Matthew R. Bernier
Associate General Counsel
Duke Energy Florida, LLC

March 1, 2018

VIA ELECTRONIC FILING

Carlotta Stauffer, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: *2017 Annual Service Reliability Report; Undocketed*

Dear Ms. Stauffer:

Please find enclosed for electronic filing on behalf of Duke Energy Florida, LLC ("DEF"), its 2017 Annual Service Reliability Report. DEF also provided two (2) hard copies and two (2) CDs of its Annual Service Reliability Report to the Division of Engineering.

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

cc: Penelope Buys, FPSC Division of Engineering

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2017 Annual Reliability Report

March 1, 2018

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2017 Year End Customers Served by Region

Zone / Regions	3 Char OP	Op Center	Cust Served	Date
NORTH CENTRAL	APK	APOPKA	100,573	12/31/2017
	DEL	DELAND	81,296	12/31/2017
	JAM	JAMESTOWN	136,298	12/31/2017
	LNG	LONGWOOD	88,316	12/31/2017
			406,483	
NORTH COASTAL	INV	INVERNESS	73,409	12/31/2017
	MON	MONTICELLO	55,218	12/31/2017
	OCA	OCALA	74,673	12/31/2017
			203,300	
SOUTH CENTRAL	BNV	BUENA VISTA	120,959	12/31/2017
	CLR	CLERMONT	34,829	12/31/2017
	HIL	HIGHLANDS	57,487	12/31/2017
	LKW	LAKE WALES	100,420	12/31/2017
	SEO	SE ORLANDO	91,119	12/31/2017
	WGN	WINTER GARDEN	80,034	12/31/2017
			484,848	
SOUTH COASTAL	CLW	CLEARWATER	143,247	12/31/2017
	SEV	SEVEN SPRINGS	185,887	12/31/2017
	STP	ST. PETERSBURG	176,140	12/31/2017
	WAL	WALSINGHAM	151,484	12/31/2017
	ZEP	ZEPHYRHILLS	25,860	12/31/2017
			682,618	
SYSTEM			**1,777,249**	

OVERALL RELIABILITY PERFORMANCE – 2017 (Rule 25-6.0455, F.A.C.)

a. Discuss overall performance absent adjustments

On January 22nd there was a confirmed tornado in North Florida, Franklin County that accounted for 3.5 SAIDI minutes. July 31st was the result of outages from Tropical Storm Emily, and accounted for 0.4 SAIDI. Hurricane Irma was the last set of weather-related exclusions for the year, from September 9th through September 20th, and accounted for 2,465.0 SAIDI minutes. Please reference Attachment "N" developed in the weeks following Hurricane Irma for an internal DEF storm assessment.

Year	2012	2013	2014	2015	2016	2017
Weather Excluded SAI	52.4	18.8	0.4	1.1	266.9	2469.0

The significant jump in Weather Excluded SAIDI from 2016 to 2017 was due almost exclusively to Hurricane Irma which impacted DEF's entire service territory. Hurricane Irma was the largest storm to hit the state of Florida since 2005, causing damage throughout the state. Excluding the effects of Hurricane Irma, weather excluded SAIDI was only 4.0 SAIDI minutes, which is 75.9% below the 5 year average from 2012 to 2016. This continued favorable performance trend is a result of DEF's ongoing focus on its Pole Replacements, Cable Replacements, Storm Hardening, and Feeder Standardization programs; DEF expanded Grid Automation on its Distribution system, installing additional Self-Healing Teams and creating a pilot Self-Healing Network at its Maximo substation is St. Petersburg. DEF also created two Night Time Line Crews, one in the Orlando market and the other in the St. Petersburg/Clearwater market.

Year	2012	2013	2014	2015	2016	2017
Reported SAIDI	142.9	107.9	102.8	98.6	370.7	2572.9

b. Describe the level of detailed reliability data the Company tracks.

The Company tracks detailed reliability information in various databases. This detailed data is recorded per event, which includes affected device, time of day, length of outage, cause of outage, number of customers affected and other pertinent information.

c. Describe Company efforts to increase critical review of detailed reliability data.

In 2017, DEF continued to utilize the IEEE method for internal business goal reporting due to integrated business practices. Duke Energy uses the IEEE Methodology (2.5 Beta) for calculating the reliability indices. This is also the way Duke Energy measures reliability for incentive goals. DEF will continue tracking PSC indices which are reported at year-end. The IEEE Method is the industry standard for Reliability measurement and comparison.

DEF continued the practice of auditing outage data to ensure accuracy and using Outage Management System Reconciliation (OMSR) as a platform which allows outage data to be captured in greater detail.

In 2017, DEF conducted analysis and reviewed reliability data that met certain operational thresholds in order to reduce the number of outages and momentary interruptions. From 2016 to 2017, DEF had a 58% increase in the number of MAIFIe customers. The majority of the increase in unadjusted MAIFIe customers is attributed to Hurricane Irma.

d. Describe the process used by your company to identify and select the level of detailed reliability data.

Customer feedback, benchmarking with other utilities, input from the FPSC, performance of assets, and trends are all considered when identifying the level of detailed reliability data.

e. Discuss adjustments

i. Generation events – *see pages 11-12.*
ii. Transmission events – *see page 13.*
iii. Extreme weather – *see page 14-15.*
iv. Other Distribution events – *see page 16*

f. Discuss adjusted performance.

For the 2017 adjusted performance results, please see pages 17-25.

FLORIDA PUBLIC SERVICE COMMISSION
ANNUAL DISTRIBUTION SERVICE RELIABILITY REPORT – ACTUAL

PART I

CAUSES OF OUTAGE EVENTS – ACTUAL **(Absent Adjustments)**

Utility Name: Duke Energy Florida Year: **2017**

Cause (a)	Customer Minutes Of Interruption	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1. Animals	7,859,526	5,662	83.3	67.2
2. Vegetation	175,329,219	9,904	369.3	356.1
3. Lightning	7,311,673	1,316	269.1	139.7
4. Other Weather	4,149,382,603	35,898	2,693.6	2,581.7
5. Vehicle	10,475,021	510	222.3	102.3
6. Defective Equipment	62,987,584	11,199	214.8	150.9
7. Unknown	63,937,315	1,944	1,743.6	1,341.9
Subtotal	4,477,277,132	66,431	1,611.9	1,578.5
All Other Causes *See Attached	95,448,940	21,514	167.8	78.2
System Totals	4,572,731,881	87,947	1,258.7	1,127.2

PSC/ECR 102 (8/06)
Incorporated by reference in Rule 25-6.0455, F.A.C.

CAUSES OF OUTAGE EVENTS – ACTUAL **(Absent Adjustments)**

Utility Name: Duke Energy Florida Year: **2017**

Cause (a)	Customer Minutes Of Interruption	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
Emergency Shutdown-PGN	26,253,574	3,224	134.0	71.1
U/G Primary Cable	19,676,043	1,522	316.7	125.2
Line Maintenance	8,114,642	4,608	167.8	162.1
U/G Secondary/Service	3,434,562	4,223	277.6	372.8
Miscellaneous	3,428,175	681	197.7	733.9
Substation-Transformer Failure	2,686,723	20	187.6	95.7
Transmission-Defective Equip	2,466,926	20	108.3	83.5
Substation-Breaker-Nonprevent	2,415,366	32	90.9	55.8
Construction Equipment	2,286,540	21	591.1	3,997.4
Human Error-Public	2,274,509	455	151.5	96.9
Foreign Material In Line	2,109,237	124	470.1	206.2
Right-Of-Way	1,975,704	38	133.6	35.6
Relay-Incorrect Setting Applied	1,733,670	7	225.2	140.2
Substation-Breaker-Preventable	1,617,229	28	57.4	34.4
Substation-Animal	1,524,868	30	45.0	35.9
Dig-In	1,443,017	286	229.6	67.7
Human Error-PGN	1,073,685	716	80.8	32.5
Improper Installation	1,031,567	45	149.8	94.3
Human Error-PGN Contractor	1,010,287	221	162.2	41.3
Vandalism	994,276	100	112.0	1,486.2
Emergency Shutdown-Customer Request	774,752	46	298.5	154.5
Transmission-Conductor/Static	553,767	15	148.3	46.1
Relay-Setting Error	549,280	23	25.6	22.1
Transmission-Unknown	546,707	5	98.8	68.2
Transmission-Lightning	537,263	17	23.3	17.4
Substation-Switch Failure	529,659	7	41.8	35.9
Substation-Improper Installatn	479,807	7	105.3	58.8
O/H Secondary Cable	377,788	356	331.8	437.8

CAUSES OF OUTAGE EVENTS – **(Absent Adjustments)**

Utility Name: Duke Energy Florida Year:**2017**

All Other Causes Cause (a)	Customer Minutes Of Interruption	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
Substation-Defective Equipment	367,498	8	60.1	31.5
Equipment Misapplication	335,763	46	1,078.5	1,229.9
Overload	305,543	91	266.1	115.6
Substation-Insulator Failure	301,744	7	25.1	15.4
Transmission-Switch Failure	287,356	3	88.7	88.4
Transmission-Animal	266,081	7	51.0	45.8
Substation-Insultr Contamination	220,088	2	102.5	98.3
Relay-Human Error-PGN	216,386	4	24.5	31.6
Transmission-Pole Rot	171,934	2	869.4	115.5
Transmission-Miscellaneous	167,695	3	239.6	239.2
Substation-Human Error-PGN	144,668	2	50.8	52.7
Voltage Ok At Meter-No Customer Contact	126,506	1,022	50.7	83.8
Transmission-Tree-Nonprevent	123,656	1	82.1	82.0
Relay-Auto Reclose Cutout Sw	117,553	3	19.0	19.0
Transmission-Vehicle	98,157	1	605.4	87.1
Inaccessible Meter	67,662	177	41.6	272.8
Customer Request	41,434	62	84.6	180.1
Relay-Relay Problem	36,790	1	65.0	65.0
Substation-Bushing Contamination	36,663	9	3.0	3.0
Substation-Breaker Failure	23,604	2	7.0	7.0
Relay-Reclosing Relay Failure	23,560	1	37.6	38.0
Transmission-Planned Outage	19,791	2	8.6	9.0
Substation-Surge Arrester	16,454	3	5.4	4.2
Transmission-Ground/Guy	10,752	3	2.0	2.0
Transmission-Crossarm Failure	8,280	4	68.5	2.2
Transmission-Human Err-Public	5,740	2	3.8	4.0
Transformer Changeout (TLM)	3,585	8	72.9	155.9

