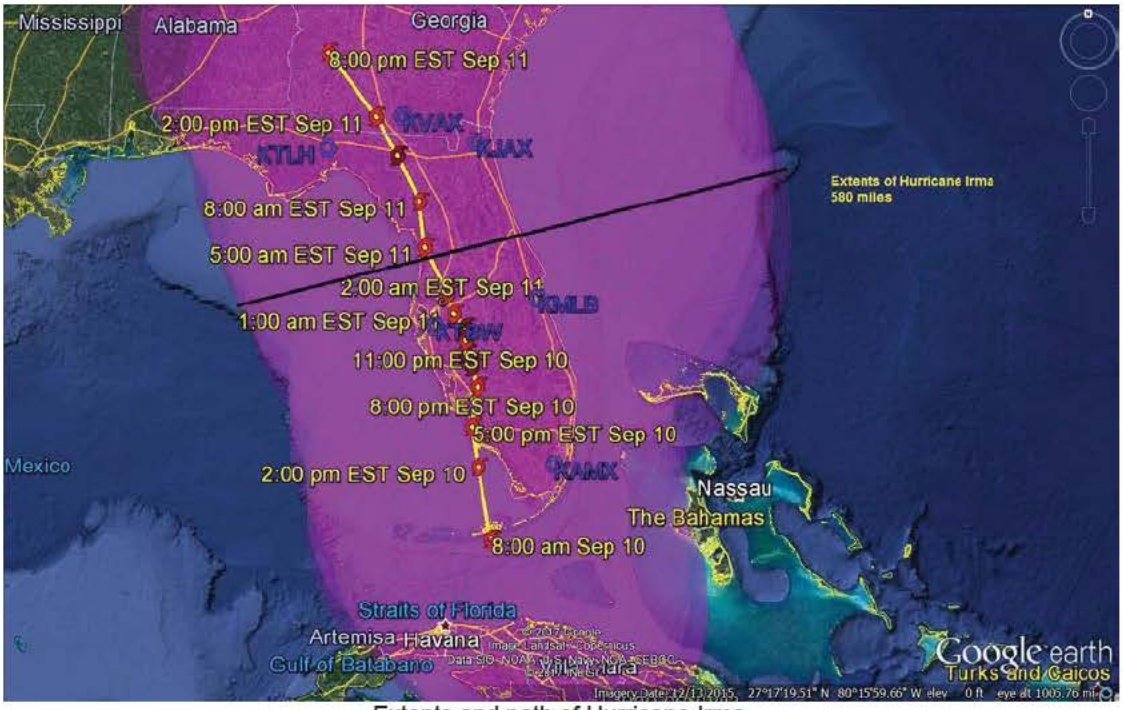
Maintenance report indicated that poles AD-15 and AD-20 were last serviced on 11/09/2013 per MX orders 2013-3004225978 and 2013-3004226001. Maintenance information is not available for the remainder of the AD-12 to AD-22 poles.

Wood pole AD-20 was significantly rotted & had a wood pecker hole near the OHGW attachment.

3.0 Weather Data

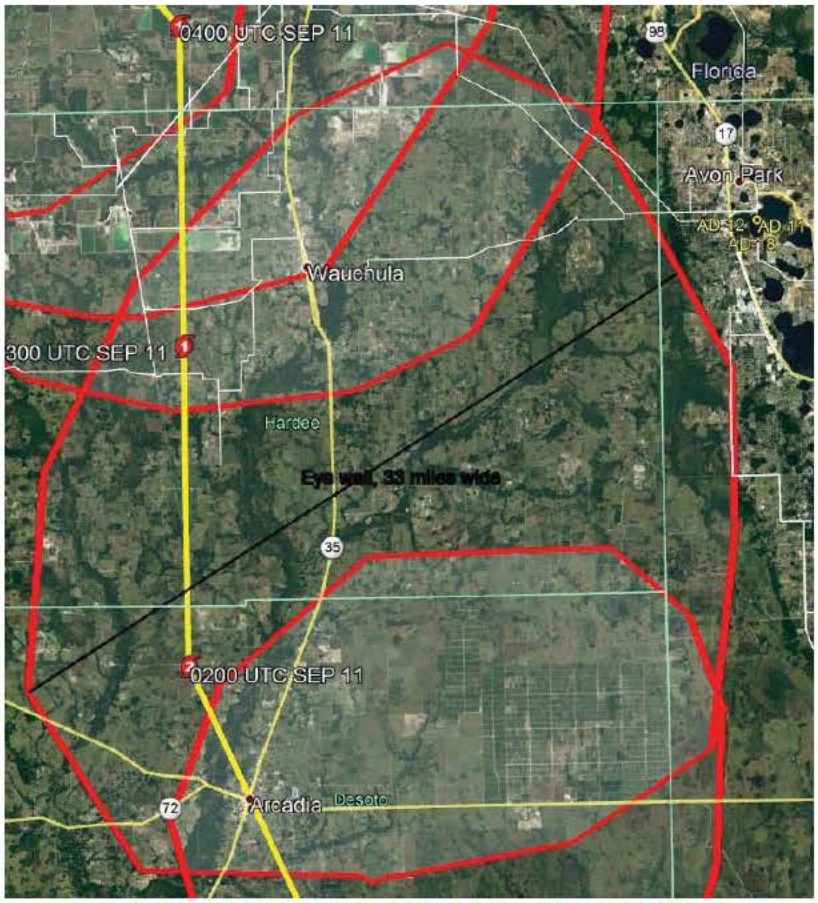
Hurricane Irma made continental landfall in Naples, Florida at 4:00 pm EST on Sunday, September 10, 2017 as a category 2 hurricane and weakened to a tropical depression over the Georgia - Alabama border 12 hours later. At the time of 69kV Avon Park – Desoto City transmission line's outage, approximately at 9:10 pm EST September 10, 2017, the hurricane was designated as a category 2 hurricane and the eye of the hurricane was located approximately 31 miles southwest of poles AD-16 and AD-17.

The hurricane was nearest to structures AD-12 to AD-21 at approximately 10:30 pm EST on Sunday, September 10, 2017 as a category 1 hurricane. The hurricane eye at that time was 33 miles wide and located approximately 25 miles west of the damage structures. The recorded wind velocity was 99 mph.



Extents and path of Hurricane Irma.

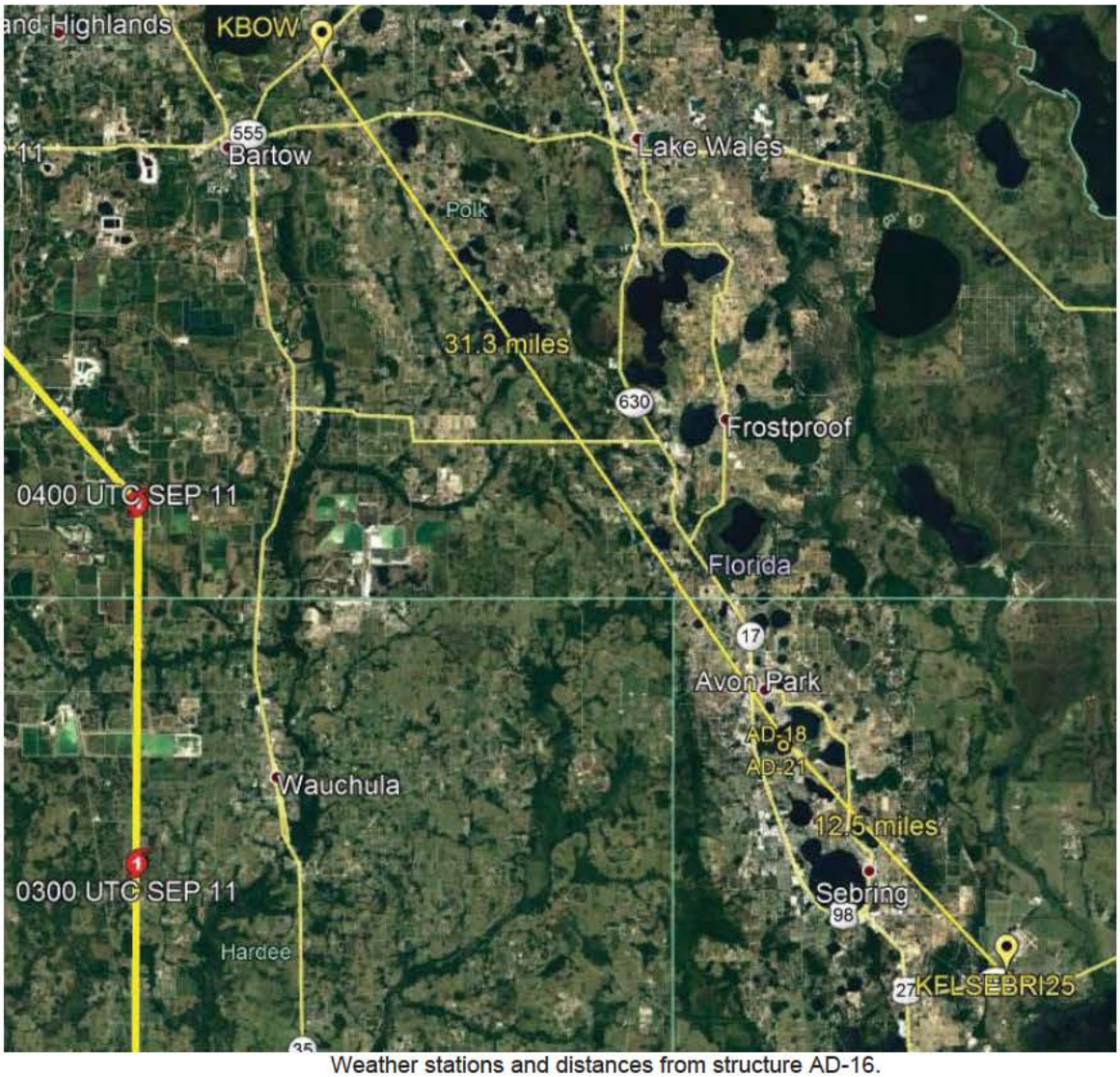
PICKETT
SURVEYING • ENGINEERING



Hurricane Irma eye wall when in vicinity of AD-12 to AD-21

Two local weather stations: KBOW and KFLSEBRI25 show wind velocities in range of 38 to 49 mph and wind gusts in range of 49 to 57 mph. According to the NOAA site specific maps, the wind speeds have reached 74 mph at time of failure.

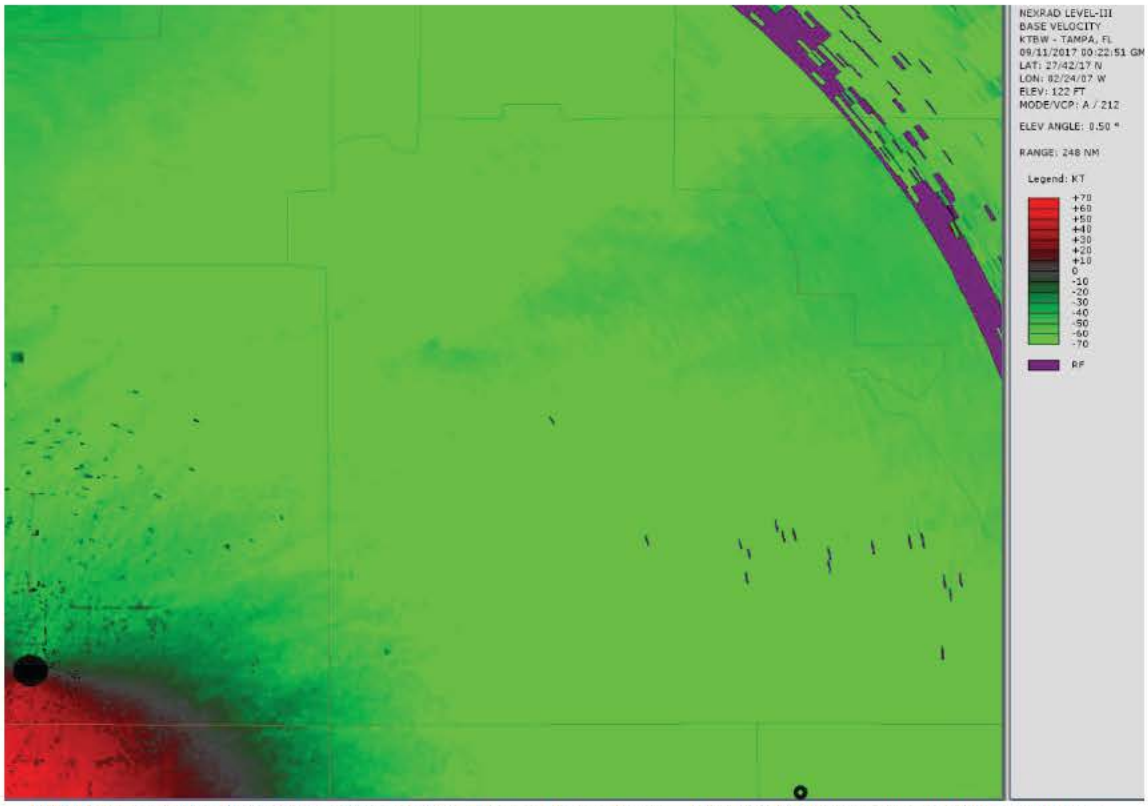
Station Name & Location	Time	Temp	Wind Dir.	Wind Vel.	Wind Gust.	Distance from AD-16
KBOW, Bartow Municipal Airport	9:15:00 PM	75.2 °F	NE	38.0 mph	49.5 mph	31.3 mi
KFLSEBRI25, Sebring, FL	9:05:00 PM	77.2 °F	WSW	49.4 mph	57.5 mph	12.5 mi



Weather stations and distances from structure AD-16.

The following map shows NOAA wind velocities at the time of collapse. The light green shading indicates 60 knot wind speed which equates to 69 mph.

PICKETT
SURVEYING • ENGINEERING



NOAA base velocities at the approximate time of Avon Park – Desoto City transmission line's outage.

NOAA cyclone activity at the time of collapse was also reviewed and found no evidence of any cyclones near poles AD-12 to AD-22.

4.0 Conclusion

Damage to the 69kV Avon Park – Desoto City transmission line was caused by Hurricane Irma's high wind velocities, 69 mph at the time of the outage. The hurricane affected structures AD-8 to AD-24 and structures AFC-6 to AFC-7 where the 69kV Avon Park – Desoto City underbuilds on the 230kV Avon Park - Fisheating Creek transmission line.

The cause of the outage appeared to be wood pole AD-18 collapse and conductor failure between wood poles AD-17 and AD-18. The conductor failure caused a dynamic longitudinal load resulting in a cascading failure of structures AD-16 to AD-12 to the north and AD-19 to AD-22 to the south. Pole AD-17 did not collapse; however, it was leaning significantly and needed replacement.

In addition to the collapsed poles, structure and wire hardware damage extended up to steel poles AFC-6 and AD-23. AD-23 dropped a distribution wire due to post insulator failure. Post insulator damage also occurred at structures AD-11 to AD-9, AFC-7 and AFC-6. Structures AD-11 and AD-10 lost transmission wires; top and middle phases on AD-11 and middle and bottom phase on AD-10. Wood pole AD-8 has a large split above the overhead ground wire hardware and is need of maintenance.

Steel pole AD-23 most likely prevented further cascading failures. AD-23's 69kV post insulator hardware was bent in a longitudinal direction because of adjacent structures collapsing and the hardware is in a need of a replacement. The top distribution underbuilt post insulator was also damaged and subsequently the wire dropped. The steel pole was leaning slightly west, towards the S. Memorial Drive.

Many of the downed poles fell to the west onto South Memorial Drive. The pole failure direction is consistent with the KFLSEBRI25, Sebring, FL weather stations reported west-northwest wind direction and hurricane's counter-clockwise rotation. Many of the downed poles and wires were relocated off the South Memorial Drive as part of the storm clean up effort. The wires across the rail road were cut and moved from the rail road right of way prior to the site visit.

Wood pole AD-15 OHGW bayonet remained intact after the pole collapse. The bayonet was leaning to the east suggesting that the OHGW was unbroken while pole AD-15 was collapsing to the west.

Wood rot has been recorded in the following poles: AD-12, AD-13 in the bottom portion of the pole, AD-14, AD-18, AD-19 contained slight wood rot, AD-20 was significantly rotted & had a wood pecker hole near the OHGW attachment, AD-21 and AD-22 contained slight wood rot. AD-20 was last serviced on 11/09/2013 according to the maintenance records.

Poles AD-15 and AD-16 did not contain wood rot. AD-15 was last serviced on 11/09/2013 according to the maintenance records.

5.0 Restoration

Restoration of the Avon Park – Desoto City transmission line was not started during the inspection; however, the broken conductor laying across the railroad tracks was cut and coiled adjacent to the railroad between poles AD-15 and AD-16.

Appendix A: Additional Photos



Wood pole AD-8 pole top damage. Looking east.



Wood pole AD-9 post insulator hardware damage. Looking east.



Wood pole AD-10 post insulator damage. Looking east.



Wood pole AD-11 post insulator damage. Looking east.



Failed wood pole AD-12. Looking north.



Wood pole AD-12 pole crack. Looking southwest.



Wood pole AD-13 base. Looking south.



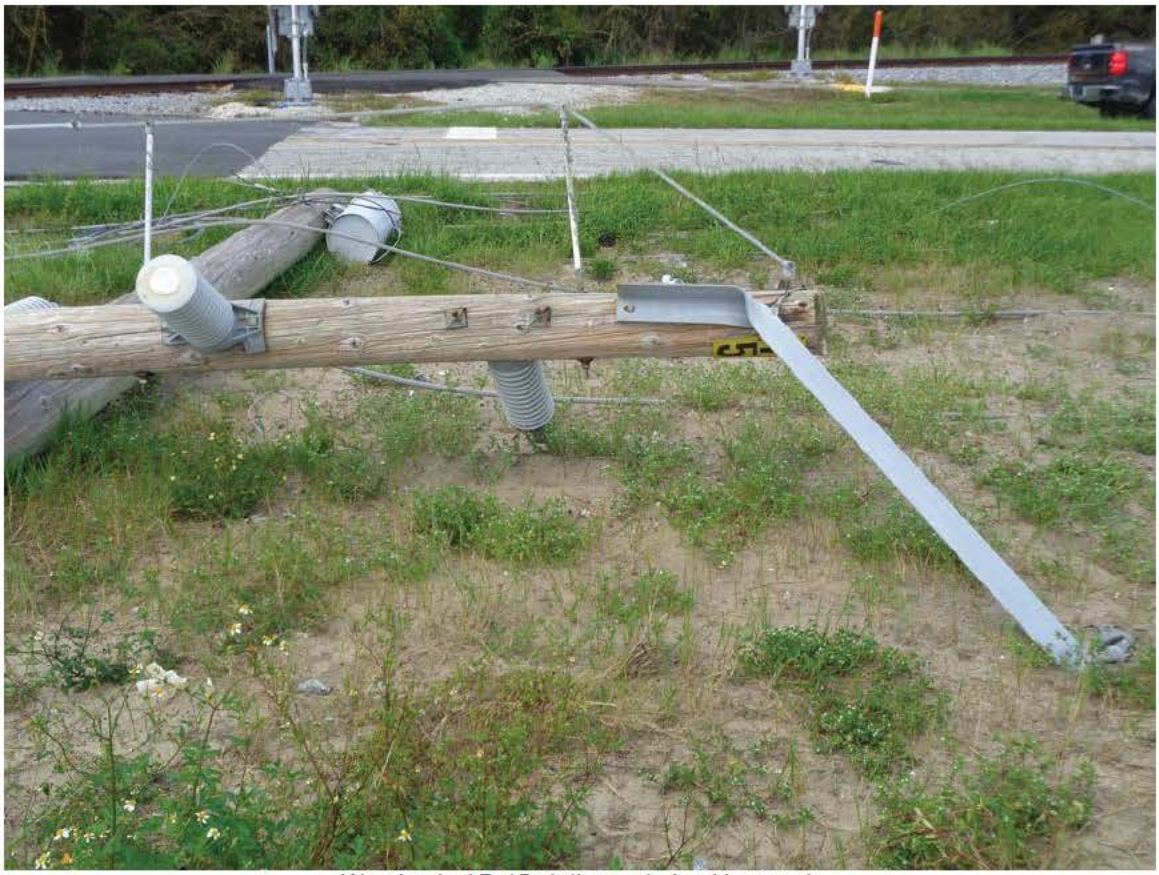
Wood pole AD-13 insulators and wood pole crack. Looking west.



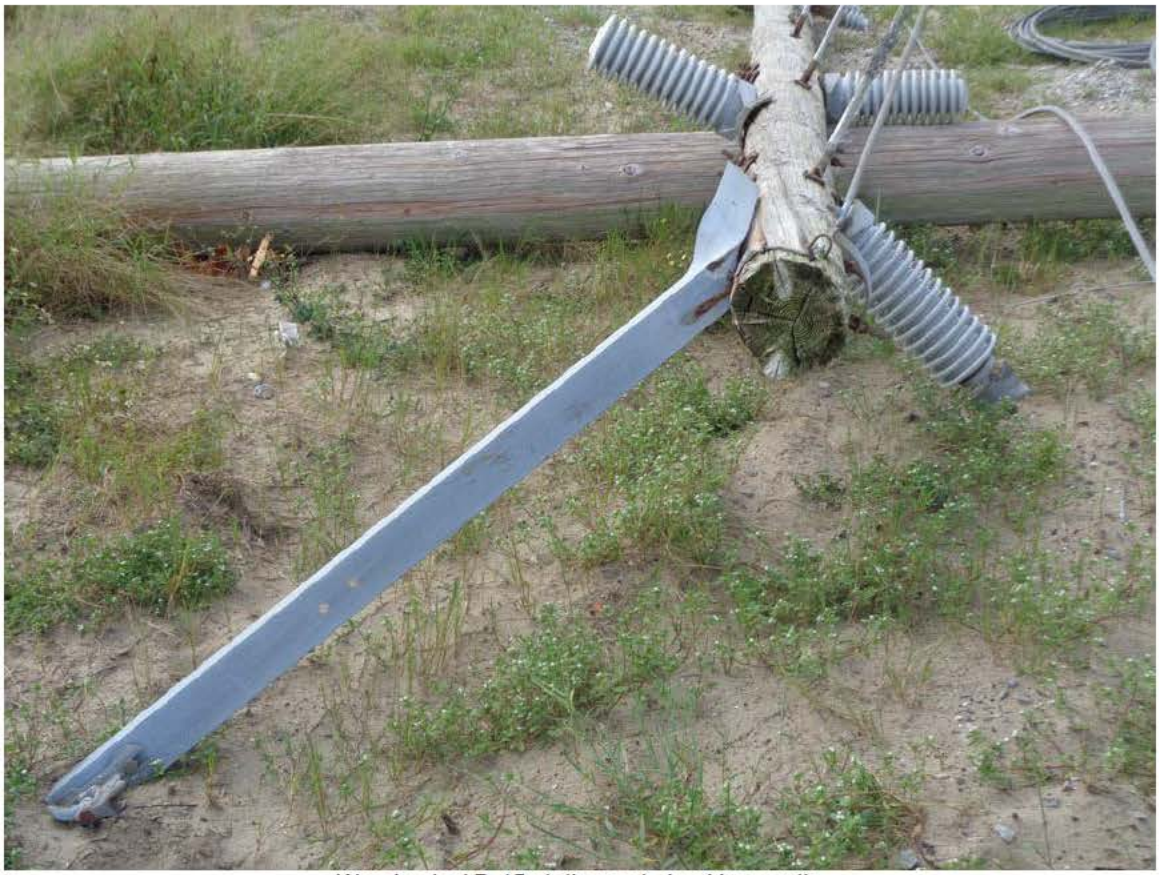
Failed distribution mid span pole. Looking north.



Wood pole AD-14 base. Looking south.



Wood pole AD-15 static mast. Looking west.



Wood pole AD-15 static mast. Looking south.



Cut and coiled wire near railroad ROW.



AD-16 post insulator damage. Looking southwest.



Wood pole AD-16 pole base. Looking southeast.



Wood pole AD-17 insulator damage. Looking north.



Wood pole AD-17 pole base. Looking north.

PICKETT
SURVEYING • ENGINEERING



Tensile wire failure.



Wood pole AD-18 failure. Pole broke into two. Looking southeast.



Wood pole AD-18 base. Looking west.



Wood pole AD-19 base. Looking northeast.



Wood pole AD-19 insulator damage and pole crack. Looking south.



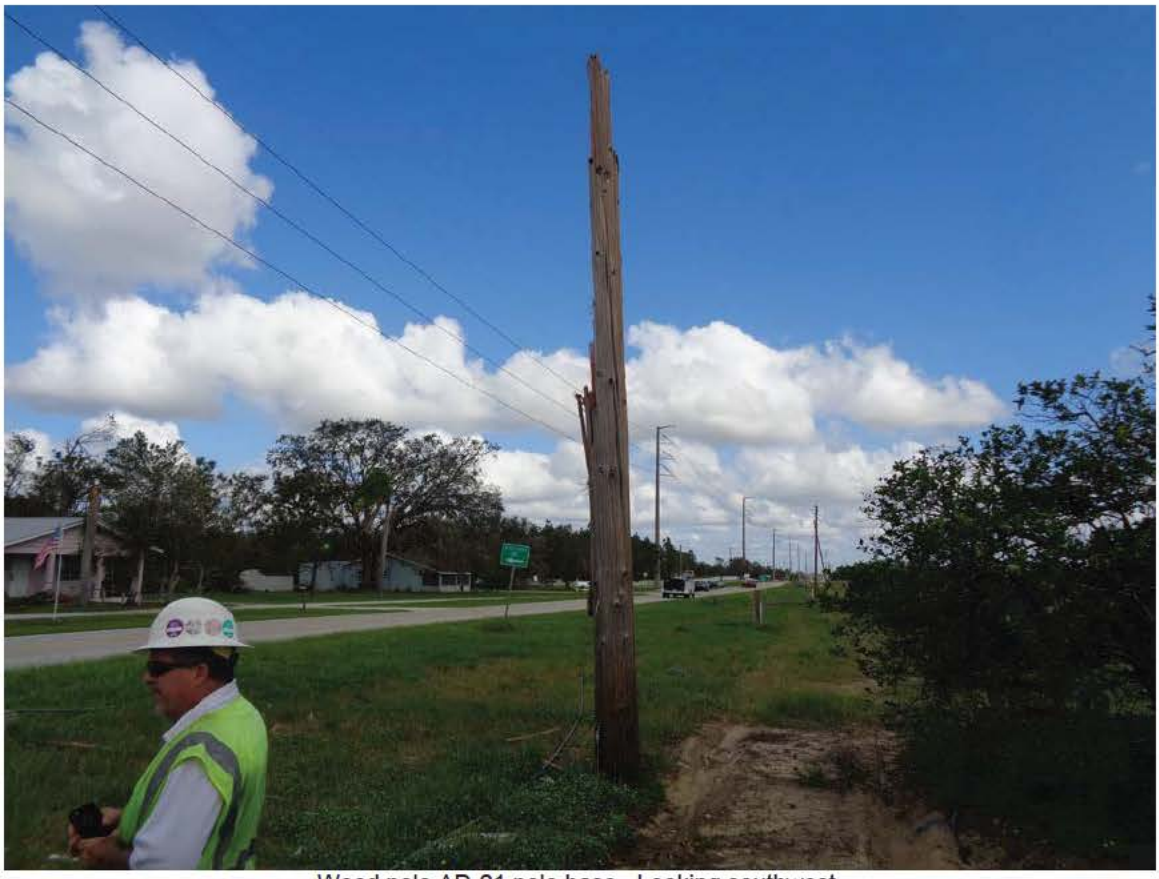
Wood pole AD-20 base. Looking south.



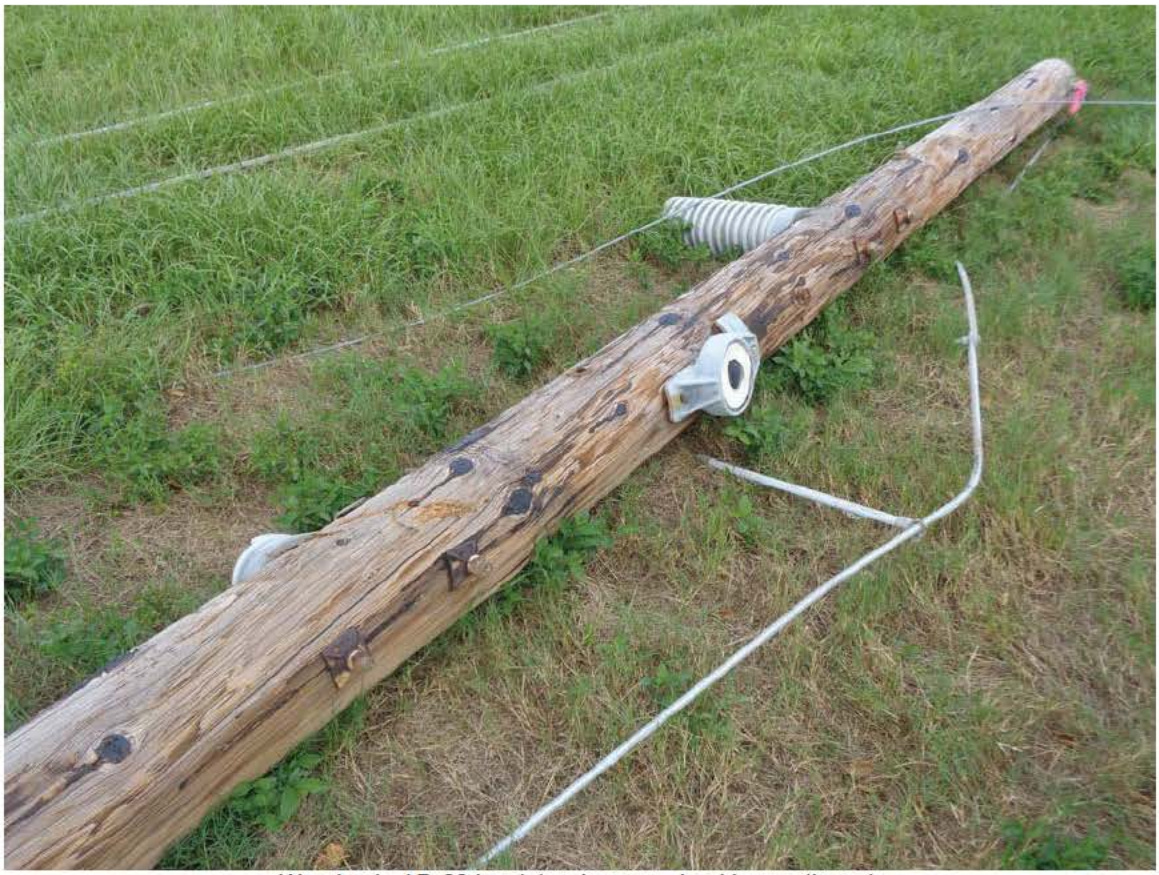
Wood pole AD-20 woodpecker damage. Looking west.



Wood pole AD-20 insulator damage. Looking southwest.



Wood pole AD-21 pole base. Looking southwest.



Wood pole AD-22 insulator damage. Looking northwest.



Wood pole AD-22 pole base. Looking west.



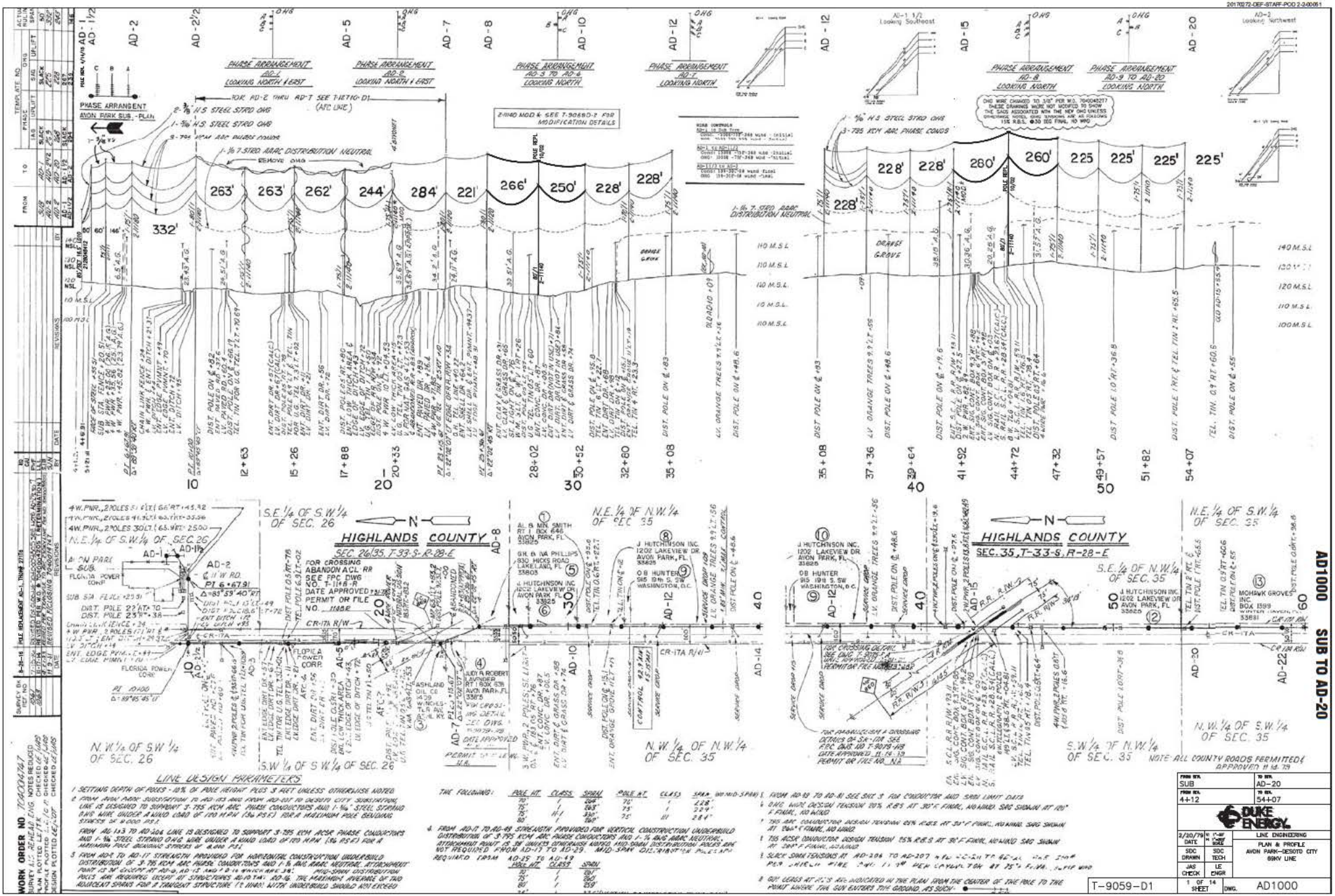
Steel pole AD-23. Looking northeast.



Wood pole AD-24. Looking northeast.

Appendix B: 69kV Avon Park – Desoto City Plan and Profile Drawings

20170272-OEF-STAFF-POD 2-3-00051



AD1000 SUB TO AD-20

LINE DESIGN PARAMETERS

1. SETTING DEPTH OF POLES - 10% OF POLE HEIGHT PLUS 3 FEET UNLESS OTHERWISE NOTED.
2. FROM AVON PARK SUBSTATION TO AD-13 AND FROM AD-20T TO DESOTO CITY SUBSTATION, LINE IS DESIGNED TO SUPPORT 3-795 KCM ARC PHASE CONDUCTORS AND 1-⅜" STEEL STRAND A.A.R. UNDER A WIND LOAD OF 120 M.P.H. (36 PSF) FOR A MAXIMUM POLE BENDING STRESS OF 4,000 PSI.

   FROM AD-13 TO AD-20A LINE IS DESIGNED TO SUPPORT 3-795 KCM ACSR PHASE CONDUCTORS AND 1-⅜" STEEL STRAND OHG WIRE UNDER A WIND LOAD OF 120 M.P.H. (36 PSF) FOR A MAXIMUM POLE BENDING STRESS OF 4,000 PSI.
3. FROM AD-2 TO AD-17 STRENGTH PROVIDED FOR HORIZONTAL CONSTRUCTION UNDERBUILD DISTRIBUTION OF 3-795 KCM ARC PHASE CONDUCTORS AND 1-⅜ OHG AARC NEUTRAL. ATTACHMENT POINT OF 24' EXCEPT AT AD-8, AD-15 AND AD-16 WHICH ARE 38'. MID-SPAN DISTRIBUTION POLES ARE REQUIRED, EXCEPT AT STRUCTURES AD-10 THRU AD-16, THE MAXIMUM SPACING OF THE ADJACENT SPANS FOR A TANGENT STRUCTURE (1° MAX) WITH UNDERBUILD SHOULD NOT EXCEED THE FOLLOWING:

POLE HT.	CLASS	SPAN	POLE HT.	CLASS	SPAN (W/MID-SPAN)
70'	1	268'	70'	1	228'
75'	1	283'	75'	1	229'
80'	H-1	330'	75'	III	284'
80'	1	299'			

4. FROM AD-17 TO AD-49 STRENGTH PROVIDED FOR VERTICAL CONSTRUCTION UNDERBUILD DISTRIBUTION OF 3-795 KCM ARC PHASE CONDUCTORS AND 1-¾ OHG AARC NEUTRAL. ATTACHMENT POINT OF 38' UNLESS OTHERWISE NOTED. MID-SPAN DISTRIBUTION POLES ARE NOT REQUIRED. FROM AD-17 TO AD-29. MID-SPAN DISTRIBUTION POLES ARE REQUIRED FROM AD-25 TO AD-49

POLE HT.	CLASS	SPAN
70'	1	251'
75'	1	280'
80'	1	259'

5. FROM AD-13 TO AD-16 SEE SHT. 3 FOR CONDUCTOR AND SPAN LIMIT DATA
6. OHG WIRE DESIGN TENSION 100% R.B.S. AT 30° F. FINAL, NO WIND, SAG SHOWN AT 120° F. FINAL, NO WIND
7. 795 ARC CONDUCTOR DESIGN TENSION 62% R.B.S. AT 30° F. FINAL, NO WIND, SAG SHOWN AT 266° F FINAL, NO WIND
8. 795 ACSR CONDUCTOR DESIGN TENSION 15% R.B.S. AT 30° F. FINAL, NO WIND, SAG SHOWN AT 288° F FINAL, NO WIND
9. SLACK SPAN TENSIONS AT AD-20A TO AD-20T 4/0 ACSR 7 STRAND PER PHASE WIRE 2 WIRE PER CONDUCTOR AT 25° F. FINAL, NO WIND
10. GUY LEADS AT ANGLES AS INDICATED IN THE PLAN FROM THE CENTER OF THE POLE TO THE POINT WHERE THE GUY ENTERS THE GROUND, AS SUCH: ●

FROM STA.	SUB
TO STA.	AD-20
FROM STA.	4+12
TO STA.	54+07

DUKE ENERGY

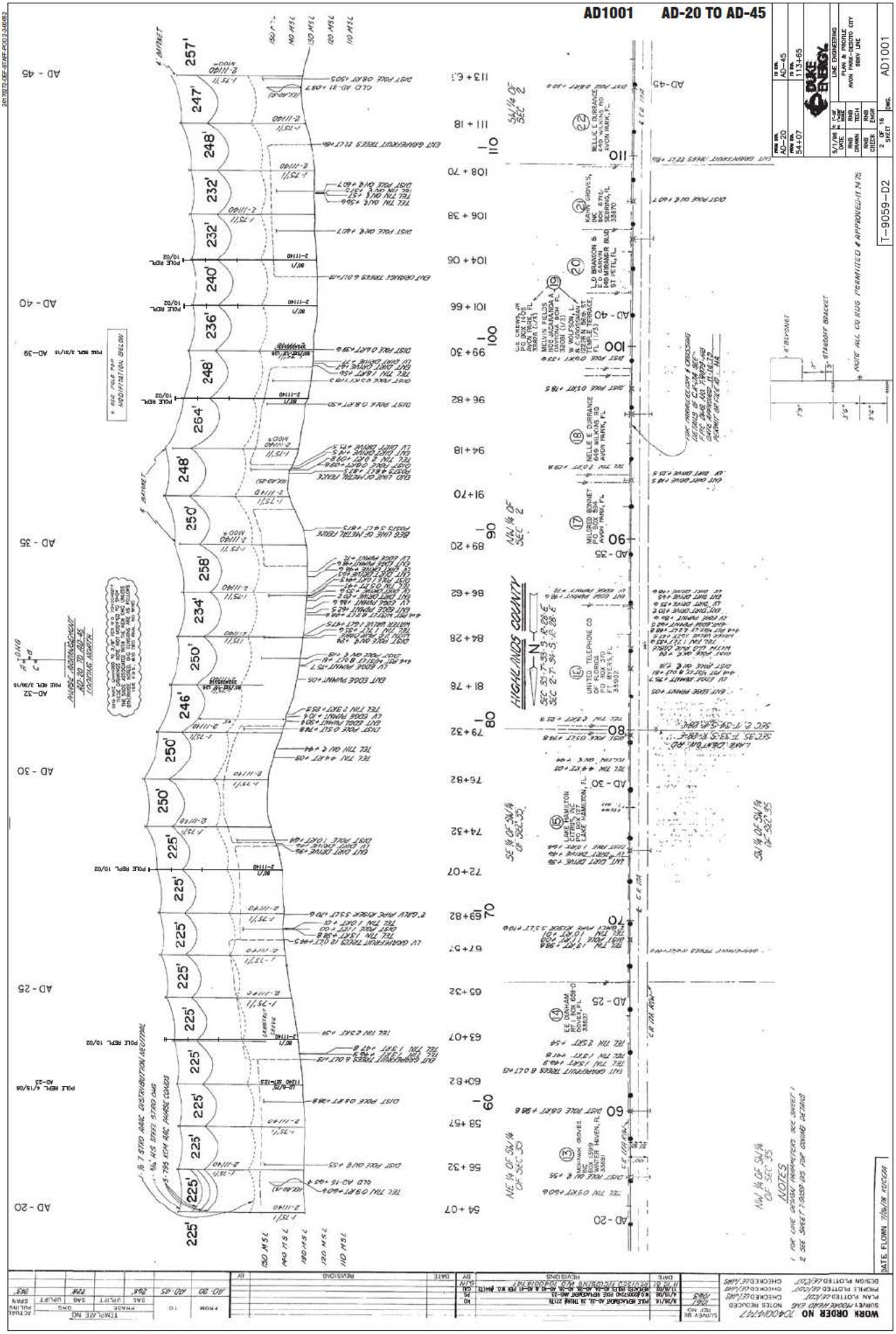
2/20/79 DATE	N. C. SCALE
SDC DRAWN	SDC TECH
JAS CHECK	LE ENGR

LINE ENGINEERING
PLAN & PROFILE
AVON PARK—DESOTO CITY 69KV LINE

T-9059-D1

1 OF 14 SHEET | DWG. AD1000

WORK ORDER NO. 7040048217
SURVEY A.C. REHEAD ENG. NOTES REVISED
PLAN PLOTTED LE/TK CHECKED LE/JAS
PROFILE PLOTTED LE/TK CHECKED LE/JAS
DESIGN PLOTTED LE/JAS CHECKED LE/JAS


AD1001
AD-20 TO AD-45
T-9059-D2
AD1001
NOTES
1. FOR LINE DESIGN PARAMETERS SEE SHEET 1
2. SEE SHEET 1 T-9059 DS FOR GRADE DETAILS
HIGHLANDS COUNTY
SEC 35-33-28E
SEC 2-34-28E
NOTE: ALL CO RDS PERMITTED & APPROVED IN NE
DATE FLOWN 7/8/08 KOCLEM

Appendix C: Weather Data

KBOW Weather data for September 10 2017												
Time (EDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:15 AM	80.6 °F	85.4 °F	73.4 °F	79%	29.82 in	10.0 mi	ENE	17.3 mph	31.1 mph	N/A		Overcast
12:35 AM	80.6 °F	85.4 °F	73.4 °F	79%	29.81 in	10.0 mi	ENE	16.1 mph	24.2 mph	N/A		Overcast
12:55 AM	78.8 °F	-	73.4 °F	83%	29.80 in	10.0 mi	East	13.8 mph	24.2 mph	N/A		Overcast
1:15 AM	78.8 °F	-	75.2 °F	89%	29.80 in	10.0 mi	ENE	15.0 mph	21.9 mph	N/A		Overcast
1:35 AM	78.8 °F	-	75.2 °F	89%	29.80 in	10.0 mi	East	13.8 mph	23.0 mph	N/A		Overcast
1:55 AM	78.8 °F	-	77.0 °F	94%	29.80 in	10.0 mi	East	13.8 mph	26.5 mph	N/A		Overcast
2:15 AM	77.0 °F	-	77.0 °F	100%	29.80 in	4.0 mi	East	20.7 mph	26.5 mph	N/A	Rain	Light Rain
2:35 AM	75.2 °F	-	-	N/A%	29.79 in	4.0 mi	ENE	17.3 mph	24.2 mph	N/A	Rain	Light Rain
2:55 AM	75.2 °F	-	-	N/A%	29.78 in	5.0 mi	ENE	15.0 mph	-	N/A	Rain	Light Rain
3:15 AM	75.2 °F	-	-	N/A%	29.77 in	7.0 mi	NE	13.8 mph	-	N/A	Rain	Light Rain
3:35 AM	75.2 °F	-	-	N/A%	29.75 in	8.0 mi	ENE	12.7 mph	20.7 mph	N/A	Rain	Light Rain
3:55 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	ENE	12.7 mph	-	N/A		Mostly Cloudy
4:15 AM	75.2 °F	-	-	N/A%	29.76 in	10.0 mi	ENE	12.7 mph	-	N/A		Mostly Cloudy
4:35 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	ENE	13.8 mph	-	N/A	Rain	Light Rain
4:55 AM	75.2 °F	-	75.2 °F	100%	29.75 in	10.0 mi	ENE	12.7 mph	18.4 mph	N/A		Overcast
5:15 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	NE	9.2 mph	15.0 mph	N/A		Light Drizzle
5:35 AM	75.2 °F	-	-	N/A%	29.76 in	9.0 mi	ENE	10.4 mph	21.9 mph	N/A	Rain	Light Rain
5:55 AM	75.2 °F	-	-	N/A%	29.76 in	5.0 mi	ENE	13.8 mph	25.3 mph	N/A	Rain	Light Rain
6:15 AM	73.4 °F	-	-	N/A%	29.75 in	7.0 mi	ENE	15.0 mph	21.9 mph	N/A	Rain	Light Rain
6:35 AM	73.4 °F	-	-	N/A%	29.74 in	10.0 mi	NE	11.5 mph	18.4 mph	N/A		Light Drizzle
6:55 AM	75.2 °F	-	-	N/A%	29.73 in	10.0 mi	NE	12.7 mph	18.4 mph	N/A		Mostly Cloudy
7:15 AM	73.4 °F	-	-	N/A%	29.74 in	4.0 mi	NNE	10.4 mph	18.4 mph	N/A	Rain	Rain
5:35 PM	73.4 °F	-	-	N/A%	29.42 in	0.8 mi	NNE	25.3 mph	41.4 mph	N/A	Rain	Heavy Rain
5:55 PM	73.4 °F	-	-	N/A%	29.39 in	0.8 mi	NE	31.1 mph	49.5 mph	N/A	Rain	Heavy Rain
6:15 PM	73.4 °F	-	-	N/A%	29.36 in	-	NNE	27.6 mph	46.0 mph	N/A	Rain	Heavy Rain
6:35 PM	71.6 °F	-	-	N/A%	29.32 in	0.2 mi	NE	38.0 mph	49.5 mph	N/A	Rain	Heavy Rain
6:55 PM	71.6 °F	-	-	N/A%	29.32 in	0.2 mi	NNE	26.5 mph	47.2 mph	N/A	Rain	Heavy Rain
7:15 PM	73.4 °F	-	-	N/A%	29.27 in	0.2 mi	NE	27.6 mph	47.2 mph	N/A	Rain	Heavy Rain
7:35 PM	73.4 °F	-	-	N/A%	29.23 in	0.2 mi	NE	35.7 mph	46.0 mph	N/A	Rain	Heavy Rain
7:55 PM	73.4 °F	-	-	N/A%	29.18 in	0.5 mi	NE	32.2 mph	48.3 mph	N/A	Rain	Heavy Rain
8:15 PM	75.2 °F	-	-	N/A%	29.15 in	0.2 mi	NE	35.7 mph	55.2 mph	N/A	Rain	Heavy Rain
8:35 PM	75.2 °F	-	-	N/A%	29.11 in	1.2 mi	ENE	38.0 mph	44.9 mph	N/A	Rain	Heavy Rain
8:55 PM	75.2 °F	-	-	N/A%	29.07 in	2.0 mi	NE	33.4 mph	50.6 mph	N/A	Rain	Rain
9:15 PM	75.2 °F	-	-	N/A%	29.03 in	0.8 mi	NE	38.0 mph	49.5 mph	N/A	Rain	Heavy Rain
9:35 PM	75.2 °F	-	-	N/A%	28.97 in	0.8 mi	NE	42.6 mph	62.1 mph	N/A	Rain	Heavy Rain
9:55 PM	75.2 °F	-	-	N/A%	28.94 in	1.0 mi	ENE	36.8 mph	56.4 mph	N/A	Rain	Heavy Rain
10:15 PM	75.2 °F	-	-	N/A%	28.89 in	-	ENE	41.4 mph	57.5 mph	N/A	Rain	Heavy Rain
10:35 PM	75.2 °F	-	-	N/A%	28.84 in	0.5 mi	ENE	38.0 mph	61.0 mph	N/A	Rain	Heavy Rain
10:55 PM	75.2 °F	-	-	N/A%	28.79 in	0.5 mi	ENE	38.0 mph	64.4 mph	N/A	Rain	Heavy Rain
11:15 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown
11:35 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown
11:55 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown

KFLSEBRI25 Weather data for September 10 2017											
Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
12:02 AM	76.1 °F	73.4 °F	91%	NE	19.7 mph	22.4 mph	-- in	0 in	0 in	0	0 w/m²
12:08 AM	75.9 °F	73.4 °F	92%	NNE	17.7 mph	22.4 mph	-- in	0 in	0 in	0	0 w/m²
12:14 AM	75.7 °F	73 °F	91%	NE	13.9 mph	17.5 mph	-- in	0 in	0 in	0	0 w/m²
12:19 AM	75.6 °F	72.9 °F	91%	ENE	12.3 mph	15 mph	-- in	0 in	0 in	0	0 w/m²
12:25 AM	75.4 °F	72.9 °F	92%	NE	7.2 mph	7.4 mph	-- in	0.07 in	0.01 in	0	0 w/m²
12:30 AM	75.4 °F	72.9 °F	92%	NE	8.3 mph	9.8 mph	-- in	0.07 in	0.01 in	0	0 w/m²
12:35 AM	75.4 °F	72.9 °F	92%	NE	15 mph	17.5 mph	-- in	0.07 in	0.02 in	0	0 w/m²
12:41 AM	75.2 °F	72.7 °F	92%	NE	15.2 mph	17.5 mph	-- in	0.07 in	0.02 in	0	0 w/m²
12:46 AM	75.4 °F	73.2 °F	93%	NNE	18.1 mph	19.9 mph	-- in	0.21 in	0.06 in	0	0 w/m²
12:51 AM	75.2 °F	73 °F	93%	NE	13.6 mph	17.5 mph	-- in	0.21 in	0.06 in	0	0 w/m²
12:56 AM	75 °F	72.9 °F	93%	NNE	10.5 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
1:01 AM	75 °F	73.2 °F	94%	NE	10.5 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
1:06 AM	74.8 °F	73 °F	94%	East	4.5 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
1:12 AM	74.7 °F	72.9 °F	94%	ENE	5.8 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
1:17 AM	74.5 °F	71.8 °F	91%	ENE	11.9 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
1:22 AM	74.3 °F	71.6 °F	91%	NNE	8.3 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
1:27 AM	73.9 °F	71.6 °F	92%	ENE	6 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
1:32 AM	73.4 °F	71.1 °F	92%	NE	6.5 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
1:37 AM	73.2 °F	70.9 °F	92%	ENE	5.8 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
1:42 AM	73.2 °F	71.4 °F	94%	NE	15.9 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
1:47 AM	73 °F	71.2 °F	94%	ENE	9.2 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
1:52 AM	73.2 °F	71.4 °F	94%	NE	7.6 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
1:58 AM	73.8 °F	72 °F	94%	NE	8.3 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
2:04 AM	74.1 °F	72 °F	93%	NNE	19.7 mph	24.8 mph	-- in	0 in	0.06 in	0	0 w/m²
2:09 AM	74.5 °F	72.3 °F	93%	NE	17.7 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
2:14 AM	74.8 °F	72.3 °F	92%	ENE	16.5 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
2:19 AM	75 °F	72.5 °F	92%	ENE	12.1 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
2:25 AM	75.2 °F	73 °F	93%	ENE	11.4 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
2:30 AM	75.2 °F	73.4 °F	94%	NNE	11.4 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
2:35 AM	75.2 °F	73.4 °F	94%	NNE	14.3 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
2:40 AM	75.2 °F	73 °F	93%	NE	10.3 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
2:45 AM	75 °F	72.9 °F	93%	NE	15.4 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
2:50 AM	75 °F	72.9 °F	93%	NE	11.9 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
2:55 AM	75 °F	72.9 °F	93%	NE	22.4 mph	24.8 mph	-- in	0 in	0.06 in	0	0 w/m²
3:01 AM	75 °F	72.9 °F	93%	ENE	15.4 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
3:06 AM	75 °F	73.2 °F	94%	NNE	11.4 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
3:11 AM	75 °F	73.2 °F	94%	NE	16.8 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
3:16 AM	75 °F	73.2 °F	94%	NE	11.9 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
3:22 AM	74.8 °F	73 °F	94%	NE	18.6 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
3:27 AM	74.8 °F	73 °F	94%	NE	12.1 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
3:32 AM	74.7 °F	72.9 °F	94%	NE	12.3 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
3:38 AM	74.7 °F	72.9 °F	94%	NE	11.9 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
3:43 AM	74.7 °F	72.5 °F	93%	NNE	17 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
3:48 AM	74.7 °F	72.5 °F	93%	NNE	14.5 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
3:53 AM	74.8 °F	72.7 °F	93%	NE	11.4 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
3:58 AM	74.8 °F	72.7 °F	93%	NNE	8.9 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
4:04 AM	74.8 °F	73 °F	94%	NE	10.7 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
4:10 AM	74.8 °F	73 °F	94%	NNE	11.4 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
4:15 AM	74.8 °F	73 °F	94%	NE	6.7 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
4:21 AM	74.8 °F	73 °F	94%	NE	7.6 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
4:26 AM	74.8 °F	73.4 °F	95%	NE	5.6 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
4:32 AM	74.7 °F	73.2 °F	95%	ENE	6 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
4:37 AM	74.7 °F	73.2 °F	95%	NE	2.5 mph	2.5 mph	-- in	0 in	0.06 in	0	0 w/m²
4:43 AM	74.5 °F	73 °F	95%	NE	10.3 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
4:48 AM	74.5 °F	73 °F	95%	NE	18.3 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
4:53 AM	74.5 °F	73 °F	95%	NE	15.4 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
4:58 AM	74.5 °F	72.7 °F	94%	NE	14.3 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
5:03 AM	74.5 °F	72.7 °F	94%	NE	13.6 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
5:08 AM	74.5 °F	72.7 °F	94%	NE	14.5 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
5:13 AM	74.5 °F	72.3 °F	93%	NE	12.3 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
5:19 AM	74.5 °F	72.7 °F	94%	NE	13.4 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
5:24 AM	74.5 °F	72.7 °F	94%	NNE	8.7 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
5:29 AM	74.5 °F	72.7 °F	94%	NNE	9.6 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
5:36 AM	74.7 °F	72.9 °F	94%	North	11.9 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
5:41 AM	74.7 °F	72.1 °F	92%	NNE	10.5 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
5:46 AM	74.7 °F	72.1 °F	92%	NNE	9.2 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
5:49 AM	74.7 °F	72.1 °F	92%	NNE	19.2 mph	22.4 mph	-- in	0 in	0.06 in	0	0 w/m²
5:54 AM	74.7 °F	72.1 °F	92%	NE	14.3 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
5:59 AM	74.8 °F	72.3 °F	92%	NNE	15 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
6:04 AM	74.8 °F	72.3 °F	92%	NNE	11.9 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
6:09 AM	75 °F	72.5 °F	92%	NNE	13.4 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
6:15 AM	75 °F	72.9 °F	93%	NNE	11.2 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
6:20 AM	75 °F	72.9 °F	93%	NNE	9.6 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
6:25 AM	74.8 °F	72.7 °F	93%	NNE	13.4 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
6:30 AM	74.8 °F	72.7 °F	93%	NE	16.8 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
6:36 AM	74.8 °F	72.7 °F	93%	NE	16.8 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
6:41 AM	74.8 °F	72.7 °F	93%	NNE	11.9 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
6:47 AM	74.7 °F	72.5 °F	93%	NE	11.4 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
6:52 AM	74.7 °F	72.1 °F	92%	NE	17 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
6:58 AM	74.7 °F	72.5 °F	93%	North	19 mph	27.5 mph	-- in	0 in	0.06 in	0	0 w/m²
7:03 AM	74.7 °F	72.1 °F	92%	NNE	17.5 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
7:08 AM	74.7 °F	72.1 °F	92%	NNE	15 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
7:14 AM	74.7 °F	72.1 °F	92%	NNE	19.7 mph	22.4 mph	-- in	0 in	0.06 in	0	0 w/m²
7:20 AM	74.7 °F	72.1 °F	92%	NNE	13.6 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
7:25 AM	74.5 °F	72.1 °F	92%	NNE	16.5 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
7:30 AM	74.5 °F	72.3 °F	93%	NNE	19.9 mph	22.4 mph	-- in	0 in	0.06 in	0	0 w/m²
7:35 AM	74.5 °F	71.8 °F	91%	NNE	16.8 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
7:40 AM	74.5 °F	72.1 °F	92%	NNE	17 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
7:45 AM	74.5 °F	72.3 °F	93%	NNE	13.9 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
7:50 AM	74.5 °F	72.3 °F	93%	NNE	13 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
7:55 AM	74.5 °F	72.3 °F	93%	NE	18.6 mph	22.4 mph	-- in	0 in	0.06 in	0	0 w/m²
8:01 AM	74.5 °F	72.3 °F	93%	NNE	15.9 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
8:06 AM	74.5 °F	72.3 °F	93%	ENE	11.2 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
8:11 AM	74.7 °F	72.5 °F	93%	NE	17.5 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
8:16 AM	74.8 °F	72.7 °F	93%	East	9.8 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
8:21 AM	74.8 °F	72.7 °F	93%	ENE	10.7 mph	12.3 mph	-- in	0 in	0.06 in	0	0.17 w/m²
8:47 AM	74.5 °F	72.7 °F	94%	NE	18.1 mph	19.9 mph	-- in	0 in	0.07 in	0	21.95 w/m²
8:52 AM	74.3 °F	72.5 °F	94%	NE	11.9 mph	12.3 mph	-- in	0 in	0.07 in	0	24.69 w/m²
8:57 AM	74.3 °F	72.1 °F	93%	NE	13.6 mph	17.5 mph	-- in	0 in	0.07 in	0	24.51 w/m²
9:02 AM	74.3 °F	72.1 °F	93%	NE	16.1 mph	19.9 mph	-- in	0 in	0.07 in	0	29.1 w/m²
9:07 AM	74.1 °F	72 °F	93%	NE	16.1 mph	19.9 mph	-- in	0 in	0.07 in	0	33.96 w/m²
9:12 AM	74.1 °F	71.8 °F	92%	ENE	15 mph	17.5 mph	-- in	0 in	0.07 in	0	38.01 w/m²
9:17 AM	73.9 °F	71.6 °F	92%	NE	15 mph	17.5 mph	-- in	0 in	0.07 in	0	39.36 w/m²
9:22 AM	73.9 °F	71.6 °F	92%	NE	19.9 mph	22.4 mph	-- in	0 in	0.07 in	1	51.96 w/m²
9:27 AM	73.8 °F	71.4 °F	92%	NNE	18.6 mph	24.8 mph	-- in	0 in	0.07 in	1	72.61 w/m²
9:32 AM	73.8 °F	71.4 °F	92%	NNE	19.2 mph	22.4 mph	-- in	0 in	0.07 in	1	60.64 w/m²
9:37 AM	73.8 °F	71.4 °F	92%	NE	13.9 mph	27.5 mph	-- in	0 in	0.07 in	1	55.46 w/m²
9:42 AM	73.8 °F	71.4 °F	92%	NNE	18.6 mph	19.9 mph	-- in	0 in	0.07 in	1	56.23 w/m²
9:47 AM	73.8 °F	71.4 °F	92%	NNE	16.8 mph	19.9 mph	-- in	0 in	0.07 in	1	58.12 w/m²
9:52 AM	73.8 °F	71.4 °F	92%	NE	12.1 mph	15 mph	-- in	0 in	0.07 in	1	65.54 w/m²
9:58 AM	73.8 °F	71.4 °F	92%	NE	23.3 mph	27.5 mph	-- in	0 in	0.07 in	1	80.05 w/m²
10:03 AM	73.8 °F	71.1 °F	91%	NE	13.4 mph	19.9 mph	-- in	0 in	0.07 in	1	65.68 w/m²
10:08 AM	73.8 °F	71.1 °F	91%	NE	15 mph	17.5 mph	-- in	0 in	0.07 in	1	65.41 w/m²
10:13 AM	73.8 °F	71.1 °F	91%	NE	23 mph	27.5 mph	-- in	0 in	0.07 in	1	48.94 w/m²
10:18 AM	73.8 °F	71.1 °F	91%	NE	16.8 mph	19.9 mph	-- in	0 in	0.07 in	0	41.88 w/m²
10:23 AM	73.8 °F	71.1 °F	91%	NNE	23.9 mph	27.5 mph	-- in	0 in	0.07 in	1	60.59 w/m²
10:28 AM	73.8 °F	71.4 °F	92%	NE	13.6 mph	17.5 mph	-- in	0 in	0.07 in	1	56.77 w/m²
10:33 AM	73.8 °F	71.4 °F	92%	NE	25.3 mph	30 mph	-- in	0 in	0.07 in	1	75.62 w/m²
10:37 AM	73.6 °F	71.2 °F	92%	NE	20.1 mph	24.8 mph	-- in	0 in	0.07 in	1	97.84 w/m²
10:42 AM	73.6 °F	71.2 °F	92%	NE	13 mph	17.5 mph	-- in	0 in	0.07 in	0	37.83 w/m²
10:46 AM	73.6 °F	71.2 °F	92%	NE	17 mph	19.9 mph	-- in	0 in	0.07 in	1	89.71 w/m²
10:51 AM	73.6 °F	71.2 °F	92%	NE	23 mph	27.5 mph	-- in	0 in	0.07 in	1	66.26 w/m²
10:56 AM	73.4 °F	71.1 °F	92%	ENE	21.5 mph	27.5 mph	-- in	0 in	0.07 in	1	80.23 w/m²
11:02 AM	73.4 °F	71.1 °F	92%	NE	21.2 mph	24.8 mph	-- in	0 in	0.07 in	1	98.1 w/m²
11:07 AM	73.4 °F	71.1 °F	92%	NE	18.3 mph	19.9 mph	-- in	0 in	0.07 in	1	109.1 w/m²
11:12 AM	73.4 °F	71.1 °F	92%	NNE	22.1 mph	27.5 mph	-- in	0 in	0.07 in	1	81.07 w/m²
11:17 AM	73.4 °F	71.1 °F	92%	NNE	24.4 mph	32.4 mph	-- in	0 in	0.07 in	1	110.08 w/m²
11:22 AM	73.4 °F	70 °F	89%	NE	24.6 mph	27.5 mph	-- in	0 in	0.07 in	1	99.33 w/m²
11:27 AM	73.4 °F	70 °F	89%	NE	19 mph	22.4 mph	-- in	0 in	0.07 in	1	78.32 w/m²
11:32 AM	73.6 °F	69.8 °F	88%	NE	20.8 mph	22.4 mph	-- in	0 in	0.07 in	1	144.28 w/m²
11:37 AM	73.6 °F	69.3 °F	86%	NE	16.8 mph	17.5 mph	-- in	0 in	0.07 in	1	138.47 w/m²
11:42 AM	73.8 °F	69.1 °F	85%	NE	23.9 mph	27.5 mph	-- in	0 in	0.07 in	1	91.16 w/m²
11:47 AM	73.9 °F	69.8 °F	87%	NNE	17 mph	19.9 mph	-- in	0 in	0.07 in	1	122.2 w/m²
11:52 AM	74.1 °F	70.3 °F	88%	NE	13.9 mph	15 mph	-- in	0 in	0.07 in	1	57.13 w/m²

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
11:57 AM	74.1 °F	70.3 °F	88%	NE	17 mph	19.9 mph	-- in	0 in	0.07 in	1	117.05 w/m²
12:02 PM	74.1 °F	70.7 °F	89%	NE	14.5 mph	17.5 mph	-- in	0 in	0.07 in	1	126.92 w/m²
12:07 PM	74.1 °F	70.7 °F	89%	North	19.9 mph	24.8 mph	-- in	0 in	0.07 in	1	142.9 w/m²
12:12 PM	73.9 °F	70.9 °F	90%	NNE	15.2 mph	17.5 mph	-- in	0 in	0.07 in	1	98.02 w/m²
12:18 PM	73.9 °F	70.9 °F	90%	NE	17 mph	19.9 mph	-- in	0 in	0.07 in	1	119.59 w/m²
12:23 PM	73.9 °F	70.9 °F	90%	NE	24.4 mph	32.4 mph	-- in	0 in	0.07 in	2	156.62 w/m²
12:28 PM	73.9 °F	71.2 °F	91%	NE	20.8 mph	24.8 mph	-- in	0 in	0.07 in	2	170.31 w/m²
12:33 PM	74.1 °F	71.4 °F	91%	NNE	22.8 mph	30 mph	-- in	0 in	0.07 in	2	166.39 w/m²
12:38 PM	74.1 °F	71.1 °F	90%	NNE	18.3 mph	19.9 mph	-- in	0 in	0.07 in	2	163.27 w/m²
12:43 PM	74.1 °F	71.1 °F	90%	NNE	15.9 mph	17.5 mph	-- in	0 in	0.07 in	1	144.39 w/m²
12:48 PM	74.3 °F	70.9 °F	89%	NNE	25.5 mph	30 mph	-- in	0 in	0.07 in	2	168.09 w/m²
12:53 PM	74.3 °F	70.9 °F	89%	North	18.1 mph	19.9 mph	-- in	0 in	0.07 in	2	182.94 w/m²
12:58 PM	74.3 °F	70.5 °F	88%	North	22.1 mph	24.8 mph	-- in	0 in	0.07 in	1	122.89 w/m²
1:03 PM	74.3 °F	70.9 °F	89%	NNE	15.9 mph	17.5 mph	-- in	0 in	0.07 in	1	82.01 w/m²
1:08 PM	74.3 °F	71.2 °F	90%	NNE	19 mph	22.4 mph	-- in	0 in	0.07 in	1	129.72 w/m²
1:13 PM	74.3 °F	71.2 °F	90%	NNE	26.2 mph	30 mph	-- in	0 in	0.07 in	1	121.33 w/m²
1:18 PM	74.5 °F	71.4 °F	90%	NNE	19 mph	22.4 mph	-- in	0 in	0.07 in	1	101.84 w/m²
1:23 PM	74.5 °F	72.1 °F	92%	NE	24.4 mph	32.4 mph	-- in	0 in	0.07 in	1	68.51 w/m²
1:28 PM	74.5 °F	72.1 °F	92%	NNE	18.1 mph	22.4 mph	-- in	0 in	0.07 in	1	65.77 w/m²
1:34 PM	74.5 °F	72.1 °F	92%	North	24.4 mph	27.5 mph	-- in	0 in	0.07 in	1	123.07 w/m²
1:39 PM	74.5 °F	72.3 °F	93%	NNE	17 mph	17.5 mph	-- in	0 in	0.07 in	1	89.16 w/m²
1:44 PM	74.5 °F	72.3 °F	93%	NNE	20.1 mph	24.8 mph	-- in	0 in	0.07 in	1	72.61 w/m²
1:49 PM	74.5 °F	72.3 °F	93%	North	18.6 mph	19.9 mph	-- in	0 in	0.07 in	1	93.34 w/m²
1:54 PM	74.5 °F	72.3 °F	93%	NE	15 mph	17.5 mph	-- in	0 in	0.07 in	1	86.37 w/m²
1:59 PM	74.3 °F	72 °F	92%	NNE	17.5 mph	19.9 mph	-- in	0 in	0.07 in	1	61.81 w/m²
2:04 PM	74.3 °F	72 °F	92%	North	30.9 mph	37.4 mph	-- in	0 in	0.07 in	1	62.66 w/m²
2:09 PM	74.3 °F	72 °F	92%	North	29.5 mph	34.9 mph	-- in	0 in	0.07 in	1	103.98 w/m²
2:14 PM	74.1 °F	71.4 °F	91%	NNE	21.2 mph	27.5 mph	-- in	0 in	0.07 in	1	91.49 w/m²
2:19 PM	74.1 °F	71.4 °F	91%	NNE	27.7 mph	34.9 mph	-- in	0 in	0.07 in	1	55.6 w/m²
2:24 PM	74.1 °F	71.8 °F	92%	North	19 mph	22.4 mph	-- in	0 in	0.07 in	0	41.11 w/m²
2:29 PM	74.1 °F	71.8 °F	92%	North	27.1 mph	30 mph	-- in	0 in	0.07 in	1	87.1 w/m²
2:34 PM	74.1 °F	71.8 °F	92%	North	21.7 mph	27.5 mph	-- in	0 in	0.07 in	1	52 w/m²
2:39 PM	74.1 °F	71.8 °F	92%	NNE	30 mph	32.4 mph	-- in	0 in	0.07 in	0	16.24 w/m²
2:44 PM	74.1 °F	71.8 °F	92%	NE	21.5 mph	24.8 mph	-- in	0 in	0.07 in	0	19.07 w/m²
2:50 PM	74.1 °F	72 °F	93%	NNE	15.2 mph	17.5 mph	-- in	0 in	0.07 in	0	25.77 w/m²
2:55 PM	74.3 °F	72.1 °F	93%	North	23 mph	30 mph	-- in	0 in	0.07 in	0	38.73 w/m²
3:00 PM	74.5 °F	72.3 °F	93%	NNE	19.7 mph	22.4 mph	-- in	0 in	0.07 in	0	23.93 w/m²
3:05 PM	74.7 °F	72.5 °F	93%	NNE	28 mph	30 mph	-- in	0 in	0.07 in	0	33.74 w/m²
3:10 PM	74.7 °F	72.5 °F	93%	NNE	23.3 mph	24.8 mph	-- in	0 in	0.07 in	0	32.34 w/m²
3:15 PM	74.8 °F	72.7 °F	93%	North	24.6 mph	27.5 mph	-- in	0 in	0.07 in	0	27.08 w/m²
3:20 PM	75 °F	72.9 °F	93%	NNW	18.3 mph	19.9 mph	-- in	0 in	0.07 in	1	46.78 w/m²
3:25 PM	75.2 °F	73 °F	93%	NNE	22.8 mph	24.8 mph	-- in	0 in	0.07 in	1	70.04 w/m²
3:30 PM	75.2 °F	73 °F	93%	North	14.5 mph	15 mph	-- in	0 in	0.07 in	0	16.28 w/m²
3:35 PM	75.2 °F	73 °F	93%	NNE	29.1 mph	34.9 mph	-- in	0 in	0.07 in	0	23.34 w/m²
3:40 PM	75.2 °F	73 °F	93%	NNE	31.5 mph	40 mph	-- in	0 in	0.07 in	1	50.7 w/m²

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
3:45 PM	75.4 °F	73.2 °F	93%	NNE	24.6 mph	30 mph	-- in	0 in	0.07 in	1	56.41 w/m²
3:50 PM	75.4 °F	73.2 °F	93%	NNE	16.8 mph	22.4 mph	-- in	0 in	0.07 in	0	9.21 w/m²
3:55 PM	75.4 °F	73.2 °F	93%	NNE	21.5 mph	27.5 mph	-- in	0 in	0.07 in	1	43.5 w/m²
4:00 PM	75.4 °F	73.2 °F	93%	NNE	19 mph	24.8 mph	-- in	0 in	0.07 in	0	30.5 w/m²
4:06 PM	75.4 °F	73.2 °F	93%	NNE	17.5 mph	19.9 mph	-- in	0 in	0.07 in	0	29.6 w/m²
4:08 PM	75.4 °F	73.6 °F	94%	North	22.1 mph	24.8 mph	-- in	0 in	0.07 in	0	23.61 w/m²
4:13 PM	75.4 °F	72.9 °F	92%	NNE	30 mph	34.9 mph	-- in	0 in	0.07 in	0	22.62 w/m²
4:18 PM	75.2 °F	72.7 °F	92%	NNE	19.9 mph	22.4 mph	-- in	0 in	0.07 in	0	34.19 w/m²
4:23 PM	75.2 °F	72.7 °F	92%	North	23.9 mph	30 mph	-- in	0 in	0.07 in	0	18.8 w/m²
4:28 PM	75.2 °F	72.7 °F	92%	NNE	26.8 mph	34.9 mph	-- in	0 in	0.07 in	0	20.78 w/m²
4:33 PM	75.4 °F	72.9 °F	92%	NNE	23 mph	27.5 mph	-- in	0 in	0.07 in	0	29.69 w/m²
4:38 PM	75.4 °F	72.9 °F	92%	NNE	21.7 mph	24.8 mph	-- in	0 in	0.07 in	0	5.42 w/m²
4:43 PM	75.6 °F	73 °F	92%	North	17.7 mph	24.8 mph	-- in	0.14 in	0.09 in	0	15.88 w/m²
4:48 PM	75.7 °F	73.2 °F	92%	NNE	28.6 mph	32.4 mph	-- in	0.14 in	0.09 in	0	18.62 w/m²
4:53 PM	75.7 °F	73.2 °F	92%	NNE	24.6 mph	27.5 mph	-- in	0 in	0.09 in	0	16.46 w/m²
4:58 PM	75.7 °F	73 °F	91%	NNE	31.1 mph	37.4 mph	-- in	0 in	0.09 in	0	25.14 w/m²
5:03 PM	75.7 °F	73 °F	91%	NNE	26.8 mph	30 mph	-- in	0 in	0.09 in	0	28.79 w/m²
5:08 PM	75.7 °F	73 °F	91%	NNE	31.8 mph	37.4 mph	-- in	0 in	0.09 in	0	23.25 w/m²
5:14 PM	75.7 °F	73 °F	91%	NNE	33.1 mph	40 mph	-- in	0 in	0.09 in	0	18.8 w/m²
5:19 PM	75.7 °F	73 °F	91%	NNE	23.7 mph	30 mph	-- in	0 in	0.09 in	0	17.94 w/m²
5:24 PM	75.7 °F	73 °F	91%	ENE	37.1 mph	45 mph	-- in	0 in	0.09 in	0	17.67 w/m²
5:29 PM	75.7 °F	73 °F	91%	NNE	31.8 mph	37.4 mph	-- in	0 in	0.09 in	0	6.12 w/m²
5:34 PM	75.7 °F	73 °F	91%	NNE	21.5 mph	22.4 mph	-- in	0 in	0.09 in	0	16.1 w/m²
5:39 PM	75.7 °F	73 °F	91%	NNE	34.7 mph	47.4 mph	-- in	0 in	0.09 in	0	3.15 w/m²
5:44 PM	75.7 °F	73 °F	91%	NE	23.7 mph	30 mph	-- in	0 in	0.09 in	0	8.2 w/m²
5:47 PM	75.7 °F	73 °F	91%	NNE	35.6 mph	40 mph	-- in	0 in	0.09 in	0	6.98 w/m²
5:52 PM	75.7 °F	73 °F	91%	NE	34 mph	45 mph	-- in	0 in	0.09 in	0	9.67 w/m²
5:57 PM	75.9 °F	73.2 °F	91%	NE	30.2 mph	37.4 mph	-- in	0 in	0.09 in	0	3.54 w/m²
6:02 PM	75.9 °F	73.2 °F	91%	NE	38.5 mph	45 mph	-- in	0 in	0.09 in	0	3.43 w/m²
6:07 PM	76.1 °F	73.4 °F	91%	NNE	28.6 mph	32.4 mph	-- in	0 in	0.09 in	0	2.14 w/m²
6:12 PM	76.3 °F	73.6 °F	91%	NE	22.8 mph	27.5 mph	-- in	0 in	0.09 in	0	0.34 w/m²
6:17 PM	76.3 °F	73.6 °F	91%	NE	22.8 mph	32.4 mph	-- in	0 in	0.09 in	0	3.04 w/m²
6:22 PM	76.3 °F	73.6 °F	91%	NE	26.2 mph	34.9 mph	-- in	0 in	0.09 in	0	0.51 w/m²
6:27 PM	76.5 °F	73.4 °F	90%	ENE	27.1 mph	34.9 mph	-- in	0 in	0.09 in	0	0.51 w/m²
6:32 PM	76.5 °F	73.8 °F	91%	NE	33.3 mph	40 mph	-- in	0 in	0.09 in	0	1.35 w/m²
6:38 PM	76.5 °F	73.4 °F	90%	NE	30.9 mph	37.4 mph	-- in	0 in	0.09 in	0	1.8 w/m²
6:43 PM	76.3 °F	73.2 °F	90%	NE	30.2 mph	34.9 mph	-- in	0 in	0.09 in	0	1.74 w/m²
6:48 PM	76.1 °F	73 °F	90%	ENE	31.1 mph	34.9 mph	-- in	0 in	0.09 in	0	0 w/m²
6:53 PM	75.9 °F	72.9 °F	90%	NE	28.6 mph	37.4 mph	-- in	0 in	0.09 in	0	0 w/m²
6:58 PM	75.7 °F	72.7 °F	90%	NE	30.6 mph	37.4 mph	-- in	0 in	0.09 in	0	0 w/m²
7:03 PM	75.6 °F	72.5 °F	90%	NE	35.6 mph	42.5 mph	-- in	0 in	0.09 in	0	0 w/m²
7:08 PM	75.6 °F	72.5 °F	90%	ENE	35.6 mph	45 mph	-- in	0 in	0.09 in	0	0 w/m²
7:13 PM	75.7 °F	72.7 °F	90%	NE	20.1 mph	27.5 mph	-- in	0 in	0.09 in	0	0 w/m²
7:18 PM	75.7 °F	72.7 °F	90%	ENE	24.8 mph	27.5 mph	-- in	0 in	0.09 in	0	0 w/m²
7:23 PM	75.9 °F	72.9 °F	90%	ENE	26.8 mph	30 mph	-- in	0 in	0.09 in	0	0 w/m²

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
7:28 PM	76.1 °F	72.7 °F	89%	ENE	24.4 mph	27.5 mph	-- in	0 in	0.09 in	0	0 w/m²
7:33 PM	76.3 °F	72.9 °F	89%	ENE	19.2 mph	22.4 mph	-- in	0 in	0.09 in	0	0 w/m²
7:38 PM	76.5 °F	72.7 °F	88%	East	35.3 mph	40 mph	-- in	0 in	0.09 in	0	0 w/m²
7:43 PM	76.6 °F	72.9 °F	88%	East	38.9 mph	47.4 mph	-- in	0 in	0.09 in	0	0 w/m²
7:48 PM	76.8 °F	73 °F	88%	ESE	35.3 mph	42.5 mph	-- in	0 in	0.09 in	0	0 w/m²
7:54 PM	76.8 °F	73 °F	88%	ENE	29.3 mph	40 mph	-- in	0 in	0.09 in	0	0 w/m²
7:59 PM	77 °F	73.2 °F	88%	East	25.3 mph	32.4 mph	-- in	0 in	0.09 in	0	0 w/m²
8:04 PM	77 °F	72.9 °F	87%	East	39.4 mph	47.4 mph	-- in	0 in	0.09 in	0	0 w/m²
8:09 PM	77 °F	72.9 °F	87%	East	34.9 mph	42.5 mph	-- in	0 in	0.09 in	0	0 w/m²
8:14 PM	77 °F	72.9 °F	87%	East	43.4 mph	52.6 mph	-- in	0 in	0.09 in	0	0 w/m²
8:19 PM	77 °F	72.9 °F	87%	East	30.2 mph	45 mph	-- in	0 in	0.09 in	0	0 w/m²
8:24 PM	77.2 °F	73 °F	87%	East	43.2 mph	47.4 mph	-- in	0 in	0.09 in	0	0 w/m²
8:29 PM	77.2 °F	72.7 °F	86%	ESE	38.9 mph	45 mph	-- in	0 in	0.09 in	0	0 w/m²
8:34 PM	77.2 °F	72.7 °F	86%	East	45.6 mph	52.6 mph	-- in	0 in	0.09 in	0	0 w/m²
8:39 PM	77.2 °F	72.7 °F	86%	ESE	41.8 mph	52.6 mph	-- in	0 in	0.09 in	0	0 w/m²
8:44 PM	77 °F	72.5 °F	86%	East	45.6 mph	52.6 mph	-- in	0 in	0.09 in	0	0 w/m²
8:49 PM	77 °F	72.5 °F	86%	ESE	38.5 mph	45 mph	-- in	0 in	0.09 in	0	0 w/m²
8:54 PM	77 °F	72.5 °F	86%	ESE	49.7 mph	60 mph	-- in	0 in	0.09 in	0	0 w/m²
9:00 PM	77.2 °F	72.7 °F	86%	ESE	30.6 mph	40 mph	-- in	0 in	0.09 in	0	0 w/m²
9:05 PM	77.2 °F	72.7 °F	86%	WSW	49.4 mph	57.5 mph	-- in	0 in	0.09 in	0	0 w/m²

PICKETT
SURVEYING • ENGINEERING

Forensic Analysis of Crooked Lake 69kV Tapline Structures AL-14-1 to AL-14-13

Hurricane Irma

November 30, 2017

DUKE ENERGY®

Table of Contents:

1.0 Executive Summary 2
2.0 Maintenance Data 4
3.0 Weather Data 4
4.0 Conclusion 7
5.0 Restoration 7
Appendix A: Weather Data 8

PICKETT
SURVEYING • ENGINEERING

1.0 Executive Summary

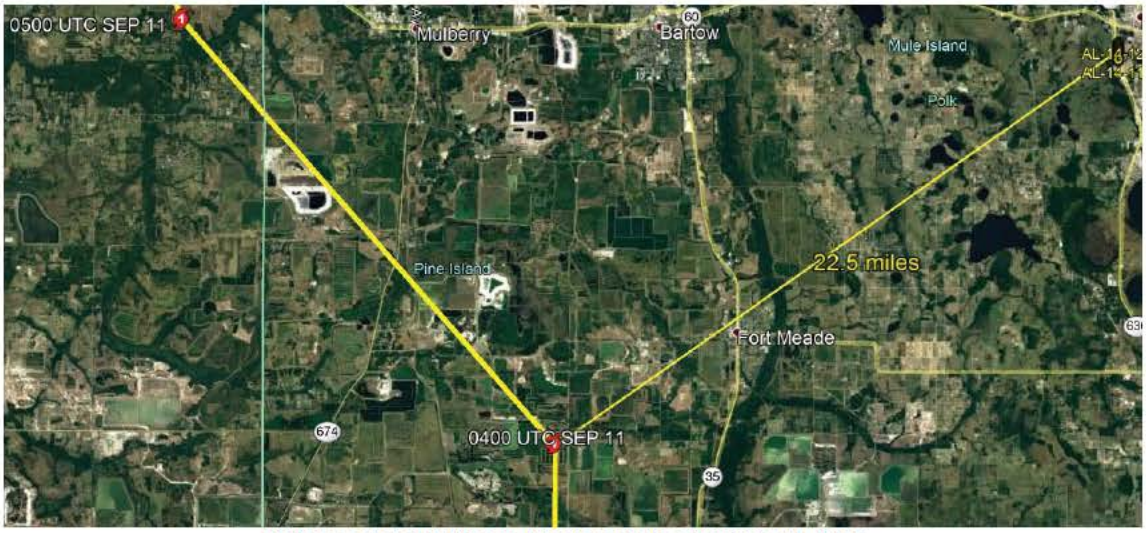
Structures: Crooked Lake 69kv Tapline Structures AL-14-1 to AL-14-13
Location – Central Polk County, FL (27°53'22.51"N; 81°35'51.78"W to 27°52'51.66"N; 81°35'51.67"W)
Date of Outage – 09-10-17
Time of Outage – 22:04 EST
Inspection Date – 09-17-17

At 10:04 pm, on Sunday, September 10th, an outage was reported on Crooked Lake 69kv Tapline. The outage was a result of wood pole failures.

At the time of the outage, 63 mph wind velocities were reported in the vicinity of structures AL-14-1 to AL-14-13 by the National Oceanic and Atmospheric Administration (NOAA). The outage occurred approximately an hour in advance of the hurricane being at a location nearest to the poles. Hurricane Irma's eye passed approximately 22.5 miles southwest of poles AL-14-1 to AL-14-13 at 11:00 pm EST Sunday, September 10, 2017.

Per a discussion with the construction inspector, there were five (5) wood poles, various insulators and wire failures. At the time of the field visit all failed poles and insulators had been replaced and new wire installed. Crews were in process of removing the failed material.

The pole and hardware failures most likely occurred due to high wind velocities as a result of Hurricane Irma's landfall. Possible wood rot could have aided in some of the wood pole's failures followed by additional cascading failures of adjacent structures.



Distance from Hurricane Irma's path to structure AL-14-7.

PICKETT
SURVEYING • ENGINEERING



Replaced light duty (LD) steel poles AL-14-5 to AL-14-3. Looking north.

2.0 Maintenance Data

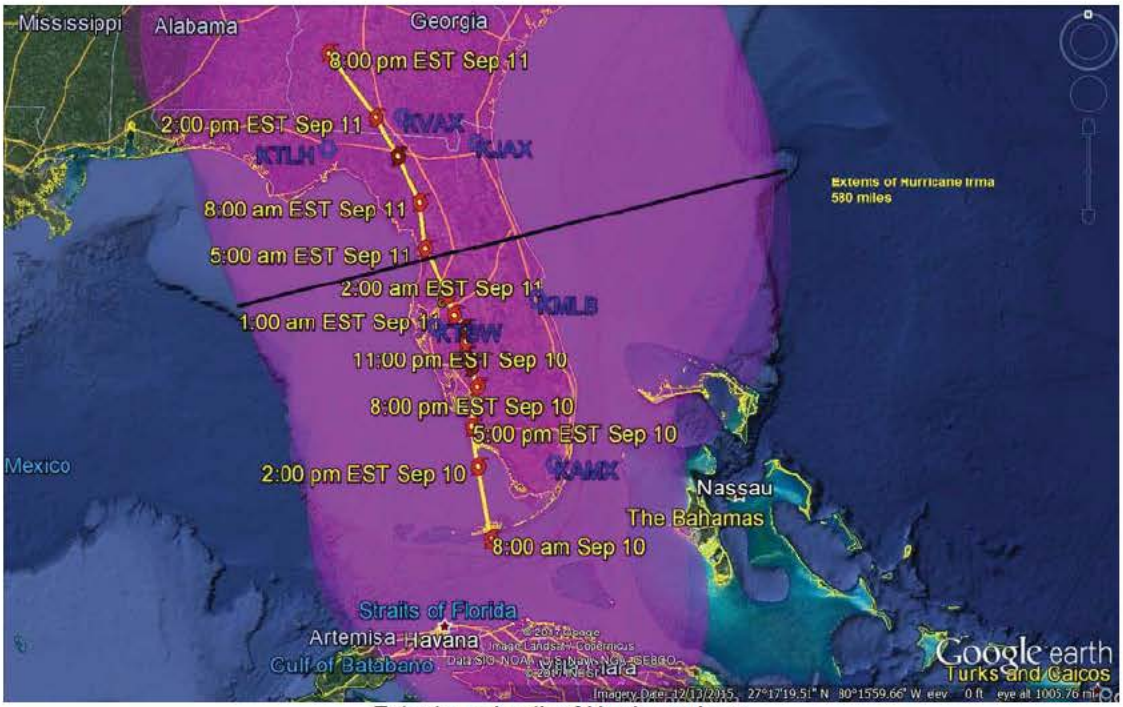
Maintenance data is not available at this time for poles AL-14-1 to AL-14-13.

3.0 Weather Data

Hurricane Irma made continental landfall in Naples, Florida at 4:00 pm EST on Sunday, September 10, 2017 as a category 2 hurricane and weakened to a tropical depression over the Georgia - Alabama border 12 hours later.

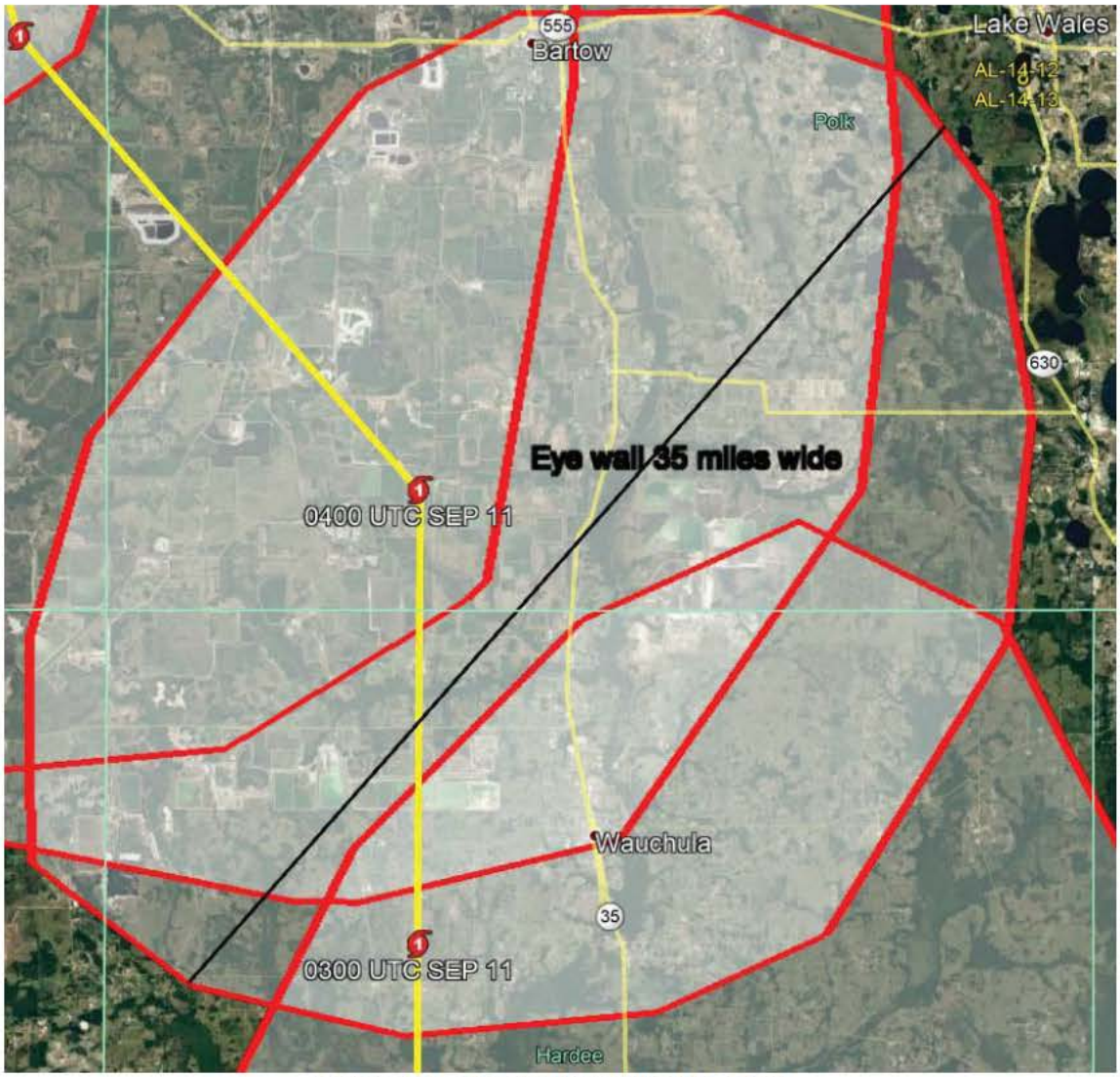
At the time of the Crooked Lake 69kv Tapline outage, approximately at 10:04 pm EST, September 10, 2017, the hurricane was designated as a category 1 hurricane and the eye of the hurricane was located approximately 32 miles southwest of pole AL-14-13. 63 mph wind velocity was reported near poles AL-14-1 to AL-14-13 at the time of the outage.

The hurricane was nearest to wood poles AL-14-1 to AL-14-13 at approximately 11:00 pm EST on Sunday, September 10, 2017 as a category 1 hurricane with recorded 100 mph wind velocities. The hurricane eye at that time was 75 miles wide and located 22.5 miles southwest of AL-14-13.



Extents and path of Hurricane Irma.

PICKETT
SURVEYING • ENGINEERING



Hurricane Irma eye wall in vicinity of AL-14-13.

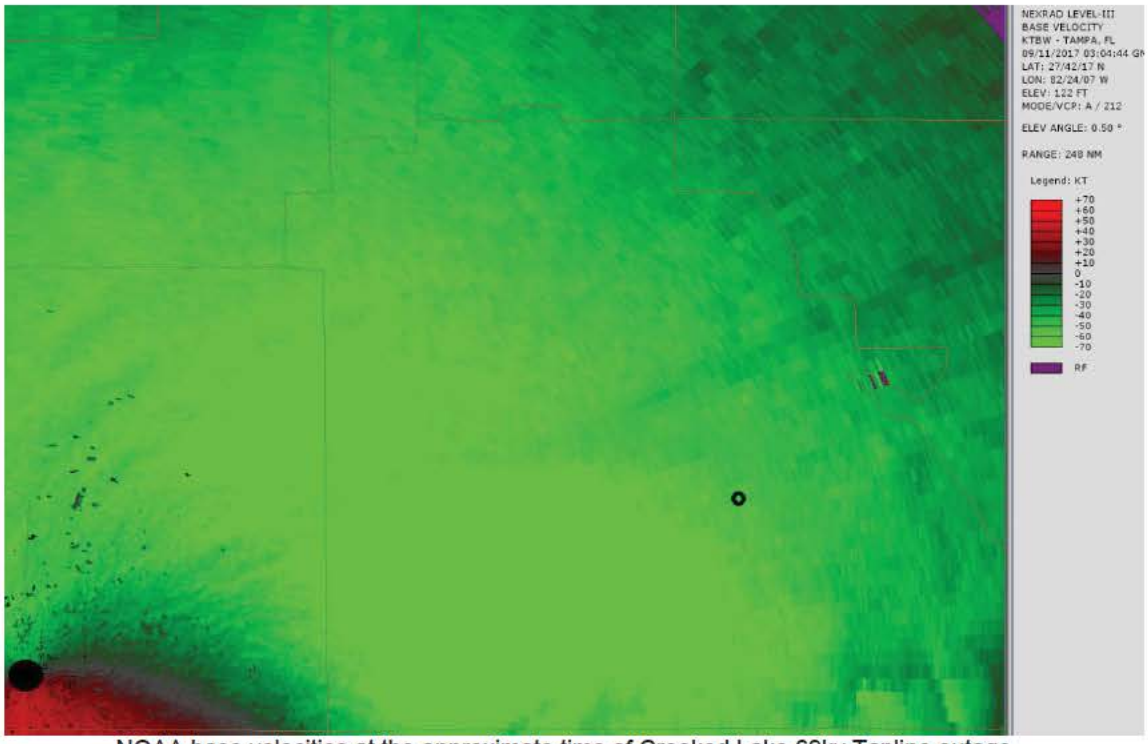
Three local weather stations: KBOW, KFLWINTE771 and KFLLAKEW36 show wind velocities in range of 24 to 41 mph and wind gusts in range of 47 to 57 mph. According to the NOAA site specific maps, the wind speeds have reached 63 mph at time of the outage.

Station Name & Location	Time	Temp	Wind Dir	Wind Vel.	Wind Gust.	Distance from AL-14-13
KBOW, Bartow Municipal Airport	10:15:00 PM	75.2 °F	ENE	41.4 mph	57.5 mph	12.1 mi
KFLWINTE771, Winter Haven, FL	10:02:00 PM	76.6 °F	ENE	30.4 mph	47.2 mph	5.5 mi
KFLLAKEW36, Lake Wales, FL	10:11:00 PM	75.9 °F	E	24 mph	47 mph	4.0 mi



Weather stations and distances from AL-14-1 to AL-14-13.

The following map shows NOAA wind velocities at the time of failure. The green shading indicates 55 knot wind speed which equates to 63 mph.



NOAA base velocities at the approximate time of Crooked Lake 69kv Tapline outage.

NOAA cyclone activity at the time of the outage was also reviewed and found no evidence of any cyclones near the Crooked Lake 69kv Tapline.

4.0 Conclusion

Per a discussion with the construction inspector, there were five (5) wood poles, various insulators and wire failures. At the time of the field visit all failed poles and insulators had been replaced and new wire installed. Crews were in process of removing the failed material.

The failed portion of the tapline is located on a slightly higher elevation and open landscape without vegetation or manmade cover. The open landscape increases wind exposure which in turn increases the risk of pole failure due to wind damage.

The pole and hardware failures most likely occurred due to high wind velocities as a result of Hurricane Irma's landfall. Possible wood rot could have aided in some of the wood pole's failures followed by additional cascading failures of adjacent structures.

5.0 Restoration

At the time of the site visit the wood failed poles, wire and hardware were being restored with LD steel poles.

Appendix A: Weather Data

KBOW Weather data for September 10 2017												
Time (EDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:15 AM	80.6 °F	85.4 °F	73.4 °F	79%	29.82 in	10.0 mi	ENE	17.3 mph	31.1 mph	N/A		Overcast
12:35 AM	80.6 °F	85.4 °F	73.4 °F	79%	29.81 in	10.0 mi	ENE	16.1 mph	24.2 mph	N/A		Overcast
12:55 AM	78.8 °F	-	73.4 °F	83%	29.80 in	10.0 mi	East	13.8 mph	24.2 mph	N/A		Overcast
1:15 AM	78.8 °F	-	75.2 °F	89%	29.80 in	10.0 mi	ENE	15.0 mph	21.9 mph	N/A		Overcast
1:35 AM	78.8 °F	-	75.2 °F	89%	29.80 in	10.0 mi	East	13.8 mph	23.0 mph	N/A		Overcast
1:55 AM	78.8 °F	-	77.0 °F	94%	29.80 in	10.0 mi	East	13.8 mph	26.5 mph	N/A		Overcast
2:15 AM	77.0 °F	-	77.0 °F	100%	29.80 in	4.0 mi	East	20.7 mph	26.5 mph	N/A	Rain	Light Rain
2:35 AM	75.2 °F	-	-	N/A%	29.79 in	4.0 mi	ENE	17.3 mph	24.2 mph	N/A	Rain	Light Rain
2:55 AM	75.2 °F	-	-	N/A%	29.78 in	5.0 mi	ENE	15.0 mph	-	N/A	Rain	Light Rain
3:15 AM	75.2 °F	-	-	N/A%	29.77 in	7.0 mi	NE	13.8 mph	-	N/A	Rain	Light Rain
3:35 AM	75.2 °F	-	-	N/A%	29.75 in	8.0 mi	ENE	12.7 mph	20.7 mph	N/A	Rain	Light Rain
3:55 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	ENE	12.7 mph	-	N/A		Mostly Cloudy
4:15 AM	75.2 °F	-	-	N/A%	29.76 in	10.0 mi	ENE	12.7 mph	-	N/A		Mostly Cloudy
4:35 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	ENE	13.8 mph	-	N/A	Rain	Light Rain
4:55 AM	75.2 °F	-	75.2 °F	100%	29.75 in	10.0 mi	ENE	12.7 mph	18.4 mph	N/A		Overcast
5:15 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	NE	9.2 mph	15.0 mph	N/A		Light Drizzle
5:35 AM	75.2 °F	-	-	N/A%	29.76 in	9.0 mi	ENE	10.4 mph	21.9 mph	N/A	Rain	Light Rain
5:55 AM	75.2 °F	-	-	N/A%	29.76 in	5.0 mi	ENE	13.8 mph	25.3 mph	N/A	Rain	Light Rain
6:15 AM	73.4 °F	-	-	N/A%	29.75 in	7.0 mi	ENE	15.0 mph	21.9 mph	N/A	Rain	Light Rain
6:35 AM	73.4 °F	-	-	N/A%	29.74 in	10.0 mi	NE	11.5 mph	18.4 mph	N/A		Light Drizzle
6:55 AM	75.2 °F	-	-	N/A%	29.73 in	10.0 mi	NE	12.7 mph	18.4 mph	N/A		Mostly Cloudy
7:15 AM	73.4 °F	-	-	N/A%	29.74 in	4.0 mi	NNE	10.4 mph	18.4 mph	N/A	Rain	Rain
5:35 PM	73.4 °F	-	-	N/A%	29.42 in	0.8 mi	NNE	25.3 mph	41.4 mph	N/A	Rain	Heavy Rain
5:55 PM	73.4 °F	-	-	N/A%	29.39 in	0.8 mi	NE	31.1 mph	49.5 mph	N/A	Rain	Heavy Rain
6:15 PM	73.4 °F	-	-	N/A%	29.36 in	-	NNE	27.6 mph	46.0 mph	N/A	Rain	Heavy Rain
6:35 PM	71.6 °F	-	-	N/A%	29.32 in	0.2 mi	NE	38.0 mph	49.5 mph	N/A	Rain	Heavy Rain
6:55 PM	71.6 °F	-	-	N/A%	29.32 in	0.2 mi	NNE	26.5 mph	47.2 mph	N/A	Rain	Heavy Rain
7:15 PM	73.4 °F	-	-	N/A%	29.27 in	0.2 mi	NE	27.6 mph	47.2 mph	N/A	Rain	Heavy Rain
7:35 PM	73.4 °F	-	-	N/A%	29.23 in	0.2 mi	NE	35.7 mph	46.0 mph	N/A	Rain	Heavy Rain
7:55 PM	73.4 °F	-	-	N/A%	29.18 in	0.5 mi	NE	32.2 mph	48.3 mph	N/A	Rain	Heavy Rain
8:15 PM	75.2 °F	-	-	N/A%	29.15 in	0.2 mi	NE	35.7 mph	55.2 mph	N/A	Rain	Heavy Rain
8:35 PM	75.2 °F	-	-	N/A%	29.11 in	1.2 mi	ENE	38.0 mph	44.9 mph	N/A	Rain	Heavy Rain
8:55 PM	75.2 °F	-	-	N/A%	29.07 in	2.0 mi	NE	33.4 mph	50.6 mph	N/A	Rain	Rain
9:15 PM	75.2 °F	-	-	N/A%	29.03 in	0.8 mi	NE	38.0 mph	49.5 mph	N/A	Rain	Heavy Rain
9:35 PM	75.2 °F	-	-	N/A%	28.97 in	0.8 mi	NE	42.6 mph	62.1 mph	N/A	Rain	Heavy Rain
9:55 PM	75.2 °F	-	-	N/A%	28.94 in	1.0 mi	ENE	36.8 mph	56.4 mph	N/A	Rain	Heavy Rain
10:15 PM	75.2 °F	-	-	N/A%	28.89 in	-	ENE	41.4 mph	57.5 mph	N/A	Rain	Heavy Rain
10:35 PM	75.2 °F	-	-	N/A%	28.84 in	0.5 mi	ENE	38.0 mph	61.0 mph	N/A	Rain	Heavy Rain
10:55 PM	75.2 °F	-	-	N/A%	28.79 in	0.5 mi	ENE	38.0 mph	64.4 mph	N/A	Rain	Heavy Rain
11:15 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown
11:35 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown
11:55 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown

KFLLAKEW36 Weather data for September 10 2017									
Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
12:10 AM	80.2 °F	75 °F	86%	ENE	11 mph	20 mph	29.84 in	0 in	0 in
12:26 AM	79.9 °F	75 °F	87%	ESE	10 mph	21 mph	29.83 in	0 in	0 in
12:41 AM	79.2 °F	74 °F	85%	ENE	9 mph	19 mph	29.83 in	0 in	0 in
1:01 AM	78.5 °F	74 °F	86%	East	7 mph	18 mph	29.82 in	0 in	0 in
1:20 AM	76.2 °F	73 °F	92%	East	6 mph	13 mph	29.82 in	0.01 in	0.01 in
1:40 AM	76.7 °F	75 °F	95%	NE	8 mph	17 mph	29.82 in	0.03 in	0.03 in
2:00 AM	76.6 °F	75 °F	95%	ESE	6 mph	15 mph	29.82 in	0.07 in	0.07 in
2:21 AM	76.2 °F	74 °F	95%	East	7 mph	14 mph	29.82 in	0.09 in	0.1 in
2:40 AM	75.8 °F	74 °F	96%	East	6 mph	11 mph	29.81 in	0.12 in	0.15 in
2:55 AM	75.6 °F	74 °F	96%	ENE	5 mph	10 mph	29.8 in	0.1 in	0.16 in
3:15 AM	75.5 °F	74 °F	96%	ENE	5 mph	13 mph	29.78 in	0.07 in	0.16 in
3:35 AM	75.7 °F	74 °F	96%	ENE	7 mph	13 mph	29.78 in	0.02 in	0.16 in
3:50 AM	75.7 °F	74 °F	96%	ENE	5 mph	12 mph	29.77 in	0 in	0.16 in
4:10 AM	75.8 °F	74 °F	96%	ESE	6 mph	15 mph	29.78 in	0 in	0.16 in
4:25 AM	75.7 °F	74 °F	96%	ENE	4 mph	10 mph	29.77 in	0 in	0.16 in
4:45 AM	75.5 °F	74 °F	96%	ENE	5 mph	10 mph	29.77 in	0.02 in	0.18 in
5:00 AM	75.4 °F	74 °F	96%	NNE	4 mph	11 mph	29.77 in	0.03 in	0.19 in
5:20 AM	75.5 °F	74 °F	96%	ENE	7 mph	17 mph	29.78 in	0.06 in	0.22 in
5:40 AM	75.3 °F	74 °F	96%	ENE	8 mph	16 mph	29.77 in	0.13 in	0.31 in
5:55 AM	75.1 °F	73 °F	96%	ENE	9 mph	17 mph	29.77 in	0.19 in	0.38 in
6:10 AM	74.7 °F	73 °F	96%	East	6 mph	14 mph	29.77 in	0.23 in	0.42 in
6:30 AM	74.8 °F	73 °F	96%	ENE	5 mph	12 mph	29.76 in	0.2 in	0.46 in
6:50 AM	74.7 °F	73 °F	97%	East	6 mph	12 mph	29.75 in	0.13 in	0.48 in
7:10 AM	74.9 °F	73 °F	97%	NNE	10 mph	20 mph	29.74 in	0.28 in	0.7 in
7:30 AM	74.9 °F	73 °F	97%	East	7 mph	14 mph	29.74 in	0.37 in	0.83 in
7:50 AM	73.7 °F	72 °F	97%	NE	6 mph	13 mph	29.74 in	0.86 in	1.34 in
8:06 AM	75.2 °F	74 °F	97%	NNE	6 mph	13 mph	29.74 in	0.71 in	1.38 in
8:26 AM	76 °F	75 °F	97%	ENE	7 mph	17 mph	29.75 in	0.62 in	1.44 in
8:47 AM	76.5 °F	75 °F	97%	ENE	8 mph	19 mph	29.75 in	0.22 in	1.52 in
9:05 AM	76.5 °F	75 °F	97%	ENE	8 mph	14 mph	29.75 in	0.32 in	1.7 in
9:25 AM	76.2 °F	75 °F	97%	ENE	10 mph	18 mph	29.75 in	0.45 in	1.89 in
9:45 AM	75.7 °F	74 °F	97%	ENE	11 mph	19 mph	29.76 in	0.58 in	2.11 in
10:00 AM	75.6 °F	74 °F	97%	NE	8 mph	18 mph	29.76 in	0.68 in	2.3 in
10:16 AM	75.2 °F	74 °F	97%	ENE	9 mph	17 mph	29.77 in	0.68 in	2.52 in
10:35 AM	74.3 °F	73 °F	96%	ENE	9 mph	18 mph	29.75 in	0.64 in	2.68 in
10:50 AM	73.2 °F	71 °F	96%	NE	11 mph	21 mph	29.79 in	0.67 in	2.84 in
11:05 AM	72.6 °F	71 °F	97%	ENE	7 mph	14 mph	29.75 in	0.54 in	2.94 in
11:25 AM	71.2 °F	70 °F	96%	ENE	9 mph	17 mph	29.75 in	0.37 in	3.01 in
11:40 AM	72.5 °F	71 °F	97%	NE	9 mph	20 mph	29.74 in	0.36 in	3.05 in
12:05 PM	73.5 °F	72 °F	96%	NE	11 mph	21 mph	29.72 in	0.18 in	3.12 in
12:20 PM	73.8 °F	72 °F	97%	NE	11 mph	23 mph	29.71 in	0.14 in	3.13 in
12:40 PM	73.5 °F	72 °F	96%	East	12 mph	23 mph	29.7 in	0.16 in	3.21 in
1:00 PM	73.7 °F	72 °F	97%	NNE	11 mph	20 mph	29.68 in	0.2 in	3.31 in
1:15 PM	73.1 °F	71 °F	96%	NE	13 mph	24 mph	29.68 in	0.42 in	3.54 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
1:35 PM	73.4 °F	72 °F	97%	ENE	12 mph	21 mph	29.65 in	0.38 in	3.59 in
1:56 PM	74 °F	73 °F	97%	NNE	12 mph	23 mph	29.63 in	0.36 in	3.63 in
2:11 PM	73.9 °F	72 °F	96%	ENE	14 mph	26 mph	29.61 in	0.18 in	3.71 in
2:31 PM	74.2 °F	72 °F	96%	NE	13 mph	30 mph	29.59 in	0.17 in	3.76 in
2:51 PM	74.1 °F	72 °F	96%	North	13 mph	23 mph	29.57 in	0.19 in	3.81 in
3:05 PM	73.9 °F	72 °F	96%	NNE	14 mph	28 mph	29.55 in	0.21 in	3.87 in
3:21 PM	73.9 °F	72 °F	96%	NE	13 mph	26 mph	29.53 in	0.22 in	3.97 in
3:40 PM	73.7 °F	72 °F	97%	ENE	14 mph	23 mph	29.52 in	0.42 in	4.2 in
4:00 PM	73.6 °F	72 °F	97%	NE	13 mph	26 mph	29.52 in	0.63 in	4.46 in
4:21 PM	73.6 °F	72 °F	97%	NNE	14 mph	28 mph	29.49 in	0.68 in	4.66 in
4:36 PM	73.4 °F	72 °F	97%	ENE	15 mph	31 mph	29.46 in	0.6 in	4.76 in
4:56 PM	73.7 °F	72 °F	97%	ENE	14 mph	41 mph	29.45 in	0.53 in	4.92 in
5:18 PM	74 °F	73 °F	97%	ENE	14 mph	31 mph	29.43 in	0.43 in	5.06 in
5:35 PM	74.3 °F	73 °F	97%	East	17 mph	38 mph	29.4 in	0.53 in	5.29 in
5:55 PM	74.2 °F	73 °F	97%	NNE	18 mph	34 mph	29.36 in	0.72 in	5.64 in
6:10 PM	74.3 °F	73 °F	97%	North	17 mph	29 mph	29.34 in	0.89 in	5.88 in
6:30 PM	73.9 °F	72 °F	97%	NE	20 mph	40 mph	29.31 in	1.11 in	6.35 in
6:51 PM	73.9 °F	72 °F	97%	NNE	17 mph	39 mph	29.28 in	1.3 in	6.87 in
7:10 PM	74.1 °F	73 °F	97%	NE	20 mph	37 mph	29.25 in	1.25 in	7.14 in
7:28 PM	75.1 °F	74 °F	98%	ENE	17 mph	34 mph	29.23 in	1.06 in	7.28 in
7:45 PM	75 °F	74 °F	98%	ENE	20 mph	37 mph	29.18 in	0.75 in	7.52 in
8:05 PM	75.6 °F	74 °F	98%	NE	19 mph	43 mph	29.13 in	0.68 in	7.79 in
8:26 PM	75.6 °F	74 °F	97%	NE	20 mph	37 mph	29.1 in	0.65 in	7.96 in
8:50 PM	75.9 °F	74 °F	97%	ENE	22 mph	46 mph	29.05 in	0.45 in	8.07 in
9:05 PM	75.9 °F	74 °F	97%	NNE	22 mph	40 mph	29 in	0.48 in	8.28 in
10:11 PM	75.9 °F	74 °F	97%	East	24 mph	47 mph	28.88 in	0.95 in	9.29 in
10:35 PM	75.8 °F	74 °F	97%	East	22 mph	47 mph	28.83 in	1.17 in	9.82 in
10:56 PM	75.9 °F	74 °F	97%	SSE	24 mph	53 mph	28.78 in	1.2 in	10.24 in
11:40 PM	76 °F	75 °F	97%	East	25 mph	47 mph	28.7 in	1.27 in	10.87 in
11:55 PM	75.7 °F	75 °F	98%	ESE	28 mph	49 mph	28.69 in	1.37 in	11.62 in

KFLWINTE771 Weather data for September 10 2017									
Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
12:02 AM	80.8 °F	79.5 °F	96%	ENE	16.1 mph	19.9 mph	29.78 in	0 in	0 in
12:07 AM	80.8 °F	79.5 °F	96%	NE	13 mph	19.9 mph	29.78 in	0 in	0 in
12:12 AM	80.8 °F	79.5 °F	96%	ENE	13 mph	19.9 mph	29.76 in	0 in	0 in
12:17 AM	80.8 °F	79.5 °F	96%	NE	16.1 mph	19.9 mph	29.77 in	0 in	0 in
12:22 AM	80.8 °F	79.5 °F	96%	East	11.9 mph	18.1 mph	29.76 in	0 in	0 in
12:27 AM	80.8 °F	79.5 °F	96%	East	15 mph	18.1 mph	29.77 in	0 in	0 in
12:32 AM	80.8 °F	79.5 °F	96%	NE	8.1 mph	18.1 mph	29.77 in	0 in	0 in
12:37 AM	80.8 °F	79.5 °F	96%	NE	16.8 mph	19.9 mph	29.77 in	0 in	0 in
12:42 AM	80.6 °F	79 °F	95%	East	18.6 mph	19.9 mph	29.76 in	0 in	0 in
12:47 AM	80.6 °F	79 °F	95%	SSE	15.4 mph	19.9 mph	29.76 in	0 in	0 in
12:52 AM	80.4 °F	78.4 °F	94%	ENE	11.2 mph	19.9 mph	29.76 in	0 in	0 in
12:57 AM	80.4 °F	78.4 °F	94%	ENE	9.4 mph	19.9 mph	29.76 in	0 in	0 in
1:02 AM	80.4 °F	78.8 °F	95%	NE	15 mph	19.9 mph	29.75 in	0 in	0 in
1:07 AM	80.2 °F	79 °F	96%	ENE	13.6 mph	19.9 mph	29.76 in	0 in	0 in
1:12 AM	80.2 °F	79 °F	96%	ENE	16.8 mph	19.9 mph	29.76 in	0 in	0 in
1:17 AM	80.2 °F	79.5 °F	97%	NE	9.8 mph	19.9 mph	29.76 in	0 in	0 in
1:22 AM	80.1 °F	79.5 °F	98%	East	8.1 mph	19.9 mph	29.75 in	0 in	0 in
1:27 AM	80.1 °F	79.5 °F	98%	ENE	10.5 mph	19.9 mph	29.76 in	0 in	0 in
1:32 AM	79.9 °F	79.5 °F	99%	ENE	16.1 mph	19.9 mph	29.76 in	0 in	0 in
1:37 AM	79.9 °F	79.5 °F	99%	NE	11.9 mph	19.9 mph	29.75 in	0 in	0 in
1:42 AM	79.9 °F	79.5 °F	99%	NE	8.7 mph	18.1 mph	29.76 in	0 in	0 in
1:47 AM	79.9 °F	79.5 °F	99%	NE	13 mph	18.1 mph	29.75 in	0 in	0 in
1:52 AM	79.7 °F	79.3 °F	99%	NNE	18.1 mph	18.1 mph	29.75 in	0 in	0 in
1:57 AM	79.7 °F	79.3 °F	99%	ENE	9.8 mph	18.1 mph	29.76 in	0.06 in	0.01 in
2:02 AM	79.5 °F	79.2 °F	99%	NE	8.7 mph	18.1 mph	29.76 in	0.12 in	0.02 in
2:07 AM	79.5 °F	79.2 °F	99%	ENE	6.9 mph	18.1 mph	29.75 in	0.12 in	0.03 in
2:12 AM	79.5 °F	79.2 °F	99%	East	14.3 mph	18.1 mph	29.76 in	0.12 in	0.04 in
2:17 AM	79.3 °F	79 °F	99%	ENE	13.6 mph	18.1 mph	29.75 in	0.12 in	0.05 in
2:22 AM	79.3 °F	79 °F	99%	NE	10.5 mph	18.1 mph	29.75 in	0.06 in	0.05 in
2:27 AM	79.2 °F	78.8 °F	99%	NE	7.4 mph	18.1 mph	29.75 in	0.12 in	0.06 in
2:32 AM	79 °F	78.6 °F	99%	NE	8.7 mph	18.1 mph	29.75 in	0.12 in	0.07 in
2:37 AM	78.8 °F	78.4 °F	99%	NE	6.3 mph	18.1 mph	29.75 in	0.12 in	0.08 in
2:42 AM	78.8 °F	78.4 °F	99%	NE	6.9 mph	18.1 mph	29.75 in	0.12 in	0.09 in
2:47 AM	78.8 °F	78.4 °F	99%	NE	5.6 mph	18.1 mph	29.74 in	0.12 in	0.1 in
2:52 AM	78.8 °F	78.4 °F	99%	ENE	5.6 mph	18.1 mph	29.74 in	0.12 in	0.11 in
2:56 AM	78.6 °F	78.3 °F	99%	NNE	6.9 mph	18.1 mph	29.73 in	0.12 in	0.11 in
3:01 AM	78.6 °F	78.3 °F	99%	ENE	11.9 mph	18.1 mph	29.73 in	0.06 in	0.12 in
3:06 AM	78.4 °F	78.1 °F	99%	NE	11.2 mph	18.1 mph	29.73 in	0.12 in	0.13 in
3:11 AM	78.4 °F	78.1 °F	99%	ENE	8.1 mph	18.1 mph	29.72 in	0.06 in	0.13 in
3:16 AM	78.3 °F	77.9 °F	99%	NNE	4.3 mph	18.1 mph	29.71 in	0 in	0.13 in
3:21 AM	78.3 °F	77.9 °F	99%	ENE	6.3 mph	15 mph	29.71 in	0.06 in	0.14 in
3:26 AM	78.3 °F	77.9 °F	99%	ENE	7.4 mph	15 mph	29.71 in	0.06 in	0.14 in
3:31 AM	78.3 °F	77.9 °F	99%	NE	8.7 mph	15.4 mph	29.71 in	0 in	0.14 in
3:36 AM	78.3 °F	77.9 °F	99%	ENE	8.7 mph	15.4 mph	29.71 in	0 in	0.14 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
3:41 AM	78.3 °F	77.9 °F	99%	ENE	10.5 mph	15.4 mph	29.7 in	0 in	0.14 in
3:46 AM	78.3 °F	77.9 °F	99%	East	8.1 mph	15.4 mph	29.71 in	0 in	0.14 in
3:51 AM	78.3 °F	77.9 °F	99%	ENE	9.8 mph	15.4 mph	29.7 in	0 in	0.14 in
3:56 AM	78.3 °F	77.9 °F	99%	ENE	11.2 mph	15.4 mph	29.71 in	0 in	0.14 in
4:01 AM	78.3 °F	77.9 °F	99%	East	8.7 mph	15.4 mph	29.71 in	0 in	0.14 in
4:06 AM	78.3 °F	77.9 °F	99%	ENE	8.1 mph	15.4 mph	29.72 in	0 in	0.14 in
4:11 AM	78.3 °F	77.9 °F	99%	East	9.8 mph	15.4 mph	29.72 in	0 in	0.14 in
4:16 AM	78.3 °F	77.9 °F	99%	NNE	11.2 mph	18.1 mph	29.71 in	0 in	0.14 in
4:21 AM	78.3 °F	77.9 °F	99%	NE	11.2 mph	18.1 mph	29.71 in	0 in	0.14 in
4:26 AM	78.3 °F	77.9 °F	99%	NE	10.5 mph	18.1 mph	29.7 in	0 in	0.14 in
4:31 AM	78.3 °F	77.9 °F	99%	NE	5.6 mph	18.1 mph	29.7 in	0 in	0.14 in
4:36 AM	78.3 °F	77.9 °F	99%	ENE	6.9 mph	18.1 mph	29.71 in	0 in	0.14 in
4:41 AM	78.1 °F	77.7 °F	99%	East	6.3 mph	18.1 mph	29.7 in	0 in	0.14 in
4:46 AM	78.3 °F	77.9 °F	99%	ENE	6.3 mph	18.1 mph	29.71 in	0 in	0.14 in
4:56 AM	78.1 °F	77.7 °F	99%	NE	7.4 mph	18.1 mph	29.7 in	0 in	0.14 in
5:01 AM	77.9 °F	77.5 °F	99%	NNE	3.8 mph	18.1 mph	29.71 in	0 in	0.14 in
5:06 AM	77.9 °F	77.5 °F	99%	NE	9.4 mph	18.1 mph	29.71 in	0 in	0.14 in
5:11 AM	77.9 °F	77.5 °F	99%	ENE	6.9 mph	13 mph	29.7 in	0 in	0.14 in
5:16 AM	77.9 °F	77.5 °F	99%	NE	10.5 mph	13 mph	29.71 in	0 in	0.14 in
5:21 AM	77.9 °F	77.5 °F	99%	ENE	9.4 mph	11.9 mph	29.71 in	0 in	0.14 in
5:26 AM	77.9 °F	77.5 °F	99%	NE	8.1 mph	13 mph	29.72 in	0.06 in	0.15 in
5:31 AM	77.9 °F	77.5 °F	99%	East	13 mph	13 mph	29.71 in	0.18 in	0.17 in
5:36 AM	77.9 °F	77.5 °F	99%	NE	10.5 mph	13 mph	29.71 in	0.18 in	0.18 in
5:41 AM	77.7 °F	77.4 °F	99%	NE	9.4 mph	13.6 mph	29.71 in	0.24 in	0.2 in
5:46 AM	77.7 °F	77.4 °F	99%	ENE	9.8 mph	15.4 mph	29.71 in	0.18 in	0.21 in
5:51 AM	77.7 °F	77.4 °F	99%	NE	11.9 mph	15.4 mph	29.71 in	0.3 in	0.24 in
5:56 AM	77.7 °F	77.4 °F	99%	NNE	12.5 mph	15.4 mph	29.71 in	0.3 in	0.26 in
6:01 AM	77.5 °F	77.2 °F	99%	NE	9.4 mph	15.4 mph	29.71 in	0.24 in	0.27 in
6:06 AM	77.5 °F	77.2 °F	99%	NE	7.4 mph	15.4 mph	29.71 in	0.12 in	0.28 in
6:11 AM	77.4 °F	77 °F	99%	NNE	11.2 mph	15.4 mph	29.7 in	0.06 in	0.28 in
6:16 AM	77.4 °F	77 °F	99%	North	10.5 mph	15.4 mph	29.7 in	0 in	0.28 in
6:21 AM	77.4 °F	77 °F	99%	ENE	5.6 mph	15.4 mph	29.7 in	0 in	0.28 in
6:26 AM	77.2 °F	76.8 °F	99%	NNE	6.3 mph	15.4 mph	29.7 in	0 in	0.28 in
6:31 AM	77.2 °F	76.8 °F	99%	NE	6.9 mph	15.4 mph	29.69 in	0.06 in	0.29 in
6:36 AM	77.2 °F	76.8 °F	99%	NE	6.9 mph	15.4 mph	29.7 in	0.06 in	0.29 in
6:41 AM	77.2 °F	76.8 °F	99%	NE	5.6 mph	14.3 mph	29.69 in	0 in	0.29 in
6:47 AM	77.2 °F	76.8 °F	99%	NNE	9.8 mph	14.3 mph	29.69 in	0 in	0.29 in
6:52 AM	77.2 °F	76.8 °F	99%	North	7.4 mph	14.3 mph	29.69 in	0.06 in	0.3 in
6:57 AM	77.2 °F	76.8 °F	99%	NNE	4.9 mph	14.3 mph	29.69 in	0.12 in	0.31 in
7:02 AM	77.2 °F	76.8 °F	99%	NE	6.9 mph	13 mph	29.69 in	0.12 in	0.32 in
7:07 AM	77.2 °F	76.8 °F	99%	NNE	6.9 mph	13 mph	29.69 in	0.06 in	0.32 in
7:12 AM	77.2 °F	76.8 °F	99%	North	7.4 mph	13 mph	29.69 in	0.06 in	0.33 in
7:17 AM	77 °F	76.6 °F	99%	NNE	8.7 mph	13 mph	29.69 in	0.12 in	0.34 in
7:22 AM	77 °F	76.6 °F	99%	NNE	7.4 mph	13 mph	29.69 in	0.24 in	0.37 in
7:27 AM	77 °F	76.6 °F	99%	NNE	3.8 mph	13 mph	29.68 in	0.54 in	0.43 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
7:32 AM	77 °F	76.6 °F	99%	NNE	7.4 mph	13 mph	29.67 in	0.48 in	0.44 in
7:37 AM	77 °F	76.6 °F	99%	NNE	11.9 mph	13 mph	29.67 in	0.18 in	0.46 in
7:42 AM	77 °F	76.6 °F	99%	NNE	8.1 mph	13 mph	29.67 in	0.18 in	0.47 in
7:47 AM	77 °F	76.6 °F	99%	NNE	8.1 mph	15 mph	29.67 in	0.12 in	0.48 in
7:52 AM	77 °F	76.6 °F	99%	North	9.4 mph	15 mph	29.67 in	0.18 in	0.5 in
7:57 AM	77 °F	76.6 °F	99%	NNE	11.9 mph	15 mph	29.67 in	0.18 in	0.51 in
8:02 AM	77.2 °F	76.8 °F	99%	NE	8.7 mph	16.8 mph	29.67 in	0.12 in	0.52 in
8:07 AM	77.2 °F	76.8 °F	99%	NE	7.4 mph	16.8 mph	29.68 in	0.12 in	0.53 in
8:12 AM	77.4 °F	77 °F	99%	SW	9.8 mph	16.8 mph	29.68 in	0.12 in	0.54 in
8:17 AM	77.4 °F	77 °F	99%	NNE	14.3 mph	16.8 mph	29.68 in	0.12 in	0.55 in
8:22 AM	77.5 °F	77.2 °F	99%	East	9.8 mph	16.8 mph	29.69 in	0.18 in	0.57 in
8:27 AM	77.5 °F	77.2 °F	99%	NNE	10.5 mph	16.8 mph	29.68 in	0.18 in	0.58 in
8:32 AM	77.7 °F	77.4 °F	99%	North	9.4 mph	16.8 mph	29.68 in	0.18 in	0.59 in
8:37 AM	77.9 °F	77.5 °F	99%	North	9.8 mph	16.8 mph	29.69 in	0.18 in	0.61 in
8:42 AM	77.9 °F	77.5 °F	99%	ENE	13.6 mph	16.8 mph	29.69 in	0.18 in	0.62 in
8:45 AM	77.9 °F	77.5 °F	99%	NE	9.4 mph	18.6 mph	29.69 in	0.24 in	0.64 in
8:50 AM	78.1 °F	77.7 °F	99%	NNE	8.7 mph	18.6 mph	29.69 in	0.3 in	0.66 in
8:51 AM	78.1 °F	77.7 °F	99%	NE	15 mph	18.6 mph	29.69 in	0.24 in	0.66 in
8:56 AM	78.1 °F	77.7 °F	99%	NE	9.8 mph	18.6 mph	29.7 in	0.24 in	0.68 in
9:01 AM	78.1 °F	77.7 °F	99%	NNE	9.8 mph	19.2 mph	29.69 in	0.24 in	0.7 in
9:06 AM	78.1 °F	77.7 °F	99%	NNE	8.7 mph	19.2 mph	29.69 in	0.24 in	0.72 in
9:11 AM	78.3 °F	77.9 °F	99%	NNE	12.5 mph	19.2 mph	29.69 in	0.24 in	0.74 in
9:16 AM	78.1 °F	77.7 °F	99%	NE	9.8 mph	19.2 mph	29.69 in	0.3 in	0.77 in
9:21 AM	78.1 °F	77.7 °F	99%	NE	13 mph	19.2 mph	29.69 in	0.42 in	0.8 in
9:26 AM	78.1 °F	77.7 °F	99%	NE	11.2 mph	19.2 mph	29.69 in	0.3 in	0.81 in
9:31 AM	78.1 °F	77.7 °F	99%	NE	14.3 mph	19.2 mph	29.68 in	0.12 in	0.82 in
9:36 AM	78.1 °F	77.7 °F	99%	ENE	12.5 mph	19.9 mph	29.7 in	0.24 in	0.85 in
9:41 AM	78.1 °F	77.7 °F	99%	NW	11.9 mph	19.9 mph	29.69 in	0.3 in	0.87 in
9:46 AM	78.1 °F	77.7 °F	99%	East	8.7 mph	19.9 mph	29.69 in	0.24 in	0.88 in
9:51 AM	78.1 °F	77.7 °F	99%	NNE	6.9 mph	19.9 mph	29.69 in	0.18 in	0.89 in
9:56 AM	78.1 °F	77.7 °F	99%	ENE	15 mph	19.9 mph	29.7 in	0.12 in	0.9 in
10:01 AM	77.9 °F	77.5 °F	99%	NNE	9.8 mph	19.9 mph	29.71 in	0.24 in	0.93 in
10:06 AM	77.9 °F	77.5 °F	99%	East	6.9 mph	19.9 mph	29.7 in	0.3 in	0.95 in
10:11 AM	77.9 °F	77.5 °F	99%	ESE	13.6 mph	19.9 mph	29.71 in	0.24 in	0.97 in
10:16 AM	77.7 °F	77.4 °F	99%	East	9.8 mph	23 mph	29.71 in	0.36 in	1.01 in
10:21 AM	77.7 °F	77.4 °F	99%	NE	10.5 mph	23 mph	29.7 in	0.3 in	1.01 in
10:26 AM	77.5 °F	77.2 °F	99%	ENE	11.2 mph	23 mph	29.7 in	0.18 in	1.03 in
10:31 AM	77.4 °F	77 °F	99%	NE	10.5 mph	23 mph	29.71 in	0.24 in	1.05 in
10:36 AM	77.2 °F	76.8 °F	99%	ENE	16.8 mph	23 mph	29.7 in	0.6 in	1.12 in
10:41 AM	77 °F	76.6 °F	99%	East	9.8 mph	23 mph	29.69 in	0.72 in	1.16 in
10:46 AM	76.8 °F	76.5 °F	99%	NE	7.4 mph	23 mph	29.71 in	0.42 in	1.19 in
10:51 AM	76.6 °F	76.3 °F	99%	ENE	6.9 mph	23 mph	29.73 in	0.72 in	1.28 in
10:56 AM	76.5 °F	76.1 °F	99%	East	13 mph	23 mph	29.74 in	2.16 in	1.55 in
11:01 AM	76.1 °F	75.7 °F	99%	NE	23 mph	23 mph	29.7 in	2.7 in	1.71 in
11:03 AM	75.9 °F	75.6 °F	99%	NE	13.6 mph	23 mph	29.7 in	2.46 in	1.74 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
11:08 AM	75.6 °F	75.2 °F	99%	NE	18.6 mph	23 mph	29.7 in	0.84 in	1.77 in
11:13 AM	75.2 °F	74.8 °F	99%	NE	8.1 mph	23 mph	29.7 in	0.36 in	1.79 in
11:18 AM	75 °F	74.7 °F	99%	NE	11.9 mph	23 mph	29.69 in	0.18 in	1.8 in
11:23 AM	75 °F	74.7 °F	99%	NNE	14.3 mph	23 mph	29.69 in	0.12 in	1.81 in
11:28 AM	74.8 °F	74.5 °F	99%	ENE	11.9 mph	23 mph	29.7 in	0.12 in	1.82 in
11:33 AM	75 °F	74.7 °F	99%	ENE	9.4 mph	23 mph	29.69 in	0.18 in	1.84 in
11:38 AM	75 °F	74.7 °F	99%	East	8.1 mph	23 mph	29.7 in	0.18 in	1.85 in
11:43 AM	75.2 °F	74.8 °F	99%	NNE	11.2 mph	23 mph	29.69 in	0.12 in	1.86 in
11:48 AM	75.4 °F	75 °F	99%	ENE	16.1 mph	23 mph	29.69 in	0.12 in	1.87 in
11:53 AM	75.4 °F	75 °F	99%	East	11.2 mph	23 mph	29.7 in	0.18 in	1.89 in
11:58 AM	75.4 °F	75 °F	99%	ENE	8.7 mph	22.4 mph	29.68 in	0.3 in	1.92 in
12:03 PM	75.4 °F	75 °F	99%	North	15.4 mph	22.4 mph	29.66 in	0.36 in	1.95 in
12:08 PM	75.4 °F	75 °F	99%	NE	16.8 mph	22.4 mph	29.66 in	0.24 in	1.96 in
12:13 PM	75.6 °F	75.2 °F	99%	NE	20.6 mph	22.4 mph	29.65 in	0.12 in	1.96 in
12:18 PM	75.6 °F	75.2 °F	99%	NNE	16.1 mph	22.4 mph	29.65 in	0.06 in	1.96 in
12:23 PM	75.6 °F	75.2 °F	99%	ENE	13 mph	22.4 mph	29.65 in	0 in	1.96 in
12:28 PM	75.6 °F	75.2 °F	99%	NE	21 mph	22.4 mph	29.65 in	0.06 in	1.97 in
12:33 PM	75.6 °F	75.2 °F	99%	NE	15.4 mph	22.4 mph	29.64 in	0.06 in	1.97 in
12:38 PM	75.7 °F	75.4 °F	99%	NE	15.4 mph	22.4 mph	29.65 in	0 in	1.97 in
12:43 PM	75.7 °F	75.4 °F	99%	NNE	18.6 mph	22.4 mph	29.64 in	0.06 in	1.98 in
12:48 PM	75.7 °F	75.4 °F	99%	NE	15.4 mph	21.7 mph	29.64 in	0.12 in	1.99 in
12:53 PM	75.7 °F	75.4 °F	99%	NE	20.6 mph	21.7 mph	29.63 in	0.18 in	2.01 in
12:58 PM	75.6 °F	75.2 °F	99%	NNE	12.5 mph	21.7 mph	29.63 in	0.12 in	2.01 in
1:03 PM	75.4 °F	75 °F	99%	NE	16.1 mph	21.7 mph	29.64 in	0.3 in	2.05 in
1:08 PM	75.2 °F	74.8 °F	99%	NE	9.4 mph	21.7 mph	29.63 in	0.48 in	2.09 in
1:13 PM	75.2 °F	74.8 °F	99%	NE	20.6 mph	21.7 mph	29.63 in	0.48 in	2.12 in
1:18 PM	75 °F	74.7 °F	99%	ESE	16.8 mph	21.7 mph	29.62 in	0.48 in	2.16 in
1:23 PM	75 °F	74.7 °F	99%	NE	15 mph	21.7 mph	29.63 in	0.36 in	2.18 in
1:28 PM	75 °F	74.7 °F	99%	NNE	14.3 mph	24.2 mph	29.61 in	0.36 in	2.22 in
1:33 PM	75 °F	74.7 °F	99%	NNE	29.3 mph	29.3 mph	29.6 in	0.42 in	2.25 in
1:38 PM	75.2 °F	74.8 °F	99%	NNE	24.8 mph	29.3 mph	29.6 in	0.18 in	2.25 in
1:43 PM	75.4 °F	75 °F	99%	NNE	13 mph	29.3 mph	29.58 in	0.06 in	2.25 in
1:48 PM	75.6 °F	75.2 °F	99%	NE	21.7 mph	29.3 mph	29.58 in	0 in	2.25 in
1:53 PM	75.6 °F	75.2 °F	99%	ENE	16.8 mph	29.3 mph	29.58 in	0.06 in	2.26 in
1:58 PM	75.6 °F	75.2 °F	99%	NE	6.9 mph	29.3 mph	29.58 in	0.06 in	2.26 in
2:03 PM	75.7 °F	75.4 °F	99%	North	13 mph	29.3 mph	29.58 in	0.06 in	2.27 in
2:08 PM	75.7 °F	75.4 °F	99%	NNE	19.9 mph	29.3 mph	29.57 in	0.12 in	2.28 in
2:13 PM	75.7 °F	75.4 °F	99%	West	14.3 mph	29.3 mph	29.57 in	0.18 in	2.29 in
2:18 PM	75.6 °F	75.2 °F	99%	North	22.4 mph	29.3 mph	29.55 in	0.18 in	2.3 in
2:19 PM	75.6 °F	75.2 °F	99%	NE	16.8 mph	29.3 mph	29.55 in	0.12 in	2.3 in
2:24 PM	75.7 °F	75.4 °F	99%	ENE	19.9 mph	29.3 mph	29.55 in	0.12 in	2.31 in
2:29 PM	75.7 °F	75.4 °F	99%	NE	13 mph	27.3 mph	29.54 in	0.12 in	2.32 in
2:34 PM	75.7 °F	75.4 °F	99%	NNE	13 mph	27.3 mph	29.54 in	0.06 in	2.32 in
2:39 PM	75.7 °F	75.4 °F	99%	North	11.2 mph	27.3 mph	29.54 in	0.06 in	2.33 in
2:44 PM	75.7 °F	75.4 °F	99%	SE	18.6 mph	27.3 mph	29.54 in	0.12 in	2.34 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
2:49 PM	75.7 °F	75.4 °F	99%	North	14.3 mph	27.3 mph	29.53 in	0.06 in	2.34 in
2:54 PM	75.7 °F	75.4 °F	99%	NNE	19.2 mph	27.3 mph	29.53 in	0.06 in	2.35 in
2:59 PM	75.7 °F	75.4 °F	99%	NNE	11.9 mph	27.3 mph	29.52 in	0.06 in	2.35 in
3:04 PM	75.7 °F	75.4 °F	99%	NNE	15.4 mph	27.3 mph	29.51 in	0.06 in	2.36 in
3:09 PM	75.6 °F	75.2 °F	99%	NNE	27.3 mph	27.3 mph	29.5 in	0.3 in	2.4 in
3:14 PM	75.6 °F	75.2 °F	99%	NE	24.2 mph	27.3 mph	29.5 in	0.36 in	2.42 in
3:19 PM	75.7 °F	75.4 °F	99%	North	20.6 mph	27.3 mph	29.49 in	0.18 in	2.43 in
3:24 PM	75.6 °F	75.2 °F	99%	NNE	19.2 mph	27.3 mph	29.5 in	0.3 in	2.47 in
3:29 PM	75.6 °F	75.2 °F	99%	ENE	23.7 mph	27.3 mph	29.49 in	0.66 in	2.54 in
3:34 PM	75.4 °F	75 °F	99%	NNE	21 mph	27.3 mph	29.48 in	0.78 in	2.59 in
3:39 PM	75.4 °F	75 °F	99%	NE	19.9 mph	27.3 mph	29.48 in	0.72 in	2.65 in
3:44 PM	75.4 °F	75 °F	99%	NNE	16.1 mph	27.3 mph	29.47 in	0.78 in	2.72 in
3:49 PM	75.2 °F	74.8 °F	99%	NNE	12.5 mph	27.3 mph	29.47 in	0.66 in	2.75 in
3:54 PM	75.4 °F	75 °F	99%	NE	23 mph	27.3 mph	29.46 in	0.3 in	2.77 in
3:59 PM	75.4 °F	75 °F	99%	NNE	19.9 mph	27.3 mph	29.47 in	0.24 in	2.79 in
4:04 PM	75.2 °F	74.8 °F	99%	NNE	18.6 mph	27.3 mph	29.46 in	0.18 in	2.8 in
4:09 PM	75.2 °F	74.8 °F	99%	ENE	15.4 mph	26.6 mph	29.46 in	0.24 in	2.82 in
4:14 PM	75.2 °F	74.8 °F	99%	NE	17.4 mph	26.6 mph	29.45 in	0.24 in	2.84 in
4:19 PM	75.2 °F	74.8 °F	99%	NE	15.4 mph	26.6 mph	29.44 in	0.42 in	2.89 in
4:24 PM	75 °F	74.7 °F	99%	NE	24.2 mph	26.6 mph	29.44 in	0.66 in	2.95 in
4:29 PM	75 °F	74.7 °F	99%	NNE	16.8 mph	29.3 mph	29.44 in	0.84 in	3.01 in
4:34 PM	75 °F	74.7 °F	99%	NNE	19.2 mph	29.3 mph	29.43 in	0.72 in	3.06 in
4:39 PM	74.8 °F	74.5 °F	99%	NNE	15 mph	29.3 mph	29.42 in	0.54 in	3.09 in
4:44 PM	74.8 °F	74.5 °F	99%	NNE	25.5 mph	34.2 mph	29.41 in	0.54 in	3.14 in
4:49 PM	75 °F	74.7 °F	99%	NE	21.7 mph	34.2 mph	29.4 in	0.54 in	3.18 in
4:54 PM	74.8 °F	74.5 °F	99%	North	22.4 mph	34.2 mph	29.39 in	0.66 in	3.24 in
4:59 PM	74.8 °F	74.5 °F	99%	NNE	19.9 mph	34.2 mph	29.4 in	0.72 in	3.29 in
5:04 PM	74.8 °F	74.5 °F	99%	NE	19.9 mph	34.2 mph	29.4 in	0.6 in	3.32 in
5:09 PM	75 °F	74.7 °F	99%	NE	18.6 mph	34.2 mph	29.39 in	0.36 in	3.34 in
5:14 PM	75.2 °F	74.8 °F	99%	North	13 mph	34.2 mph	29.39 in	0.24 in	3.35 in
5:19 PM	75.4 °F	75 °F	99%	ENE	21.7 mph	34.2 mph	29.39 in	0.3 in	3.39 in
5:24 PM	75.4 °F	75 °F	99%	NNE	15 mph	34.2 mph	29.37 in	0.66 in	3.46 in
5:29 PM	75.4 °F	75 °F	99%	North	22.4 mph	34.2 mph	29.38 in	0.66 in	3.49 in
5:34 PM	75.4 °F	75 °F	99%	NNE	18.1 mph	34.2 mph	29.35 in	0.48 in	3.53 in
5:39 PM	75.6 °F	75.2 °F	99%	NE	18.1 mph	29.8 mph	29.34 in	0.6 in	3.58 in
5:44 PM	75.4 °F	75 °F	99%	SE	34.2 mph	34.2 mph	29.34 in	0.72 in	3.63 in
5:49 PM	75.4 °F	75 °F	99%	North	21.7 mph	34.2 mph	29.34 in	0.66 in	3.68 in
5:54 PM	75.2 °F	74.8 °F	99%	NNW	26.6 mph	34.2 mph	29.33 in	0.6 in	3.72 in
5:59 PM	75.4 °F	75 °F	99%	NE	26.2 mph	34.2 mph	29.32 in	0.54 in	3.76 in
6:04 PM	75.2 °F	74.8 °F	99%	ENE	31.8 mph	34.2 mph	29.31 in	0.78 in	3.84 in
6:09 PM	75.2 °F	74.8 °F	99%	WNW	19.9 mph	34.2 mph	29.31 in	1.08 in	3.93 in
6:10 PM	75 °F	74.7 °F	99%	ENE	28.6 mph	34.2 mph	29.31 in	1.08 in	3.94 in
6:16 PM	74.8 °F	74.5 °F	99%	SE	19.9 mph	34.2 mph	29.3 in	0.96 in	4.01 in
6:21 PM	74.7 °F	74.3 °F	99%	NNE	31.8 mph	34.2 mph	29.29 in	0.9 in	4.09 in
6:26 PM	74.5 °F	74.1 °F	99%	NNE	24.8 mph	34.2 mph	29.28 in	1.02 in	4.18 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
6:31 PM	74.5 °F	74.1 °F	99%	ENE	20.6 mph	36 mph	29.28 in	0.96 in	4.25 in
6:36 PM	74.3 °F	73.9 °F	99%	North	26.2 mph	36 mph	29.26 in	0.96 in	4.34 in
6:41 PM	74.3 °F	73.9 °F	99%	East	16.8 mph	36 mph	29.25 in	0.96 in	4.41 in
6:46 PM	74.3 °F	73.9 °F	99%	NNE	29.3 mph	36 mph	29.26 in	0.9 in	4.49 in
6:51 PM	74.5 °F	74.1 °F	99%	NNE	23.7 mph	36 mph	29.26 in	0.84 in	4.55 in
6:56 PM	74.5 °F	74.1 °F	99%	ENE	29.3 mph	36 mph	29.25 in	0.9 in	4.64 in
7:01 PM	74.5 °F	74.1 °F	99%	East	23 mph	36 mph	29.24 in	0.9 in	4.7 in
7:06 PM	74.5 °F	74.1 °F	99%	NNE	26.6 mph	36 mph	29.23 in	1.02 in	4.81 in
7:11 PM	74.7 °F	74.3 °F	99%	NNE	28 mph	36 mph	29.21 in	1.14 in	4.89 in
7:16 PM	74.7 °F	74.3 °F	99%	NE	19.9 mph	36 mph	29.21 in	1.02 in	4.98 in
7:21 PM	74.8 °F	74.5 °F	99%	NE	21 mph	36 mph	29.2 in	1.02 in	5.06 in
7:26 PM	74.8 °F	74.5 °F	99%	NE	26.6 mph	36 mph	29.18 in	1.02 in	5.15 in
7:31 PM	75 °F	74.7 °F	99%	NNE	23 mph	46.1 mph	29.19 in	0.84 in	5.2 in
7:36 PM	75 °F	74.7 °F	99%	East	21.7 mph	46.1 mph	29.17 in	0.66 in	5.26 in
7:41 PM	75.2 °F	74.8 °F	99%	NE	30.4 mph	46.1 mph	29.16 in	0.84 in	5.34 in
7:46 PM	75.4 °F	75 °F	99%	NE	22.4 mph	46.1 mph	29.15 in	1.02 in	5.43 in
7:47 PM	75.4 °F	75 °F	99%	NNW	21 mph	46.1 mph	29.14 in	1.14 in	5.46 in
7:52 PM	75.4 °F	75 °F	99%	ENE	18.1 mph	46.1 mph	29.15 in	1.2 in	5.55 in
7:57 PM	75.4 °F	75 °F	99%	NW	23.7 mph	46.1 mph	29.13 in	1.14 in	5.64 in
8:02 PM	75.4 °F	75 °F	99%	NE	24.2 mph	46.1 mph	29.13 in	1.32 in	5.76 in
8:07 PM	75.6 °F	75.2 °F	99%	NE	33.6 mph	46.1 mph	29.11 in	1.38 in	5.86 in
8:12 PM	75.7 °F	75.4 °F	99%	NNE	29.3 mph	46.1 mph	29.1 in	1.08 in	5.92 in
8:17 PM	75.7 °F	75.4 °F	99%	North	28 mph	46.1 mph	29.09 in	0.66 in	5.96 in
8:22 PM	75.7 °F	75.4 °F	99%	NE	31.8 mph	46.1 mph	29.08 in	0.42 in	5.99 in
8:27 PM	75.9 °F	75.6 °F	99%	NE	28 mph	46.1 mph	29.08 in	0.42 in	6.02 in
8:32 PM	76.1 °F	75.7 °F	99%	ENE	34.9 mph	39.8 mph	29.06 in	0.54 in	6.07 in
8:37 PM	76.1 °F	75.7 °F	99%	North	19.9 mph	39.8 mph	29.05 in	0.42 in	6.09 in
8:42 PM	76.1 °F	75.7 °F	99%	NE	24.2 mph	44.1 mph	29.05 in	0.24 in	6.11 in
8:47 PM	76.3 °F	75.9 °F	99%	NNE	33.6 mph	44.1 mph	29.04 in	0.24 in	6.13 in
8:52 PM	76.3 °F	75.9 °F	99%	NE	26.6 mph	44.1 mph	29.03 in	0.24 in	6.15 in
8:57 PM	76.5 °F	76.1 °F	99%	NE	28 mph	44.1 mph	29.02 in	0.3 in	6.18 in
9:02 PM	76.5 °F	76.1 °F	99%	NNE	29.8 mph	44.1 mph	29.01 in	0.36 in	6.2 in
9:07 PM	76.5 °F	76.1 °F	99%	ENE	28 mph	44.1 mph	29 in	0.54 in	6.26 in
9:12 PM	76.5 °F	76.1 °F	99%	ENE	31.1 mph	44.1 mph	28.98 in	0.6 in	6.29 in
9:17 PM	76.6 °F	76.3 °F	99%	NNE	23.7 mph	44.1 mph	28.98 in	0.48 in	6.32 in
9:22 PM	76.6 °F	76.3 °F	99%	NE	34.9 mph	44.1 mph	28.97 in	0.6 in	6.38 in
9:27 PM	76.6 °F	76.3 °F	99%	ENE	29.8 mph	44.1 mph	28.94 in	0.78 in	6.44 in
9:32 PM	76.6 °F	76.3 °F	99%	East	32.9 mph	44.1 mph	28.94 in	0.84 in	6.5 in
9:37 PM	76.6 °F	76.3 °F	99%	East	34.2 mph	44.1 mph	28.94 in	0.72 in	6.55 in
9:42 PM	76.6 °F	76.3 °F	99%	ENE	32.9 mph	44.1 mph	28.93 in	0.72 in	6.61 in
9:47 PM	76.6 °F	76.3 °F	99%	ENE	27.3 mph	44.1 mph	28.91 in	0.66 in	6.66 in
9:52 PM	76.6 °F	76.3 °F	99%	ENE	31.1 mph	44.1 mph	28.9 in	0.66 in	6.71 in
9:57 PM	76.8 °F	76.5 °F	99%	NE	29.8 mph	44.1 mph	28.88 in	0.72 in	6.77 in
10:02 PM	76.6 °F	76.3 °F	99%	ENE	30.4 mph	47.2 mph	28.88 in	1.02 in	6.87 in
10:07 PM	76.6 °F	76.3 °F	99%	NNE	29.3 mph	47.2 mph	28.87 in	1.02 in	6.93 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
10:12 PM	76.5 °F	76.1 °F	99%	NE	32.2 mph	47.2 mph	28.86 in	1.02 in	7.03 in
10:17 PM	76.5 °F	76.1 °F	99%	NE	31.8 mph	47.2 mph	28.84 in	1.38 in	7.15 in
10:23 PM	76.5 °F	76.1 °F	99%	NE	32.9 mph	47.2 mph	28.83 in	1.2 in	7.23 in
10:28 PM	76.5 °F	76.1 °F	99%	East	26.6 mph	47.2 mph	28.81 in	1.02 in	7.32 in
10:33 PM	76.5 °F	76.1 °F	99%	ENE	37.8 mph	47.2 mph	28.81 in	1.02 in	7.4 in
10:38 PM	76.3 °F	75.9 °F	99%	ENE	36.7 mph	47.2 mph	28.8 in	1.02 in	7.49 in
10:43 PM	76.3 °F	75.9 °F	99%	ENE	31.1 mph	47.2 mph	28.8 in	1.08 in	7.58 in
10:48 PM	76.3 °F	75.9 °F	99%	ENE	37.4 mph	47.2 mph	28.78 in	1.38 in	7.71 in
10:53 PM	76.3 °F	75.9 °F	99%	ENE	41.6 mph	47.2 mph	28.76 in	1.44 in	7.8 in
10:58 PM	76.3 °F	75.9 °F	99%	East	40.9 mph	47.2 mph	28.76 in	0.9 in	7.85 in
11:03 PM	76.3 °F	75.9 °F	99%	ENE	37.8 mph	47.2 mph	28.77 in	0.9 in	7.94 in
11:08 PM	76.3 °F	75.9 °F	99%	ENE	47.2 mph	47.9 mph	28.74 in	1.2 in	8.05 in
11:22 PM	76.3 °F	75.9 °F	99%	East	42.9 mph	61.5 mph	28.72 in	1.26 in	8.31 in
11:24 PM	76.3 °F	75.9 °F	99%	NNE	39.1 mph	61.5 mph	28.72 in	1.2 in	8.35 in
11:29 PM	76.3 °F	75.9 °F	99%	East	39.8 mph	61.5 mph	28.7 in	1.08 in	8.42 in
11:31 PM	76.3 °F	75.9 °F	99%	ESE	37.8 mph	61.5 mph	28.71 in	0.96 in	8.44 in
11:35 PM	76.3 °F	75.9 °F	99%	NE	47.2 mph	61.5 mph	28.7 in	0.96 in	8.5 in
11:36 PM	76.3 °F	75.9 °F	99%	NE	46.5 mph	61.5 mph	28.71 in	0.96 in	8.53 in
11:37 PM	76.3 °F	75.9 °F	99%	ENE	40.9 mph	61.5 mph	28.68 in	0.9 in	8.54 in
11:42 PM	76.3 °F	75.9 °F	99%	ENE	39.1 mph	61.5 mph	28.69 in	1.02 in	8.62 in
11:47 PM	76.3 °F	75.9 °F	99%	ENE	47.2 mph	61.5 mph	28.69 in	1.32 in	8.75 in
11:52 PM	76.1 °F	75.7 °F	99%	NE	34.9 mph	61.5 mph	28.69 in	1.92 in	8.93 in
11:57 PM	76.1 °F	75.7 °F	99%	East	34.9 mph	61.5 mph	28.67 in	2.58 in	9.17 in

PICKETT
SURVEYING • ENGINEERING

Forensic Analysis of Avon Park – Lake Placid 69 kV Transmission Line

Structures ALP-205 Through ALP-208 and ALP-223 Through ALP-226

Hurricane Irma

December 1, 2017

DUKE ENERGY®

Table of Contents:

1.0 Executive Summary 2
2.0 Maintenance Data 6
3.0 Weather Data 6
4.0 Conclusion 9
5.0 Restoration 10
Appendix A: Additional Photos 11
Appendix B: Avon Park – Lake Placid 69 kV Plan and Profile Drawings 17
Appendix C: Weather Data 18

PICKETT
SURVEYING • ENGINEERING

1.0 Executive Summary

Structures: Avon Park – Lake Placid 69 kV Transmission Line
Structures ALP-205 Through ALP-208 and ALP-221 Through ALP-226
Location: central western Highlands County, FL (27°27'49.61"N; 81°30'53.59"W to 27°26'47.76"N; 81°30'54.19"W)
Date of Outage: 09-10-17
Time of Outage: 21:10 EDT (0110 UTC)
Inspection Date: 09-19-17

At 9:10 pm, Eastern Daylight Savings Time on Sunday, September 10th, an outage was reported on the Avon Park – Lake Placid 69 kV transmission line. The outage was a result of wood pole failures.

At the time of the outage, 81 mph wind velocities were reported in the vicinity of structures ALP-205 to ALP-226 by the National Oceanic and Atmospheric Administration (NOAA). The outage occurred approximately 1.5 hours in advance of the hurricane being at a location nearest to the poles. Hurricane Irma's eye passed approximately 23.6 miles west of poles ALP-205 to ALP-226 at 10:40 pm EDT Sunday, September 10, 2017.

At the time of the field visit all failed poles and insulators had been replaced and the failed material had already been removed.

The pole and hardware failures most likely occurred due to high wind velocities resulting from Hurricane Irma's landfall. Possible wood rot could have aided in some of the wood pole's failures followed by additional failures of adjacent structures, especially as most of the failed poles were located on a culvert embankment near standing water.

New insulators installed on the middle and bottom phases of several adjacent structures indicate that the existing post insulators may have failed due to longitudinal loading, perhaps due to broken wires.

The failed portions of the transmission line are located on a slightly higher elevation and open landscape to the east (windward) without vegetation or manmade cover. The open landscape increases wind exposure which in turn increases the risk of pole failure due to wind damage.

Light duty steel poles at adjacent structures ALP-222 and ALP-227 were undamaged and the existing LD poles were left in place. These steel poles likely played a part in preventing further structure failures down the line and keeping damage localized.

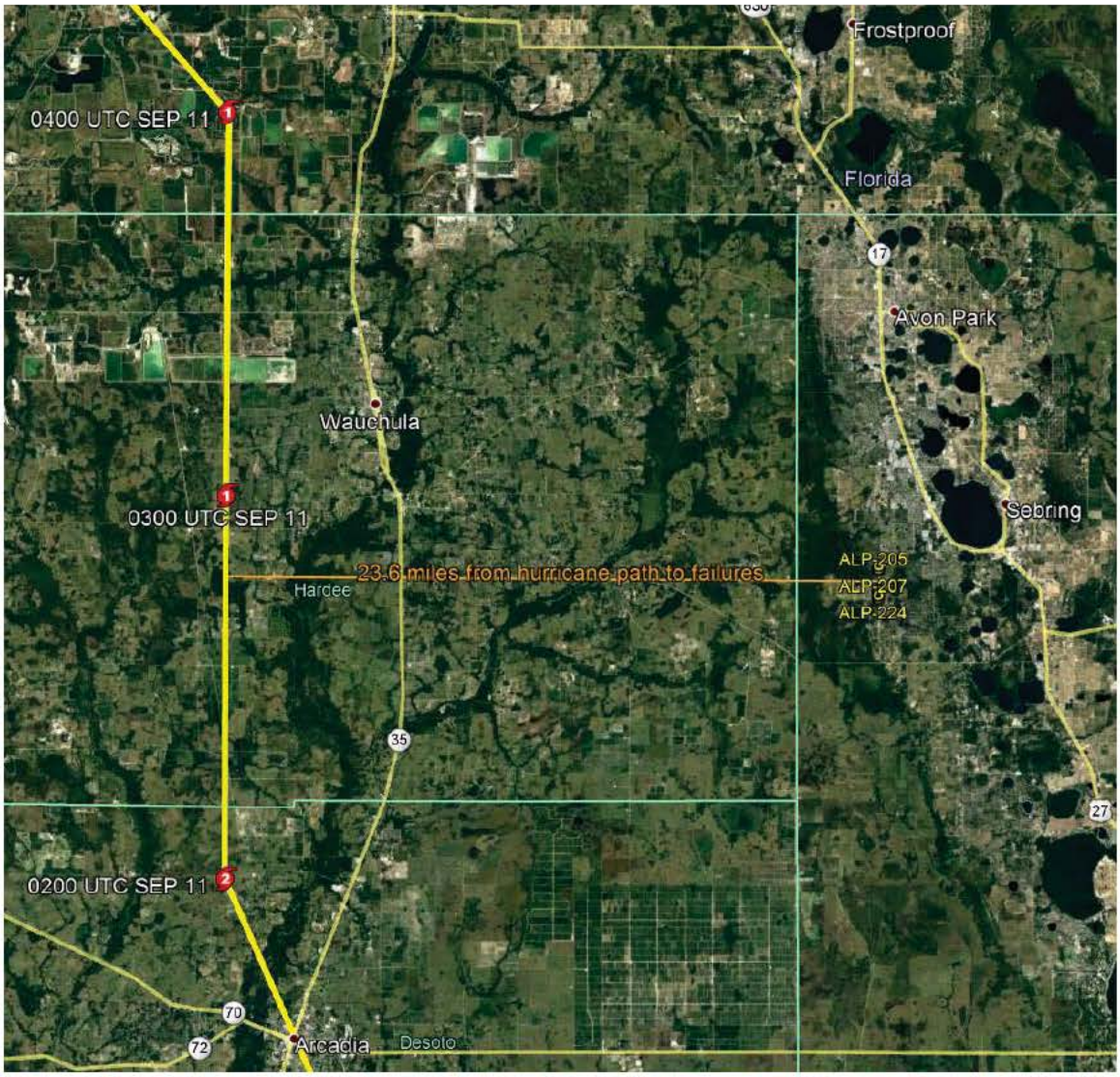


Figure 1: Distance from Hurricane Irma's path to structures ALP-205 through ALP-226.

PICKETT
SURVEYING • ENGINEERING



Figure 2: Open area east of transmission line exposed structures to westbound hurricane winds.



Figure 3: Open area east of transmission line exposed structures to westbound hurricane winds.

PICKETT
SURVEYING • ENGINEERING



Figure 4: Existing LD steel pole ALP-222 was undamaged and left in place, looking southeast.

2.0 Maintenance Data

Maintenance data is not available at this time for poles ALP-205 through ALP-208, ALP-223, and ALP-226.

The 09/20/2017 maintenance report indicated that poles ALP-224 and ALP-225 were identified as requiring replacement with a target date of 10/26/2013, but it is unclear what maintenance work was performed. The corresponding MX Order numbers are 2013-3004224053 and 2013-3004224054, respectively.

3.0 Weather Data

Hurricane Irma made continental landfall in Naples, Florida at 4:00 pm EDT on Sunday, September 10, 2017 as a category 2 hurricane and weakened to a tropical depression over the Georgia - Alabama border 12 hours later.

At the time of the Avon Park – Lake Placid 69 kV line outage, approximately at 9:10 pm EDT, September 10, 2017, the hurricane was designated as a category 2 hurricane and the eye of the hurricane was located approximately 28.4 miles southwest of pole ALP-205. 81 mph wind velocity was reported near poles ALP-205 to ALP-226 at the time of the outage.

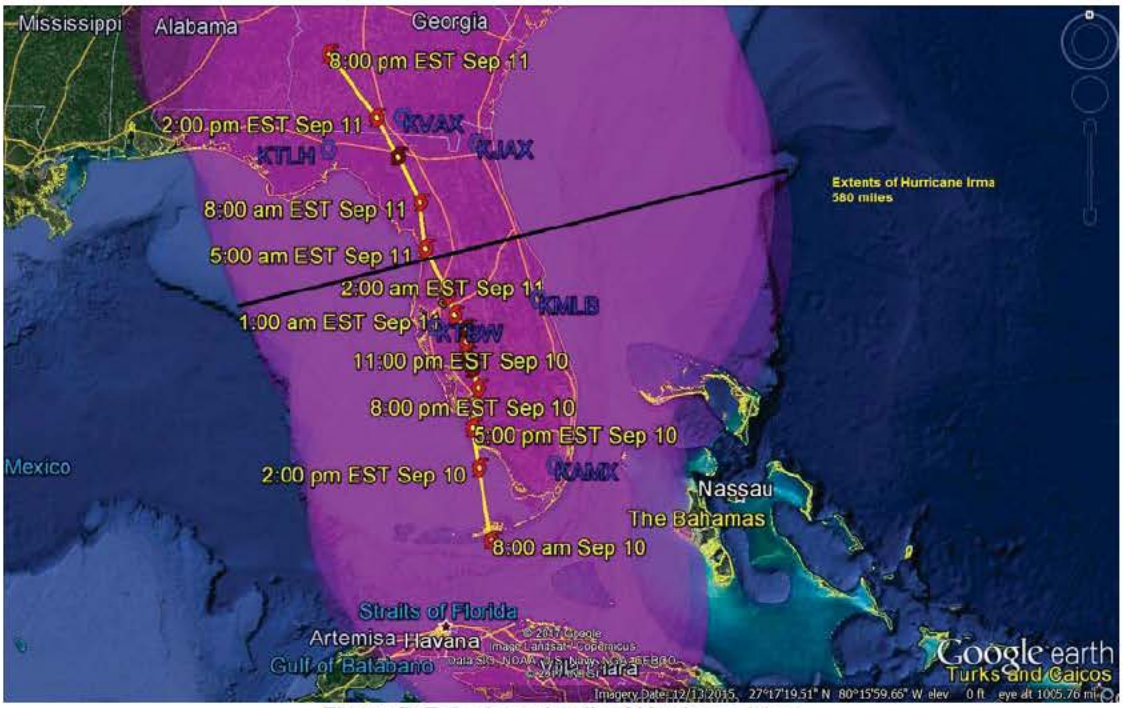


Figure 5: Extents and path of Hurricane Irma.

PICKETT
SURVEYING • ENGINEERING

The hurricane was nearest to structures ALP-205 through ALP-226 at approximately 10:40 pm EDT on Sunday, September 10, 2017 as a category 2 hurricane. The hurricane eye at that time was 33 miles wide and encompassed the damaged structures.