CAUSES OF OUTAGE EVENTS – **(Absent Adjustments)**

Utility Name: Duke Energy Florida Year:**2017**

All Other Causes Cause (a)	Customer Minutes Of Interruption	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
Transmission-Wind	2,814	1	6.4	6.0
Transmission-Insulator Failure	1,360	1	1.7	2.0
O/H Service Cable	200	2	87.1	50.0
Dispatcher Resolved	0	3,157	0.0	0
All Other Causes	95,448,940	21,514	167.8	78.2

PART II

THREE PERCENT FEEDER LIST - ACTUAL **(UNADJUSTED)**

Utility Name: Duke Energy Florida ___Year: **2017**

Primary Circuit Id. No. or Name (a)	Sub-station Origin (b)	Location (c)	Number of Customers					Outage Events "N" (i)	Avg Duration "L-Bar" (j)	CAIDI (k)	Listed Last Year? (l)	No. of Years in the Last 5 (m)	Corrective Action Completion Date (n)
			Residential (d)	Commercial (e)	Industrial (f)	Other (g)	Total (h)						
K19	HAINES CITY	LAKE WALES	298	81	10	17	406	17	2,997.5	4,668.9	N	-	12/31/18
W0902	BARBERVILLE	DELAND	1,095	339	1	35	1,470	9	618.9	224.6	N	-	12/31/18
K58	LAKE WALES	LAKE WALES	1,210	267	-	36	1,513	9	1,296.0	1,235.7	N	-	12/31/18
K68	BAY HILL	BUENA VISTA	1,619	191	-	15	1,825	9	2,407.3	1,499.1	N	-	12/31/18
K246	WAUCHULA	HIGHLANDS	1,237	121	1	30	1,389	8	1,581.8	770.1	N	-	12/31/18
K3286	LAKE LUNTZ	WINTER GARDEN	1,965	204	-	21	2,190	8	239.9	281.5	N	-	12/31/18
K1690	DINNER LAKE	HIGHLANDS	1,297	297	-	23	1,617	7	2,434.4	1,360.6	N	-	12/31/18
K1885	LAKE OF THE HILLS	LAKE WALES	1,011	77	1	4	1,093	7	1,164.1	771.6	N	2	6/30/18
K1695	LAKEWOOD	HIGHLANDS	1,065	110	-	9	1,184	7	3,578.4	1,864.6	N	1	6/30/18
N58	APALACHICOLA	MONTICELLO	668	214	9	79	970	7	128.4	66.2	N	2	12/31/18
K1320	LAKE PLACID	HIGHLANDS	1,951	254	-	14	2,219	7	1,685.1	1,671.8	Y	2	6/30/18
K3205	PEMBROKE	HIGHLANDS	1	20	-	-	21	6	2,016.6	909.4	N	1	12/31/18
K57	LAKE WALES	LAKE WALES	1,151	115	-	20	1,286	6	855.9	950.4	N	1	12/31/18
K286	OKAHUMPKA	CLERMONT	556	12	-	-	568	6	564.6	91.1	N	-	12/31/18
N69	MONTICELLO	MONTICELLO	976	193	2	38	1,209	6	1,460.5	558.2	Y	2	12/31/18
K1081	TAUNTON ROAD	HIGHLANDS	1,349	32	-	-	1,381	6	1,691.3	586.9	N	-	12/31/18
K1706	LAKEWOOD	HIGHLANDS	1,748	86	-	23	1,857	6	1,934.9	1,531.7	N	-	12/31/18
K1083	TAUNTON ROAD	HIGHLANDS	592	121	3	20	736	6	2,368.5	727.0	N	-	12/31/18
K1772	CROOKED LAKE	LAKE WALES	1,690	221	3	8	1,922	6	355.8	55.4	N	1	6/30/18
W4553	DELTONA	DELAND	1,468	50	-	14	1,532	6	1,436.6	360.2	N	-	12/31/18
W0494	CENTRAL PARK	CONWAY	-	124	4	8	136	6	414.3	282.4	N	-	12/31/18
M445	BAY RIDGE	APOPKA	645	150	1	6	802	6	2,425.9	608.4	N	-	12/31/18
M34	ZELLWOOD	APOPKA	1,394	134	-	21	1,549	6	1,773.6	1,011.5	Y	1	6/30/18
K1688	DINNER LAKE	HIGHLANDS	701	160	4	45	910	6	2,781.3	492.9	N	1	6/30/18
N54	PORT ST JOE	MONTICELLO	455	246	2	61	764	6	265.8	89.5	N	-	12/31/18
M471	PIEDMONT	APOPKA	1,513	125	1	24	1,663	5	1,879.0	1,369.1	N	-	12/31/18
C303	TARPON SPRINGS	SEVEN SPRINGS	1,485	412	3	56	1,956	5	702.3	2,053.6	N	1	12/31/18
K119	AVON PARK	HIGHLANDS	1,473	223	1	41	1,738	5	1,535.0	2,576.7	N	1	6/30/18
W0516	CASSADAGA	DELAND	1,463	30	-	7	1,500	5	1,569.8	1,607.9	N	-	12/31/18
C16	CLEARWATER	CLEARWATER	2,393	108	-	37	2,538	5	635.6	1,259.2	N	-	12/31/18
K1032	EAST LAKE WALES	LAKE WALES	1,344	123	-	16	1,483	5	859.5	1,421.3	N	-	12/31/18
K4841	MONTVERDE	CLERMONT	2,235	104	3	15	2,357	5	523.8	922.5	N	-	6/30/18
C652	BAYVIEW	CLEARWATER	2,309	328	3	15	2,655	5	269.9	422.4	N	-	12/31/18
C308	TARPON SPRINGS	SEVEN SPRINGS	951	330	2	50	1,333	5	1,091.3	889.0	N	-	12/31/18
K1030	EAST LAKE WALES	LAKE WALES	1,227	112	7	1	1,347	5	794.6	1,222.8	N	-	12/31/18
W0176	OVIEDO	JAMESTOWN	1,555	43	-	10	1,608	5	574.5	522.9	N	-	6/30/18
A69	DUNNELLON TOWN	INVERNESS	756	209	1	48	1,014	5	1,416.4	682.2	N	-	12/31/18
K3220	DESOTO CITY	HIGHLANDS	969	311	2	34	1,316	5	2,092.9	866.0	N	1	6/30/18
K1687	DINNER LAKE	HIGHLANDS	608	60	-	12	680	5	2,975.3	1,250.1	N	1	6/30/18
A38	MARTIN	OCALA	1,768	239	-	20	2,027	5	467.3	266.5	Y	1	6/30/18
A90	TRENTON	MONTICELLO	907	200	3	55	1,165	5	1,865.6	361.6	N	-	12/31/18

LBAR AND CAIDI Includes all devices.

PART III

SYSTEM RELIABILITY INDICES – ACTUAL **(ABSENT ADJUSTMENTS)**

Utility Name: Duke Energy Florida Year: 2017

District or Service Area (a)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)
North Coastal	**2090.6**	**732.1**	**2.9**	**12.1**	**12.29%**
Inverness	2071.4	884.2	2.34	11.5	5.97%
Monticello	1088.9	390.8	2.79	13.4	14.83%
Ocala	2850.1	835.4	3.41	11.7	16.63%
South Coastal	**2885.3**	**1187.8**	**2.43**	**12.9**	**5.54%**
Clearwater	3242.9	1354.8	2.39	18.7	3.45%
Seven Springs	2896.6	1284.2	2.26	13.7	4.36%
St. Petersburg	2821.1	1089.3	2.59	8.7	8.74%
Walsingham	2579.7	985.2	2.62	11.8	6.06%
Zephyrhills	3051.2	1827.1	1.67	10.7	0.00%
North Central	**2602.6**	**1248.6**	**2.08**	**12.8**	**4.64%**
Apopka	2954.2	1217.6	2.43	15.9	8.15%
Deland	3459.0	1308.2	2.64	13.6	6.61%
Jamestown	1850.6	1138.6	1.63	9.6	1.22%
Longwood	2574.4	1363.4	1.89	13.5	4.10%
South Central	**2310.5**	**1154.0**	**2.00**	**10.8**	**5.54%**
Buena Vista	1157.3	1137.0	1.02	8.4	0.38%
Clermont	1581.0	958.2	1.65	9.7	0.00%
SE Orlando	1968.9	1070.6	1.84	8.2	6.71%
Highlands	4996.6	1248.6	4.00	18.9	4.55%
Lake Wales	2750.3	1143.3	2.41	12.6	20.52%
Winter Garden	2278.5	1207.7	1.89	9.7	3.75%
System	**2572.9**	**1127.2**	**2.28**	**12.2**	**6.11%**

GENERATION EVENTS – ADJUSTMENTS (Rule 25-6.0455 F.A.C.)

a. Discuss <u>each</u> generation event that resulted in customer outages.

There were no events to report for 2017.

b. Address whether the event was localized or system-wide.

N/A

c. Describe the Company's efforts to avoid or minimize any similar events in the future in terms of the level of costs incurred and outage duration.

N/A

d. Provide the 2017 service reliability data for each generation outage event that is excluded from your Company's 2017 Annual Distribution Reliability Report pursuant to Rule 25-6.0455.

Generation Event	N/A
C	N/A
CMI	N/A
CI	N/A
SAIDI	N/A
SAIFI	N/A

Please see attached Form 103.

PART I

CAUSES OF OUTAGE EVENTS – ADJUSTED

Utility Name: Duke Energy Florida Year: **2017**

Cause (a)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
Generation	N/A	N/A	N/A
System Totals:	N/A	N/A	N/A

PSC/ECR 103 (8/06)
Incorporated by reference in Rule 25-6.0455, F.A.C.