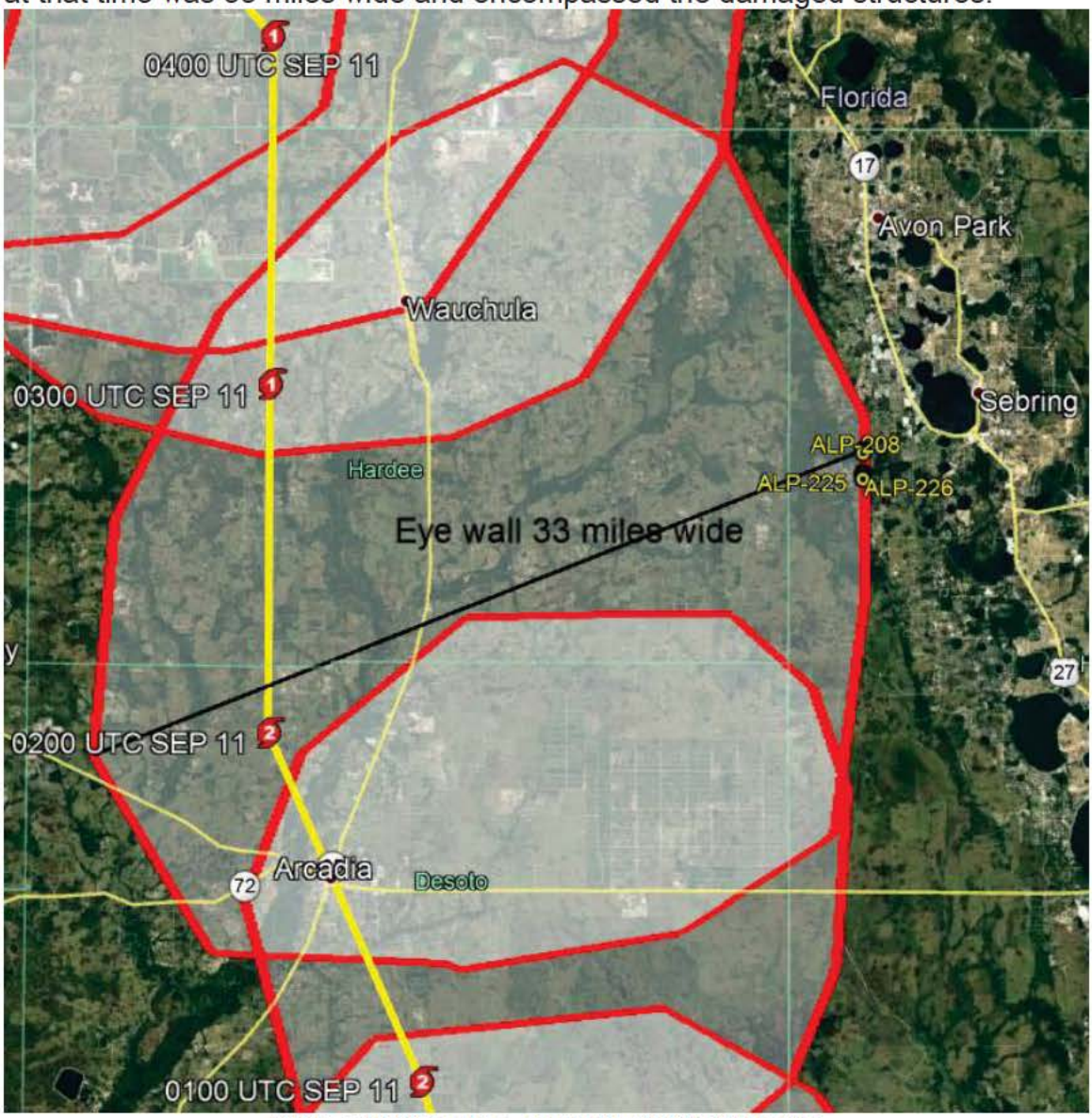


Figure 6: Hurricane Irma eye wall in vicinity of ALP-205.

Three local weather stations: KBOW, KFLARCAD1, and FLKFLSEBRI25 show wind velocities in range of 38 to 54 mph and wind gusts in range of 49 to 57 mph. According to the NOAA site specific maps, the wind speeds have reached 81 mph at time of the outage.

PICKETT
SURVEYING • ENGINEERING

Station Name & Location	Time	Temp	Wind Dir	Wind Vel.	Wind Gust.	Distance from ALP-208
KBOW, Bartow Municipal Airport	9:15:00 PM	75.2 °F	NE	38.0 mph	49.5 mph	37.4 mi
KFLARCAD1, Arcadia, FL	9:11:00 PM	76.2 °F	NE	54.1 mph	54.1 mph	26.9 mi
FLKFLSEBRI25, Sebring, FL	9:05:00 PM	77.2 °F	WSW	49.4 mph	57.5 mph	9.9 mi

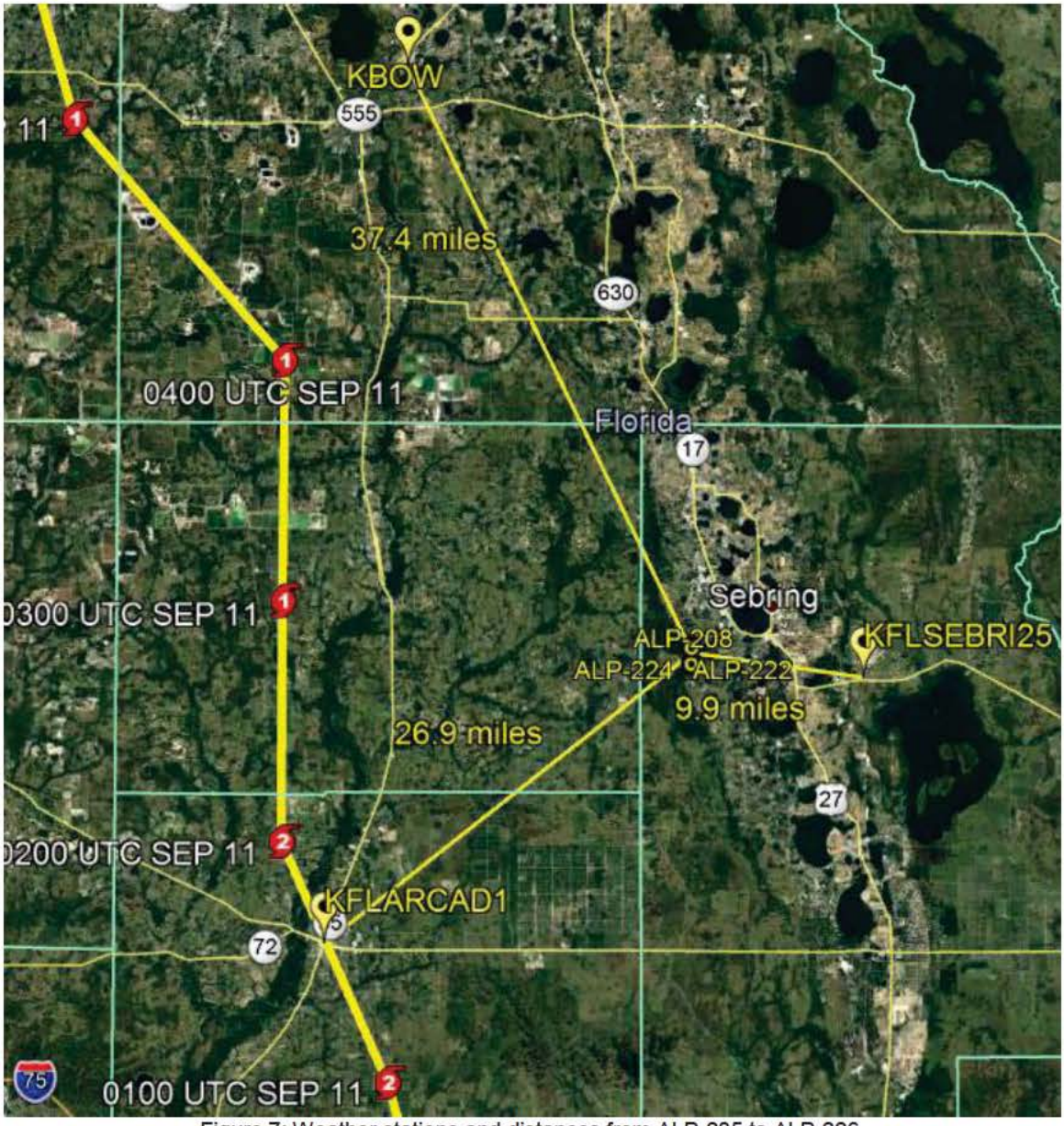


Figure 7: Weather stations and distances from ALP-205 to ALP-226.

PICKETT
SURVEYING • ENGINEERING

The following map shows NOAA wind velocities at the time of failure. The green shading indicates 70 knot wind speed which equates to 81 mph.

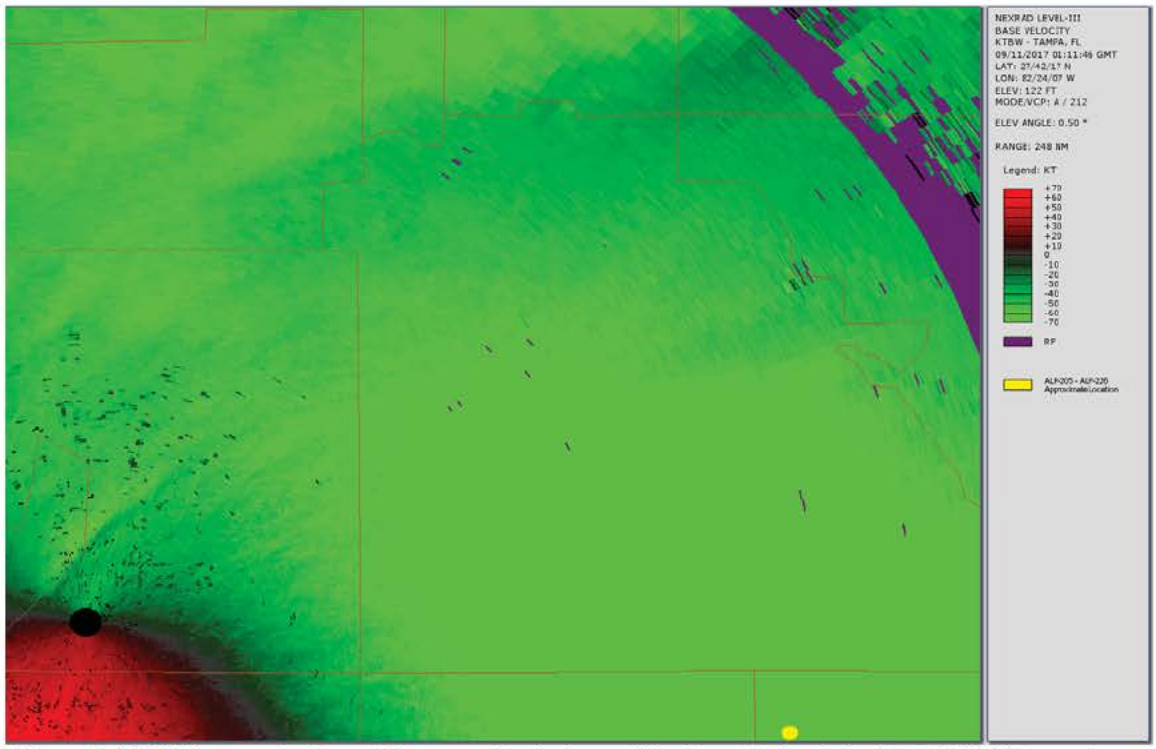


Figure 8: NOAA base velocities at the approximate time of the Avon Park – Lake Placid 69 kV line outage.

NOAA cyclone activity at the time of the outage was also reviewed and found no evidence of any cyclones near the Avon Park – Lake Placid 69 kV transmission line.

4.0 Conclusion

At the time of the field visit all failed poles and insulators had been replaced and the failed material had already been removed.

The pole and hardware failures most likely occurred due to high wind velocities resulting from Hurricane Irma's landfall. Possible wood rot could have aided in some of the wood pole's failures followed by additional failures of adjacent structures, especially as most of the failed poles were located on a culvert embankment near standing water.

New insulators installed on the middle and bottom phases of several adjacent structures indicate that the existing post insulators may have failed due to longitudinal loading, perhaps due to broken wires.

The failed portions of the transmission line are located on a slightly higher elevation and open landscape to the east (windward) without vegetation or manmade cover. The open landscape increases wind exposure which in turn increases the risk of pole failure due to wind damage.

Light duty steel poles at adjacent structures ALP-222 and ALP-227 were undamaged and the existing LD poles were left in place. These steel poles likely played a part in preventing further structure failures down the line and keeping damage localized.

5.0 Restoration

At the time of the site visit the wood failed poles, wire and hardware had already been restored with LD steel poles. Several insulators were also replaced on adjacent wood poles that had not been damaged.

Appendix A: Additional Photos



Figure 9: Failed pole ALP-205, looking southeast.



Figure 10: Failed pole ALP-206, looking southeast.



Figure 11: Failed poled ALP-207, looking southeast.



Figure 12: Failed pole ALP-208, looking southeast.



Figure 13: Failed pole ALP-223, looking southeast.



Figure 14: Failed pole ALP-224, looking southeast.



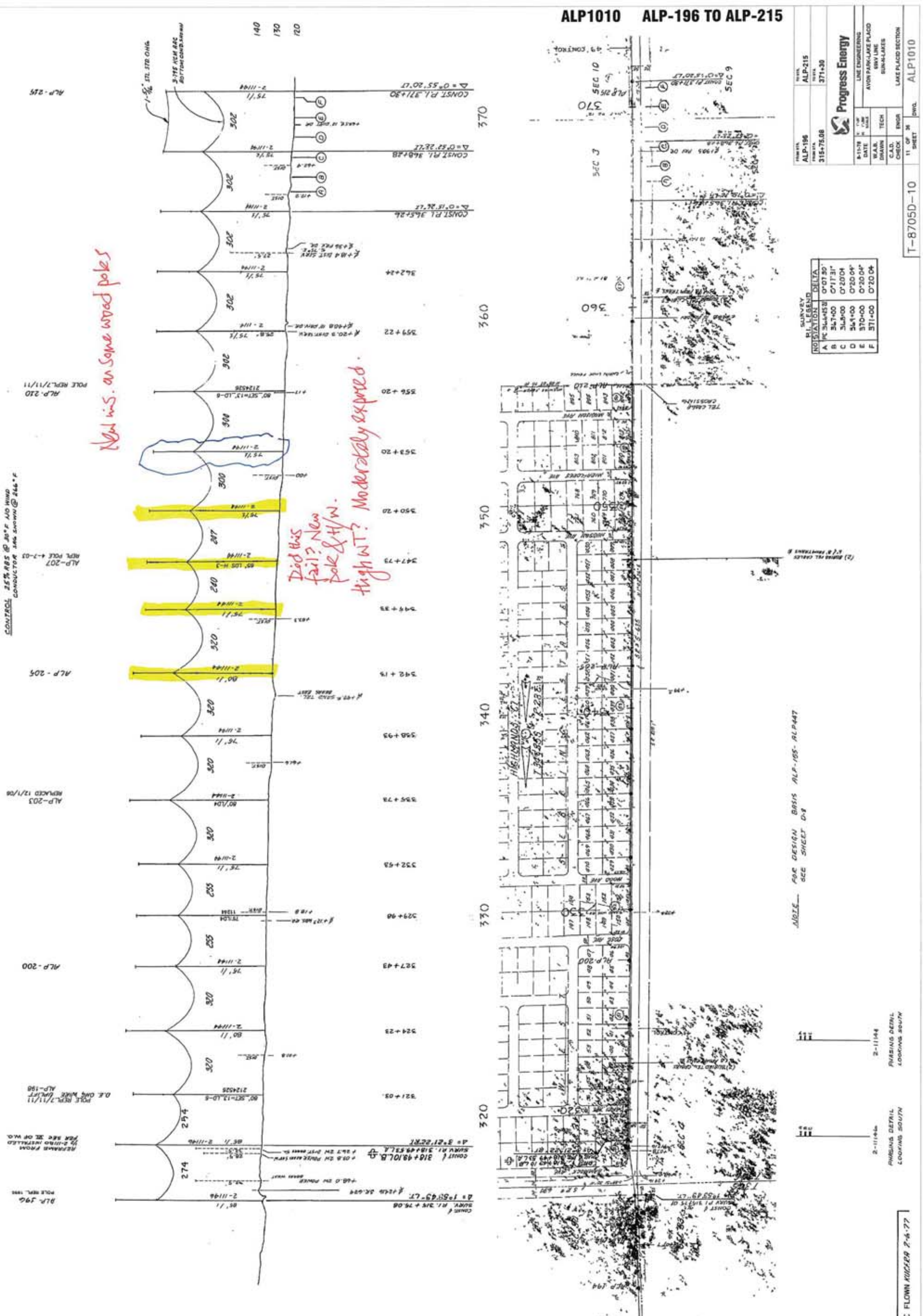
Figure 15: Failed pole ALP-225, looking southeast.



Figure 16: Failed pole ALP-226, looking southeast.

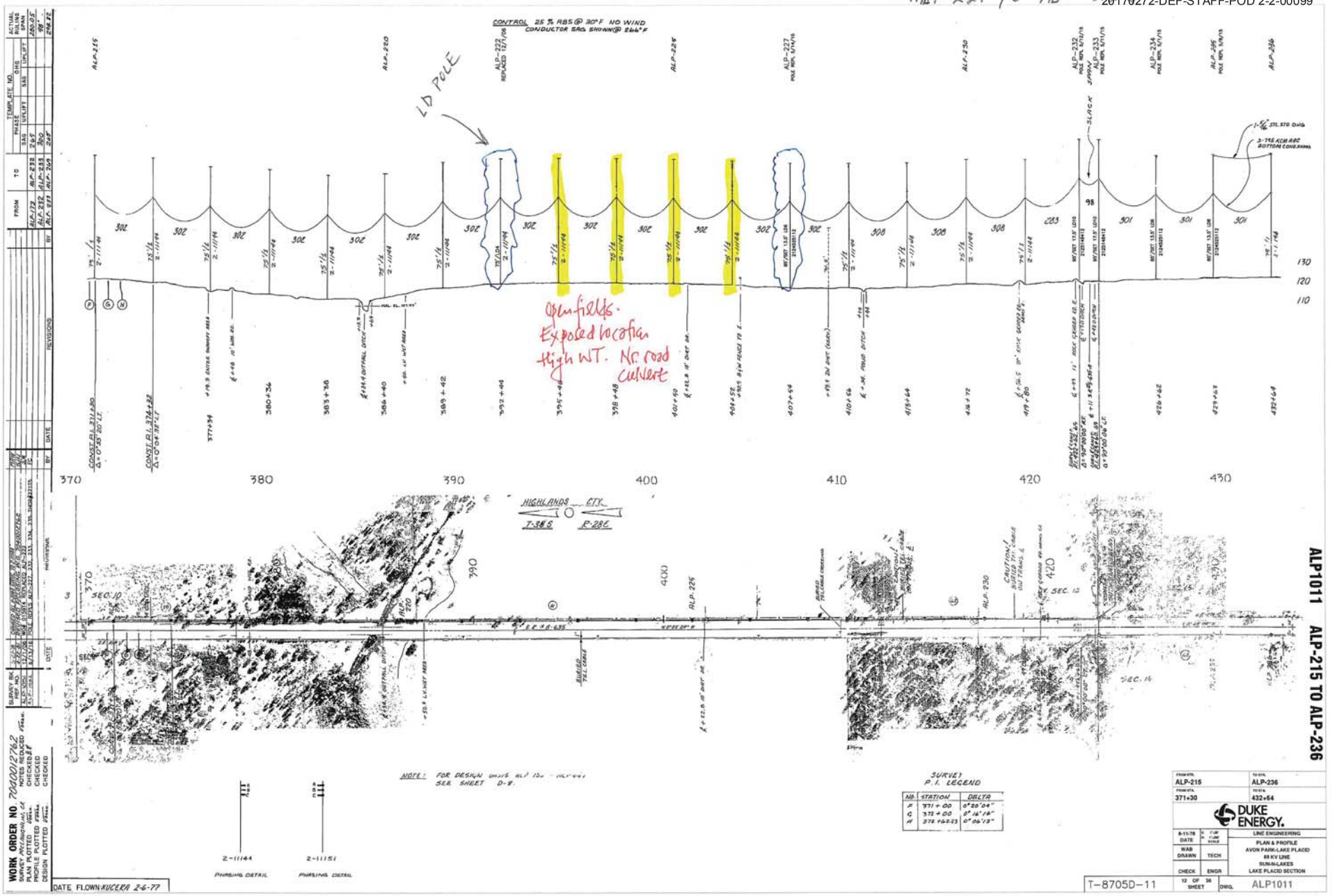
Appendix B: Avon Park – Lake Placid 69 kV Plan and Profile Drawings

20170272-DEF-STAFF-POD 2-2-00098



ALP-221 to ALP-236

20170272-DEF-STAFF-POD 2-2-00099



ALP1011 ALP-215 TO ALP-236

WORK ORDER NO. 70400127662
SURVEY PLOTTED
PLAN PLOTTED
PROFILE PLOTTED
DESIGN PLOTTED

DATE FLOWN: AUCERA 2-6-77

FROM STA.	ALP-215
TO STA.	ALP-236
FROM STA.	371+30
TO STA.	432+64

DUKE ENERGY.

8-11-78 DATE		LINE ENGINEERING
WAB DRAWN	TECH	PLAN & PROFILE AVON PARK-LAKE PLACID 69 KV LINE SUN-N-LAKES LAKE PLACID SECTION
CHECK	ENGR	

T-8705D-11 | SHEET 12 OF 36 | DWG. ALP1011

Appendix C: Weather Data

KBOW Weather data for September 10 2017												
Time (EDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:15 AM	80.6 °F	85.4 °F	73.4 °F	79%	29.82 in	10.0 mi	ENE	17.3 mph	31.1 mph	N/A		Overcast
12:35 AM	80.6 °F	85.4 °F	73.4 °F	79%	29.81 in	10.0 mi	ENE	16.1 mph	24.2 mph	N/A		Overcast
12:55 AM	78.8 °F	-	73.4 °F	83%	29.80 in	10.0 mi	East	13.8 mph	24.2 mph	N/A		Overcast
1:15 AM	78.8 °F	-	75.2 °F	89%	29.80 in	10.0 mi	ENE	15.0 mph	21.9 mph	N/A		Overcast
1:35 AM	78.8 °F	-	75.2 °F	89%	29.80 in	10.0 mi	East	13.8 mph	23.0 mph	N/A		Overcast
1:55 AM	78.8 °F	-	77.0 °F	94%	29.80 in	10.0 mi	East	13.8 mph	26.5 mph	N/A		Overcast
2:15 AM	77.0 °F	-	77.0 °F	100%	29.80 in	4.0 mi	East	20.7 mph	26.5 mph	N/A	Rain	Light Rain
2:35 AM	75.2 °F	-	-	N/A%	29.79 in	4.0 mi	ENE	17.3 mph	24.2 mph	N/A	Rain	Light Rain
2:55 AM	75.2 °F	-	-	N/A%	29.78 in	5.0 mi	ENE	15.0 mph	-	N/A	Rain	Light Rain
3:15 AM	75.2 °F	-	-	N/A%	29.77 in	7.0 mi	NE	13.8 mph	-	N/A	Rain	Light Rain
3:35 AM	75.2 °F	-	-	N/A%	29.75 in	8.0 mi	ENE	12.7 mph	20.7 mph	N/A	Rain	Light Rain
3:55 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	ENE	12.7 mph	-	N/A		Mostly Cloudy
4:15 AM	75.2 °F	-	-	N/A%	29.76 in	10.0 mi	ENE	12.7 mph	-	N/A		Mostly Cloudy
4:35 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	ENE	13.8 mph	-	N/A	Rain	Light Rain
4:55 AM	75.2 °F	-	75.2 °F	100%	29.75 in	10.0 mi	ENE	12.7 mph	18.4 mph	N/A		Overcast
5:15 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	NE	9.2 mph	15.0 mph	N/A		Light Drizzle
5:35 AM	75.2 °F	-	-	N/A%	29.76 in	9.0 mi	ENE	10.4 mph	21.9 mph	N/A	Rain	Light Rain
5:55 AM	75.2 °F	-	-	N/A%	29.76 in	5.0 mi	ENE	13.8 mph	25.3 mph	N/A	Rain	Light Rain
6:15 AM	73.4 °F	-	-	N/A%	29.75 in	7.0 mi	ENE	15.0 mph	21.9 mph	N/A	Rain	Light Rain
6:35 AM	73.4 °F	-	-	N/A%	29.74 in	10.0 mi	NE	11.5 mph	18.4 mph	N/A		Light Drizzle
6:55 AM	75.2 °F	-	-	N/A%	29.73 in	10.0 mi	NE	12.7 mph	18.4 mph	N/A		Mostly Cloudy
7:15 AM	73.4 °F	-	-	N/A%	29.74 in	4.0 mi	NNE	10.4 mph	18.4 mph	N/A	Rain	Rain
5:35 PM	73.4 °F	-	-	N/A%	29.42 in	0.8 mi	NNE	25.3 mph	41.4 mph	N/A	Rain	Heavy Rain
5:55 PM	73.4 °F	-	-	N/A%	29.39 in	0.8 mi	NE	31.1 mph	49.5 mph	N/A	Rain	Heavy Rain
6:15 PM	73.4 °F	-	-	N/A%	29.36 in	-	NNE	27.6 mph	46.0 mph	N/A	Rain	Heavy Rain
6:35 PM	71.6 °F	-	-	N/A%	29.32 in	0.2 mi	NE	38.0 mph	49.5 mph	N/A	Rain	Heavy Rain
6:55 PM	71.6 °F	-	-	N/A%	29.32 in	0.2 mi	NNE	26.5 mph	47.2 mph	N/A	Rain	Heavy Rain
7:15 PM	73.4 °F	-	-	N/A%	29.27 in	0.2 mi	NE	27.6 mph	47.2 mph	N/A	Rain	Heavy Rain
7:35 PM	73.4 °F	-	-	N/A%	29.23 in	0.2 mi	NE	35.7 mph	46.0 mph	N/A	Rain	Heavy Rain
7:55 PM	73.4 °F	-	-	N/A%	29.18 in	0.5 mi	NE	32.2 mph	48.3 mph	N/A	Rain	Heavy Rain
8:15 PM	75.2 °F	-	-	N/A%	29.15 in	0.2 mi	NE	35.7 mph	55.2 mph	N/A	Rain	Heavy Rain
8:35 PM	75.2 °F	-	-	N/A%	29.11 in	1.2 mi	ENE	38.0 mph	44.9 mph	N/A	Rain	Heavy Rain
8:55 PM	75.2 °F	-	-	N/A%	29.07 in	2.0 mi	NE	33.4 mph	50.6 mph	N/A	Rain	Rain
9:15 PM	75.2 °F	-	-	N/A%	29.03 in	0.8 mi	NE	38.0 mph	49.5 mph	N/A	Rain	Heavy Rain
9:35 PM	75.2 °F	-	-	N/A%	28.97 in	0.8 mi	NE	42.6 mph	62.1 mph	N/A	Rain	Heavy Rain
9:55 PM	75.2 °F	-	-	N/A%	28.94 in	1.0 mi	ENE	36.8 mph	56.4 mph	N/A	Rain	Heavy Rain
10:15 PM	75.2 °F	-	-	N/A%	28.89 in	-	ENE	41.4 mph	57.5 mph	N/A	Rain	Heavy Rain
10:35 PM	75.2 °F	-	-	N/A%	28.84 in	0.5 mi	ENE	38.0 mph	61.0 mph	N/A	Rain	Heavy Rain
10:55 PM	75.2 °F	-	-	N/A%	28.79 in	0.5 mi	ENE	38.0 mph	64.4 mph	N/A	Rain	Heavy Rain
11:15 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown
11:35 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown
11:55 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown

KFLARCAD1 Weather data for September 10 2017									
Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
12:00 AM	79.1 °F	74.7 °F	86%	NE	16.9 mph	24.3 mph	29.77 in	0.03 in	0.03 in
12:05 AM	78.9 °F	74.7 °F	87%	East	11.2 mph	21.3 mph	29.77 in	0.01 in	0.01 in
12:10 AM	78.4 °F	74.4 °F	88%	NNE	15.7 mph	18.1 mph	29.77 in	0.02 in	0.02 in
12:15 AM	77.8 °F	74 °F	88%	NNE	18.6 mph	18.6 mph	29.77 in	0.04 in	0.03 in
12:20 AM	77.3 °F	73.9 °F	89%	NE	17.3 mph	23.2 mph	29.77 in	0.05 in	0.05 in
12:25 AM	77 °F	73.9 °F	90%	NE	21.5 mph	22.1 mph	29.76 in	0.07 in	0.06 in
12:30 AM	76.7 °F	73.9 °F	91%	NNE	15.8 mph	20.3 mph	29.76 in	0.08 in	0.08 in
12:35 AM	76.6 °F	74 °F	92%	NE	18.9 mph	26.2 mph	29.76 in	0.09 in	0.09 in
12:40 AM	76.7 °F	74.2 °F	92%	NE	23.9 mph	23.9 mph	29.75 in	0.09 in	0.09 in
12:45 AM	76.6 °F	74.1 °F	92%	NE	14.9 mph	21.6 mph	29.76 in	0.1 in	0.1 in
12:50 AM	76.4 °F	74 °F	92%	NE	11.7 mph	24.4 mph	29.76 in	0.11 in	0.11 in
12:55 AM	76.4 °F	74 °F	92%	NNE	17.9 mph	22.6 mph	29.76 in	0.12 in	0.12 in
1:00 AM	76.3 °F	73.9 °F	92%	NNE	17.2 mph	26.1 mph	29.76 in	0.13 in	0.13 in
1:05 AM	76.2 °F	73.8 °F	92%	NNE	22.7 mph	22.7 mph	29.75 in	0.14 in	0.14 in
1:10 AM	76.1 °F	73.9 °F	93%	NNE	9.6 mph	25.5 mph	29.75 in	0.16 in	0.16 in
1:15 AM	76.1 °F	74.1 °F	94%	NE	9.6 mph	16.9 mph	29.76 in	0.18 in	0.18 in
1:20 AM	76.1 °F	74.2 °F	94%	NE	10 mph	17.1 mph	29.75 in	0.2 in	0.2 in
1:25 AM	76.1 °F	74.4 °F	94%	NNE	22.8 mph	22.8 mph	29.75 in	0.22 in	0.22 in
1:30 AM	76 °F	74.4 °F	95%	NNE	18.2 mph	24 mph	29.74 in	0.27 in	0.27 in
1:35 AM	75.9 °F	74.4 °F	95%	NE	11.9 mph	23.7 mph	29.74 in	0.33 in	0.33 in
1:40 AM	75.9 °F	74.5 °F	95%	NNE	17.8 mph	21.8 mph	29.74 in	0.35 in	0.35 in
1:46 AM	75.7 °F	74.3 °F	95%	NE	17.9 mph	20.6 mph	29.74 in	0.37 in	0.37 in
1:51 AM	75.4 °F	73.6 °F	94%	NE	14.5 mph	19.9 mph	29.74 in	0.37 in	0.37 in
1:56 AM	75.1 °F	73.2 °F	94%	NNE	12.2 mph	23.1 mph	29.74 in	0.37 in	0.37 in
2:01 AM	74.9 °F	72.9 °F	93%	NE	15.8 mph	16.3 mph	29.73 in	0.38 in	0.38 in
2:06 AM	74.8 °F	72.6 °F	93%	NNE	14.5 mph	18.6 mph	29.73 in	0.38 in	0.38 in
2:11 AM	74.4 °F	72.2 °F	93%	NNE	11.1 mph	24.7 mph	29.73 in	0.39 in	0.39 in
2:16 AM	74.5 °F	72.4 °F	93%	NE	15 mph	19.3 mph	29.73 in	0.4 in	0.4 in
2:21 AM	74.6 °F	72.6 °F	93%	NNE	18.2 mph	20.4 mph	29.72 in	0.4 in	0.4 in
2:26 AM	74.7 °F	72.8 °F	94%	NE	11.2 mph	23.4 mph	29.72 in	0.4 in	0.4 in
2:31 AM	74.9 °F	73.1 °F	94%	NE	17.8 mph	21.2 mph	29.72 in	0.4 in	0.4 in
2:36 AM	75 °F	73.2 °F	94%	North	16 mph	19.8 mph	29.72 in	0.4 in	0.4 in
2:41 AM	75.1 °F	73.2 °F	94%	NNE	12.6 mph	16.8 mph	29.72 in	0.4 in	0.4 in
2:46 AM	75.1 °F	73.3 °F	94%	NNE	13.4 mph	14 mph	29.72 in	0.4 in	0.4 in
2:51 AM	75.1 °F	73.3 °F	94%	NNE	9.3 mph	20.9 mph	29.72 in	0.4 in	0.4 in
2:56 AM	75.1 °F	73.4 °F	94%	NNE	15.7 mph	20.8 mph	29.71 in	0.4 in	0.4 in
3:01 AM	75.1 °F	73.4 °F	94%	NE	22.4 mph	23.3 mph	29.71 in	0.4 in	0.4 in
3:06 AM	75.3 °F	73.6 °F	94%	NE	7.7 mph	19 mph	29.71 in	0.4 in	0.4 in
3:11 AM	75.4 °F	73.8 °F	95%	NNE	11.7 mph	18.8 mph	29.7 in	0.41 in	0.41 in
3:16 AM	75.5 °F	73.8 °F	95%	NE	11.7 mph	23.4 mph	29.7 in	0.41 in	0.41 in
3:21 AM	75.7 °F	74 °F	94%	NNE	6.8 mph	17.5 mph	29.7 in	0.41 in	0.41 in
3:26 AM	75.8 °F	74.1 °F	94%	ENE	8.6 mph	21.9 mph	29.71 in	0.41 in	0.41 in
3:31 AM	75.7 °F	73.8 °F	94%	NE	14.4 mph	21.1 mph	29.7 in	0.41 in	0.41 in
3:36 AM	75.7 °F	73.6 °F	93%	NE	13.9 mph	19.6 mph	29.7 in	0.41 in	0.41 in
3:41 AM	75.9 °F	73.7 °F	93%	NE	14.7 mph	25.3 mph	29.7 in	0.41 in	0.41 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
3:46 AM	75.9 °F	73.7 °F	93%	NE	14.3 mph	20.4 mph	29.71 in	0.41 in	0.41 in
3:51 AM	75.9 °F	73.7 °F	93%	NNE	15 mph	21.9 mph	29.71 in	0.43 in	0.43 in
3:56 AM	75.9 °F	73.8 °F	93%	NE	15.5 mph	20.3 mph	29.71 in	0.43 in	0.43 in
4:01 AM	75.8 °F	73.7 °F	93%	NE	18.5 mph	18.5 mph	29.7 in	0.44 in	0.44 in
4:06 AM	75.7 °F	73.6 °F	93%	ENE	12.9 mph	20.9 mph	29.7 in	0.44 in	0.44 in
4:11 AM	75.6 °F	73.5 °F	93%	NE	21.3 mph	23.7 mph	29.69 in	0.44 in	0.44 in
4:16 AM	75.8 °F	73.7 °F	93%	NNE	9.3 mph	17.9 mph	29.69 in	0.44 in	0.44 in
4:21 AM	75.7 °F	73.6 °F	93%	NE	20 mph	22.9 mph	29.69 in	0.45 in	0.45 in
4:26 AM	75.6 °F	73.5 °F	93%	NE	19 mph	20.1 mph	29.69 in	0.45 in	0.45 in
4:31 AM	75.7 °F	73.5 °F	93%	NNE	13.2 mph	23.7 mph	29.69 in	0.45 in	0.45 in
4:36 AM	75.7 °F	73.4 °F	93%	NE	20.3 mph	24.2 mph	29.69 in	0.45 in	0.45 in
4:41 AM	75.6 °F	73.3 °F	92%	NE	19.8 mph	28.6 mph	29.69 in	0.45 in	0.45 in
4:46 AM	75.6 °F	73.3 °F	92%	NNE	19.9 mph	23.5 mph	29.69 in	0.45 in	0.45 in
4:52 AM	75.6 °F	73.4 °F	93%	NE	27.3 mph	27.3 mph	29.69 in	0.45 in	0.45 in
4:57 AM	75.4 °F	73.3 °F	93%	NNE	9.9 mph	28.6 mph	29.69 in	0.45 in	0.45 in
5:02 AM	75.3 °F	73.3 °F	94%	NE	15 mph	24 mph	29.69 in	0.45 in	0.45 in
5:07 AM	75.4 °F	73.4 °F	94%	NNE	25.9 mph	25.9 mph	29.68 in	0.45 in	0.45 in
5:12 AM	75.4 °F	73.4 °F	94%	NNE	14.5 mph	23.2 mph	29.68 in	0.45 in	0.45 in
5:17 AM	75.3 °F	73.3 °F	94%	North	17.8 mph	21.1 mph	29.67 in	0.45 in	0.45 in
5:18 AM	75.3 °F	73.3 °F	94%	North	18.4 mph	21.1 mph	29.67 in	0.45 in	0.45 in
5:23 AM	75.3 °F	73.2 °F	93%	NNW	12.2 mph	27.9 mph	29.67 in	0.45 in	0.45 in
5:28 AM	75.4 °F	73.3 °F	93%	North	19.2 mph	25.5 mph	29.67 in	0.45 in	0.45 in
5:33 AM	75.7 °F	73.6 °F	93%	NNE	12.6 mph	21.3 mph	29.67 in	0.45 in	0.45 in
5:38 AM	75.5 °F	73.5 °F	93%	NNE	11.6 mph	18.6 mph	29.67 in	0.45 in	0.45 in
5:43 AM	75.7 °F	73.6 °F	93%	NNE	12.2 mph	19.4 mph	29.67 in	0.45 in	0.45 in
5:48 AM	75.8 °F	73.6 °F	93%	North	11 mph	19.5 mph	29.67 in	0.45 in	0.45 in
5:53 AM	75.7 °F	73.4 °F	93%	North	6.3 mph	17.1 mph	29.66 in	0.45 in	0.45 in
5:58 AM	75.7 °F	73.4 °F	93%	North	14.6 mph	22.4 mph	29.66 in	0.45 in	0.45 in
6:03 AM	75.8 °F	73.5 °F	92%	NNE	11.2 mph	20.8 mph	29.65 in	0.45 in	0.45 in
6:08 AM	75.8 °F	73.5 °F	92%	North	12.4 mph	20 mph	29.65 in	0.45 in	0.45 in
6:13 AM	75.8 °F	73.4 °F	92%	NNE	17.9 mph	20.9 mph	29.65 in	0.45 in	0.45 in
6:18 AM	75.8 °F	73.4 °F	92%	NE	12.5 mph	21.6 mph	29.65 in	0.45 in	0.45 in
6:23 AM	75.8 °F	73.3 °F	92%	North	9.9 mph	20.8 mph	29.65 in	0.45 in	0.45 in
6:28 AM	76 °F	73.5 °F	92%	North	15.6 mph	21.7 mph	29.64 in	0.45 in	0.45 in
6:33 AM	75.9 °F	73.3 °F	92%	NNE	17.3 mph	23.4 mph	29.64 in	0.45 in	0.45 in
6:38 AM	75.9 °F	73.3 °F	92%	North	17.3 mph	21.4 mph	29.64 in	0.45 in	0.45 in
6:43 AM	75.9 °F	73.3 °F	92%	North	19.8 mph	25.2 mph	29.64 in	0.46 in	0.46 in
6:48 AM	75.9 °F	73.2 °F	92%	NE	18.8 mph	23.9 mph	29.63 in	0.46 in	0.46 in
6:53 AM	75.9 °F	73.2 °F	91%	ENE	11.4 mph	27.6 mph	29.63 in	0.46 in	0.46 in
6:58 AM	75.9 °F	73.2 °F	91%	ENE	9.7 mph	21.8 mph	29.64 in	0.47 in	0.47 in
7:03 AM	75.8 °F	73.1 °F	91%	NE	12.6 mph	25.4 mph	29.63 in	0.47 in	0.47 in
7:08 AM	75.8 °F	73.2 °F	92%	North	10.2 mph	26.9 mph	29.62 in	0.47 in	0.47 in
7:13 AM	75.8 °F	73.2 °F	92%	NNE	20.4 mph	29 mph	29.63 in	0.48 in	0.48 in
7:18 AM	75.8 °F	73.3 °F	92%	North	23.6 mph	27.7 mph	29.63 in	0.49 in	0.49 in
7:23 AM	75.6 °F	73.2 °F	92%	NNW	17.1 mph	25.4 mph	29.62 in	0.51 in	0.51 in
7:28 AM	75.7 °F	73.4 °F	93%	North	17.6 mph	20.3 mph	29.63 in	0.53 in	0.53 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
7:33 AM	75.6 °F	73.5 °F	93%	North	19.1 mph	26.4 mph	29.63 in	0.55 in	0.55 in
7:41 AM	75.8 °F	73.8 °F	93%	NNE	15 mph	15 mph	29.64 in	0 in	0.59 in
7:46 AM	75.6 °F	73.6 °F	93%	NNE	11.5 mph	23.1 mph	29.64 in	0.6 in	0.6 in
7:51 AM	75.7 °F	73.7 °F	93%	NNE	12.3 mph	25.8 mph	29.64 in	0.61 in	0.61 in
7:57 AM	75.6 °F	73.8 °F	94%	NNE	8.3 mph	25.2 mph	29.66 in	0.74 in	0.74 in
8:02 AM	75.7 °F	73.9 °F	94%	NNE	11.3 mph	20.3 mph	29.65 in	0.8 in	0.8 in
8:07 AM	75.6 °F	74.1 °F	95%	ENE	11.2 mph	11.9 mph	29.67 in	0.85 in	0.84 in
8:12 AM	75.7 °F	74.3 °F	95%	ENE	9.5 mph	14.9 mph	29.66 in	1.19 in	1.19 in
8:17 AM	75.1 °F	73.7 °F	95%	NE	6.8 mph	14.9 mph	29.66 in	1.26 in	1.26 in
8:22 AM	74.9 °F	74.1 °F	97%	ENE	12.6 mph	23.6 mph	29.67 in	1.38 in	1.38 in
8:27 AM	74.6 °F	73.5 °F	96%	NE	14.9 mph	20.4 mph	29.67 in	1.47 in	1.47 in
8:32 AM	74.1 °F	73.3 °F	97%	NE	13.5 mph	17.8 mph	29.65 in	1.5 in	1.5 in
8:37 AM	74.1 °F	73.3 °F	98%	NE	13.8 mph	21.9 mph	29.65 in	1.51 in	1.51 in
8:42 AM	74.4 °F	73.7 °F	98%	NNE	11.2 mph	27.8 mph	29.65 in	1.52 in	1.52 in
8:47 AM	74.7 °F	73.9 °F	98%	NNE	6.3 mph	16.2 mph	29.64 in	1.53 in	1.53 in
8:52 AM	74.9 °F	74.2 °F	98%	NNE	15.7 mph	20.4 mph	29.64 in	1.53 in	1.53 in
8:57 AM	75.1 °F	74.3 °F	98%	NNE	13.7 mph	18.3 mph	29.64 in	1.54 in	1.54 in
9:02 AM	75.3 °F	74.5 °F	97%	NNE	14.7 mph	22.1 mph	29.63 in	1.54 in	1.54 in
9:07 AM	75.4 °F	74.4 °F	97%	NNE	8.2 mph	23.6 mph	29.64 in	1.54 in	1.54 in
9:12 AM	75.5 °F	74.4 °F	96%	North	8.6 mph	27.5 mph	29.64 in	1.55 in	1.55 in
9:17 AM	75.8 °F	74.6 °F	96%	NNE	15.6 mph	20.1 mph	29.64 in	1.55 in	1.55 in
9:22 AM	76 °F	74.7 °F	96%	NNE	23.9 mph	26.4 mph	29.64 in	1.55 in	1.55 in
9:23 AM	76 °F	74.6 °F	96%	North	23.2 mph	26.4 mph	29.64 in	1.56 in	1.56 in
9:28 AM	76 °F	74.4 °F	95%	NE	11.1 mph	21.3 mph	29.64 in	1.56 in	1.56 in
9:33 AM	75.9 °F	73.9 °F	94%	NNE	20.6 mph	30.8 mph	29.64 in	1.58 in	1.58 in
9:38 AM	75.9 °F	74 °F	94%	NNE	17.8 mph	24.1 mph	29.64 in	1.59 in	1.59 in
9:43 AM	75.9 °F	74.1 °F	94%	NNW	14.8 mph	22.6 mph	29.63 in	1.61 in	1.61 in
9:48 AM	75.8 °F	73.9 °F	94%	NNE	22.1 mph	25.8 mph	29.63 in	1.63 in	1.63 in
9:49 AM	75.8 °F	73.8 °F	94%	NNE	24.4 mph	28.8 mph	29.62 in	1.63 in	1.63 in
9:54 AM	75.4 °F	73.3 °F	93%	NNE	23.2 mph	28.3 mph	29.62 in	1.64 in	1.64 in
9:59 AM	75.4 °F	73.3 °F	93%	NE	27.1 mph	29.7 mph	29.62 in	1.65 in	1.65 in
10:04 AM	75.5 °F	73.5 °F	94%	NNE	7.8 mph	27.8 mph	29.62 in	1.66 in	1.66 in
10:09 AM	75.5 °F	73.6 °F	94%	NE	17.1 mph	27.7 mph	29.62 in	1.66 in	1.66 in
10:14 AM	75.7 °F	73.7 °F	94%	NNE	11.9 mph	25.4 mph	29.62 in	1.68 in	1.68 in
10:19 AM	75.5 °F	73.5 °F	94%	NE	21.7 mph	22.3 mph	29.61 in	1.69 in	1.69 in
10:24 AM	75.6 °F	73.4 °F	93%	North	20.1 mph	20.1 mph	29.6 in	1.69 in	1.69 in
10:29 AM	75.6 °F	73.3 °F	93%	NE	15.7 mph	26.8 mph	29.59 in	1.69 in	1.69 in
10:34 AM	75.3 °F	73 °F	93%	North	20.1 mph	31.8 mph	29.58 in	1.7 in	1.7 in
10:39 AM	75.1 °F	72.5 °F	92%	North	28.6 mph	35.5 mph	29.58 in	1.7 in	1.7 in
10:44 AM	75.2 °F	72.8 °F	92%	North	25.2 mph	35.9 mph	29.59 in	1.7 in	1.7 in
10:49 AM	75.4 °F	73 °F	92%	NNE	31.4 mph	40.5 mph	29.58 in	1.7 in	1.7 in
10:54 AM	75.2 °F	72.8 °F	92%	North	22.1 mph	33.1 mph	29.58 in	1.7 in	1.7 in
11:00 AM	75.2 °F	73 °F	93%	NNE	20.2 mph	30.8 mph	29.57 in	1.71 in	1.71 in
11:05 AM	75 °F	72.9 °F	93%	NNE	38.3 mph	41.9 mph	29.57 in	1.71 in	1.71 in
11:10 AM	75.1 °F	72.9 °F	93%	North	13.4 mph	36 mph	29.57 in	1.71 in	1.71 in
11:15 AM	75.1 °F	72.7 °F	92%	NNE	28.2 mph	38.2 mph	29.56 in	1.71 in	1.71 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
11:20 AM	75.4 °F	72.9 °F	92%	NNE	26.2 mph	33.1 mph	29.56 in	1.72 in	1.72 in
11:25 AM	75.4 °F	72.9 °F	92%	NNE	19.1 mph	32.6 mph	29.56 in	1.72 in	1.72 in
11:30 AM	75.2 °F	72.8 °F	92%	North	23.7 mph	42.1 mph	29.56 in	1.72 in	1.72 in
11:35 AM	75.1 °F	72.8 °F	93%	NNE	28.1 mph	29.1 mph	29.56 in	1.73 in	1.73 in
11:40 AM	75.1 °F	72.8 °F	93%	NNE	16.5 mph	38.9 mph	29.56 in	1.74 in	1.74 in
11:45 AM	74.9 °F	72.7 °F	93%	NNE	22 mph	33.1 mph	29.56 in	1.75 in	1.75 in
11:50 AM	75 °F	72.9 °F	93%	NNE	16.8 mph	26.8 mph	29.56 in	1.76 in	1.76 in
11:55 AM	75 °F	72.9 °F	93%	NNE	23.5 mph	37.8 mph	29.56 in	1.76 in	1.76 in
12:00 PM	75.1 °F	72.9 °F	93%	NE	17.1 mph	28.8 mph	29.55 in	1.77 in	1.77 in
12:05 PM	75.3 °F	73.2 °F	93%	NNE	21.6 mph	26.5 mph	29.55 in	1.77 in	1.77 in
12:10 PM	75.6 °F	73.5 °F	93%	North	20.1 mph	24.2 mph	29.54 in	1.77 in	1.77 in
12:15 PM	75.7 °F	73.5 °F	93%	North	14.7 mph	26.6 mph	29.54 in	1.77 in	1.77 in
12:20 PM	75.7 °F	73.4 °F	93%	NE	12.8 mph	34 mph	29.53 in	1.78 in	1.78 in
12:25 PM	75.9 °F	73.6 °F	93%	NE	23.1 mph	32.4 mph	29.52 in	1.78 in	1.78 in
12:30 PM	75.9 °F	73.6 °F	93%	NNE	16.2 mph	29.8 mph	29.52 in	1.79 in	1.79 in
12:35 PM	75.8 °F	73.6 °F	93%	NNE	29.7 mph	31.2 mph	29.51 in	1.79 in	1.79 in
12:40 PM	75.7 °F	73.4 °F	93%	NNE	15.3 mph	36.8 mph	29.51 in	1.8 in	1.8 in
12:45 PM	75.6 °F	73.2 °F	92%	NE	18.2 mph	34.2 mph	29.5 in	1.8 in	1.8 in
12:50 PM	75.8 °F	73.3 °F	92%	North	14.4 mph	31.6 mph	29.49 in	1.81 in	1.81 in
12:55 PM	75.7 °F	73.2 °F	92%	NNE	27.2 mph	36.8 mph	29.49 in	1.82 in	1.82 in
1:00 PM	75.9 °F	73.6 °F	93%	NNE	22.6 mph	38.3 mph	29.5 in	1.82 in	1.82 in
1:05 PM	76 °F	73.7 °F	93%	NNE	20.6 mph	29.5 mph	29.49 in	1.82 in	1.82 in
1:10 PM	75.7 °F	73.4 °F	92%	North	25 mph	41.6 mph	29.48 in	1.83 in	1.83 in
1:15 PM	75.7 °F	73.3 °F	92%	NNE	30.8 mph	35.9 mph	29.48 in	1.83 in	1.83 in
1:20 PM	75.7 °F	73.5 °F	93%	North	18.6 mph	29.1 mph	29.47 in	1.85 in	1.85 in
1:25 PM	75.5 °F	73.4 °F	93%	North	32.9 mph	38 mph	29.45 in	1.86 in	1.86 in
1:30 PM	75.6 °F	73.5 °F	93%	NNE	24.6 mph	38.2 mph	29.45 in	1.86 in	1.86 in
1:35 PM	75.4 °F	73.1 °F	93%	North	38.5 mph	44.4 mph	29.44 in	1.86 in	1.86 in
1:40 PM	75.7 °F	73.4 °F	93%	North	27.8 mph	37.3 mph	29.45 in	1.88 in	1.88 in
1:45 PM	75.8 °F	73.5 °F	93%	NNE	23.1 mph	36.2 mph	29.45 in	1.89 in	1.89 in
1:50 PM	75.7 °F	73.6 °F	93%	NNE	25 mph	38.3 mph	29.45 in	1.9 in	1.9 in
1:55 PM	75.7 °F	73.6 °F	93%	North	15.4 mph	40.8 mph	29.43 in	1.91 in	1.91 in
2:00 PM	75.7 °F	73.8 °F	94%	NNE	29.3 mph	32.1 mph	29.43 in	1.91 in	1.91 in
2:05 PM	75.7 °F	73.7 °F	93%	NNE	27.3 mph	33.1 mph	29.42 in	1.92 in	1.92 in
2:10 PM	75.8 °F	73.7 °F	93%	NNE	19.8 mph	31.3 mph	29.41 in	1.92 in	1.92 in
2:15 PM	76 °F	73.8 °F	93%	North	20.9 mph	38 mph	29.42 in	1.94 in	1.94 in
2:20 PM	75.7 °F	73.4 °F	93%	North	26.8 mph	34.2 mph	29.4 in	1.95 in	1.95 in
2:25 PM	75.8 °F	73.7 °F	93%	NNE	19.5 mph	27.9 mph	29.4 in	1.97 in	1.97 in
2:30 PM	75.6 °F	73.6 °F	94%	North	15.8 mph	33.9 mph	29.4 in	1.99 in	1.99 in
2:35 PM	75.6 °F	73.8 °F	94%	NNW	23.1 mph	30.8 mph	29.4 in	2.04 in	2.04 in
2:40 PM	75.4 °F	73.7 °F	94%	NNE	28.5 mph	36.3 mph	29.39 in	2.05 in	2.05 in
2:45 PM	75.5 °F	73.8 °F	95%	NNE	22.2 mph	33.9 mph	29.39 in	2.07 in	2.07 in
2:50 PM	75.5 °F	73.8 °F	94%	NNE	25.7 mph	42 mph	29.38 in	2.09 in	2.09 in
2:55 PM	75.4 °F	73.8 °F	95%	North	17.7 mph	30.8 mph	29.37 in	2.13 in	2.13 in
3:00 PM	75.4 °F	74 °F	95%	North	22.4 mph	25.8 mph	29.36 in	2.17 in	2.17 in
3:05 PM	75.4 °F	74.2 °F	96%	North	15 mph	30.9 mph	29.35 in	2.19 in	2.19 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
3:10 PM	75.7 °F	74.6 °F	96%	NNE	16.1 mph	27.7 mph	29.35 in	2.2 in	2.2 in
3:15 PM	75.6 °F	74.5 °F	96%	NE	15.4 mph	29.8 mph	29.35 in	2.28 in	2.28 in
3:20 PM	75.5 °F	74.5 °F	97%	NNE	29.5 mph	34.2 mph	29.34 in	2.31 in	2.31 in
3:25 PM	75.6 °F	74.7 °F	97%	NE	20 mph	39.7 mph	29.33 in	2.33 in	2.33 in
3:30 PM	75.8 °F	74.9 °F	97%	North	26.3 mph	41.3 mph	29.32 in	2.38 in	2.38 in
3:35 PM	76 °F	75 °F	97%	North	14.3 mph	38.4 mph	29.31 in	2.4 in	2.4 in
3:40 PM	76 °F	74.9 °F	96%	North	25.5 mph	33.4 mph	29.3 in	2.45 in	2.45 in
3:45 PM	75.9 °F	74.8 °F	96%	North	19.1 mph	33.1 mph	29.28 in	2.5 in	2.5 in
3:50 PM	75.8 °F	74.6 °F	96%	North	22.3 mph	32.2 mph	29.27 in	2.54 in	2.54 in
3:55 PM	75.9 °F	74.7 °F	96%	NNW	14.7 mph	35 mph	29.27 in	2.57 in	2.57 in
4:00 PM	75.9 °F	74.8 °F	96%	North	17.3 mph	36.4 mph	29.25 in	2.6 in	2.6 in
4:05 PM	76 °F	74.3 °F	95%	North	18.8 mph	55.5 mph	29.24 in	2.63 in	2.63 in
4:10 PM	75.9 °F	74.2 °F	94%	NE	21.6 mph	43.9 mph	29.22 in	2.69 in	2.69 in
4:15 PM	75.7 °F	74.2 °F	95%	NNE	44.3 mph	44.3 mph	29.2 in	2.74 in	2.74 in
4:20 PM	75.7 °F	74.6 °F	96%	NNE	25.1 mph	54.1 mph	29.22 in	2.78 in	2.78 in
4:25 PM	75.7 °F	74.9 °F	97%	NE	18.2 mph	28.6 mph	29.21 in	2.85 in	2.84 in
4:30 PM	75.7 °F	74.9 °F	97%	NNE	41.4 mph	47.4 mph	29.2 in	2.87 in	2.87 in
4:35 PM	75.8 °F	75 °F	97%	North	27.8 mph	43.8 mph	29.18 in	2.9 in	2.9 in
4:40 PM	75.8 °F	74.9 °F	97%	NNE	18.3 mph	46.2 mph	29.17 in	2.95 in	2.95 in
4:45 PM	75.6 °F	74.7 °F	97%	North	37.7 mph	47.2 mph	29.16 in	2.99 in	2.99 in
4:50 PM	75.6 °F	74.7 °F	97%	North	18.5 mph	57.6 mph	29.14 in	3.02 in	3.02 in
4:55 PM	75.6 °F	74.8 °F	97%	NNE	27.7 mph	38.2 mph	29.14 in	3.06 in	3.06 in
5:00 PM	75.7 °F	74.9 °F	97%	North	37.3 mph	46.4 mph	29.13 in	3.08 in	3.08 in
5:05 PM	75.5 °F	74.8 °F	98%	North	18 mph	46.4 mph	29.12 in	3.13 in	3.12 in
5:10 PM	75.6 °F	75 °F	98%	NNW	17.5 mph	45.9 mph	29.12 in	3.19 in	3.19 in
5:15 PM	75.6 °F	75.1 °F	98%	NE	29.3 mph	42.8 mph	29.11 in	3.31 in	3.3 in
5:20 PM	75.6 °F	75.2 °F	99%	NNE	37.7 mph	48.7 mph	29.08 in	3.4 in	3.4 in
5:25 PM	75.7 °F	75.4 °F	99%	NNE	31.8 mph	56.2 mph	29.1 in	3.44 in	3.43 in
5:30 PM	75.4 °F	75.2 °F	99%	NNE	37.3 mph	58.8 mph	29.09 in	3.47 in	3.47 in
5:35 PM	75.5 °F	75.3 °F	99%	NNE	32.1 mph	49.6 mph	29.09 in	3.49 in	3.49 in
5:40 PM	75.7 °F	75.6 °F	100%	NE	30.6 mph	42.5 mph	29.08 in	3.5 in	3.5 in
5:45 PM	75.9 °F	75.8 °F	100%	NNE	18.4 mph	47.9 mph	29.08 in	3.54 in	3.54 in
5:51 PM	76 °F	75.8 °F	99%	NNE	38.9 mph	44.1 mph	29.07 in	3.57 in	3.57 in
5:56 PM	76.1 °F	75.7 °F	99%	NNE	44.6 mph	47.9 mph	29.06 in	3.59 in	3.59 in
6:01 PM	76.1 °F	75.7 °F	99%	NE	19.6 mph	42.1 mph	29.04 in	3.66 in	3.66 in
6:06 PM	76 °F	75.7 °F	99%	NNE	22.8 mph	46.6 mph	29.02 in	3.72 in	3.72 in
6:11 PM	76 °F	75.8 °F	100%	North	31.1 mph	37.9 mph	29.01 in	3.77 in	3.77 in
6:16 PM	76.1 °F	76 °F	100%	NE	14.2 mph	41.6 mph	28.99 in	3.84 in	3.84 in
6:21 PM	75.9 °F	75.8 °F	100%	North	32.6 mph	37.7 mph	28.97 in	3.91 in	3.91 in
6:26 PM	76.1 °F	76 °F	100%	NNE	17.6 mph	47.8 mph	28.96 in	3.94 in	3.94 in
6:31 PM	75.7 °F	75.7 °F	100%	NNE	22.8 mph	52.1 mph	28.93 in	3.99 in	3.98 in
6:36 PM	75.9 °F	75.8 °F	100%	NNE	35.4 mph	45.7 mph	28.92 in	4.01 in	4.01 in
6:41 PM	75.8 °F	75.7 °F	100%	NE	40.1 mph	42.1 mph	28.92 in	4.03 in	4.03 in
6:46 PM	75.9 °F	75.8 °F	100%	NE	34.7 mph	43 mph	28.91 in	4.05 in	4.05 in
6:51 PM	76.1 °F	75.9 °F	100%	NNE	28.4 mph	46.4 mph	28.89 in	4.07 in	4.07 in
6:56 PM	76.1 °F	75.9 °F	100%	NNE	23.4 mph	41.3 mph	28.88 in	4.1 in	4.1 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
7:01 PM	76 °F	75.8 °F	100%	NE	40.8 mph	49.2 mph	28.87 in	4.12 in	4.12 in
7:06 PM	76.1 °F	75.9 °F	99%	NNE	33.9 mph	50.6 mph	28.86 in	4.14 in	4.14 in
7:11 PM	75.7 °F	75.5 °F	99%	NE	46.5 mph	52.9 mph	28.83 in	4.17 in	4.17 in
7:16 PM	75.7 °F	75.6 °F	100%	NNE	30.3 mph	46.8 mph	28.82 in	4.19 in	4.19 in
7:21 PM	75.8 °F	75.8 °F	100%	NNE	19 mph	49.5 mph	28.81 in	4.21 in	4.21 in
7:26 PM	75.7 °F	75.7 °F	100%	NE	52.5 mph	56.9 mph	28.8 in	4.23 in	4.23 in
7:31 PM	76 °F	76 °F	100%	NE	39.8 mph	51.3 mph	28.78 in	4.27 in	4.27 in
7:36 PM	76.1 °F	76.1 °F	100%	NNE	27.2 mph	42.1 mph	28.78 in	4.29 in	4.29 in
7:41 PM	76.1 °F	76.1 °F	100%	NE	39.6 mph	42.9 mph	28.76 in	4.31 in	4.31 in
7:46 PM	76.3 °F	76.3 °F	100%	NNE	44.4 mph	55.2 mph	28.75 in	4.34 in	4.34 in
7:51 PM	76.5 °F	76.5 °F	100%	NNE	23.7 mph	43.5 mph	28.72 in	4.37 in	4.37 in
7:56 PM	76.8 °F	76.8 °F	100%	NE	17 mph	54.7 mph	28.72 in	4.38 in	4.38 in
8:01 PM	76.8 °F	76.7 °F	100%	NNE	27 mph	40.1 mph	28.71 in	4.39 in	4.39 in
8:06 PM	76.9 °F	76.7 °F	99%	NNE	36.3 mph	63.4 mph	28.66 in	4.42 in	4.42 in
8:11 PM	76.7 °F	76.5 °F	99%	North	44.1 mph	50.6 mph	28.65 in	4.43 in	4.43 in
8:16 PM	76.7 °F	76.5 °F	99%	NE	35.7 mph	44.7 mph	28.64 in	4.44 in	4.44 in
8:21 PM	76.8 °F	76.5 °F	99%	NNE	40.8 mph	52.8 mph	28.62 in	4.45 in	4.45 in
8:26 PM	76.7 °F	76.3 °F	99%	NE	40 mph	46.9 mph	28.6 in	4.45 in	4.45 in
8:31 PM	76.8 °F	76.3 °F	98%	NNE	45.4 mph	55.9 mph	28.58 in	4.46 in	4.46 in
8:36 PM	76.7 °F	76.3 °F	99%	East	28.1 mph	54.6 mph	28.56 in	4.48 in	4.48 in
8:41 PM	76.6 °F	76.4 °F	99%	NE	29.5 mph	57.5 mph	28.54 in	4.52 in	4.52 in
8:46 PM	76.7 °F	76.6 °F	100%	NNE	16.9 mph	54.1 mph	28.49 in	4.55 in	4.55 in
8:51 PM	76.4 °F	76.3 °F	100%	NE	33.6 mph	64.7 mph	28.45 in	4.58 in	4.58 in
8:56 PM	76.6 °F	76.6 °F	100%	NNE	38.6 mph	54.7 mph	28.41 in	4.6 in	4.6 in
9:01 PM	76.3 °F	76.3 °F	100%	NNE	41.1 mph	44.3 mph	28.37 in	4.64 in	4.64 in
9:06 PM	76 °F	76 °F	100%	NE	35.9 mph	54.1 mph	28.33 in	4.67 in	4.67 in
9:11 PM	76.2 °F	76.2 °F	100%	NE	54.1 mph	54.1 mph	28.29 in	4.71 in	4.71 in
9:16 PM	76.2 °F	76.2 °F	100%	NE	60.6 mph	65.6 mph	28.24 in	4.74 in	4.74 in
9:21 PM	76.2 °F	76.2 °F	100%	NE	32.2 mph	78.7 mph	28.18 in	4.76 in	4.76 in
9:26 PM	76.2 °F	76.2 °F	100%	NE	45 mph	67.4 mph	28.16 in	4.77 in	4.77 in
9:31 PM	76.2 °F	76.2 °F	100%	NE	35.4 mph	47.8 mph	28.15 in	4.78 in	4.78 in
9:36 PM	76.5 °F	76.5 °F	100%	NNE	0 mph	33.6 mph	28.13 in	4.79 in	4.79 in
9:41 PM	76.5 °F	76.5 °F	100%	NE	0 mph	10.3 mph	28.11 in	4.8 in	4.8 in
9:46 PM	76.5 °F	76.5 °F	100%	NE	0 mph	0 mph	28.1 in	4.82 in	4.82 in
9:51 PM	76.5 °F	76.5 °F	100%	NE	0 mph	0 mph	28.11 in	4.83 in	4.83 in
9:56 PM	76.5 °F	76.5 °F	100%	NE	0 mph	0 mph	28.12 in	4.83 in	4.83 in
10:01 PM	76.6 °F	76.6 °F	100%	NE	0 mph	0 mph	28.13 in	4.84 in	4.84 in
10:06 PM	76.3 °F	76.3 °F	100%	NE	0 mph	0 mph	28.16 in	4.85 in	4.85 in
10:11 PM	76.3 °F	76.3 °F	100%	NE	0 mph	0 mph	28.2 in	4.86 in	4.86 in
10:16 PM	76.3 °F	76.3 °F	100%	SSW	26.5 mph	34.4 mph	28.25 in	4.86 in	4.86 in
10:21 PM	76.3 °F	76.3 °F	100%	SSE	0 mph	24.5 mph	28.31 in	4.87 in	4.87 in
10:26 PM	76.4 °F	76.4 °F	100%	South	20.4 mph	26.5 mph	28.36 in	4.87 in	4.87 in
10:31 PM	76.4 °F	76.4 °F	100%	SSW	26.5 mph	36.9 mph	28.42 in	4.87 in	4.87 in
10:36 PM	76.4 °F	76.4 °F	100%	SSE	0 mph	0 mph	28.45 in	4.87 in	4.87 in
10:41 PM	76.3 °F	76.3 °F	100%	SSW	19.4 mph	30.5 mph	28.49 in	4.87 in	4.87 in
10:46 PM	76.4 °F	76.4 °F	100%	SSW	38.3 mph	38.3 mph	28.52 in	4.87 in	4.87 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
10:51 PM	76.5 °F	76.5 °F	100%	South	21.9 mph	30.3 mph	28.55 in	4.87 in	4.87 in
10:56 PM	76.4 °F	76.3 °F	100%	South	0 mph	22.9 mph	28.58 in	4.87 in	4.87 in
11:01 PM	76.5 °F	76.3 °F	99%	South	20.8 mph	29.6 mph	28.6 in	4.87 in	4.87 in
11:06 PM	76.5 °F	76.2 °F	99%	SSW	27.6 mph	31.6 mph	28.63 in	4.87 in	4.87 in
11:12 PM	76.6 °F	76.1 °F	98%	South	12.7 mph	28.3 mph	28.66 in	4.87 in	4.87 in
11:18 PM	76.8 °F	75.9 °F	97%	South	29.3 mph	34.2 mph	28.68 in	4.87 in	4.87 in
11:19 PM	76.7 °F	75.8 °F	97%	SSW	23.4 mph	35.9 mph	28.7 in	4.87 in	4.87 in
11:22 PM	76.7 °F	75.8 °F	97%	South	15.1 mph	29.1 mph	28.71 in	4.87 in	4.87 in
11:26 PM	76.7 °F	75.8 °F	97%	South	37.1 mph	37.5 mph	28.72 in	4.87 in	4.87 in
11:30 PM	76.8 °F	75.9 °F	97%	South	21.9 mph	28.3 mph	28.73 in	4.87 in	4.87 in
11:32 PM	76.6 °F	75.8 °F	97%	South	22.2 mph	28.1 mph	28.74 in	4.88 in	4.88 in
11:36 PM	76.8 °F	76 °F	97%	South	26.8 mph	30.5 mph	28.75 in	4.88 in	4.88 in
11:41 PM	76.9 °F	76.1 °F	97%	SSW	17.3 mph	26.5 mph	28.78 in	4.88 in	4.88 in
11:46 PM	76.6 °F	75.8 °F	97%	SSE	13.8 mph	29 mph	28.79 in	4.88 in	4.88 in
11:56 PM	76.7 °F	76 °F	98%	SSW	0 mph	20.8 mph	28.82 in	4.88 in	4.88 in

KFLSEBRI25 Weather data for September 10 2017											
Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
12:02 AM	76.1 °F	73.4 °F	91%	NE	19.7 mph	22.4 mph	-- in	0 in	0 in	0	0 w/m²
12:08 AM	75.9 °F	73.4 °F	92%	NNE	17.7 mph	22.4 mph	-- in	0 in	0 in	0	0 w/m²
12:14 AM	75.7 °F	73 °F	91%	NE	13.9 mph	17.5 mph	-- in	0 in	0 in	0	0 w/m²
12:19 AM	75.6 °F	72.9 °F	91%	ENE	12.3 mph	15 mph	-- in	0 in	0 in	0	0 w/m²
12:25 AM	75.4 °F	72.9 °F	92%	NE	7.2 mph	7.4 mph	-- in	0.07 in	0.01 in	0	0 w/m²
12:30 AM	75.4 °F	72.9 °F	92%	NE	8.3 mph	9.8 mph	-- in	0.07 in	0.01 in	0	0 w/m²
12:35 AM	75.4 °F	72.9 °F	92%	NE	15 mph	17.5 mph	-- in	0.07 in	0.02 in	0	0 w/m²
12:41 AM	75.2 °F	72.7 °F	92%	NE	15.2 mph	17.5 mph	-- in	0.07 in	0.02 in	0	0 w/m²
12:46 AM	75.4 °F	73.2 °F	93%	NNE	18.1 mph	19.9 mph	-- in	0.21 in	0.06 in	0	0 w/m²
12:51 AM	75.2 °F	73 °F	93%	NE	13.6 mph	17.5 mph	-- in	0.21 in	0.06 in	0	0 w/m²
12:56 AM	75 °F	72.9 °F	93%	NNE	10.5 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
1:01 AM	75 °F	73.2 °F	94%	NE	10.5 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
1:06 AM	74.8 °F	73 °F	94%	East	4.5 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
1:12 AM	74.7 °F	72.9 °F	94%	ENE	5.8 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
1:17 AM	74.5 °F	71.8 °F	91%	ENE	11.9 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
1:22 AM	74.3 °F	71.6 °F	91%	NNE	8.3 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
1:27 AM	73.9 °F	71.6 °F	92%	ENE	6 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
1:32 AM	73.4 °F	71.1 °F	92%	NE	6.5 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
1:37 AM	73.2 °F	70.9 °F	92%	ENE	5.8 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
1:42 AM	73.2 °F	71.4 °F	94%	NE	15.9 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
1:47 AM	73 °F	71.2 °F	94%	ENE	9.2 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
1:52 AM	73.2 °F	71.4 °F	94%	NE	7.6 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
1:58 AM	73.8 °F	72 °F	94%	NE	8.3 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
2:04 AM	74.1 °F	72 °F	93%	NNE	19.7 mph	24.8 mph	-- in	0 in	0.06 in	0	0 w/m²
2:09 AM	74.5 °F	72.3 °F	93%	NE	17.7 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
2:14 AM	74.8 °F	72.3 °F	92%	ENE	16.5 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
2:19 AM	75 °F	72.5 °F	92%	ENE	12.1 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
2:25 AM	75.2 °F	73 °F	93%	ENE	11.4 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
2:30 AM	75.2 °F	73.4 °F	94%	NNE	11.4 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
2:35 AM	75.2 °F	73.4 °F	94%	NNE	14.3 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
2:40 AM	75.2 °F	73 °F	93%	NE	10.3 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
2:45 AM	75 °F	72.9 °F	93%	NE	15.4 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
2:50 AM	75 °F	72.9 °F	93%	NE	11.9 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
2:55 AM	75 °F	72.9 °F	93%	NE	22.4 mph	24.8 mph	-- in	0 in	0.06 in	0	0 w/m²
3:01 AM	75 °F	72.9 °F	93%	ENE	15.4 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
3:06 AM	75 °F	73.2 °F	94%	NNE	11.4 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
3:11 AM	75 °F	73.2 °F	94%	NE	16.8 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
3:16 AM	75 °F	73.2 °F	94%	NE	11.9 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
3:22 AM	74.8 °F	73 °F	94%	NE	18.6 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
3:27 AM	74.8 °F	73 °F	94%	NE	12.1 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
3:32 AM	74.7 °F	72.9 °F	94%	NE	12.3 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
3:38 AM	74.7 °F	72.9 °F	94%	NE	11.9 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
3:43 AM	74.7 °F	72.5 °F	93%	NNE	17 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
3:48 AM	74.7 °F	72.5 °F	93%	NNE	14.5 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
3:53 AM	74.8 °F	72.7 °F	93%	NE	11.4 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
3:58 AM	74.8 °F	72.7 °F	93%	NNE	8.9 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
4:04 AM	74.8 °F	73 °F	94%	NE	10.7 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
4:10 AM	74.8 °F	73 °F	94%	NNE	11.4 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
4:15 AM	74.8 °F	73 °F	94%	NE	6.7 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
4:21 AM	74.8 °F	73 °F	94%	NE	7.6 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
4:26 AM	74.8 °F	73.4 °F	95%	NE	5.6 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
4:32 AM	74.7 °F	73.2 °F	95%	ENE	6 mph	7.4 mph	-- in	0 in	0.06 in	0	0 w/m²
4:37 AM	74.7 °F	73.2 °F	95%	NE	2.5 mph	2.5 mph	-- in	0 in	0.06 in	0	0 w/m²
4:43 AM	74.5 °F	73 °F	95%	NE	10.3 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
4:48 AM	74.5 °F	73 °F	95%	NE	18.3 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
4:53 AM	74.5 °F	73 °F	95%	NE	15.4 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
4:58 AM	74.5 °F	72.7 °F	94%	NE	14.3 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
5:03 AM	74.5 °F	72.7 °F	94%	NE	13.6 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
5:08 AM	74.5 °F	72.7 °F	94%	NE	14.5 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
5:13 AM	74.5 °F	72.3 °F	93%	NE	12.3 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
5:19 AM	74.5 °F	72.7 °F	94%	NE	13.4 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
5:24 AM	74.5 °F	72.7 °F	94%	NNE	8.7 mph	9.8 mph	-- in	0 in	0.06 in	0	0 w/m²
5:29 AM	74.5 °F	72.7 °F	94%	NNE	9.6 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
5:36 AM	74.7 °F	72.9 °F	94%	North	11.9 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
5:41 AM	74.7 °F	72.1 °F	92%	NNE	10.5 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
5:46 AM	74.7 °F	72.1 °F	92%	NNE	9.2 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
5:49 AM	74.7 °F	72.1 °F	92%	NNE	19.2 mph	22.4 mph	-- in	0 in	0.06 in	0	0 w/m²
5:54 AM	74.7 °F	72.1 °F	92%	NE	14.3 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
5:59 AM	74.8 °F	72.3 °F	92%	NNE	15 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
6:04 AM	74.8 °F	72.3 °F	92%	NNE	11.9 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
6:09 AM	75 °F	72.5 °F	92%	NNE	13.4 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
6:15 AM	75 °F	72.9 °F	93%	NNE	11.2 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
6:20 AM	75 °F	72.9 °F	93%	NNE	9.6 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
6:25 AM	74.8 °F	72.7 °F	93%	NNE	13.4 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
6:30 AM	74.8 °F	72.7 °F	93%	NE	16.8 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
6:36 AM	74.8 °F	72.7 °F	93%	NE	16.8 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
6:41 AM	74.8 °F	72.7 °F	93%	NNE	11.9 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
6:47 AM	74.7 °F	72.5 °F	93%	NE	11.4 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
6:52 AM	74.7 °F	72.1 °F	92%	NE	17 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
6:58 AM	74.7 °F	72.5 °F	93%	North	19 mph	27.5 mph	-- in	0 in	0.06 in	0	0 w/m²
7:03 AM	74.7 °F	72.1 °F	92%	NNE	17.5 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
7:08 AM	74.7 °F	72.1 °F	92%	NNE	15 mph	17.5 mph	-- in	0 in	0.06 in	0	0 w/m²
7:14 AM	74.7 °F	72.1 °F	92%	NNE	19.7 mph	22.4 mph	-- in	0 in	0.06 in	0	0 w/m²
7:20 AM	74.7 °F	72.1 °F	92%	NNE	13.6 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
7:25 AM	74.5 °F	72.1 °F	92%	NNE	16.5 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
7:30 AM	74.5 °F	72.3 °F	93%	NNE	19.9 mph	22.4 mph	-- in	0 in	0.06 in	0	0 w/m²
7:35 AM	74.5 °F	71.8 °F	91%	NNE	16.8 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
7:40 AM	74.5 °F	72.1 °F	92%	NNE	17 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
7:45 AM	74.5 °F	72.3 °F	93%	NNE	13.9 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
7:50 AM	74.5 °F	72.3 °F	93%	NNE	13 mph	15 mph	-- in	0 in	0.06 in	0	0 w/m²
7:55 AM	74.5 °F	72.3 °F	93%	NE	18.6 mph	22.4 mph	-- in	0 in	0.06 in	0	0 w/m²
8:01 AM	74.5 °F	72.3 °F	93%	NNE	15.9 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
8:06 AM	74.5 °F	72.3 °F	93%	ENE	11.2 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
8:11 AM	74.7 °F	72.5 °F	93%	NE	17.5 mph	19.9 mph	-- in	0 in	0.06 in	0	0 w/m²
8:16 AM	74.8 °F	72.7 °F	93%	East	9.8 mph	12.3 mph	-- in	0 in	0.06 in	0	0 w/m²
8:21 AM	74.8 °F	72.7 °F	93%	ENE	10.7 mph	12.3 mph	-- in	0 in	0.06 in	0	0.17 w/m²
8:47 AM	74.5 °F	72.7 °F	94%	NE	18.1 mph	19.9 mph	-- in	0 in	0.07 in	0	21.95 w/m²
8:52 AM	74.3 °F	72.5 °F	94%	NE	11.9 mph	12.3 mph	-- in	0 in	0.07 in	0	24.69 w/m²
8:57 AM	74.3 °F	72.1 °F	93%	NE	13.6 mph	17.5 mph	-- in	0 in	0.07 in	0	24.51 w/m²
9:02 AM	74.3 °F	72.1 °F	93%	NE	16.1 mph	19.9 mph	-- in	0 in	0.07 in	0	29.1 w/m²
9:07 AM	74.1 °F	72 °F	93%	NE	16.1 mph	19.9 mph	-- in	0 in	0.07 in	0	33.96 w/m²
9:12 AM	74.1 °F	71.8 °F	92%	ENE	15 mph	17.5 mph	-- in	0 in	0.07 in	0	38.01 w/m²
9:17 AM	73.9 °F	71.6 °F	92%	NE	15 mph	17.5 mph	-- in	0 in	0.07 in	0	39.36 w/m²
9:22 AM	73.9 °F	71.6 °F	92%	NE	19.9 mph	22.4 mph	-- in	0 in	0.07 in	1	51.96 w/m²
9:27 AM	73.8 °F	71.4 °F	92%	NNE	18.6 mph	24.8 mph	-- in	0 in	0.07 in	1	72.61 w/m²
9:32 AM	73.8 °F	71.4 °F	92%	NNE	19.2 mph	22.4 mph	-- in	0 in	0.07 in	1	60.64 w/m²
9:37 AM	73.8 °F	71.4 °F	92%	NE	13.9 mph	27.5 mph	-- in	0 in	0.07 in	1	55.46 w/m²
9:42 AM	73.8 °F	71.4 °F	92%	NNE	18.6 mph	19.9 mph	-- in	0 in	0.07 in	1	56.23 w/m²
9:47 AM	73.8 °F	71.4 °F	92%	NNE	16.8 mph	19.9 mph	-- in	0 in	0.07 in	1	58.12 w/m²
9:52 AM	73.8 °F	71.4 °F	92%	NE	12.1 mph	15 mph	-- in	0 in	0.07 in	1	65.54 w/m²
9:58 AM	73.8 °F	71.4 °F	92%	NE	23.3 mph	27.5 mph	-- in	0 in	0.07 in	1	80.05 w/m²
10:03 AM	73.8 °F	71.1 °F	91%	NE	13.4 mph	19.9 mph	-- in	0 in	0.07 in	1	65.68 w/m²
10:08 AM	73.8 °F	71.1 °F	91%	NE	15 mph	17.5 mph	-- in	0 in	0.07 in	1	65.41 w/m²
10:13 AM	73.8 °F	71.1 °F	91%	NE	23 mph	27.5 mph	-- in	0 in	0.07 in	1	48.94 w/m²
10:18 AM	73.8 °F	71.1 °F	91%	NE	16.8 mph	19.9 mph	-- in	0 in	0.07 in	0	41.88 w/m²
10:23 AM	73.8 °F	71.1 °F	91%	NNE	23.9 mph	27.5 mph	-- in	0 in	0.07 in	1	60.59 w/m²
10:28 AM	73.8 °F	71.4 °F	92%	NE	13.6 mph	17.5 mph	-- in	0 in	0.07 in	1	56.77 w/m²
10:33 AM	73.8 °F	71.4 °F	92%	NE	25.3 mph	30 mph	-- in	0 in	0.07 in	1	75.62 w/m²
10:37 AM	73.6 °F	71.2 °F	92%	NE	20.1 mph	24.8 mph	-- in	0 in	0.07 in	1	97.84 w/m²
10:42 AM	73.6 °F	71.2 °F	92%	NE	13 mph	17.5 mph	-- in	0 in	0.07 in	0	37.83 w/m²
10:46 AM	73.6 °F	71.2 °F	92%	NE	17 mph	19.9 mph	-- in	0 in	0.07 in	1	89.71 w/m²
10:51 AM	73.6 °F	71.2 °F	92%	NE	23 mph	27.5 mph	-- in	0 in	0.07 in	1	66.26 w/m²
10:56 AM	73.4 °F	71.1 °F	92%	ENE	21.5 mph	27.5 mph	-- in	0 in	0.07 in	1	80.23 w/m²
11:02 AM	73.4 °F	71.1 °F	92%	NE	21.2 mph	24.8 mph	-- in	0 in	0.07 in	1	98.1 w/m²
11:07 AM	73.4 °F	71.1 °F	92%	NE	18.3 mph	19.9 mph	-- in	0 in	0.07 in	1	109.1 w/m²
11:12 AM	73.4 °F	71.1 °F	92%	NNE	22.1 mph	27.5 mph	-- in	0 in	0.07 in	1	81.07 w/m²
11:17 AM	73.4 °F	71.1 °F	92%	NNE	24.4 mph	32.4 mph	-- in	0 in	0.07 in	1	110.08 w/m²
11:22 AM	73.4 °F	70 °F	89%	NE	24.6 mph	27.5 mph	-- in	0 in	0.07 in	1	99.33 w/m²
11:27 AM	73.4 °F	70 °F	89%	NE	19 mph	22.4 mph	-- in	0 in	0.07 in	1	78.32 w/m²
11:32 AM	73.6 °F	69.8 °F	88%	NE	20.8 mph	22.4 mph	-- in	0 in	0.07 in	1	144.28 w/m²
11:37 AM	73.6 °F	69.3 °F	86%	NE	16.8 mph	17.5 mph	-- in	0 in	0.07 in	1	138.47 w/m²
11:42 AM	73.8 °F	69.1 °F	85%	NE	23.9 mph	27.5 mph	-- in	0 in	0.07 in	1	91.16 w/m²
11:47 AM	73.9 °F	69.8 °F	87%	NNE	17 mph	19.9 mph	-- in	0 in	0.07 in	1	122.2 w/m²
11:52 AM	74.1 °F	70.3 °F	88%	NE	13.9 mph	15 mph	-- in	0 in	0.07 in	1	57.13 w/m²

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
11:57 AM	74.1 °F	70.3 °F	88%	NE	17 mph	19.9 mph	-- in	0 in	0.07 in	1	117.05 w/m²
12:02 PM	74.1 °F	70.7 °F	89%	NE	14.5 mph	17.5 mph	-- in	0 in	0.07 in	1	126.92 w/m²
12:07 PM	74.1 °F	70.7 °F	89%	North	19.9 mph	24.8 mph	-- in	0 in	0.07 in	1	142.9 w/m²
12:12 PM	73.9 °F	70.9 °F	90%	NNE	15.2 mph	17.5 mph	-- in	0 in	0.07 in	1	98.02 w/m²
12:18 PM	73.9 °F	70.9 °F	90%	NE	17 mph	19.9 mph	-- in	0 in	0.07 in	1	119.59 w/m²
12:23 PM	73.9 °F	70.9 °F	90%	NE	24.4 mph	32.4 mph	-- in	0 in	0.07 in	2	156.62 w/m²
12:28 PM	73.9 °F	71.2 °F	91%	NE	20.8 mph	24.8 mph	-- in	0 in	0.07 in	2	170.31 w/m²
12:33 PM	74.1 °F	71.4 °F	91%	NNE	22.8 mph	30 mph	-- in	0 in	0.07 in	2	166.39 w/m²
12:38 PM	74.1 °F	71.1 °F	90%	NNE	18.3 mph	19.9 mph	-- in	0 in	0.07 in	2	163.27 w/m²
12:43 PM	74.1 °F	71.1 °F	90%	NNE	15.9 mph	17.5 mph	-- in	0 in	0.07 in	1	144.39 w/m²
12:48 PM	74.3 °F	70.9 °F	89%	NNE	25.5 mph	30 mph	-- in	0 in	0.07 in	2	168.09 w/m²
12:53 PM	74.3 °F	70.9 °F	89%	North	18.1 mph	19.9 mph	-- in	0 in	0.07 in	2	182.94 w/m²
12:58 PM	74.3 °F	70.5 °F	88%	North	22.1 mph	24.8 mph	-- in	0 in	0.07 in	1	122.89 w/m²
1:03 PM	74.3 °F	70.9 °F	89%	NNE	15.9 mph	17.5 mph	-- in	0 in	0.07 in	1	82.01 w/m²
1:08 PM	74.3 °F	71.2 °F	90%	NNE	19 mph	22.4 mph	-- in	0 in	0.07 in	1	129.72 w/m²
1:13 PM	74.3 °F	71.2 °F	90%	NNE	26.2 mph	30 mph	-- in	0 in	0.07 in	1	121.33 w/m²
1:18 PM	74.5 °F	71.4 °F	90%	NNE	19 mph	22.4 mph	-- in	0 in	0.07 in	1	101.84 w/m²
1:23 PM	74.5 °F	72.1 °F	92%	NE	24.4 mph	32.4 mph	-- in	0 in	0.07 in	1	68.51 w/m²
1:28 PM	74.5 °F	72.1 °F	92%	NNE	18.1 mph	22.4 mph	-- in	0 in	0.07 in	1	65.77 w/m²
1:34 PM	74.5 °F	72.1 °F	92%	North	24.4 mph	27.5 mph	-- in	0 in	0.07 in	1	123.07 w/m²
1:39 PM	74.5 °F	72.3 °F	93%	NNE	17 mph	17.5 mph	-- in	0 in	0.07 in	1	89.16 w/m²
1:44 PM	74.5 °F	72.3 °F	93%	NNE	20.1 mph	24.8 mph	-- in	0 in	0.07 in	1	72.61 w/m²
1:49 PM	74.5 °F	72.3 °F	93%	North	18.6 mph	19.9 mph	-- in	0 in	0.07 in	1	93.34 w/m²
1:54 PM	74.5 °F	72.3 °F	93%	NE	15 mph	17.5 mph	-- in	0 in	0.07 in	1	86.37 w/m²
1:59 PM	74.3 °F	72 °F	92%	NNE	17.5 mph	19.9 mph	-- in	0 in	0.07 in	1	61.81 w/m²
2:04 PM	74.3 °F	72 °F	92%	North	30.9 mph	37.4 mph	-- in	0 in	0.07 in	1	62.66 w/m²
2:09 PM	74.3 °F	72 °F	92%	North	29.5 mph	34.9 mph	-- in	0 in	0.07 in	1	103.98 w/m²
2:14 PM	74.1 °F	71.4 °F	91%	NNE	21.2 mph	27.5 mph	-- in	0 in	0.07 in	1	91.49 w/m²
2:19 PM	74.1 °F	71.4 °F	91%	NNE	27.7 mph	34.9 mph	-- in	0 in	0.07 in	1	55.6 w/m²
2:24 PM	74.1 °F	71.8 °F	92%	North	19 mph	22.4 mph	-- in	0 in	0.07 in	0	41.11 w/m²
2:29 PM	74.1 °F	71.8 °F	92%	North	27.1 mph	30 mph	-- in	0 in	0.07 in	1	87.1 w/m²
2:34 PM	74.1 °F	71.8 °F	92%	North	21.7 mph	27.5 mph	-- in	0 in	0.07 in	1	52 w/m²
2:39 PM	74.1 °F	71.8 °F	92%	NNE	30 mph	32.4 mph	-- in	0 in	0.07 in	0	16.24 w/m²
2:44 PM	74.1 °F	71.8 °F	92%	NE	21.5 mph	24.8 mph	-- in	0 in	0.07 in	0	19.07 w/m²
2:50 PM	74.1 °F	72 °F	93%	NNE	15.2 mph	17.5 mph	-- in	0 in	0.07 in	0	25.77 w/m²
2:55 PM	74.3 °F	72.1 °F	93%	North	23 mph	30 mph	-- in	0 in	0.07 in	0	38.73 w/m²
3:00 PM	74.5 °F	72.3 °F	93%	NNE	19.7 mph	22.4 mph	-- in	0 in	0.07 in	0	23.93 w/m²
3:05 PM	74.7 °F	72.5 °F	93%	NNE	28 mph	30 mph	-- in	0 in	0.07 in	0	33.74 w/m²
3:10 PM	74.7 °F	72.5 °F	93%	NNE	23.3 mph	24.8 mph	-- in	0 in	0.07 in	0	32.34 w/m²
3:15 PM	74.8 °F	72.7 °F	93%	North	24.6 mph	27.5 mph	-- in	0 in	0.07 in	0	27.08 w/m²
3:20 PM	75 °F	72.9 °F	93%	NNW	18.3 mph	19.9 mph	-- in	0 in	0.07 in	1	46.78 w/m²
3:25 PM	75.2 °F	73 °F	93%	NNE	22.8 mph	24.8 mph	-- in	0 in	0.07 in	1	70.04 w/m²
3:30 PM	75.2 °F	73 °F	93%	North	14.5 mph	15 mph	-- in	0 in	0.07 in	0	16.28 w/m²
3:35 PM	75.2 °F	73 °F	93%	NNE	29.1 mph	34.9 mph	-- in	0 in	0.07 in	0	23.34 w/m²
3:40 PM	75.2 °F	73 °F	93%	NNE	31.5 mph	40 mph	-- in	0 in	0.07 in	1	50.7 w/m²

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
3:45 PM	75.4 °F	73.2 °F	93%	NNE	24.6 mph	30 mph	-- in	0 in	0.07 in	1	56.41 w/m²
3:50 PM	75.4 °F	73.2 °F	93%	NNE	16.8 mph	22.4 mph	-- in	0 in	0.07 in	0	9.21 w/m²
3:55 PM	75.4 °F	73.2 °F	93%	NNE	21.5 mph	27.5 mph	-- in	0 in	0.07 in	1	43.5 w/m²
4:00 PM	75.4 °F	73.2 °F	93%	NNE	19 mph	24.8 mph	-- in	0 in	0.07 in	0	30.5 w/m²
4:06 PM	75.4 °F	73.2 °F	93%	NNE	17.5 mph	19.9 mph	-- in	0 in	0.07 in	0	29.6 w/m²
4:08 PM	75.4 °F	73.6 °F	94%	North	22.1 mph	24.8 mph	-- in	0 in	0.07 in	0	23.61 w/m²
4:13 PM	75.4 °F	72.9 °F	92%	NNE	30 mph	34.9 mph	-- in	0 in	0.07 in	0	22.62 w/m²
4:18 PM	75.2 °F	72.7 °F	92%	NNE	19.9 mph	22.4 mph	-- in	0 in	0.07 in	0	34.19 w/m²
4:23 PM	75.2 °F	72.7 °F	92%	North	23.9 mph	30 mph	-- in	0 in	0.07 in	0	18.8 w/m²
4:28 PM	75.2 °F	72.7 °F	92%	NNE	26.8 mph	34.9 mph	-- in	0 in	0.07 in	0	20.78 w/m²
4:33 PM	75.4 °F	72.9 °F	92%	NNE	23 mph	27.5 mph	-- in	0 in	0.07 in	0	29.69 w/m²
4:38 PM	75.4 °F	72.9 °F	92%	NNE	21.7 mph	24.8 mph	-- in	0 in	0.07 in	0	5.42 w/m²
4:43 PM	75.6 °F	73 °F	92%	North	17.7 mph	24.8 mph	-- in	0.14 in	0.09 in	0	15.88 w/m²
4:48 PM	75.7 °F	73.2 °F	92%	NNE	28.6 mph	32.4 mph	-- in	0.14 in	0.09 in	0	18.62 w/m²
4:53 PM	75.7 °F	73.2 °F	92%	NNE	24.6 mph	27.5 mph	-- in	0 in	0.09 in	0	16.46 w/m²
4:58 PM	75.7 °F	73 °F	91%	NNE	31.1 mph	37.4 mph	-- in	0 in	0.09 in	0	25.14 w/m²
5:03 PM	75.7 °F	73 °F	91%	NNE	26.8 mph	30 mph	-- in	0 in	0.09 in	0	28.79 w/m²
5:08 PM	75.7 °F	73 °F	91%	NNE	31.8 mph	37.4 mph	-- in	0 in	0.09 in	0	23.25 w/m²
5:14 PM	75.7 °F	73 °F	91%	NNE	33.1 mph	40 mph	-- in	0 in	0.09 in	0	18.8 w/m²
5:19 PM	75.7 °F	73 °F	91%	NNE	23.7 mph	30 mph	-- in	0 in	0.09 in	0	17.94 w/m²
5:24 PM	75.7 °F	73 °F	91%	ENE	37.1 mph	45 mph	-- in	0 in	0.09 in	0	17.67 w/m²
5:29 PM	75.7 °F	73 °F	91%	NNE	31.8 mph	37.4 mph	-- in	0 in	0.09 in	0	6.12 w/m²
5:34 PM	75.7 °F	73 °F	91%	NNE	21.5 mph	22.4 mph	-- in	0 in	0.09 in	0	16.1 w/m²
5:39 PM	75.7 °F	73 °F	91%	NNE	34.7 mph	47.4 mph	-- in	0 in	0.09 in	0	3.15 w/m²
5:44 PM	75.7 °F	73 °F	91%	NE	23.7 mph	30 mph	-- in	0 in	0.09 in	0	8.2 w/m²
5:47 PM	75.7 °F	73 °F	91%	NNE	35.6 mph	40 mph	-- in	0 in	0.09 in	0	6.98 w/m²
5:52 PM	75.7 °F	73 °F	91%	NE	34 mph	45 mph	-- in	0 in	0.09 in	0	9.67 w/m²
5:57 PM	75.9 °F	73.2 °F	91%	NE	30.2 mph	37.4 mph	-- in	0 in	0.09 in	0	3.54 w/m²
6:02 PM	75.9 °F	73.2 °F	91%	NE	38.5 mph	45 mph	-- in	0 in	0.09 in	0	3.43 w/m²
6:07 PM	76.1 °F	73.4 °F	91%	NNE	28.6 mph	32.4 mph	-- in	0 in	0.09 in	0	2.14 w/m²
6:12 PM	76.3 °F	73.6 °F	91%	NE	22.8 mph	27.5 mph	-- in	0 in	0.09 in	0	0.34 w/m²
6:17 PM	76.3 °F	73.6 °F	91%	NE	22.8 mph	32.4 mph	-- in	0 in	0.09 in	0	3.04 w/m²
6:22 PM	76.3 °F	73.6 °F	91%	NE	26.2 mph	34.9 mph	-- in	0 in	0.09 in	0	0.51 w/m²
6:27 PM	76.5 °F	73.4 °F	90%	ENE	27.1 mph	34.9 mph	-- in	0 in	0.09 in	0	0.51 w/m²
6:32 PM	76.5 °F	73.8 °F	91%	NE	33.3 mph	40 mph	-- in	0 in	0.09 in	0	1.35 w/m²
6:38 PM	76.5 °F	73.4 °F	90%	NE	30.9 mph	37.4 mph	-- in	0 in	0.09 in	0	1.8 w/m²
6:43 PM	76.3 °F	73.2 °F	90%	NE	30.2 mph	34.9 mph	-- in	0 in	0.09 in	0	1.74 w/m²
6:48 PM	76.1 °F	73 °F	90%	ENE	31.1 mph	34.9 mph	-- in	0 in	0.09 in	0	0 w/m²
6:53 PM	75.9 °F	72.9 °F	90%	NE	28.6 mph	37.4 mph	-- in	0 in	0.09 in	0	0 w/m²
6:58 PM	75.7 °F	72.7 °F	90%	NE	30.6 mph	37.4 mph	-- in	0 in	0.09 in	0	0 w/m²
7:03 PM	75.6 °F	72.5 °F	90%	NE	35.6 mph	42.5 mph	-- in	0 in	0.09 in	0	0 w/m²
7:08 PM	75.6 °F	72.5 °F	90%	ENE	35.6 mph	45 mph	-- in	0 in	0.09 in	0	0 w/m²
7:13 PM	75.7 °F	72.7 °F	90%	NE	20.1 mph	27.5 mph	-- in	0 in	0.09 in	0	0 w/m²
7:18 PM	75.7 °F	72.7 °F	90%	ENE	24.8 mph	27.5 mph	-- in	0 in	0.09 in	0	0 w/m²
7:23 PM	75.9 °F	72.9 °F	90%	ENE	26.8 mph	30 mph	-- in	0 in	0.09 in	0	0 w/m²

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
7:28 PM	76.1 °F	72.7 °F	89%	ENE	24.4 mph	27.5 mph	-- in	0 in	0.09 in	0	0 w/m²
7:33 PM	76.3 °F	72.9 °F	89%	ENE	19.2 mph	22.4 mph	-- in	0 in	0.09 in	0	0 w/m²
7:38 PM	76.5 °F	72.7 °F	88%	East	35.3 mph	40 mph	-- in	0 in	0.09 in	0	0 w/m²
7:43 PM	76.6 °F	72.9 °F	88%	East	38.9 mph	47.4 mph	-- in	0 in	0.09 in	0	0 w/m²
7:48 PM	76.8 °F	73 °F	88%	ESE	35.3 mph	42.5 mph	-- in	0 in	0.09 in	0	0 w/m²
7:54 PM	76.8 °F	73 °F	88%	ENE	29.3 mph	40 mph	-- in	0 in	0.09 in	0	0 w/m²
7:59 PM	77 °F	73.2 °F	88%	East	25.3 mph	32.4 mph	-- in	0 in	0.09 in	0	0 w/m²
8:04 PM	77 °F	72.9 °F	87%	East	39.4 mph	47.4 mph	-- in	0 in	0.09 in	0	0 w/m²
8:09 PM	77 °F	72.9 °F	87%	East	34.9 mph	42.5 mph	-- in	0 in	0.09 in	0	0 w/m²
8:14 PM	77 °F	72.9 °F	87%	East	43.4 mph	52.6 mph	-- in	0 in	0.09 in	0	0 w/m²
8:19 PM	77 °F	72.9 °F	87%	East	30.2 mph	45 mph	-- in	0 in	0.09 in	0	0 w/m²
8:24 PM	77.2 °F	73 °F	87%	East	43.2 mph	47.4 mph	-- in	0 in	0.09 in	0	0 w/m²
8:29 PM	77.2 °F	72.7 °F	86%	ESE	38.9 mph	45 mph	-- in	0 in	0.09 in	0	0 w/m²
8:34 PM	77.2 °F	72.7 °F	86%	East	45.6 mph	52.6 mph	-- in	0 in	0.09 in	0	0 w/m²
8:39 PM	77.2 °F	72.7 °F	86%	ESE	41.8 mph	52.6 mph	-- in	0 in	0.09 in	0	0 w/m²
8:44 PM	77 °F	72.5 °F	86%	East	45.6 mph	52.6 mph	-- in	0 in	0.09 in	0	0 w/m²
8:49 PM	77 °F	72.5 °F	86%	ESE	38.5 mph	45 mph	-- in	0 in	0.09 in	0	0 w/m²
8:54 PM	77 °F	72.5 °F	86%	ESE	49.7 mph	60 mph	-- in	0 in	0.09 in	0	0 w/m²
9:00 PM	77.2 °F	72.7 °F	86%	ESE	30.6 mph	40 mph	-- in	0 in	0.09 in	0	0 w/m²
9:05 PM	77.2 °F	72.7 °F	86%	WSW	49.4 mph	57.5 mph	-- in	0 in	0.09 in	0	0 w/m²

PICKETT
SURVEYING • ENGINEERING

Forensic Analysis of Country Oaks to Dundee 69kV Structures DCO-72 and DCO-76 to DCO-80

Hurricane Irma

November 30, 2017

DUKE ENERGY®

Table of Contents:

1.0 Executive Summary 2
2.0 Maintenance Data 6
3.0 Weather Data 6
4.0 Conclusion 10
5.0 Restoration 11
Appendix A: Weather Data 12

PICKETT
SURVEYING • ENGINEERING

1.0 Executive Summary

Structures: Country Oaks to Dundee 69kV transmission line structures DCO-72 and DCO-76 to DCO-80
Location – Central Polk County, FL (27°58'5.02"N; 81°34'42.13"W to 27°57'44.15"N; 81°34'41.94"W)
Date of Outage – 09-10-17
Time of Outage – 21:41 EST
Inspection Date – 09-17-17

At 9:41 pm, on Sunday, September 10th, an outage was reported on Country Oaks to Dundee 69kV transmission line. The outage was a result of wood pole failures.

At the time of the outage, 75 mph wind velocities were reported in the vicinity of structures DCO-72 and DCO-76 to DCO-80 by the National Oceanic and Atmospheric Administration (NOAA). The outage occurred approximately 80 minutes in advance of the hurricane being at a location nearest to the poles. Hurricane Irma's eye passed approximately 26.8 miles southwest of DCO-72 and DCO-76 to DCO-80 at 11:00 pm EST Sunday, September 10, 2017.

The wood poles failures most likely occurred due to high wind velocities as a result of Hurricane Irma's landfall. Wood rot additionally aided in the following pole failures: DCO-72, DCO-78 and DCO-79; the same poles were replaced in 2012 per maintenance reports. Poles DCO-76, DCO-77 and DCO-80 failed as a result of adjacent poles collapsing.

Also, the open landscape increases wind exposure which in turn increases the risk of pole failure due to wind damage.



Distance from Hurricane Irma's path to structure DCO-77.

PICKETT
SURVEYING • ENGINEERING



Steel poles DCO-80 to DCO-76 replacement in progress. Looking north.

PICKETT
SURVEYING • ENGINEERING



Replaced pole DCO-72. Looking south.



Country Oaks to Dundee 69kV transmission line wind exposure.

PICKETT
SURVEYING • ENGINEERING



Country Oaks to Dundee 69kV transmission line wind exposure.

2.0 Maintenance Data

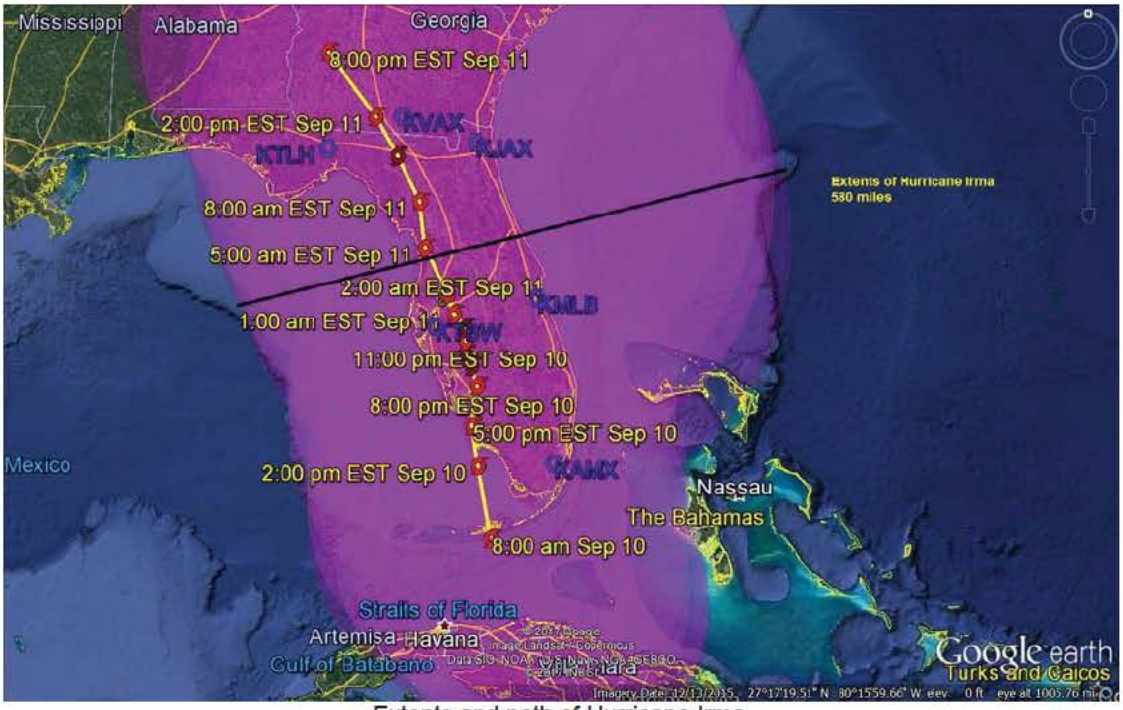
According to maintenance records, poles DCO-72, DCO-78 and DCO-79 were replaced with wood poles on 10/13/2012 per MX orders: 2012-3004168825, 2012-3004168826 and 2012-3004168827, respectively. Pole DCO-77 was replaced with a wood pole on 3/1/2017 per MX order 2017-3006322298.

3.0 Weather Data

Hurricane Irma made continental landfall in Naples, Florida at 4:00 pm EST on Sunday, September 10, 2017 as a category 2 hurricane and weakened to a tropical depression over the Georgia - Alabama border 12 hours later.

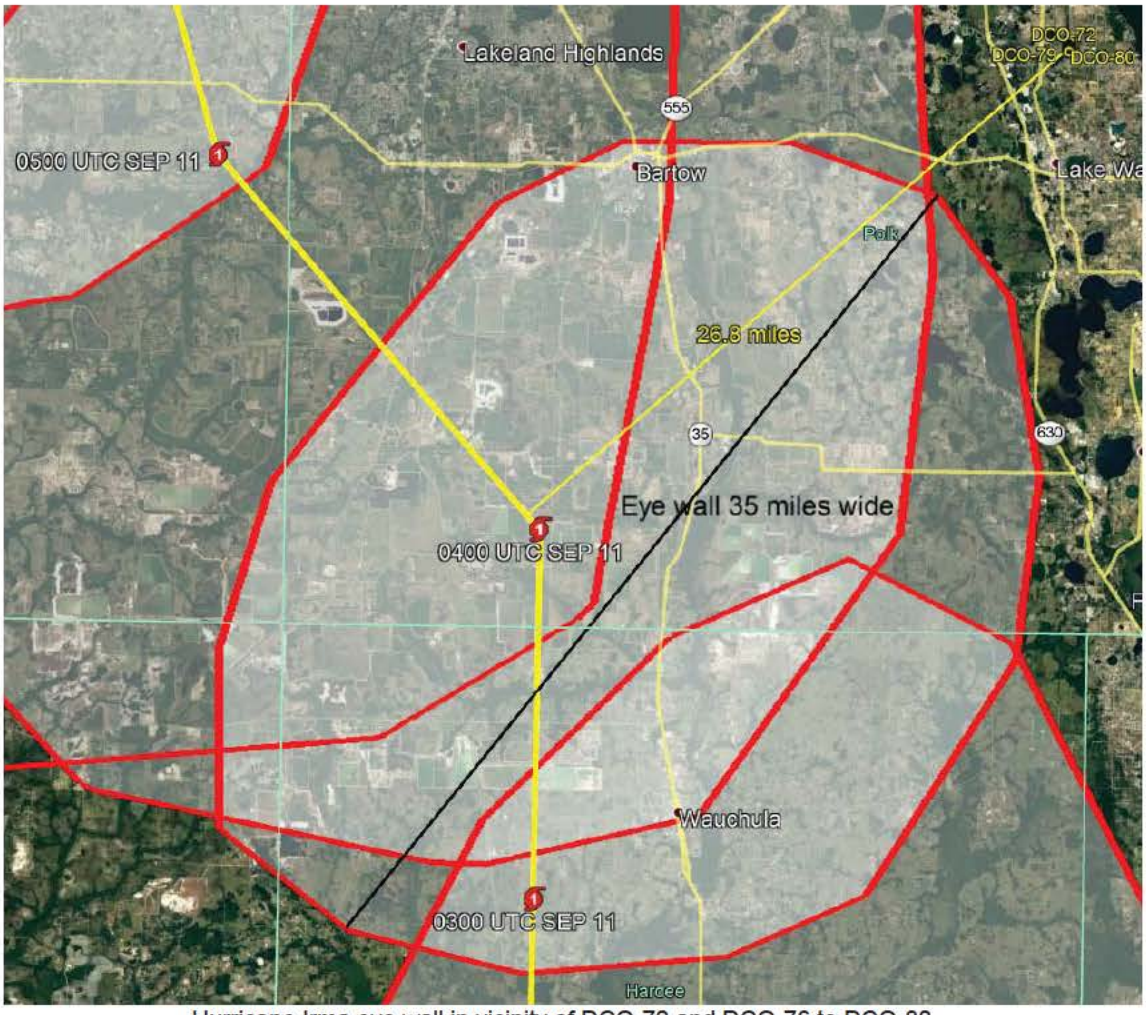
At the time of the Country Oaks to Dundee 69kV transmission line outage, approximately at 9:41 pm EST, September 10, 2017, the hurricane was designated as a category 1 hurricane and the eye of the hurricane was located approximately 42 miles southwest of pole DCO-77. 75 mph wind velocity was reported near poles DCO-72 and DCO-76 to DCO-80 at the time of the outage.

The hurricane was nearest to wood poles DCO-72 and DCO-76 to DCO-80 at approximately 11:00 pm EST on Sunday, September 10, 2017 as a category 1 hurricane with recorded 100 mph wind velocities. The hurricane eye at that time was 35 miles wide and located 26.8 miles southwest of DCO-77.



Extents and path of Hurricane Irma.

PICKETT
SURVEYING • ENGINEERING

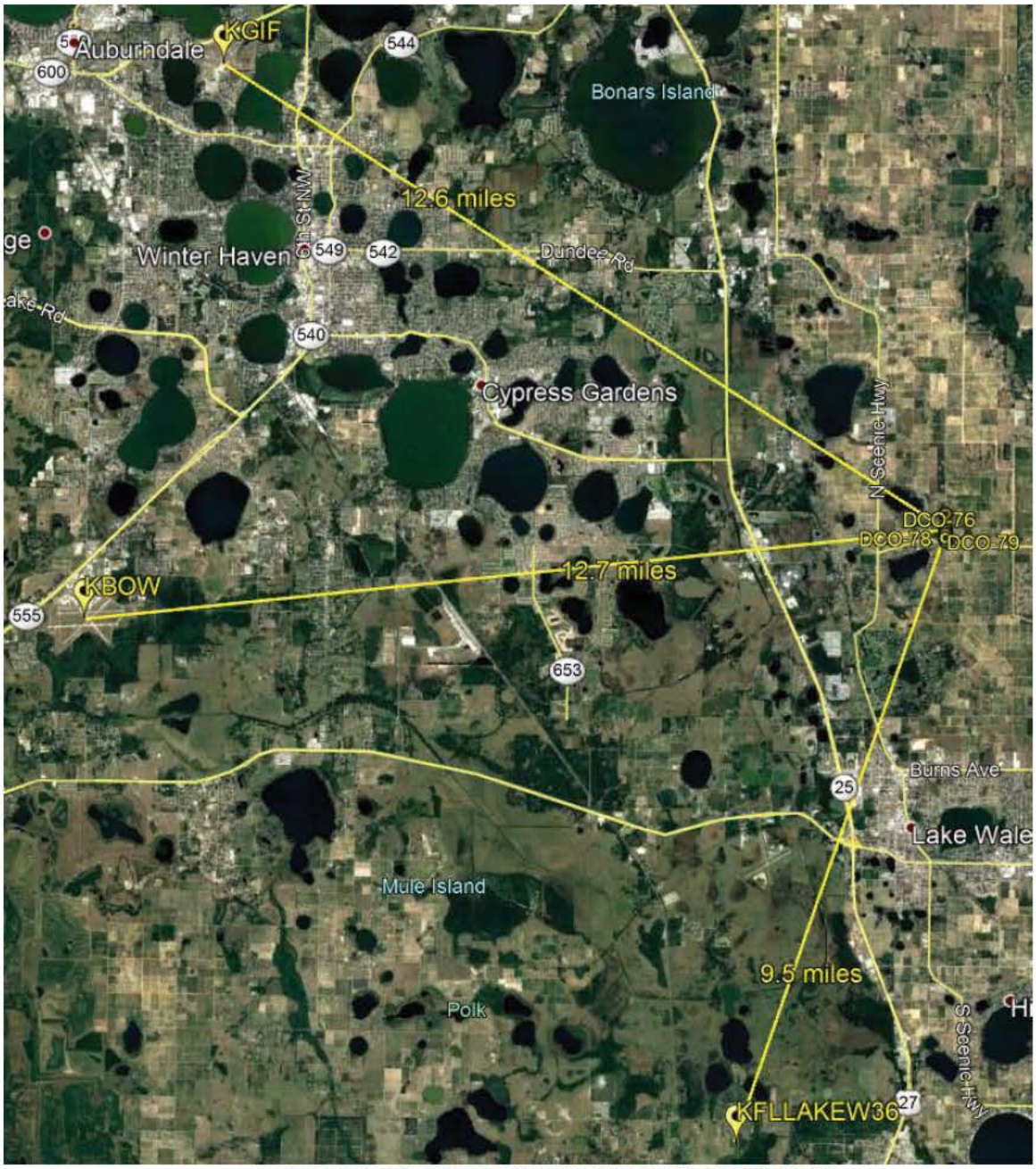


Hurricane Irma eye wall in vicinity of DCO-72 and DCO-76 to DCO-80.

Three local weather stations: KBOW, KGIF and KFLLAKEW36 show wind velocities in range of 24 to 44 mph and wind gusts in range of 47 to 62 mph. According to the NOAA site specific maps, the wind speeds have reached 75 mph at time of the outage.

Station Name & Location	Time	Temp.	Wind Dir	Wind Vel.	Wind Gust.	Distance from DCO-77
KBOW, Bartow Municipal Airport	9:35:00 PM	75.2 °F	NE	42.6 mph	62.1 mph	12.7 mi
KFLLAKEW36, Lake Wales, FL	10:11:00 PM	75.9 °F	E	24 mph	47 mph	9.5 mi
KGIF, Winter Haven, FL	9:36:00 PM	77.0 °F	ENE	43.7 mph	59.8 mph	12.6 mi

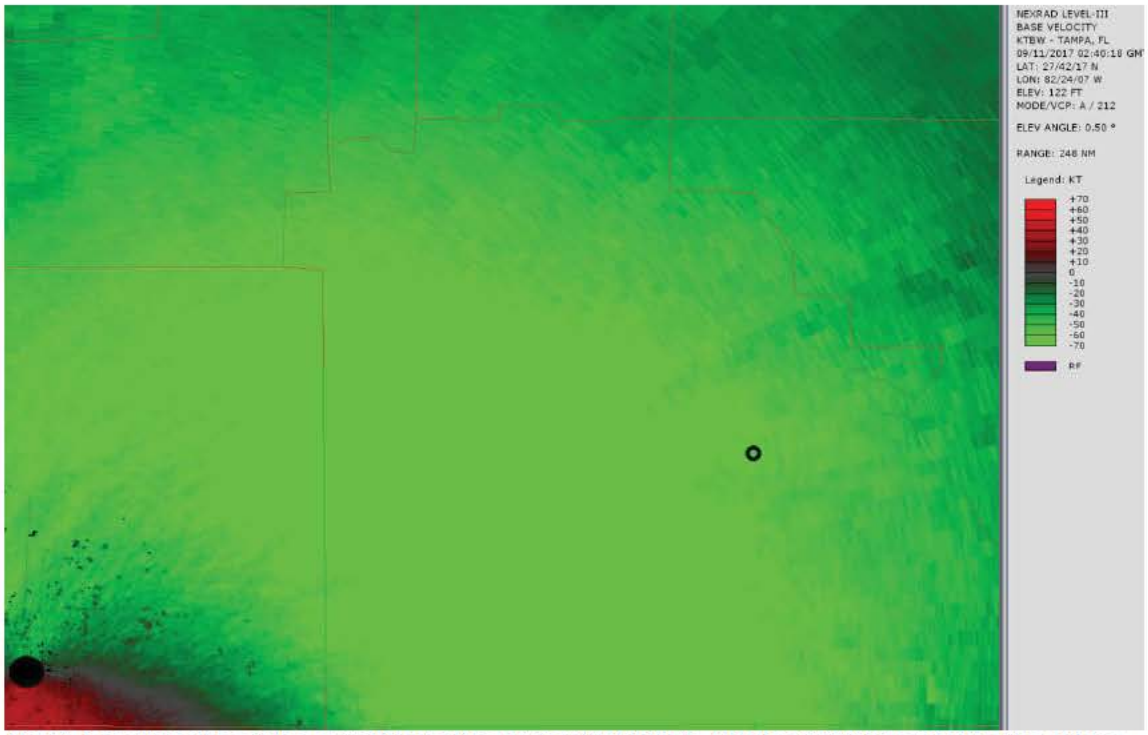
PICKETT
SURVEYING • ENGINEERING



Weather stations and distances from AL-14-1 to AL-14-13.

The following map shows NOAA wind velocities at the time of failure. The light green shading indicates 65 knot wind speed which equates to 75 mph.

PICKETT
SURVEYING • ENGINEERING



NOAA base velocities at the approximate time of Country Oaks to Dundee 69kV transmission line outage.

NOAA cyclone activity at the time of the outage was also reviewed and found no evidence of any cyclones near the Country Oaks to Dundee 69kV transmission line.

4.0 Conclusion

The wood poles failures most likely occurred due to high wind velocities as a result of Hurricane Irma's landfall. The wood poles snapped at various locations. Wood rot additionally aided in the pole failures. Because of construction in progress not all the poles could be safely inspected. However, an assessment of the structures was provided by the contract inspector on 9/19/17.

According to Darrell Williamson, Contract Inspector, Utility Oversight Services, Inc., poles DCO-72, DCO-78 and DCO-79 contained wood rot at the base. Poles DCO-76, DCO-77 and DCO-80 failed as a result of adjacent poles collapsing.

Poles DCO-72, DCO-78 and DCO-79 containing wood rot were poles replaced on 10/13/2012 per MX orders: 2012-3004168825, 2012-3004168826 and 2012-3004168827 respectively.

The failed portion of the transmission line is located in an open landscape without tall vegetation or manmade cover. The open landscape increases wind exposure which in turn increases the risk of pole failure due to wind damage.

5.0 Restoration

During the field visit, all new poles were set and wire installation was in progress. All structures were replaced with 95' LD-6 steel poles except for DCO-78 which was replaced with an 85' LD-6 steel pole.

Appendix A: Weather Data

KBOW Weather data for September 10 2017												
Time (EDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:15 AM	80.6 °F	85.4 °F	73.4 °F	79%	29.82 in	10.0 mi	ENE	17.3 mph	31.1 mph	N/A		Overcast
12:35 AM	80.6 °F	85.4 °F	73.4 °F	79%	29.81 in	10.0 mi	ENE	16.1 mph	24.2 mph	N/A		Overcast
12:55 AM	78.8 °F	-	73.4 °F	83%	29.80 in	10.0 mi	East	13.8 mph	24.2 mph	N/A		Overcast
1:15 AM	78.8 °F	-	75.2 °F	89%	29.80 in	10.0 mi	ENE	15.0 mph	21.9 mph	N/A		Overcast
1:35 AM	78.8 °F	-	75.2 °F	89%	29.80 in	10.0 mi	East	13.8 mph	23.0 mph	N/A		Overcast
1:55 AM	78.8 °F	-	77.0 °F	94%	29.80 in	10.0 mi	East	13.8 mph	26.5 mph	N/A		Overcast
2:15 AM	77.0 °F	-	77.0 °F	100%	29.80 in	4.0 mi	East	20.7 mph	26.5 mph	N/A	Rain	Light Rain
2:35 AM	75.2 °F	-	-	N/A%	29.79 in	4.0 mi	ENE	17.3 mph	24.2 mph	N/A	Rain	Light Rain
2:55 AM	75.2 °F	-	-	N/A%	29.78 in	5.0 mi	ENE	15.0 mph	-	N/A	Rain	Light Rain
3:15 AM	75.2 °F	-	-	N/A%	29.77 in	7.0 mi	NE	13.8 mph	-	N/A	Rain	Light Rain
3:35 AM	75.2 °F	-	-	N/A%	29.75 in	8.0 mi	ENE	12.7 mph	20.7 mph	N/A	Rain	Light Rain
3:55 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	ENE	12.7 mph	-	N/A		Mostly Cloudy
4:15 AM	75.2 °F	-	-	N/A%	29.76 in	10.0 mi	ENE	12.7 mph	-	N/A		Mostly Cloudy
4:35 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	ENE	13.8 mph	-	N/A	Rain	Light Rain
4:55 AM	75.2 °F	-	75.2 °F	100%	29.75 in	10.0 mi	ENE	12.7 mph	18.4 mph	N/A		Overcast
5:15 AM	75.2 °F	-	-	N/A%	29.75 in	10.0 mi	NE	9.2 mph	15.0 mph	N/A		Light Drizzle
5:35 AM	75.2 °F	-	-	N/A%	29.76 in	9.0 mi	ENE	10.4 mph	21.9 mph	N/A	Rain	Light Rain
5:55 AM	75.2 °F	-	-	N/A%	29.76 in	5.0 mi	ENE	13.8 mph	25.3 mph	N/A	Rain	Light Rain
6:15 AM	73.4 °F	-	-	N/A%	29.75 in	7.0 mi	ENE	15.0 mph	21.9 mph	N/A	Rain	Light Rain
6:35 AM	73.4 °F	-	-	N/A%	29.74 in	10.0 mi	NE	11.5 mph	18.4 mph	N/A		Light Drizzle
6:55 AM	75.2 °F	-	-	N/A%	29.73 in	10.0 mi	NE	12.7 mph	18.4 mph	N/A		Mostly Cloudy
7:15 AM	73.4 °F	-	-	N/A%	29.74 in	4.0 mi	NNE	10.4 mph	18.4 mph	N/A	Rain	Rain
5:35 PM	73.4 °F	-	-	N/A%	29.42 in	0.8 mi	NNE	25.3 mph	41.4 mph	N/A	Rain	Heavy Rain
5:55 PM	73.4 °F	-	-	N/A%	29.39 in	0.8 mi	NE	31.1 mph	49.5 mph	N/A	Rain	Heavy Rain
6:15 PM	73.4 °F	-	-	N/A%	29.36 in	-	NNE	27.6 mph	46.0 mph	N/A	Rain	Heavy Rain
6:35 PM	71.6 °F	-	-	N/A%	29.32 in	0.2 mi	NE	38.0 mph	49.5 mph	N/A	Rain	Heavy Rain
6:55 PM	71.6 °F	-	-	N/A%	29.32 in	0.2 mi	NNE	26.5 mph	47.2 mph	N/A	Rain	Heavy Rain
7:15 PM	73.4 °F	-	-	N/A%	29.27 in	0.2 mi	NE	27.6 mph	47.2 mph	N/A	Rain	Heavy Rain
7:35 PM	73.4 °F	-	-	N/A%	29.23 in	0.2 mi	NE	35.7 mph	46.0 mph	N/A	Rain	Heavy Rain
7:55 PM	73.4 °F	-	-	N/A%	29.18 in	0.5 mi	NE	32.2 mph	48.3 mph	N/A	Rain	Heavy Rain
8:15 PM	75.2 °F	-	-	N/A%	29.15 in	0.2 mi	NE	35.7 mph	55.2 mph	N/A	Rain	Heavy Rain
8:35 PM	75.2 °F	-	-	N/A%	29.11 in	1.2 mi	ENE	38.0 mph	44.9 mph	N/A	Rain	Heavy Rain
8:55 PM	75.2 °F	-	-	N/A%	29.07 in	2.0 mi	NE	33.4 mph	50.6 mph	N/A	Rain	Rain
9:15 PM	75.2 °F	-	-	N/A%	29.03 in	0.8 mi	NE	38.0 mph	49.5 mph	N/A	Rain	Heavy Rain
9:35 PM	75.2 °F	-	-	N/A%	28.97 in	0.8 mi	NE	42.6 mph	62.1 mph	N/A	Rain	Heavy Rain
9:55 PM	75.2 °F	-	-	N/A%	28.94 in	1.0 mi	ENE	36.8 mph	56.4 mph	N/A	Rain	Heavy Rain
10:15 PM	75.2 °F	-	-	N/A%	28.89 in	-	ENE	41.4 mph	57.5 mph	N/A	Rain	Heavy Rain
10:35 PM	75.2 °F	-	-	N/A%	28.84 in	0.5 mi	ENE	38.0 mph	61.0 mph	N/A	Rain	Heavy Rain
10:55 PM	75.2 °F	-	-	N/A%	28.79 in	0.5 mi	ENE	38.0 mph	64.4 mph	N/A	Rain	Heavy Rain
11:15 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown
11:35 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown
11:55 PM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown

KFLLAKEW36 Weather data for September 10 2017									
Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
12:10 AM	80.2 °F	75 °F	86%	ENE	11 mph	20 mph	29.84 in	0 in	0 in
12:26 AM	79.9 °F	75 °F	87%	ESE	10 mph	21 mph	29.83 in	0 in	0 in
12:41 AM	79.2 °F	74 °F	85%	ENE	9 mph	19 mph	29.83 in	0 in	0 in
1:01 AM	78.5 °F	74 °F	86%	East	7 mph	18 mph	29.82 in	0 in	0 in
1:20 AM	76.2 °F	73 °F	92%	East	6 mph	13 mph	29.82 in	0.01 in	0.01 in
1:40 AM	76.7 °F	75 °F	95%	NE	8 mph	17 mph	29.82 in	0.03 in	0.03 in
2:00 AM	76.6 °F	75 °F	95%	ESE	6 mph	15 mph	29.82 in	0.07 in	0.07 in
2:21 AM	76.2 °F	74 °F	95%	East	7 mph	14 mph	29.82 in	0.09 in	0.1 in
2:40 AM	75.8 °F	74 °F	96%	East	6 mph	11 mph	29.81 in	0.12 in	0.15 in
2:55 AM	75.6 °F	74 °F	96%	ENE	5 mph	10 mph	29.8 in	0.1 in	0.16 in
3:15 AM	75.5 °F	74 °F	96%	ENE	5 mph	13 mph	29.78 in	0.07 in	0.16 in
3:35 AM	75.7 °F	74 °F	96%	ENE	7 mph	13 mph	29.78 in	0.02 in	0.16 in
3:50 AM	75.7 °F	74 °F	96%	ENE	5 mph	12 mph	29.77 in	0 in	0.16 in
4:10 AM	75.8 °F	74 °F	96%	ESE	6 mph	15 mph	29.78 in	0 in	0.16 in
4:25 AM	75.7 °F	74 °F	96%	ENE	4 mph	10 mph	29.77 in	0 in	0.16 in
4:45 AM	75.5 °F	74 °F	96%	ENE	5 mph	10 mph	29.77 in	0.02 in	0.18 in
5:00 AM	75.4 °F	74 °F	96%	NNE	4 mph	11 mph	29.77 in	0.03 in	0.19 in
5:20 AM	75.5 °F	74 °F	96%	ENE	7 mph	17 mph	29.78 in	0.06 in	0.22 in
5:40 AM	75.3 °F	74 °F	96%	ENE	8 mph	16 mph	29.77 in	0.13 in	0.31 in
5:55 AM	75.1 °F	73 °F	96%	ENE	9 mph	17 mph	29.77 in	0.19 in	0.38 in
6:10 AM	74.7 °F	73 °F	96%	East	6 mph	14 mph	29.77 in	0.23 in	0.42 in
6:30 AM	74.8 °F	73 °F	96%	ENE	5 mph	12 mph	29.76 in	0.2 in	0.46 in
6:50 AM	74.7 °F	73 °F	97%	East	6 mph	12 mph	29.75 in	0.13 in	0.48 in
7:10 AM	74.9 °F	73 °F	97%	NNE	10 mph	20 mph	29.74 in	0.28 in	0.7 in
7:30 AM	74.9 °F	73 °F	97%	East	7 mph	14 mph	29.74 in	0.37 in	0.83 in
7:50 AM	73.7 °F	72 °F	97%	NE	6 mph	13 mph	29.74 in	0.86 in	1.34 in
8:06 AM	75.2 °F	74 °F	97%	NNE	6 mph	13 mph	29.74 in	0.71 in	1.38 in
8:26 AM	76 °F	75 °F	97%	ENE	7 mph	17 mph	29.75 in	0.62 in	1.44 in
8:47 AM	76.5 °F	75 °F	97%	ENE	8 mph	19 mph	29.75 in	0.22 in	1.52 in
9:05 AM	76.5 °F	75 °F	97%	ENE	8 mph	14 mph	29.75 in	0.32 in	1.7 in
9:25 AM	76.2 °F	75 °F	97%	ENE	10 mph	18 mph	29.75 in	0.45 in	1.89 in
9:45 AM	75.7 °F	74 °F	97%	ENE	11 mph	19 mph	29.76 in	0.58 in	2.11 in
10:00 AM	75.6 °F	74 °F	97%	NE	8 mph	18 mph	29.76 in	0.68 in	2.3 in
10:16 AM	75.2 °F	74 °F	97%	ENE	9 mph	17 mph	29.77 in	0.68 in	2.52 in
10:35 AM	74.3 °F	73 °F	96%	ENE	9 mph	18 mph	29.75 in	0.64 in	2.68 in
10:50 AM	73.2 °F	71 °F	96%	NE	11 mph	21 mph	29.79 in	0.67 in	2.84 in
11:05 AM	72.6 °F	71 °F	97%	ENE	7 mph	14 mph	29.75 in	0.54 in	2.94 in
11:25 AM	71.2 °F	70 °F	96%	ENE	9 mph	17 mph	29.75 in	0.37 in	3.01 in
11:40 AM	72.5 °F	71 °F	97%	NE	9 mph	20 mph	29.74 in	0.36 in	3.05 in
12:05 PM	73.5 °F	72 °F	96%	NE	11 mph	21 mph	29.72 in	0.18 in	3.12 in
12:20 PM	73.8 °F	72 °F	97%	NE	11 mph	23 mph	29.71 in	0.14 in	3.13 in
12:40 PM	73.5 °F	72 °F	96%	East	12 mph	23 mph	29.7 in	0.16 in	3.21 in
1:00 PM	73.7 °F	72 °F	97%	NNE	11 mph	20 mph	29.68 in	0.2 in	3.31 in
1:15 PM	73.1 °F	71 °F	96%	NE	13 mph	24 mph	29.68 in	0.42 in	3.54 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
1:35 PM	73.4 °F	72 °F	97%	ENE	12 mph	21 mph	29.65 in	0.38 in	3.59 in
1:56 PM	74 °F	73 °F	97%	NNE	12 mph	23 mph	29.63 in	0.36 in	3.63 in
2:11 PM	73.9 °F	72 °F	96%	ENE	14 mph	26 mph	29.61 in	0.18 in	3.71 in
2:31 PM	74.2 °F	72 °F	96%	NE	13 mph	30 mph	29.59 in	0.17 in	3.76 in
2:51 PM	74.1 °F	72 °F	96%	North	13 mph	23 mph	29.57 in	0.19 in	3.81 in
3:05 PM	73.9 °F	72 °F	96%	NNE	14 mph	28 mph	29.55 in	0.21 in	3.87 in
3:21 PM	73.9 °F	72 °F	96%	NE	13 mph	26 mph	29.53 in	0.22 in	3.97 in
3:40 PM	73.7 °F	72 °F	97%	ENE	14 mph	23 mph	29.52 in	0.42 in	4.2 in
4:00 PM	73.6 °F	72 °F	97%	NE	13 mph	26 mph	29.52 in	0.63 in	4.46 in
4:21 PM	73.6 °F	72 °F	97%	NNE	14 mph	28 mph	29.49 in	0.68 in	4.66 in
4:36 PM	73.4 °F	72 °F	97%	ENE	15 mph	31 mph	29.46 in	0.6 in	4.76 in
4:56 PM	73.7 °F	72 °F	97%	ENE	14 mph	41 mph	29.45 in	0.53 in	4.92 in
5:18 PM	74 °F	73 °F	97%	ENE	14 mph	31 mph	29.43 in	0.43 in	5.06 in
5:35 PM	74.3 °F	73 °F	97%	East	17 mph	38 mph	29.4 in	0.53 in	5.29 in
5:55 PM	74.2 °F	73 °F	97%	NNE	18 mph	34 mph	29.36 in	0.72 in	5.64 in
6:10 PM	74.3 °F	73 °F	97%	North	17 mph	29 mph	29.34 in	0.89 in	5.88 in
6:30 PM	73.9 °F	72 °F	97%	NE	20 mph	40 mph	29.31 in	1.11 in	6.35 in
6:51 PM	73.9 °F	72 °F	97%	NNE	17 mph	39 mph	29.28 in	1.3 in	6.87 in
7:10 PM	74.1 °F	73 °F	97%	NE	20 mph	37 mph	29.25 in	1.25 in	7.14 in
7:28 PM	75.1 °F	74 °F	98%	ENE	17 mph	34 mph	29.23 in	1.06 in	7.28 in
7:45 PM	75 °F	74 °F	98%	ENE	20 mph	37 mph	29.18 in	0.75 in	7.52 in
8:05 PM	75.6 °F	74 °F	98%	NE	19 mph	43 mph	29.13 in	0.68 in	7.79 in
8:26 PM	75.6 °F	74 °F	97%	NE	20 mph	37 mph	29.1 in	0.65 in	7.96 in
8:50 PM	75.9 °F	74 °F	97%	ENE	22 mph	46 mph	29.05 in	0.45 in	8.07 in
9:05 PM	75.9 °F	74 °F	97%	NNE	22 mph	40 mph	29 in	0.48 in	8.28 in
10:11 PM	75.9 °F	74 °F	97%	East	24 mph	47 mph	28.88 in	0.95 in	9.29 in
10:35 PM	75.8 °F	74 °F	97%	East	22 mph	47 mph	28.83 in	1.17 in	9.82 in
10:56 PM	75.9 °F	74 °F	97%	SSE	24 mph	53 mph	28.78 in	1.2 in	10.24 in
11:40 PM	76 °F	75 °F	97%	East	25 mph	47 mph	28.7 in	1.27 in	10.87 in
11:55 PM	75.7 °F	75 °F	98%	ESE	28 mph	49 mph	28.69 in	1.37 in	11.62 in

KFLWINTE771 Weather data for September 10 2017									
Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
12:02 AM	80.8 °F	79.5 °F	96%	ENE	16.1 mph	19.9 mph	29.78 in	0 in	0 in
12:07 AM	80.8 °F	79.5 °F	96%	NE	13 mph	19.9 mph	29.78 in	0 in	0 in
12:12 AM	80.8 °F	79.5 °F	96%	ENE	13 mph	19.9 mph	29.76 in	0 in	0 in
12:17 AM	80.8 °F	79.5 °F	96%	NE	16.1 mph	19.9 mph	29.77 in	0 in	0 in
12:22 AM	80.8 °F	79.5 °F	96%	East	11.9 mph	18.1 mph	29.76 in	0 in	0 in
12:27 AM	80.8 °F	79.5 °F	96%	East	15 mph	18.1 mph	29.77 in	0 in	0 in
12:32 AM	80.8 °F	79.5 °F	96%	NE	8.1 mph	18.1 mph	29.77 in	0 in	0 in
12:37 AM	80.8 °F	79.5 °F	96%	NE	16.8 mph	19.9 mph	29.77 in	0 in	0 in
12:42 AM	80.6 °F	79 °F	95%	East	18.6 mph	19.9 mph	29.76 in	0 in	0 in
12:47 AM	80.6 °F	79 °F	95%	SSE	15.4 mph	19.9 mph	29.76 in	0 in	0 in
12:52 AM	80.4 °F	78.4 °F	94%	ENE	11.2 mph	19.9 mph	29.76 in	0 in	0 in
12:57 AM	80.4 °F	78.4 °F	94%	ENE	9.4 mph	19.9 mph	29.76 in	0 in	0 in
1:02 AM	80.4 °F	78.8 °F	95%	NE	15 mph	19.9 mph	29.75 in	0 in	0 in
1:07 AM	80.2 °F	79 °F	96%	ENE	13.6 mph	19.9 mph	29.76 in	0 in	0 in
1:12 AM	80.2 °F	79 °F	96%	ENE	16.8 mph	19.9 mph	29.76 in	0 in	0 in
1:17 AM	80.2 °F	79.5 °F	97%	NE	9.8 mph	19.9 mph	29.76 in	0 in	0 in
1:22 AM	80.1 °F	79.5 °F	98%	East	8.1 mph	19.9 mph	29.75 in	0 in	0 in
1:27 AM	80.1 °F	79.5 °F	98%	ENE	10.5 mph	19.9 mph	29.76 in	0 in	0 in
1:32 AM	79.9 °F	79.5 °F	99%	ENE	16.1 mph	19.9 mph	29.76 in	0 in	0 in
1:37 AM	79.9 °F	79.5 °F	99%	NE	11.9 mph	19.9 mph	29.75 in	0 in	0 in
1:42 AM	79.9 °F	79.5 °F	99%	NE	8.7 mph	18.1 mph	29.76 in	0 in	0 in
1:47 AM	79.9 °F	79.5 °F	99%	NE	13 mph	18.1 mph	29.75 in	0 in	0 in
1:52 AM	79.7 °F	79.3 °F	99%	NNE	18.1 mph	18.1 mph	29.75 in	0 in	0 in
1:57 AM	79.7 °F	79.3 °F	99%	ENE	9.8 mph	18.1 mph	29.76 in	0.06 in	0.01 in
2:02 AM	79.5 °F	79.2 °F	99%	NE	8.7 mph	18.1 mph	29.76 in	0.12 in	0.02 in
2:07 AM	79.5 °F	79.2 °F	99%	ENE	6.9 mph	18.1 mph	29.75 in	0.12 in	0.03 in
2:12 AM	79.5 °F	79.2 °F	99%	East	14.3 mph	18.1 mph	29.76 in	0.12 in	0.04 in
2:17 AM	79.3 °F	79 °F	99%	ENE	13.6 mph	18.1 mph	29.75 in	0.12 in	0.05 in
2:22 AM	79.3 °F	79 °F	99%	NE	10.5 mph	18.1 mph	29.75 in	0.06 in	0.05 in
2:27 AM	79.2 °F	78.8 °F	99%	NE	7.4 mph	18.1 mph	29.75 in	0.12 in	0.06 in
2:32 AM	79 °F	78.6 °F	99%	NE	8.7 mph	18.1 mph	29.75 in	0.12 in	0.07 in
2:37 AM	78.8 °F	78.4 °F	99%	NE	6.3 mph	18.1 mph	29.75 in	0.12 in	0.08 in
2:42 AM	78.8 °F	78.4 °F	99%	NE	6.9 mph	18.1 mph	29.75 in	0.12 in	0.09 in
2:47 AM	78.8 °F	78.4 °F	99%	NE	5.6 mph	18.1 mph	29.74 in	0.12 in	0.1 in
2:52 AM	78.8 °F	78.4 °F	99%	ENE	5.6 mph	18.1 mph	29.74 in	0.12 in	0.11 in
2:56 AM	78.6 °F	78.3 °F	99%	NNE	6.9 mph	18.1 mph	29.73 in	0.12 in	0.11 in
3:01 AM	78.6 °F	78.3 °F	99%	ENE	11.9 mph	18.1 mph	29.73 in	0.06 in	0.12 in
3:06 AM	78.4 °F	78.1 °F	99%	NE	11.2 mph	18.1 mph	29.73 in	0.12 in	0.13 in
3:11 AM	78.4 °F	78.1 °F	99%	ENE	8.1 mph	18.1 mph	29.72 in	0.06 in	0.13 in
3:16 AM	78.3 °F	77.9 °F	99%	NNE	4.3 mph	18.1 mph	29.71 in	0 in	0.13 in
3:21 AM	78.3 °F	77.9 °F	99%	ENE	6.3 mph	15 mph	29.71 in	0.06 in	0.14 in
3:26 AM	78.3 °F	77.9 °F	99%	ENE	7.4 mph	15 mph	29.71 in	0.06 in	0.14 in
3:31 AM	78.3 °F	77.9 °F	99%	NE	8.7 mph	15.4 mph	29.71 in	0 in	0.14 in
3:36 AM	78.3 °F	77.9 °F	99%	ENE	8.7 mph	15.4 mph	29.71 in	0 in	0.14 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
3:41 AM	78.3 °F	77.9 °F	99%	ENE	10.5 mph	15.4 mph	29.7 in	0 in	0.14 in
3:46 AM	78.3 °F	77.9 °F	99%	East	8.1 mph	15.4 mph	29.71 in	0 in	0.14 in
3:51 AM	78.3 °F	77.9 °F	99%	ENE	9.8 mph	15.4 mph	29.7 in	0 in	0.14 in
3:56 AM	78.3 °F	77.9 °F	99%	ENE	11.2 mph	15.4 mph	29.71 in	0 in	0.14 in
4:01 AM	78.3 °F	77.9 °F	99%	East	8.7 mph	15.4 mph	29.71 in	0 in	0.14 in
4:06 AM	78.3 °F	77.9 °F	99%	ENE	8.1 mph	15.4 mph	29.72 in	0 in	0.14 in
4:11 AM	78.3 °F	77.9 °F	99%	East	9.8 mph	15.4 mph	29.72 in	0 in	0.14 in
4:16 AM	78.3 °F	77.9 °F	99%	NNE	11.2 mph	18.1 mph	29.71 in	0 in	0.14 in
4:21 AM	78.3 °F	77.9 °F	99%	NE	11.2 mph	18.1 mph	29.71 in	0 in	0.14 in
4:26 AM	78.3 °F	77.9 °F	99%	NE	10.5 mph	18.1 mph	29.7 in	0 in	0.14 in
4:31 AM	78.3 °F	77.9 °F	99%	NE	5.6 mph	18.1 mph	29.7 in	0 in	0.14 in
4:36 AM	78.3 °F	77.9 °F	99%	ENE	6.9 mph	18.1 mph	29.71 in	0 in	0.14 in
4:41 AM	78.1 °F	77.7 °F	99%	East	6.3 mph	18.1 mph	29.7 in	0 in	0.14 in
4:46 AM	78.3 °F	77.9 °F	99%	ENE	6.3 mph	18.1 mph	29.71 in	0 in	0.14 in
4:56 AM	78.1 °F	77.7 °F	99%	NE	7.4 mph	18.1 mph	29.7 in	0 in	0.14 in
5:01 AM	77.9 °F	77.5 °F	99%	NNE	3.8 mph	18.1 mph	29.71 in	0 in	0.14 in
5:06 AM	77.9 °F	77.5 °F	99%	NE	9.4 mph	18.1 mph	29.71 in	0 in	0.14 in
5:11 AM	77.9 °F	77.5 °F	99%	ENE	6.9 mph	13 mph	29.7 in	0 in	0.14 in
5:16 AM	77.9 °F	77.5 °F	99%	NE	10.5 mph	13 mph	29.71 in	0 in	0.14 in
5:21 AM	77.9 °F	77.5 °F	99%	ENE	9.4 mph	11.9 mph	29.71 in	0 in	0.14 in
5:26 AM	77.9 °F	77.5 °F	99%	NE	8.1 mph	13 mph	29.72 in	0.06 in	0.15 in
5:31 AM	77.9 °F	77.5 °F	99%	East	13 mph	13 mph	29.71 in	0.18 in	0.17 in
5:36 AM	77.9 °F	77.5 °F	99%	NE	10.5 mph	13 mph	29.71 in	0.18 in	0.18 in
5:41 AM	77.7 °F	77.4 °F	99%	NE	9.4 mph	13.6 mph	29.71 in	0.24 in	0.2 in
5:46 AM	77.7 °F	77.4 °F	99%	ENE	9.8 mph	15.4 mph	29.71 in	0.18 in	0.21 in
5:51 AM	77.7 °F	77.4 °F	99%	NE	11.9 mph	15.4 mph	29.71 in	0.3 in	0.24 in
5:56 AM	77.7 °F	77.4 °F	99%	NNE	12.5 mph	15.4 mph	29.71 in	0.3 in	0.26 in
6:01 AM	77.5 °F	77.2 °F	99%	NE	9.4 mph	15.4 mph	29.71 in	0.24 in	0.27 in
6:06 AM	77.5 °F	77.2 °F	99%	NE	7.4 mph	15.4 mph	29.71 in	0.12 in	0.28 in
6:11 AM	77.4 °F	77 °F	99%	NNE	11.2 mph	15.4 mph	29.7 in	0.06 in	0.28 in
6:16 AM	77.4 °F	77 °F	99%	North	10.5 mph	15.4 mph	29.7 in	0 in	0.28 in
6:21 AM	77.4 °F	77 °F	99%	ENE	5.6 mph	15.4 mph	29.7 in	0 in	0.28 in
6:26 AM	77.2 °F	76.8 °F	99%	NNE	6.3 mph	15.4 mph	29.7 in	0 in	0.28 in
6:31 AM	77.2 °F	76.8 °F	99%	NE	6.9 mph	15.4 mph	29.69 in	0.06 in	0.29 in
6:36 AM	77.2 °F	76.8 °F	99%	NE	6.9 mph	15.4 mph	29.7 in	0.06 in	0.29 in
6:41 AM	77.2 °F	76.8 °F	99%	NE	5.6 mph	14.3 mph	29.69 in	0 in	0.29 in
6:47 AM	77.2 °F	76.8 °F	99%	NNE	9.8 mph	14.3 mph	29.69 in	0 in	0.29 in
6:52 AM	77.2 °F	76.8 °F	99%	North	7.4 mph	14.3 mph	29.69 in	0.06 in	0.3 in
6:57 AM	77.2 °F	76.8 °F	99%	NNE	4.9 mph	14.3 mph	29.69 in	0.12 in	0.31 in
7:02 AM	77.2 °F	76.8 °F	99%	NE	6.9 mph	13 mph	29.69 in	0.12 in	0.32 in
7:07 AM	77.2 °F	76.8 °F	99%	NNE	6.9 mph	13 mph	29.69 in	0.06 in	0.32 in
7:12 AM	77.2 °F	76.8 °F	99%	North	7.4 mph	13 mph	29.69 in	0.06 in	0.33 in
7:17 AM	77 °F	76.6 °F	99%	NNE	8.7 mph	13 mph	29.69 in	0.12 in	0.34 in
7:22 AM	77 °F	76.6 °F	99%	NNE	7.4 mph	13 mph	29.69 in	0.24 in	0.37 in
7:27 AM	77 °F	76.6 °F	99%	NNE	3.8 mph	13 mph	29.68 in	0.54 in	0.43 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
7:32 AM	77 °F	76.6 °F	99%	NNE	7.4 mph	13 mph	29.67 in	0.48 in	0.44 in
7:37 AM	77 °F	76.6 °F	99%	NNE	11.9 mph	13 mph	29.67 in	0.18 in	0.46 in
7:42 AM	77 °F	76.6 °F	99%	NNE	8.1 mph	13 mph	29.67 in	0.18 in	0.47 in
7:47 AM	77 °F	76.6 °F	99%	NNE	8.1 mph	15 mph	29.67 in	0.12 in	0.48 in
7:52 AM	77 °F	76.6 °F	99%	North	9.4 mph	15 mph	29.67 in	0.18 in	0.5 in
7:57 AM	77 °F	76.6 °F	99%	NNE	11.9 mph	15 mph	29.67 in	0.18 in	0.51 in
8:02 AM	77.2 °F	76.8 °F	99%	NE	8.7 mph	16.8 mph	29.67 in	0.12 in	0.52 in
8:07 AM	77.2 °F	76.8 °F	99%	NE	7.4 mph	16.8 mph	29.68 in	0.12 in	0.53 in
8:12 AM	77.4 °F	77 °F	99%	SW	9.8 mph	16.8 mph	29.68 in	0.12 in	0.54 in
8:17 AM	77.4 °F	77 °F	99%	NNE	14.3 mph	16.8 mph	29.68 in	0.12 in	0.55 in
8:22 AM	77.5 °F	77.2 °F	99%	East	9.8 mph	16.8 mph	29.69 in	0.18 in	0.57 in
8:27 AM	77.5 °F	77.2 °F	99%	NNE	10.5 mph	16.8 mph	29.68 in	0.18 in	0.58 in
8:32 AM	77.7 °F	77.4 °F	99%	North	9.4 mph	16.8 mph	29.68 in	0.18 in	0.59 in
8:37 AM	77.9 °F	77.5 °F	99%	North	9.8 mph	16.8 mph	29.69 in	0.18 in	0.61 in
8:42 AM	77.9 °F	77.5 °F	99%	ENE	13.6 mph	16.8 mph	29.69 in	0.18 in	0.62 in
8:45 AM	77.9 °F	77.5 °F	99%	NE	9.4 mph	18.6 mph	29.69 in	0.24 in	0.64 in
8:50 AM	78.1 °F	77.7 °F	99%	NNE	8.7 mph	18.6 mph	29.69 in	0.3 in	0.66 in
8:51 AM	78.1 °F	77.7 °F	99%	NE	15 mph	18.6 mph	29.69 in	0.24 in	0.66 in
8:56 AM	78.1 °F	77.7 °F	99%	NE	9.8 mph	18.6 mph	29.7 in	0.24 in	0.68 in
9:01 AM	78.1 °F	77.7 °F	99%	NNE	9.8 mph	19.2 mph	29.69 in	0.24 in	0.7 in
9:06 AM	78.1 °F	77.7 °F	99%	NNE	8.7 mph	19.2 mph	29.69 in	0.24 in	0.72 in
9:11 AM	78.3 °F	77.9 °F	99%	NNE	12.5 mph	19.2 mph	29.69 in	0.24 in	0.74 in
9:16 AM	78.1 °F	77.7 °F	99%	NE	9.8 mph	19.2 mph	29.69 in	0.3 in	0.77 in
9:21 AM	78.1 °F	77.7 °F	99%	NE	13 mph	19.2 mph	29.69 in	0.42 in	0.8 in
9:26 AM	78.1 °F	77.7 °F	99%	NE	11.2 mph	19.2 mph	29.69 in	0.3 in	0.81 in
9:31 AM	78.1 °F	77.7 °F	99%	NE	14.3 mph	19.2 mph	29.68 in	0.12 in	0.82 in
9:36 AM	78.1 °F	77.7 °F	99%	ENE	12.5 mph	19.9 mph	29.7 in	0.24 in	0.85 in
9:41 AM	78.1 °F	77.7 °F	99%	NW	11.9 mph	19.9 mph	29.69 in	0.3 in	0.87 in
9:46 AM	78.1 °F	77.7 °F	99%	East	8.7 mph	19.9 mph	29.69 in	0.24 in	0.88 in
9:51 AM	78.1 °F	77.7 °F	99%	NNE	6.9 mph	19.9 mph	29.69 in	0.18 in	0.89 in
9:56 AM	78.1 °F	77.7 °F	99%	ENE	15 mph	19.9 mph	29.7 in	0.12 in	0.9 in
10:01 AM	77.9 °F	77.5 °F	99%	NNE	9.8 mph	19.9 mph	29.71 in	0.24 in	0.93 in
10:06 AM	77.9 °F	77.5 °F	99%	East	6.9 mph	19.9 mph	29.7 in	0.3 in	0.95 in
10:11 AM	77.9 °F	77.5 °F	99%	ESE	13.6 mph	19.9 mph	29.71 in	0.24 in	0.97 in
10:16 AM	77.7 °F	77.4 °F	99%	East	9.8 mph	23 mph	29.71 in	0.36 in	1.01 in
10:21 AM	77.7 °F	77.4 °F	99%	NE	10.5 mph	23 mph	29.7 in	0.3 in	1.01 in
10:26 AM	77.5 °F	77.2 °F	99%	ENE	11.2 mph	23 mph	29.7 in	0.18 in	1.03 in
10:31 AM	77.4 °F	77 °F	99%	NE	10.5 mph	23 mph	29.71 in	0.24 in	1.05 in
10:36 AM	77.2 °F	76.8 °F	99%	ENE	16.8 mph	23 mph	29.7 in	0.6 in	1.12 in
10:41 AM	77 °F	76.6 °F	99%	East	9.8 mph	23 mph	29.69 in	0.72 in	1.16 in
10:46 AM	76.8 °F	76.5 °F	99%	NE	7.4 mph	23 mph	29.71 in	0.42 in	1.19 in
10:51 AM	76.6 °F	76.3 °F	99%	ENE	6.9 mph	23 mph	29.73 in	0.72 in	1.28 in
10:56 AM	76.5 °F	76.1 °F	99%	East	13 mph	23 mph	29.74 in	2.16 in	1.55 in
11:01 AM	76.1 °F	75.7 °F	99%	NE	23 mph	23 mph	29.7 in	2.7 in	1.71 in
11:03 AM	75.9 °F	75.6 °F	99%	NE	13.6 mph	23 mph	29.7 in	2.46 in	1.74 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
11:08 AM	75.6 °F	75.2 °F	99%	NE	18.6 mph	23 mph	29.7 in	0.84 in	1.77 in
11:13 AM	75.2 °F	74.8 °F	99%	NE	8.1 mph	23 mph	29.7 in	0.36 in	1.79 in
11:18 AM	75 °F	74.7 °F	99%	NE	11.9 mph	23 mph	29.69 in	0.18 in	1.8 in
11:23 AM	75 °F	74.7 °F	99%	NNE	14.3 mph	23 mph	29.69 in	0.12 in	1.81 in
11:28 AM	74.8 °F	74.5 °F	99%	ENE	11.9 mph	23 mph	29.7 in	0.12 in	1.82 in
11:33 AM	75 °F	74.7 °F	99%	ENE	9.4 mph	23 mph	29.69 in	0.18 in	1.84 in
11:38 AM	75 °F	74.7 °F	99%	East	8.1 mph	23 mph	29.7 in	0.18 in	1.85 in
11:43 AM	75.2 °F	74.8 °F	99%	NNE	11.2 mph	23 mph	29.69 in	0.12 in	1.86 in
11:48 AM	75.4 °F	75 °F	99%	ENE	16.1 mph	23 mph	29.69 in	0.12 in	1.87 in
11:53 AM	75.4 °F	75 °F	99%	East	11.2 mph	23 mph	29.7 in	0.18 in	1.89 in
11:58 AM	75.4 °F	75 °F	99%	ENE	8.7 mph	22.4 mph	29.68 in	0.3 in	1.92 in
12:03 PM	75.4 °F	75 °F	99%	North	15.4 mph	22.4 mph	29.66 in	0.36 in	1.95 in
12:08 PM	75.4 °F	75 °F	99%	NE	16.8 mph	22.4 mph	29.66 in	0.24 in	1.96 in
12:13 PM	75.6 °F	75.2 °F	99%	NE	20.6 mph	22.4 mph	29.65 in	0.12 in	1.96 in
12:18 PM	75.6 °F	75.2 °F	99%	NNE	16.1 mph	22.4 mph	29.65 in	0.06 in	1.96 in
12:23 PM	75.6 °F	75.2 °F	99%	ENE	13 mph	22.4 mph	29.65 in	0 in	1.96 in
12:28 PM	75.6 °F	75.2 °F	99%	NE	21 mph	22.4 mph	29.65 in	0.06 in	1.97 in
12:33 PM	75.6 °F	75.2 °F	99%	NE	15.4 mph	22.4 mph	29.64 in	0.06 in	1.97 in
12:38 PM	75.7 °F	75.4 °F	99%	NE	15.4 mph	22.4 mph	29.65 in	0 in	1.97 in
12:43 PM	75.7 °F	75.4 °F	99%	NNE	18.6 mph	22.4 mph	29.64 in	0.06 in	1.98 in
12:48 PM	75.7 °F	75.4 °F	99%	NE	15.4 mph	21.7 mph	29.64 in	0.12 in	1.99 in
12:53 PM	75.7 °F	75.4 °F	99%	NE	20.6 mph	21.7 mph	29.63 in	0.18 in	2.01 in
12:58 PM	75.6 °F	75.2 °F	99%	NNE	12.5 mph	21.7 mph	29.63 in	0.12 in	2.01 in
1:03 PM	75.4 °F	75 °F	99%	NE	16.1 mph	21.7 mph	29.64 in	0.3 in	2.05 in
1:08 PM	75.2 °F	74.8 °F	99%	NE	9.4 mph	21.7 mph	29.63 in	0.48 in	2.09 in
1:13 PM	75.2 °F	74.8 °F	99%	NE	20.6 mph	21.7 mph	29.63 in	0.48 in	2.12 in
1:18 PM	75 °F	74.7 °F	99%	ESE	16.8 mph	21.7 mph	29.62 in	0.48 in	2.16 in
1:23 PM	75 °F	74.7 °F	99%	NE	15 mph	21.7 mph	29.63 in	0.36 in	2.18 in
1:28 PM	75 °F	74.7 °F	99%	NNE	14.3 mph	24.2 mph	29.61 in	0.36 in	2.22 in
1:33 PM	75 °F	74.7 °F	99%	NNE	29.3 mph	29.3 mph	29.6 in	0.42 in	2.25 in
1:38 PM	75.2 °F	74.8 °F	99%	NNE	24.8 mph	29.3 mph	29.6 in	0.18 in	2.25 in
1:43 PM	75.4 °F	75 °F	99%	NNE	13 mph	29.3 mph	29.58 in	0.06 in	2.25 in
1:48 PM	75.6 °F	75.2 °F	99%	NE	21.7 mph	29.3 mph	29.58 in	0 in	2.25 in
1:53 PM	75.6 °F	75.2 °F	99%	ENE	16.8 mph	29.3 mph	29.58 in	0.06 in	2.26 in
1:58 PM	75.6 °F	75.2 °F	99%	NE	6.9 mph	29.3 mph	29.58 in	0.06 in	2.26 in
2:03 PM	75.7 °F	75.4 °F	99%	North	13 mph	29.3 mph	29.58 in	0.06 in	2.27 in
2:08 PM	75.7 °F	75.4 °F	99%	NNE	19.9 mph	29.3 mph	29.57 in	0.12 in	2.28 in
2:13 PM	75.7 °F	75.4 °F	99%	West	14.3 mph	29.3 mph	29.57 in	0.18 in	2.29 in
2:18 PM	75.6 °F	75.2 °F	99%	North	22.4 mph	29.3 mph	29.55 in	0.18 in	2.3 in
2:19 PM	75.6 °F	75.2 °F	99%	NE	16.8 mph	29.3 mph	29.55 in	0.12 in	2.3 in
2:24 PM	75.7 °F	75.4 °F	99%	ENE	19.9 mph	29.3 mph	29.55 in	0.12 in	2.31 in
2:29 PM	75.7 °F	75.4 °F	99%	NE	13 mph	27.3 mph	29.54 in	0.12 in	2.32 in
2:34 PM	75.7 °F	75.4 °F	99%	NNE	13 mph	27.3 mph	29.54 in	0.06 in	2.32 in
2:39 PM	75.7 °F	75.4 °F	99%	North	11.2 mph	27.3 mph	29.54 in	0.06 in	2.33 in
2:44 PM	75.7 °F	75.4 °F	99%	SE	18.6 mph	27.3 mph	29.54 in	0.12 in	2.34 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
2:49 PM	75.7 °F	75.4 °F	99%	North	14.3 mph	27.3 mph	29.53 in	0.06 in	2.34 in
2:54 PM	75.7 °F	75.4 °F	99%	NNE	19.2 mph	27.3 mph	29.53 in	0.06 in	2.35 in
2:59 PM	75.7 °F	75.4 °F	99%	NNE	11.9 mph	27.3 mph	29.52 in	0.06 in	2.35 in
3:04 PM	75.7 °F	75.4 °F	99%	NNE	15.4 mph	27.3 mph	29.51 in	0.06 in	2.36 in
3:09 PM	75.6 °F	75.2 °F	99%	NNE	27.3 mph	27.3 mph	29.5 in	0.3 in	2.4 in
3:14 PM	75.6 °F	75.2 °F	99%	NE	24.2 mph	27.3 mph	29.5 in	0.36 in	2.42 in
3:19 PM	75.7 °F	75.4 °F	99%	North	20.6 mph	27.3 mph	29.49 in	0.18 in	2.43 in
3:24 PM	75.6 °F	75.2 °F	99%	NNE	19.2 mph	27.3 mph	29.5 in	0.3 in	2.47 in
3:29 PM	75.6 °F	75.2 °F	99%	ENE	23.7 mph	27.3 mph	29.49 in	0.66 in	2.54 in
3:34 PM	75.4 °F	75 °F	99%	NNE	21 mph	27.3 mph	29.48 in	0.78 in	2.59 in
3:39 PM	75.4 °F	75 °F	99%	NE	19.9 mph	27.3 mph	29.48 in	0.72 in	2.65 in
3:44 PM	75.4 °F	75 °F	99%	NNE	16.1 mph	27.3 mph	29.47 in	0.78 in	2.72 in
3:49 PM	75.2 °F	74.8 °F	99%	NNE	12.5 mph	27.3 mph	29.47 in	0.66 in	2.75 in
3:54 PM	75.4 °F	75 °F	99%	NE	23 mph	27.3 mph	29.46 in	0.3 in	2.77 in
3:59 PM	75.4 °F	75 °F	99%	NNE	19.9 mph	27.3 mph	29.47 in	0.24 in	2.79 in
4:04 PM	75.2 °F	74.8 °F	99%	NNE	18.6 mph	27.3 mph	29.46 in	0.18 in	2.8 in
4:09 PM	75.2 °F	74.8 °F	99%	ENE	15.4 mph	26.6 mph	29.46 in	0.24 in	2.82 in
4:14 PM	75.2 °F	74.8 °F	99%	NE	17.4 mph	26.6 mph	29.45 in	0.24 in	2.84 in
4:19 PM	75.2 °F	74.8 °F	99%	NE	15.4 mph	26.6 mph	29.44 in	0.42 in	2.89 in
4:24 PM	75 °F	74.7 °F	99%	NE	24.2 mph	26.6 mph	29.44 in	0.66 in	2.95 in
4:29 PM	75 °F	74.7 °F	99%	NNE	16.8 mph	29.3 mph	29.44 in	0.84 in	3.01 in
4:34 PM	75 °F	74.7 °F	99%	NNE	19.2 mph	29.3 mph	29.43 in	0.72 in	3.06 in
4:39 PM	74.8 °F	74.5 °F	99%	NNE	15 mph	29.3 mph	29.42 in	0.54 in	3.09 in
4:44 PM	74.8 °F	74.5 °F	99%	NNE	25.5 mph	34.2 mph	29.41 in	0.54 in	3.14 in
4:49 PM	75 °F	74.7 °F	99%	NE	21.7 mph	34.2 mph	29.4 in	0.54 in	3.18 in
4:54 PM	74.8 °F	74.5 °F	99%	North	22.4 mph	34.2 mph	29.39 in	0.66 in	3.24 in
4:59 PM	74.8 °F	74.5 °F	99%	NNE	19.9 mph	34.2 mph	29.4 in	0.72 in	3.29 in
5:04 PM	74.8 °F	74.5 °F	99%	NE	19.9 mph	34.2 mph	29.4 in	0.6 in	3.32 in
5:09 PM	75 °F	74.7 °F	99%	NE	18.6 mph	34.2 mph	29.39 in	0.36 in	3.34 in
5:14 PM	75.2 °F	74.8 °F	99%	North	13 mph	34.2 mph	29.39 in	0.24 in	3.35 in
5:19 PM	75.4 °F	75 °F	99%	ENE	21.7 mph	34.2 mph	29.39 in	0.3 in	3.39 in
5:24 PM	75.4 °F	75 °F	99%	NNE	15 mph	34.2 mph	29.37 in	0.66 in	3.46 in
5:29 PM	75.4 °F	75 °F	99%	North	22.4 mph	34.2 mph	29.38 in	0.66 in	3.49 in
5:34 PM	75.4 °F	75 °F	99%	NNE	18.1 mph	34.2 mph	29.35 in	0.48 in	3.53 in
5:39 PM	75.6 °F	75.2 °F	99%	NE	18.1 mph	29.8 mph	29.34 in	0.6 in	3.58 in
5:44 PM	75.4 °F	75 °F	99%	SE	34.2 mph	34.2 mph	29.34 in	0.72 in	3.63 in
5:49 PM	75.4 °F	75 °F	99%	North	21.7 mph	34.2 mph	29.34 in	0.66 in	3.68 in
5:54 PM	75.2 °F	74.8 °F	99%	NNW	26.6 mph	34.2 mph	29.33 in	0.6 in	3.72 in
5:59 PM	75.4 °F	75 °F	99%	NE	26.2 mph	34.2 mph	29.32 in	0.54 in	3.76 in
6:04 PM	75.2 °F	74.8 °F	99%	ENE	31.8 mph	34.2 mph	29.31 in	0.78 in	3.84 in
6:09 PM	75.2 °F	74.8 °F	99%	WNW	19.9 mph	34.2 mph	29.31 in	1.08 in	3.93 in
6:10 PM	75 °F	74.7 °F	99%	ENE	28.6 mph	34.2 mph	29.31 in	1.08 in	3.94 in
6:16 PM	74.8 °F	74.5 °F	99%	SE	19.9 mph	34.2 mph	29.3 in	0.96 in	4.01 in
6:21 PM	74.7 °F	74.3 °F	99%	NNE	31.8 mph	34.2 mph	29.29 in	0.9 in	4.09 in
6:26 PM	74.5 °F	74.1 °F	99%	NNE	24.8 mph	34.2 mph	29.28 in	1.02 in	4.18 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
6:31 PM	74.5 °F	74.1 °F	99%	ENE	20.6 mph	36 mph	29.28 in	0.96 in	4.25 in
6:36 PM	74.3 °F	73.9 °F	99%	North	26.2 mph	36 mph	29.26 in	0.96 in	4.34 in
6:41 PM	74.3 °F	73.9 °F	99%	East	16.8 mph	36 mph	29.25 in	0.96 in	4.41 in
6:46 PM	74.3 °F	73.9 °F	99%	NNE	29.3 mph	36 mph	29.26 in	0.9 in	4.49 in
6:51 PM	74.5 °F	74.1 °F	99%	NNE	23.7 mph	36 mph	29.26 in	0.84 in	4.55 in
6:56 PM	74.5 °F	74.1 °F	99%	ENE	29.3 mph	36 mph	29.25 in	0.9 in	4.64 in
7:01 PM	74.5 °F	74.1 °F	99%	East	23 mph	36 mph	29.24 in	0.9 in	4.7 in
7:06 PM	74.5 °F	74.1 °F	99%	NNE	26.6 mph	36 mph	29.23 in	1.02 in	4.81 in
7:11 PM	74.7 °F	74.3 °F	99%	NNE	28 mph	36 mph	29.21 in	1.14 in	4.89 in
7:16 PM	74.7 °F	74.3 °F	99%	NE	19.9 mph	36 mph	29.21 in	1.02 in	4.98 in
7:21 PM	74.8 °F	74.5 °F	99%	NE	21 mph	36 mph	29.2 in	1.02 in	5.06 in
7:26 PM	74.8 °F	74.5 °F	99%	NE	26.6 mph	36 mph	29.18 in	1.02 in	5.15 in
7:31 PM	75 °F	74.7 °F	99%	NNE	23 mph	46.1 mph	29.19 in	0.84 in	5.2 in
7:36 PM	75 °F	74.7 °F	99%	East	21.7 mph	46.1 mph	29.17 in	0.66 in	5.26 in
7:41 PM	75.2 °F	74.8 °F	99%	NE	30.4 mph	46.1 mph	29.16 in	0.84 in	5.34 in
7:46 PM	75.4 °F	75 °F	99%	NE	22.4 mph	46.1 mph	29.15 in	1.02 in	5.43 in
7:47 PM	75.4 °F	75 °F	99%	NNW	21 mph	46.1 mph	29.14 in	1.14 in	5.46 in
7:52 PM	75.4 °F	75 °F	99%	ENE	18.1 mph	46.1 mph	29.15 in	1.2 in	5.55 in
7:57 PM	75.4 °F	75 °F	99%	NW	23.7 mph	46.1 mph	29.13 in	1.14 in	5.64 in
8:02 PM	75.4 °F	75 °F	99%	NE	24.2 mph	46.1 mph	29.13 in	1.32 in	5.76 in
8:07 PM	75.6 °F	75.2 °F	99%	NE	33.6 mph	46.1 mph	29.11 in	1.38 in	5.86 in
8:12 PM	75.7 °F	75.4 °F	99%	NNE	29.3 mph	46.1 mph	29.1 in	1.08 in	5.92 in
8:17 PM	75.7 °F	75.4 °F	99%	North	28 mph	46.1 mph	29.09 in	0.66 in	5.96 in
8:22 PM	75.7 °F	75.4 °F	99%	NE	31.8 mph	46.1 mph	29.08 in	0.42 in	5.99 in
8:27 PM	75.9 °F	75.6 °F	99%	NE	28 mph	46.1 mph	29.08 in	0.42 in	6.02 in
8:32 PM	76.1 °F	75.7 °F	99%	ENE	34.9 mph	39.8 mph	29.06 in	0.54 in	6.07 in
8:37 PM	76.1 °F	75.7 °F	99%	North	19.9 mph	39.8 mph	29.05 in	0.42 in	6.09 in
8:42 PM	76.1 °F	75.7 °F	99%	NE	24.2 mph	44.1 mph	29.05 in	0.24 in	6.11 in
8:47 PM	76.3 °F	75.9 °F	99%	NNE	33.6 mph	44.1 mph	29.04 in	0.24 in	6.13 in
8:52 PM	76.3 °F	75.9 °F	99%	NE	26.6 mph	44.1 mph	29.03 in	0.24 in	6.15 in
8:57 PM	76.5 °F	76.1 °F	99%	NE	28 mph	44.1 mph	29.02 in	0.3 in	6.18 in
9:02 PM	76.5 °F	76.1 °F	99%	NNE	29.8 mph	44.1 mph	29.01 in	0.36 in	6.2 in
9:07 PM	76.5 °F	76.1 °F	99%	ENE	28 mph	44.1 mph	29 in	0.54 in	6.26 in
9:12 PM	76.5 °F	76.1 °F	99%	ENE	31.1 mph	44.1 mph	28.98 in	0.6 in	6.29 in
9:17 PM	76.6 °F	76.3 °F	99%	NNE	23.7 mph	44.1 mph	28.98 in	0.48 in	6.32 in
9:22 PM	76.6 °F	76.3 °F	99%	NE	34.9 mph	44.1 mph	28.97 in	0.6 in	6.38 in
9:27 PM	76.6 °F	76.3 °F	99%	ENE	29.8 mph	44.1 mph	28.94 in	0.78 in	6.44 in
9:32 PM	76.6 °F	76.3 °F	99%	East	32.9 mph	44.1 mph	28.94 in	0.84 in	6.5 in
9:37 PM	76.6 °F	76.3 °F	99%	East	34.2 mph	44.1 mph	28.94 in	0.72 in	6.55 in
9:42 PM	76.6 °F	76.3 °F	99%	ENE	32.9 mph	44.1 mph	28.93 in	0.72 in	6.61 in
9:47 PM	76.6 °F	76.3 °F	99%	ENE	27.3 mph	44.1 mph	28.91 in	0.66 in	6.66 in
9:52 PM	76.6 °F	76.3 °F	99%	ENE	31.1 mph	44.1 mph	28.9 in	0.66 in	6.71 in
9:57 PM	76.8 °F	76.5 °F	99%	NE	29.8 mph	44.1 mph	28.88 in	0.72 in	6.77 in
10:02 PM	76.6 °F	76.3 °F	99%	ENE	30.4 mph	47.2 mph	28.88 in	1.02 in	6.87 in
10:07 PM	76.6 °F	76.3 °F	99%	NNE	29.3 mph	47.2 mph	28.87 in	1.02 in	6.93 in

Time	Temp.	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.
10:12 PM	76.5 °F	76.1 °F	99%	NE	32.2 mph	47.2 mph	28.86 in	1.02 in	7.03 in
10:17 PM	76.5 °F	76.1 °F	99%	NE	31.8 mph	47.2 mph	28.84 in	1.38 in	7.15 in
10:23 PM	76.5 °F	76.1 °F	99%	NE	32.9 mph	47.2 mph	28.83 in	1.2 in	7.23 in
10:28 PM	76.5 °F	76.1 °F	99%	East	26.6 mph	47.2 mph	28.81 in	1.02 in	7.32 in
10:33 PM	76.5 °F	76.1 °F	99%	ENE	37.8 mph	47.2 mph	28.81 in	1.02 in	7.4 in
10:38 PM	76.3 °F	75.9 °F	99%	ENE	36.7 mph	47.2 mph	28.8 in	1.02 in	7.49 in
10:43 PM	76.3 °F	75.9 °F	99%	ENE	31.1 mph	47.2 mph	28.8 in	1.08 in	7.58 in
10:48 PM	76.3 °F	75.9 °F	99%	ENE	37.4 mph	47.2 mph	28.78 in	1.38 in	7.71 in
10:53 PM	76.3 °F	75.9 °F	99%	ENE	41.6 mph	47.2 mph	28.76 in	1.44 in	7.8 in
10:58 PM	76.3 °F	75.9 °F	99%	East	40.9 mph	47.2 mph	28.76 in	0.9 in	7.85 in
11:03 PM	76.3 °F	75.9 °F	99%	ENE	37.8 mph	47.2 mph	28.77 in	0.9 in	7.94 in
11:08 PM	76.3 °F	75.9 °F	99%	ENE	47.2 mph	47.9 mph	28.74 in	1.2 in	8.05 in
11:22 PM	76.3 °F	75.9 °F	99%	East	42.9 mph	61.5 mph	28.72 in	1.26 in	8.31 in
11:24 PM	76.3 °F	75.9 °F	99%	NNE	39.1 mph	61.5 mph	28.72 in	1.2 in	8.35 in
11:29 PM	76.3 °F	75.9 °F	99%	East	39.8 mph	61.5 mph	28.7 in	1.08 in	8.42 in
11:31 PM	76.3 °F	75.9 °F	99%	ESE	37.8 mph	61.5 mph	28.71 in	0.96 in	8.44 in
11:35 PM	76.3 °F	75.9 °F	99%	NE	47.2 mph	61.5 mph	28.7 in	0.96 in	8.5 in
11:36 PM	76.3 °F	75.9 °F	99%	NE	46.5 mph	61.5 mph	28.71 in	0.96 in	8.53 in
11:37 PM	76.3 °F	75.9 °F	99%	ENE	40.9 mph	61.5 mph	28.68 in	0.9 in	8.54 in
11:42 PM	76.3 °F	75.9 °F	99%	ENE	39.1 mph	61.5 mph	28.69 in	1.02 in	8.62 in
11:47 PM	76.3 °F	75.9 °F	99%	ENE	47.2 mph	61.5 mph	28.69 in	1.32 in	8.75 in
11:52 PM	76.1 °F	75.7 °F	99%	NE	34.9 mph	61.5 mph	28.69 in	1.92 in	8.93 in
11:57 PM	76.1 °F	75.7 °F	99%	East	34.9 mph	61.5 mph	28.67 in	2.58 in	9.17 in

PICKETT
SURVEYING • ENGINEERING

Forensic Analysis of 115kV Higgins to Griffin Transmission Line Structure HG-160 Hurricane Irma

October 31, 2017

DUKE ENERGY®

Table of Contents:

1.0 Executive Summary 3
2.0 Maintenance Data 5
3.0 Weather Data 5
4.0 Conclusion 8
5.0 Remediation 13
6.0 Restoration 14
Appendix A: HG-160 Plan & Profile Drawings 16
Appendix B: HG-160 Erection Diagram and Design Loads 19
Appendix C: Weather Data 22
Appendix D: HG-160 Leg and Stub Angles 30

1.0 Executive Summary

Structure: 115kV Higgins to Griffin Transmission Line Structure HG-160
Location: Northeast Hillsborough County, FL (28° 4'41.10"N; 82°16'34.63"W)
Date of Failure – 09-10-17
Time of Failure – 19:53 EST

HG-160 is a 123 foot above ground 115kV double circuit tangent suspension lattice tower. HG-160 is located in the middle of the deadend section between towers HG-157 and HG-163. At 7:53 pm, on Sunday, September 10th, 2017, the lattice tower suffered a structural failure resulting in a collapse, which consequently caused a power delivery outage during Hurricane Irma landfall.