TRANSMISSION EVENTS – ADJUSTMENTS (Rule 25-6.0455 F.A.C.)

a. Discuss <u>each</u> transmission event that resulted in customer outages.

See Attachment A - "DEF Transmission Outages 2017 - Major Events Excluded".

b. Address whether the event was localized or system-wide.

See Attachment A - "DEF Transmission Outages 2017 - Major Events Excluded".

c. Describe the Company's efforts to avoid or minimize any similar events in the future in terms of the level of costs incurred and outage duration.

Outages are reviewed and investigated by local transmission maintenance staff. The results from these investigations are looked at from a system perspective by DEF's Transmission Department Asset Management Group to determine if the failure is isolated or similar failures are occurring on another part of the system. When similar failures are noted on the system, further investigation is performed to determine if a solution should be implemented system wide to remedy the problem. If a project is required, it is submitted for prioritization against other projects.

d. Provide the 2017 service reliability data for each generation outage event that is excluded from your Company's 2017 Annual Distribution Reliability Report pursuant to Rule 25-6.0455.

There were nine major events resulting in an exclusion in 2017. This information is reflected in Attachment B-DEF Transmission Outages 2017-Major Events Only.

EXTREME WEATHER - EXCLUSIONS (Rule 25-6.0455 F.A.C.)

a. Include in the discussion, the type of weather event, strength (wind speeds/surge-flood levels), locations affected, source of meteorological information, and the performance of overhead and underground systems.

Distribution

See Attachment C - "Summary of Severe Weather Dates – 2017".
See Attachment C1-"Exclusion summary-2017.
See Attachment C2-"2017 Actual Adjusted Data Breakdown"

Transmission

There were nine major events resulting in an exclusion in 2017. This information is reflected in Attachment B- DEF Transmission Outages 2017-Major Events Only.

b. Describe the Company's efforts to avoid or minimize in terms of costs incurred and outage duration any similar events in the future (Example: Reference specific storm hardening activity).

Distribution

Please see response to "Storm Hardened Facilities" on Pages 39-42. These efforts are also addressed in DEF's approved Storm Hardening Plan that was filed on May 3, 2016 (Attachment J).

Transmission

Please see response to "Storm Hardened Facilities" on Pages 39-42. These efforts are also addressed in DEF's approved Storm Hardening Plan that was filed on May 3, 2016 (Attachment J).

c. If the method of deriving the weather exclusion is different from the method used for 2015, please explain the changes and provide the CMI and CI for 2017 using the prior method.

For Distribution & Transmission - The same exclusion method has been used for years 2006 through 2017.

d. Provide the 2017 service reliability data for <u>each</u> extreme weather outage event that is excluded from your Company's 2017 Annual Distribution Reliability Report pursuant to Rule 25-6.0455.

<u>Distribution</u>

Dates	Overhead vs. Underground	C	CMI	CI	Duration	L-Bar	N
1/22/2017	OH	203,300	6,253,236	24,925	129,325	489.9	264
	UG		46,805	96	4,845	346.1	14
7/31/2017	OH	1,777,249	708,184	9,643	18,350	101.9	180
	UG		31,411	166	6,477	158.0	41
9/09 - 9/20/2017	OH	1,777,249	3,757,013,136	1,385,787	87,655,770	3,057.0	28,674
	UG		623,983,325	156,959	15,857,472	2,670.1	5,939

<u>Transmission</u>

There were nine major events resulting in an exclusion in 2017. This information is reflected in Attachment B- DEF Transmission Outages 2017-Major Events Only.

OTHER DISTRIBUTION – ADJUSTMENTS (Rule 25-6.0455, F.A.C.)

a. Discuss the causation of each type of distribution event that resulted in customer complaints.

Since Duke Energy Florida has not taken other causations as exclusions for any events in 2017, DEF has no information to report in this section.

b. Describe the Company's efforts to avoid or minimize any similar events in the future in terms of the level of costs incurred and outage duration.

Since Duke Energy Florida has not taken other causations as exclusions for any events in 2017, DEF has no information to report in this section.

c. Provide the 2017 service reliability data for each distribution outage event that is excluded from your Company's 2017 Annual Distribution Reliability Report pursuant to Rule 25-6.0455.

i. A table
ii. Electronic file
iii. Causation, Date, CMI, CI Total Repair Cost, etc.

Since Duke Energy Florida has not taken other causations as exclusions for any events in 2017, DEF has no information to report in this section.

2017 ADJUSTED RELIABILITY (Rule 25-6.0455, F.A.C.)

Duke Energy Florida's (DEF) 2017 annual adjusted SAIDI was 82.7, a 3% decrease from SAIDI observed in 2016 following a 7% increase from 2016. The primary driver for 2017 was caused by weather related outages primarily from afternoon thunderstorms.

There were 7 days in 2017 that totaled more than 1 SAIDI minute. All seven days had weather-related outages as the driving factor with more than 50% of the outages for each day being weather-related, January 22nd (1.92 SAIDI), January 23rd (1.66 SAIDI), February 7th (1.05 SAIDI), May 6th (1.25 SAIDI), May 13th (1.07 SAIDI), May 24th (1.05 SAIDI), and July 4th (1.61 SAIDI).

2017 presented us with the most challenging weather related year, with two named storms—Tropical Storm Emily and Hurricane Irma. With Hurricane Irma causing significant damage to the entire state, and all of DEF's service territory. Even with this challenge, DEF adjusted SAIDI decreased from 85.0 in 2016 to 82.7 in 2017, as well as a decrease in adjusted SAIFI from 0.98 in 2016 to 0.92 in 2017. This decrease in SAIDI and SAIFI can be seen in a slight downward trend over the past 5 years for SAIDI—2013 to 2017—and a significant downward trend for SAIFI.

Year	2012	2013	2014	2015	2016	2017
Adjusted SAIDI	73.4	89.1	85.1	79.7	85.0	82.7

Year	2012	2013	2014	2015	2016	2017
Adjusted SAIFI	0.96	1.09	1.09	0.98	0.98	0.92

a. Causes of outages events – *see attached forms*.

i. 5-yr patterns/trends in outage causation for each of the top 10 causes of outage events, including the frequency, duration, restoration time, cost incurred to restore service, remediation programs and costs.

- *See Attachment D - "5 yr. Trend by Cause Code" Spreadsheet for 2013 - 2017.*

ii. The process used to identify and select the actions to improve the performance in each of the top 10 causes of outages.

DEF prioritizes the reliability improvement action plan by balancing historical and current year performance. System devices are evaluated based on the number of interruptions, customers interrupted (CI), and customer minutes of interruption (CMI). In addition, current year performance is monitored monthly to identify emergent and seasonal issues including load balancing for cold weather and the need for foot patrols of devices experiencing multiple interruptions.

iii. 2018activities and financial projection levels addressing each of the 10 causes of service outage.

- *See Attachment E - "2018 Program Projection" Spreadsheet.*

b. Three percent Feeder list

i. Identify whether any feeders appear on the 3% listing more than once within a consecutive 5-yr. period and any actions implemented to improve feeder performance.

***Feeder A38**:*

- *DEF Infrared scanned main feeder A38 in April 2016, and no issues were found. DEF will continue to scan main feeder of A38 in June/July 2018.*
- *DEF completed 11.8 miles of backbone tree trimming in 2016.*
- *DEF plans to implement a self-healing team that will allow transfer of segments of A38 between two adjacent feeders, A34 out of Reddick substation and A39 out of Martin substation.*
- *Operations techs will continue to analyze feeder and perform an in-depth patrol to identify operational issues and initiate mitigation actions.*

Feeder K1772:

- *DEF will Infrared scan the main feeder K1772 in June/July 2018.*
- *K1772 experienced 3 feeder level outages in 2017. One was due to storm, one due to a vehicular accident, and the third due to tree-preventable.*
- *Operations techs will continue to analyze feeder and perform an in-depth patrol to identify operational issues and initiate mitigation actions.*

Feeder M445:

- *DEF will Infrared scan the main feeder M445 in June/July 2018.*
- *M445 experienced 3 feeder level outages in 2017. All three were attributable to vegetation.*
- *There is a reliability project to be completed in 2018 on feeder M445.*
- *Operations techs will continue to analyze feeder and perform an in-depth patrol to identify operational issues and initiate mitigation actions.*

Feeder K779:

- *DEF Infrared scanned main feeder K779 in June/July of 2017, no issue was found. DEF will continue to Infrared scan main feeder of K779 in June/July 2018.*

- *Feeder K779 is primarily an underground feeder, comprised of 81% underground backbone cable, and 92% underground lateral cable.*
- *K779 experienced 3 feeder level outages in 2016. Two were attributable to dig ins, and a third due to UG primary cable failure.*
- *Operations techs will continue to analyze feeder and perform an in-depth patrol to identify operational issues and initiate mitigation actions.*

Feeder N67:

- *DEF Infrared scanned main feeder N67 June/July of 2017. Multiple problem areas were found and replaced. This included 16 bad lightning arrestors and a three phase terminator, all equipment was replaced by August 2017. DEF will continue to Infrared scan main feeder N67 in June/July 2018.*
- *DEF completed 11 miles of backbone tree trimming in 2017.*
- *N67 experienced 3 feeder level outages in 2017. One attributed to weather, one cause by DEF contractor error and the third cause is unknown, the feeder had a hot line while contractors were doing work but no cause was found.*
- *Operations techs will continue to analyze feeder and perform an in-depth patrol to identify operational issues and initiate mitigation actions.*
- *N67 is planned to be a part of the Grid Investment Plan (GIP) Transformer Retrofit program in 2018.*

Feeder M451:

- *DEF will Infrared scan the main feeder M451 in June/July 2018.*
- *M451 experienced 2 feeder level outages in 2017. One cause by tree-non preventable, and the other by a dig in into the underground feeder cable.*
- *DEF completed 5.8 miles of backbone tree trimming in 2017.*
- *Operations techs will continue to analyze feeder and perform an in-depth patrol to identify operational issues and initiate mitigation actions.*

Feeder A39:

- *DEF will Infrared scan the main feeder A39 in June/July 2018.*
- *A39 experienced 2 feeder level outages in 2017. One cause by tree-non preventable, and the other by a burnt jumper on a switch which was repaired to restore the outage.*
- *There is a reliability project planned to be completed in 2018 on feeder A39.*

- *Operations techs will continue to analyze feeder and perform an in-depth patrol to identify operational issues and initiate mitigation actions.*

ii. The process used to identify and select the actions to improve the performance of feeders in the 3% feeder list, if any.

DEF prioritizes the reliability improvement action plan for 3% Feeder List by balancing historical and current year performance. Feeders are evaluated based on the number of interruptions, customers interrupted (CI), and customer minutes of interruption (CMI). In addition, current year performance is monitored monthly to identify emergent and seasonal issues including load balancing for cold weather and the need for foot patrols of feeders experiencing multiple interruptions.

iii. 2018 activities and financial projection levels directed at improving feeder performance.

Feeders are prioritized for maintenance and replacement work based on several criteria including customer minutes of interruption (CMI), number of interruptions, interruption cause code, and CEMI repeat outage performance. This process results in a work plan targeted at feeders and devices having the greatest impact on reliability indices and customer satisfaction. This process has resulted in consistent and sustained reliability performance.

The 3% feeder list is based solely on number of interruptions and does not take into consideration any of the additional criteria above. While all feeders on the 3% list are patrolled for corrective action, the possibility exists that they could appear on the list more than once due to their relative impact on system reliability indices.

For the 2018 budget levels, please see Attachment E - "2018 Program Projection" Spreadsheet.

c. Regional Reliability Indices – *see attached forms.*

i. 5-Yr. patterns/trends in each regions reliability for each index and on any overall basis.

- *See Attachment F - "5 yr. Sum by Region" Spreadsheet.*

ii. The process used to identify and select actions to improve the regional reliability trends.

- *Regional reliability trends are tracked to ensure alignment with the system level goals they support. Specific device level improvements are measured and prioritized at a system level to ensure maximum benefit for resources expended.*

iii. Discuss any 2018 projected activities and financial projection levels directed at improving regional reliability performance.

- *See Attachment E - "2018 Program Projection" Spreadsheet. Regional reliability trends are tracked to ensure alignment with the system level goals they support. Specific device level improvements are measured and prioritized at a system level to ensure maximum benefit for resources expended.*
    - *DEF installed its first Self-Healing Network in 2017. This upgraded system segments the distribution grid to minimize the number of customers affected by a fault. The SCADA communication between the devices and the DEF Distribution Control Center (DCC), allows automatic remote sectionalization to further reduce the number and duration of the outages. In 2018, DEF will continue to install Self-Healing Networks across its service territory.*
    - *In 2017, DEF conducted analysis and reviewed reliability data that meet certain operational thresholds in order to reduce the number of outages and momentary interruptions. From 2016 to 2017, DEF had a 5% reduction in the number of MAIFI customers, and the 5 year trend in MAIFI is downward. DEF will look to build on this success by refining processes and execution in 2018.*
    - *DEF will implement the Transformer Retrofit Program as part of the GIP. This will target the mitigation of outages caused by CSP (Completely-Self Protected) transformers. CSP transformers with no external protection have been a frequent cause of upstream fuse outages. Adding the external fuse to these transformers would limit the number of customers impacted by transformer or service level issues. This outage mitigation will be accomplished by adding external fused cutouts, replacing bare copper wires with covered copper, and adding animal mitigation to these locations. The retrofitting of CSP transformers is being done in lieu of replacement as a cost-effective method of outage reduction for DEF customers in these locations.*
    - *DEF will implement the Deteriorated Conductor Program as part of the GIP starting in 2018. The Deteriorated Conductor Program focuses on replacing small overhead copper conductor with aluminum conductor. Copper conductor on the grid is older, and by replacing it with new aluminum conductor will improve the overall reliability.*

FLORIDA PUBLIC SERVICE COMMISSION
ANNUAL DISTRIBUTION SERVICE RELIABILITY REPORT – ADJUSTED
Top Ten Outage Causes: Form PSC/ECR 102-1(a) (8/06) and Form PSC/ECR 102-1(b) (8/06)

PART I

CAUSES OF OUTAGE EVENTS – **ADJUSTED**

Utility Name: Duke Energy Florida Year: **2017**

Cause** (a)	Customer Minutes Of Interruption	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1.) Animals	7,450,353	5,597	80.0	63.9
2.) Vegetation	41,102,888	8,143	150.1	102.8
3.) Lightning	4,096,889	1,261	151.4	80.2
4.) Other Weather	20,899,058	5,478	145.2	95.4
5.) Vehicle	10,408,160	505	223.2	103.2
6.) Defective Equipment	35,688,733	10,475	150.0	91.0
7.) Unknown	1,507,361	998	93.9	64.5
Subtotal	121,153,380	32,457	136.6	93.0
All Other Causes*See attached	25,861,038	8,287	179.8	76.1
System Totals:	147,014,418	40,744	145.4	89.5

PSC/ECR 103 (8/06)
Incorporated by reference in Rule 25-6.0455, F.A.C.

CAUSES OF OUTAGE EVENTS – **ADJUSTED**

Utility Name: Duke Energy Florida Year:**2017**

All Other Causes Cause (a)	Customer Minutes Of Interruption	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
U/G Primary Cable	15,205,166	1,456	277.4	100.1
U/G Secondary/Service	2,030,101	3,956	205.0	244.0
Human Error-Public	1,993,529	438	122.3	86.1
Right-Of-Way	1,719,108	36	60.4	31.5
Dig-In	1,262,899	281	192.9	62.4
Improper Installation	1,014,431	43	110.3	92.9
Human Error-PGN	928,962	693	53.0	28.2
Human Error-PGN Contractor	741,591	207	80.4	31.2
Foreign Material In Line	548,240	90	83.4	61.0
Overload	195,734	87	126.6	74.9
O/H Secondary Cable	108,214	291	149.3	166.7
Miscellaneous	90,152	596	64.1	80.6
Vandalism	15,331	94	55.5	33.5
Construction Equipment	7,380	17	99.7	113.5
O/H Service Cable	200	2	87.1	50.0
All Other Causes	25,861,038	8,287	179.8	76.1

THREE PERCENT FEEDER LIST – **ADJUSTED**

Utility Name: DUKE ENERGY FLORIDA, INC. Year: **2017**

PRIMARY CIRCUIT ID. NO. OR NAME	SUBSTATION ORIGIN	LOCATION	NUMBER OF CUSTOMERS					OUTAGE EVENTS "N"	AVERAGE DURATION "L-Bar"	CAIDI	LISTED LAST YEAR ?	NO. OF YEARS IN THE LAST 5	CORRECTIVE ACTION COMPLETION DATE
			RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL						
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
K3286	LAKE LUNTZ	WINTER GARDEN	1,965	204	-	21	2,190	8	131.0	29.9	N	-	12/31/18
N65	WAUKEENAH	MONTICELLO	403	77	-	11	491	4	136.5	126.9	N	-	12/31/18
W0494	CENTRAL PARK	CONWAY	-	124	4	8	136	4	155.6	61.9	N	-	12/31/18
W0176	OVIEDO	JAMESTOWN	1,555	43	-	10	1,608	4	225.7	90.9	N	1	6/30/18
W0902	BARBERVILLE	DELAND	1,095	339	1	35	1,470	4	143.0	90.0	N	1	12/31/18
K1690	DINNER LAKE	HIGHLANDS	1,297	297	-	23	1,617	4	159.0	100.6	N	-	12/31/18
A38	MARTIN	OCALA	1,768	239	-	20	2,027	4	150.2	130.2	Y	3	6/30/18
N10	PERRY	MONTICELLO	848	176	-	19	1,043	4	72.9	75.6	N	-	12/31/18
W0629	HOLOPAW	CONWAY	858	247	10	21	1,136	4	176.9	170.1	N	1	6/30/18
K1772	CROOKED LAKE	LAKE WALES	1,690	221	3	8	1,922	3	159.0	58.2	Y	2	6/30/18
M445	BAY RIDGE	APOPKA	645	150	1	6	802	3	115.0	63.1	N	2	12/31/18
J240	ULMERTON	WALSINGHAM	213	283	13	12	521	3	143.0	113.0	N	-	12/31/18
J2906	TAYLOR AVENUE	WALSINGHAM	2,335	58	-	14	2,407	3	215.9	75.4	N	-	12/31/18
M252	WOODSMERE	WINTER GARDEN	1,650	86	-	5	1,741	3	107.6	70.5	N	-	12/31/18
W0502	MAGNOLIA RANCH	CONWAY	1,205	68	5	20	1,298	3	142.9	65.3	N	-	12/31/18
C5011	ALDERMAN	SEVEN SPRINGS	1,952	196	-	10	2,158	3	240.2	57.8	N	-	12/31/18
W4553	DELTONA	DELAND	1,468	50	-	14	1,532	3	134.7	41.8	N	-	12/31/18
C753	PALM HARBOR	SEVEN SPRINGS	2,009	107	-	15	2,131	3	158.8	77.7	N	-	12/31/18
K779	ISLESWORTH	WINTER GARDEN	975	91	-	14	1,080	3	164.4	93.8	Y	3	6/30/18
K1688	DINNER LAKE	HIGHLANDS	701	160	4	45	910	3	115.4	46.4	N	1	6/30/18
K202	WINTER GARDEN	WINTER GARDEN	170	453	12	34	669	3	116.5	34.6	N	-	12/31/18
K286	OKAHUMPKA	CLERMONT	556	12	-	-	568	3	178.0	109.2	N	-	12/31/18
K3205	PEMBROKE	HIGHLANDS	1	20	-	-	21	3	287.5	129.3	N	-	12/31/18
K4841	MONTVERDE	CLERMONT	2,235	104	3	15	2,357	3	181.8	77.9	N	1	6/30/18
M1139	EATONVILLE	LONGWOOD	1,304	319	1	14	1,638	3	135.2	76.4	N	-	12/31/18
N54	PORT ST JOE	MONTICELLO	455	246	2	61	764	3	116.1	35.2	N	-	12/31/18
A154	SILVER SPRINGS	OCALA	748	154	1	20	923	3	126.2	129.9	N	-	12/31/18
N69	MONTICELLO	MONTICELLO	976	193	2	38	1,209	3	101.2	79.2	Y	1	12/31/18
N67	MONTICELLO	MONTICELLO	1,137	224	-	45	1,406	3	127.9	89.8	Y	2	12/31/18
A204	ZUBER	OCALA	1,319	128	1	12	1,460	3	140.1	79.7	N	1	12/31/18
A208	TROPIC TERRACE	INVERNESS	534	59	6	3	602	3	115.6	76.5	N	-	12/31/18
A244	LADY LAKE	OCALA	1,971	221	-	18	2,210	3	139.6	148.5	N	-	12/31/18
N58	APALACHICOLA	MONTICELLO	668	214	9	79	970	3	101.8	50.2	N	1	12/31/18
C4320	ODESSA	SEVEN SPRINGS	1,651	486	24	87	2,248	3	159.3	47.0	N	-	12/31/18
W0382	ORANGE CITY	DELAND	1,331	132	1	16	1,480	3	82.3	28.7	N	-	12/31/18
M664	SPRING LAKE	LONGWOOD	1,690	292	-	17	1,999	3	139.5	49.5	Y	2	6/30/18
M451	BAY RIDGE	APOPKA	1,483	186	2	20	1,691	2	180.8	118.5	N	2	6/30/18
W0087	MAITLAND	LONGWOOD	1,898	272	2	73	2,245	2	147.5	120.7	N	-	12/31/18
C16	CLEARWATER	CLEARWATER	2,393	108	-	37	2,538	2	177.9	109.7	N	-	12/31/18
A39	MARTIN	OCALA	1,437	219	-	19	1,675	2	122.6	101.6	N	2	12/31/18
X113	GATEWAY	WALSINGHAM	2,048	168	-	9	2,225	2	199.2	122.8	N	1	12/31/18