Exact tower installation date is unknown; however, Blaw-Knox Division Co. Pittsburgh Erection Diagram drawing No. P-66282 and Duke Energy Plan & Profile HG1018 drawing show dates between March and June 1951.

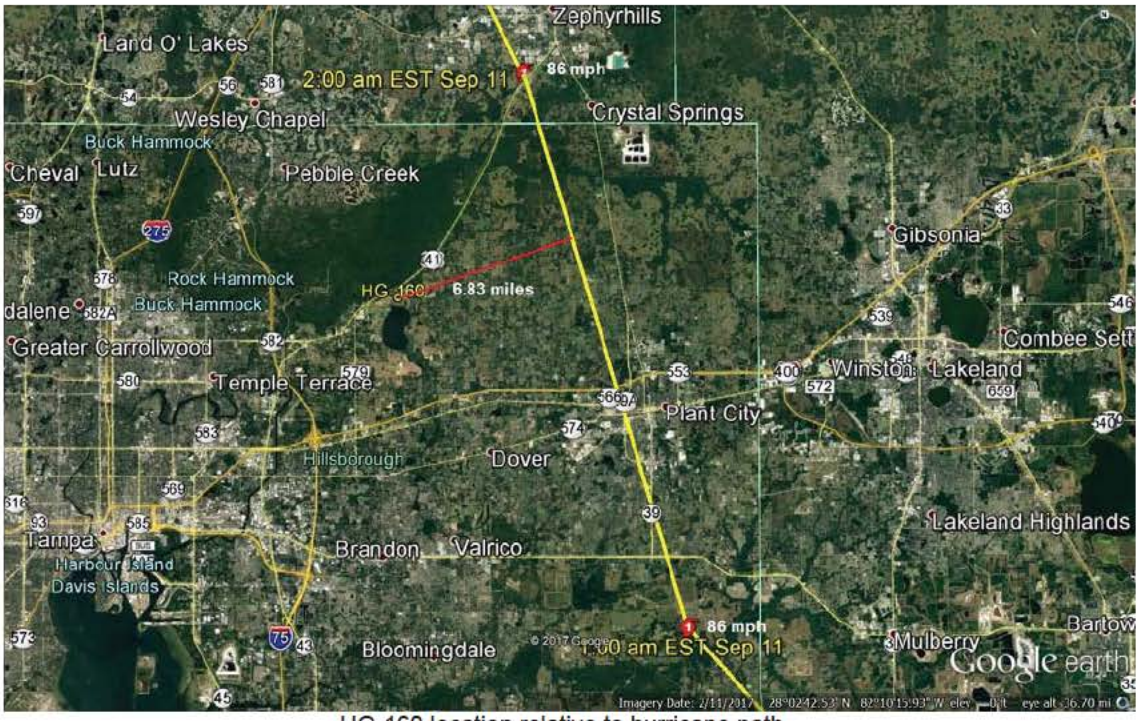
A power outage on the Higgins – Griffin line occurred at 7:53 pm EST on Sunday, September 10, 2017. The power outage most likely coincides with the HG-160 tower's collapse. At the time of the collapse, 74 mph wind velocities were reported in the area by the National Oceanic and Atmospheric Administration (NOAA). The collapse occurred approximately 5.5 hours in advance of the hurricane being at a location nearest to the tower. Hurricane Irma's eye passed approximately 7 miles east of HG-160 at 1:30 am EST Monday, September 11, 2017.

Tower HG-160 was laid down on the ground to the south; no torqueing or twisting of the tower was evident. The tower fall direction is consistent with the location of the hurricane relative to the tower at the time of collapse and the counter clockwise winds which would have been blowing primarily south / south west. Conversely, if the tower had held long enough for the storm to pass to the north it would be expected for the tower to fall to the north.

As reported by the inspection crews, it appeared as the tower may have been restrained by the wires as it laid down until both optical ground wires (OPGW) and one conductor wire broke. Upon inspection of the tower by Pickett on September 13, 2017, it was evident that the cause of failure was corroded stub angles at the tower foundation and high wind velocities.

In addition to HG-160, additional towers within the deadend section (HG-157 to HG-163) were identified with corroded stub angles and an assessment of the entire 115kV Higgins to Griffin Transmission Line stub angles should be performed.

In 2016, Pickett and Associates Inc. developed a tower leg remediation procedure for tower HG-99. Tower HG-99 suffered from similar cross section deterioration at the stub angle and foundation interface as tower HG-160.



HG-160 location relative to hurricane path.



Tower HG-160 failure – Looking Northwest.

PICKETT
SURVEYING • ENGINEERING



Tower HG-160 northeast leg corrosion.

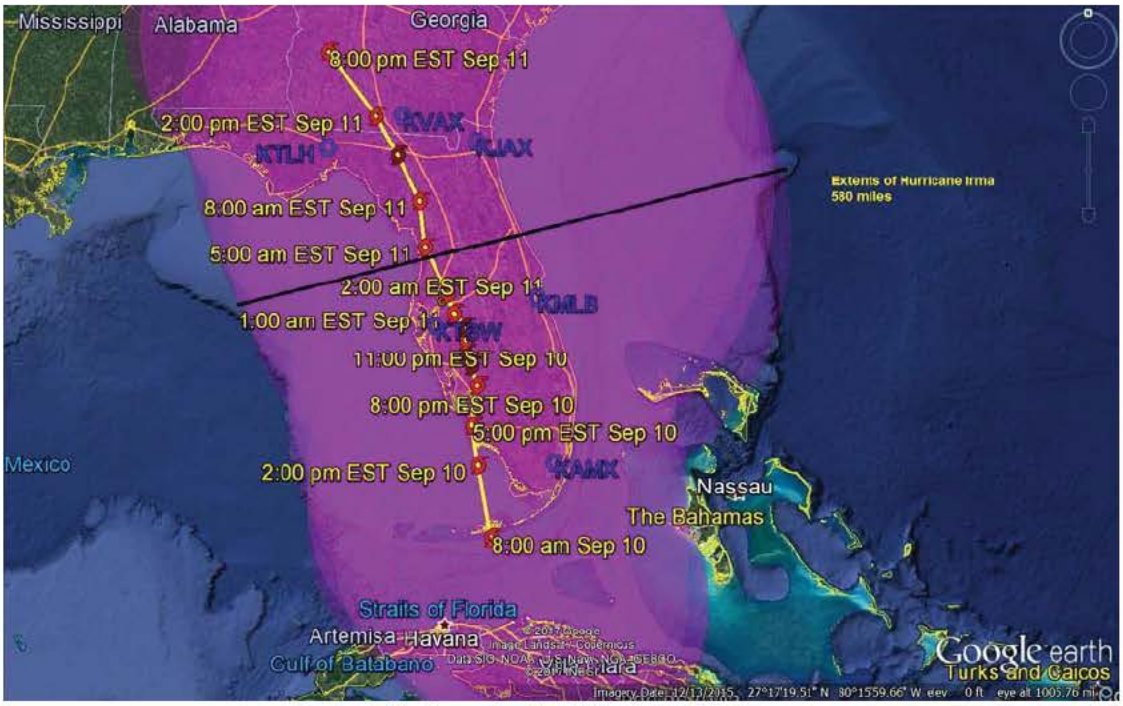
2.0 Maintenance Data

Maintenance data is not available at this time for tower HG-160.

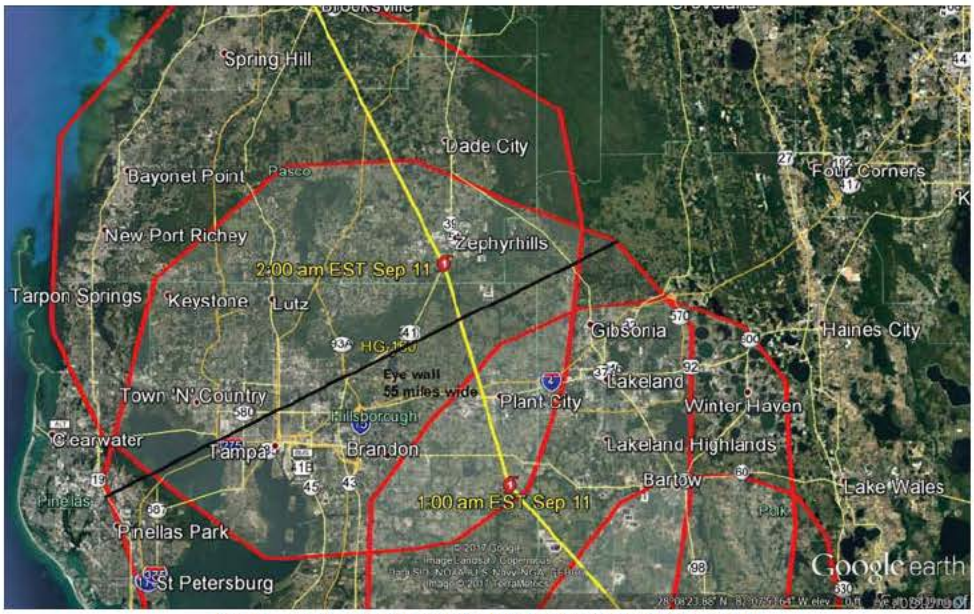
3.0 Weather Data

Hurricane Irma made continental landfall in Naples, Florida at 4:00 pm EST on Sunday, September 10, 2017 as a category 2 hurricane and weakened to a tropical depression over the Georgia - Alabama border 12 hours later. At the time of tower HG-160's collapse, approximately at 7:58 pm EST September 10, 2017, the hurricane was still designated as a category 2 hurricane and the eye of the hurricane was located approximately 95 miles south of tower HG-160.

The hurricane was adjacent to HG-160 at approximately 1:30 am EST on Monday, September 11, 2017 as a category 1 hurricane. The hurricane eye at that time was 55 miles wide and located 7 miles east of HG-160. The recorded wind velocities were 86 mph.



Extents and path of Hurricane Irma.

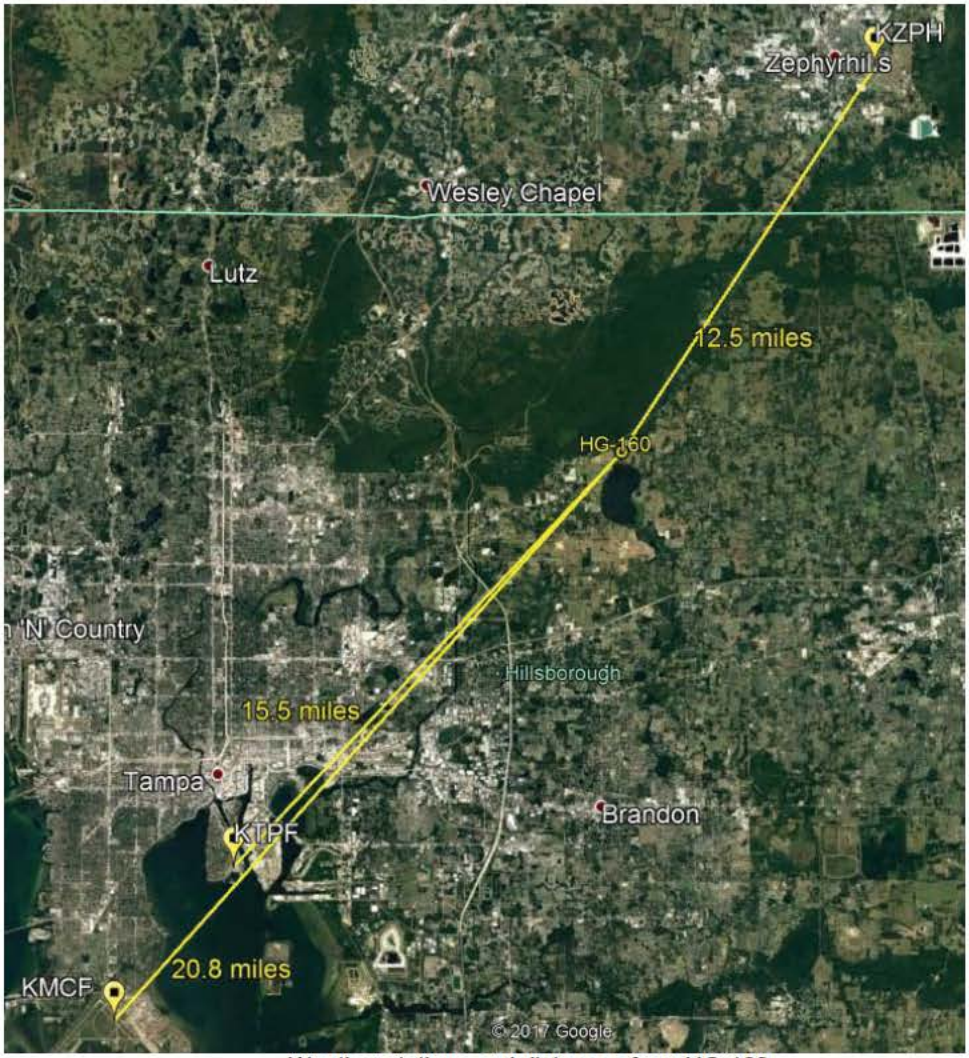


Hurricane Irma eye wall when in vicinity of HG-160.

Three local weather stations: KMCF, KTPF and KZPH show wind velocities in range of 29 to 32 mph and wind gusts in range of 43 to 53 mph. According to the NOAA site specific maps, the wind speeds have reached 74 mph at time of failure.

PICKETT
SURVEYING • ENGINEERING

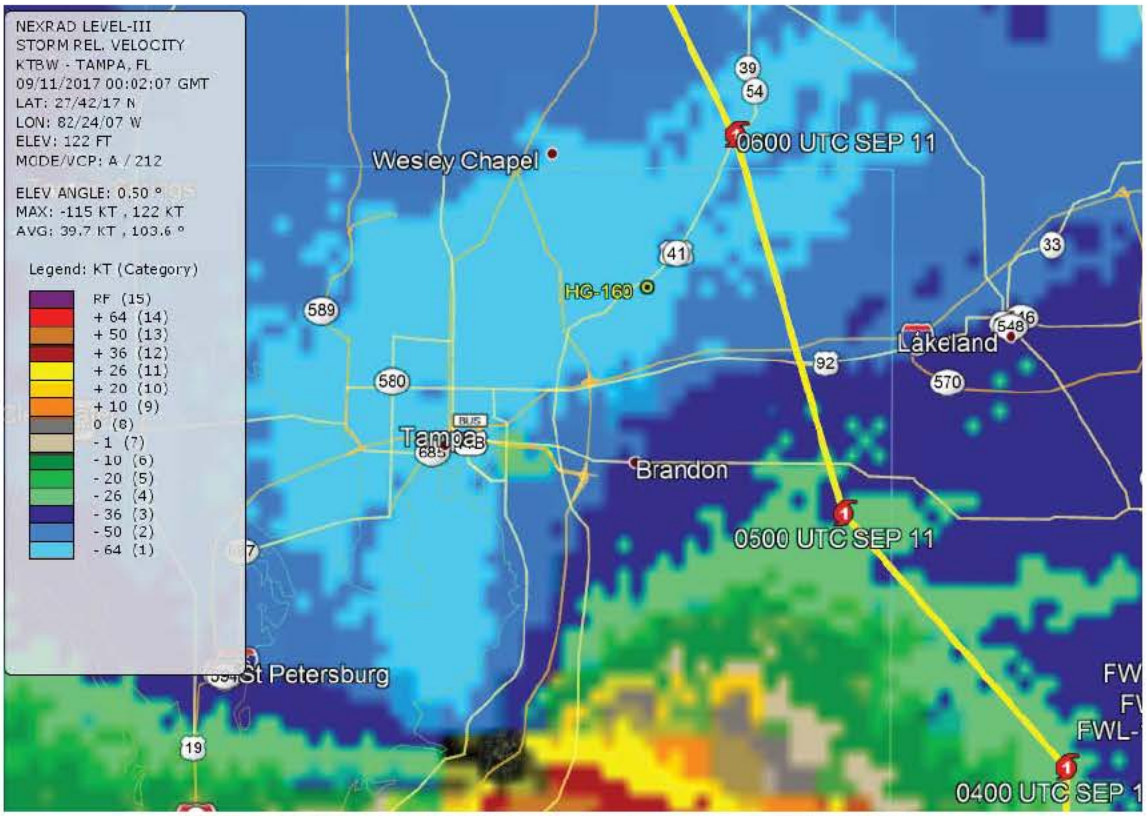
Station Name & Location	Time	Temp	Wind Dir	Wind Vel.	Wing Gust.	Distance from HG-160
KMCF, Tampa Macdill AFB, FL	7:58:00 PM	72.9 °F	NE	28.8 mph	52.9 mph	20.8 mi
KTPF, Tampa Knight Airport, FL	7:55:00 PM	N/A	NNE	29.9 mph	46.0 mph	15.5 mi
KZPH, Zephyrhills, FL	7:55:00 PM	73.6 °F	NNE	32.2 mph	42.6 mph	12.5 mi



Weather stations and distances from HG-160.

The following map shows NOAA wind velocities at the time of collapse. The light blue shading indicates 64 knot wind which equates to 74 mph.

PICKETT
SURVEYING • ENGINEERING



NOAA base velocities at the approximate time of tower HG-160 collapse.

NOAA cyclone activity at the time of collapse was also reviewed and found no evidence of any cyclones near tower HG-160.

4.0 Conclusion

HG-160 tower failure is a result of high winds and severe corrosion of the embedded stub angles projecting directly from the top of the concrete foundations. Failure mode was likely a combination of a tension/shear failure of the stub angles due to significant loss of cross sectional area. The diagonal bracing members near the ground line were also corroded however most likely did not contribute to the tower's collapse.

Although the reported 74 mph wind velocity did not exceed the tower's 134 mph design wind velocity, Hurricane Irma's wind in combination with the corroded stub angles caused the tower's collapse. The 134-mph design wind velocity was determined from drawing's P-8-1544-1: 2200 lb. conductor transverse load, 1100' wind span and 0.522" 4/0 copper conductor diameter.

Tower HG-160 damage assessment showed both OPGWs and top phase of the north set of wires broken, the reminder of the conductors remained intact. Although the tower fell to the south, landing on top of the south set of wires, the wires laying on the ground were determined to be intact by adjacent tower's insulator swing. The intact conductor

insulators were swinging towards the fallen tower and the broken conductor's insulator remained plumb.



HG-160 NW foundation, corroded-sheared stub angle.



HG-160 SW foundation, corroded-sheared stub angle.



HG-160 NE foundation, corroded-sheared stub angle.



HG-160 SE foundation, corroded-sheared stub angle.

Some of the tower foundation/stub angle connections appeared to have been maintained by installing an epoxy coating over the stub angle interface with the concrete. HG-160 did not appear to have any epoxy coating on it. It is unknown when the epoxy was applied or why only some of the towers stub angles were epoxied and others were not.



Tower HG-157 epoxy treatment.

In addition to HG-160, additional towers within the deadend section (HG-157 to HG-163) were inspected for stub angle corrosion. Tower HG-162 was also found to exhibiting significant section loss on the foundation stub angle of the SW leg; other three tower legs could not be safely accessed but likely have similar corrosion.



HG-162 Major Section Loss on Stub Angle at Foundation SW Leg



HG-162 SW Leg Corrosion on Stub Angle at Foundation

Deadend towers HG-157 and HG-163 did not appear to have any damaged members and their foundations did not exhibit any noticeable corrosion.

Due to HG-160 tower falling to the south, adjacent towers HG-159 and HG-161 suffered steel arm member failures at the overhead ground wire and top conductor phase on the north side of the towers.



Tower HG-159 damage.



Tower HG-161 damage.

5.0 Remediation

In 2016, Pickett and Associates Inc. was tasked with developing a tower leg remediation for tower HG-99. Tower HG-99 suffered from similar cross section deterioration as tower HG-160.

Pickett proposed to replace the corroded L4x5x5/16 stub angle with one of the same size. The replacement procedure consisted of:

1. Temporarily lifting the working corner of the tower utilizing a lifting bracket.
2. Removing top 1'-0" of concrete from the existing foundation.
3. Unbolting the top portion of the L4x5x5/16 stub angle and cutting at the bottom the corroded angle.
4. Welding and bolting a new L4x5x5/16 stub angle.
5. Casting the foundation top with newly added steel reinforcement.

The same procedure could be utilized for mitigating the reminder of the corroded tower stub angles on the Higgins to Griffin 115kV transmission line.

Contributing to the corrosion is the shallow reveal of the foundation. Because the top of concrete is flush with the soil, the stub angle is exposed to the surrounding soil.

Additional tests and monitoring should be performed to better understand the steel deterioration. Steel deterioration can be attributed to surrounding soil's high pH &

chloride levels, high ground water level, flooding, or loss of cathodic protection due to a current leak.

Few of the suggested tests are:

- Soil pH test.
- Soil chlorides levels.
- Groundwater levels.
- Historical flood data.
- Grounding study.
- Current leakage assessment.

Due to the severity of towers HG-160 and HG-162 stub angle corrosion, previous epoxy remediation and tower HG-99 stub angle remediation; an assessment of entire 115kV Higgins to Griffin Transmission Line stub angles is encouraged.

6.0 Restoration

Duke Energy transmission line crews responded to the tower HG-160 collapse and towers HG-159 & HG-161 arm failures by replacing the three towers with three double circuit tangent concrete poles utilizing post insulators. See images below.



Tower HG-159 replacement.

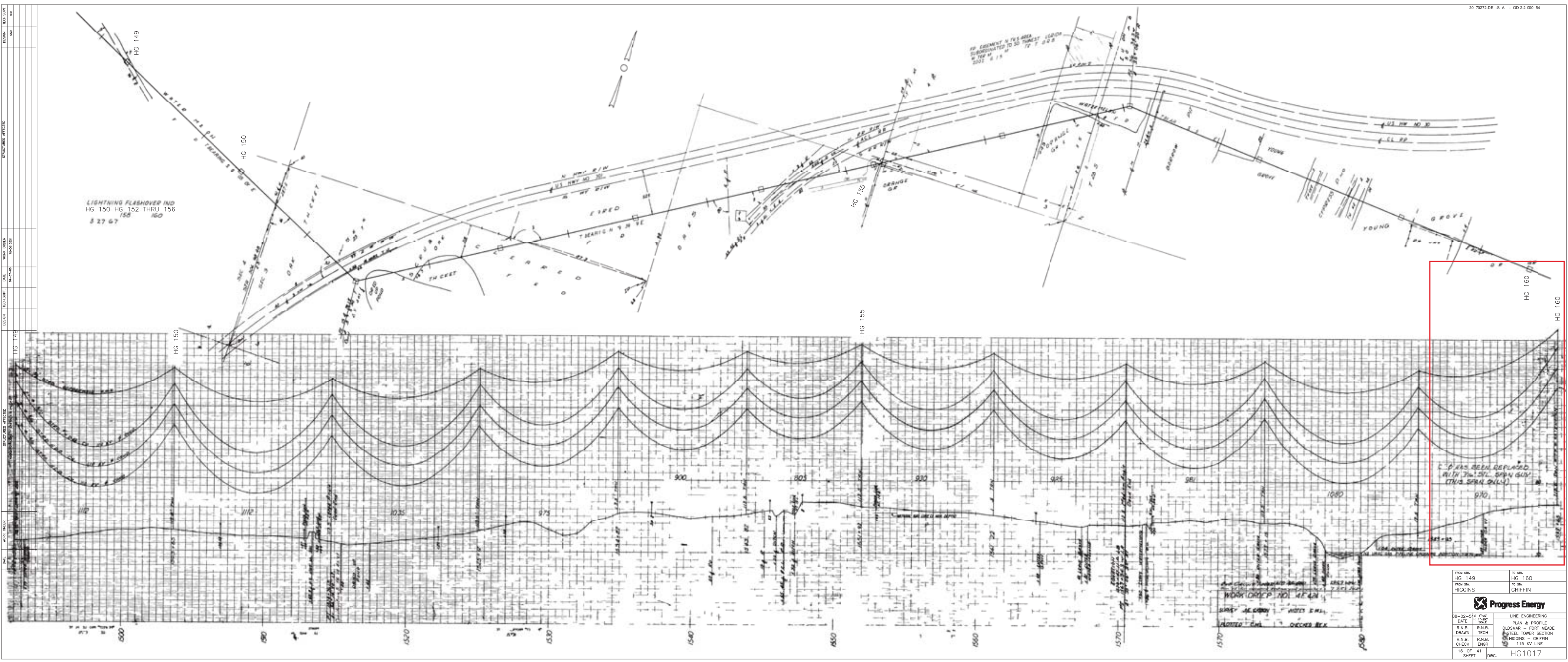


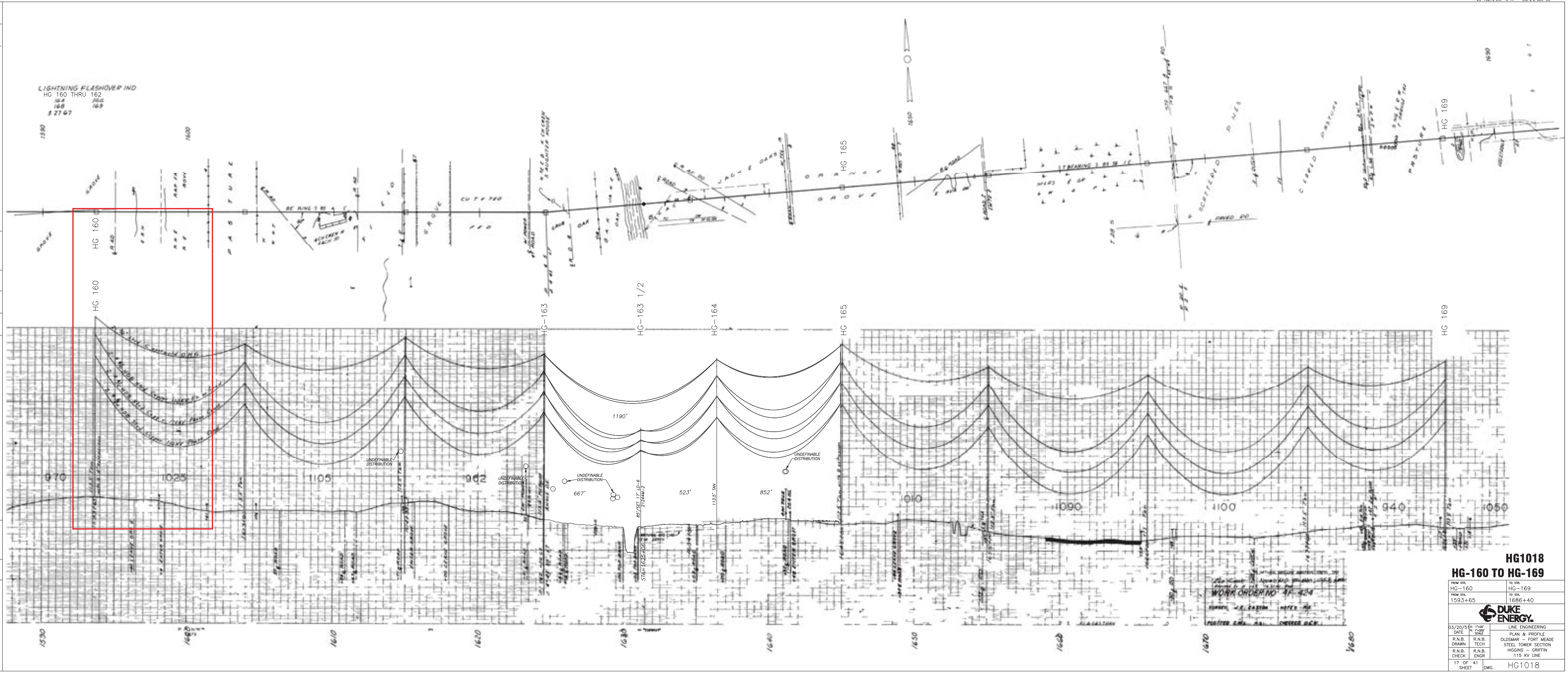
Tower HG-160 replacement.



Tower HG-161 replacement.

Appendix A: HG-160 Plan & Profile Drawings


HG 149
HG 150
HG 155
HG 160
LIGHTNING FLASHOVER IND
HG 150 HG 152 THRU 156
US HWY NO 301
C-P HAS BEEN REPLACED WITH 7/16" SYL. SPAN GUY (THIS SPAN ONLY)
WORK ORDER NO. 4E424
FROM STR.
HG 149
TO STR.
HG 160
FROM STA.
HIGGINS
TO STA.
GRIFFIN
Progress Energy
08-02-51
DATE
V: 1"=20'
H: 1"=200'
SCALE
LINE ENGINEERING
R.N.B.
DRAWN
R.N.B.
TECH
R.N.B.
CHECK
R.N.B.
ENGR
PLAN & PROFILE
OLDSMAR – FORT MEADE
STEEL TOWER SECTION
HIGGINS – GRIFFIN
115 KV LINE
16 OF 41
SHEET
DWG.
HG1017



HG1018
HG-160 TO HG-169

FROM STR.	TO STR.
HG-160	HG-169
FROM STA.	TO STA.
1593+65	1686+40

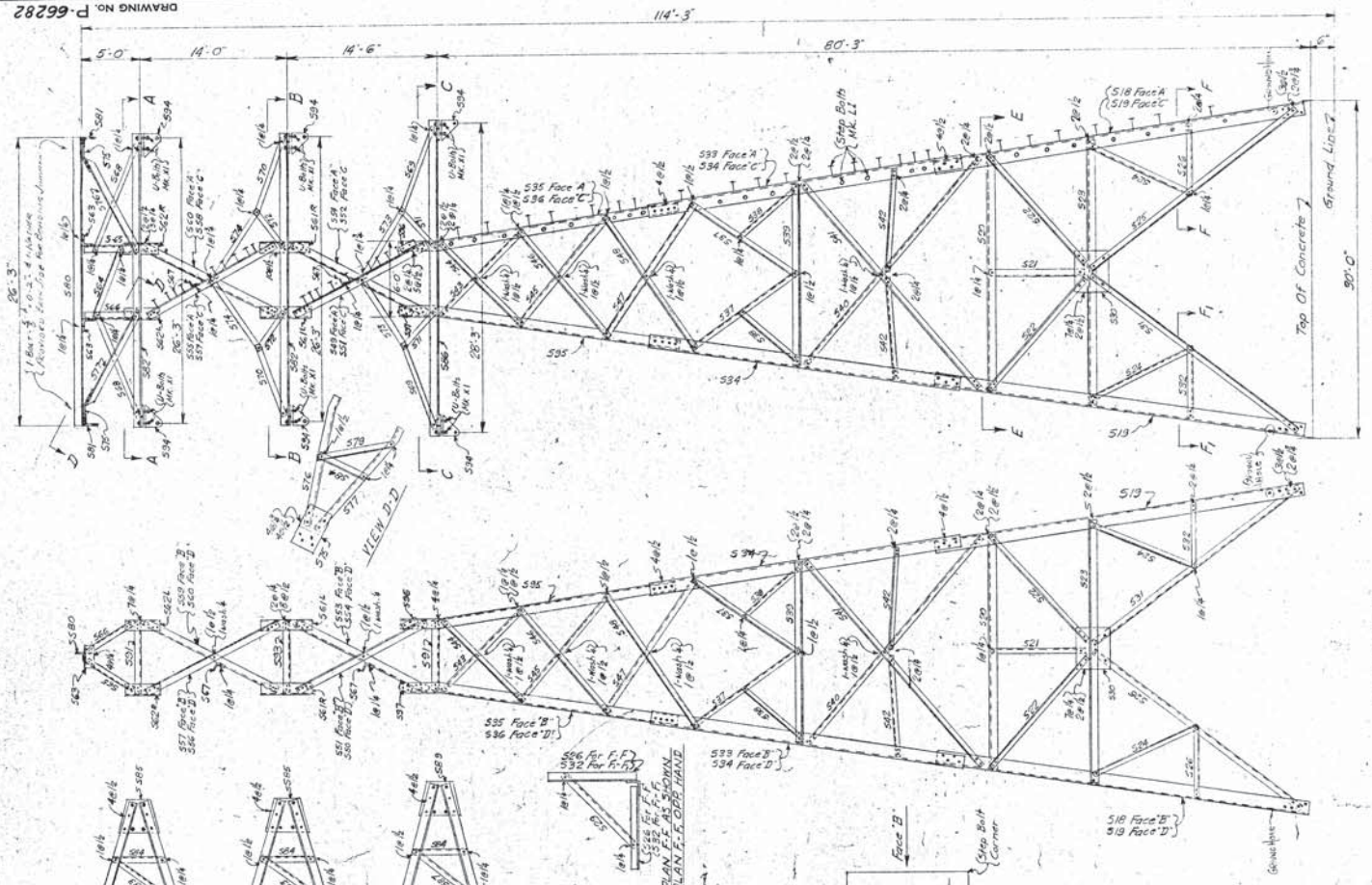
DUKE ENERGY

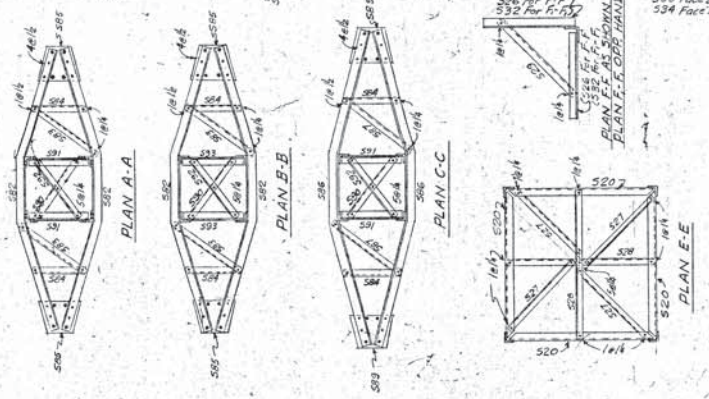
03/20/51 DATE	V: 1"=20' H: 1"=200' SCALE	LINE ENGINEERING
R.N.B. DRAWN	R.N.B. TECH	PLAN & PROFILE OLDSMAR – FORT MEADE STEEL TOWER SECTION HIGGINS – GRIFFIN 115 KV LINE
R.N.B. CHECK	R.N.B. ENGR	
17 OF 41 SHEET	DWG. HG1018	

WORK ORDER:

Appendix B: HG-160 Erection Diagram and Design Loads

DRAWING NO. P-66282





PLAN OF TOWER
Views Of All Faces Taken
Looking In Direction Of Arrows

BILL OF MATERIAL FOR ONE SUSPENSION TOWER

No.	MARK	Dwg. No.	No.	MARK	Dwg. No.
1	518	P66278	2	557	P66280
3	519		1	558	
4	520		1	559	
4	521		2	560	
8	522		2	561R	
4	523		2	562R	
8	524		2	563	
4	525		2	564	
4	526		2	565	
4	527		2	566	
2	528		4	567	
4	529		4	568	
4	530		4	569	
4	531		4	570	
4	532		4	571	
			4	572	
1	533	P66279	4	573	
3	534		4	574	
8	537		2	575	
8	538		2	576	
4	539		2	577	
4	540				
4	541		2	579	
8	542		1	580	
1	535		2	581	
1	536		4	596	
4	543		4	597	
4	544				
4	545		4	582	P66281
4	546		4	583	
4	547		8	584	
4	548		4	585	
2	595		2	586	
			2	587	
1	549	P66280			
1	550		2	589	
2	551		3	590	
1	552		4	591	
1	553		3	592	
2	554		2	593	
1	555		6	594	
1	556				
2	561L				
2	562L				

NET NO. OF FIELD BOLTS FOR ONE SUSPENSION TOWER

No.	Description	Length
312	5/8" ø Bolts Sq. & Hex. Thd. 1"	0'-1½"
360	5/8" ø Bolts Sq. & Hex. Thd. 1"	0'-1½"
28	5/8" ø Bolts Sq. & Hex. Thd. 1"	0'-1¾"
2	5/8" ø Bolts Sq. & Hex. Thd. 1"	0'-2"
22	Washers 1¼ x 1⅛ x ¼ Tk.	
64	MK. L1 Step Bolts	
12	MK. X1 U-Bolts Dwg. No. H25799	

PROPOSAL NO.	
PROPOSAL	DATE

REVISIONS		
No.	REVISED FROM	DATE
1	[illegible]	11/24
2	[illegible]	12/24

THIS DRAWING AND THE INFORMATION IT CONTAINS ARE THE PROPERTY OF THE BLAW-KNOX COMPANY. IT IS NOT TO BE TRACED OR COPIED, NOR IS THE INFORMATION TO BE MISUSED IN ANY WAY.

BLAW-KNOX DIVISION
OF BLAW-KNOX COMPANY
PITTSBURGH

ERECTION DIAGRAM
SUSPENSION TOWER
FOR
FLORIDA POWER CORP.

In Charge of Studt
Made N.K.B.
Check D.A.S.
Approved 3-21-41
Date 6-8-41
Scale

CONTRACT (KA-1942, KA-1943, KA-1944)

DRAWING No. P-66282

TOWERS

FORM No. PPC

20170272-DEF-STRAPOD 2-2-000158

DRAWING NO. P

6'-7 / 9 / 74 = 14.00 / 7.33 / 6.67

2 Gr. Wires 3/8" Steel Strand & Conductors 4/0 H.D. Copper

DESIGN LOADS

LONGITUDINAL 1100 FT. SPAN
5890# At Any One Ground Wire Support, or
6110# At Any One Conductor Support.

TRANSVERSE
750# At Any Broken Ground Wire Support.
1500# At Any Unbroken Ground Wire Support.
1133# At Any Broken Conductor Support.
2233# At Any Unbroken Conductor Support.
Wind On Tower
72.9# Per Sq. Ft. On 1½ Times The Projected Area Of Steel In One Face Of Tower.

VERTICAL
990# At Each Ground Wire Support.
900# At Each Conductor Support.
Dead Weight Of Tower

Tower To Withstand Above Combined Loads Without Failure.

4-4×4×5/16 — 4-3×3×5/16 — 4-3×3×1/4 — 4-2½×2½×1/4 — 4-2½×2½×5/16 — 4-3×3×3/8 — 4-3½×3½×5/16 — 4-4×4×3/8

4-4×4×5/16 — L4-4×4-0.8-1⅛" Hole — G.W. Broken Long. — G.W. Broken Trans. — U-Bolts 4 Units With Cotters — ⅞" Hole — 2" IR

Trans. 23.3 — Vert. 23.3 — Long. 5.7 — Vert. 5.7 — Trans. 3.3 — Trans. 3.3 — Vert. 2.1 — Dead 33.9

Trans. 6.0 — Trans. 6.0 — Vert. 4.3 — Trans. 2.9 — Trans. 2.0 — Dead 35.0

Trans. 15.9 — Vert. 1.5 — Dead 1.6 — 48.6

Plan BB — Plan AA — Plan GG

Concrete Anchor — Earth Anchor

Max. Pressure on Earth 1500#/s.f.

Reactions per Post
Down 57000
Up 48000

Transverse One G. Wire Broken L = 3000#/s.f.

Longitudinal One G. Wire Broken L = 3000#/s.f.

Torque + Transverse at Waist Top Cond. Broken L = 1.3333 #/s.f. 4281

Torque + Longitudinal at Waist Both Cond. Broken L = 3000#/s.f. 5127

Concrete Anchor

9 Ft. Extension

DO NOT USE FOR CONSTRUCTION!

5/8" Dia. Bolts P-81-1544-A

PROPOSAL NO.		REVISIONS		
PROPOSAL	DATE	No.	REVISED FROM—	DATE
		1		4/14/61

THIS DRAWING AND THE INFORMATION IT CONTAINS ARE THE PROPERTY OF THE BLAW-KNOX COMPANY. IT IS NOT TO BE TRACED OR COPIED, NOR IS THE INFORMATION TO BE MISUSED IN ANY WAY.

BLAW-KNOX DIVISION
OF BLAW-KNOX COMPANY
PITTSBURGH

Suspension Tower
110 KV Double Circuit
Florida Power Corp.

In Charge of W.M.M.
Made K.S.
Chk'd
Appr'd
Date 3-15-61
Scale 1/2

CONTRACT KA1250

DRAWING No. P 81-1544-F

Appendix C: Weather Data

KMCF Weather data for September 10 2017											
Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:13 AM	78.8 °F	78.8 °F	100%	29.80 in	10.0 mi	ENE	16.1 mph	21.9 mph	N/A		Mostly Cloudy
12:58 AM	78.6 °F	78.6 °F	100%	29.79 in	10.0 mi	ENE	16.1 mph	-	N/A		Mostly Cloudy
1:09 AM	78.8 °F	78.8 °F	100%	29.79 in	6.0 mi	ENE	17.3 mph	21.9 mph	N/A	Rain	Light Rain
1:10 AM	78.8 °F	78.8 °F	100%	29.79 in	6.0 mi	ENE	16.1 mph	21.9 mph	N/A	Rain	Heavy Rain
1:30 AM	77.0 °F	77.0 °F	100%	29.78 in	10.0 mi	ENE	16.1 mph	19.6 mph	N/A		Mostly Cloudy
1:58 AM	77.0 °F	77.0 °F	100%	29.78 in	10.0 mi	NE	13.8 mph	-	0.04 in		Mostly Cloudy
2:28 AM	77.0 °F	77.0 °F	100%	29.77 in	10.0 mi	ENE	13.8 mph	-	N/A		Mostly Cloudy
2:53 AM	77.0 °F	77.0 °F	100%	29.76 in	10.0 mi	ENE	10.4 mph	-	N/A		Overcast
2:58 AM	77.7 °F	77.7 °F	100%	29.76 in	10.0 mi	ENE	12.7 mph	-	N/A		Overcast
3:33 AM	78.8 °F	78.8 °F	100%	29.74 in	10.0 mi	East	20.7 mph	26.5 mph	N/A		Mostly Cloudy
3:38 AM	78.8 °F	78.8 °F	100%	29.74 in	10.0 mi	East	20.7 mph	26.5 mph	N/A		Mostly Cloudy
3:58 AM	78.6 °F	78.1 °F	98%	29.73 in	10.0 mi	East	21.9 mph	27.6 mph	N/A		Mostly Cloudy
4:36 AM	78.8 °F	78.8 °F	100%	29.73 in	10.0 mi	East	23.0 mph	28.8 mph	N/A	Rain	Light Rain
4:58 AM	77.7 °F	77.7 °F	100%	29.73 in	10.0 mi	East	20.7 mph	26.5 mph	0.00 in		Light Drizzle
4:59 AM	77.0 °F	77.0 °F	100%	29.73 in	10.0 mi	East	19.6 mph	26.5 mph	N/A		Clear
5:07 AM	77.0 °F	77.0 °F	100%	29.73 in	10.0 mi	East	21.9 mph	28.8 mph	N/A	Rain	Light Rain
5:32 AM	77.0 °F	77.0 °F	100%	29.73 in	10.0 mi	East	20.7 mph	28.8 mph	N/A		Partly Cloudy
5:33 AM	77.0 °F	77.0 °F	100%	29.73 in	10.0 mi	East	20.7 mph	-	N/A		Light Drizzle
5:58 AM	77.2 °F	77.2 °F	100%	29.73 in	10.0 mi	East	23.0 mph	-	0.00 in	Rain	Light Rain
6:58 AM	76.6 °F	76.6 °F	100%	29.71 in	10.0 mi	ENE	23.0 mph	29.9 mph	0.01 in	Rain	Light Rain
7:03 AM	77.0 °F	77.0 °F	100%	29.71 in	10.0 mi	East	23.0 mph	29.9 mph	N/A		Partly Cloudy
7:58 AM	76.5 °F	76.5 °F	100%	29.71 in	10.0 mi	ENE	21.9 mph	27.6 mph	0.00 in		Clear
8:09 AM	77.0 °F	77.0 °F	100%	29.72 in	10.0 mi	ENE	18.4 mph	29.9 mph	N/A	Rain	Light Rain
8:58 AM	75.7 °F	75.7 °F	100%	29.72 in	5.0 mi	ENE	19.6 mph	27.6 mph	0.06 in	Rain	Rain
9:26 AM	75.2 °F	75.2 °F	100%	29.73 in	5.0 mi	ENE	18.4 mph	26.5 mph	N/A	Rain	Rain
9:36 AM	77.0 °F	77.0 °F	100%	29.73 in	6.0 mi	ENE	19.6 mph	26.5 mph	N/A	Rain	Rain
9:41 AM	77.0 °F	77.0 °F	100%	29.73 in	5.0 mi	ENE	17.3 mph	26.5 mph	N/A	Rain	Rain
9:51 AM	77.0 °F	77.0 °F	100%	29.73 in	5.0 mi	ENE	18.4 mph	24.2 mph	N/A	Rain	Light Rain
9:56 AM	77.0 °F	77.0 °F	100%	29.73 in	5.0 mi	ENE	18.4 mph	24.2 mph	N/A	Rain	Light Rain
9:58 AM	76.5 °F	76.5 °F	100%	29.73 in	5.0 mi	ENE	17.3 mph	24.2 mph	0.14 in	Rain	Light Rain
10:08 AM	77.0 °F	77.0 °F	100%	29.73 in	4.0 mi	ENE	17.3 mph	26.5 mph	N/A	Rain	Rain
10:13 AM	77.0 °F	77.0 °F	100%	29.73 in	3.0 mi	ENE	19.6 mph	25.3 mph	N/A	Rain	Rain
10:18 AM	77.0 °F	77.0 °F	100%	29.73 in	3.0 mi	ENE	19.6 mph	27.6 mph	N/A	Rain	Heavy Rain
10:23 AM	77.0 °F	77.0 °F	100%	29.73 in	3.0 mi	ENE	23.0 mph	28.8 mph	N/A	Rain	Rain
10:48 AM	77.0 °F	77.0 °F	100%	29.72 in	0.5 mi	East	26.5 mph	33.4 mph	N/A	Fog , Rain	Heavy Rain
10:53 AM	77.0 °F	77.0 °F	100%	29.72 in	0.5 mi	East	18.4 mph	33.4 mph	N/A	Fog , Rain	Heavy Rain
10:58 AM	77.0 °F	77.0 °F	100%	29.72 in	1.2 mi	East	25.3 mph	33.4 mph	0.37 in	Rain	Rain
11:03 AM	77.0 °F	77.0 °F	100%	29.72 in	6.0 mi	East	23.0 mph	32.2 mph	N/A	Rain	Light Rain
11:08 AM	77.0 °F	77.0 °F	100%	29.72 in	7.0 mi	East	24.2 mph	29.9 mph	N/A	Rain	Light Rain
11:13 AM	77.0 °F	77.0 °F	100%	29.71 in	8.0 mi	East	26.5 mph	35.7 mph	N/A	Rain	Light Rain
11:58 AM	76.6 °F	76.6 °F	100%	29.70 in	3.0 mi	ENE	27.6 mph	38.0 mph	0.07 in	Rain	Rain
12:03 PM	75.2 °F	75.2 °F	100%	29.70 in	2.0 mi	East	32.2 mph	38.0 mph	N/A	Rain	Heavy Rain
12:13 PM	75.2 °F	75.2 °F	100%	29.69 in	4.0 mi	East	25.3 mph	38.0 mph	N/A	Rain	Light Rain
12:58 PM	74.3 °F	74.3 °F	100%	29.66 in	10.0 mi	ENE	26.5 mph	38.0 mph	0.09 in	Rain	Light Rain

KMCF Weather data for September 10 2017											
Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
1:17 PM	73.4 °F	73.4 °F	100%	29.65 in	7.0 mi	ENE	25.3 mph	39.1 mph	N/A		Mostly Cloudy
1:24 PM	73.4 °F	73.4 °F	100%	29.64 in	8.0 mi	ENE	25.3 mph	39.1 mph	N/A	Rain	Light Rain
1:56 PM	73.4 °F	73.4 °F	100%	29.63 in	8.0 mi	ENE	32.2 mph	43.7 mph	N/A		Mostly Cloudy
1:58 PM	73.4 °F	73.4 °F	100%	29.62 in	8.0 mi	ENE	32.2 mph	43.7 mph	0.03 in		Overcast
2:04 PM	73.4 °F	73.4 °F	100%	29.61 in	7.0 mi	ENE	27.6 mph	42.6 mph	N/A	Rain	Light Rain
2:15 PM	73.4 °F	73.4 °F	100%	29.60 in	10.0 mi	ENE	28.8 mph	38.0 mph	N/A		Overcast
2:19 PM	73.4 °F	73.4 °F	100%	29.60 in	10.0 mi	NE	25.3 mph	38.0 mph	N/A	Rain	Light Rain
2:58 PM	73.2 °F	73.2 °F	100%	29.57 in	3.0 mi	NE	20.7 mph	40.3 mph	0.09 in	Rain	Heavy Rain
3:14 PM	73.4 °F	73.4 °F	100%	29.54 in	10.0 mi	NE	26.5 mph	34.5 mph	N/A		Overcast
3:16 PM	73.4 °F	73.4 °F	100%	29.53 in	9.0 mi	NE	20.7 mph	34.5 mph	N/A	Rain	Rain
3:52 PM	73.4 °F	73.4 °F	100%	29.51 in	3.0 mi	NE	24.2 mph	38.0 mph	N/A	Rain	Heavy Rain
3:58 PM	73.2 °F	73.2 °F	100%	29.50 in	4.0 mi	NE	25.3 mph	36.8 mph	0.05 in	Rain	Rain
4:03 PM	73.4 °F	73.4 °F	100%	29.50 in	5.0 mi	NE	24.2 mph	36.8 mph	N/A	Rain	Rain
4:07 PM	73.4 °F	73.4 °F	100%	29.50 in	2.5 mi	NE	29.9 mph	47.2 mph	N/A	Rain	Heavy Rain
4:12 PM	73.4 °F	73.4 °F	100%	29.50 in	2.0 mi	NE	29.9 mph	47.2 mph	N/A	Rain	Rain
4:17 PM	73.4 °F	73.4 °F	100%	29.49 in	3.0 mi	NE	25.3 mph	43.7 mph	N/A	Rain	Heavy Rain
4:22 PM	73.4 °F	73.4 °F	100%	29.48 in	2.5 mi	NE	21.9 mph	42.6 mph	N/A	Rain	Heavy Rain
4:32 PM	73.4 °F	73.4 °F	100%	29.47 in	3.0 mi	NE	25.3 mph	38.0 mph	N/A	Rain	Heavy Rain
4:57 PM	73.4 °F	73.4 °F	100%	29.45 in	7.0 mi	NE	20.7 mph	40.3 mph	N/A	Rain	Light Rain
4:58 PM	73.4 °F	73.4 °F	100%	29.45 in	7.0 mi	NE	21.9 mph	40.3 mph	0.20 in	Rain	Light Rain
5:13 PM	73.4 °F	73.4 °F	100%	29.44 in	5.0 mi	NE	26.5 mph	42.6 mph	N/A	Rain	Heavy Rain
5:28 PM	73.4 °F	73.4 °F	100%	29.42 in	2.5 mi	NE	21.9 mph	35.7 mph	N/A	Rain	Heavy Rain
5:38 PM	73.4 °F	73.4 °F	100%	29.41 in	4.0 mi	NNE	25.3 mph	40.3 mph	N/A	Rain	Rain
5:48 PM	73.4 °F	73.4 °F	100%	29.41 in	2.5 mi	NE	25.3 mph	43.7 mph	N/A	Rain	Heavy Rain
5:53 PM	73.4 °F	73.4 °F	100%	29.40 in	2.5 mi	NE	26.5 mph	40.3 mph	N/A	Rain	Heavy Rain
5:58 PM	73.4 °F	73.4 °F	100%	29.39 in	3.0 mi	NE	19.6 mph	40.3 mph	0.19 in	Rain	Heavy Rain
6:11 PM	73.4 °F	73.4 °F	100%	29.37 in	3.0 mi	NE	25.3 mph	39.1 mph	N/A	Rain	Heavy Rain
6:21 PM	73.4 °F	73.4 °F	100%	29.37 in	1.8 mi	NE	24.2 mph	44.9 mph	N/A	Rain	Heavy Rain
6:41 PM	73.4 °F	73.4 °F	100%	29.32 in	1.5 mi	NE	27.6 mph	42.6 mph	N/A	Rain	Heavy Rain
6:44 PM	73.4 °F	73.4 °F	100%	29.32 in	1.5 mi	NE	23.0 mph	42.6 mph	N/A	Rain	Heavy Rain
6:49 PM	73.4 °F	73.4 °F	100%	29.31 in	2.0 mi	NE	27.6 mph	40.3 mph	N/A	Rain	Heavy Rain
6:54 PM	73.4 °F	73.4 °F	100%	29.31 in	1.5 mi	NE	26.5 mph	39.1 mph	N/A	Rain	Heavy Rain
6:58 PM	73.4 °F	73.4 °F	100%	29.30 in	1.2 mi	NE	29.9 mph	42.6 mph	0.38 in	Rain	Heavy Rain
7:03 PM	73.4 °F	73.4 °F	100%	29.30 in	1.2 mi	NE	26.5 mph	44.9 mph	N/A	Rain	Heavy Rain
7:13 PM	73.4 °F	73.4 °F	100%	29.28 in	1.0 mi	NE	27.6 mph	46.0 mph	N/A	Rain	Heavy Rain
7:23 PM	73.4 °F	73.4 °F	100%	29.28 in	1.5 mi	NE	28.8 mph	40.3 mph	N/A	Rain	Heavy Rain
7:28 PM	73.4 °F	73.4 °F	100%	29.27 in	1.5 mi	NE	32.2 mph	48.3 mph	N/A	Rain	Heavy Rain
7:33 PM	73.4 °F	73.4 °F	100%	29.26 in	1.2 mi	NE	29.9 mph	48.3 mph	N/A	Rain	Heavy Rain
7:38 PM	73.4 °F	73.4 °F	100%	29.26 in	1.5 mi	NE	27.6 mph	48.3 mph	N/A	Rain	Heavy Rain
7:46 PM	73.4 °F	73.4 °F	100%	29.24 in	1.5 mi	NNE	26.5 mph	44.9 mph	N/A	Rain	Heavy Rain
7:58 PM	72.9 °F	72.9 °F	100%	29.22 in	1.8 mi	NE	28.8 mph	52.9 mph	0.60 in	Rain	Heavy Rain
8:00 PM	73.4 °F	73.4 °F	100%	29.21 in	2.0 mi	NE	33.4 mph	52.9 mph	N/A	Rain	Heavy Rain
8:01 PM	73.4 °F	73.4 °F	100%	29.21 in	2.0 mi	NNE	34.5 mph	52.9 mph	N/A	Rain	Heavy Rain
8:05 PM	73.4 °F	73.4 °F	100%	29.20 in	2.0 mi	NNE	26.5 mph	51.8 mph	N/A	Rain	Heavy Rain

KMCF Weather data for September 10 2017											
Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:10 PM	73.4 °F	73.4 °F	100%	29.19 in	1.8 mi	NE	32.2 mph	51.8 mph	N/A	Rain	Heavy Rain
8:25 PM	73.4 °F	73.4 °F	100%	29.15 in	2.5 mi	NNE	35.7 mph	52.9 mph	N/A	Rain	Heavy Rain
8:35 PM	73.4 °F	73.4 °F	100%	29.15 in	1.5 mi	NE	28.8 mph	44.9 mph	N/A	Rain	Heavy Rain
8:39 PM	73.4 °F	73.4 °F	100%	29.14 in	1.5 mi	NE	26.5 mph	43.7 mph	N/A	Rain	Heavy Rain
8:44 PM	73.4 °F	73.4 °F	100%	29.13 in	1.2 mi	NNE	28.8 mph	43.7 mph	N/A	Rain	Heavy Rain
8:47 PM	73.4 °F	73.4 °F	100%	29.13 in	1.0 mi	NNE	31.1 mph	48.3 mph	N/A	Rain	Heavy Rain
8:52 PM	73.4 °F	73.4 °F	100%	29.13 in	1.0 mi	NE	33.4 mph	54.1 mph	N/A	Rain	Heavy Rain
8:57 PM	73.4 °F	73.4 °F	100%	29.12 in	1.2 mi	NE	28.8 mph	54.1 mph	N/A	Rain	Heavy Rain
8:58 PM	73.2 °F	73.2 °F	100%	29.11 in	1.2 mi	NE	32.2 mph	54.1 mph	0.80 in	Rain	Heavy Rain
9:03 PM	73.4 °F	73.4 °F	100%	29.10 in	1.0 mi	NNE	26.5 mph	50.6 mph	N/A	Rain	Heavy Rain
9:08 PM	73.4 °F	73.4 °F	100%	29.10 in	1.0 mi	NNE	29.9 mph	50.6 mph	N/A	Rain	Heavy Rain
9:09 PM	73.4 °F	73.4 °F	100%	29.10 in	1.0 mi	NNE	36.8 mph	51.8 mph	N/A	Rain	Heavy Rain
9:14 PM	73.4 °F	73.4 °F	100%	29.09 in	1.5 mi	NNE	27.6 mph	51.8 mph	N/A	Rain	Heavy Rain
9:19 PM	73.4 °F	73.4 °F	100%	29.08 in	1.8 mi	NNE	27.6 mph	51.8 mph	N/A	Rain	Heavy Rain
9:21 PM	73.4 °F	73.4 °F	100%	29.08 in	2.0 mi	NNE	29.9 mph	48.3 mph	N/A	Rain	Heavy Rain
9:37 PM	71.6 °F	71.6 °F	100%	29.06 in	3.0 mi	NNE	29.9 mph	48.3 mph	N/A	Rain	Heavy Rain
9:47 PM	73.4 °F	73.4 °F	100%	29.05 in	2.5 mi	NE	26.5 mph	44.9 mph	N/A	Rain	Heavy Rain
9:52 PM	73.4 °F	73.4 °F	100%	29.03 in	1.5 mi	NNE	26.5 mph	46.0 mph	N/A	Rain	Heavy Rain
9:58 PM	72.9 °F	72.9 °F	100%	29.02 in	1.2 mi	NNE	28.8 mph	46.0 mph	0.76 in	Rain	Heavy Rain
10:03 PM	73.4 °F	73.4 °F	100%	29.00 in	2.0 mi	NNE	29.9 mph	50.6 mph	N/A	Rain	Heavy Rain
10:08 PM	73.4 °F	73.4 °F	100%	28.99 in	2.5 mi	NNE	28.8 mph	50.6 mph	N/A	Rain	Heavy Rain
10:23 PM	73.4 °F	73.4 °F	100%	28.97 in	3.0 mi	NNE	27.6 mph	46.0 mph	N/A	Rain	Heavy Rain
10:28 PM	73.4 °F	73.4 °F	100%	28.96 in	4.0 mi	NNE	27.6 mph	46.0 mph	N/A	Rain	Heavy Rain
10:36 PM	73.4 °F	73.4 °F	100%	28.95 in	4.0 mi	North	-	-	N/A		Overcast
10:41 PM	73.4 °F	73.4 °F	100%	-	-	North	-	-	N/A		Unknown
10:58 PM	-	-	N/A%	-	-	North	-	-	N/A		Unknown

KTPF Weather data for September 10 2017												
Time (EDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:15 AM	80.6 °F	87.1 °F	77.0 °F	89%	29.80 in	10.0 mi	NE	17.3 mph	-	N/A		Scattered Clouds
12:35 AM	80.6 °F	87.1 °F	77.0 °F	89%	29.80 in	10.0 mi	NE	16.1 mph	20.7 mph	N/A		Mostly Cloudy
12:55 AM	80.6 °F	88.1 °F	78.8 °F	94%	29.79 in	10.0 mi	NE	15.0 mph	21.9 mph	N/A		Mostly Cloudy
1:15 AM	80.6 °F	88.1 °F	78.8 °F	94%	29.79 in	10.0 mi	NE	16.1 mph	20.7 mph	N/A		Mostly Cloudy
1:35 AM	80.6 °F	88.1 °F	78.8 °F	94%	29.78 in	10.0 mi	NE	16.1 mph	20.7 mph	N/A		Scattered Clouds
1:55 AM	80.6 °F	88.1 °F	78.8 °F	94%	29.78 in	10.0 mi	NE	9.2 mph	13.8 mph	N/A		Overcast
2:15 AM	80.6 °F	89.3 °F	80.6 °F	100%	29.78 in	10.0 mi	NE	11.5 mph	-	N/A		Overcast
2:35 AM	80.6 °F	89.3 °F	80.6 °F	100%	29.77 in	10.0 mi	NE	10.4 mph	18.4 mph	N/A		Overcast
2:55 AM	80.6 °F	89.3 °F	80.6 °F	100%	29.76 in	10.0 mi	ENE	10.4 mph	-	N/A		Overcast
3:15 AM	80.6 °F	89.3 °F	80.6 °F	100%	29.75 in	10.0 mi	ENE	10.4 mph	-	N/A		Overcast
3:35 AM	82.4 °F	90.9 °F	77.0 °F	84%	29.74 in	10.0 mi	East	21.9 mph	27.6 mph	N/A		Scattered Clouds
3:55 AM	80.6 °F	87.1 °F	77.0 °F	89%	29.73 in	10.0 mi	ENE	17.3 mph	24.2 mph	N/A		Clear
4:15 AM	80.6 °F	87.1 °F	77.0 °F	89%	29.73 in	10.0 mi	ENE	20.7 mph	26.5 mph	N/A		Scattered Clouds
4:35 AM	80.6 °F	87.1 °F	77.0 °F	89%	29.73 in	10.0 mi	ENE	16.1 mph	-	N/A	Rain	Light Rain
4:55 AM	78.8 °F	-	78.8 °F	100%	29.73 in	10.0 mi	ENE	19.6 mph	25.3 mph	N/A		Light Drizzle
5:15 AM	80.6 °F	89.3 °F	80.6 °F	100%	29.73 in	10.0 mi	ENE	15.0 mph	26.5 mph	N/A		Light Drizzle
5:35 AM	80.6 °F	89.3 °F	80.6 °F	100%	29.74 in	10.0 mi	ENE	17.3 mph	21.9 mph	N/A	Rain	Light Rain
5:55 AM	80.6 °F	89.3 °F	80.6 °F	100%	29.74 in	7.0 mi	ENE	19.6 mph	26.5 mph	N/A	Rain	Light Rain
6:15 AM	78.8 °F	-	78.8 °F	100%	29.74 in	10.0 mi	NE	18.4 mph	26.5 mph	N/A	Rain	Light Rain
6:35 AM	-	-	-	N/A%	29.73 in	10.0 mi	ENE	15.0 mph	25.3 mph	0.01 in	Rain	Light Rain
6:55 AM	-	-	-	N/A%	29.72 in	10.0 mi	ENE	13.8 mph	26.5 mph	0.01 in	Rain	Light Rain
7:15 AM	-	-	-	N/A%	29.71 in	10.0 mi	NE	16.1 mph	21.9 mph	N/A		Scattered Clouds
7:35 AM	78.8 °F	-	78.8 °F	100%	29.71 in	10.0 mi	NE	17.3 mph	24.2 mph	N/A		Clear
8:15 AM	-	-	-	N/A%	29.72 in	10.0 mi	NE	17.3 mph	24.2 mph	0.01 in	Rain	Light Rain
8:35 AM	-	-	-	N/A%	29.73 in	7.0 mi	NE	19.6 mph	25.3 mph	0.02 in	Rain	Light Rain
8:55 AM	-	-	-	N/A%	29.73 in	7.0 mi	NE	21.9 mph	25.3 mph	0.06 in	Rain	Rain
9:15 AM	-	-	-	N/A%	29.73 in	7.0 mi	NE	15.0 mph	26.5 mph	0.03 in	Rain	Light Rain
9:35 AM	-	-	-	N/A%	29.73 in	7.0 mi	NE	17.3 mph	23.0 mph	0.07 in	Rain	Light Rain
9:55 AM	-	-	-	N/A%	29.73 in	10.0 mi	NE	20.7 mph	26.5 mph	0.08 in	Rain	Light Rain
10:15 AM	-	-	-	N/A%	29.73 in	7.0 mi	NE	19.6 mph	23.0 mph	0.01 in	Rain	Light Rain
10:35 AM	-	-	-	N/A%	29.73 in	7.0 mi	NE	17.3 mph	27.6 mph	0.03 in	Rain	Rain
10:55 AM	-	-	-	N/A%	29.72 in	10.0 mi	ENE	16.1 mph	29.9 mph	0.05 in	Rain	Light Rain
11:15 AM	80.6 °F	89.3 °F	80.6 °F	100%	29.73 in	7.0 mi	ENE	16.1 mph	29.9 mph	N/A	Rain	Light Rain
11:35 AM	-	-	-	N/A%	29.73 in	5.0 mi	ENE	16.1 mph	25.3 mph	0.03 in	Rain	Light Rain
11:55 AM	-	-	-	N/A%	29.72 in	1.5 mi	ENE	21.9 mph	31.1 mph	0.18 in	Rain	Light Rain
12:15 PM	77.0 °F	-	77.0 °F	100%	29.70 in	3.0 mi	ENE	21.9 mph	31.1 mph	0.03 in	Rain	Light Rain
12:35 PM	77.0 °F	-	77.0 °F	100%	29.69 in	7.0 mi	NE	21.9 mph	33.4 mph	0.03 in	Rain	Light Rain
12:55 PM	-	-	-	N/A%	29.67 in	7.0 mi	NE	29.9 mph	40.3 mph	0.05 in	Rain	Light Rain
1:15 PM	77.0 °F	-	77.0 °F	100%	29.66 in	4.0 mi	NE	25.3 mph	32.2 mph	0.02 in	Rain	Light Rain
1:35 PM	-	-	-	N/A%	29.65 in	10.0 mi	NE	24.2 mph	32.2 mph	0.05 in	Rain	Light Rain
1:55 PM	-	-	-	N/A%	29.63 in	3.0 mi	NE	25.3 mph	36.8 mph	0.09 in	Rain	Light Rain
2:15 PM	-	-	-	N/A%	29.61 in	10.0 mi	NE	25.3 mph	35.7 mph	N/A		Light Drizzle
2:35 PM	-	-	-	N/A%	29.60 in	7.0 mi	NE	24.2 mph	32.2 mph	0.01 in		Light Drizzle
2:55 PM	-	-	-	N/A%	29.57 in	4.0 mi	NNE	24.2 mph	35.7 mph	0.07 in	Rain	Rain
3:15 PM	-	-	-	N/A%	29.54 in	10.0 mi	NNE	23.0 mph	35.7 mph	0.01 in	Rain	Light Rain
3:35 PM	-	-	-	N/A%	29.53 in	7.0 mi	NNE	25.3 mph	36.8 mph	0.02 in	Rain	Light Rain
3:55 PM	-	-	-	N/A%	29.52 in	4.0 mi	NE	27.6 mph	38.0 mph	0.06 in	Rain	Light Rain

KTPF Weather data for September 10 2017												
Time (EDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
4:15 PM	-	-	-	N/A%	29.49 in	3.0 mi	NNE	23.0 mph	39.1 mph	0.08 in	Rain	Rain
4:35 PM	-	-	-	N/A%	29.47 in	5.0 mi	NNE	21.9 mph	38.0 mph	0.15 in	Rain	Light Rain
4:55 PM	-	-	-	N/A%	29.46 in	7.0 mi	NNE	20.7 mph	36.8 mph	0.18 in	Rain	Light Rain
5:15 PM	-	-	-	N/A%	29.45 in	5.0 mi	NNE	28.8 mph	41.4 mph	0.04 in	Rain	Rain
5:35 PM	-	-	-	N/A%	29.42 in	5.0 mi	NNE	26.5 mph	46.0 mph	0.10 in	Rain	Rain
5:55 PM	-	-	-	N/A%	29.39 in	4.0 mi	NNE	25.3 mph	39.1 mph	0.18 in	Rain	Heavy Rain
6:15 PM	-	-	-	N/A%	29.38 in	3.0 mi	NNE	27.6 mph	43.7 mph	0.07 in	Rain	Rain
6:35 PM	-	-	-	N/A%	29.34 in	2.5 mi	NNE	27.6 mph	41.4 mph	0.21 in	Rain	Heavy Rain
6:55 PM	-	-	-	N/A%	29.30 in	2.5 mi	NNE	29.9 mph	42.6 mph	0.34 in	Rain	Rain
7:15 PM	-	-	-	N/A%	29.29 in	2.0 mi	NNE	28.8 mph	47.2 mph	0.17 in	Rain	Heavy Rain
7:35 PM	-	-	-	N/A%	29.26 in	1.8 mi	NNE	29.9 mph	47.2 mph	0.38 in	Rain	Heavy Rain
7:55 PM	-	-	-	N/A%	29.22 in	1.8 mi	NNE	29.9 mph	46.0 mph	0.62 in	Rain	Heavy Rain
8:15 PM	-	-	-	N/A%	29.16 in	2.0 mi	NNE	32.2 mph	47.2 mph	0.13 in	Rain	Heavy Rain
8:35 PM	-	-	-	N/A%	29.15 in	1.8 mi	NNE	27.6 mph	47.2 mph	0.32 in	Rain	Heavy Rain
8:55 PM	-	-	-	N/A%	29.12 in	1.5 mi	NNE	33.4 mph	50.6 mph	0.70 in	Rain	Heavy Rain
9:15 PM	-	-	-	N/A%	29.09 in	1.8 mi	NNE	33.4 mph	43.7 mph	0.22 in	Rain	Heavy Rain
9:35 PM	-	-	-	N/A%	29.06 in	2.5 mi	NNE	28.8 mph	40.3 mph	0.35 in	Rain	Heavy Rain
9:55 PM	-	-	-	N/A%	29.02 in	1.5 mi	North	28.8 mph	50.6 mph	0.59 in	Rain	Rain
10:15 PM	-	-	-	N/A%	28.96 in	2.0 mi	NNE	29.9 mph	40.3 mph	0.14 in	Rain	Rain
10:35 PM	-	-	-	N/A%	-	-	North	29.9 mph	50.6 mph	0.26 in	Rain	Rain
10:55 PM	-	-	-	N/A%	28.91 in	2.0 mi	North	26.5 mph	49.5 mph	0.44 in	Rain	Heavy Rain
11:15 PM	-	-	-	N/A%	28.85 in	2.0 mi	North	28.8 mph	55.2 mph	0.13 in	Rain	Heavy Rain
11:35 PM	-	-	-	N/A%	28.82 in	1.8 mi	North	24.2 mph	42.6 mph	0.37 in	Rain	Heavy Rain
11:55 PM	-	-	-	N/A%	28.77 in	2.5 mi	North	25.3 mph	40.3 mph	0.51 in	Rain	Heavy Rain

KZPH Weather data for September 10 2017											
Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:15 AM	77.9 °F	73.4 °F	86%	29.83 in	10.0 mi	NNE	12.7 mph	17.3 mph	N/A		Scattered Clouds
12:35 AM	77.9 °F	73.4 °F	86%	29.83 in	10.0 mi	NNE	11.5 mph	-	N/A		Scattered Clouds
12:55 AM	78.1 °F	73.6 °F	86%	29.83 in	10.0 mi	NNE	9.2 mph	-	N/A		Mostly Cloudy
1:15 AM	76.6 °F	74.5 °F	93%	29.82 in	7.0 mi	ENE	5.8 mph	-	0.02 in	Rain	Light Rain
1:35 AM	76.5 °F	74.5 °F	94%	29.82 in	10.0 mi	NNE	6.9 mph	-	0.02 in	Rain	Light Rain
1:55 AM	76.5 °F	74.7 °F	94%	29.81 in	10.0 mi	NNE	8.1 mph	-	0.02 in		Overcast
2:15 AM	76.5 °F	74.7 °F	94%	29.80 in	10.0 mi	NNE	11.5 mph	-	N/A		Overcast
2:35 AM	76.5 °F	75.0 °F	95%	29.80 in	10.0 mi	NNE	8.1 mph	-	N/A	Rain	Rain
2:55 AM	76.5 °F	75.2 °F	96%	29.80 in	10.0 mi	NE	5.8 mph	-	0.01 in		Mostly Cloudy
3:15 AM	77.9 °F	73.9 °F	88%	29.79 in	10.0 mi	ENE	15.0 mph	21.9 mph	N/A		Mostly Cloudy
3:35 AM	77.9 °F	73.4 °F	86%	29.79 in	10.0 mi	ENE	9.2 mph	20.7 mph	N/A		Scattered Clouds
3:55 AM	77.4 °F	73.4 °F	88%	29.77 in	10.0 mi	ENE	6.9 mph	-	N/A		Mostly Cloudy
4:15 AM	77.5 °F	73.8 °F	88%	29.76 in	10.0 mi	ENE	12.7 mph	17.3 mph	N/A		Scattered Clouds
4:35 AM	77.7 °F	73.4 °F	86%	29.76 in	10.0 mi	ENE	9.2 mph	-	N/A		Clear
4:55 AM	77.9 °F	74.1 °F	88%	29.76 in	10.0 mi	East	12.7 mph	18.4 mph	N/A		Scattered Clouds
5:15 AM	77.9 °F	74.3 °F	89%	29.76 in	10.0 mi	ENE	13.8 mph	21.9 mph	N/A		Light Drizzle
5:35 AM	77.9 °F	74.5 °F	89%	29.77 in	10.0 mi	ENE	13.8 mph	19.6 mph	N/A		Scattered Clouds
5:55 AM	77.5 °F	74.7 °F	91%	29.77 in	10.0 mi	NE	10.4 mph	20.7 mph	N/A	Rain	Light Rain
6:15 AM	77.0 °F	75.2 °F	94%	29.77 in	7.0 mi	NE	12.7 mph	-	0.02 in	Rain	Rain
6:35 AM	76.5 °F	75.2 °F	96%	29.78 in	7.0 mi	ENE	8.1 mph	17.3 mph	0.03 in	Rain	Rain
6:55 AM	75.9 °F	74.1 °F	94%	29.77 in	10.0 mi	ENE	9.2 mph	-	0.03 in	Rain	Light Rain
7:15 AM	75.4 °F	73.8 °F	95%	29.75 in	10.0 mi	NE	9.2 mph	-	N/A		Light Drizzle
7:35 AM	75.4 °F	74.3 °F	96%	29.75 in	10.0 mi	NE	9.2 mph	-	0.01 in		Light Drizzle
7:55 AM	75.6 °F	74.3 °F	96%	29.76 in	10.0 mi	NE	11.5 mph	-	0.01 in		Scattered Clouds
8:15 AM	75.7 °F	74.3 °F	95%	29.75 in	7.0 mi	NE	10.4 mph	16.1 mph	N/A	Rain	Light Rain
8:35 AM	76.1 °F	75.0 °F	96%	29.76 in	10.0 mi	NE	11.5 mph	18.4 mph	0.01 in	Rain	Rain
8:55 AM	76.6 °F	75.6 °F	96%	29.77 in	7.0 mi	NNE	12.7 mph	19.6 mph	0.01 in	Rain	Light Rain
9:15 AM	77.0 °F	75.6 °F	95%	29.77 in	5.0 mi	NNE	12.7 mph	20.7 mph	0.02 in	Rain	Light Rain
9:35 AM	77.0 °F	76.1 °F	97%	29.77 in	5.0 mi	NE	15.0 mph	20.7 mph	0.04 in	Rain	Light Rain
9:55 AM	77.0 °F	75.9 °F	96%	29.76 in	10.0 mi	NNE	13.8 mph	23.0 mph	0.04 in	Rain	Light Rain
10:15 AM	77.4 °F	76.1 °F	96%	29.77 in	7.0 mi	NE	15.0 mph	20.7 mph	0.01 in	Rain	Light Rain
10:35 AM	77.7 °F	76.3 °F	95%	29.76 in	7.0 mi	NE	15.0 mph	21.9 mph	0.02 in	Rain	Light Rain
10:55 AM	77.9 °F	76.5 °F	95%	29.76 in	10.0 mi	NNE	13.8 mph	19.6 mph	0.03 in	Rain	Light Rain
11:15 AM	78.1 °F	76.6 °F	95%	29.76 in	10.0 mi	NE	12.7 mph	17.3 mph	N/A	Rain	Light Rain
11:35 AM	77.9 °F	77.0 °F	97%	29.76 in	2.5 mi	East	9.2 mph	16.1 mph	0.11 in	Rain	Heavy Rain
11:55 AM	76.3 °F	74.8 °F	95%	29.76 in	1.2 mi	East	12.7 mph	17.3 mph	0.50 in	Rain	Heavy Rain
12:35 PM	73.0 °F	71.8 °F	96%	29.77 in	0.2 mi	ENE	18.4 mph	34.5 mph	1.23 in	Rain	Heavy Rain
12:55 PM	72.9 °F	71.6 °F	96%	29.75 in	3.0 mi	East	10.4 mph	25.3 mph	1.33 in	Rain	Rain
1:15 PM	73.8 °F	72.0 °F	94%	29.73 in	4.0 mi	ENE	19.6 mph	31.1 mph	0.05 in	Rain	Rain
1:35 PM	75.0 °F	72.9 °F	93%	29.71 in	7.0 mi	ENE	19.6 mph	31.1 mph	0.08 in	Rain	Light Rain
1:55 PM	74.7 °F	72.5 °F	93%	29.72 in	4.0 mi	ENE	18.4 mph	26.5 mph	0.11 in	Rain	Light Rain
2:15 PM	74.3 °F	71.8 °F	92%	29.69 in	5.0 mi	NE	15.0 mph	27.6 mph	0.02 in	Rain	Light Rain
2:35 PM	73.9 °F	71.6 °F	92%	29.68 in	7.0 mi	NE	18.4 mph	29.9 mph	0.03 in	Rain	Light Rain
2:55 PM	73.6 °F	71.8 °F	94%	29.66 in	7.0 mi	NE	19.6 mph	29.9 mph	0.05 in	Rain	Light Rain
3:15 PM	74.1 °F	72.3 °F	94%	29.64 in	10.0 mi	NNE	19.6 mph	28.8 mph	N/A	Rain	Light Rain
3:35 PM	74.3 °F	72.5 °F	94%	29.62 in	10.0 mi	NNE	19.6 mph	34.5 mph	N/A	Rain	Light Rain
3:55 PM	74.3 °F	72.9 °F	95%	29.60 in	7.0 mi	NNE	19.6 mph	31.1 mph	0.01 in	Rain	Light Rain

KZPH Weather data for September 10 2017											
Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
4:15 PM	74.3 °F	72.7 °F	95%	29.59 in	5.0 mi	NNE	20.7 mph	31.1 mph	0.02 in	Rain	Light Rain
4:35 PM	74.1 °F	72.9 °F	96%	29.56 in	5.0 mi	NNE	26.5 mph	34.5 mph	0.06 in	Rain	Light Rain
4:55 PM	73.9 °F	72.7 °F	96%	29.55 in	5.0 mi	NNE	24.2 mph	38.0 mph	0.08 in	Rain	Light Rain
5:15 PM	73.9 °F	72.9 °F	96%	29.52 in	4.0 mi	NNE	26.5 mph	34.5 mph	0.04 in	Rain	Rain
5:35 PM	74.3 °F	72.9 °F	95%	29.51 in	3.0 mi	NNE	24.2 mph	39.1 mph	0.07 in	Rain	Rain
5:55 PM	74.3 °F	73.0 °F	96%	29.50 in	4.0 mi	NNE	23.0 mph	31.1 mph	0.09 in	Rain	Rain
6:15 PM	74.3 °F	72.9 °F	95%	29.48 in	2.5 mi	NNE	28.8 mph	39.1 mph	0.02 in	Rain	Rain
6:35 PM	74.3 °F	73.2 °F	96%	29.46 in	3.0 mi	NNE	26.5 mph	38.0 mph	0.04 in	Rain	Rain
6:55 PM	74.3 °F	73.0 °F	96%	29.43 in	1.5 mi	NNE	26.5 mph	44.9 mph	0.06 in	Rain	Rain
7:15 PM	74.5 °F	73.2 °F	96%	29.39 in	1.8 mi	NNE	29.9 mph	41.4 mph	0.02 in	Rain	Rain
7:35 PM	73.9 °F	72.7 °F	96%	29.37 in	2.0 mi	NNE	29.9 mph	48.3 mph	0.04 in	Rain	Heavy Rain
7:55 PM	73.6 °F	72.5 °F	96%	29.34 in	1.8 mi	NNE	32.2 mph	42.6 mph	0.06 in	Rain	Rain
8:15 PM	73.9 °F	73.0 °F	97%	29.28 in	2.0 mi	NNE	31.1 mph	44.9 mph	0.02 in	Rain	Rain
8:35 PM	74.3 °F	73.6 °F	98%	29.25 in	1.5 mi	NNE	34.5 mph	48.3 mph	0.04 in	Rain	Rain
8:55 PM	73.4 °F	72.7 °F	98%	29.22 in	0.8 mi	NNE	42.6 mph	63.3 mph	0.06 in		Unknown
9:15 PM	73.4 °F	72.9 °F	98%	29.20 in	1.8 mi	NNE	33.4 mph	46.0 mph	0.02 in	Rain	Rain
9:35 PM	73.9 °F	73.6 °F	99%	29.18 in	2.0 mi	NNE	26.5 mph	40.3 mph	0.04 in	Rain	Rain
9:55 PM	75.2 °F	74.5 °F	98%	29.15 in	3.0 mi	NE	25.3 mph	48.3 mph	0.07 in	Rain	Light Rain
10:15 PM	75.6 °F	75.2 °F	99%	29.10 in	2.0 mi	NNE	40.3 mph	55.2 mph	0.02 in	Rain	Rain
10:35 PM	75.2 °F	74.5 °F	98%	29.07 in	3.0 mi	NNE	34.5 mph	49.5 mph	0.04 in	Rain	Light Rain
10:55 PM	-	-	N/A%	-	-	North	-	-	N/A		Overcast
11:15 PM	-	-	N/A%	-	-	North	-	-	N/A		Unknown
11:35 PM	-	-	N/A%	-	-	North	-	-	0.05 in		Unknown
11:55 PM	-	-	N/A%	-	-	North	-	-	N/A		Unknown

Appendix D: HG-160 Leg and Stub Angles





PICKETT
SURVEYING • ENGINEERING











BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: August 17, 2018

DUKE ENERGY FLORIDA, LLC'S RESPONSE TO
STAFF'S THIRD SET OF INTERROGATORIES (NOS. 28-29)

Duke Energy Florida, LLC ("DEF"), subject to and without waiving the contemporaneously served objections to these requests, responds to the Staff of the Florida Public Service Commission ("Staff") Third Set of Interrogatories to DEF (Nos. 28-29) as follows:

28. Please refer to Exhibit JC-1, Forensic Analysis of Storm Damage to DEF's Distribution System as a Result of Hurricane Irma ("Accenture Report)). Did Accenture Consulting perform a forensic analysis of storm damage to DEF's transmission system as a result of Hurricane Irma?

a. If not, did DEF or another company perform a forensic analysis of DEF's transmission system following Hurricane Irma?

b. If not, why not?