LBAR AND CAIDI Includes all devices.

PART III

SYSTEM RELIABILITY INDICES – **ADJUSTED**

Utility Name: Duke Energy Florida Year: 2017

District or Service Area (a)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)
North Coastal	**154.3**	**106.6**	**1.45**	**8.2**	**2.83%**
Inverness	120.7	107.9	1.12	7.2	0.92%
Monticello	166.1	99.3	1.67	9.9	4.25%
Ocala	178.5	111.2	1.61	7.8	3.66%
South Coastal	**75.0**	**85.1**	**0.88**	**6.8**	**0.21%**
Clearwater	67.5	85.3	0.79	8.5	0.13%
Seven Springs	73.7	77.2	0.95	8.2	0.30%
St. Petersburg	74.4	82.5	0.90	4.7	0.23%
Walsingham	87.1	98.6	0.88	6.2	0.20%
Zephyrhills	60.3	83.0	0.73	5.0	0.00%
North Central	**75.5**	**90.0**	**0.84**	**7.6**	**0.37%**
Apopka	83.4	93.4	0.89	9.7	0.49%
Deland	80.9	85.7	0.94	7.9	0.93%
Jamestown	61.5	91.3	0.67	6.0	0.07%
Longwood	83.0	89.0	0.93	7.6	0.16%
South Central	**69.6**	**83.3**	**0.84**	**6.9**	**0.87%**
Buena Vista	39.9	82.6	0.48	6.0	0.03%
Clermont	75.7	89.8	0.84	6.3	0.23%
SE Orlando	86.5	103.5	0.84	4.5	0.17%
Highlands	111.2	70.6	1.58	11.6	1.11%
Lake Wales	66.8	83.7	0.80	8.5	1.29%
Winter Garden	66.1	75.1	0.88	6.1	2.70%
SYSTEM	**82.7**	**89.5**	**0.92**	**7.2**	**0.73%**

FEEDER SPECIFIC DATA – Expanded to include OH/UG details

Provide the following information for each feeder circuit in service during 2017. If any data is not available explain whether the Company has any plans to begin tracking such data and if not, why.

For (A) thru (Y) - See Attachment G - CD containing Excel File – "2017 Feeder Specific Data".

- *In 2008, DEF transitioned from FRAMME to G-Electric. This change supported the move from a location-based GIS system to an asset-based GIS system. All 2017 data was obtained from G-Electric.*

For (Z) – See Attachment G - "2017 Summer Feeder Peaks".

(A)	Feeder ID	*See Attachment G*
(B)	Sub-Region in which the feeder is located	*See Attachment G*
(C)	Number of overhead lateral lines	*See Attachment G*
(D)	Number of overhead lateral miles	*See Attachment G*
(E)	Number of Customers served on OH lateral lines	*See Attachment G*
(F)	CMI for overhead lateral lines	*See Attachment G*
(G)	CI for overhead lateral lines	*See Attachment G*
(H)	Number of underground lateral lines	*See Attachment G*
(I)	Number of underground lateral miles	*See Attachment G*
(J)	Number of customers served on UG lateral lines	*See Attachment G*
(K)	CMI for underground lateral lines	*See Attachment G*
(L)	CI for underground lateral lines	*See Attachment G*
(M)	Number of automatic line sectionalizing devices on the lateral lines	*See Attachment G*
(N)	Number of automatic line sectionalizing devices on the feeder	*See Attachment G*
(O)	Whether the feeder circuit is looped	*See Attachment G*
(P)	Total length of the feeder circuit	*See Attachment G*
(Q)	Length of underground portion of the feeder circuit	*See Attachment G*
(R)	Number of customers served by underground feeders	*See Attachment G*
(S)	CMI for underground feeders	*See Attachment G*
(T)	CI for underground feeders	*See Attachment G*
(U)	Length of overhead portion of the feeder circuit	*See Attachment G*
(V)	Number of customers served by overhead feeders	*See Attachment G*
(W)	CMI for overhead feeders	*See Attachment G*
(X)	CI for overhead feeders	*See Attachment G*
(Y)	Load growth since December 31, 2009	*See Attachment G*
(Z)	Peak load recorded through December 31, 2009	*See Attachment G*
(AA)	Vegetation Management-number of overhead lateral lines-miles	*See Attachment G*

DISTRIBUTION SUBSTATION (Rule 25-6.0455, F.A.C.)

a. Describe the five year patterns/trends in reliability performance of distribution substations.

The five year patterns/trends in reliability performance of distribution substations is best described by the performance indices. These indices are used for calculating system reliability:

- *SAIDI – System Average Interruption Duration Index (minutes/customer). Reflects the average number of minutes a customer was without power system wide. It is determined by dividing the sum of customer-minutes of interruption by the average number of customers served during a period.*

- *CAIDI - Customer Average Interruption Duration Index (minutes/customer). CAIDI is the average customer-minutes of interruption per customer interruption. It approximates the average length of time required to complete service restoration. It is determined by dividing the sum of all customer-minutes of interruption durations by the number of customer interruptions during a period. CAIDI measures how long it takes DEF to restore service after an interruption.*

- *SAIFI - System Average Interruption Frequency Index. SAIFI is the average number of interruptions per customer per a certain period. It is determined by dividing the total number of customer interruptions by the average number of customers served during a period.*

- *FOHMY – Forced Outages per Hundred Miles per Year, measures the number of transmission line events, momentary AND sustained, that are incurred per hundred circuit miles per year. This measure is often grouped by voltage class.*

The following charts will show the trending for these Reliability Indices:

Table 1: 2017 Duke Energy-Florida SAIDI Reliability Indices

Section	Grid SAIDI	SECI SAIDI	Retail SAIDI
North	2.2	4.5	2.2
Central	4.6	1.8	5.4
Coastal	2.5	.1	3.5
Florida	9.3	6.4	11.1

In 2017, Grid SAIDI increased from 2016 and SECI (Seminole Electric Cooperatives, Inc.) SAIDI also increased from 2016. SECI represents its electric cooperative members in Florida.

Roughly 50% of the total customer interruptions in 2017 occurred during the months of April to August, inclusive, as shown in Figure 4. Customer Line Equipment, Breaker Equipment and Human Error were the main contributors to higher CMI during this period.

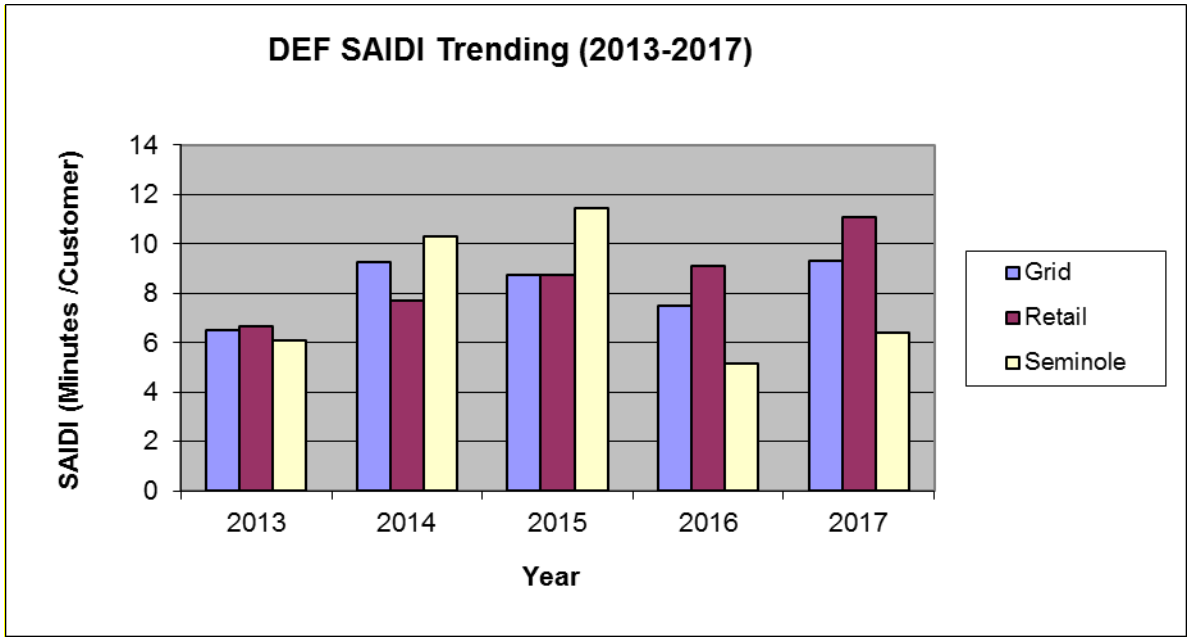


Fig.1 DEF SAIDI Trending (2013-2017)

Grid KPIs		2013	2014	2015	2016	2017
Customers (Thousands)		376.36	529.41	402.95	445.65	533.33
CMI (Millions)		14.57	20.32	20.57	18.91	21.7
SAIDI		6.526	7.72	8.77	8.18	9.3
CAIDI		39.266	39.4	49.64	39.68	40.69
SAIFI		0.17	0.14	0.18	0.21	0.22
FSO		N/A	N/A	N/A	N/A	N/A
FOHMY		8.21	13.5	11.78	9.07	9.75

Table 2: DEF Statistics (2013-2017)

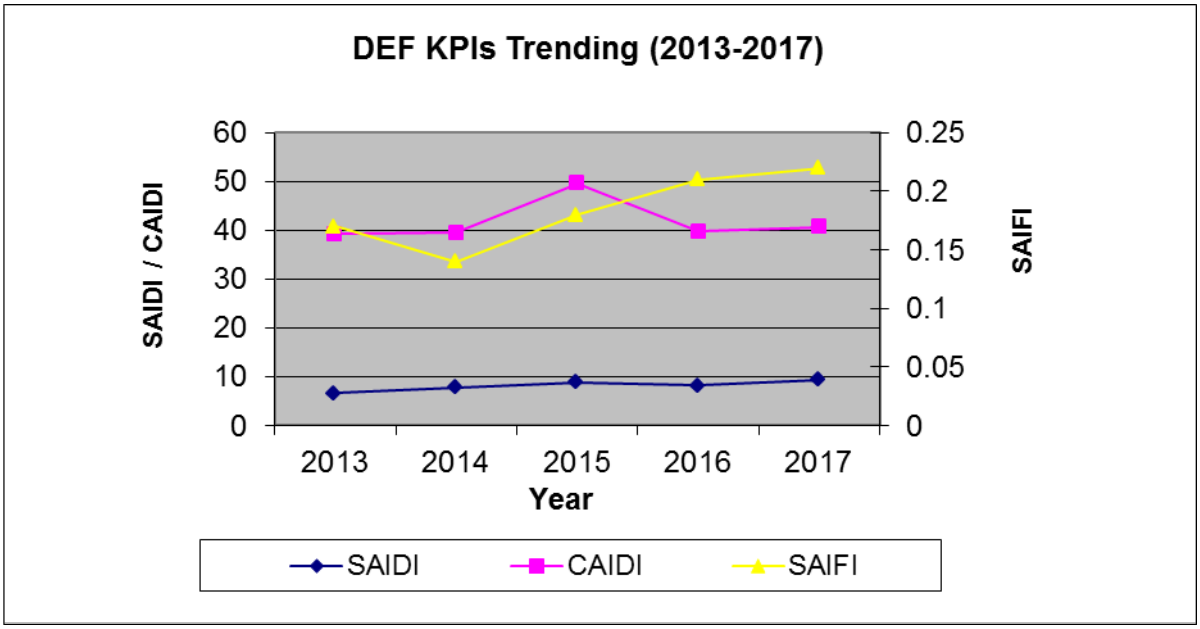


Fig.2 DEF Key Performance Indicators Trending (2013- 2017)

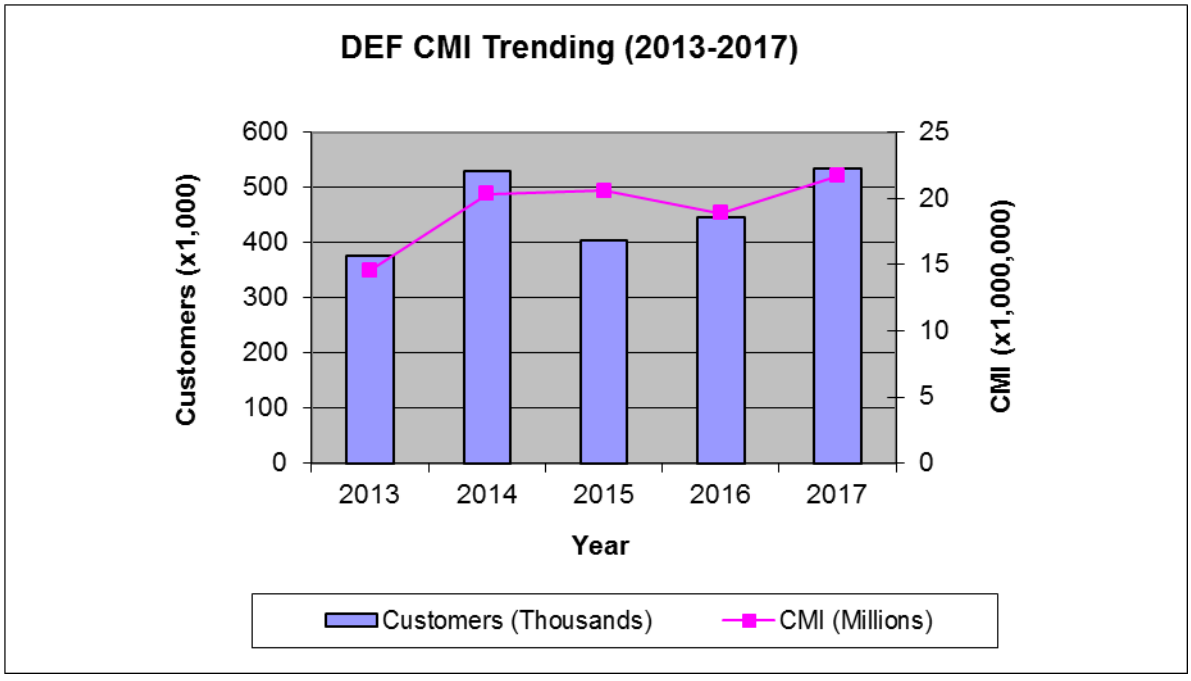


Fig.3 DEF Customers Minute Interruption Trending (2013- 2017)

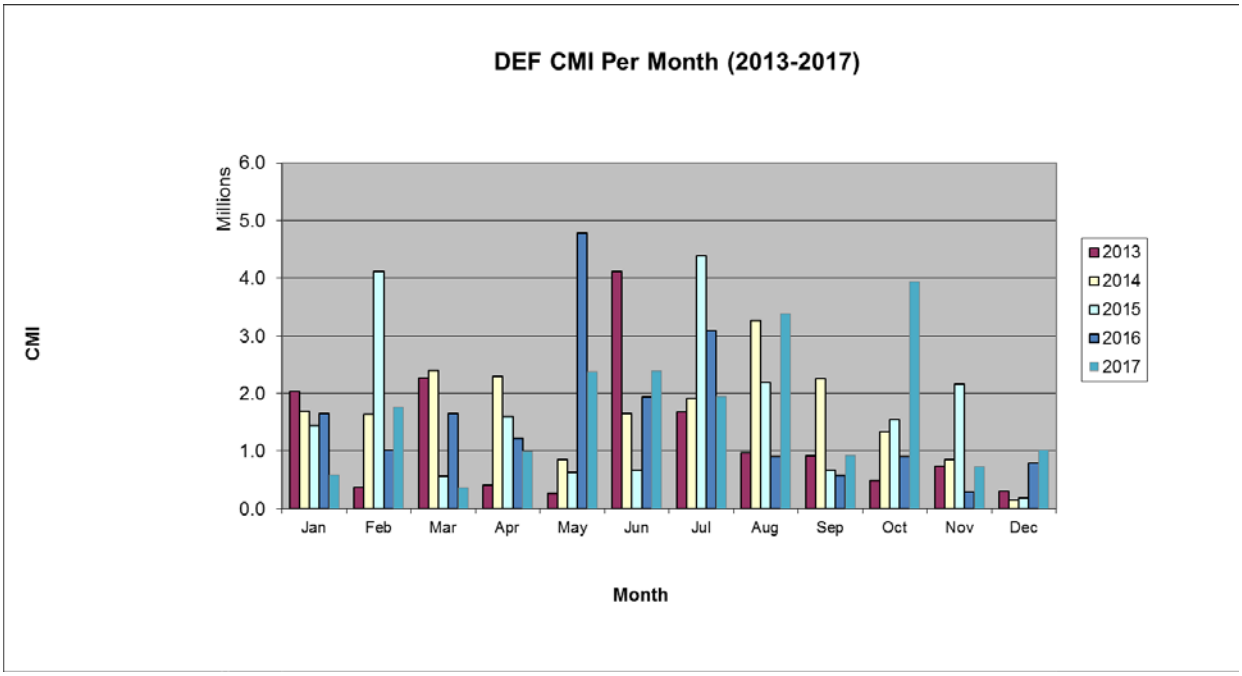


Fig.4 DEF CMI per month (2013- 2017)

a. Describe Company efforts to track the reliability of distribution substations.

Duke Energy Florida has an in-house database, Transmission Outage Management System (TOMS), which is used to keep track and record all the events that occur every day. It maintains all the indices mentioned above.

b. Describe the process used by your Company to identify and select the actions to promote substation reliability.

To identify and promote substation reliability, DEF uses different methods, such as monthly substation inspections, predictive and preventive maintenance, infra-red analysis, and numerous diagnostics tests. Once a problem is identified, DEF's work management tool is used to track the efforts to correct it.

c. Provide the number of distribution substations inspected during normal operations (non-storm related) for 2007 through 2017.