Answer:

Accenture Consulting did not perform a forensic analysis of storm damage to DEF's transmission system.

a. Pickett and Associates, Inc., performed a forensic analysis of failed structures on the Transmission system that met the following criteria.

- **Cascading failure of 5 or more structures**
- **Failed steel or concrete poles**
- **Failed dead-end or large angle structures**

Copies of these reports are produced in response to Staff's Second Request for Production, number 2.

b. N/A

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 25
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: Buckler (29)Matthews (28)

29. On page 18, lines 9-11 of his direct testimony, DEF Witness Buckler stated that DEF estimated that it has incurred at least $1.64 million in incremental accounts receivable charge-offs in the months of January, February, and March 2018.

a. Please provide an updated estimate of incremental account receivable charge-offs through the allowable recovery period ending May 31, 2018.

Answer:

DEF estimates it has incurred $2.143 million in incremental accounts receivable charge-offs for the period ending May 31, 2018.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF _____

I hereby certify that on this _____ day of August, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared ROBERT MATTHEWS, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number 28, of STAFF'S THIRD SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 28-29) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of August, 2018.

_____
ROBERT MATTHEWS

_____
Notary Public
State of Florida, at Large

My Commission Expires:

_____

AFFIDAVIT

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

I hereby certify that on this _____ day of August, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BRYAN BUCKLER, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number 29 of STAFF'S THIRD SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 28-29) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this _____ day of August, 2018.

_____
BRYAN BUCKLER

_____
Notary Public
State of Florida, at Large

My Commission Expires:
_____

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC	Docket No. 20170272-EI Dated: September 10, 2018

NOTICE OF FILING VERIFIED AFFIDAVITS

Duke Energy Florida, LLC, ("DEF") hereby gives notice of filing the verified affidavits of Bryan Buckler and Robert Matthews in support of DEF's Response to the Staff's Third Set of Interrogatories (Nos. 28-29), filed on August 17, 2018, via electronic mail to Rachael Dziechciarz, Office of General Counsel, this 10th day of September, 2018.

/s/ Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, FL 33701
T: 727. 820.4692
F: 727.820.5041
E: Dianne.Triplett@Duke-Energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 E. College Avenue, Suite 800
Tallahassee, FL 32301
T: 850.521.1428
F: 727.820.5041
E: Matthew.Bernier@Duke-Energy.com

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 10th day of September, 2018.

/s/ Matthew R. Bernier
Attorney

Rachael Dziechciarz Ashley Weisenfeld Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 RDziechc@psc.state.fl.us aweisenf@psc.state.fl.us J. R. Kelly / C. Rehwinkel Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com

AFFIDAVIT

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

I hereby certify that on this 20th day of August, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BRYAN BUCKLER, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number 29 of STAFF'S THIRD SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 28-29) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 20th day of August, 2018.

W. Bryan Buckler

BRYAN BUCKLER

Aloma M. Felder

Notary Public
State of ~~Florida, at Large~~ North Carolina

My Commission Expires:
July 21, 2020

ALOMA M. FELDER
NOTARY
PUBLIC
CABARRUS COUNTY, N. C.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF Seminole

I hereby certify that on this 5th day of ~~August~~ September, 2018, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared ROBERT MATTHEWS, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory number 28, of STAFF'S THIRD SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC (NOS. 28-29) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 5th day of ~~August~~ September, 2018.

ROBERT MATTHEWS

Notary Public
State of Florida, at Large

My Commission Expires:

KAROL ANN CARR
MY COMMISSION # GG010042
EXPIRES July 10, 2020
(407) 398-0153 FloridaNotaryService.com

FILED 5/20/2019
DOCUMENT NO. 04401-2019
FPSC - COMMISSION CLERK

Matthew R. Bernier
Associate General Counsel
Duke Energy Florida, LLC.

May 17, 2019

VIA ELECTRONIC FILING

Adam Teitzman, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: *Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate, by Duke Energy Florida, LLC; Docket No. 20170272-EI*

Dear Mr. Teitzman:

Please find enclosed for electronic filing, on behalf of Duke Energy Florida, LLC ("DEF"), DEF's Request for Confidential Classification filed in connection with the Deposition Transcript and Late-filed Exhibits for deposition held on March 14-15, 2019.

The filing includes the following:

- DEF's Request for Confidential Classification
- Slipsheet for confidential Exhibit A
- Slipsheet for Redacted Exhibit B
- Exhibit C (justification matrix), and
- Exhibit D (affidavit of Jason Cutliffe)

DEF's confidential Exhibit A that accompanies the above-referenced is being submitted under separate cover.

Thank you for your assistance in this matter. Please feel free to call me at (850) 521-1428 should you have any questions concerning this filing.

Respectfully,

s/Matthew R. Bernier

Matthew R. Bernier

MRB/mw
Enclosures

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 26
PARTY: DUKE ENERGY HEARING EXHBITS
DESCRIPTION: TR and EXH Deposition Duces Tecum of J Cutliffe, T Roebuck, A DeZonia, LaQuitta Ghent, B Sawyer, TFo...

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC

Docket No. 20170272-EI

Dated: May 15, 2019

DUKE ENERGY FLORIDA, LLC'S
REQUEST FOR CONFIDENTIAL CLASSIFICATION

Duke Energy Florida, LLC, ("DEF" or "Company"), pursuant to Section 366.093, Florida Statutes (F.S.), and Rule 25-22.006, Florida Administrative Code (F.A.C.), submits this Request for Confidential Classification for certain information contained in the Deposition Transcript and late filed exhibits from Deposition held on March 14 and 15, 2019. In support of this Request, DEF states:

1. Portions of the information provided in the Deposition Transcript and late filed exhibits, contain "proprietary confidential business information" under Section 366.093(3), Florida Statutes.

2. The following exhibits are included with this request:

(a) Sealed Composite Exhibit A is a package containing an unredacted copy of all the documents for which DEF seeks confidential treatment. Composite Exhibit A is being submitted separately in a sealed envelope labeled "CONFIDENTIAL." In the unredacted version, the information asserted to be confidential is highlighted in yellow.

(b) Composite Exhibit B is a package containing two copies of redacted versions of the documents for which the Company requests confidential classification. The specific

information for which confidential treatment is requested has been blocked out by opaque marker or other means.

(c) Exhibit C is a table which identifies by page and line the information for which DEF seeks confidential classification and the specific statutory bases for seeking confidential treatment.

(d) Exhibit D is an affidavit attesting to the confidential nature of information identified in this request.

3. As indicated in Exhibit C, the information for which DEF requests confidential classification is "proprietary confidential business information" within the meaning of Section 366.093(3), F.S. Specifically, the information contained in the Deposition transcript and late filed exhibits, specifically exhibit numbers 5 through 17, 19 through 20, and 22 through 29 relate to communications regarding confidential contractor invoices and rates involved in the restoration work in DEF's service territory and DEF's Storm Accounting Policies, Procedures and Guidelines, which include employee personnel information. The disclosure of which would impair the Company's ability to contract on favorable terms. *See* § 366.093(3)(d), F.S.; Affidavit of Jason Cutliffe at ¶ 4. Furthermore, disclosing the Company's contractor rates could adversely affect the Company's ability to secure required resources during a storm response event, which would impact the Company's competitive interests and ultimately have a detrimental impact on DEF's customers. *See* § 366.093(3)(e), F.S.; Affidavit of Jason Cutliffe at ¶ 4. DEF must ensure that sensitive business information such as employee contact information, unrelated to compensation, duties, qualifications, or responsibilities, are kept confidential, the disclosure of which would impair the Company's to contract on favorable terms. *See* § 366.093(3)(f), F.S.; Affidavit of Jason Cutliffe at ¶ 4.

Accordingly, such information constitutes "proprietary confidential business information" which is exempt from disclosure under the Public Records Act pursuant to Section 366.093(1), F.S.

4. Additionally, the Deposition transcript relates to communications regarding internal auditing controls and reports explaining internal processes concerning contractor invoices; calculating the invoice payments, vendor costs, mutual assistance, etc. involved in the restoration work during Hurricane Irma. The internal procedures are kept confidential. The disclosure of which would impair the Company's efforts to contract for good and services on favorable terms. See § 366.093(3)(e), F.S.; Affidavit of Jason Cutliffe at ¶ 4. Public disclosure of the confidential information would violate the confidentiality provisions in DEF's contracts with companies providing line crew assistance and it would impair DEF's ability to contract for similar services on competitive and favorable terms. If other third parties such as competitors are aware of the negotiated terms of the contracts and mutual assistance agreements, they may offer DEF less competitive contractual terms in future contractual negotiations. Id. Accordingly, such information constitutes "proprietary confidential business information" which is exempt from disclosure under the Public Records Act pursuant to Section 366.093(1), F.S.

5. The information identified as Exhibit "A" is intended to be and is treated as confidential by the Company. *See* Affidavit of Jason Cutliffe at ¶ 4. The information has not been disclosed to the public, and the Company has treated and continues to treat this information as confidential. Id.

5. DEF requests that the information identified in Exhibit A be classified as "proprietary confidential business information" within the meaning of section 366.093(3), F.S., that the information remain confidential for a period of at least 18 months as provided in section 366.093(4)

F.S., and that the information be returned as soon as it is no longer necessary for the Commission to conduct its business.

WHEREFORE, for the foregoing reasons, DEF respectfully requests that this Request for Confidential Classification be granted.

RESPECTFULLY SUBMITTED this 15th day of May, 2019.

s/Matthew R. Bernier

DIANNE M. TRIPLETT
Deputy General Counsel
Duke Energy Florida, LLC.
299 First Avenue North
St. Petersburg, FL 33701
T: 727.820.4692
F: 727.820.5041
E: Dianne.Triplett@duke-energy.com

MATTHEW R. BERNIER
Associate General Counsel
Duke Energy Florida, LLC
106 East College Avenue
Suite 800
Tallahassee, Florida 32301
T: 850.521.1428
F: 727.820.5041
E: Matthew.Bernier@duke-energy.com

Duke Energy Florida, LLC
Docket No.: 20170272
CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail this 15th day of May, 2019 to all parties of record as indicated below.

s/Matthew R. Bernier
Attorney

Rachel Dziechciarz / Ashley Weisenfeld Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 RDziechc@psc.state.fl.us aweisenf@psc.state.fl.us J. R. Kelly / C. Rehwinkel / T. David Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us david.tad@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com

Exhibit A

“CONFIDENTIAL”

(submitted on disc under separate cover)

Exhibit B

REDACTED

(one copy on disc & one copy attached)

I N D E X

PAGE

PROCEEDINGS..... 5
DIRECT EXAMINATION BY MR. REHWINKEL..... 16
CERTIFICATE OF OATH..... 318
CERTIFICATE OF REPORTER..... 319
ERRATA SHEETS..... 320-326

E X H I B I T S

FOR THE OFFICE OF PUBLIC COUNSEL: PAGE

1 - Notice of Confidential Deposition Duces Tecum.. 17
2 - "Terms: Can we agree on these when I ask you?" 21
3 - February 7th Response to Citizens' Fourth Request to Produce Documents Nos. 18 through 26 66
4 - Screen shot of question 18..... 66
5 - Box Listing..... 73
6 - Late-Filed - Hurricane Irma Market Average for Line Crew..... 153
7 - Late-Filed - Release, Date and Time by Crew.... 206
8 - Late-Filed - Bates 1-6-0060580 and 60583..... 239
9 - [redacted] Invoice..... 245
10 - [redacted] Work Papers..... 254
11 - [redacted] Excerpt..... 258
12 - [redacted] Review Work Papers..... 258
13 - Late-Filed - Reconciliation of Exhibit 12 Cover Sheet..... 261
14 - Late-Filed - [redacted] ROD Notes.. 265
15 - Late-Filed - Truck 31090 Explanation..... 271
16 - Late-Filed - [redacted] Authorization..... 289

Q And if you could turn, I don't know -- on the left-hand side, it shows a box number 10 and it's in yellow highlighting.

A Yes, sir.

Q And you see Ameren with a [redacted] invoice amount. Do you see that on the right-hand side?

A Yes, sir.

Q Okay. And then there are Asplundh -- I said Construction, but it's Asplundh Tree Expert invoices of varying amounts that -- they cover one, two, three -- something like four and a half pages.

A Box number 10?

Q Yes, all within box number 10. Do you see that?

A Yes, sir.

Q Okay. So all of these documents were recovered after the damage. They just got kind of jumbled up. Is that your understanding?

A One moment.

Q Okay.

A This is Tess.

Q Yes.

A Out of that box en route to the copying service it spilled out. They were able to pull most of it together, however, there were 74 pages that they

could not organize or pull together.

Q Okay. So I think we have separate conversations with your counsel about getting those, but I just wanted to understand. We have an Ameren invoice and the Asplundh has been recreated to a large extent --

A Yes.

Q -- in the order so it's understandable; is that right?

A Yes, sir, to the best of our ability.

Q I understand. Yes. But if we go six or seven pages to box 14 --

A Fourteen?

Q Yes -- we see there are -- have you made it to there? It's yellow highlighted.

A Yes, sir.

Q All right. The vendors are Holland, Hooper, IB Abel, I-B A-B-E-L, Inc., Infratech, IJUS, LLC and JCL Power. Do you see that?

A Yes, sir.

Q Okay. And they have on the far right -- Holland, for example, has an invoice amount of [redacted] Do you see that?

A Yes, sir.

Q And if we go down to the bottom, JCL Power, the invoice amount is [redacted]. Do you see that?

is that right?

A During Irma they did bring in outside resources.

Q Okay. Are all of your embedded vendors, do they have both -- do they have crews that did both embedded work and -- did they have non-embedded and embedded crews working for you?

A A lot of them did. I don't know off the top of my head what percentage of them did. We could check, but --

Q If you had, how would you check? What would you do to check?

A We have a listing of all the suppliers that work for us and we know whether they were off-system or on-system crews.

Q When you say on and off, you mean embedded?

A Yes, embedded or foreign.

Q Okay. And let's say you had Pike. Pike has embedded crews and then they have some foreign or non-embedded, right?

A (Nods head.)

Q The rate in the MSA and the rate sheet they're going to be working for you, is it going to be uniform regardless of whether embedded or not during the storm?

A [redacted]

[redacted]

[redacted]

Q Okay. Which one is higher?

A [redacted]

Q Okay. Is that generally -- does that paradigm hold true for other vendors that have embedded and non-embedded crews?

A I would say it does. Looking at each one of them, I would say it's probably generally [redacted], foreign.

A (Jay Shawver) [redacted]

[redacted]

Q Okay. [redacted]**?**

A [redacted].

Q Okay.

A And this was Jay. Sorry.

Q That's okay.

A (Tim Fouty) That's a good point.

Q All right. Do you ever have circumstances where you've engaged a crew, they're on their way down

bounds?

A This is Jay. I would say that's a possibility. I mean, anytime there's an opportunity like that, that I could assume that somebody would try to take advantage of that situation. I see it in non-storm work almost every week with projects. Suppliers have crews out there working a project for even another utility or co-op and we're bidding work, and I assume that if they think that Duke will pay a higher rate, they'll remove that crew and bring it over, so -- but we look at the overall rates we have on the system in that area and we can make that judgment whether or not they're the right fit for us based on safety, cost, reliability, schedule.

Q [redacted]

[redacted]

[redacted]

A [redacted]

Q Duke has union and nonunion line crews?

A Internal or --

Q Yes, internal.

A (Brian Sawyer) Yes.

A (Amy DeZonia) Yes.

Q Okay. [redacted]

[redacted]

[redacted]

A (Jay Shawver) Do I? Yes.

Q [redacted]

[redacted]

A Yes.

Q Okay. [redacted]

[redacted]

A I believe so, yes.

Q Okay. Do you have an idea of percentage-wise how much more it is?

A Not off the top of my head.

Q Okay.

A I just know that we're -- in the [redacted], and that's been an ongoing battle over the last year or two.

MR. REHWINKEL: Okay. Let's go off the record for just a second.

(Discussion off the record.)

as the workload gets lighter, if you will, and resources are starting to be released, you're starting to release the fueling resources. Assume that commercial fueling options are available and you're going to balance that with having on-site fueling?

A That is correct. And we also, then, would balance it with respect to where the movement is. So if we condense to a certain area, those fueling assets will go to the area where more trucks and activity are.

Q Okay. This is a question back to -- at least initially to Jay and Tim. We talked about the timing of when you negotiate non-embedded or foreign vendor rates closer in time to the storm as you're actually acquiring the resources; is that right?

A (Jay Shawver) Yes.

Q In doing that, do the types of storm, in other words, if it's a Category 2 versus a Category 4, does that influence the rate that that vendor is asking or able to ask, or is a storm a storm?

A This is Jay. I believe a storm is a storm. I don't think it's differentiated.

Q [redacted]

present you with documentation, what are your expectations with respect to paying them? Do you want proof of payment or would a bill work?

A So they are required to issue a receipt. We can find out exactly what the terminology is, but it is not, to my knowledge, a detailed receipt. It is a receipt for the amount of expenditures that they spent at that restaurant.

Q Okay. So let me give you an example of what I'm asking about. I consider a receipt to be proof of payment, that you got a piece of paper that says you paid this amount and that means that -- usually it will have a credit card number on it, or sometimes it says you paid cash, but it's a receipt. A bill is what you get at the table at a restaurant when you're finished with your meal and the waiter brings you the bill and it says amount due, you know, $29 and you can put a tip on there or not. But that's a bill, not a receipt.

Do you understand that?

A I do. [redacted]

[redacted]

Q And why is that?

A I'd have to defer to contracts.

A (Tim Fouty) This is Tim. [redacted]

[redacted]

09ac02ff-2893-4455-8ac5-c3168cc8f9ab

[redacted]

[redacted]. The contract says provide a receipt.

Q Okay. [redacted]

[redacted]

[redacted]

A During a storm?

Q Yes.

A I would assume they probably would. I haven't had to deal with that.

A (Brian Sawyer) This is Brian. If I can jump in on that. So there is an option, an expenditure for a Duke employee if they lost a receipt to provide an explanation as to why, approval by a supervisor with a manager. It's an option they have for that.

Q [redacted]

[redacted]

[redacted]

A [redacted]

Q [redacted]

[redacted]

A [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Q Okay.

A (Tim Fouty) This is Tim. I think that even a Duke employee --

Q You need to speak up a little bit.

A [redacted]

Q Well, do Duke employees generally have a company card or --

A (Tess Roebuck) Yes.

Q Okay. So you have another -- you have an internal control that you know --

A (Tim Fouty) That would be helpful.

Q That you can see the statement, right?

A Not every employee has a card, but yes.

Q I understand. Okay.

BY MR. REHWINKEL:

Q I have up on the screen an invoice 1-PILS-7437 and I'm just going to read -- these are all going to be from POD 1-6. So I'm just going to read the last non-zero digits of the Bates numbers. So this is at 60549. And I don't know who can answer questions about this, but I'm going to put it out there for the first volunteer.

This vendor's name is [redacted] Is that right? Would this be Tess?

A (Tess Roebuck) Yes. This is [redacted]

Q Yes. And I want to ask about the Bates 60550, 60551 and 60552, but let's go to 550 first, the second page. And this -- well, I'm sorry. Let's go back to the front page.

This document on the front is not what the vendor submitted, this one page. This is Duke's cataloging, if you will, of the invoice for scanning and tracking purposes; is that fair?

A For clarity, it was for copying these to provide to you.

Q That's what I meant by scanning.

A Yes.

Q So what we have is a box number we saw on that Exhibit 4, both the listing of box numbers, it has the

storm and it has the vendor name and the invoice number, and then it doesn't have a dollar sign, but that's the total invoice amount at the bottom generally. That's what it's supposed to represent, right?

A Yes, sir.

Q Okay. So the second page that goes -- it's 550, this shows [redacted] that corresponds to the prior page; is that right?

A Correct.

Q And this has a breakdown of labor, equipment, meals, hotel and fuel. Do you see that?

A Yes, sir.

Q Okay. And I don't know if you know the answer to this, but I want to ask you about 551 and 552. These are two different -- well, it looks to me to be [redacted] of the invoice on each of the invoice pages; is that fair?

A Correct. It involved our [redacted] to our contract partners.

Q Do you have any idea or is there any significance to the fact that -- I mean, they're both dated the same date, October 19, 2017, and one at 655 -- I mean at 551 is [redacted] and then the other one is [redacted]. Do you know why that's done?

A Just one moment. So this would be where -- why they have the two names listed differently is probably not that significant of an issue. They're doing business as [redacted]. They submitted the other one as [redacted]. [redacted]

Q Okay. I notice that the [redacted] invoice is -- it's got that same invoice number, but it's got a dot 2A and then the [redacted] invoice has got a dot 2.

A Correct.

Q What I didn't understand, and the reason I'm asking the question is, is they're dated the same day. It's not like one came in early and another one came later.

A So they submitted those subject to check, but they submitted those. [redacted]. [redacted]

Q Okay. So even though all three of these invoices, the two half ones, dot 2 and dot 2A and the one without the dot 2 or 2A, they're all three dated

October 19th.

A That's the date that they submitted them. One we would go ahead and [redacted]. The other would go through our [redacted] that was taking a target time frame of about [redacted] to get through all of the Irma invoices and an accurate review process as efficiently as possible.

Q So is that -- what you just described, is that sort of typical for vendors? You expect most of the foreign vendors to do it this way as to they would get an [redacted] Is that generally the process?

A So there are some significant issues tied strategically as to why we did the [redacted], but I'm going to have Tim speak to that. Those decisions were made within his department and executives, but there was a reason for it.

A (Tim Fouty) Yes. So for Irma, this did not happen in advance of Irma. This was a decision that Duke had been contemplating for major storm work, so it was kind of implemented late in the game on Irma.

But the goal of [redacted]

[redacted]

Q Okay.

A That's why we did what we did.

Q And was that generally what you tried to do with most of the foreign crew vendors?

A Yes. If it was [redacted], I believe, the invoice, [redacted] If it was [redacted], we just tried to process it as timely as possible.

Q Okay.

A [redacted]

And it had been -- at the point we implemented this, what was it, on November -- we had a date.

A (Amy DeZonia) 17th.

A (Tim Fouty) November 17th. So we were two months already passed the storm when they approached us and said --

Q Now, when you say you implemented on November 17th, you're talking about for that vendor?

A For all vendors.

Q So this was dated October 17 -- October 19?

A (Amy DeZonia) [redacted]

A (Tim Fouty) Clarification. It sounds like that was just the [redacted]

Q And that was done in November?

A Yes.

Q I was going to ask you if it was [redacted]. It seemed like that would be the most logical because you

wouldn't -- that wouldn't have been a situation with

[redacted]

A Right.

Q Okay. All right. So I follow you there. So what happened is --

A (Tess Roebuck) Charles?

Q Yes.

A Can I offer some clarification to my prior statement?

Q Yes.

A I indicated that we [redacted] on August 2nd. We [redacted]

Q I understand.

A All right.

Q Your assumption was is that if you audited,

[redacted]

A (Tess Roebuck) More or less, yes.

And I'd like to clarify a term. We've spent so much time even talking about ourselves. So we very usually use the term "audited." [redacted]

[redacted]

[redacted]

So I just want to -- [redacted] So I just want to clarify. We use that term loosely and interchangeably with review.

Q I appreciate that. And I think it's a good thing to say your folks aren't [redacted]

All right. So if I look at -- and this was an invoice that was audited. I don't know if you can pull it up on the screen, but I think I talked earlier off record of [redacted] was one of the documents that we were provided in POD 18 in the list that was in Exhibit, I think it was 4.

And I was just wondering if I could ask somebody, or Tess, were you privy to the results of the [redacted] audit review?

A So I will tell you that I am not a reviewer myself. I am the leader of that group. So to say that I have put eyes on every single one would not be a true statement. So some of these today I may be seeing for the first time. But I'm fairly confident with the team that I brought today that we can answer your questions.

Many of these took a day to work through to weeks to a month.

Q Right.

A So there might be some that I can't give you an accurate answer right here today, but we will definitely provide it to you as soon as we can.

Q Okay. I just had a simple question about this that I think you could give verification of is that out of the entire amount of [redacted] that we saw, there was a challenge that apparently was agreed to or was deducted of an air compressor that wasn't on the rate sheet at $3,240. That was adjusted off, so the net amount you paid was [redacted].

Does that sound right and can you verify that?

A So for clarification, we would -- any adjustments that were made through the review audit process, we would have not gone back and corrected these template documents. You would see it on the final revised.

Q Okay. So --

A One moment, please.

MS. WEST: Charles, what Bates number are you looking at?

MR. REHWINKEL: The Bates on this is 4-180331?

A (Tess Roebuck) Could you repeat your last

question for me?

BY MR. REHWINKEL:

Q Yes. My question was -- I'm going to withdraw the question because I asked it wrong.

A That's okay.

Q I think what this document would show is that the reviewers challenged the compressor, but it was [redacted]

A That is a correct statement.

Q Okay. So I don't think we need to bring this sheet up, but that --

Well, if I could ask you, was that the only thing that was challenged by the reviewer was the air compressor, not any other costs?

A One moment.

It appears there were no other exceptions identified.

Q Okay. So let's look at this invoice a little bit further in. We see -- well, if we look at 550, the second page of the document, we see labor of [redacted] **Do you see that?**

A Yes.

Q Equipment [redacted]**, meals** [redacted] **hotels**

[redacted] and fuel of [redacted] And assuming the math adds up of those things we just listed to [redacted], all of those amounts were paid?

A Correct.

Q Okay. So when I look on the 553 page, we see a summary of equipment of the same [redacted] and there's the compressor at $3,240. Do you see that?

A Yes.

Q Okay. And then we go to the next page which is hotels or lodging a total of [redacted] That corresponds to the summary on the first page. That was paid, right?

A Correct.

Q And then there's a meal summary of [redacted] That corresponds, so that was all paid?

A Yes, sir.

Q And then finally, on 557 we see the [redacted] which is the fuel. That was all paid, right?

A Correct.

Q Okay. So let me ask you about the hotels first. This -- well, I'm sorry. I take that back. Let's go to 558, and this shows this crew started billing on September 9th, 2017; is that right? Up in the upper right-hand corner we see the date of the time sheet?

multiple folks here, but let's say somebody called Contra in Pennsylvania and got Miller Brothers on the phone and they said -- well, actually, they're a PPL vendor, I think. But you contact them and they say, We're willing to come down, and you agreed on all the terms and rates. When are they allowed to start billing? Is it when they get that call or when they hit the road?

A (Tim Fouty) This is Tim, and I'll take a stab at that.

[redacted]

Q Okay. Regardless of whether they hit the road or not?

A That's correct. [redacted]

then we pay.

Q So when I look on 558, which is the September 9th time sheet, over on the upper left-hand quadrant of it says Customer, and it says PPL, does that tell you that this was an embedded crew with Philadelphia Power & Light or whatever PPL stands for, Pennsylvania Power & Light?

A Yeah, PPL, are they -- it's an SEE company.

Q Okay. So this is an SEE-acquired resource?

A (Sharon Bogdanos) Yes.

Q All right. So you would assume they mobilize and they start on the 9th and they're mobilizing through the 12th, it looks like. Because if I go to 561 under Job Notes it says, [redacted] Do you see that?

A (Tess Roebuck) Um-hum.

Q So does that mean in all likelihood that they were able to commence restoration work on the 13th? Is that how you read that?

A I read this that they were arriving -- that's what that validates. They were arriving on the 13th.

Q Okay. We talked about onboarding mustering

areas in Savannah or Perry, Georgia. If somebody was coming down on the 13th, would they just come on into the state and not stop up there because the storm's already through and mustering is a thing of the past?

A (Amy DeZonia) Yes.

Q All right. So in all likelihood, whoever is their mobilization coordinator is going to direct them? Here they think they're going to Orlando, but wherever they're supposed to go; is that right?

A That's correct.

Q All right. So we would assume, if we go to the last page of this, which is 571 which is dated the 22nd, it says: They drove from Virginia home. We have returned from storm. Will begin normal work next week, and that's a Friday, the 22nd.

So it looks like they would have been released on the 20th because the 21st, it looks like they're driving from Georgia to Virginia. So one would assume that on the 20th at whatever time they left Central Florida, they drove to somewhere in Georgia.

Am I reading that right?

A (Tess Roebuck) Our ROD notes indicate that we ceased billing as of the 20th for them. Or released. I'm sorry. Let me correct that. We released them.

Q Okay. So from sometime on the [redacted]

[redacted]

A We have them validate when they are [redacted]

[redacted]

Q Okay. Now, this document shows on 571 that they started at 4:00 a.m. and ended at 2:00 p.m. So if my math is right, that's a 10-hour day. So they billed ten hours of demobilization time and then they went off the clock at 2:00 p.m.

A Yes, that's what that says.

Q Okay. With regard to mobilization and demobilization, and this is more of a general question, does the contract require or the contract terms or whatever arrangements you have with these foreign vendors, is there a set amount of mobilization and demobilization time they can bill for? Like, is there -- if you drive 12 hours, do you get to bill 16 or do you only get to bill for the time that you're driving on a mobilization or demobilization day? What is the rule there?

A (Tim Fouty) This is Tim. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Q Okay. So if a crew leaves Wisconsin, you know, at 5:00 a.m. on the 9th and they take three hours -- I mean three days to get down to Florida and the first day they, for whatever reason, [redacted]

[redacted]

A [redacted]

[redacted]

Q I meant 5:00 a.m. I'm sorry. I should have said 5:00 a.m. So they start at the beginning of day, they drive -- but they only drive five hours for whatever reason and stop, and then the next day they drive six hours and stop, and then the last day they drive the rest of the way. I don't know how long it actually takes to get from [redacted] to Orlando, but does it matter to you-all, the pace of the mobilization?

A It matters and, I mean, we would --[redacted]

[redacted]

[redacted] Amy may know more about that process.

A (Amy DeZonia) Right. Sure. This is Amy.

So we do a manual GPS to us and home. So if they're not here in a certain number of days because we're depending on them to be here working, we'll say, well, where are you and why aren't you here? And then, of course, if they aren't here when we expect them, we'll look to Tim and Sharon and say, hey, this company is not doing what we expect them to do and we'll go through those repercussions later.

So yeah, there's an expectation that you're going to be here when we tell you to be here.

Q So in that circumstance, is there going to be anything that's going to show up in the review or is that all going to be taking place before you get the invoice?

A Yeah. So we would have to have discussions with Sharon and Tim and say, hey, these guys, they stopped, you know, we just called them, they stopped after five hours on the road, so we need to call their home office. Or, you know, we work through that how we need to, but we'll make notes in the system and say, you

know, we called the home office and agree we're only paying five hours for this day, or whatever we worked out, but they're not adhering to the terms of the contract.

Q And just for the record, that was a pure hypothetical.

A Sure.

Q That had nothing to do with the vendor we're talking about now. I'm just trying to understand your process.

A No.

Q Those notes would be in the ROD system?

A Yes, they would.

Q Okay. So does anyone know whether [redacted] is a firm that you had done business with before or --

A (Amy DeZonia) [redacted]

A (Tim Fouty) [redacted] possibly, not under[redacted] I'm assuming we could check, but I believe [redacted] we've done work with before.

Q But this crew came to you straight from [redacted]? They didn't get handed off to another utility, it looks like, on this documentation. Is that right?

A I believe that is correct.

Q Okay. All right. So I want to -- let's go and look at 573. So I want to talk about the -- well, actually, let's look at 572.

So this is just a [redacted] it looks like to me. [redacted]?

A (Tess Roebuck) So I -- [redacted]

Q Okay. [redacted]

A I believe that it does.

Q So if you look under [redacted]

A I see that it does say that. I think what you're asking is a legal terminology, and what we're talking about is we had linemen out in the field that were eating en route. We know that Kingsport, Tennessee is en route. It's a meal, [redacted] and this falls into our reasonable category. They were consuming a meal on their route and we would pay them.

Q All right. So let's look at the next page, 573. This is a -- it says at the bottom, [redacted]

[redacted]

MS. WEST: Let me turn it around.

A (Tess Roebuck) Again, I think we verify that it is a food amount, it is in a location that they are traveling from and to, and it is reasonable that they would have consumed this food.

Q Okay.

A So, you know, Charles, let me just preface that that may be helpful. So for our process review, audit review, there are a number of things we do so that [redacted]

We also then pull ROD: From what date to what date should they be billing us and then what is the crew size. And then we validate. Let's make sure there's not a hundred people and 600 trucks as well as hotel rooms. So the hotel rooms should equal the amount of the crew and not exceed that.

And then food and consumables fall into reimbursements for that as well as there is some that

probably fall into the miscellaneous category that are reasonable around restoration.

So, you know, we targeted the 90-day time frame. [redacted]

Q I'm still going to ask these questions. I understand your point.

A Okay. That's okay.

MR. REHWINKEL: So what do we have up?

MS. WEST: 573.

BY MR. REHWINKEL:

Q So let's look at 575. And this says -- would you agree it says -- and this is for September 11th and it's in Kingsport, Tennessee and it says, [redacted]

A (Tess Roebuck) Yes, I see that.

Q Okay. And let's go to the next page.

A (Tim Fouty) Charles, I just have a comment too.

Q Yes.

A So one of the things that I discovered in previous, not necessarily Irma, but previous storms, so when we ask these suppliers or these linemen to keep the itemized receipts, the receipt you sign doesn't always have the detail. I think that's why many of them look

[redacted]

So I think the intent was to show, hey, I really ate salsa and chicken here, it wasn't ten beers.

[redacted] I suppose, but --

Q I appreciate your answer there, but you don't know?

A I don't.

Q Okay.

A I'm just telling you from experience-wise.

Q I get it.

So we're on 576. It says [redacted] and it's on the 12th in Savannah, Georgia; is that right?

A (Tess Roebuck) We paid this as a reimbursable amount.

Q Okay. Now, we saw a note on the 12th that said: We can't get down to Florida and stopped around -- let's see -- we weren't able to make it because there was some traffic.

So here we have them Savannah, which I don't know, is it about two hours from the Florida border?

So our reviewers that go through these receipts have access to ROD and there are very detailed notes on who they spoke to: There were two accidents, what exit they are at. There are detailed messages that people who are calling them and speaking to them are on the way put in our system. So we try to have some controls around how they're traveling, where they are at and why.

Q Okay. Would you agree that the invoices that we've looked at by virtue of the fact that they show [redacted]

A I'm sorry. What was your question?

Q Well, if you -- let's see. [redacted]

Would you agree with that?

A I would make the assumption that if [redacted]

Q Okay. But to answer my question, nothing on this invoice shows the [redacted]

[redacted]

A Nor do we require that.

Q All right. So let's go to 578. And do you see where it says [redacted]

A Correct.

Q Can you tell from this where this occurred and what time and date?

A We cannot tell in this room, but there is an original that I'm sure was more legible to the person reviewing this document. So we could validate that and follow up with you on what that information states.

Q Well, this says at the bottom, "Scanned by CamScanner."

A Correct.

Q But the previous ones don't have that indication. So is the CamScanner yours or is it something that [redacted] **used?**

A Stand by.

So we do not believe that to be our designation there. It could be theirs. We do not know what that scanned-by statement means there.

Q Okay.

A But you will see that receipts will come in that are taped to papers and sent to us. They are photocopied. They are pictures taken of them with cell

phones. There's a variety of formats that you will see in the same type of invoice. And some of them that we noticed in the scan are a lot less readable than what they were in the originals.

Q Is that the case with these, the ones we've looked at -- well, let's look at the next page which is -- where are we, 579? This looks like it was something in Pennsylvania on the 9th, and I think I can make out cash tender and change of 15 cents. Do you see that?

A I actually cannot read any of this on this one, but we're talking about 90 sheets of paper that were sent to be scanned. And so you're going to have some that are easier to read than others on the originals.

Q Okay.

A So if there are any that you would like follow-up, just let us know and we'll be happy to do that.

Q So this says "CamScanner" on it which we're assuming that was [redacted] production end, right?

A We could assume that.

Q Okay. And then we look at the next page of 580. Is anything on here -- well, do you see up at the top, it looks like [redacted] is handwritten in there?

Do you see that?

A Yes.

Q And I think we can look -- if you just pick one of the time sheets, there's somebody named [redacted] however you pronounce that?

A Yes.

Q Okay. And if we look at the prior page, the page before that, 578, that handwritten notation is rather clear compared to the rest of the document. Would you agree with that?

A It could be the difference in pens that were utilized. There could have been a number of factors. I don't really know why the difference is.

Q Okay. So 580, 581. Can we tell what was done on that? This is rather poor quality. Would you agree?

A For the photocopy I would agree, but they were likely able to read the original.

Q Are you sure about your folks being able to read the original if this was scanned by CamScanner?

A One moment.

So for a point of reference that I do know that my folks -- my team can see it clearer is there is that Excel spreadsheet that they load in the dollar amounts of these to auto calculate to ensure that it totals what they have on the invoice. So on those

templates, you would see they will type in what amount they see. If they don't, they're typically highlighted in yellow or a question mark or there is a note made beside it, "hard to read, this one is in question." There's all types of variances that are notated. Or if they can read the original, they place it in that template. And in this case they did with these.

Q But the information that's in the audit or review work papers is the same information, is it not, that's in the summary that [redacted] provided, right?

A But the individual dollar amounts that you're seeing in that template, they are manually typing those in based on the receipts that they're seeing here to ensure that it totals the summary page. That's part of the audit review process.

MR. REHWINKEL: Well, let me just get a late-filed, Matt. I want an example of 580. I'd like to see the actual document that was reviewed to see if the reviewer could --

MR. BERNIER: Sure.

MR. REHWINKEL: So this will be late-filed No. 8, and it will be -- I'm just going to call it Bates 60580. Let's call it 1-6-0060580, and just for good measure, let's put 60583, so it will be "and 60583."

Chili's.

So it looks like this is the Pilot receipt that's noted sandwiched between McDonald's and Chili's. But are you saying that the reviewers would have been able to see a better quality of this one? It says CamScanner at the bottom.

A I'm saying that that would be likely. I think a clarification in our standard is that we require receipts or supporting documentation. That's a Duke Energy standard for employees to submit their items, and for mutual assistance vendors as well it is also part of the contract.

Q Okay. So let's go to 594, the next page. [redacted] lunch 9/12 in Savannah and it says -- again, [redacted] It just shows an [redacted] Would you agree with that?

A I would agree this is what they submitted for reimbursement for their meal.

Q And the next page says: [redacted]

A And they submitted that for reimbursement as well.

Q All right. And then if we go to 597, it talks about [redacted] probably [redacted], or however you

pronounce it, 9/10/17 dinner, but we don't know from this document where, how much, anything like that, right? At least this version of that document. Would you agree with that?

A This version, yes, it can not read well.

Q Alrighty. So now let's flip over to 600. There's [redacted] with a [redacted] Is there any way to just --

MR. REHWINKEL: Do they have to come up one at a time?

MS. WEST: Yes.

MR. REHWINKEL: There's no way to go to the next?

MS. WEST: I won't be able to see a Bates if I just -- I can bring them up like this, but I can't see what it is.

MR. REHWINKEL: Okay. It's that one you had -- yes, okay.

BY MR. REHWINKEL:

Q So this shows [redacted]

A Yes.

Q I mean, is there a trend that you see here that these [redacted] There's a lot of this going on. Does that concern you?

A [redacted]

[redacted]

Q If a Duke employee submitted a whole string of documentation that didn't show [redacted], would the company maybe look a little sideways at that and maybe investigate?

A We wouldn't require $10 receipts. As Amy mentioned earlier, if it is under $75, a receipt is not required.

Q Well, let's assume you got a bunch of $76 receipts from an employee that [redacted] Would that cause a problem?

A Say that again.

Q If a Duke employee gave you over a three- or four-day period five $76-plus [redacted] would those get paid?

A I would be able to validate against their company credit card transaction, but I'm not sure it's

apples to apples.

Q So let's look at 602. So even though he's got boxers and socks on here, the only thing he's been reimbursed here for is $1.88. So I just want to make sure we're not suggesting that it's anything other than whatever food item is on there.

A That is correct.

MR. REHWINKEL: All right. So Matt, I'm going to make this entire document an exhibit. This will be No. 9. It will be -- I'm just going to call it [redacted] Invoice.

MR. BERNIER: Okay.

(Exhibit 9 was marked for identification.)

BY MR. REHWINKEL:

Q All right. And I'm not done with that. I just want to -- I'm not going to go through the rest of these meal items, but I want to get you to turn to -- I want to ask you to turn the hotel documentation that's on here. And let's go to the summary. I'm sorry. The summary is at 554. It's one more over. It's the far left bottom, right there.

So this shows in Kingsport, Tennessee, hotel rooms at a Hampton Inn for the dates of 9/9 through 9/11 and it has room numbers here, 112, 118, 227, 228, 222, 413, 201, 313, 314, and then on the 8th only, room 117.

Do you agree with that?

A (Tess Roebuck) Correct.

Q Okay. And if we go back -- and these are the same dates generally that we show meal documentation for Kingsport, Tennessee in that same general time frame. Would you agree with that?

A Correct.

Q All right. So let's go back to the documentation at 640.

So on 640 we see an individual named [redacted] and it says room number 112 and it looks like it totals up to the amount for room 112 of $484.64. Can you see that in the --

A Yes.

Q Okay. Now, do you know who [redacted] is?

A One moment. So we did not have [redacted] listed as assigned to a crew. However, many times you're going to see these hotels booked in the name of the logistics person who reserved blocks or that piece. So that's when you heard me say earlier we attempt to validate those by doing a crew count at a hotel to ensure that it doesn't exceed the crew count amount.

Q Okay. Do you know whether [redacted] is a logistics person or whether he is a crew leader of another crew?

A We do not list the names of their logistic personnel in our ROD system. So as I indicated earlier, our validation of that process would be to validate is it in the area that is en route to us and then is it within the head count of their crew.

Q Would Duke be in a position to know whether Bates 1-60060640 for room 112 in Kingsport at the Hampton Inn was also charged to another utility?

A I would not know what is billed to another utility, only what's billed to us.

Q Okay. If that room was billed to another utility, would that cause you concern?

A I don't think I'm going to make those type of fraudulent assumptions as I'm going through 90 sheets of invoices trying to process them, so -- I'm sorry, 90,000. [redacted]

Q Okay. But my question is if they did bill this room to another utility, would that be a problem for you if you found -- I'm not suggesting you should have known that. I'm asking if you were able -- if you were to discover that this room was billed to another utility, would that cause you a concern?

possibility. But if this guy was a crew leader of another crew and he billed his time and that room to another utility and he billed that room to you, wouldn't that be a problem?

A (Tess Roebuck) I don't know how my last question to you is any different than the question you just asked me as far as --

Q You suggested that he was a logistics person, and I'm saying what if he was a crew leader on a line crew?

A I'm saying that -- so I made that as a suggestion alternative. [redacted]

Q Okay. I would ask the same questions about the rest of these hotel rooms for the Hampton Inn Kingsport. You really don't know whether the rooms that are under [redacted] name were actually used by a crew that provided service to Duke, do you?

A I don't really have an answer to your question.

Q Okay. Let's go to Oak Plantation Resort Hotel at 60655. Do you know who Scott -- I mean [redacted] is?

A Let me verify in our ROD tool.

I'm sorry. What was your question?

Q Do you know who [redacted] is, [redacted]?

A We know that they are not a crew member that is listed in ROD as working, but their name is listed on multiple hotel receipts for the Oak Plantation. So we believe them to be logistics and they to be appropriate invoices to reimburse.

Q Okay.

A (Tim Fouty) This is Tim. We have that gentleman's name listed as our main contact for [redacted] for resource acquisition.

Q Which --

A [redacted]

Q Okay. So the last thing I want to ask you about [redacted] is the fuel. If we could go to --

A (LaQuitta Ghent) Charles, can I interrupt for a second off the record?

MR. REHWINKEL: Yes.

(Discussion off the record.)

BY MR. REHWINKEL:

Q So let's look at [redacted] fuel and this will be on the summary page at WEX. That's Wright Express I think is what WEX stands for. Is that right? That's a

fueling report.

A What is the number?

Q I'm sorry. It's 556. So --

A The first one says Wawa?

Q Yes, that's correct.

Now, this -- am I correct at 556 through 557 is [redacted] worth of fuel summarized, fuel purchases summarized? Is that right?

A Say that one more time. I'm sorry.

Q These two pages 556 through 557 are [redacted] of fuel purchases summarized?

A Correct.

Q Now, what we don't have in this packet is information that is receipts because this is a WEX corporate fuel card and they provide summaries?

A That is correct.

Q Okay. If we look on 557, the second page of that, and we see on 9/9 at the Raceway, $121.51 by an employee named [redacted] Do you see that?

A Yes.

Q Okay. Do you know whether that amount was billed to another utility? Would you have any way of knowing?

A No.

Q Okay. If we go down about a third of the way

and we see 108 -- $106.78 by an employee named [redacted] do you see that?

A Yes.

Q Do you have any way of knowing if that was billed to another utility?

A No.

Q And if I go down a little past halfway on 9/13 at the Raceway on 1040 Golfair Boulevard in Jacksonville, [redacted], $150 even, do you see that?

A At the Raceway?

Q Yes.

A Yes, I do see that.

Q Do you know whether that was billed to -- would you have any way of knowing whether that were billed to another utility?

A I would not. Not that I'm aware of.

Q And then finally, the $150 that's about six lines below that by [redacted], do you know whether that was billed to another utility or would you have any way of knowing?

A I would not have any way of knowing.

Q Okay. A general question and I don't know who wants to field it, but if a vendor would submit fraudulent receipts for miscellaneous expenses and you were able to determine that, would that cause you to

Q And that would be a good reason why you would not have visibility into what those two -- what that vendor was billing with respect to you and the other utility; is that fair?

A Fair.

MR. REHWINKEL: It's 4:20. When are we targeting to eat, at 6:00?

MR. GUZMAN: I believe that was communicated, yes.

MR. REHWINKEL: And what I'd like to ask at this point, and I'm going to stop [redacted] and go to [redacted] and I'm going to ask if anybody would like to have a break.

AMY DEZONIA: Take a five-minute break?

MR. REHWINKEL: Let's just take ten minutes and be realistic.

(Recess from 4:24 p.m. to 4:40 p.m.)

MR. REHWINKEL: Before we go to embedded rate reduction, I wanted to identify another exhibit which would be -- I call it the [redacted] Review Work Papers, if we want to use the A word, and it is POD 4-18-0331, and that will be Exhibit 10.

MR. BERNIER: Yes.

(Exhibit 10 was marked for identification.)

BY MR. REHWINKEL:

Q All right. So what I want to turn to now is POD 1-6-0026501 which is the invoice for [redacted] Services. It's invoice W20819 and the invoice amount is [redacted]

And I guess I'll direct this to Tess. Do you agree with --

A (Tess Roebuck) I believe it's [redacted]

Q Oh, I apologize. [redacted]e. I thought that was -- [redacted] Thank you.

Other than that, do you agree that that's what that first page says?

A Yes, sir.

Q Okay. So I guess I'll start directing this to Tess, but maybe Tim or Jay may know more. But can you tell me who [redacted] is?

A They are a mutual assistant utility that came with us from [redacted]

Q (Tim Fouty) Via TECO.

A (Tess Roebuck) Via TECO.

Q So if I can ask how you acquired their services, was it that you worked -- that you were in communication with Tampa Electric Company and asked if they had any resources that you could have when they were done with them?

A (Tim Fouty) Yes. This is Tim.

So generally, and I can't remember the exact conversation around [redacted] of course, but during that time we would hold what they call impact utility calls to the SEE. So we didn't bring every utility across the United States in, but the impact utilities would talk and talk about releases and needs so that we could -- before somebody released somebody to head home, they could assist others if needed. So [redacted] is one of those companies we acquired from TECO when they notified us we were in B.C.

Q They weren't someone that you on the front end of the storm had looked at to acquire; is that fair?

A That's fair.

Q Okay. Did you ever go to Canada to get services?

A I have.

Q Did you do that for this storm?

A Was it Holland? So yes, with Holland Power we did.

Q Is Holland an IOU or is that a contractor?

A It's a contractor.

Q All right. And maybe the band drowned it out, but did you say [redacted]?

A They were acquired by -- through one of the

mutual assistance calls by TECO.

Q But I was asking is [redacted]

[redacted]?

A I do not --

A (Jason Cutliffe) Yes, they are. [redacted]

[redacted]

A (Tim Fouty) I was not aware of that.

MR. REHWINKEL: That's okay. All right. So let's go off the record.

(Discussion off the record.)

MR. REHWINKEL: On the record, the document I printed out to bring, it starts -- after 501 it starts with 564. And so what we're going to do is between now and the end of the deposition ask Duke to make a copy of the entire invoice and make that what will probably be Exhibit 11.

MR. BERNIER: Could we go off record?

MR. REHWINKEL: Yes.

(Discussion off the record.)

MR. REHWINKEL: Let's go to 564. I just think it's locked up because it's printing, so we'll wait.

While that's going on, I would like to -- I'm going to identify an exhibit and this will be, what are we at, 12? Let's -- Exhibit 11 is going to be

[redacted] Invoice Excerpt. Okay?

MR. BERNIER: Yes.

(Exhibit 11 was marked for identification.)

MR. REHWINKEL: And for the record, it will be the part of the invoice that -- well, these are just document excerpts from the invoice, but the first excerpt is at 26564. And while we're -- okay, so we can do that.

I'm also going to identify as Exhibit 12 the [redacted] invoice review work papers, okay? And this is one that you provided for us today. It doesn't have a Bates number on it. And I want to set that aside. Then I will probably ask -- well, actually, let's talk about this document, Exhibit 12. We can just leave it there where it is. I don't know if you can bring Exhibit 12 up on the screen. Is there any way to bring this --

MR. BERNIER: Hold on. We're going to get set real quick.

MR. REHWINKEL: Is there any way to get these documents over there?

MR. BENNETT: I just emailed it to her.

MR. REHWINKEL: Oh, okay.

(Exhibit 12 was marked for identification.)

BY MR. REHWINKEL:

Q So what I want to go to is the first -- the cover sheet page. All right. So this is Exhibit -- the cover page of Exhibit 12.

And Tess, would you agree this is the summary document for the review work papers for [redacted]

A (Tess Roebuck) Yes.

Q And this is the one we discussed in the morning session that was housed on an employee's laptop instead of put in the common share point drive; is that right?

A It was actually just saved in a different area on the share point rather than in the appropriate section.

Q All right. But it was not with all the others?

A Correct.

Q All right. So we see on this, this is an invoice amount of [redacted]. That's the number -- the invoice amount that we saw on Exhibit 10 on the cover sheet; is that right?

A Yes.

Q And if we look here, it says: Audit Notes. On receipts for Black Fire Steakhouse the totals were handwritten, so I entered the amount of the receipt, not

the written totals. [redacted] was not -- that's [redacted] I'm sure that's not how he pronounces it -- was not on the time sheets but was in the audited section as working three days per handwritten time sheet, so I added him in. ROD is attached. All names are matching.

Did I read that right?

A Yes. ROD is our Resource On Demand tool.

Q Okay. And then it says: [redacted]

Did I read that right?

A That is correct.

Q So starting from the bottom up, what can we glean from the discussion about the [redacted] Does that make sense?

A One moment, please. One moment.

So many of these are quite complex. I've got to look in multiple areas and --

Q Understood.

A -- you know, we're checking through that. So there already appears to be some typos on here that were made by the individual and we need to verify, but we believe there were not [redacted]. So we will verify what that count is.

Q All right. And I've just seen this today for the first time, so I didn't -- this is not something I came prepared to ask about, but when I saw it, it certainly struck my curiosity. It looks weird, but it doesn't look logical to me. I don't know how [redacted].

So what I'd like to do is maybe ask if we could get a late-filed exhibit to reconcile any discrepancies, apparent discrepancies on the cover sheet of Exhibit 12. Can we do that rather than sit here and try to zip through it?

A Yes.

MR. REHWINKEL: So this would be late-filed No. 13, and it will be Reconciliation of Exhibit 12 Cover Sheet.

(Exhibit 13 to be marked and produced as a late-filed exhibit.)

BY MR. REHWINKEL:

Q Okay. All right. Now, let's go ahead and

turn to Bates 26564. This looks like a time sheet for September 17, 2017 for a crew of one, two, three, four, five, six, seven, eight, nine -- ten people. Would you agree with that?

A (Tess Roebuck) Yes.

Q And the bottom person is [redacted] Do you see that?

A Correct.

Q And if we look over in the middle of the page on the right-hand side, there's a signature line. It says [redacted], and then it has a signature that looks like [redacted], right?

A Correct.

Q Okay. And then it says Customer Supervisor below that. Is that someone who would work for Duke?

A I am not sure if it is.

Q We know -- well, let's look at the Comments. It says 6:00 a.m. to 11:00 a.m. with TECO in Tampa. 11:00 a.m. to 4:00 p.m. waiting for reassignment work elsewhere. 4:00 p.m. to 11:00 p.m. working for Duke Energy, and, please bank time for [redacted]

So we don't know whether the customer is TECO or Duke in that case; is that fair? Unless you recognize somebody's handwriting. I'm just not finding --

eyeballing it, it looks like it's the same guys on the 17th, but this is now a time sheet for the 23rd. Do you see that?

A Yes.

Q And we see [redacted]. It says TR.31090, which I'm assuming that means truck 31090 is his. Is that how you would read that?

A Yes.

Q And we see truck 31090 up in the truck box, there's six vehicles. [redacted] on the crew. His truck is on the time sheet. That kind of matches up. Would you agree?

A Yes, sir.

Q And the Comments say, "Travel home." So one would assume that [redacted] had been released and they were on their way home on the 23rd; is that right?

A I would need to verify that in ROD, but --

Q When you're verifying that, would you look in the ROD and see what date and time if available they were released?

A Yes. Okay. [redacted]

[redacted]

[redacted]

[redacted]

Q Okay. Is there a way to get a late-filed exhibit that just had the ROD notes for [redacted] Is that something that can be printed?

A Sure.

MR. REHWINKEL: Okay. So let's make late-filed No. 14 [redacted] ROD Notes.

(Exhibit 14 to be marked and produced as a late-filed exhibit.)

BY MR. REHWINKEL:

Q Okay. So thank you. Let's -- do the notes say what time they were released on --

A 6:00 a.m.

Q Oh, I'm sorry.

A Ask your question.

Q It sounded like the 22nd was when they were actually released.

A No. They were not released until 6:00 a.m. that next morning.

Q So what happened on the 22nd? What do the notes say about the 22nd?

A Due to -- Jason spoke to this earlier.

Jason, do you want to repeat that on how we

released people the following morning to make their travel back home, and in this case to [redacted]

A (Jason Cutliffe) Is the question why an AM release? To make sure I understand.

A (Amy DeZonia) It was because they were released so late in the day.

Q Well, my question is -- well, let's just go to 26579. So this is an interesting document. It's filled-in handwritten. Do you see that? And the month of January is stricken and it says September, or SEPT. And then on the day it says 22nd, 2017. Time start at 6:00 a.m. Time stop is 10:00 p.m.

Is that right so far?

A (Tess Roebuck) Yes.

Q And then on the notes it says handwritten: Storm relief. Duke Energy released from -- and I believe that word says duty, D-U-T-Y. I wouldn't write it that way, but that's what it looks like to me.

Do you agree with that?

A We can interpret it's the duty.

Q Okay. 8:00 a.m. What I'm trying to understand is, is this right or is the ROD right? Because this says they were cut loose at 8:00 a.m. on the 22nd.

A One moment.

Q And when I say "they," it's this crew here which is [redacted]

A Okay. One moment.

A (Jason Cutliffe) This comment most likely indicates they were released for duty 8:00 a.m. the next day. This would have been the last full day of work and that would be consistent with our practice.

Q All right. But --

A (Tess Roebuck) So -- I'm sorry, Jason. Were you speaking?

Q He was suggesting -- and I don't mean to put words in your mouth, but you were speculating that this references to the next day, not -- did you find any?

A (Tess Roebuck) So we work on a storyline with each of these items what the note is that we have on here specific to this crew --

Q You're talking about "here," meaning ROD?

A I'm sorry. No.

Q Oh.

A This is just -- so based on the notes that we see here, we believe that the 8:00 a.m. is accurate because there was some dialogue between Duke leadership and them that they had some specific requirements relevant to their driving hours and logbook. So they had to have a set number of hours of rest time before

being able to travel. So even though we may have had them released at 6:00 a.m., they may not have been able to start traveling at 8:00 a.m. in order to meet --

[redacted]

Q So my question, I guess, is is the 22nd or 23rd the right day? This time sheet says the 22nd and that's one thing I'm trying to understand.

A Okay. So I'm not sure -- I'm going to respond to this. [redacted]

Q Okay. And when I asked for a late-filed 14 and I called it the ROD notes, but with those notes that we intended to ask for here, would that have all of that dialogue and information that you just talked about?

A I just asked her and we can provide it to you, but I do not believe that was provided in those.

Q And I'm not asking to see it now. I just want to know if we can get it as a late-filed --

A Absolutely.

Q -- that whole dialogue?

A Yes.

Q Okay. I called it ROD notes. And if it's not part of ROD, if it's some other record, that's fine. I want to see that explanation.

A Very good.

Q [redacted]

Is that what they're telling you?

A That's what they told us.

Q Okay. All right. So what you're seeing there, and just so I understand it, is the date -- the time between the morning of 8:00 a.m. on the 22nd and the, we'll call it the release time on the 23rd at 6:00 a.m., that was an agreed-upon rest time that would allow them to get back a day and a half earlier off your clock --

A Correct.

Q -- off your dime?

A Correct.

Q Okay. But let's go to -- so we were on 26570 and we saw [redacted] truck on the 23rd and he's on a crew that is headed by [redacted] Well, I don't know. [redacted] at the top of the page. Do you agree with that?

A (Nods head.)

Q So let's go to --

A Yes.

Q -- the next page which is 6574. Here we go, that one.

All right. So this is a time sheet from September 17, 2017, and it says -- [redacted] is the guy at the top of the page. And I'm looking over here in the truck column and I see truck 31090 on the 17th. And then that truck was working, if you will, between 6:30 a.m. and 11:30 p.m. Do you see that?

A I do see what you're referencing.

Q And there's 17 hours of time associated with that. I assume there's some kind of split between TECO and Duke, and as a similar note, they were released from TECO at 10:30, traveled to Duke Energy, finished that day at 11:30. That's [redacted] crew; is that right?

A Yes, correct.

Q I'm wondering if Duke paid for [redacted]

tell if that's 107 or 707. But this appears to be an [redacted] receipt for 61 people to eat at the Black Fire Brazilian Steakhouse for $3,311.28. Do you see that?

A (Tess Roebuck) Yes.

Q Do you have any information about whether this was paid by Duke?

A One moment. Yes, we paid it.

A (Tim Fouty) Did you say 3,000 --

Q $3,311.28. That's what I meant to say.

A (Tess Roebuck) Yes, we paid the full amount.

Q [redacted]

A [redacted]

[redacted]

[redacted]

Q [redacted]

[redacted]

[redacted]

[redacted]

A No. One of the things that our folks take into account in reviewing these is that. So, for example, we have spoken to many contractors in follow-up when we see items like this and they will say, look, our logistics called five different restaurants to see how they could handle us and this is the only one that

could; we have not had a hot dinner in, you know, several weeks now.

There are those type of varied factors that come into it. We do not make the presumption of fraud unless we have proof.

Q So we had a discussion earlier about how 75 but in this case at least 61 park at a parking lot. And I'm not assuming there's one vehicle to one man, but that would be a lot of vehicles in a parking lot, wouldn't it, if they all drove? I mean, did you-all bus them there from somewhere?

A No. We know that they have pickup trucks primarily.

Q Okay. All right. Let's go to -- if you had it in paper, I'd say keep your finger on it, but let's go to 26616. I don't know if there's a way to split screen and look at both documents at the same time.

Well, before you go over there, let's look at the information we do have. It says Table 124. Do you see that? Check 5165 and the transaction number is 1874. Do you see those? And it says, Employee, [redacted] employee name[redacted]

A Yes.

Q All right. So let's go over to 26616, 26616.

Okay. Over on the left-hand side, we see

Black Fire Brazilian Steakhouse and the transaction number there is 1908. The table number is 125. The check number is 5166 versus the other one was 5165. Employee name is [redacted] And this is for $740.61 and the time is 9:42:55 at 9/20/2017. Does that summarize that a little bit? Correct?

A That is what the receipt says.

Q And this is for -- can we tell how many meals were served here?

A Not that I can see. [redacted]

Q Okay. My question is -- and it says under here, K & M paid me, it looks like $250. Is that booze?

A I do not know what that comment references.

Q Okay. It says Check Notes. Is that something your reviewer would write or --

A Where at?

Q Underneath. See where it says Check Notes underneath that?

A I also cannot differentiate looking at these now whether the notes my employees made versus their employees looking -- right.

Q And that's fine. I didn't -- does the check mark there, is that one that your folks made or is that something that [redacted] would have made?

A I do not know.

Q Okay. And we see an amount of $939.02. Is that them wanting to get paid in [redacted]

A They were -- one moment.

It is our understanding that the amount paid is the amount listed on the receipt.

Q $740.61?

A That is correct.

Q Okay. But if you were going to pay a [redacted] vendor, they might want to be paid in [redacted] Is that what that is? I'm just curious.

A I do not know.

Q Okay. So -- and I look here, it says Trace Number under -- above it where it says Purchase is 001557 and the Trace Number on the $3,300 invoice is 1556. Do you see that? You might not be able to see that, but --

A Yes, I see what you're referencing.

Q Okay. So does it look like these two invoices are for the same sit-down meal at the same restaurant that they're split a certain way, maybe one to the [redacted] and another to the [redacted] people?

I'm just trying to understand what we're seeing because the date and time isn't on this other

one.

A My understanding is that the amount that was paid on this total invoice matches with the receipt amounts, not any handwritten amounts.

Q I'm good with that. I'm trying to understand, if I use the $740.61 invoice at 9:42, closing out at 9:42 on the 20th, would it be a fair assumption that these are just two [redacted] crews in the same restaurant at the same time on the same day?

A One moment.

There is not -- go ahead.

A (Tim Fouty) I was going to say while you're looking, I did Google Black Fire and to answer the direct question, it's part of a very large shopping center, so it could have accommodated plenty of vehicles.

Q Okay.

A (Tess Roebuck) So Charles, on the one that you referenced, trace number 1556, below it is detailed out 61 dinners which is under their total crew count. So the trace number 1557 does not list the count, but based on the dollar amount, you could make some assumptions that it was their full crew.

Q That's kind of what I was doing is trying to understand. I actually -- I mean, if you use the same

their dinnertime to what their new hotel location would be to report the next morning for that work in that area.

Q Well, if they did, they went out and had this meal now, is it fair to assume that -- and they were released basically a day later, on the 21st, would they have been actually doing work or were they just kind of hanging around Orlando is kind of what I'm trying to understand.

A We would have to do some digging to validate -- try to validate that.

Q Okay. And so [redacted] explanation may fit, make some of the puzzle pieces fit together.

If I could get you to look at 26588 and we see --

A Got it.

Q All right. So we see the Embassy Suites 2:30 in the afternoon, [redacted] and, I don't know, it looks like [redacted] -- or [redacted] are at the Embassy Suites getting chicken tenders and whatnot.

But if they were not really expected to work that day because they were essentially resting, this would not be inconsistent with that dialogue, that timeline that you described earlier, this being in the early afternoon they were at a restaurant? They

wouldn't be going to a staging area and loading their trucks up, they're resting?

And I'm not trying to -- it's not a trick question. I'm just -- I was trying to understand before I knew about the [redacted] hold-over thing why these guys were eating a meal in the afternoon when it looked like they would be working on a --

A Well, we receive receipts from leadership members, logistic members. [redacted]

Q But if they were not working -- if they were resting on the 22nd, they basically were free to do what they wanted. I mean, that's my point is they were --

A We would have still covered their meals until they --

Q What I'm trying to do is --

A I'm sorry.

Q Before I understood about the [redacted] I was wondering why these guys were in the early afternoon not out stringing wire but in a restaurant. But if they were being held, this is why they would be in a restaurant in the House of Blues at Universal. It's a rest time; is that right?

A (Tim Fouty) Lodging.

A (Tess Roebuck) Yes.

Q All right. Let's go to 6630. Okay. This looks like a [redacted] MasterCard statement for a person named [redacted] Do you see that?

A Yes.

Q All right. And he's asking to be reimbursed it looks like for something on September 10th or 11th -- or September 10th for $89.81?

A Red Lobster.

Q Yes.

A Yes.

Q And in Bristol, I believe, Virginia.

Given that you got this crew from TECO, should you be paying costs for crew members before the 17th?

A I don't believe so, however, there could be extenuating circumstances.

Q Okay. One of those wouldn't be if he had also billed that to Tampa Electric, would it?

A I wouldn't know that. One second.

Q So let's go over to 6680.

A I'm sorry. This is some of the danger in trying to answer stuff quickly when there's a lot of factors. One moment, please.

Q Okay, sure.

A My response stands.

Q Okay. And can you tell from this whether that $89.91, even though -- just because it's circled was billed to you-all?

A No, I cannot.

Q Okay.

A And we can speak to some of the contractual terms around mutual assistance and how we handle meals and how they invoice us and Tim could speak to that. I think he did earlier.

A (Tim Fouty) [redacted] came to us through TECO. Actually, [redacted] acquired through TECO but not through -- they weren't allocated through the SEE. They are a utility, so it kind of complicates it a little bit. But in general, yes. For other utilities we do not require the documentation that we would for suppliers.

Q Well, on Exhibit -- I understand what you're saying, but on Exhibit 12 it says by reviewer notes SEE, no rate sheet provided.

A (Tess Roebuck) They are listed as a mutual assistance.

Q They what?

A They are listed as a mutual assistance.

A (Tim Fouty) It's probably because we got them through TECO, but they weren't -- they weren't allocated -- because they're [redacted] they weren't

allocated through SEE.

And also, we do have rate sheets. I think you mentioned earlier that some of the notes may not be correct on this particular one. I'm wondering if, like, we do have rate sheets and stuff like that, but there might just be some confusion on this one.

But regardless, they're another utility, [redacted] and we treat other utilities whether we acquire them from the SEE or not under the same level of scrutiny. We require receipts, but not to the level of detail that we would ask a supplier.

Q Okay. Thank you.

And when I look at -- what I want to do is go over to 26 -- okay, you're there. Is there any way to tell from this page 26680 which of these corporate MasterCard statements for [redacted] was charged to and/or paid by Duke? I see a bunch of check marks, but I don't know what those mean. Would you know?

A No, not at this time.

Q Some of these charges are for the 9th through the 11th and some are for the 22nd through the 25th. Charges from the 22nd through the 25th would be within the time frame of demobilization and/or rest time that was authorized; is that right?

A Correct.

Q If the 9th through the 12th charges were for mobilization down to Tampa Electric, they may or may not be appropriate for you-all to pay, but we don't have any evidence which way this one went?

A I don't have evidence that I actually paid those items.

Q Is it possible that the work papers would in any way support that, the answer to that question?

A No, we typically do not require this level of detail and supporting documentation for mutual assistant utilities.

A (Tim Fouty) Let me clarify too. This is Tim.

So I got some good information from some notes from support behind me here. So [redacted] came to us kind of through the SEE. They were discussed on a SEE call, but they weren't actually allocated through the SEE allocation tool. So we did acquire them via the SEE, but not the official allocation that we normally do. So that kind of explains the reference SEE and we don't have record of it in our match log.

Q Okay. And if you have Exhibit -- I appreciate that -- Exhibit 12, which is the work papers, if I look -- and I don't think we need to put this on the screen.

If we look at the meals listing, it doesn't

look like there's a meal charge before the 17th. I don't see anything for the 9th, 10th, 11th and 12th that's listed on here.

A (Tess Roebuck) Correct.

Q This would not indicate -- if this ties to what they billed, it would not indicate that Duke paid [redacted] for charges on the 9th, 10th, 11th, 12th from those credit card statements. Is that a fair conclusion to make?

A According to this, no. However -- one moment.

Our list does not include any of those charges for dates that they were not with Duke.

Q Okay. So what you just said was that your documentation does not show that you were invoiced or that you paid for charges for the days prior to the 17th? Is that what you said in another way?

A It is, but in transparency, I don't have the ability to itemize that out on the invoice.

Q I understand. I appreciate that.

A Okay.

Q I was asking about those because they submitted documentation that showed those dates. I just wanted to make sure to the best of our ability here today that we didn't show that being incurred by Duke customers for a period prior to them working for TECO.

A Okay.

Q And we didn't see the work papers until today, so I just want to be on the record that we somewhat understood the scenario once you broke the ice with that [redacted].

MR. REHWINKEL: It's 10 minutes to 6:00. Let's just stop here, get a bite to eat, and then we'll do a few more before we leave.

MR. BERNIER: Sounds good.

(Dinner recess from 5:50 p.m. to 6:35 p.m.)

BY MR. REHWINKEL:

Q I want to talk about some documentation inside of this invoice here which is 9117Z and ask you to turn to page 47562.

Okay. So does someone know what this invoice 9117Z is supposed to represent? It looks to us like it's just all lodging for [redacted].

A (Tess Roebuck) One second.

Q Okay.

A Okay. So this group of documents that are 1,900 pages are all of the expenses for [redacted], and [redacted] is one of the sub companies under [redacted] and their lodging.

Q They're one of the [redacted]; is that fair?

A Correct.

Tim, correct?

A (Tim Fouty) That is correct.

Q So what I want to ask about is, it looks like [redacted], this is their lodging summary, these two pages of 562 and 563; is that right?

A (Tess Roebuck) Correct.

Q I haven't added it up, but it doesn't like like it's totaled.

A It is on that page we were on.

Q Okay. It's over on the right --

A Correct.

Q [redacted]?

A Correct.

Q And then there's meals of [redacted] for a total of expenses for [redacted] of [redacted], right?

A Correct.

Q And the meals, it says there's 19 -- pieces of equipment on the left there are 19 pieces of equipment, there are 19 men in the meals column, and we see in the hotel -- is that right, about the 19 meals, 19 men eating meals for seven days?

A Correct.

Q [redacted]

[redacted]

[redacted]

A [redacted]

[redacted]

A [redacted]

[redacted]

[redacted]

Q [redacted]

A [redacted]

Q [redacted]

[redacted]

[redacted]

[redacted]

A (Nods head.)