Duke Energy Florida has inspected each of its current 501 substations on a routine basis since 2004 to present. These routine inspections are scheduled and performed monthly.

SUPPLEMENTAL DISTRIBUTION INFORMATION

The next six pages contain the following information:

2017

	Unadjusted Data		Adjusted Data	
	CMI	**CI**	**CMI**	**CI**
NORTH CENTRAL	**1,057,905,088**	**847,263**	**30,679,378**	**340,697**
APOPKA	297,108,037	244,020	8,390,893	89,793
DELAND	281,204,264	214,951	6,579,318	76,769
JAMESTOWN	252,227,857	221,531	8,377,820	91,754
LONGWOOD	227,364,930	166,761	7,331,347	82,381
NORTH COASTAL	**425,011,485**	**580,567**	**31,363,555**	**294,311**
INVERNESS	152,062,422	171,985	8,857,677	82,093
MONTICELLO	60,126,736	153,839	9,173,316	92,363
OCALA	212,822,327	254,743	13,332,562	119,855
SOUTH CENTRAL	**1,120,240,979**	**970,754**	**33,745,298**	**405,194**
BUENA VISTA	139,984,053	123,115	4,827,938	58,481
CLERMONT	55,065,615	57,467	2,636,740	29,350
HIGHLANDS	287,241,631	230,044	6,392,194	90,565
LAKE WALES	276,186,959	241,562	6,711,077	80,139
SE ORLANDO	179,401,531	167,572	7,886,130	76,191
WINTER GARDEN	182,361,190	150,994	5,291,219	70,468
SOUTH COASTAL	**1,969,574,329**	**1,658,180**	**51,226,249**	**602,306**
CLEARWATER	464,535,143	342,892	9,665,249	113,349
SEVEN SPRINGS	538,445,222	419,293	13,691,889	177,383
ST. PETERSBURG	496,905,666	456,150	13,110,125	158,989
WALSINGHAM	390,784,671	396,659	13,200,311	133,816
ZEPHYRHILLS	78,903,627	43,186	1,558,675	18,769
Grand Total	**4,572,731,881**	**4,056,764**	**147,014,480**	**1,642,508**

CEMI5 Unadjusted Report - 2017

	INTERRUPTIONS:	1	2	3	4	5	6	7	8	9	10 +	Cust >5	CEMI >5
NORTH COASTAL													
	Inverness	16,549	16,122	10,330	8,165	4,474	2,157	1,027	510	212	478	4,384	**5.97%**
	Monticello	9,657	8,364	7,947	6,716	4,729	2,787	2,055	1,268	745	1,336	8,191	**14.83%**
	Ocala	14,435	17,500	8,168	6,964	5,584	3,488	3,085	2,421	1,133	2,293	12,420	**16.63%**
	NORTH COASTAL	**40,641**	**41,986**	**26,445**	**21,845**	**14,787**	**8,432**	**6,167**	**4,199**	**2,090**	**4,107**	**24,995**	**12.29%**
SOUTH COASTAL													
	Clearwater	41,796	36,307	21,635	13,369	8,932	3,169	1,031	500	220	29	4,949	**3.45%**
	Seven Springs	44,711	37,670	32,906	17,576	11,139	4,406	2,085	1,011	431	177	8,110	**4.36%**
	St. Petersburg	50,358	35,767	24,150	19,275	11,016	7,409	4,976	1,854	746	409	15,394	**8.74%**
	Walsingham	44,304	29,475	28,159	15,784	9,832	4,114	1,755	2,046	822	436	9,173	**6.06%**
	Zephyrhills	7,585	7,763	3,010	1,428	624	204	5	-	-	209	0	
	SOUTH COASTAL	**188,754**	**146,982**	**109,860**	**67,432**	**41,543**	**19,302**	**9,852**	**5,411**	**2,219**	**1,051**	**37,835**	**5.54%**
NORTH CENTRAL													
	Apopka	27,397	20,415	13,928	9,633	4,559	2,746	1,823	1,792	721	1,115	8,197	**8.15%**
	Deland	17,351	20,712	16,823	10,070	3,807	3,252	1,012	605	153	349	5,371	**6.61%**
	Jamestown	43,231	22,974	23,446	7,956	2,484	976	517	52	74	46	1,665	**1.22%**
	Longwood	26,635	19,929	8,585	4,371	4,290	2,081	1,165	231	46	94	3,617	**4.10%**
	NORTH CENTRAL	**114,614**	**84,030**	**62,782**	**32,030**	**15,140**	**9,055**	**4,517**	**2,680**	**994**	**1,604**	**18,850**	**4.64%**
SOUTH CENTRAL													
	Buena Vista	36,097	19,724	7,888	3,271	555	266	112	46	14	22	460	**0.38%**
	Clermont	9,422	5,351	5,001	2,127	1,567	547	156	7	-	710	0	
	Highlands	28,193	17,294	9,688	6,533	2,515	1,850	767	561	359	607	4,144	**4.55%**
	Lake Wales	7,100	9,301	8,968	9,374	8,106	5,061	2,631	1,706	1,244	1,152	11,794	**20.52%**
	SE Orlando	28,946	17,461	15,866	9,552	5,543	4,517	1,512	432	154	120	6,735	**6.71%**
	Winter Garden	30,063	17,189	10,057	5,050	1,553	708	1,284	844	89	78	3,003	**3.75%**
	SOUTH CENTRAL	**139,821**	**86,320**	**57,468**	**35,907**	**19,839**	**12,949**	**6,462**	**3,596**	**1,860**	**1,979**	**26,846**	**5.54%**
	System	**483,830**	**359,318**	**256,555**	**157,214**	**91,309**	**49,738**	**26,998**	**15,886**	**7,163**	**8,741**	**108,526**	**6.11%**

CEMI5 Adjusted Report - 2017

INTERRUPTIONS:		1	2	3	4	5	6	7	8	9	10 +	Cust >5	CEMI >5
NORTH COASTAL													
	Inverness	22235	13098	5501	1778	614	174	230	177	31	61	673	**0.92%**
	Monticello	13362	9634	7458	3557	1707	913	381	500	201	351	2,346	**4.25%**
	Ocala	20768	13472	7055	3728	1686	1408	730	407	111	80	2,736	**3.66%**
	NORTH COASTAL	**56365**	**36204**	**20014**	**9063**	**4007**	**2495**	**1341**	**1084**	**343**	**492**	**5,755**	**2.83%**
SOUTH COASTAL													
	Clearwater	48000	17238	4875	1942	233	160	21	0	0		181	**0.13%**
	Seven Springs	60499	28791	10333	3999	768	483	63	10	0		556	**0.30%**
	St. Petersburg	56352	18977	9959	4979	1521	321	62	3	0		412	**0.23%**
	Walsingham	37960	19813	11572	2564	777	232	51	9	0		303	**0.20%**
	Zephyrhills	8301	2566	1314	221	44	0	0	0	0		0	**0.00%**
	SOUTH COASTAL	**211112**	**87385**	**38053**	**13705**	**3343**	**1196**	**197**	**22**	**0**		**1,452**	**0.21%**
NORTH CENTRAL													
	Apopka	31762	11889	4296	2410	1197	316	109	39	5	28	497	**0.49%**
	Deland	22113	8876	6084	1580	895	317	157	66	71	142	753	**0.93%**
	Jamestown	39777	13918	5112	1011	394	39	14	0	0		98	**0.07%**
	Longwood	28210	11920	5409	1739	579	58	61	1	6	12	138	**0.16%**
	NORTH CENTRAL	**121862**	**46603**	**20901**	**6740**	**3065**	**730**	**341**	**106**	**82**	**182**	**1,486**	**0.37%**
SOUTH CENTRAL													
	Buena Vista	30886	10710	883	314	123	18	18	0	0		36	**0.03%**
	Clermont	12536	4064	1567	577	87	75	4	0	0		79	**0.23%**
	Highlands	25621	9286	3475	1745	863	525	217	155	35	76	1,008	**1.11%**
	Lake Wales	17066	15128	7129	2122	1166	501	128	107	7	0	743	**1.29%**
	SE Orlando	32887	10561	4918	1353	387	73	54	4	28	10	169	**0.17%**
	Winter Garden	23168	5527	4990	659	195	61	1601	423	57	20	2162	**2.70%**
	SOUTH CENTRAL	**142164**	**55276**	**22962**	**6770**	**2821**	**1253**	**2022**	**689**	**127**	**106**	**4,197**	**0.87%**
	System	**531503**	**225468**	**101930**	**36278**	**13236**	**5674**	**3901**	**1901**	**552**	**780**	**12,890**	**0.73%**

MAIFIe - Unadjusted (01/01/2017 - 12/31/2017)

	Customers Served	# momentary events	CME	MAIFIe
NORTH COASTAL				
Inverness	73,409	618	846,994	**11.5**
Monticello	55,218	840	738,730	**13.4**
Ocala	74,673	612	876,269	**11.7**
NORTH COASTAL	**203,300**	**2,070**	**2,461,993**	**12.1**
SOUTH COASTAL				
Clearwater	143,247	1275	2,685,199	**18.7**
Seven Springs	185,887	1318	2,542,040	**13.7**
St. Petersburg	176,140	820	1,531,293	**8.7**
Walsingham	151,484	1033	1,791,713	**11.8**
Zephyrhills	25,860	145	276,587	**10.7**
SOUTH COASTAL	**682,618**	**4,591**	**8,826,832**	**12.9**
NORTH CENTRAL				
Apopka	100,573	1358	1,602,004	**15.9**
Deland	81,296	721	1,106,026	**13.6**
Jamestown	136,298	801	1,308,692	**9.6**
Longwood	88,316	906	1,191,831	**13.5**
NORTH CENTRAL	**406,483**	**3,786**	**5,208,553**	**12.8**
SOUTH CENTRAL				
Buena Vista	120,959	930	1,015,282	**8.4**
Clermont	34,829	286	338,583	**9.7**
Highlands	57,487	916	1,085,461	**18.9**
Lake Wales	100,420	993	1,260,983	**12.6**
SE Orlando	91,119	642	744,660	**8.2**
Winter Garden	80,034	570	774,606	**9.7**
SOUTH CENTRAL	**484,848**	**4,337**	**5,219,575**	**10.8**
System	**1,777,249**	**14,784**	**21,716,953**	**12.2**