Q [redacted]

[redacted]

[redacted]

[redacted]

A [redacted]

Q [redacted]

A [redacted]

[redacted]

Q **How did you know where to pay?**

A I would -- I'm trying to think if --

Q Why don't you speak up.

A I'm talking to myself really.

Q Okay.

A Give me a second.

Q All right.

A (Tess Roebuck) [redacted]

A (Tim Fouty) Right. That's what I was confirming.

A (Jay Shawver) I just did the math and it was [redacted]

Q Okay. So --

A If my math is right.

Q So it's somewhere in the [redacted] range?

A Yes, that's what I got, [redacted]

Q Okay. [redacted] **Is that something you would have agreed to or negotiated with** [redacted]

A (Tim Fouty) It's something that could be, but we don't see it in their rate sheet.

Q That's what we were struggling with is we couldn't find it.

A I don't know -- we'll continue to look into that. We may have some notes, but it's not in the rate sheet.

09ac02ff-2893-4455-8ac5-c3168cc8f9ab

Q Okay. So what I want to do is as a late-filed exhibit, [redacted] we'll call it Authorization, but what I'm looking for is a [redacted] Does that make sense?

A Yes.

MR. BERNIER: Yes.

(Exhibit 16 to be marked and produced as a late-filed exhibit.)

BY MR. REHWINKEL:

Q All right. So we were talking earlier in the day when we were -- I was asking about purchase orders, and I think the term that was used was something along the line -- it had the word "scope" in it. Can you refresh my memory about what that document was?

A (Tim Fouty) This is Tim. You might be referring to the scope and method of payment document.

Q Yes.

A Okay.

Q Would there be such a document for [redacted]?

A No. The scope and method of payment document is generally for our on-system embedded crews.

Q And I think the master service agreement refers to a purchase order when it says where to look for [redacted] rates.

A If there is a purchase order.

Q Okay.

A In that case, there is not.

Q There is not one for [redacted]?

A There is not. The purchase order is the scope and method of payment document or a different agreement.

Q Okay. So when we looked at the master service agreement section Roman numeral IV.B on page 10 of 29 in the contract between [redacted] and Duke discusses [redacted]

[redacted]

And what I guess we're trying to understand is is there a billing instructions document that you should have?

A Well, there is a billing instructions document on how to submit for your invoice.

Q Okay.

A It does not contain a detail of the -- I mean, the document itself just tells you what accounting to use and --

Q Oh, it's the same for everyone? It's a boilerplate?

A Yes.

Q And then -- so when we're looking for rates --

A Right.

Q Okay. And that 45025 document is what you were using for foreign crews universally or in most cases? I mean, would there be exceptions to that?

A With [redacted] we actually did use the thicker version of the master services agreement probably because it was done prior to us, 2015. It was done prior to going to that 45025 method.

Q All right. And any reference in that master services agreement for [redacted] that referenced a purchase order was just a dead end in the sense that there's no such thing for them?

A That would be correct.

Q Okay.

A (Jay Shawver) And Charles, this is Jay. What was that provision you called out, section -- or Roman IV.B, or what was that?

Q Yes, Roman numeral IV.B, page 10 of 29.

A We'll look at that.

Q I have it in one of those boxes there. It's probably easier for you-all to find it.

A I'll just look it up.

Q While he's looking for that, do you consider people like [redacted]

A (Tim Fouty). Yeah. I mean, when we're dealing with [redacted]

Q Okay.

A And we might make sure that [redacted]

Q Okay. [redacted]

A [redacted]

Q Okay. And nobody -- if somebody's got a union rate and it's --

A We have two sets of rates for [redacted].

Q Okay.

A Two rate sheets. One is a union one and one is a non-union.

Q Okay. But that's uniform?

A That's right.

Q It doesn't matter whether it's [redacted] union, non-union; same thing uniformly?

A Right. That's correct.

Q So let's go back to [redacted] And if I looked at this document here on the page that summarizes the lodging, it shows hotel lodging from 9/7 through 9/10, which I assume means on the way down, and then 9/21 which would be on the way back home, mobilization in the first instance, demobilization on the 21st; is that fair?

A Yes.

Q And we see [redacted] spending the night at a Country Inn on the 21st, which would imply that they were released probably on the 21st. Their last day of work would have been the 20th?

A I would assume. I assume we can check, but I would say that it seems logical.

Q And I think based on the conversation we've had earlier today, that [redacted] would probably be on the early end of release? You wouldn't hold them over to do button-up work or anything like that?

A Generally not.

Q Okay.

A (Jay Shawver) This is Jay. So while she's doing that, we referenced that contract and that's the invoicing section, and then it references if there's not a PO, otherwise it's the rates that we have in the

standard sheet, and in that sheet there is no mention of a cost per mile. So that's probably an opportunity.

Q Okay. Is it possible, and we didn't ask -- well, we've got it somewhere, but given the time frame we did not seek to look at the reviewer paper for [redacted] thinking that they would probably be somewhat extensive.

Is it possible that there's documentation in there that discusses propriety of a mileage rate?

A In what document?

Q You know these work papers that we've been talking about? We'll start off on audit papers.

MR. BERNIER: POD 18 stuff?

MR. REHWINKEL: Yes.

A (Jay Shawver) I've never seen in ROD.

BY MR. REHWINKEL:

Q Okay.

A (Tess Roebuck) So our delay is that we do not have the crews broken out by the [redacted] identifiers, they are crew IDs. So to cross-reference that --

Q That's fine. I see you might have released [redacted]resources differentially based on crew, okay, rather than -- I don't know. How many [redacted]resources do you have, [redacted]

A (Tim Fouty) In two waves we ended up with [redacted]

Q Okay. So you wouldn't have obviously released all [redacted] on the same --

A No. It was staggered. And we don't -- we're still going to find the documentation, [redacted]

Q Okay.

A (Tess Roebuck) Subject to check, we've got a good list of [redacted] but it's very specific instructions that they are released as of 6:00 a.m. on 9/21, they should go to the staging site in the morning for breakfast and to unload material, tree ground prior to departing.

Q And that was all [redacted]?

A (Tess Roebuck) No.

Q Oh.

A It's a good percentage of them.

Q Good percentage. Okay. Gotcha. So they essentially were done working on the 20th which -- and you let them go first thing in the morning on the 21st. Is that what you just said?

A (Tess Roebuck) Yes, sir.

Q Okay. So if I looked at this table that has this summary of the hotels, I can assume that these all relate to that same [redacted] crew. And would they likely

have traveled together, these 19 men? They would have --

A That's a reasonable assumption.

Q Amy, did you have any thoughts about what -- all the [redacted] people have traveled together?

A (Amy DeZonia) Yes, the 19, I would assume they would have traveled together.

Q Okay. So here's what I want to understand about these invoices or receipts. So I'm looking at -- let's go to 47587. And so this is a [redacted] Electric 7. I don't -- I guess is their name. But it's Room 303, arriving on the 8th, departing on the 9th, and it's -- if you look at the bottom of the page it says Country Inn and Suites, 1033 Fairmount Highway, Calhoun, Georgia.

Did I read that right?

A (Tess Roebuck) Yes.

Q All right. And then we see if we look at -- it says they departed on the 9th. It has 9/11/17, 3:33:49 p.m. Eastern Standard Time, and it looks like that's an indicator that that's when the invoice was generated, but this says that the crew checked out or departed on the 9th. Is that how you read that?

A It shows their room was from 9/8 to 9/9.

Q I'm just trying to kind of get rid of the 9/11

MR. BERNIER: I'm sorry?

MR. REHWINKEL: Calhoun, Georgia?

MR. BERNIER: Calhoun is up near the Tennessee border. Milledgeville is not far from Perry where the staging --

A (Tess Roebuck) They're about two to three hours apart.

Q So that is a southerly --

MR. BERNIER: Yes.

A Two to three hours.

BY MR. REHWINKEL:

Q I thought it was down in southwest Georgia somewhere.

MR. BERNIER: Middle College of Georgia is there.

BY MR. REHWINKEL:

Q All right. I was rewarded for closing that question out by error.

All right. Okay. I have a big scope question about [redacted]. We looked at Bates from 46722 to 49386 and I don't know that we're going to be able to determine this here today, but we totaled the invoices there at [redacted], and we saw billings for [redacted] of [redacted] and there was -- which left [redacted] of invoices that we could not reconcile here.

And so what we're trying to understand is where might we find the other [redacted]. I'm not suggesting it doesn't exist. We just don't have in our documentation invoices for -- and I think it's about two or three invoices that support that amount of money.

A (Tess Roebuck) That is something we'd have to follow up with you on. So if you wanted to send that to us, we could do our research and reply to you validating we have those documents --

Q Okay.

A -- or explaining otherwise.

Q Is there anything anybody knows about where [redacted] invoices might be?

A There's a lot there.

Q Yeah, I understand. Okay.

A They were all moved there.

Q Okay. Let's go to invoice 9117 P.1-2. And I want to ask about Bates -- well, let's just look at that. This is 2-point -- [redacted] is the total invoice here. Do you see that?

A Yes.

Q All right. And turn to the -- let's go to Bates 470796. This looks like a time sheet for [redacted], [redacted]

A (Tim Fouty) That's correct?

A (Tess Roebuck) Yes.

Q And this is for the week ending 9/1017 and it looks like the date of this time sheet is 9/1014, which is two days after the storm has left town? No, three days, right? 12, 13, 14?

A (Nods head.)

Q All right. So would you have information in the ROD that says when this particular crew [redacted] arrived or was unboarding?

A Let me check. If it's listed by that, yes, if I have to cross-reference crew IDs, but let me see if it's --

Q Okay.

A The size of [redacted] is going to create quite a bit of time for us to do this.

Q Okay.

A We could have created the names with a crew ID cross-reference given some time, but we could certainly follow --

Q Okay. Well, let me move away from that. I was just trying to understand.

If we look at page 7 -- 47082, this is a summary of billing, it looks like, for the week ending the 10th and it shows a billing for the 8th, 9th and 10th; is that fair, [redacted]

A Yes.

Q And then if we skip over to 84, 47084, we show the billing time pretty uniformly for the 11th through the 17th in this summary of time, right?

A Correct, with a couple of exceptions.

Q Right.

A Yes.

Q But would you assume from this that R[redacted] arrived pretty much near the beginning of the event and onboarded based on the travel time?

A Subject to check, that's a fair assumption, but we would be able to validate it in ROD.

Q So now let's go back over to -- let's go to 7095. And this -- what I want to look at is, first of all, this is a [redacted]daily time sheet and it shows work on the 14th; is that right?

A Yes, that's what it appears.

Q It looks like it's a three-man crew?

A There are three names listed there, yes.

Q Okay. So then we go down -- let's go to the notes at the bottom. It says there: Working off feeder X83 inspected all -- what does that say?

A Stingers.

Q -- stingers for damage, repair service primary --

A (Amy DeZonia) Secondary.

Q -- secondary and --

A Cans.

Q -- cans. That's meters that are cans?

A Or transformers.

Q Okay. And then it says: Waited at staging till 12:00 p.m.

What would you deduce from the "waited at staging" comment?

A I would defer.

Q Anybody?

A (Tim Fouty) This is Tim. I don't know if this was an example, but I know there was a time when the bus wasn't there and they had to wait for a bus to return to take them to the hotel. I don't know if that applied to this specific one.

Q Well, is the thought that 12:00 p.m. there is midnight or noon?

A Yeah, I'm assuming midnight, but --

Q But you think -- I thought of 12:00 p.m. as being noon.

A Well, it should be, but I think -- I was taking it that they meant they waited till midnight, but that could be. We were just all agreeing that noon is probably more what the document is referring to.

Q All right. So --

A (Tess Roebuck) So we have located some ROD notes. It appears that they were onboarded the morning of 9/14 and went through the onboarding process. It listed who the onboarding was completed with, by [redacted]

Q Does anybody know where [redacted] started?

A We're checking to see if we have that. They're from Canada.

Q Okay. So even though it shows them, I think we looked at them, their first billing date was the 8th, you're assuming that travel time would have brought them in late on the 13th or early on the 14th to be onboarded on the 14th?

A Yes, we had some that came in late night of the 13th and were onboarded the morning of the 14th.

Q Okay. All right.

A (Amy DeZonia) This is Amy. That explains the 12:00 p.m. start because they would have been onboarded at that point.

Q That's what I was trying to understand. So okay.

All right. Let's, if we can, turn to [redacted] and I want to turn to invoice -- well, we can go to Bates 38275.

All right. This shows a [redacted] crew working on -- it says the 13th, 14th, 15th and 16th in handwritten notation up there. Do you see that?

A (Tess Roebuck) Yes, 13, 14, 15 and 16.

Q Can you tell me what the [redacted] off to the right represents?

A One moment.

Tim, Sharon, can you guys reference the contract to see if that is in reference to the contract?

A (Tim Fouty) Oh, the [redacted]?

Q (Tess Roebuck) Yes.

A (Tim Fouty) I don't know which [redacted] crew this was, but there was some that started as transmission and switched to distribution. So we could have a different contract to look at. So I was trying to figure out if it's a transmission.

A (Tess Roebuck) Yes. I'm trying to figure out if this is a distribution or transmission invoice.

We're confirming -- if it's distribution we have it. If it's not, we don't.

Q Is this some kind of a [redacted]

[redacted]

A I'm checking, Charles.

Q Okay.

A So Charles?

Q Yes.

A There are some complexities to this one that is more likely transmission than distribution. We've got no reference to that [redacted] currently, but we could follow up on the details with this one. It's just going to take longer piecing together, unless you want us to spend another five minutes doing that.

Q No, I think --

A We would have to just -- we're checking various different systems as quickly as we can.

Q Okay. Well, let's go to, if we can, 38284.

A Excuse me?

Q 38284.

Okay. This shows rates, it looks like, for the invoice. Can you tell anything from this, what type of crew this was by their rates?

A (Tim Fouty) This is the distribution [redacted] rates and we believe that that crew was transmission.

Q Okay.

A So we're looking to find transmission rates.

Q Why would these rates be attached to these invoices?

A Well --

Q Or is this a boilerplate thing?

A It could be, but we kind of have to sort through the notes because we did have some crews that started as transmission and switched to distribution at some point.

A (Tess Roebuck) Yes, just on the spot this is not going to be an easy one to have a simple response to, but we can definitely give you one.

Q Okay. Well, let's move past that and let's go -- let me just generically ask a question about 38288. And this shows [redacted] Do you see that?

A Yes.

Q And are these specific rates for this specific crew out of [redacted] versus some sort of a generic [redacted] rate? To be fair, let's go to the page before which is 38287, and there's a letter here where somebody named [redacted] with [redacted] sends a letter to Duke in July of 2017 talking about their rates based on, it looks like, union requirements.

A (Brian Sawyer) Can you make that a little bit bigger?

A (Tess Roebuck) So one of the things we need

to validate is -- and Tim, you need to speak to this -- that we had some that if there was not a current contract what would you do, if there was a dated contract.

A (Tim Fouty) Supply Chain would have requested an update to the rates. But I'm not sure why the in-state designation on this one.

A (Brian Sawyer) Okay. So -- this is Brian. I'm sorry. So I recognize Mike Forest. He is actually a transmission employee, a manager in the Midwest. This looks like a communication from [redacted] who's out of [redacted] to perform potential transmission work in the Midwest and trying to establish storm rates under what we would call our blue sky MSA and SMP, scope and method of payment. That's what that looks like to me.

Q Okay.

A (Tess Roebuck) And for further clarification, we believe in this are 2018 storm rates -- or 2017. Wait.

Q It says: I respectfully submit emergency labor and equipment rates for the period July 1, 2017 through December 31, 2017.

So these -- and I guess the next page are their rates. And so these would be --

Is this for a specific [redacted] versus all of

[redacted]?

A (Tim Fouty) That's what it looks like to me. Not maybe a crew, but specific to those who were already working for transmission.

A (Brian Sawyer) This would be -- because this is a [redacted] company. This would be consistent with any [redacted], one through however many that were under the MSA contract in the Midwest. If they were deployed in a named storm with us, these rates would apply if we agreed to these. I don't know if we agreed to them or not. We've had storm rates from other companies in the past where they've tried to establish them which we did not sign off and agree to.

In our current baseload blue sky through method of payment of transmission we don't have storm rates. We have overtime -- regular time and O.T. There's no double time. So I don't know if these were proposed or actually agreed upon. That I don't know.

Q So would [redacted] be considered embedded for the Midwest of Duke?

A Yes. What I was confirming with Brent, I think we had a signed MSA in 2017, so currently they are embedded. I would assume in 2017 they were. They're a current state, so --

They weren't in '17? Okay. They're working

today, I believe. They weren't in '17.

Q All right. So let's do this. Let's stop here for the day and let's come back at 8:30 in the morning and we'll kind of streamline our questions and then we'll get a little -- dodge this, what we talked about about [redacted].

But before we stop, what I want to understand is, is this -- is [redacted] embedded only in the Midwest at this point in time?

A For transmission, yes.

Q Are they embedded at all for distribution?

A I'm sorry. Let me clarify. For Transmission, Midwest, yes.

Q Okay. So one thing I'm trying to understand is, looking at these rates they seem [redacted] but they seem to be a lot lower than the rates that Florida Public Utilities Company brought onboard for Irma based on their testimony that FPL negotiated them.

So what I'm trying to understand is does Duke have a relationship with [redacted] that would give you some better leverage with [redacted] than maybe some other utilities would have?

A (Jay Shawver) So I'll answer that. This is

09ac02ff-2893-4455-8ac5-c3168cc8f9ab

Jay. So we -- at the [redacted] that we do business with.

Q Who are the other [redacted]?

A [redacted]

Q Okay.

A They've got [redacted].

Q Okay.

A There are over [redacted].

Q So when it comes to negotiating rates, we talked earlier today that it's sort of a -- for foreign crews it's more a matter of kind of in the heat of the moment price determination, right?

A Yes.

Q But I take it that you have a guy in Deland talking about wanting to set up some rates for the upcoming storm season, and would this be consistent with that or is this a little bit different that you're setting up potential discussions about rates in July versus in August or September as the storm is starting to heat up in the basin?

A Give me a second.

A (Brian Sawyer) I can probably answer that if

you'd like. This is Brian.

So from the letter that I saw, that was an attempt to actually establish an MSA and a scope of method of payment in the Midwest, in which case that would be consistent with the [redacted].

That's probably why you're seeing the delta between the July time frame versus the realtime September foreign crews. [redacted]

Q So is [redacted] a contractor that performs high-quality work, quality work? Are they just --

A They perform substantial high-quality work. When we brought them into Irma from a transmission perspective, we actually tried to establish post-storm an actual MSA scope and method of payment with them. [redacted] but we tried substantially. They do fine work.

Q That's at the transmission level. What about

can anybody address it at a distribution level?

A (Tim Fouty) From the storm perspective, not from the distribution side that I'm aware of from a day-to-day work standpoint.

Q Is there a reason for that? Is it because of price?

A (Jay Shawver) This is Jay. Yes.

Q So distribution end price has been an issue?

A Yes.

Q Okay. All right. [redacted] Is that essentially what you experienced?

A I'm sorry. Can you repeat that?

Q Their hourly rates would be [redacted]. Is that what you experienced for [redacted] on the distribution side?

So is this document here, are those the rates? What page is that? Are these the rates that you used for [redacted] or were they --

A (Tim Fouty) That is not the rates that we have for distribution.

SHARON BOGDANOS: Those are transmission.

BY MR. REHWINKEL:

Q Okay. For distribution I see --

A (Brian Sawyer) These are transmission rates. This is Brian. These are transmission rates. Those are not the distribution rates. Is that correct?

A (Tim Fouty) That is correct.

Q So when I look at 38284, this document here, for [redacted]

Are these rates also -- those rates there, what are those?

A Distribution.

A (Tim Fouty) Those are distribution rates.

A (Tess Roebuck) These are what were utilized.

Q [redacted]

A (Tim Fouty) Yes, that would be correct.

Q When you say --

A (Jay Shawver) This is Jay. The way this rate sheet appears is for storm only, and so it's not applicable [redacted].

Q Okay. [redacted]?

A Yes.

A (Tim Fouty) The description of when the overtime applies is below.

Q Right there?

A [redacted]

09ac02ff-2893-4455-8ac5-c3168cc8f9ab

[redacted]

Q [redacted]

[redacted]

[redacted]

A [redacted]

[redacted], but for storm work that seems in line.

Q **For union crews or for any crews?**

A [redacted]

[redacted]

[redacted]

MR. REHWINKEL: Okay. All right. Well, let's stop there and we'll come back at 8:30 tomorrow and we'll pick up with PAR or somebody else. I'm just going to leave these boxes in here if that's okay.

MR. BERNIER: That's fine.

MR. REHWINKEL: We can go off the record.

(The deposition adjourned at 7:44 p.m.)

I N D E X

PAGE

PROCEEDINGS..... 330
CONTINUED DIRECT EXAMINATION BY MR. REHWINKEL..... 332
CERTIFICATE OF OATH..... 451
CERTIFICATE OF REPORTER..... 452
ERRATA SHEETS..... 453-459

E X H I B I T S

FOR THE OFFICE OF PUBLIC COUNSEL: PAGE

17 - Late-Filed - [redacted]..... 344
18 - Late-Filed - Pre-Staged Crews..... 352
19 - [redacted] Review Work Papers..... 369
20 - [redacted] Invoice 40061880..... 369
21 - Late-Filed - Storm Damage Follow-Up..... 389
22 - Late-Filed - [redacted] Documents Showing [redacted]..... 413
23 - Late-Filed - [redacted] Follow-Up..... 430
24 - [redacted] Invoice 901711041A..... 431
25 - [redacted] Invoice 272035..... 440
26 - [redacted] Invoice 59221.1-2..... 441
27 - Late-Filed - [redacted] 441
28 - [redacted] Invoice 1771 Excerpt..... 447

P R O C E E D I N G S

MR. REHWINKEL: So let's go back on the record. I think in the room today everyone that made an appearance yesterday is here again without exception, except Bill Schultz is not here today. And I think everybody on the phone has indicated --

MR. BERNIER: Yes, I think on the phone I had Schef, J.R. Kelly, Rachel -- I'm going to butcher your last name as always.

MR. REHWINKEL: Charles.

MS. DZIECHCIARZ: No worries.

MR. BERNIER: And you're going to provide me a list of the other people you've got with you.

And then I have Laura Wynn and Jon Moyle; is that all correct?

MR. REHWINKEL: You have Schef.

MR. BERNIER: I had Schef.

MR. REHWINKEL: And Schef, your sound was kind of low again today for whatever reason.

MR. WRIGHT: I'm using my phone for other reasons.

MR. REHWINKEL: Okay. You're very faint.

MR. WRIGHT: You're coming in loud and clear and I'm going back on mute because I probably won't have much to say.

MR. REHWINKEL: Okay.

MR. WRIGHT: Again, just before we go on the record -- (Discussion off the record.)

MR. REHWINKEL: And now that we're on the record, this is a continuation of yesterday, and everyone, I would just like you to go down the line, acknowledge that you've still under oath starting with Tess.

TESS ROEBUCK: Yes.

MR. REHWINKEL: Jason?

JASON CUTLIFFE: Yes.

LAQUITTA GHENT: Yes.

MS. DEZONIA: This is Amy. Yes.

BRIAN SAWYER: This is Brian. Yes.

TIM FOUTY: This is Tim. Yes.

MR. SHAWVER: This is Jay. Yes.

MR. REHWINKEL: Thank you.

CONTINUED DIRECT EXAMINATION

BY MR. REHWINKEL:

Q All right. So I've asked to put on the screen the email that's attached to Exhibit 9. Okay. And I think I'll direct this question to Tess, but it could go to Tim or Jay. But Tess, are you familiar with this email?

A (Tess Roebuck) Yes, sir.

Q Okay. Can you explain to me -- and I'm just trying to understand the circumstances of the time frame. I don't know if you need to go to the beginning of the email, but tell me what your understanding of this email describes.

A This email is really our process that we use for any time we have a challenge with a vendor on getting information from them or getting lack of follow-back when we keep asking them for things or we need clarification, then we get guidance from the contract management group. And Robin Grace was the lead working with the payment team for Hurricane Irma.

Q Okay. Let's go to, I guess, the very beginning of the email string which I think will be at 678, 60678. And this is Robin to Joan Sharpshair and Brent Holly and some others, and this is dated in March, March 27 of 2018.

It says, "We're still trying to process an invoice for [redacted] for Hurricane Irma storm restoration support. I do see them on the off-system line support spreadsheet I received from Sharon and they have a crew ID in ROD, so I can validate they were on system working for us.

Today, they were able to provide me with a rate sheet and their corporate signed terms and

conditions contract.

Can someone in Contract Management give me approval to use this rate sheet to complete our audit of their invoice?"

And it seems like from the email stream that there was not a rate sheet in place prior to them doing work. Is that what I'm understanding from this?

A That was our understanding.

Q And if we go to 677, which is -- it's an email from Brent Holly to [redacted], and it looks like he says, "Can you please confirm who at Duke Energy you provided these rates to storm work being performed? Also, if you can forward me the email documentation, that would be great."

And then on April 4th [redacted] sends back to Brent Holly, "As we discussed, [redacted] was sent to Duke Energy via mutual assistance from PPL. Our rates did not make it to Duke prior to work."

Is that right?

A Yes, sir.

Q So -- and this may be directed to Tim or Jay. Can you explain why this circumstance would happen and if there's anything unusual about it?

A (Tim Fouty) Yes. This is Tim. I'll start.

BY MR. REHWINKEL:

Q -- where he says: Hi Sharon, Please see below from company [redacted] Robin has been sent -- has been trying to track down validation of their invoicing from Irma, but we have been unable to locate any storm rate sheet internally. Per note below, they were a mutual assistance contractor provided from PPL. Based on that, are you okay with Robin moving forward with payment based on the rates [redacted] provided post storm?

And Sharon's response to Robin was: Are the rates way out of line with what you've been seeing for other companies? If not, then I would be okay with processing invoices based on the rates they have provided us.

And then Robin says to Sharon: Their rates are a little on the high side, but certainly not the highest we've seen -- we have seen. Expenses seem reasonable and in line with others as well. I will go ahead with processing their invoice if you agree.

So this is to Tess. Did I read that, despite my stumbles, fairly accurately?

A (Tess Roebuck) Yes, sir.

Q Okay. And from the standpoint of review and processing of the invoice, your team would have relied

66feda51-0c00-4485-b409-15b72fb4a730

A I can get that for you relatively quickly.

Q Okay. Thank you.

A Charles, [redacted] goes to one of our executives to approve that.

Q Okay. Thank you.

All right. Now, we can move from the [redacted] [redacted] invoice to -- I want to tee up, if we can, this [redacted]. I think I misspelled it. [redacted] and then it's [redacted]. And the Bates on this would be 3269.

Okay. This -- and I don't know exactly who the right person to direct this to is, so I'll ask the question and hopefully someone can speak up.

This appears to be a time sheet summary for a week ending the 23rd of September with the last time summary for the day of the 21st; is that correct?

A (Tess Roebuck) Yes, that's what it appears.

Q Okay. And this is a, I don't know, it looks like about 10-people crew. I didn't count the numbers. So what I want to ask about is are the notes for the date of Sunday, 9/17 at the bottom. And I don't know if that needs to be enlarged to folks, but you can see it a tiny bit.

And what I want to ask, the notes say: Crews were released from TECO storm -- I can't tell if that's a 9 or an 8:00 a.m., and transferred to Duke Energy for

gone to one site to have that briefing and onboarding and then to another base camp to receive work and get their assignments.

Q Okay. So can you tell from this -- I guess my question was would the assumption be that they worked on Monday and then on Tuesday and then they were released on Wednesday?

A That's what I would draw from this. And again, Monday is an assumption because it's not noted specifically in those comments.

Q Okay. What I'd like to do is just ask if we could get maybe some notes of follow-up explanation of what happened with this crew with a little bit more detail, whatever notes you have that show what they did from the time they onboarded with you to the time they were released.

A We can do that.

Q Because their demobilization time seems rather quick, so that doesn't look like an issue for us. We just want to understand. And what I'm looking for here is just to understand the mechanics of it because these notes are a little bit odd.

A We can do that.

MR. REHWINKEL: So this will be a late-filed No. 17 and it would be [redacted] Detail. I'm just

right?

A (Tim Fouty) Depending on -- this is Tim. [redacted]

Q Okay. And let's say that somebody has gone to a location north of Florida to, I use the term "hole up," you know, just wait for the storm. So then they're not traveling, but they're on standby. They're just waiting around.

Is there a limitation on the billing for standby time when someone's in a hotel waiting for a couple of days or are they allowed to bill [redacted] generally?

A They are probably generally allowed to bill [redacted].

Q Okay. So I guess another way of asking that question is you don't have a maximum for standby time that vendors can bill?

A We do not. [redacted]

Q All right.

A (Jason Cutliffe) This is Jason. What I would just add to that to tie into Tess' comments, there's an

the state. I'll ask the group if they recall anything different. Not line crews. I mean, we had leadership and support and damage assessment. Those folks were here.

Q I understand.

A They were in state. But our off-system restoration crews, I believe we had them all in those two mustering locations.

A (Amy DeZonia) I would like to confer.

Jason, if I could just for a minute.

Q Okay. And my question isn't every single one, but I mean as a general rule.

MR. BERNIER: Your question was whether or not as a general rule crews would be staged in Georgia, not whether or not every --

MR. REHWINKEL: That's right.

A (Amy DeZonia) All right. I can answer this now.

Q Yes.

A Okay. So yes, we did bring in roughly 1,000 resources before the storm.

Q Okay.

A We had a parking site at the Orange County Convention Center where we parked trucks and then vetted them down before the storm.

that fair?

A (Jason Cutliffe) This is Jason. Yes. Their function is a bit different. They need to be out just as soon as it's safe to travel and they need to be familiar with their area before so that they're effective immediately. And so we need them, as many as we can get, actually here on site.

Q Okay. And then tree removal, what you were calling veg, tree removal crews are crucial too because they needed to clear the path if it needed to be cleared for the line crews to work because you don't ask line crews to clear trees other than maybe small limbs, right?

A (Amy DeZonia) Correct.

Q Is that fair?

A (Jason Cutliffe) Correct.

Q All right. I want to switch to the -- first of all, let me ask this, and this may go to Tim or to Jay first. [redacted] **Is that something you're familiar with?**

A (Tim Fouty) This is Tim. They can charge -- I guess it depends on the contract and whether or not they are a contract company or a utility.

Q Okay. My example is a utility.

A A utility, we honor whatever stipulation they have with their crews. [redacted]

Q Okay. So if -- and my -- I'm going to tee up the [redacted] Have you seen that before?

A Yes.

Q Okay. So when they get that -- and as I understand it, [redacted] is that right?

A I have seen that note and that's what that indicated, yes.

Q Okay. So in a situation like that, does it mean anything more than that they're just going to get [redacted]

A [redacted]

66feda51-0c00-4485-b409-15b72fb4a730

[redacted]

Q Okay. What is Duke's expectation? Is it that

[redacted]

A [redacted]

Q Okay. Go ahead.

A (Jay Shawver) This is Jay. In our sheet from each supplier, there's a question that says if Duke does not provide a meal what is the per diem you'll charge, and we have that for each supplier.

Q Okay. [redacted]

[redacted]

A That's what it appears, yes.

Q Okay. I wanted to get the [redacted] **invoice up and this would be -- let's just go to -- the page would be 25113, and if we can scroll down to the notes at the bottom. There you go. And maybe zoom in a little bit, more towards the left side.**

It appears to read in the box there -- first of all, this looks like a weekly summary of time worked for a [redacted] **crew. There's hand-numbered on the left-hand side, 52. Do you see the hand number 52 by the last guy,** [redacted]

A (Tim Fouty) Yes.

Q And then in the per diem box at the bottom it says, [redacted] Do you see that?

A (Nods head.)

Q Is that an unusual provision or is that something you're used to seeing?

A (Jay Shawver) This is Jay. That is not common.

Q Okay. Let's go to the next page which is 114, 25114. And this -- what I want to ask about, if we can -- before we go to the notes, let's go to -- this looks like a summary of time for the week ending on Saturday, the 23rd. Actually, it's more than that. It's Wednesday, the 13th, through Saturday, the 23rd. Do you see that?

A (Tess Roebuck) Yes.

Q Okay. [redacted] Is that right?

A Correct.

Q And then each box has the same names, it appears, populated in it from --

A They do.

Q -- [redacted] right?

66feda51-0c00-4485-b409-15b72fb4a730

A Yes.

Q And we see in the bottom box [redacted] for everyone --

A Correct.

Q -- with some -- well, through -- for everyone through the 18th.

A It's actually not everyone.

Q Not everyone. I'm sorry.

A That's okay.

Q Everyone -- yeah, it's intermittent.

And then on the top box we see hours ranging from [redacted] for those folks.

A Correct.

Q Some people have [redacted] if you look on the Saturday there.

So on one hand, one would look at -- if we take [redacted] at the top on the 13th, it looks like he's recording [redacted] and also [redacted] but then there's a note --

A Correct.

Q -- at the bottom, if we could scroll down now to the note.

Okay. So it says: Per internal policy, management employees providing mutual assistance support

[redacted]

Did I read that right?

A Yes, sir.

Q Is that an unusual provision?

A Yes. The top boxes, they're actual hours worked. [redacted]

Q Okay. [redacted] **is that right?**

A (Tim Fouty) It appears to be correct, yes.

Q And one thing I just want to understand by asking this example, this is a mutual assistance vendor. This is another IOU in the [redacted] **area, I think, right?**

A (Tim Fouty) Yes.

A (Tess Roebuck) Yes.

Q What's mutual about it is they help you, you help them if they need help in an ice storm or something or a Hurricane Sandy situation, but what's not mutual is --

Well, let me ask this: Does Duke have provisions like this where you [redacted] **Does anyone know?**

A (Jason Cutliffe) This is Jason. When we support another utility, we have guidance that we use. We treat it the same as if we're working on system up to a certain level of management. If the event is approved to meet criteria as a major event, [redacted] We carry that same pay practice into off-system deployments.

At a certain level of management, that is not available. [redacted].

So that's how we roll on storms that are here in Florida, and we apply the same criteria when our

strike teams go outside of the state.

Q Okay. So what I'm hearing is that in a mutual assistance arrangement with respect to [redacted] your pay practices for management are symmetrical with theirs?

A That's fair.

Q And in the mutual assistance world where you require resources through the RMAGs, this is a situation where it may not be what you do for your internal pay practices at home or when providing mutual assistance, but you're not in a position to challenge theirs if you accept their resources; you pay what they charge you, right?

A That's correct.

Q Okay. Is there ever a circumstance other than, say, if somebody submits a receipt for some -- you know, an engine overhaul or some kind of major repair that you say, We're not paying that, and you push back on that, I assume? That's a hypothetical.

A An example of that is if the expectation is anything purchased is consumed during the event. So things that are purchased that aren't consumed in the event, we -- we've done that ourselves at some of our deployments where we have had to take those off the invoices, sleeping bags, things like that that aren't consumed that were necessary, but we absorbed that cost

because it didn't meet the criteria.

Q Well, beyond those kind of items, you're going to pay what they charge you for their labor regardless of whether you like it or you would do it yourself; is that right?

A That's fair.

Q Okay.

A Within reason.

Q Yes. Can you recall or does anyone know of any instances where you pushed back on the labor charges of a mutual assistance provider?

A (Tim Fouty) I'm not aware -- this is Tim. I'm not aware of it. We have given feedback to leadership. I don't know specific to this one, but we have given feedback to leadership about what -- something that's not symmetrical.

Q Right.

A And a particular example I'm thinking of, it was our representative on the EEI. So they meet as executives and discuss. So I assume that it was discussed, but I don't know what the result of that was.

Q Okay. Let's -- what I want to do is look at some invoices -- I'm sorry, some receipts in support of this particular invoice here, and what I want to do is look at 25124.

finish their work, get your eight hours work and start the next day.

Q Okay. Well, let's look at 25113.

MR. BERNIER: I'm sorry, Charles. Is that 113?

MR. REHWINKEL: 113. It's a time summary.

BY MR. REHWINKEL:

Q Okay. So if I look on Sunday, the 17th, I notice that most of the time is billed at 16 hours. Do you see that? Or recorded at 16 hours. There's a section of zero hours and they're starting, it looks like, with employee 12, [redacted], down to [redacted] Do you see that?

A (Tess Roebuck) Yes, sir.

Q So given the prior answer that you gave, it would look like some people on this crew worked no time that day and then those people worked 14 hours the next day, but everyone else seems to have 16 hours.

Is there anything -- are you saying that you don't know whether this 16 hours that people recorded would have put them into, you know, after the 10:00 time? Is that what you're saying?

A Only because we don't know their start and stop times per this or anything that we specifically

track.

Q But everything -- so do we know when they arrived and were onboarded?

A Yes, ROD should tell us that.

Q Okay.

A There is not anything in the short that gives us an indication of why they've listed those hours as zero. We could take it as a follow-up for further research to see if we can validate that one way or the other. But our initial tools for a quick reference are not providing any insight.

Q Okay. Is there any way to know what they worked on the night of the 17th or the day of the 17th? Is there any information that you might have about that elsewhere?

A So no. Once -- Amy, you want to speak to once we've mobilized them on to where -- in between when we demobilize them?

A (Amy DeZonia) Well, that would be operations. So this is Amy. So once they are handed over to operations in the field, they control, like Jason spoke to yesterday, the process of where they work them and move them out in the field. So once they move out in the field, we don't have insight to when they release them and go to bed.

Q All right. So basically what we're saying is at this point there's no way of knowing whether they put in a late night such that they got to sleep in and go to the cafe until 9:30?

A Yeah, we wouldn't know that on our side.

Q But you're saying that if they had worked late, they would be entitled probably as a matter of fairness, but also probably their union rules, to get eight hours' sleep before they work again; is that right? Is that generally how it works?

A The general rule of thumb, yes. We would allow them eight hours of sleep.

Q All right.

A Or rest. I should not say sleep. I should say rest.

Q Right. Would anyone know with respect to -- we talked a little bit about the [redacted] if there's any issue about whether those employees, or does Duke concern itself in this kind of environment with whether there are any federal rules about extra compensation for employees, Fair Labor Standards Act issues about whether those employees could be paid at that rate? Is that something between them and their employer or do you guys get involved in that at all, if you know?

A (Jason Cutliffe) Yeah, and this is Jason. I'm not aware that we've ever scrutinized it to that level, and I have looked at it always as a necessary accommodation to bring resources into Florida.

Q Okay. Let's look at 25210. I'm sorry. Strike that. 25214. And this looks like -- this is Freightliner of Savannah and it's a bill for it looks like $1,153 and some obliterated change. Oh, wait. $1,153.53 on the receipt there on the left. And I see the word -- well, I can't tell what this is for. I see what looks like the last part of the word "compressor," but I don't know if that's even what that is.

And my question is is this something that should be paid?

A (Tim Fouty) This is Tim. According to our agreement with EDI, the EDI agreement between utilities, we would pay for any equipment repairs or fix any damage to any of their equipment utilized during the storm.

Q Okay.

A I'm not sure exactly what this one is yet, but I do know we cover all their costs while they're working for us for repairs.

Q Okay. But that will be unless it was like an item of -- a capital item that Jason talked about?

A Yeah. A bucket truck breaks down while

they're here, we'll pay for those repairs to fix it.

Q And they do the same for you when you're on the road?

A Yes.

MR. REHWINKEL: I'm going to -- I don't know that we need to bring this up, but just for the record, there's a -- the audit work papers which are at Bates 4-18-0901, I should call it the review work papers for this invoice. I'm just going to make this an exhibit if it's okay.

MR. BERNIER: Sure.

MR. REHWINKEL: And that would be, I think, No. 19, because late-filed 18 was pre-stage crews. So this will be [redacted] Review Work Papers.

MR. BERNIER: Could you give me the Bates number one more time?

MR. REHWINKEL: Yes. It's 4-18-0901.

MR. BERNIER: Thank you.

MR. REHWINKEL: And then 20 was going to be the invoice 40061880.

MR. BERNIER: I'm sorry. The invoice number one more time? Is that the [redacted] one that we just spoke about?

MR. REHWINKEL: Yes. It's the one that's 40061880.

66feda51-0c00-4485-b409-15b72fb4a730

MR. BERNIER: Thank you.

(Exhibits 19 and 20 were marked, respectively, for identification.)

BY MR. REHWINKEL:

Q So just before we wrap up on [redacted] when a crew of this size is working, does Duke ever embed anyone with the crew or have any of their people that stay with that crew all the time or are they treated like everyone else where there's a feeder coordinator that works multiple crews? Do you know that you?

A This is Jason. They would be treated much like other vendors in terms of being assigned to a feeder coordinator and moved out to an area.

Q Okay. So for a crew of this size, would there be someone from Duke that was kind of dedicated to them while they were out there?

A I don't recall. What was the size of this crew?

Q Well, we see 52 on the linemen and then you had another dozen or so of management folks.

A Okay. So we target, you know, 30 to 50 per feeder coordinator. So it's possible they worked with one, you know, or two, but we would have assigned them the same way. We would either assemble or attempt to break down other contractors that were here.

And I'm sorry if that's not answering your question, but --

Q Well, and I appreciate that. I think you're saying if you had 52 line crew out there, they might get broken up?

A Yes.

Q They're not all going to be 52 people together moving as a mob around, right?

A Exactly, correct.

Q But would they generally -- would you generally try to assign people that worked for an IOU like that to work in the same general vicinity or would they just be split up and sent wherever?

A We would attempt to keep them in the same location and then the value comes in and most utilities are better at this in breaking those 52 crew men down into smaller units, and at the end of a restoration that's very valuable to send one or two trucks on a call versus five or six trucks for some that aren't equipped or trained or willing to break down to that level.

Q Okay. All right. I think what I want to do is I just want to talk about [redacted] for a second. I don't know that we need to look at invoices, but we may. And I don't know who to direct this to, but I think I'll start with Jason.

66feda51-0c00-4485-b409-15b72fb4a730

We noticed some [redacted] crews stayed and were working up until, I think, even December, a small number of crews. Can you tell me why that would occur and what was going on there?

A (Jason Cutliffe) Yes. This is Jason. So there would have been -- there were a number of reasons that we engaged these additional crews beyond the 20th, which is about the time that all the lights were back on. We went through a process that we do at the end of hurricanes, we call them a sweep, where we patrol the hardest hit areas and attempt to catalog and list all of the temporary repairs and any of the other conditions that don't meet our current standards. And there's a lot of legitimate reasons why crews that come in and work in a pressed time will make temporary repairs where they will restore service, but not bring the facilities up to our standards. So we keep crews over to address that work.

The other thing that was particularly acute in Irma is the damage that was left after lights were on was considerable. So we looked at just the six-week period after the 20th when we were done getting lights on, and our outage volume was more than 50 percent greater than it typically would be for that time of year. And that was due to a lot of damaged limbs,

pejorative in the sense there's something wrong with your network. It was still in the state of healing just because of the way you put service back in in exigency versus how you would do it on a blue sky day; is that right?

A That is fair.

Q And this question may go to Tim or to Jay, but when you're in the storm restoration period, I think some vendors we saw in the [redacted]

But what we just talked about here, where you've got vendors who are working out into October, November, December to do this work we talked about, is there a different standard? And I'm looking at [redacted] **for example.** [redacted]

A (Tim Fouty) This is Tim, and this would be subject to check, but I --

Q Why don't you speak up a little bit.

A Yes. This would be subject to check, but I believe it would be a [redacted] we probably have in

place. I'm just thinking of [redacted] as an example.

Q Okay. I'm probably going to ask you if you could give me a contrast between what a [redacted] crew would -- and I assume what you just described are [redacted] crews, is that right, that you would hold over to do that?

A (Jason Cutliffe) Yeah. This is Jason. We need to check. That is absolutely our desire is to select the crews that make the most sense for that kind of work for the extended stay, that know our system and know their contacts. So that is definitely a preference, but we need to check for what we actually did for Irma.

Q So what I want to understand is the contrast of [redacted] that you still consider storm restoration work that you would include in this filing.

And so I don't know if we could take a minute and get those rates and talk about them, but what I'm going to be looking at also is whether -- I understand billing overtime, you want to get as many people back in service as fast as possible so you're going to have more long days, but now when you're in more of this

66feda51-0c00-4485-b409-15b72fb4a730

post-restoration environment, are you still working more than eight-hour days and billing overtime and things like that?

A (Jay Shawver) Yes, we'll check.

MR. REHWINKEL: Why don't we just take a ten-minute break here, people can do what they want and then we can check on this.

MR. BERNIER: Off the record.

(Recess from to 9:58 a.m. to 10:14 a.m.)

BY MR. REHWINKEL:

Q All right. So back on the record, and I think I direct my questions to Jay or Tim. And on the break we gave some invoice examples and I'd like to ask if you have any general comments about the last question I asked.

A (Jay Shawver) Yes. This is Jay. So we confirmed that, I think it was -- what's that first one, the left you have bracketed, 58843?

Q Yes.

A So we looked that up and [redacted] So we tied off what was on John's ROD report versus our rate structure for that particular invoice.

Q Okay. So when you say -- is it still a storm

rate --

A No.

Q -- that these folks are working?

A It's our standard rate for blanket services.

Q So can you tell me what the change would have been in the hours worked and the rates in general?

A Yes. Let me go look.

MR. REHWINKEL: We're off the record.

(Discussion off the record.)

BY MR. REHWINKEL:

Q Okay. Back on the record.

A [redacted]

Q But would the rate change from what they got during the storm restoration period?

A Yes, it would change. [redacted]

Q You're talking about hours. I'm talking about the hourly rate, the pay rate.

A [redacted]

Q [redacted]

A [redacted]

Q Okay. And what I was trying to understand is

66feda51-0c00-4485-b409-15b72fb4a730

it would go from -- let's say for a lineman, it would go from what to what?

A Okay.

A (Tim Fouty) We need a moment.

Q And let's take a Florida embedded crew because I understand that the rates could be different.

A (Jay Shawver) I need to clarify what I said.

Q Okay.

A [redacted]

Q Okay.

A -- storm work, post storm.

Q And does -- let's say you've got where you're talking about a Florida embedded [redacted] crew. So that Florida embedded [redacted] crew during the restoration period, they would have worked generally 16 hour days at a certain rate, right?

A Right.

Q Then in this post-restoration work that we talked to Mr. Cutliffe about, they're doing some follow up-work. I'm using that in a broad sense. That may not be your term. But follow-up work, and you're saying their hours would drop down from, say, 16 to something

less than that, maybe 12; is that fair?

A Yes.

Q [redacted]

A Correct.

Q Okay. Now, I think we saw some invoices where these crews were working as late as the end of December. Some of these crews were working as late as December 29. Does that sound right?

A Yes, I see that.

Q After this type of what we call -- I'm going to call follow-up work was concluded, would they still be working at that [redacted] **in January of 2018 on blue sky days where they're just doing ordinary work for you-all?**

A So long as it's an embedded crew. I didn't look at the other invoices, so I don't know if those are Florida embedded crews or not.

Q So is the rate that these [redacted] **crews -- these embedded Florida** [redacted] **crews bill you at, is it the** [redacted]

A That is correct.

Q Okay.

A (Jason Cutliffe) Charles, when it's

66feda51-0c00-4485-b409-15b72fb4a730

appropriate if I could clarify?

Q Please, go ahead.

A And this is Jason. Just to clarify the scope of that work. So there were elevated outage levels after the hurricane that were clearly linked to damage from the hurricane, but we have not been charging those to the hurricane. So the scope of work that these [redacted] crews had was related to things like streetlight restoration that came after the power was back on and homeowners who were returning and had secondary damage and now they're ready to receive service so line work's got to be done.

So what we included in the Irma cost, the follow-up work was that type of damage that was left over from the hurricane. And even though we would have used these crews for some emergent outages, their time was absorbed in our normal operations for the activity.

Q Okay. So is it -- and I have -- I've been asking you sort of general questions without giving you specific invoice numbers. But if I'm seeing invoices that are in the support for your $420 million for Irma restoration costs, they should be for work that -- for this Pike example, that these vendors are doing that are related to what you consider storm restoration costs that are lingering after the 22nd or the 20th, whatever

It says more, but I'm going to stop there.

Twice we saw in that passage I read, and this is from paragraph 38C of the August 29, 2017 agreement that's in effect now, it's used the phrase "storm damage costs." So the answer that you gave was that those -- that work that is billed for under these invoices is for storm damage costs?

A (Jason Cutliffe) Correct.

Q Okay. And if the work in these invoices were to represent normal work that an embedded [redacted] crew was to do year round irrespective of the storm, that wouldn't be appropriate for recovery in this case; is that --

A That's fair. That would not be consistent with our intention if that's the case.

Q These crews that are embedded here, do these guys live in Florida? Do they get up, go to work every day? They're not being lodged anywhere on the company's dime; is that right?

A (Amy DeZonia) This is Amy. That's correct. They are not.

Q Okay. Now, that's for an embedded Florida [redacted] crew?

A Correct.

Q If you brought a non-embedded [redacted] crew, or at

least it wasn't embedded in Florida but they might be embedded with an affiliate in another state, would you lodge them and did you do any of that for [redacted] after the storm?

A After the storm, no, sir, we did not.

Q Okay. So the intent for these invoices would be -- and I say "these invoices." The ones that occur after the restoration period would be -- those should only be embedded [redacted] crews; is that right?

A Correct.

Q And is that true -- I know I've been talking about [redacted]. Were there other vendors that did this same kind of follow-up storm damage cost work?

A Yes, there was on some of the street-lighting work that we had, yes.

Q Who would have done that kind of work?

A [redacted], also known as W[redacted].

Q [redacted] something like that?

A Yes.

Q What was the first word you said?

A [redacted]. That's their new name.

Q Can you spell that for the --

A [redacted].

Q Okay. Would they have been embedded?

A They are embedded, yes.

Q So that would be the same kind of general rules for them as with [redacted]?

A Yes.

Q Okay. But other than that, any of this follow-up work would not have been done from out-of-state or out-of-town people that you had to lodge; is that right?

A That is correct.

Q Okay. Now, when these embedded [redacted] crews are doing this kind of, my term, follow-up work, are they being fed any differently than they would be, you know, in March to July in their blue sky work? Do they get a per diem or do they get meals or anything like that?

A That's back to contract. So per diem, do you want to speak to that?

A (Tim Fouty) This is Tim. I think if I understand your question right, there wouldn't be any difference. It's the same contract, same rates, same expectations.

Q Okay.

A As long as they weren't traveling overnight, they would not receive meals or --

Q Okay. So if they're embedded and they're working, they're just going to be almost like any Duke

employee that goes to work and goes out and works in the field on distribution facilities, they're not getting meals paid for on their workday? Is that how it's supposed to be?

A That's the way I understand it, yes.

A (Jay Shawver) So hypothetically -- this is Jay. So hypothetically, if we moved them out of the their zone to another zone, then we potentially could pay them for lodging.

Q So if we see in these invoices per diem and lodging, we would have to ask the question: Are they working out of their ordinary site?

A That's right.

Q And that would be pegged to where they actually live, I guess, is how that works?

A Not necessarily. I mean, they could live in that area and choose to go up to the other zone.

Q Okay. Would there be -- should there be anything on the invoice that indicated that they either moved out of their zone and that's why they were billing, billing meals or lodging if we found that on an invoice?

A (Tim Fouty) If they were billing, there should be -- it should be on their invoice.

Q Some justification?

A Yeah.

Q Okay. Duke -- the work that we talked about, [redacted] are the contracts that would apply to this follow-up work that we've talked about, are they in what we've been provided in the discovery?

So when we asked for the contract for the work for these vendors, we got master service agreements and rate sheets. So for this [redacted] work, for example, should we have the rate sheets and any contracts that apply to this follow-up work?

A (Jay Shawver) Yes.

Q Okay. So when we look at [redacted] we'll see that?

A (Nods head.)

Q You gave an example of a native -- well, an embedded [redacted] vendor. Are there -- and I think we established that none of this work that's follow-up was being done by anything other than an embedded [redacted] crew; is that right?

A Well, what I said earlier is that I only looked at that one invoice that matched to an embedded crew.

Q Okay. And on the break -- and I'm not trying to put words in your mouth. I'm just trying to understand. Are there possible [redacted] charges that are

based on a rate other than the Florida embedded rate? Were there any union variables or anything like that?

MR. REHWINKEL: Let's go off the record for a second.

(Discussion off the record.)

MR. REHWINKEL: Let's go back on the record.

BY MR. REHWINKEL:

Q And [redacted], is that a line crew contractor or do they do specific work related to streetlights only?

A (Amy DeZonia) Actually, they're a line crew contractor.

Q All right.

A (Jay Shawver) So I don't remember the acquisition date, but [redacted] acquired -- I'm sorry -- [redacted] I don't know if it was after Irma before or after. I think it was after. So just so the timing of your --

Q So it should be [redacted], then, because they were acquired after?

A I think so.

Q One final on this area and I'll direct it to Jason, but maybe someone else actually knows.

We talked about -- and I read this provision about storm damage costs. Should there be any

66feda51-0c00-4485-b409-15b72fb4a730

[redacted] next, so let's do that. Let's go to -- and this is -- [redacted], that's a [redacted] -- what used to be [redacted], I think. That's a mutual assistance IOU?

A (Tim Fouty) Yes. Not part of the SEE, but they are in our Great Lakes Mutual Assistance Group.

Q So can you tell me a little bit just how you got [redacted] Was this after you exhausted your SEE resources and then you asked them to go and looked to some other RMAGs?

A Yes, all the impacted utilities were brought in through Great Lakes Mutual Assistance and we acquired them through that process.

Q Okay. I'd like to ask if we could turn to 6246. And this document here appears to be a receipt for the Oasis Pool bar at the Wyndham Lake Buena Vista on September 14th at 9:39 p.m. Well, cashing out at 9:39 p.m., and it has a $578.10 as the amount?

A (Tess Roebuck) Yes, sir.

Q Tess, that's for you? Okay.

A Um-hum.

Q So can you tell me anything about -- when it says Pool Bar, that sort of makes you ask, Well, what are they doing at a bar? Would you have any idea what this represented?

66feda51-0c00-4485-b409-15b72fb4a730

A So it was the belief of the reviewer that this was for food, though there are some challenges that they sometimes see at hotels on how they can seat a large group of people, and sometimes they'll set up burger bars or, you know, buffets -- I said bars -- those type of things. So the reviewer processed this as though it was food for the group.

Q Okay. Would they have -- you know, I understand you're processing hundreds of millions of dollars of invoices. We talked about that yesterday. Is this something where they would have followed up or asked for more detail? I mean, because this is the payment receipt. It doesn't show any of the details. Is there anything they would have done differently?

A It would have been left at the judgment of that reviewer if they saw a number of red flags. And in this stack of receipts, there are a number that are done at this Oasis Pool Bar. So they by deduction thought this was how they were being fed at this particular hotel they were staying at.

Q Okay. We talked about Cafe Gauguin for the [redacted]. Is this a situation where Duke had asked for this crew to eat at the hotel instead of coming to the staging area?

A I would have to validate the date.

66feda51-0c00-4485-b409-15b72fb4a730

A (LaQuitta Ghent) I need to check that.

A (Tess Roebuck) So Charles, in full transparency, I mean, they are checking to see if we were feeding at Richey Brothers' staging site. But because of everything that happened during Irma, [redacted]

[redacted]

If we received food receipts during that time frame, we reimbursed for those.

Q Okay. Let me -- before we leave this page here while I've got a train of thought in that area, let's go back -- and I don't want to bring the document up, I want to stay here, but let's go back to the example of [redacted]. You said feed them here. They're not eating at the staging area.

What I'm trying to understand is you get [redacted]

[redacted]

Then they're paying for them to eat at the $20-a-plate buffet.

So my question to you is is that what's happening?

66feda51-0c00-4485-b409-15b72fb4a730

A So I can give you some examples we had during the storm that there were box lunches that were picked up in the morning by crews and then late afternoon, when they eat those box lunches from the vendors we had hired, there was mold on those breads or the sandwiches that were bad, so they were having to then go out and purchase food and bring to them.

So those complexities mixed with the fact that [redacted]

Q Okay. Putting aside the practicalities of enforcing any kind of policy that you might want to enforce, is there any kind of desire on Duke's part or was there a theoretical desire to say, [redacted] Is that what you would --

A Expect?

Q -- in a perfect world have dictated and enforced if you could?

A Yes, sir.

Q Okay. So let's go over two pages from that pool bar receipt to 6248.

know, these [redacted], things like that, why are they doing this kind of stuff?

A This would not be our expectations. This is one that instantly we would have seen and said this is not appropriate. We would have documented the tracker sheet that we have, but we didn't reject it based on that, but I agree.

Q I understand.

A (Jason Cutliffe) This is Jason. I'll just add to that. So, I mean, outside of the practicality and the logistics of processing these thousands of invoices and what makes sense there, this is disappointing that this casts a negative light on a lot of folks working hard doing the right thing.

And so absent some circumstance that somebody was not recording time that day or there's a myriad of personal circumstances that could enter into things with birthdays, and I don't know what was going on with this, but on the surface of it, this is completely opposite to what we work for, what we expect and to the conduct and behavior that the vast majority of folks who volunteer to come here and help us exhibit.

Q I appreciate that answer. I understand what you're saying. And let me follow up on that by asking you this, because one of our yardsticks is what does

Duke do when Duke goes and provides mutual assistance.

Is it your answer that you would not -- you would not expect your employees to do this when they go and represent your company in a mutual assistance environment?

A That is correct, and expectations are set ahead of time. Our folks are told how long to pack for. They understand that they're on a humanitarian mission to help people and that that comes first.

And so, again, outside of the lapse of judgment to turn a ticket like this in is, What are you doing that day, what are you here for?

Q Yes.

A And there's a serious mission to get things back to normal.

Q Thank you.

Let's -- I don't know if we could pull this up, but POD 4-18-1000 is the [redacted] work papers, and I'm looking at the cover sheet.

MR. BERNIER: Do you want to take a second to find this? This one broke up because of the size.

MR. REHWINKEL: Okay. I think we're there.

MR. BERNIER: Tess is here, so I think you can probably go on.

BY MR. REHWINKEL:

Q Okay. So this is the cover sheet of the review work papers and I'm looking at this. It says, Vendor [redacted], invoice date 11/30/2017, invoice number 902591.75, and that was the invoice number that we just looked at. I said dot 75. There's no dot there. Invoice amount [redacted]

A (Tess Roebuck) Yes, sir.

Q That looks like you didn't pay it, but am I misreading that?

A What you are seeing here is that this invoice, this template was created, but it has never been updated with what actually occurred with reviewing the account and paying it. So when you look at 90,000 pieces of paper coming in, we tried to create a process that ensured that we were very organized and tracked this paper per person, but this is one of those items that from a November timeframe to June timeframe when they were paid was misplaced.

Q Okay.

A So there was some initial reviewing that took place. They had to resubmit everything in June so that we could pay them.

Q "They" meaning?

A [redacted]

Q Okay. So if I look at -- if you can go to the receipts tab?

A Yes.

Q And go to the top.

MS. FALL-FRY: It's in the same workbook.

MR. REHWINKEL: You have to go over.

MS. FALL-FRY: Click the green arrow over.

There you go. Two more, I think. There it is.

MR. REHWINKEL: Thank you.

BY MR. REHWINKEL:

Q All right. So if you could go all the way to the [redacted]; is that right?

A (Tess Roebuck) Correct.

Q And now let's go all the way to the bottom, just a little further, and go to the left a little bit with that[redacted]. Is that -- it looks from this document that that's all out of the 337 or whatever that number was that that was paid or approved. Can you shed any light on that?

A So you are seeing what receipts were tabulated here --

Q Right.

A -- and on this spreadsheet. But what we do

know about this is that in June, the reason we know about this is because they called and said, We have not been paid for Hurricane Irma. So it was an escalated complaint that came into our senior associate in that group, [redacted] had these receipts, but they also emailed her a link to what appeared to be like a share point site for [redacted] that they gave her access to.

She reviewed those, but in expediting the payment and the process, she did not print those receipts and attach them with the hard copy. So we do not have the remaining balance of those receipts. But also, in full transparency, the receipts we do not believe would have totaled that full other category because there are some vehicle charges that are included in that as well.

Q So given that explanation, is the [redacted], is that the amount that was ultimately paid --

A Yes, sir.

Q -- and included in the amount? Okay.

All right. So we've got this receipt -- I mean invoice that we talked about and we've got those audit work papers. Is there any other documentation related to this process that went from November to June, final payment?

A This would be an example of us trying to put a very strong business control in process, but with humans these things happen. So this one did not go perfect to our procedure, so not all of this was documented on the template as it should have been.

Q Well, the two pieces of information that I have, this invoice and the audit work papers, is that basically what you have?

A Yes. The only other thing I have is an email that shows that that employee did have the links and access, but there is nothing else attached to it, no, sir.

Q Okay. Is there any documentation that would describe kind of the back and forth between [redacted] and wherever it got escalated to the company?

A I believe that was a phone call.

Q Okay. So your answer would be that there's no other documentation in written form that would explain the rest of this?

A That is correct. It was all verbal.

Q Okay. One other thing I want to ask about the invoice, if we could go back to that, this is going to be a specific question, but it's also going to be sort of a philosophical question probably to Tim.

If we could go to 26233. So this shows of

this [redacted] **And those are those expenses, right?**

You have about [redacted] **Is that generally right?**

A Yes. The only item that they would also receive for vehicles that isn't detailed out, it would be included in the "other" category.

Q Was there more paid than [redacted]

A No, sir.

Q The vehicles would have been in the [redacted]

A Correct.

Q Okay. What I'm trying to understand is some IOUs, they have administrative fees, A & G fees, other loadings. [redacted]

Does Duke make any judgment about whether you want a mutual assistance resource based on kind of the ratio of overhead to actual labor? Like, would you

bring in a resource that the overheads were 60 percent and the labor was 40 percent? Is that something that factors into any of your decision making?

A (Tim Fouty) This is Tim. And when we're acquiring resources, we don't even know that information.

Q Okay. So it's all on the back end?

A Yes. We don't know their rate structure, anything.

Q Okay.

A All we have to go by is this agreement that says we'll make you whole.

Q Okay. So is that something that you look at after the fact and say, you know, if you get a utility that's sort of -- and I'm not saying [redacted] has done that. If you get a utility that's sort of top heavy on overheads, do you make any kind of judgment as, like, we don't want those guys coming down here again?

A This is Tim again. I would say that's seldom. Now, a company like [redacted] sticks in the back of our mind, so we would probably try not to bring them on again. [redacted]

Q I understand. So it seems like there is a diminishing returns kind of thing that goes on when you've got an IOU that's, my term, top heavy. They're coming from a long way away. You sort of are paying a lot of money to get a little bit of help. Is that a fair question for us to ask?

A I think it would be -- that's a very general statement, so it would be hard for us to say yes or no.

Q And I'm not asking in terms of looking back at Irma because your answer is you don't know until you get the bill what their rate structure is. But for the next time, is it something that you give consideration to whether you're going to think twice before inviting someone down that's far away and top heavy? Does anybody have any --

A This is Tim again. I mean, just from my perspective, and I'll defer to others for their thoughts, but we don't generally even know this feedback, this information. This doesn't make its way back nor would I expect it to normally. But if we encounter an issue during the storm and we're questioned about that company, then we do make notes of the issues we've had with companies, whether it be charges, not working, didn't show up with the proper equipment, so that when we do have the next storm, we can say, you

know, we had some issues with these guys, we really don't need these resources desperately, you know, let's look elsewhere or just not take them.

So we kind of do that, but the exact example you're giving, I can't say that I've ever had that information.

Q Okay.

A (Jason Cutliffe) This is Jason. I would just add. Tim answered it very well. In this moment in time, in a state of emergency like a hurricane presents with the range of variances that we're looking at, [redacted] some are higher, some are lower, we recognize that every vendor comes at a different cost, and within the ranges that we have seen, we do not screen on that criteria. We're looking to get help in as quickly as I can.

What I would offer is where we do flag and have long memories are cases where vendors don't work safe. We have dismissed entire contractors in the middle of an event when that has occurred and we have chosen not to use certain vendors for that reason. And when they show up and they're not ready to work, that's a problem. So if they don't have the equipment to function, if they show up with four bald tires and an empty truck, we have turned them around before and we

don't call them back.

So in the spectrum of considerations, fit for duty is number one, and the range of costs that we see is a lesser consideration when we're trying to get people to help us.

Q I appreciate that, and I asked the question in the spirit of not this storm but process improvement, because as we started off this deposition -- you know, we're here today because the customers feel like every penny of these costs are on them because that's the way this is designed is we pay for it all.

So our question is, in the future would you look at certain of these things based on what you've learned? Because I think we talked about again at the beginning, it's a -- you're in a continuous improvement mode.

A Um-hum.

Q And in the throes of the storm, you're trying to get service back in and we understand that. But for the next storm, are you going to be taking people in that maybe are unreasonably high? And I'm not saying anything about [redacted] Their loadings aren't as bad as some that we've seen.

So that's the spirit I asked the question in. Not let's go back and challenge something that you would

have visibility into when you picked up the phone.

A And that's a fair question and that is something we -- you know, in our continuous improvement mode, we make choices about how far away we're willing to go in an event and it's all in the spirit of making the best use of resources and minimizing costs, balancing all those things that are going on.

Q Okay. Let's move away from [redacted]

MR. REHWINKEL: I've been asked to go off the record.

(Discussion off the record.)

BY MR. REHWINKEL:

Q Tess, I just want to ask just a conversation we had off the record based on some work papers that supported the [redacted] review. It appears that there was a rather small amount, but 4,000 or so dollars of invoices [redacted] submitted to Duke that should have been submitted to FPL?

A (Tess Roebuck) That is correct.

Q Okay. And the company is pursuing reimbursement for that, but not that it would move the needle on the $400 million?

A Yes, sir.

Q Okay. Let's look at [redacted] and the invoice, at least we get it teed up, is at Bates 38294. And I'd

like to look at 38307 and I have a question, and it's about halfway down on the right-hand side under the Column description. There is a [redacted] and a [redacted]. Do you see that?

A Yes, sir.

Q And I'm just trying to understand. Is this a situation where you've got a father and son or is this some person that's on there twice?

A One moment.

Q Okay.

A We're validating, but we should have validated this against ROD.

Q Yes, I see it's circled here by somebody and one's an AP 6 and another's an AP 5 which I assume is apprentice.

A Charles?

Q Yes.

A Based on what we know at this point, we believe that [redacted] actually worked two different types of jobs with two different types of pay. Given those hours combined, they fall in line with the other hours and we do not have two different [redacted] as of yet. They're checking the different crews as quickly as possible, but we don't see two different ones.

Q Okay. So you say you're checking the ROD?

A Yes, I'm sorry, the ROD.

Q And do you know what AP 6 and AP 5 are?

A The labor category states that they're two different level type of jobs done.

Q Okay. So when I see JL, I think of journeyman lineman. When I see GF, I think of general foreman. And FM I would think of as a foreman. And when I see AP, I think of apprentice. Am I pretty close?

A (Brian Sawyer) This is Brian. I would say you're accurate in your assessment. The 5, 6 and the 7 probably indicate the step in his apprentice progression.

Q So would people likely change job classification during a week when they're down on storm work? I'm just asking. I don't know how that works.

A (Tess Roebuck) Charles?

Q Yes?

A [redacted]

Q Okay.

A So even though it's separated out [redacted]

Q Okay. So is it a function of their recordkeeping is that when -- [redacted]

66feda51-0c00-4485-b409-15b72fb4a730

BY MR. REHWINKEL:

Q Can you spell it for her?

A (Brian Sawyer) S-A-I-O-C-A-T. It's an apprenticeship program.

The apprentice levels, those steps, they have to have a certain amount of hours performing those tasks that correlate to those steps. So that's probably an internal tracking mechanism for his apprenticeship progression to journeyman.

Q So he just hit his threshold while he was working that week?

A No. He was probably just indicating the tasks that he was performing. You've got to get through all -- there's a bunch of different steps at the apprentice level and you have to complete all those tasks before you become a journeyman.

Q All right. Thank you.

A Yep.

Q All right. 38363 is the same invoice. So my question is, first of all, about the notes.

Well, let -- before I ask about the notes, this says 9/12/17 and I think that was a Wednesday that week given that the 17th was a Sunday.

The question that I had was why were people working [redacted] It looks like they had one hour at

[redacted] **on a weekday.**

A (Tess Roebuck) One moment.

Q Okay.

A So according to the contract, [redacted]

[redacted]

[redacted]

Q Okay. So now let's look at the note and it says: Mobilize from Charles -- I think that means Charleston, South Carolina to St. Petersburg, Florida. Go through check-in, safety orientation. Guys on bus waited 45 minutes for bus to leave to go to Tradewinds Resorts. Guys that drove went there. No rooms. Went to Sheraton.

Is that something that is just part of the first day and getting onboarded where they would have delays?

A (Jason Cutliffe) This is Jason. I'll respond to that and invite others to add as well.

So this is Tuesday, the 12th.

Q Okay.

A This is the day after the storm exited the system. So this is quite normal in the first full day after a hurricane has come through, and, you know, we're talking about county crews would have just finished road-clearing activities. The hotels have to get their

workers in to open up. And so getting people housed, getting them to their first bed assignments in that first day is -- could be chaotic at times.

Q Okay.

A (LaQuitta Ghent) Can I add to that?

Q Yes.

A This is LaQuitta. Also, to Jason's points, things are a bit chaotic, but the Tradewinds Resort, we had a block of rooms prior to the storm that we reserved and they had damage to some of their rooms that we could not then utilize, so we had to reallocate resources.

Q Okay. Thank you.

Let's go to the next page which is 3864. All right. So this is -- I'm sorry. I said the other one was Wednesday, but this is now Wednesday, the 13th. And we see all of the hours for this 15-and-a-half-hour day [redacted] and I wanted to ask why would that be.

A (Tess Roebuck) One moment.

Charles, we believe what has occurred here is [redacted]

Q Does it move them into [redacted]

[redacted]

[redacted]

A [redacted] Is that correct? I'm getting a nod. [redacted]

[redacted]

A (Tim Fouty) They don't see that in the contract. We're still looking.

Q All right. Here's what we're going to do. It's almost 11:30, but before we go to break, J.R. and Matt and I, we've been emailing back and forth. We've still been struggling to make sure we understand and have the full contracting documents with PAR.

And what I'd like to do, I don't know if we can get it today but at least ask as a late-filed and get it as soon as we can, is whatever contract documents you were relying on to give those last two answers, we need to see that. We just want to understand it and see it for ourselves.

MR. REHWINKEL: And so I'm just going to make a late-filed No. 22. This will be PAR Contract [redacted]

BY MR. REHWINKEL:

Q Is that understood?

A (Tess Roebuck) Yes, sir.

(Exhibit 22 to be produced and marked as a late-filed exhibit.)

MR. REHWINKEL: And so with that, Matt, is this -- do we know --

MR. BERNIER: I will check. We can probably go off the record.

MR. REHWINKEL: I can ask a few more questions to save some time.

MR. BERNIER: Okay.

MR. KELLY: Charles, are you off the record?

MR. REHWINKEL: Not yet because Tim may have some information.

A (Tim Fouty) Brian, do you want to tell them what you told me? We're still looking specifically.

A (Brian Sawyer) This is Brian. As they're looking through the contract for PAR as it pertains -- one second, guys -- as it pertains to Duke and our contract with PAR for the storm, it may behoove us if we point back to the [redacted]

Q Okay. I had a question in here that I prepared a while back that I hadn't asked, but I wanted to in following up on that is to ask if -- do you -- in terms of understanding payment terms and supporting

documentation, do you ever ask for a vendor's union contract so you will understand what the requirements are to verify whether you should be paying based on their representations or do you take their word for it? Does anybody know?

A (Tim Fouty) This is Tim. [redacted].

Q Okay. Do some of the union contract terms that you have encountered with the vendors, [redacted]

A [redacted]

Q But do you know what the union contract terms are for your own Duke employees?

A We would have access to that.

Q Okay. So part of what I'm trying to understand is if you see a union contract requirement from a vendor, do you sort of bump it up against what you know about your own internal crews' union

requirements and say, yeah, we've seen that before or that one looks really weird, we need to understand that a little more? Do you understand my question?

A Yes, I do. And on the front end, I rarely would have to worry about that during the acquisition piece because I'm not seeing any of the conflicts, but we would have the ability to do that if it was provided. And it would be logical to, if we saw something that we really needed to compare a term in the contract. [redacted]

A (Tess Roebuck) What you just stated is the exact level of reasonability that our reviewers look at. So for example, [redacted] So we have reasonability under this one.

Q Okay.

A (Jason Cutliffe) And this is Jason. I would just add to that in practical terms. If we were to support another utility and they asked us for our memorandum of agreement with the union, I would take a very dim view on a second opinion about how our folks -- represented folks get paid. We have an entire labor relations department that handles that. It's just not a fruitful area of inquiry, quite honestly.

Q Okay. So in a mutual sense, everybody stays out of everybody else's union business in kind of a general sense; is that fair?

A It would be a stretch to interpret a company's pay structure under their own contract with their own union differently than they have. They would know.

Q Okay. And that sort of goes with the vendors as well?

A Yes.

Q While we're waiting on lunch, let me go to another [redacted] invoice, and this will be -- let's just go to the Bates at 38546.

MS. WEST: 38 what?

MR. REHWINKEL: 546. It's invoice 901711041A.

MS. WEST: It's in this series? It's in [redacted]

MR. REHWINKEL: Yes. It's a different invoice.

MS. WEST: Okay. I'm sorry.

BY MR. REHWINKEL:

Q Okay. This is a cash receipt for $54 and it's got some signatures on it. If you could go back up to the top, I just have to ask about this.

It looks strange. The date on it looks like January 11th, 2000 something and it's at 1:33 a.m. I'm just wondering --

A (Tess Roebuck) One moment. Charles, I can answer this one.

Q Tess?

A I can answer this one. The $54 was placed on our variance document as unreadable but that they submitted it for reimbursement.

Q Okay. Is there something wrong with the date and time on that?

A They had it listed that the invoice itself --

Q Your reviewers?

A The reviewer said the invoice itself was questionable and they couldn't thoroughly read it so they listed it as a variance.

Q You said invoice but you meant receipt?

A Yes. I'm sorry.

Q All right. Let's look at --

MR. REHWINKEL: Is the food here?

MR. BERNIER: Yes.

MR. REHWINKEL: All right. Let's stop.

(Lunch recess 11:37 a.m. to 12:24 p.m.)

MR. REHWINKEL: Let's go back on the record.

BY MR. REHWINKEL:

Q And as we were heading off to break, I wanted to -- I had asked -- I wanted to get 38540 up on the screen. And this is in this 901711041A [redacted] invoice.

is for -- well, hours on 9/6?

A (Tess Roebuck) It is the week ending 9/9. So it's 9/8 and 9/9.

Q Okay. But it doesn't show them billing time before 9/8. Is that --

A That is correct. I do not see it.

Q Okay. So is this a situation like we discussed yesterday where you acquired resources and even though they could have billed you pretty much as soon as you acquired them, these guys started billing on the 8th?

A (Tim Fouty) That could be. I think we received -- I need to confirm, but I think we received some crews from [redacted] that were originally allocated somewhere else as well. Let me check real quick.

Q Okay. While he's checking, what Tess is telling me is this. These time sheets are the ones that -- and it's for the [redacted] crew. These relate to the hotel rooms --

A (Tess Roebuck) And again -- go ahead. I'm sorry.

Q -- on the night of the 8th.

A Those are what we cross-referenced for the dates and the headcount, yes, sir?

A (Tim Fouty) I clarified that this is what we

66feda51-0c00-4485-b409-15b72fb4a730

printed so that they had all of the receipts prior to leaving to get on the road the next morning. So they were reimbursed based on this.

Q Okay. I'd like to turn now to 38624, and this document here appears to be a receipt for 1:07 p.m. on the 14th of September at the Hooters of Clearwater, and it's got somebody's name, [redacted], and there's a couple of other names there as well.

My question is, first of all, is a meal at Hooters at 1:07 during the early days of storm restoration something that you expect the crews to be partaking of?

A I understand that there are a lot of variables that come into play when you're looking at receipts like this. We do know that this [redacted] is a foreman. So we do not know if these were foremen that were out going from crew to crew out in the field visiting their employees and then went into this restaurant to quickly eat, but what we do know is they submitted this for food they consumed and asked for reimbursement for it.

Q Okay. If we look at the next page, 38625, we see [redacted] and again those two somewhat illegible names at Crabby Bills St. Pete Beach ending up at 8:25 p.m. And I guess my question would be would you expect, foreman or not, this guy to be eating in one

66feda51-0c00-4485-b409-15b72fb4a730

place at Clearwater and the next night at -- or later in the day at St. Pete Beach, all while service is still out?

A I do not have all those factors around why they would have eaten at those two locations.

Q Okay. Is Clearwater Hooters and St. Petersburg Beach -- I'm not that familiar with it. Are they right close to each other or -- does anyone know?

A (Jason Cutliffe) This is Jason. Yeah, they're, what is it, about maybe a 45-minute drive, an hour drive between the two at the most.

Q Okay. So would a crew that [redacted] might be in charge of, would they be in these vicinities during a day like that or -- it seems like at that point in time when service is kind of out, people would be working. They wouldn't be going all over the place because they would be, like, concentrated out as they'd be working and not moving a lot. But I don't know. I'm not in the business like you guys are.

A It's impossible to tell from the meal ticket, but it's not inconceivable that crews from a contingent like this could be spread from Clearwater to St. Pete.

Q Okay. But you would agree with me, it looks like on these two, the Hooters invoice and the Crabby

Bills invoice, that it looks like it's the same three people, assuming that that represents three people eating meals there?

A Those appear to be the same three names, yes.

Q And I think what's interesting, I guess, if we could go back to 624, is although there are three names on here, if you look under Danielle, the server, at 1:07 p.m. and it says table 14 and has a slash of 1, I usually read that after the slash is that's the number of people that that server served. Is that how you read these?

A I don't know.

Q Okay. Tess, do you have any thoughts about that?

A (Tess Roebuck) I'm not an expert on what those numbers represent nor if they're always accurate.

Q Okay. So is it also fair to say that both for Hooters as well as Crabby Bills, that we have a receipt with no detail about what was purchased?

A Furthermore, we don't even know if they got these orders to go.

Q But we don't know if they did either, right?

A No.

Q Well, let's look at 38627, and this is a place called Mainstay Tavern and it's for the 16th, which I

guess was probably a Saturday, closing the check at 8:14. And we see this is a $101.32 payment. It's got [redacted] name on it and there's now four other pretty much illegible names under that. And it shows a Yuengling draft, Bud Light draft, Angus burger. It looks like several meals here. And this is at Clearwater Beach.

Is this something that you would expect to incur the time to eat as well as the expense to pay?

A This appears to be at Sand Key Resort Sheraton. I do know that was a hotel that we were housing people at. So I do not know the factors around if they had gotten their crew back and were there eating and ending their day, but they submitted reimbursement for those four individuals for $81.32 which we paid on a total invoice -- one moment -- for [redacted].

Q What was [redacted]?

A The total invoice submitted for [redacted] was [redacted] originally.

Q Okay. This doesn't show like -- this isn't like Gauguin's where 65 people were eating. This is just four people. This isn't where you couldn't feed them at the staging area. You said Sand Key would feed need crew. This is just four people eating some burgers and having a couple of beers, right?

A It's really impossible for us to know all the factors around what drove them to eat at the restaurant at their hotel.

Q But I mean, [redacted] had a larger contingent than just four people, right? I mean, this isn't the whole crew sitting down and getting their dinner, right?

A No.

Q Let's go to 38633 and we see now [redacted] I think it says [redacted] and it's a receipt for Mugs and Jugs for $113.25 plus a $25 tip for $138.25.

A Yes, sir.

Q And it's at 2:58 p.m. on Sunday, which is still several days before lights on.

And so my question is, is this something you would expect line crews charging [redacted] maybe [redacted], to be doing at 3:00 in the afternoon?

A I have no details that tell me that line crews are the ones that are actually consuming this food. It could be leaders, logistics, their support staff. There's a variety of people who submit reimbursement that are not actually line crews restoring power, they are supporting those restoring power.

Q Okay. But do you know what they bought at Mugs and Jugs? What would you get there, the food?

A Yes.

Q Do they serve alcohol?

A I believe that most restaurants do.

Q Okay. Again, even if they're not people who string wire, get up and do the overhead work, are you expecting that while people are out of service, that even the supervisory folks work a little bit less, they don't -- you know, they're not out there putting in on a [redacted]day a full day's work?

I mean, that's a serious question that I pose to you-all. Is this what you expect the people that come down here and get paid these premium rates to do while lights are out?

A So there's a number of ways to answer that, and I do see your point of view. But the different point of view that we see so frequently is leaders like this that are working 19, 20 hours, their crews are being moved from area to area. Their crews are being separated up. They're having to travel between those. And when they can stop for a few minutes to get a bite to eat and do planning where they can sit at a table with light and spread out papers to be able to do that, then they take the time to do that.

So my only point to that is as much as you could have points on that side, there are points for how hard they worked to restore power and to support their

crews.

Q Do you have information about who [redacted] is?

A One moment.

Q I mean what his role on the --

A Yes, sir, I should be able to. One moment.

In ROD he's listed as oversight leadership, a general foreman.

Q Okay. Those guys get paid the highest rates on a crew, don't they?

A It's actually hard to tell when -- it could not always be true, right?

Q I meant to say bill at, not paid. I don't know what they get paid, but bill at. Aren't those usually the top of the pyramid in the rate structure?

A (Tim Fouty) This is Tim. I would say in general from a crew standpoint, yes.

Q And would [redacted]

A Yes, they do.

Q Okay. Let's move to Michels. Oh, actually, I'm sorry. I want to go to [redacted] 46543. I'm sorry, that's the right invoice. And go to 46543.

Is [redacted] -- what kind of vendor

are they, if anyone knows?

A (Amy DeZonia) This is Amy. They're a line contractor.

Q Okay. This is a hotel, arrival date of 9/11, departure date 9/17. I see the name [redacted] handwritten up there and there may be something above that. And there's a Progress Energy sticker that says this hotel is in Anderson, South Carolina, 483 miles from Silver Springs, seven-and-a-half-hour drive, 30 people on time sheets, seven rooms.

Can you tell me why a hotel in Anderson, South Carolina is billed for six nights?

A (Tess Roebuck) One moment.

Q Maybe more?

A Charles?

Q Yes.

A This one appears to be quite complex which some of these take pulling together.

Q Okay.

A And then we're trying recreate it in this moment what could have taken a week to pull together.

Q Okay.

A So we would need to follow up on this one for you.

Q And if you wouldn't mind in your follow-up,

there's -- I just picked one invoice. There's several in here that have a similar kind of, you know, multi-day out-of-town hotel stay.

MR. REHWINKEL: So I would -- we'll make that No. 23, late-filed 23, and we'll give it a title of [redacted] Follow-Up.

(Exhibit 23 to be produced and marked as a late-filed exhibit.)

BY MR. REHWINKEL:

Q And I think as part of that explanation, there's probably -- I would ask you to look at -- I think it's on 547. Yes, let's go to 547.

So we look at this hotel invoice in Silver Springs, Florida, it shows the crew -- well, this hotel billing beginning 9/4.

Let me start again.

547 shows a hotel bill that shows the first night's lodging on September 4th. There are numbers written next to the lodging records of September 10th, 11th and 12th and onto the next page through the 15th.

So part of what I would want to understand is it doesn't look like those first dates from the 4th through the 9th are coded to a storm bill, but nevertheless, this person who I assume is with [redacted] with an address of Apalachicola, it looks like

66feda51-0c00-4485-b409-15b72fb4a730

he was in Silver Springs, Florida on -- earlier than the storm.

So if you could just in your narrative explain kind of what happened here.

A (Tess Roebuck) Absolutely.

Q All right. I think I want to go to [redacted] Let's look at Bates 33964. This is similar to a question I asked earlier.

If we look on this invoice, it looks like the crew is billing [redacted] on a Wednesday. Is that what it looks like to you-all?

A Yes.

Q So I would want to know why they would do that.

A One moment.

Q Okay. While she's --

A Charles --

Q -- researching that --

A -- I can answer.

MR. REHWINKEL: Before you do that, I wanted to make this [redacted] invoice 91 -- 901711041A, I want to make that an exhibit. We'll give it 24.

(Exhibit 24 to be produced and marked as a late-filed exhibit.)

BY MR. REHWINKEL:

Q I'm sorry, Tess. Were you about to --

A Yes, sir.

Q Okay.

A Subject to check, which we are going to do, the notes that we have listed from a review and payment process is that they received [redacted]

Q Okay.

A Tim and his team are validating that that is in fact --

A (Tim Fouty) I don't know if we have that documentation.

A (Tess Roebuck) They are double-checking?

A (Tim Fouty) We do not have the documentation kind of like we talked about earlier with IEB. [redacted]

Q So for clarification for me on that, are you saying that you should have a contract or some document that says this is why that would be or --

A Because it's a union item, sometimes

they'll -- a supplier or a contractor will put it in their agreement with us and other times they don't spell out all the stipulations. This is one that is not spelled out in their pricing sheet.

Q Okay. So what you're saying is that there's nothing in the documentation that spells out [redacted]

A Nothing that they have found yet.

Q Okay. So you're still looking? That's what I'm trying understand.

A We may have a note or something. There's nothing in the contract, but we may have a note or something, so that's what we'll search.

Q Let's look at 33962 while we're waiting for further information, 33962.

Okay. Can you tell me what rates or whether this invoice is being billed at -- well, [redacted]

A (Tim Fouty) [redacted]

MR. REHWINKEL: Let's go off the record for a second.

(Discussion off the record.)

BY MR. REHWINKEL:

Q Let's go back on and give your clarification. We're ready. Go ahead, Tim.

A (Tim Fouty) Yes, this is Tim. For clarification, the [redacted] storm contract we did find out that the [redacted]

Q Okay. And is that unusual or is that something you expect to see?

A For a storm contract? I have to get the expert's opinion. It sounds as if we have seen it both ways.

Q Okay. We looked at the audit review work papers for [redacted] and the day before, on a Tuesday, and it says they worked 18 hours on that sheet. [redacted] Is that what you would see?

A (Tess Roebuck) That sounds accurate.

Q Okay. Let's look at 33995. Okay. So what I'm looking at here is, I think it says Cracker Bar and Grill on 9/13 at 9:34 in the evening for $67.61. It shows that it's unpaid. But the issue is, is this a -- well, I take that back. It does show -- there's a credit card number on that, so I withdraw that part of

66feda51-0c00-4485-b409-15b72fb4a730

it. It says Balance Due, but you see -- it seems to show that it was paid.

I'm sorry. Let's go and ask about the Hooters bill, the next one. Are these bills that are on the 13th at 9:30 and 10:00, are those consistent with the workday, in other words, being done with the workday for those days?

A When we are reviewing the invoices, we do not have the details of what exactly their workday was. So that is not necessarily considered in the reimbursement process for meals based on all the varied complexities.

Q Okay. Let's look at 334016. Look on the 18th. It shows, it looks like, the whole crew. Well, this is an invoice for vehicles. Am I right about that?

A Yes, sir.

Q Okay. Is there a reason why there wouldn't be the individuals that go with those vehicles?

A It sure would be nice, but we get these in every format imaginable. So we cross-reference them with the crew count to ensure there are no significant variables.

Q Okay. So if I look on the next page, 34017, we see eight hours for certain people. I mean, you see eight hours for everyone who is on the sheet and it says [redacted]. Do you see that?

A Yes, sir.

Q And then if we go to the next page, it shows 11 hours [redacted]

A Correct. [redacted]

[redacted].

Q Okay. So we see -- and like we talked about, their rate is [redacted] -- well, let's just take [redacted] general foreman. He's billing at [redacted] and then on 34018 he's billing 11 hours at time and a half, but it's at the same [redacted] like we talked about earlier, right?

A Yes.

Q All right. [redacted] Is that what it appears to show?

A Yes.

Q Okay. So it looks like on the 19th -- [redacted]

[redacted]

Now, given our prior example about Wednesday, why would there not be [redacted] When I say "our prior example about Wednesday," on the invoice before we

talked about that showed they worked [redacted] Why wouldn't you have a similar situation here?

A Without having the start and stop times, it's hard to ascertain if they, in fact, [redacted]

Q Okay. So on the prior example, we didn't have the start and stop times, [redacted] Now, on this example we see [redacted] So you're just assuming they [redacted] When I say the second day, on the 19th in this example.

A That is correct.

Q Okay. But that would be an assumption you would have to make without digging and finding some other documentation that, say, operations had about when they started and stopped?

A I do not have those details.

Q I don't mean you, but I'm just saying if someone were to ultimately find it out, it would reside somewhere other than what you have?

A Correct.

Q Let's look at 34016. Okay. This shows this [redacted]crew and these are the vehicles, but if we look

on the next one, 34017, we see this crew we've been talking about, they stopped billing on Thursday, the 21st. They billed eight hours. Do you see that?

A Yes.

Q Okay. And then we look at -- if you can turn over to 34025, we see a hotel bill or several hotel bills from 25 through 27 for a Holiday Inn Express in Pittsburg, South Pittsburg, without an "h", Tennessee. Do you see that?

A Yes.

Q All right. And this hotel bill shows checkout on the 20th; is that right?

A It does.

Q And it looks like, if we look at the pages 17 and 18, when we combine the [redacted] they show 16 hours on the 20th and another 16 hours on the 21st. Do you see that?

A Correct. Yes.

Q All right. So that's a total of 32 hours for the 20th and 21st, if my math is right?

A Yes.

Q Okay. And [redacted] -- well, this invoice says [redacted] What I don't know is whether this crew is based there or if that's just the

corporate headquarters and this crew is -- their portal, if you will, is somewhere else.

But my question would be assuming they then released, they were in Pittsburg, Tennessee on the morning of the 20th, why would it take 32 hours to demobilize from Pittsburg, Tennessee to [redacted] or is there another place they demobilized to?

A Just one moment.

Q Okay.

MR. REHWINKEL: We can go off the record.

(Discussion off the record.)

MR. REHWINKEL: Let's go back on the record.

Are we on mute?

MS. WEST: Yes.

BY MR. REHWINKEL:

Q Yes.

A (Tess Roebuck) So Charles, what is typically an easy check-in reference for us with ROD, this was a Midwest crew. So we would need to follow up with some more research on getting this detail and explain the actual travel time here.

From the sidebars, it doesn't seem all of that out of the window of possibility between traveling and this size of caravan, but we want to give accurate

details to you and check those.

Q Okay. Well, do you know what their end portal is, this crew? Did you get that much information? Do we know when they started?

A Keep in mind, I'll state that the person reviewing this back two years ago very likely had all of this information and knew that. We just can't put our hands on it this very second for you, but we could, in fact, get it all.

Q Okay. Does anyone else have any --

A (Tim Fouty) This is Tim. We believe it's an Indiana-based crew or crews.

Q Okay. Indiana -- from Tennessee to Indiana?

A They were embedded with Midwest Duke.

Q Okay. Okay.

A We had two groups of [redacted] but we believe this is the one that was embedded.

MR. REHWINKEL: Okay. So I'm going to ask for a late-filed, but we were side-barring. I wanted to identify the [redacted] Invoice 272035 as No. 25.

(Exhibit 25 to be produced and marked as a late-filed exhibit.)

MR. REHWINKEL: And I had forgotten to identify the [redacted] Invoice that we're going to get a late-filed on. So I want to

introduce -- I want to identify Invoice 59221.1-2 as No. 26.

(Exhibit 26 was marked for identification.)

MR. REHWINKEL: Which would bring us to late-filed No. 27, which would be late-filed Exhibit 27, [redacted] Demobilization Explanation. But you know what I'm looking for, the portal where they ended up and then any explanation about the travel time from Pittsburg, Tennessee to the end point.

(Exhibit 27 to be produced and marked as a late-filed exhibit.)

BY MR. REHWINKEL:

Q Let me ask a demobilization question. Some vendor crews might be spread out before the storm and then when the call goes out and you acquire the resource, folks have to gather up at a point and then travel down. Are you familiar with that scenario? Yes?

A (Amy DeZonia) Yes.

Q Okay. So do you -- and I'm just going to use a hypothetical. Let's say that you've got a vendor whose home base is Columbus, Ohio, but they've got a 24-man crew that's based from Cleveland to Cincinnati to Dayton.

As they're gathering up, is there any time or

66feda51-0c00-4485-b409-15b72fb4a730

A (Tess Roebuck) One moment.

Q I guess I just have a question about whether this is part of the -- I just used the word "mustering," but you use mustering as sort of the check-in point in Georgia. And what I'm wondering, is that what this is here on the 10th? That does say 10th, right?

A (Jason Cutliffe) This page has a 19.

Q Oh, 19. I'm sorry. My eyes are bad. I can only read it if it's small.

Well, first of all, so my question is, is this a receipt or a proof of payment, given that what it says on there and there's no --

A (Tess Roebuck) There is no -- we believe this to be based on the notes that this is a Perry, Georgia, Motel 6 and that this was intended for reimbursement on the room lodging fee.

Q Okay. There is a similar set of questions I have about this crew getting back to wherever they were ending up. And the time sheets reflect again a 32-hour situation from this point here back to wherever their portal was. So what I would ask is if we could just include any research and explanation related to this Bates field along with late-filed 27. Can we do that?

A Yes.

Q Okay. Let's look at [redacted], and

the Bates would be 4140 -- I'm sorry, 41413. It's invoice 1771. Let's go to the next page. Well, actually, I'm sorry. Let's go to 41493.

MR. REHWINKEL: Matt, the paper copy I gave you earlier is an excerpt from this invoice.

MR. BERNIER: Yep.

BY MR. REHWINKEL:

Q Okay. What I see here are hotel rooms. The one in the upper left shows departure 9:29, the upper right 9/29, bottom left 9/29. So all of these documents show a hotel room that shows the beginning date of 9/6/17 and the departure date of 9/29/17 in a hotel, a Holiday Inn Express in Apex, North Carolina, which I think is somewhat near Raleigh.

A (LaQuitta Ghent) This is LaQuitta. That's correct.

Q Why would Duke be housing someone in the Raleigh area for two weeks?

A This is LaQuitta again. Our [redacted] is in Apex, North Carolina, which is about seven miles from Cary, North Carolina, in that vicinity, and that is where their [redacted] on the ground that are supporting restoration.

Q So what is the -- well, who would this be

66feda51-0c00-4485-b409-15b72fb4a730

that -- why wasn't -- I guess what I'm struggling with understanding is if that's where the outfit is that runs [redacted] -- well, whose hotel room is this?

A The hotel receipt says [redacted]. [redacted] is our, I guess I would say for lack of better terms, the lead for [redacted] there. So [redacted] and his team, they have a team that supports outside of the impacted areas to secure assets and to make sure that the team that's within Florida has full support.

So just as we have our storm centers in different locations in Florida that support the entire state, this is where they muster and their headquarters is and that's where they support out of and that supports the impacted areas to get support and supplies in.

Q Who is [redacted] employer?

A [redacted].

Q Where does he normally live?

A I cannot answer that. Just stand by.

At the time, he lived in Indiana.

Q And why was he there through the 29th?

A So [redacted] they obviously come in for the storm, and then after the storm they have to demobilize assets and make sure that everything is, you

know, brought back in and reconciled and administrative duties, invoicing, things of that nature.

Q So does your contract with [redacted] say that if you've got to bring in your employee from other parts of the country, you get to bill Duke for that, for lodging them?

A I will have to check with our contracts. Just one second.

I'm back, Charles.

Q Okay.

A So [redacted] was also -- outside of just supporting the sites during the event, they were also supporting us in restoration activities after the event to any of our sites that were damaged. And then we do have [redacted] but that's in the contract.

Q Okay. And 41460, the Bates there, if we could go to that, and we see at the bottom left of this, [redacted] is housed in a hotel in Jacksonville, Florida.

A That is correct.

Q Who is [redacted]

A [redacted] is an employee of [redacted]

Q And then the receipt above that hotel receipt

66feda51-0c00-4485-b409-15b72fb4a730

for Jacksonville shows Labelle, Florida on September 5th. It looks like fuel for $54 and change.

A That is correct.

Q So does she live in Labelle?

A I do not know where [redacted] lives, but she was traveling from Labelle, Florida north to support the storm and stopped in Jacksonville.

Q Okay.

A And headed to Apex, North Carolina.

Q So why doesn't she have a hotel room?

A [redacted] is [redacted]

Q Okay. [redacted]

A I don't know if she was living there, but at the time of her deployment she was in Labelle, Florida and she was traveling back to Apex.

MR. REHWINKEL: All right. I'm going to go ahead and just make this a -- and this is going to be 28, and it will be [redacted] Excerpt, Invoice Excerpt. Actually, I should call it [redacted] Invoice 1771 Excerpt.

Is that fair?

MR. BERNIER: Yes.

(Exhibit 28 was marked for identification.)

A (LaQuitta Ghent) And Charles, can I add for

the record?

Q Yes, please.

A These explanations were asked and will be in the responses to the Ninth Set of Interrogatories that we received.

Q That's fine. Okay.

MR. BERNIER: 28, right, Charles? Am I counting right?

MR. REHWINKEL: That was 28.

MR. BERNIER: Thanks.

MR. REHWINKEL: Let's take a brief break. I may be done, but I just need to make sure.

MR. BERNIER: No problem.

(Recess from 1:49 p.m. to 1:55 p.m.)

MR. REHWINKEL: So back on the record.

Matt, I'm not sure we have the contract for [redacted] but I'd like to ask as a late-filed that we can get it. And if we have it, if you think we have it, if you could just give us the Bates number.

MR. BERNIER: My guess is you probably don't because I think you-all asked for line.

MR. REHWINKEL: I believe so.

MR. BERNIER: But we'll get it for you. No problem.

MR. REHWINKEL: So it will be late-filed No. 29, [redacted] Contract.

MR. BERNIER: Yep.

(Exhibit 29 to be produced and marked as a late-filed exhibit.)

BY MR. REHWINKEL:

Q Okay. And I guess the last question I would ask is that after these two days and all the topics we've covered, and you certainly don't have to do this now, but I just was wondering if anybody had any clarifications or any information that they wanted to clarify?

A (LaQuitta Ghent) I have one small -- very small clarification.

Q Okay.

A [redacted]

Q That's a good thing not to have if it's not true.

MR. BERNIER: This is a family deposition.

MR. REHWINKEL: It is confidential.

And I don't know if any of the parties have any questions, but now is the time.

LATE-FILED EXHIBIT

5

REDACTED

In their entirety

LATE-FILED EXHIBIT

6

REDACTED

In their entirety

LATE-FILED EXHIBIT

7

REDACTED

In its entirety

LATE-FILED EXHIBIT

8

REDACTED

In its entirety

LATE-FILED EXHIBIT

9

REDACTED

In its entirety

LATE-FILED EXHIBIT

10

REDACTED

In its entirety

LATE-FILED EXHIBIT

11

REDACTED

In its entirety

LATE-FILED EXHIBIT

12

REDACTED

In its entirety

LATE-FILED EXHIBIT

13

REDACTED

In its entirety

LATE-FILED EXHIBIT

14

REDACTED

In its entirety

LATE-FILED EXHIBIT

15

REDACTED

In its entirety

LATE-FILED EXHIBIT

16

REDACTED

In its entirety

LATE-FILED EXHIBIT

17

REDACTED

In its entirety

LATE-FILED EXHIBIT

19

REDACTED

In its entirety

LATE-FILED EXHIBIT

20

REDACTED

In its entirety

LATE-FILED EXHIBIT

22

REDACTED

In its entirety

LATE-FILED EXHIBIT

23

REDACTED

In its entirety

LATE-FILED EXHIBIT

24

REDACTED

In its entirety

LATE-FILED EXHIBIT

25

REDACTED

In its entirety

LATE-FILED EXHIBIT

26

REDACTED

In its entirety

LATE-FILED EXHIBIT

27

REDACTED

In its entirety

LATE-FILED EXHIBIT

28

REDACTED

In its entirety

LATE-FILED EXHIBIT

29

REDACTED

In its entirety

Exhibit C

DUKE ENERGY FLORIDA
Confidentiality Justification Matrix

DOCUMENT/RESPONSES	PAGE/LINE	JUSTIFICATION
Deposition Transcript for Depositions held on March 14 - 15, 2019	Page 4 Lines 13: all information after "9" and before "Invoice, after "10" and before "Work papers", Lines 14: all information after "11" and before "Excerpt", after "12" and before "Review", Line 16: all information "after "late-filed" and before ROD Notes", and Line 17: all information after "late-filed" and before "Authorization". Page 71 Line 5: the information after "Ameren with a" Page 72 Line 22: the information before "Do you see that?" Page 72 Line 25: the information after "invoice amount is" and before "Do you see that?" Page 125 Lines 1-2: the complete lines in its entirety Page 126 Line 4: the information after "A" in its entirety Page 126 Line 9: the information after "generally"	§366.093(3)(d), F.S. The document in question contains confidential information, the disclosure of which would impair DEF's efforts to contract for goods or services on favorable terms. §366.093(3)(e), F.S. The document in question contains confidential information, the disclosure of which would impair DEF's competitive interests, the disclosure would impair the competitive business. §366.093(3)(f), F.S. The document in question contains confidential employee personnel information unrelated to compensation, duties, qualifications, or responsibilities.

	Page 126 Lines 11-16: the information after "(Jay Shawver)" in its entirety Page 126 Line 17-18: the information after "Okay" in its entirety Page 126 Line 19: the information after "A" Page 156 Lines 15-17: the information after "Q" in its entirety Page 156 Line 18: the information after "A" in its entirety Page 156 Lines 24-25: the information after "Okay" in its entirety Page 157 Lines 1-2: the complete lines in its entirety Page 157 Lines 4-6: the information after "Q" in its entirety Page 157 Lines 8-12: the information after "Okay" in its entirety Page 157 Lines 18-21: the information after "we're -- in the" and before "and that's been" Page 166 Lines 22-24: the information after "Q" in its entirety Page 199 Line 19: the	

	information after “employee for anything” in its entirety Page 201 Lines 20-21: the information after “I do” In its entirety Page 201 Lines 24-25: the information after “This is Tim” in its entirety Page 202 Lines 1-3: the information before “The contract says” in its entirety Page 202 Lines 4-6: the information after “Okay” in its entirety Page 202 Lines 16-25: all information contained in the sentences in their entirety Page 203 Lines 1-4: the complete lines in its entirety Page 203 Lines 9-16: the complete lines after “A” in its entirety Page 211 Line 9: the information after “vendor’s name is” and before “is that” Page 211 Line 11: the information after “This is” Page 212 Line 7: the information after “550, this shows” and before “that” Page 212 Line 15: the information after “me to be” in its entirety	

	Page 212 Line 16: the information before “of the” in its entirety Page 212 Line 18: the information after “It involved our” Page 212 Line 19: the information before “to our contract” Page 212 Line 23: the information after “at 551 is” in its entirety Page 212 Line 24: the information before “and then the” Page 212 Line 24: the information after “other one is” and before “Do” Page 213 Line 4: the information after “doing business as” and before “They submitted the” Page 213 Lines 5-8: the information after “other one as” in its entirety Page 213 Line 9: the information after “notice that the” in its entirety Page 213 Line 11: the information after “and then the” and before “invoice” Page 213 Lines 19-22: the information after “they submitted those” in its	

	entirety Page 214 Line 3: the information after “go ahead and” and before “The other” Page 214 Line 4: the information after “go through our” and before “that was taking” Page 214 Line 5: the information after “frame of about” and before “to get through” Page 214 Lines 11-13: the information after “an” and before “Is that” Page 214 Line 16: the information after “we did the” and before “but” Page 214 Lines 24-25: the information after “the goal of” in its entirety Page 215 Lines 1-17: the complete lines in its entirety Page 215 Line 22: the information after “If it was” and before “I believe, the” Page 215 Line 23: the information after “invoice” and before “If it was” Page 215 Line 23: the information after “If it was” Page 215 Line 24: the information before “we just tried”	

	Page 216 Lines 2-8: the information after "A" in its entirety Page 216 Line 19: the information after "(Amy DeZonia)" Page 216 Line 21: the information after "that was just the" in its entirety Page 216 Line 24: the information after "if it was" and before "It" Page 217 Line 2: the complete line in its entirety Page 217 Line 11: the information after "indicated that we" and before "on August" Page 217 Line 12: the information after "2nd. We" in its entirety Page 217 Lines 16-20: the complete lines in its entirety Page 217 Line 24-25: the information after "the term audited" in its entirety Page 218 Lines 1-2: the complete lines in its entirety Page 218 Lines 3-4: the information after "I just want to --" and before "So I just" Page 218 Lines 8-10: the	

	information after “your folks aren’t” in its entirety Page 218 Line 14: the information after “record of” and before “was one of” Page 218 Line 19: the information before “audit review” Page 219 Line 9: the information after “entire amount of” and before “that we saw” Page 219 Line 13: the information after “you paid was” Page 220 Lines 8-10: the complete lines in its entirety Page 220 Line 23: the information before “Do you see that?” Page 220 Line 25: the information after “equipment” and before “meals” as well as the information after “meals” and before “hotels” Page 221 Line 1: the information before “and fuel of” as well as the information after “and fuel of” and before “And assuming this” Page 221 Line 3: the information before “all of those”	

	Page 221 Line 6: the information after “of the same” and before “and” Page 221 Line 10: the information after “a total of” and before “That” Page 221 Line 14: the information after “meal summary of” Page 221 Line 17: the information after “we see the” Page 223 Lines 11-22: the complete lines in its entirety Page 223 Line 25: the information after “That’s correct.” Page 224 Lines 12: the complete lines in its entirety Page 224 Lines 14-18: the information after “Job Notes it says” and before “Do you see that” in its entirety Page 225 Line 25: the information after “sometime on the” in its entirety Page 226 Lines 1-2: the complete lines in its entirety Page 226 Lines 3-5: the information after “when they are” in its entirety Page 226 Lines 22-25: the information after “This is	

	Tim" in its entirety Page 227 Lines 1-3: the complete lines in its entirety Page 227 Lines 7-8: the information after "for whatever reason" in its entirety Page 227 Lines 9-14: the information after "A" in its entirety Page 227 Lines 23-25: the information after "I mean, we would" in its entirety Page 228 Lines 1-3: the information before "Amy may know more about" in its entirety Page 229 Line 15: the information before "is a firm" Page 229 Line 17: the information after "(Tim Fouty)" Page 229 Line 18: the information after "(Tim Fouty)" and before "possibly, not" Page 229 Line 19: the information after "under" and before "I'm assuming we" Page 229 Line 20: the information after "believe" and before "we've done work	

	Page 229 Line 22: the information before “They” in its entirety Page 230 Line 4: the information after “is just a” and before “it looks like” Page 230 Lines 5-6: the information after “me” in its entirety Page 230 Line 7-9: the information after “So I ---” in its entirety Page 230 Lines 10-11: the information after “Okay” in its entirety Page 230 Line 13-15: the information after “you look under” in its entirety Page 230 Line 20: the information after “It’s a meal” in its entirety Page 230 Line 24-25: the information after “at the bottom” in its entirety Page 231 Line 1: the complete line in its entirety Page 231 Line 11-17: the complete lines in its entirety Page 232 Line 4-5: the information after “frame” in its entirety Page 232 Lines 14-15: the	

	information after “and it says” in its entirety Page 233 Line 1-5: the complete lines in its entirety Page 233 Line 8-9: the information before “I suppose, but --” in its entirety Page 233 Line 16: the information after “It says” and before “and” Page 235 Lines 11-13: the complete lines in its entirety Page 235 Line 15-17: the information after “let’s see” in its entirety Page 235 Line 19-23: the information after “assumption that if” in its entirety Page 235 Line 25: the information after “invoice shows the” in its entirety Page 236 Line 1: the complete line in its entirety Page 236 Line 4: the information after “where it says” in its entirety Page 236 Line 17: the information after “something that” and before “used” Page 237 Line 21: the	

	information after “assuming that was” and before “production end right” Page 237 Line 25: the information after “top, it looks like” and before “is handwritten in there” Page 238 Line 5: the information before “however you pronounce” in its entirety Page 239 Line 10: the information after “the summary that” and before “provided right” Page 242 Line 14: the information before “lunch 9/12 in” in its entirety Page 242 Line 15: the information after “says – again” and before “It” Page 242 Line 16: the information after “just shows an” and before “Would you agree” Page 242 Lines 20-21: the information after “next page says” in its entirety Page 242 Line 25: the information after “about” and before “probably” as well as the information after “probably” and before “or however you” Page 243 Line 7: the	

	information after “There’s” and before “with a” as well as the information after “with a” and before “Is there any way” Page 243 Line 20: the information after “So this shows” in its entirety Page 243 Line 23: the information after “that these” and before “There’s a” Page 243 Line 25: the information after “A” in its entirety Page 244 Lines 1-7: the complete lines in its entirety Page 244 Line 9: the information after “didn’t show” and before “would” Page 244 Lines 16-17: the information after “an employee that “and before “would that cause” Page 244 Lines 21-22: the information after “five $76-plus” and before “would” Page 245 Line 11: the information before “Invoice” Page 246 Line 11: the information before “and it says” Page 246 Line 15: the	

	information after “you know who” and before “is” Page 246 Line 16: the information after “did not have” in its entirety Page 246 Line 23: the information after “know whether” and before “is a” Page 247 Lines 16-19: the information after “90,000” in its entirety Page 249 Lines 12-15: the information after “suggestion alternative” in its entirety Page 249 Line 19: the information after “are under” and before “name were actually” Page 249 Line 24: the information after “I mean” in its entirety Page 250 Line 3: the information after “Do you know who” and before “is” Page 250 Line 4: the complete line in its entirety Page 250 Line 12: the information after “main contact for” Page 251 Line 7: the information after “is” and before “worth of fuel” Page 251 Line 10: the	

	information after “through 557 are” Page 251 Line 19: the information after “employee named” and before “Do you see” Page 252 Line 2: the information before “do you see that?” in its entirety Page 252 Line 9: the information after “Jacksonville” and before “$150 even” Page 252 Line 18: the information after “below that by” and before “do you know” Page 254 Line 11: the information after “I’m going to stop” and before “and go to” Page 254 Line 12: the information before “and I’m going to” Page 254 Line 20: the information after “I call it the” in its entirety Page 255 Line 3: the information after “is the invoice for” in its entirety Page 255 Line 5: the complete line in its entirety Page 255 Line 8: the information after “I believe it’s”	

	Page 255 Line 9: the information after “Oh, I apologize” and before “I thought” Page 255 Line 10: the information after “that was” and before “Thank you” Page 255 Line 16: the information after “tell me who” and before “is” Page 255 Line 18: the information after “with us from” Page 256 Line 3: the information after “conversation around” and before “of course” Page 256 Line 9: the information after “if needed. So” and before “is one of those” Page 256 Line 24: the information after “but did you say” in its entirety Page 257 Lines 2-3 the information after “But I was asking is” in its entirety Page 257 Lines 5-6 the information after “Yes, they are” in its entirety Page 258 Line 1: the information before “Invoice Excerpt”	

	Page 258 Line 10: the information before “invoice review” Page 259 Line 6: the information after “work papers for” Page 259 Line 19: the information after “invoice amount of” and before “That’s the number” Page 260 Line 1: the information after “the written totals” and before “was not” Page 260 Line 2: the information before “I’m sure that’s not” Page 260 Lines 9-17: the information after “And then it says:” in its entirety Page 260 Line 21-22: the information after “discussion about the” and before “Does that make sense” Page 261 Line 5: the information after “there were not” and before “So we will” Page 261 Lines 11-12: the information after “I don’t know how” in its entirety Page 262 Lines 6-7: the information after “the bottom person is” and before “Do you see that”	

	Page 262 Line 11: the information after “says” and before “and then it” Page 262 Line 12: the information after “that looks like” and before “right” Page 262 Line 21: the information after “please bank time for” in its entirety Page 264 Line 5: the information after “And we see” and before “It says TR.31090” Page 264 Line 10: the information after “there’s six vehicles” and before “on the crew” Page 264 Line 15: the information after “would assume that” and before “had been released” Page 264 Lines 21-25: the information after “Yes. Okay.” in its entirety Page 265 Lines 1-3: the complete lines in its entirety Page 265 Line 5: the information after “the ROD notes for” in its entirety Page 265 Line 6: the information before “Is that something” Page 265 Line 9: the information after “late-filed	

	No. 14" and before "ROD Notes" Page 266 Line 2: the information after "in this case to" Page 267 Line 2: the information after "which is" in its entirety Page 268 Lines 4-6: the complete lines in its entirety Page 268 Lines 11-17: the information after "to this" in its entirety Page 269 Lines 8-13: the information after "Q" in its entirety Page 270 Line 2: the information after "and we saw" and before "truck on the" Page 270 Line 3: the information after "is headed by" and before "Well, I don't" Page 270 Line 12: the information after "and it says" and before "is the" Page 270 Line 22: the information after "day at 11:30. That's" and before "crew; is that" Page 270 Line 25: the information after "Duke paid for" in its entirety	

	Page 272 Line 2: the information before “receipt for 61” in its entirety Page 272 Line 12: the information after “Q” in its entirety Page 272 Lines 13-15: the information after “A” in its entirety Page 272 Lines 16-19: the information after “Q” in its entirety Page 273 Line 21: the information after “it says, Employee” Page 273 Line 22: the information after “employee name” Page 274 Line 4: the information after “employee name is” and before “And this is” Page 274 Lines 10-11: the information after “Not that I can see” in its entirety Page 274 Line 25: the information after “something that” and before “would have made” Page 275 Line 3: the information after “get paid in” in its entirety Page 275 Line 9: the information after “to pay a”	

	Page 275 Lines 10-11: the information after “want to be paid in” and before “Is” Page 274 Line 23: the information before “and another to the” as well as the information after “and another to the” and before “people” Page 276 Line 8: the information after “these are just two” and before “crews in the” Page 278 Line 12: the information after “Okay. And so” and before “explanation” Page 278 Line 18: the information after “in the afternoon” and before “and” Page 278 Line 19: the information before “-- or” as well as the information after “-- or” and before “are at the Embassy” Page 279 Line 5: the information after “knew about the” and before “hold-over thing” Page 279 Lines 9-11: the information after “members, logistic members” in its entirety Page 279 Line 19: the information after “understood about the” in	

	its entirety Page 280 Line 3: the information after “looks like a” and before “MasterCard statement” Page 280 Line 4: the information after “named” and before “Do you see” Page 281 Line 10: the information after “(Tim Fouty)” and before “came to us” Page 281 Line 11: the information after “Actually” and before “acquired through” Page 281 Line 25: the information after “because they’re” and before “they weren’t” Page 282 Line 8: the information before “and we treat” Page 282 Line 16: the information after “MasterCard statements for” and before “was charged to” Page 283 Line 14: the information after “behind me here. So” and before “came to us kind” Page 284 Line 7: the information before “for charges on”	

	Page 285 Line 5: the complete line in its entirety Page 285 Line 17: the information after “all lodging for” Page 285 Line 21: the information after “the expenses for” and before “and” Page 285 Line 22: the information before “is one of” as well as the information after “sub companies under” and before “and their” Page 285 Lines 24-25: the information after “They’re one of the” and before “is that fair” Page 286 Line 5: the information before “this is their” Page 286 Lines 13-15: the information after “Q” in its entirety Page 286 Line 17: the information after “there’s meals of” and before “for a total” Page 286 Line 18: the information after “expenses for” and before “of” as well as the information after “of” and before “right” Page 287 Lines 1-14: the information after “Q” in its	

	entirety Page 287 Lines 16-23: the information after "Q" in its entirety Page 288 Line 6: the information after "(Tess Roebuck)" in its entirety Page 288 Line 10: the complete line in its entirety Page 288 Line 13: the information after "somewhere in the" and before "range" Page 288 Line 14: the information after "that's what I got" Page 288 Lines 15-17: the information after "Okay" and before "Is that something you" Page 288 Line 18: the information after "or negotiated with" Page 289 Line 2: the information after "exhibit" and before "we'll call it" Page 289 Lines 3-5: the information after "looking for is a" and before "Does that make sense" Page 289 Line 20: the information after "such a document for" Page 289 Line 25: the	

	information after “for” and before “rates” Page 290 Line 4: the information after “not one for” Page 290 Lines 9-11: the information after “the contract between” and before “and Duke discusses” as well as the information after “and Duke discusses” in its entirety Page 293 Line 4: the information after “With” and before “we actually did” Page 293 Line 9: the information after “services agreement for” and before “that referenced a purchase” Page 293 Lines 23-25: the information after “people like” in its entirety Page 294 Lines 2-4: the information after “dealing with” in its entirety Page 294 Lines 6-9: the information after “make sure that” in its entirety Page 294 Lines 10-14: the information after “Okay.” in its entirety Page 294 Line 17: the information after “of rates for”	

	Page 294 Lines 23-24: the information after “doesn’t matter whether it’s” and before “union, non-union; same” Page 295 Line 2: the information after “go back to” and before “And if I” Page 295 Line 10: the information after “And we see” and before “spending the night” Page 295 Line 17: the information after “earlier today, that” and before “would probably be” Page 296 Line 5: the information after “reviewer paper for” Page 296 Line 18: the information after “out by the” and before “identifiers, they” Page 296 Line 21: the information before “resources differentially based” Page 296 Line 22: the information after “How many” and before “resources” Page 296 Line 23: the information after “do you have” Page 296 Line 25: the complete line in its entirety	

	Page 297 Line 2: the information after “all” and before “on the same” Page 297 Lines 4-6: the information after “find the documentation” in its entirety Page 297 Line 9: the information after “good list of” and before “but it’s very” Page 297 Line 14: the information after “And that was all” Page 297 Line 25: the information after “to that same” and before “crew. And would” Page 298 Line 5: the information after “all the” and before “people have traveled” Page 298 Line 10: the information after “this is a” and before “Electric 7” Page 301 Line 20: the information after “about” and before “We looked at Bates” Page 301 Line 23: the information after “there at” and before “and we saw” as well as the information after “saw billings for” and before “of”	

	Page 301 Line 24: the information before “and there was “as well as the information after “which left” Page 302 Line 2: the information after “find the other” and before “I’m not” Page 302 Line 13: the information before “invoices might be” Page 302 Line 19: the information after “this is 2-point --” and before “is the total” Page 302 Line 23-24: the information after “a time sheet for” in its entirety Page 303 Line 8: the information after “this particular crew” Page 303 Line 14: the information after “The size of” and before “is going to create” Page 303 Line 25: the information after “is that fair? Page 304 Line 8: the information after “from this that” Page 304 Line 15: the information after “this is a” and before “daily time sheet”	

	Page 306 Line 6: the complete line in its entirety Page 306 Line 7: the information after “anybody know where” and before “started” Page 306 Line 23: the information after “if we can, turn to” and before “and” Page 307 Line 1: the information after “This shows a” and before “crew working” Page 307 Line 5: the information after “tell me what the” and before “off to the right” Page 307 Line 10: the information after “Oh, the” Page 307 Line 12: the information after “don’t know which” and before “crew this” Page 307 Lines 21-23: the information after “some kind of a” in its entirety Page 308 Line 5: the information after “reference to that” and before “currently, but we could” Page 308 Line 18: the information after “This is the distribution” Page 309 Lines 10-14: the information after “And this	

	shows" and before "Do you see that" Page 309 Line 17: the information after "crew out of" and before "versus some sort" as well as the information after "of a generic" Page 309 Line 20: the information before "with" as well as the information after "with" and before "sends a letter" Page 310 Line 11: the information after "communication from" and before "who's out of" as well as the information after "who's out of" Page 310 Line 12: the information before "to perform potential" Page 310 Line 25: the information after "for a specific" and before "versus all of" Page 311 Line 1: the complete line in its entirety Page 311 Line 6: the information after "is a" and before "company" Page 311 Line 7: the information before "one through however many" Page 311 Line 19: the information after "So	

	would" and before "be considered embedded" Page 312 Line 6: the information after "about" Page 312 Line 8: the information after "is this -- is" and before "embedded only in" Page 312 Lines 15-17: the information after "these rates they seem" and before "but they seem to be a lot" Page 312 Line 22: the information after "a relationship with" and before "that would give" Page 312 Line 23: the information after "better leverage with" and before "than maybe some" Page 313 Line 1-4: the information after "So we – at the" and before "that we do business with." Page 313 Line 5: the information after "Who are the other" Page 313 Line 6: the information after "A" in its entirety Page 313 Line 8: the information after "They've got" Page 313 Lines 10-11: the information after "There are	

	over" in its entirety Page 314 Lines 5-7: the information after "consistent with the" in its entirety Page 314 Lines 10-13: the information after "September foreign crews" in its entirety Page 314 Line 14: the information after "So is" and before "a contractor that" Page 314 Lines 19-23: the information after "of payment with them" and before "but we tried" Page 315 Lines 10-12: the information after "Okay. All right." and before "Is that" Page 315 Lines 15-16: the information after "rates would be" and before "Is that what" Page 315 Line 16: the information after "you experienced for" and before "on the" Page 315 Line 20: the information after "for" and before "or were they" Page 316 Lines 6-7: the information after "for" in its entirety Page 316 Lines 13-14: the	

	information after “Q” in its entirety Page 316 Line 19: the information after “applicable” in its entirety Page 316 Line 20: the information after “Okay.” in its entirety Page 316 Line 25: the information after “A” in its entirety Page 317 Line 1: the complete line in its entirety Page 317 Lines 2-6: the information after “Q” and before “but for storm work” Page 317 Lines 8-10: the information after “A” in its entirety Page 330-Line 8: all information -after “late-filed” and before “344”, Lines 9: all information after “19” and before “Review”, all information after “20” and before “Invoice”, Line 10: all information after “late filed” and Lines 11: before “413”, after “late filed” and before “follow-up”, Lines 12: all information after “24” and before “Invoice”, all information after “25” and before “Invoice”, Lines 13: all information after “26” and before “Invoice”, after “late-filed” and before	

	"Invoice" and Line 14: all information after "28" and before "Invoice" are confidential Page 333 Line 19: the information after "invoice for" and before "for Hurricane" Page 334 Lines 10-11: the information after "Brent Holly to" and before "and it looks like" Page 334 Line 16: the information after "then on April 4th" and before "sends" Page 334 Line 17: the information after "As we discussed" in its entirety Page 338 Line 3: the information after "from company" and before "Robin has been sent" Page 338 Line 9: the information after "on the rates" and before "provided" Page 340 Line 3: the information after "Charles" and before "goes to one" Page 340 Line 6-7: the information after "can move from the" and before "invoice to – I want" Page 340 Line 8: the information before "I think I	

	misspelled it" as well as the information after "I think I misspelled it" and before "and then it's" Page 340 Line 9: the information before "And the Bates" Page 343 Line 25: the information after "and it would be" and before "Detail. I'm just" Page 347 Lines 3-5: the complete lines in its entirety Page 347 Line 13: the information after "allowed to bill" Page 347 Lines 15-16: the information after "allowed to bill" in its entirety Page 347 Lines 20-22: the information after "We do not." in its entirety Page 353 Lines 19-21: the information after "Jay first" and before "Is that something?" Page 354 Lines 3-5: the information after "have with their crews" in its entirety Page 354 Lines 7-9: the information after "the" and before "Have you seen" Page 354 Lines 13-15: the information after "understand it" and before	

	"is that right" Page 354 Lines 20-25: the complete line in its entirety Page 355 Line 1: the complete line in its entirety Page 355 Lines 3-4: the complete line in its entirety Page 355 Line 5: the information after "A" in its entirety Page 355 Lines 11-13: the information after "A" in its entirety Page 355 Line 15: the information after "to get the" and before "invoice up" Page 355 Line 22: the information after "for a" and before "crew. There's hand-numbered" Page 355 Line 24: the information after "the last guy" in its entirety Page 356 Lines 2-4: the information after "says" and before "Do you see that" Page 356 Lines 18-20: the information after "Okay" and before "Is that right" Page 356 Line 25: the information after "Q --" and before "right"	

	Page 357 Line 2: the information after “in the bottom box” and before “for” Page 357 Line 12: the information after “from” and before “for those folks” Page 357 Line 14: the information after “Some people have” and before “if you look on” Page 357 Line 17: the information after “take” and before “at the top” Page 357 Line 18: the information after “like he’s recording” and before “and also” as well as the information after “and also” in its entirety Page 357 Line 19: the information before “but then there’s a” in its entirety Page 357 Line 24-25: the information after “So it says:” in its entirety Page 358 Line 1-8: the complete lines in its entirety Page 358 Lines 13-14: the information after “worked” in its entirety Page 358 Lines 15-18: the information after “Okay” and before “is that right” in its entirety	

	Page 358 Line 22: the information after “IOU in the” and before “area, I” Page 359 Lines 6-8: the information after “this where you” and before “Does anyone” in its entirety Page 359 Lines 14-17: the information after “as a major event” and before “We carry that same pay” in its entirety Page 359 Lines 20-23: the information after “available” in its entirety Page 360 Line 3: the information after “with respect to” and before “your pay” Page 365 Line 12: the information after “with employee 23” and before “down to” Page 365 Line 13: the information before “Do you see” in its entirety Page 367 Lines 17-18: the information after “little bit about the” and before “if there’s any” Page 369 Line 14: the information after “this will be” and before “Review Work Papers” Page 369 Line 22: the information after “Is that	

	the" and before "one that we just" Page 370 Line 5: the information after "wrap up on" and before "when a" Page 371 Line 22: the information after "to talk about" and before "for a second" Page 372 Line 1: the information after "We noticed some" and before "crews stayed and were" Page 374 Lines 9-13: the information after "we saw in the" in its entirety Page 374 Line 17: the information after "And I'm looking at" Page 374 Lines 18-20: the information after "for example" in its entirety Page 374 Line 25: the information after "would be a" and before "we probably have" Page 375 Line 1: the information after "just thinking of" and before "as an example" Page 375 Line 3: the information after "between what a" in its entirety Page 375 Line 5: the information before "crews,	

	is that right" Page 375 Lines 15-18: the information after "of" and before "that you still" Page 376 Lines 20-22: the information after "looked that up and" and before "So we tied off" Page 377 Lines 12-14: the information after "A" in its entirety Page 377 Lines 17-18: the information after "Yes, it would change." in its entirety Page 377 Lines 21-22: the information after "A" in its entirety Page 377 Lines 23-24: the information after "Q" in its entirety Page 378 Lines 9-12: the information after "A" in its entirety Page 378 Line 16: the information after "a Florida embedded" and before "crew. So that" Page 378 Line 17: the information after "Florida embedded" and before "crew during the restoration" Page 379 Lines 3-5: the information after "Q" in its	

	entirety Page 379 Line 14: the information after “working at that” and before “in January of 2018” Page 379 Line 20: the information after “rate that these” and before “crews -- these” Page 379 Line 21: the information after “embedded Florida” and before “crews bill you at” Page 379 Lines 21-22: the information after “is it the” in its entirety Page 380 Line 7: the information after “scope of work that these” Page 380 Line 23: the information after “this” and before “example, that these” Page 382 Line 10: the information after “that an embedded” and before “crew was” Page 382 Line 23: the information before “crew” Page 382 Line 25: the information after “brought a non-embedded” and before “crew, or at” Page 383 Line 3: the information after “of that for” and before “after the”	

	Page 383 Line 9: the information after “only be embedded” and before “crews; is that” Page 383 Line 12: the information after “about” and before “Were there other” Page 383 Line 17: the information after “A” and before “also known as” as well as the information after “also known as” Page 383 Line 18: the information before “something like” Page 383 Line 22: the information after “A” and before “That’s their new” Page 383 Line 24: the information after “A” in its entirety Page 384 Line 3: the information after “for them as with” Page 384 Line 10: the information after “when these embedded” and before “crews are” Page 386 Line 3: the information before “are the contracts that” in its entirety Page 386 Line 9: the information after “So for this” and before “work, for	

	example” Page 386 Line 13: the information after “we look at” and before “we’ll see that” Page 386 Line 16: the information after “embedded” and before “vendor” Page 386 Line 18: the information after “embedded” and before “crew” Page 386 Line 25: the information after “Are there possible” and before “charges that are Page 387 Line 8: the information after “And” and before “is that a line crew” Page 387 Line 15: the information after “acquisition date, but” and before “acquired -- I’m sorry --” Page 387 Line 16: the information before “I don’t know” Page 387 Line 19: the information after “it should be” and before then, because they” Page 390 Line 1: the information before “next, so let’s do that.”	

	Page 390 Line 2: the information after “this is --” and before “that’s a” as well as the information after “that’s a” and before “-- what used to” Page 390 Line 3: the information after “be” and before “I think” Page 390 Line 8: the information after “got” and before “Was this after” Page 391 Line 22: the information before “Is this a situation” in its entirety. Page 392 Lines 5-7: the information after “happened during Irma” in its entirety. Page 392 Line 14: the information after “example of” and before “You said” Page 392 Lines 16-22: the information after “is you get” and before “Then they’re” in its entirety Page 393 Lines 9-13: the complete lines in its entirety Page 393 Lines 17-19: the information after “desire to say” and before “Is that what you” Page 395 Line 1: the information after “know, these” and before “things like that”	

	Page 396 Line 18: the information after “POD 4-18-1000 is the” in its entirety Page 397 Line 4: the information after “Vendor” and before “invoice date” Page 397 Lines 7-9: the information after “Invoice amount” in its entirety Page 398 Line 2: the information after “A” in its entirety Page 398 Line 14: the information after “the” and before “is that right” in its entirety Page 398 Line 18: the information after “with that” and before “Is that” Page 399 Line 5: the information after “group” and before “had these receipts” Page 399 Line 7: the information after “site for” and before “that they gave” Page 399 Line 17: the information before “is that the amount” Page 400 Line 14: the information after “back and forth between” and before “and”	

	Page 401 Lines 1-5: the information after “this” and before “And those are” in its entirety Page 401 Lines 7-9: the information after “You have about” and before “Is that generally” in its entirety Page 401 Line 14: the information after “more paid than” Page 401 Line 16: the information after “have been in the” Page 401 Lines 20-22: the information after “loadings” in its entirety Page 402 Line 15: the information after “I’m not saying” and before “has done that” Page 402 Line 20: the information after “a company like” and before “sticks in the back” Page 402 Lines 22-25: the information after “again” in its entirety Page 404 Lines 11-12: the information after “we’re looking at” and before “some are” in its entirety Page 405 Line 22: the information after “anything about” and before “Their loadings aren’t”.	

	Page 406 Line 8: the information after “move away from” in its entirety Page 406 Line 15: the information after “supported the” and before “review. It appears” Page 406 Line 17: the information before “submitted to Duke” Page 406 Line 24: the information after “Let’s look at” and before “and the invoice” Page 407 Line 3: the information after “There is a” and before “and a” Page 407 Line 4: the information before “Do you see that” Page 407 Line 19: the information after “believe that” and before “actually worked two” Page 407 Line 22: the information after “have two different” and before “as of yet” Page 408 Line 18: the information after “A” in its entirety Page 408 Lines 20-21: the information after “its separated out” in its entirety	

	Page 408 Lines 23-25: the information after "recordkeeping is that when --" in its entirety Page 410 Line 25: the information after "working" and before "It looks like they" Page 411 Line 1: the information before "on a weekday" in its entirety Page 411 Lines 4-6: the information after "according to the contract" in its entirety Page 412 Line 17: the information before "and I wanted to" in its entirety Page 412 Lines 21-24: the complete lines in its entirety Page 412 Line 25: the remaining sentence after "it move them into" in its entirety Page 413 Lines 1-2: the complete lines in its entirety Page 413 Lines 3-4: the information after "A" and before "Is that correct" Page 413 Lines 5-6: the information after "I'm getting a nod" in its entirety Page 413 Line 22: the complete line in its entirety	

	Page 414 Lines 19-21: the information after “point back to the” in its entirety Page 415 Lines 6-9: the information after “This is Tim” in its entirety Page 415 Lines 11-18: the information after “encountered with the vendors” in its entirety Page 416 Lines 9-11: the information after “term in the contract” in its entirety Page 416 Lines 14-15: the information after “So for example” and before “So we have” Page 417 Line 11: the information after “another” and before “invoice, and this will” Page 417 Line 15: the information after “It’s in this series? It’s in” Page 418 Line 25: the information after “in this 301711041A” and before “invoice” Page 420 Line 14: the information after “some crews from” and before “that were originally” Page 420 Line 18: the information after “and it’s for the” and before “crew. These”	

	Page 422 Line 7: the information after “got somebody’s name” and before “and there’s a” Page 422 Line 15: the information after “know that this” and before “is a foreman” Page 422 Line 22: the information after “see” and before “and again those” Page 423 Line 13: the information after “would a crew that” and before “might” Page 425 Line 3: the information before “name on it” in its entirety Page 425 Line 16: the information before “one moment -- for” Page 425 Line 17: the information before “one moment -- for” Page 425 Line 18: the information after “invoice submitted for” and before “was” Page 425 Line 19: the information before “originally” Page 426 Line 4: the information after “But I mean” and before “had a larger”	

	Page 426 Line 8: the information after “we see now” and before “I” Page 426 Line 9: the information after “think it says” and before “and it’s a” Page 426 Line 15: the information after “line crews charging” and before “maybe” as well as the information after “maybe” Page 426 Line 16: the information before “to be doing at” in its entirety Page 427 Line 8: the information before “day a full” Page 428 Line 2: the information after “information about who” Page 428 Lines 18-20: the information after “And would” in its entirety Page 428 Line 23: the information after “want to go to” and before “46543” Page 428 Line 25: the information after “Is” and before “what kind of vendor” Page 429 Line 5: the information after “see the name” in its entirety Page 430 Line 6: the	

	information before “Follow-up” Page 431 Line 6: the information after “want to go to” Page 431 Line 10: the information after “crew is billing” and before “on a Wednesday” Page 431 Line 21: the information after “to make this” and before “invoice 91” Page 432 Lines 7-8: the information after “that they received” in its entirety Page 432 Lines 16-21: the information after “earlier with IEB” in its entirety Page 433 Lines 6-8: the information after “that spells out” in its entirety Page 433 Lines 18-21: the information after “billed at -- well” in its entirety Page 433 Line 22: the information after “(Tim Fouty)” in its entirety Page 434 Line 5: the information after “clarification, the” and before “storm contract” Page 434 Line 14: the information after “papers for” and before “and the day	

	before” Page 434 Lines 15-17: the information after “hours on that sheet” and before “Is that what” Page 435 Line 25: the information before “Do you see that” Page 436 Line 3: the information after “11 hours” Page 436 Lines 4-6: the information after “Correct” in its entirety Page 436 Line 8: the information after “their rate is” and before “-- well, let’s just take” as well as the information after “let’s just take” Page 436 Line 9: the information before “general foreman” Page 436 Line 10: the information after “billing at” and before “and then on” Page 436 Line 12: the information after “the same” and before “like we talked” Page 436 Lines 14-16: the information after “All right” and before “like we talked” Page 436 Lines 19-22: the information after “like on	

	the 19th --" in its entirety Page 436 Line 24: the information after "there not be" and before "When I say" Page 437 Lines 1-2: the information after "that showed they worked" and before "Why" Page 437 Lines 5-6: the information after "if they, in fact" in its entirety Page 437 Lines 8-9: the information after "start and stop times" in its entirety Page 437 Line 10-11: the information after "example we see" and before "So you're just" Page 437 Line 12: the information before "When I say" in its entirety Page 437 Line 25: the information before "crew and these are" Page 438 Line 15-16: the information after "when we combine the" and before "they show 16 hours" Page 438 Line 23: the information after "Okay. And" and before "-- well, this invoice says" Page 438 Line 24: the information before "What I	

	don't know is" Page 439 Line 6: the information after "Tennessee to" Page 439 Line 7: the information before "or is there" Page 440 Line 16: the information after "two groups of" and before "but we believe" Page 440 Line 20: the information after "to identify the" and before "Invoice 272035" Page 440 Line 24: the information after "identify the" and before "Invoice that" Page 441 Line 6: the information after "Exhibit 27" and before "Demobilization Explanation" Page 443 Line 25: the information after "Let's look at" and before "and" Page 444 Lines 19-20: the information after "Our" and before "is in Apex, North Carolina" Page 444 Lines 22-23: the information after "is where their" and before "on the ground"	

	Page 445 Line 3: the information before “-- well, whose hotel” Page 445 Line 4: the information after “hotel receipt says” in its entirety Page 445 Lines 6-7: the information after “the lead for” and before “there” Page 445 Line 7: the information after “there. So” and before “and his team” Page 445 Line 17: the information after “Who is” and before “employer” Page 445 Line 18: the information after “A” in its entirety Page 445 Line 23: the information after “So” and before “they obviously” Page 446 Line 3: the information after “your contract with” in its entirety Page 446 Line 11: the information after “So” and before “was also” Page 446 Lines 15-16: the information after “we do have” and before “but that’s in” Page 446 Line 19: the information before “is house in” in its entirety	

	Page 446 Line 22: the information after “Who is” in its entirety Page 446 Line 23: the information before “is an employee of” as well as the information after “is an employee of” Page 446 Line 24: the complete line in its entirety Page 447 Line 5: the information after “not know where” and before “lives, but she” Page 447 Line 11: the complete line in its entirety Page 447 Lines 12-13: the information after “Okay” in its entirety Page 447 Line 19: the information after “it will be” and before “Excerpt” Page 447 Line 21: the information before “Invoice 1771 Excerpt” Page 448 Line 17: the information before “but I’d like to” in its entirety Page 449 Line 2: the information after “29” and before “Contract” Page 449 Lines 16-19: the information after “A” in its	

	entirety	
DOCUMENT/RESPONSES	**PAGE/LINE**	**JUSTIFICATION**
Late filed Exhibits for Deposition held on March 14-15, 2019	**Exhibit No. 5**: all information contained in the document is confidential in its entirety. **Exhibit No. 6**: all information contained int he the document is confidential in its entirety. **Exhibit No. 7**: all information contained in the document is confidential in its entirety. **Exhibit No. 8**: all information contained in the document is confidential in its entirety. **Exhibit No. 9**: all information contained in the document is confidential in its entirety. **Exhibit No. 10**: all information contained in the document is confidential in its entirety. **Exhibit No. 11**: all information contained in the document is confidential in its entirety. **Exhibit No. 12**: all information contained in the document is confidential in its entirety. **Exhibit No. 13**: all information contained in the	§366.093(3)(d), F.S. The document in question contains confidential information, the disclosure of which would impair DEF's efforts to contract for goods or services on favorable terms. §366.093(3)(e), F.S. The document in question contains confidential information, the disclosure of which would impair DEF's competitive interests, the disclosure would impair the competitive business. §366.093(3)(f), F.S. The document in question contains confidential employee personnel information unrelated to compensation, duties, qualifications, or responsibilities.

	document is confidential in its entirety. **Exhibit No. 14**: all information contained in the document is confidential in its entirety. **Exhibit No. 15**: all information contained in the document is confidential in its entirety. **Exhibit No. 16**: all information contained in the document is confidential in its entirety. **Exhibit No. 17**: all information contained in the document is confidential in its entirety. **Exhibit No. 19**: all information contained in the document is confidential in its entirety. **Exhibit No. 20**: all information contained in the document is confidential in its entirety. **Exhibit No. 22**: all information contained in the document is confidential in its entirety. **Exhibit No. 23**: all information contained in the document is confidential in its entirety. **Exhibit No. 24**: all information contained in the	

	document is confidential in its entirety. **Exhibit No. 25**: all information contained in the document is confidential in its entirety. **Exhibit No. 26**: all information contained in the document is confidential in its entirety. **Exhibit No. 27**: all information contained in the document is confidential in its entirety. **Exhibit No. 28**: all information contained in the document is confidential in its entirety. **Exhibit No. 29**: all information contained in the document is confidential in its entirety	

Exhibit D

AFFIDAVIT OF JASON CUTLIFFE

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC

Docket No. 20170272-EI

Dated: May 15, 2019

AFFIDAVIT OF JASON CUTLIFFE IN SUPPORT OF DUKE ENERGY FLORIDA, LLC'S REQUEST FOR CONFIDENTIAL CLASSIFICATION

STATE OF FLORIDA

COUNTY OF PINELLAS

BEFORE ME, the undersigned authority duly authorized to administer oaths, personally appeared Jason Cutliffe, who being first duly sworn, on oath deposes and says that:

1. My name is Jason Cutliffe. I am over the age of 18 years old and I have been authorized by Duke Energy Florida (hereinafter "DEF" or the "Company") to give this affidavit in the above-styled proceeding on DEF' s behalf and in support of DEF's Request for Confidential Classification (the "Request"). The facts attested to in my affidavit are based upon my personal knowledge.

2. I am the General Manager of Customer Delivery Operations in DEF's Florida Customer Delivery organization. I am also the Planning Section Chief in DEF's Incident Command Structure ("ICS") which affords rapid scalability in response to a specific event.

3. DEF is seeking confidential classification for information contained in the Deposition Transcript and DEF's Late Filed Exhibits, specifically exhibit numbers 5 through 17, 19 through 20, and 22 through 29 to the Office of the Public Counsel ("OPC"), held on March 14, 2019 and March 15, 2019.

4. The confidential information at issue is contained in confidential Exhibit A attached to this Request and is outlined in DEF's Justification Matrix that is attached as Exhibit C. DEF is requesting confidential classification of this information because it contains proprietary confidential business information, the disclosure of which would impair the Company's ability to protect proprietary business information, and also because disclosure would impair the Company's ability to contract on favorable terms.

5. Strict procedures are established and followed to maintain the confidentiality of the Company's vendor contracts and mutual aid agreements, as well as sensitive contractual pricing information, which includes restricting access to those persons who need the information to assist the Company, and restricting the number of, and access to the information. At no time since receiving the information in question has the Company publicly disclosed that information. The Company has treated and continues to treat the information at issue as confidential.

6. This concludes my affidavit.

Further affiant sayeth not.

Dated the _____ day of February, 2019.

_____
(Signature)
Jason Cutliffe
General Manager CD Operations
Florida Customer Delivery Organization
Duke Energy
299 1st Avenue North
St. Petersburg, FL 33701

THE FOREGOING INSTRUMENT was sworn to and subscribed before me this ___ day of February 2019 by Jason Cutliffe. He is personally known to me or has produced his _____ driver's license, or his _____ as identification.

_____
(Signature)

_____
(Printed Name)

(AFFIX NOTARIAL SEAL) NOTARY PUBLIC, STATE OF _____

_____
(Commission Expiration Date)

_____
(Serial Number, If Any)

27

DEF Response. to Staff's 1st Data Request (1-36)

See CD/USB for Staff Hearing Exhibits.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20170272-EI EXHIBIT: 27
PARTY: STAFF HEARING EXHBITS
DESCRIPTION: DEF Response. to Staff's 1st Data Request (1-36)See CD/USB for Staff

FILED 5/3/2019
DOCUMENT NO. 04115-2019
FPSC - COMMISSION CLERK

Matthew R. Bernier
Associate General Counsel
Duke Energy Florida, LLC.

May 3, 2019

VIA ELECTRONIC FILING

Adam J. Teitzman, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: *Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by Duke Energy Florida, LLC;*
Docket No. 20170272-EI

Dear Mr. Teitzman:

Please find enclosed for electronic filing in the above-referenced docket, Duke Energy Florida, LLC, Response to Staff's First Data Request (Nos. 1-36).

Thank you for your assistance in this matter. Please feel free to call me at (850) 521-1428 should you have any questions concerning this filing.

Respectfully,

/s/ Matthew R. Bernier

Matthew R. Bernier

MRB/cmk
Enclosures

Docket No. 20170272-EI

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished to the following by electronic mail this 3rd day of May, 2019, to all parties of record as indicated below.

/s/ Matthew R. Bernier
Attorney

Rachel Dziechciarz / Ashley Weisenfeld Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 RDziechc@psc.state.fl.us aweisenf@psc.state.fl.us J. R. Kelly / C. Rehwinkel / T. David Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Room 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us david.tad@leg.state.fl.us Jon C. Moyle, Jr. / Karen A. Putnal Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com kputnal@moylelaw.com	James Brew / Laura Wynn Stone Law Firm 1025 Thomas Jefferson St., N.W. Suite 800 West Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com Robert Scheffel Wright / John T. LaVia, III c/o Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com

Duke Energy Florida, LLC's (DEF) Response to Staff's First Data Request (Nos. 1-36) re. Application for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Irma and Nate by DEF

Docket No. 20170272-EI

1. Please refer to page 8 of the Settlement Agreement. In paragraph 4, it states that the time period for recovery of storm costs will be adjusted to reflect the earlier recovery due to greater tax savings (Docket No. 20180047-EI) and a reduction in the recoverable storm costs (Docket No. 20170272-EI). When does DEF anticipate storm costs will be fully recovered and the base rate reduction will become effective?

Response:

As proposed in the Settlement Agreement, DEF anticipates recovery would be complete, and the storm reserve replenished in Feb. 2021; therefore, a base rate reduction would take place with the first billing cycle March 2021. However, on April 30, 2019, DEF filed a Petition for Limited Proceeding for Recovery of Incremental Storm Restoration Costs Related to Hurricane Michael and Approval of Second Implementation Stipulation (Docket No. 20190110-EI). If approved by the Commission, that Petition would save customers $6.95/1,000 kWh residential by continuing to use the tax savings to offset the storm surcharge DEF would otherwise be authorized to implement to recover its Hurricane Michael restoration costs, followed by replenishment of the storm reserve. The base rate reduction would then occur after the storm reserve is replenished.

2. Please explain in detail how this Settlement Agreement is intended to balance and prioritize restoration time against cost control and vendor oversight.

Response:

It is the parties' intent that restoration time will not be impacted by the process changes incorporated into this settlement. To the extent that DEF encounters a situation where strict adherence to these policies would negatively impact restoration efforts, DEF would exercise operational discretion to avoid any negative impact on restoration activities and would document those circumstances constituting an exception under the Agreement; DEF would then take all reasonable steps to restore service to customers as soon as reasonably possible. Where adherence to the policies outlined in the Agreement would not impact restoration times, the parties to the Agreement believe that the processes will increase cost control and contractor oversight while improving record keeping and organization to allow for greater ease of review and overall transparency.

3. Does the Settlement Agreement reflect a top priority of expedient restoration time?

Response:

Yes. Safe, expedient restoration is DEF's primary goal after a natural disaster.

4. If, after a future storm event, the Process Improvements outlined in the Settlement Agreement are found to hinder the overall storm restoration process, please explain the process the parties to the Settlement Agreement (the Parties) would undertake to rectify those issues and potentially revise those processes found to be a hindrance.

Response:

As discussed in response to DR1.2, DEF would document the circumstances that might have caused the delay/hindrance in restoration and then would take all reasonable steps to avoid the delay. Consistent with DEF's current practice of evaluating and incorporating post-storm lessons learned, if after the storm restoration process DEF believes a process or policy needs to be improved or amended, it would discuss with the signatories the issues discovered and, if agreement on an amendment is reached, the amended policy would be brought to the Commission as discussed in response to DR 1.5.

The following series of questions relate to the Storm Restoration Cost Process Improvements included in the Settlement Agreement. In its petition, this list is described as a detailed set of policies and process changes that will apply to DEF during future storm restorations.

5. Please refer to page 9, the continuation of paragraph 6. If changes to the policies and procedures are agreed upon by the Parties, will the Parties seek Commission approval of those changes?

Response:

Yes. If approved by the Commission, the policies included in the Agreement become a part of the Commission's Order. Therefore, alterations/amendments to those policies will be brought to the Commission for its review and approval.

6. Please identify which provision(s) of Rule 25-6.0143, F.A.C., would allow the Cost Recovery for Initial Process Implementation, including the Initial Audit, to be charged to Account 228.1.

Response:

The provision in II.D. does not specifically state that the "start-up costs" would be necessarily charged to Account 228.1. It simply provides for recovery of those costs for the first qualifying storm. The costs could be recorded in a deferred debit account and

included in a petition for recovery of storm costs. It is separate and apart from the general provisions of Rule 25-6.0143, F.A.C. and is not inconsistent with the concept of incremental cost recovery contained in the rule.

7. What is the Parties' estimate of additional time, if any, the application of this set of policies and procedures will add to restoration times following a storm event?

Response:

As discussed in response to Staff's DR 1.2 and 1.4, the parties' intent and belief is that application of these policies is not expected to impact restoration time; if DEF discovers that is not the case in application, exceptions will be documented and restoration will occur as safely and expediently as possible.

8. What is the Parties' estimate of how much it will cost to implement this set of policies and procedures?

Response:

DEF does not have a current estimate of the costs of implementation, but recognizes that the costs will vary depending on the size, path, and damage caused by an individual storm.

9. When and specifically how will the costs incurred to implement this set of policies and procedures be recovered by DEF?

Response:

Pursuant to the section II.D. (page 13) of the Storm Restoration Cost Process Improvements, the one time, start-up costs to implement the new procedures required under these processes will be recovered as part of the first qualifying storm. Ongoing costs to implement these policies and procedures consistent with the Rule and ICCA methodology will be recovered on an ongoing basis as part of each subsequent storm.

10. Even though the Parties have agreed to this set of policies and procedures, is it understood by DEF and verified by the signatories that the Commission will make future decisions on allowable storm recovery costs on a case-by-case basis, based on the evidence in the record?

Response:

Yes, the Parties recognize that the Commission has the sole authority to approve cost recovery and that compliance with the requirements of the policies and procedures in addition to other applicable standards must be based on evidence in the record.

11. What is DEF's expectation on how the compliance or lack of compliance would reflect upon the Commission's decision on a reasonable and prudent determination of storm costs?

Response:

DEF believes that compliance with the policies and procedures outlined in the Agreement should give rise to something akin to a "rebuttable presumption" of recovery of the costs entailed with compliance, subject to review for reasonableness of the costs (e.g., notwithstanding compliance with the procedures, the parties may challenge and the Commission may agree that some element of the costs related to a contractor was unreasonable and reduce recovery accordingly). Where the policies are not complied with, DEF believes that recovery would still be allowed if exceptions to the policies were reasonable and prudent and supported by evidence in the record.

12. If there is a dispute about the sufficiency of the documentation, what is the process for resolving such a dispute?

Response:

The Parties anticipate that any dispute regarding the sufficiency of documentation would be handled through the normal course of discovery, and ultimately if the parties cannot agree, the Commission or designated PHO would resolve the dispute.

13. Could any of these process changes be detrimental to obtaining contractors to help with storm restoration efforts? Please explain your response.

Response:

DEF does not believe so, however we recognize that the potential does exist. As outlined in the Agreement, DEF will attempt to contract in advance with vendors and will at that time begin to assess reaction from potential vendors in advance of storm season. Contracts negotiated in advance define terms and conditions and do not require action from either party. Moreover, to the extent DEF discovers that the policies and procedures have the potential to cause issues with securing necessary resources, DEF would prioritize timely restoration and document those circumstances and apply the exceptions policy as described in response to DR 1.2.

14. Is DEF permitted, under the terms of the Settlement Agreement, to contract with vendors who, because of union or other regulations, are unable to abide by the proposed process improvements?

Response:

Yes, if DEF determines it is necessary to respond to a given storm; DEF would document the exception as described in response to DR 1.2.

15. Is DEF permitted, under the terms of the Settlement Agreement, to contract with vendors who refuse on their own accord to abide by the proposed process improvements?

Response:

Yes, if DEF determines it is necessary to respond to a given storm; DEF would document the exception as described in response to DR 1.2.

Section E of the Storm Restoration Cost Process Improvements, outlined on page 10 of the Settlement Agreement, states that DEF will require GPS tracking of vendors "where reasonably practicable."

16. Please explain the benefits of the GPS tracking of vendor crews with regard to restoration efforts and cost control.

Response:

GPS tracking, which is becoming standard in the industry, will increase efficiency by allowing DEF to remotely track contractor movement towards the state remotely increasing efficiency (e.g., by reducing the volume of "touchpoint" phone calls during travel) and will allow DEF to better coordinate resource arrival, on-boarding, and contract compliance.

17. Please give an example of where GPS tracking of a given vendor may NOT be "reasonably practicable."

Response:

Without listing all possible instances where tracking may not be reasonably practicable, a vendor theoretically may object to tracking for privacy reasons, may have union or other contractual prohibitions against GPS tracking, or there may be technological issues with tracking during a storm event (e.g., tracking being done via cell phone app may be unavailable in a situation where all cell service is down).

18. Does this policy include crews working on restoration of critical infrastructure or emergency services (e.g. Hospitals)? Please explain.

Response:

Yes. However, DEF and the Parties recognize that efficient restoration is the primary and overarching goal and therefore would take priority over strict adherence to any policy contained in the Agreement. If a crew was working to restore a critical facility and needed to work beyond 16 hours, DEF would require the vendor to document that exception and would allow/require restoration to continue.

19. Is DEF permitted to contract with vendors who refuse to abide by the 16 hours on, 8 hours off policy laid out in Section H? Please explain.

Response:

Yes, if DEF determines it is necessary to respond to a given storm; DEF would document the exception as described in response to DR 1.2.

Please refer to page 12, paragraph II. B. Initial Audit Required.

20. Will the independent outside audit be performed each time named storm damages exceed 50 percent of the full authorized storm reserve or $40 million?

Response:

No. The parties contemplate that the audit will be necessary after the first named storm that reaches the cost thresholds contained in the Agreement.

21. Will an independent outside audit be performed when the storm reserve is depleted?

Response:

Please see the response to DR 1.20; this audit may or may not coincide with depletion of the reserve, depending on the size, path, and damage caused by a given storm.

22. Will said audit examine 100 percent or nearly 100 percent of all storm restoration invoices as recommended by OPC witness Schultz's testimony filed in Docket No. 20180049-EI? If not, please explain.

Response:

The scope of the audit should be sufficient to enable the auditor to evaluate the adequacy and effectiveness of the Company's internal controls (or processes) governing the vendor procurement process, including (1) complete rate agreement, (2) invoice/billing payment review process, and (3) the approval/denial/resolution process, including but not limited to, the Company's payment approval logic for reasonableness, allowability and compliance with contract terms.

As outlined in the Agreement, the audit is intended to focus on DEF's internal policies for implementing the process changes outlined in the Agreement; it is not intended to replicate the detailed invoice review work of a witness like Mr. Schultz. Instead, professional audit standards and guidelines would be applied by the outside auditor in its independent professional judgment, which may involve a statistical or non-statistical sampling of the invoices in question to the extent the independent auditor felt necessary to effectively fulfill the audit scope identified above.

23. In lieu of auditing 100 percent or nearly 100 percent of all storm restoration invoices, can the independent outside audit firm use professional judgement in utilizing statistical or random sampling to conduct their audit?

Response:

See response to DR 1.22. DEF would accept sampling methods that comply with applicable auditing standards in light of the scope of the independent audit.

24. What does DEF believe to be a reasonable time for said audit to be completed?

Response:

The time for completion of the audit will depend on the size and the scope of the storm and resulting documentation and a majority of actual costs have been recognized as discussed in DRs 1.22 and 1.23.

25. Please refer to page 13, paragraph II.D. Cost Recovery for Initial Process Implementation. Will the Audit from paragraph II.B. be part of the supporting documentation referenced under II.A?

Response:

Yes, for the first storm that reaches the cost threshold identified in the Agreement, the audit would be available for the Commission to consider as a part of the evidence in the record.

Please refer to the Incremental Cost Methodology Addendum.

26. Please explain in detail how the 3-year historical averages used to determine incremental expenses will be determined. Specifically, whether or not historical years which had storm-related activity during the pertinent month(s) would be supplanted in the 3-year average.

Response:

The 3-year historical average calculations are generally derived from the methodology for determining incremental tree trimming expenses in Rule 25-6.0143 (1)(f)8., F.A.C. As an example, assume a storm occurs on September 5, 2019, and all storm activities occur in September. Also, assume overtime pay (OT) is the type of expense being considered. All OT associated with storm duties will be charged to the storm reserve. All else being equal, this will cause OT in O&M to be lower in September than it would have been absent the storm. DEF would then calculate the average of total DEF OT expensed to O&M in September of 2016, 2017 and 2018. If that average is higher than the OT expensed to O&M in September 2019, DEF will move the difference from the storm reserve to O&M. Now assume that a storm had also occurred in September 2016. When DEF evaluates September 2016 OT costs in its calculation of the 3-year historical average for the 2019 storm, any adjustments to increase OT in O&M that were made for the September 2016 storm would need to be included to prevent understating OT for September 2016. Further, assume a rate case occurred with a test period of 2017. For the month of September 2017, DEF would not use actual OT costs in its calculation of the 3-year historical average. Rather, DEF would use the OT that was approved by the Commission in its rate case or settlement for 2017 only. DEF will need to delineate OT by month somewhere in its rate case or settlement filing in order to determine how much was approved by the Commission for the month of a storm. To summarize the calculation of the 3-year historical average of OT in O&M for the September 2019 storm; for 2016 DEF will use the adjusted OT after adding back any storm impacts, for 2017 DEF will use the amount approved in its rate case or settlement order, and for 2018 DEF will use the actual OT.

27. Please specify how the amount to be capitalized would be calculated, and provide an example of a distribution pole replacement for illustrative purposes which includes: 1) A reasonable estimated average cost to replace the pole in the absence of a storm (assuming company personnel or embedded vendors during normal hours and/or both); 2) a reasonable estimated average cost to replace the pole during a storm restoration event (assuming the use of 3rd Party contractors using rented equipment outside of normal hours); 3) an explanation of how the Capitalized Costs provision in the proposed Settlement Agreement would be applied; 4) a description of how DEF would reflect this pole replacement on its books (including all entries pertaining to the establishment of a regulatory asset).

Response:

1) & 2): The following is an illustration based on high level estimates in response to this data request, but it does not represent the methodology that is contemplated in the settlement agreement:

		Non-Storm	Storm
Material Components:			
	Unit of Property - Pole - average	$207	$207
	Warehouse Burdens - 15%	$31	$31
	Working Stock materials - 20%	$41	$41
	Total Material Cost	$279	$279
Labor Components:			
	Average of Internal / Native rates Non-Storm (Estimated)	$110	
	Average of Native / Non-Native rates Storm (Estimated)		$185
	Number of Resources (Estimated)	4	4
	Number of Hours (Estimated)	8	8
	Total Hours	32	32
	Labor Cost	$3,520	$5,920
Total Capital Cost		**$3,799**	**$6,199**

3): Please see the clarification in DEF's response to DR 1.29. DEF would calculate the average hourly cost of internal employees (including overheads), native contractors and foreign contractors (if any) in the absence of a storm and take the simple average of those hourly costs, i.e., the "normal cost for the removal, retirement and replacement of those facilities in the absence of a storm" (*see* Rule 25-6.0143(1)(d), F.A.C. For example, if the average hourly cost of employees is $100, the average hourly cost of native contractors is $120 and the average hourly cost of foreign contractors is $170, DEF would calculate a simple average hourly cost of $130 [($100 + $120 + $170) / 3]. Then DEF would multiply $130 by the number of people and by the number of hours needed to replace a pole. Assuming it takes four people eight hours to replace a pole, that cost would be $130 x 4 people x 8 hours = $4,160 per pole plus the cost of the pole and any other materials.

4): The cost calculated in part 3 would be recorded in property, plant and equipment. That amount would be depreciated at the approved depreciation rate by debiting depreciation expense and crediting accumulated depreciation. Then each month a journal entry would be made to debit a specified regulatory asset and credit depreciation expense for 40% of the total depreciation expense associated with that pole. The regulatory asset would be amortized over four years beginning with the next rate case or settlement. To record the retirement of the poles that have been replaced, DEF generally tracks poles by location, and the oldest poles in a particular location are retired first by debiting accumulated depreciation and crediting electric plant in service for the original cost of the oldest poles in that location.

28. How is the methodology used to determine the incremental payroll, under the Incremental Cost Methodology Addendum, consistent with Rule 25-6.0143, F.A.C.?

Response:

The methodology is consistent with the ICCA methodology in Rule 25-6.0143 (1)(d), F.A.C., in that it provides a straightforward way to calculate the amount that is "incremental to costs normally charged to non-cost recovery clause operating expenses in the absence of a storm" by comparing costs during the month of storm activities to that same month in the prior three years. This is also consistent with the 3-year historical average calculations used in determining incremental tree trimming expenses in Rule 25-6.0143 (1)(f)8., F.A.C.

29. How is the methodology used to determine the Capitalized Costs, under the Incremental Cost Methodology Addendum, consistent with Rule 25-6.0143, F.A.C.?

Response:

The methodology is consistent with the rule in that it excludes storm-related staging and logistics costs (travel costs, meals, lodging, etc.), which comprise a large portion of the total storm related costs. Further, after giving serious consideration to the dialogue at the meeting with staff on April 23, 2019 and after further consultation with all parties, DEF provides the clarification that the calculation of capitalized costs would include an average of hourly employee and contractor costs to be capitalized.

30. On page 16 of the Settlement Agreement under the heading Capitalized Costs, please identify the amount of capitalized costs agreed to in the instant docket, and what the amount of capitalized costs would be if this provision were currently in effect.

Response:

The provision on page 15 of the Settlement Agreement regarding capitalized costs is a prospective implementation of the capitalization methodology and has no correlation to the amount agreed to on page 7 of the Settlement Agreement. DEF has not calculated the amount that would have been capitalized if this provision were currently in effect. It would require separate tracking than what has been historically tracked which would require considerable efforts at this point. An illustrative example for a single pole has been provided in response to DR 1.27.

31. Please describe the current policy DEF follows for tracking the costs of poles replaced following storm damage. For purposes of this response, also please explain what impact, if any, this new capitalization provision for capitalization will have on this tracking process.

Response:

The current process is as follows: All storm restorations costs are charged to the storm charge codes. Then in the month(s) after the storm, a calculation is completed to determine the "normal" cost per pole. An average of employee payroll costs and native contractor costs is determined, and an overhead loader for management personnel is added to arrive at the total labor cost of a pole. The cost of materials is then added to arrive at the total cost of each pole. The new capitalization provision will include employee costs and management loaders, and native and non-native contractor hourly costs, if any in the absence of a storm, in a simple average calculation.

Please refer to the provision regarding deferral of certain costs to a regulatory asset

32. Please identify the amount of the regulatory asset that DEF could create if this provision were currently in effect.

Response:

For illustration purposes, assuming the capitalized cost is $49 million ($31 million per Exhibit BB-2 plus $18 million on page 7 of the Settlement Agreement), DEF would defer the depreciation impact on 40% of the capitalized amount. DEF's approved depreciation rate on distribution poles is 4.2%. Assuming the $49 million represents only poles, the annual depreciation expense would be approximately $2 million annually, and 40% of this amount is $.8 million. In this scenario, the regulatory asset would grow by $.8 million each year until the next rate case or settlement, at which time it would be amortized over four years.

33. Will the regulatory asset accrue a carrying cost until the next rate case? If not, please explain. If yes, please identify and explain the rate of return.

Response:

Yes. A carrying costs would accrue at DEF's approved AFUDC rate.

34. For earnings surveillance purposes, will the 60 percent of the total capitalized storm restoration related amounts of plant, accumulated depreciation, and depreciation expense be reflected in the Company's ESRs?

Response:

Any amounts in gross plant, accumulated depreciation and depreciation expense (after reclassifying 40% of depreciation expense to the regulatory asset) will be reflected in

DEF's ESRs. The deferred depreciation expense in the regulatory asset will not be included in ESRs since it will earn an AFUDC rate.

35. Will the associated tangible property taxes for the 40 percent of the total capitalized storm restoration related plant be included in the regulatory asset? If not, please explain.

Response:

No. The only thing that will be included in the regulatory asset is 40% of the depreciation expense. The entire capitalized amount will remain in property, plant, and equipment.

36. For earnings surveillance purposes, will the accumulated deferred income taxes associated with the 40 percent of the total capitalized storm restoration related plant amount be excluded from the overall cost of capital in the Company's ESRs?

Response:

No. Any accumulated deferred income taxes associated with the deferral of depreciation expense will be included in accumulated deferred income taxes in DEF's capital structure in its ESRs.

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 29th day of April, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MARCIA OLIVIER, who is personally known to me, and has acknowledged before me that she provided the answers to numbers 1, 6 and 20 through 36, of STAFF'S FIRST DATA REQUEST TO DUKE ENERGY FLORIDA, LLC (NOS. 1-36) in Docket No. 20170272-EI, and that the responses are true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 29th day of April, 2019.

Marcia Olivier

Marcia Olivier

MONIQUE WEST
MY COMMISSION # FF 244727
EXPIRES: June 28, 2019
Bonded Thru Notary Public Underwriters

Notary Public
State of Florida, at Large

My Commission Expires: June 28, 2019

AFFIDAVIT

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 30th day of April, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JASON CUTLIFFE, who is personally known to me, and has acknowledged before me that he provided the answers to numbers 2 through 5 and 7 through 19 of STAFF'S FIRST DATA REQUEST TO DUKE ENERGY FLORIDA, LLC (NOS. 1-36) in Docket No. 20170272-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 30th day of April, 2019.

Jason Cutliffe

Jason Cutliffe

DEBRA MARY SMITH
Notary Public - State of Florida
Commission # GG 118350
My Comm. Expires Jul 2, 2021
Bonded through National Notary Assn.

Debra Mary Smith

Notary Public
State of Florida, at Large

My Commission Expires: July 2, 2021