MAIFIe - Adjusted (01/01/2017 - 12/31/2017)

	Customers Served	# momentary events	CME	MAIFIe
NORTH COASTAL				
Inverness	73,409	394	528,646	**7.2**
Monticello	55,218	621	548,940	**9.9**
Ocala	74,673	398	583,223	**7.8**
NORTH COASTAL	**203,300**	**1,413**	**1,660,809**	**8.2**
SOUTH COASTAL				
Clearwater	143,247	608	1,216,031	**8.5**
Seven Springs	185,887	793	1,520,098	**8.2**
St. Petersburg	176,140	462	830,905	**4.7**
Walsingham	151,484	589	946,391	**6.2**
Zephyrhills	25,860	74	128,130	**5**
SOUTH COASTAL	**682,618**	**2,526**	**4,641,555**	**6.8**
NORTH CENTRAL				
Apopka	100,573	810	975,740	**9.7**
Deland	81,296	419	642,420	**7.9**
Jamestown	136,298	508	811,949	**6**
Longwood	88,316	521	668,844	**7.6**
NORTH CENTRAL	**406,483**	**2,258**	**3,098,953**	**7.6**
SOUTH CENTRAL				
Buena Vista	120,959	642	720,227	**6**
Clermont	34,829	188	219,014	**6.3**
Highlands	57,487	566	666,688	**11.6**
Lake Wales	100,420	660	853,942	**8.5**
SE Orlando	91,119	376	409,492	**4.5**
Winter Garden	80,034	350	490,391	**6.1**
SOUTH CENTRAL	**484,848**	**2,782**	**3,359,754**	**6.9**
System	**1,777,249**	**8,979**	**12,761,071**	**7.2**

DUKE ENERGY.

SYSTEM RELIABILITY INDICES – ABSENT ADJUSTMENTS

Utility Name: Duke Energy Florida

2017

Region	Operation Center	SAIDI
NORTH COASTAL		**2,090.6**
	Inverness	2,071.4
	Monticello	1,088.9
	Ocala	2,850.1
SOUTH COASTAL		**2,885.3**
	Clearwater	3,242.9
	Seven Springs	2,896.6
	St. Petersburg	2,821.1
	Walsingham	2,579.7
	Zephyrhills	3,051.2
NORTH CENTRAL		**2,602.6**
	Apopka	2,954.2
	Deland	3,459.0
	Jamestown	1,850.6
	Longwood	2,574.4
SOUTH CENTRAL		**2,310.5**
	Buena Vista	1,157.3
	Clermont	1,581.0
	Highlands	4,996.6
	Lake Wales	2,750.3
	SE Orlando	1,968.9
	Winter Garden	2,278.5
SYSTEM		**2,572.9**

Note: SAIDI indices are the contribution to the system level.

DUKE ENERGY.

SYSTEM RELIABILITY INDICES – ADJUSTED

Utility Name: Duke Energy Florida

2017

Region	Operation Center	SAIDI
NORTH COASTAL		**154.3**
	Inverness	120.7
	Monticello	166.1
	Ocala	178.5
SOUTH COASTAL		**75.0**
	Clearwater	67.5
	Seven Springs	73.7
	St. Petersburg	74.4
	Walsingham	87.1
	Zephyrhills	60.3
NORTH CENTRAL		**75.5**
	Apopka	83.4
	Deland	80.9
	Jamestown	61.5
	Longwood	83.0
SOUTH CENTRAL		**69.6**
	Buena Vista	39.9
	Clermont	75.7
	Highlands	111.2
	Lake Wales	66.8
	SE Orlando	86.5
	Winter Garden	66.1
SYSTEM		**82.7**

Note: SAIDI indices are the contribution to the system level.

I. RELIABILITY RELATED CUSTOMER COMPLAINTS

Please see "Attachment H" for DEF's spreadsheet comparing DEF vs. PSC 2017 Reliability-related complaints.

a. Describe the five year patterns/trends in reliability related customer complaints.

Duke Energy Florida receives its customer complaints from the FPSC via a variety of methods (Formal Complaints, Courtesy Calls, and Internet Transfers). The 5 year trend is shown below with DEF reliability related complaint data:

	FPSC Formal (15 Day/Logged) Complaints				
Complaint Category	Year End Total				
	2013	**2014**	**2015**	**2016**	**2017**
Outages - Momentary	27	15	12	8	6
Outages - Frequent	35	53	38	39	35
Outages – Extended	2	5	5	2	23
Voltage	3	2	3	5	2
Equipment/Facilities	6	5	4	4	10
Tree Trimming	9	9	6	6	6
Safety	2	1	0	0	0
Total	**84**	**90**	**68**	**64**	**82**

b. Describe Company efforts to correlate reliability related complaints with reliability indices for applicable feeder, lateral and subregion.

Reliability complaints are typically driven by localized delivery system performance. The most effective remedy is surgical corrective action based on patrol/survey of a discrete segment in conjunction with analysis of outage cause(s) and duration. Corrective action scope is typically increased when appropriate to ensure maximum impact on established reliability indices such as SAIDI, MAIFIe, CEMI5, and CELID3.

c. Describe the process used by your company to identify and select systematic actions to improve reliability due to customer complaints (if no such program exists explain why).

Systematic corrective actions are prioritized based on expected improvement to established reliability indices such as SAIDI, MAIFIe, CEMI4, and CELID3. Reliability complaints are typically driven by localized delivery system performance. The most effective remedy is surgical corrective action based on patrol/survey of a discrete segment in conjunction with analysis of outage cause(s) and duration. Corrective actions are compared to the reliability work plan to ensure no unnecessary duplication of effort.

II. STORM HARDENED FACILITIES

Pursuant to the Stipulation regarding the "Process within the Process" entered into and filed jointly by the third-party attachers and IOU's with the FPSC on September 26, 2007, paragraph 7 requires each electric utility to file by March 1 each year a status report of its implementation of its storm hardening plan. Please see *Attachment I - "Spreadsheet of Storm Hardening Project Status*".

a. Describe each storm hardening activity undertaken in the field during 2017.

Distribution

In addition to the activities identified in DEF's Storm Hardening Plan (Attachment J), Wood Pole Inspection Plan (Attachment K), and other initiatives identified and discussed herein, Duke Energy Florida Distribution undertook the following specific activities that deliver a storm hardening benefit during 2017:

Existing Overhead to Underground Conversion:
See Attachment L - "Major Conversions Historical Data".

New Construction Cable footage installed underground:
In 2017, DEF installed 227 circuit miles of new underground cable. Overall, the DEF distribution system consists of 44.0% primary underground circuit miles (14,141 circuit miles).

Network Maintenance and Replacement:
2017 Actuals - $4.1m

Switchgear Replacement
2017 Actuals - $2.0m

Midfeeder Electronic Sectionalizing (Reclosers):
2017 Actuals - $1.0m

Wood Pole Inspection and Treatment:
2017 Actuals - $4.1m

Wood Pole Replacement and Reinforcement:
2017 Actuals - $22.3m

Padmount Transformer Replacement:
2017 Actuals - $5.5m

Storm Hardening Projects
2017 Actuals - $6.3m

Transmission

In addition to the activities identified in DEF's Storm Hardening Plan (Attachment J), Wood Pole Inspection Plan (Attachment K), and other initiatives identified and discussed herein, Duke Energy Florida Transmission undertook the following specific Storm Hardening Activities during 2017:

Maintenance Change outs:
Duke Energy Florida Transmission is installing either steel or concrete poles when replacing existing wood poles. This activity resulted in the replacement of 530 wood poles with steel or concrete during 2017.

DOT/Customer Relocations and Line Upgrades and Additions:
Duke Energy Florida Transmission will design any DOT or Customer Requested Relocations and any line upgrades or additions to meet or exceed the current NESC Code Requirements and will construct these projects with either steel or concrete poles. This activity resulted in the installation of approximately 455 poles with steel or concrete poles during 2017.

b. Describe the process used by your company to identify the location and select the scope of storm hardening projects.

Distribution

The location and scope of projects that deliver hardening benefits varies by type of construction, maintenance, or replacement activity. Primary factors considered include operational and storm performance, remaining life, condition assessment of equipment as determined by inspection, and cost to repair or replace. In all cases, the cost to install, maintain, or replace equipment is balanced against the expected long term operational and cost benefit.

For additional information, please see Attachment J- DEF's Storm Hardening Plan.

Transmission

Maintenance Change outs
Poles that require change out are identified by Procedure TECP-MIM-TRM-00026, "Ground Patrols" (Attachment M). The change out schedule is determined by the condition of the wood pole based upon inspector experience.

DOT/Customer Relocations
Poles that are changed out and upgraded are identified by requests from DOT or customers.

Line Upgrades and Additions
Duke Energy Florida Transmission Planning will determine where and when lines need to be upgraded.

For additional information, please see Attachment J - DEF's Storm Hardening Plan.

c. Provide the costs incurred and any quantified expected benefits.

Distribution

See Subsection (a) above.

Transmission

Line Maintenance Change outs
Duke Energy Florida Transmission invested approximately $36.9 million in Capital Improvements during 2017. Capital Improvements include pole change outs and complete insulator replacements.

Quantified benefits will be a stronger and more consistent material supporting Transmission Circuits. Over the next 10 years, the percentage of wood poles on Duke Energy Florida's Transmission system should reduce wood poles on the system from approximately 50% today to 25%.

DOT/Customer Relocations and Line Upgrades and Additions
Duke Energy Florida Transmission invested approximately $72.4 million for DOT/Customer Relocations and Line Upgrades and Additions in 2017.

Quantified benefits will be a stronger and more consistent material supporting Transmission Circuits. Over the next 10 years, the percentage of wood poles on Duke Energy's Transmission system should reduce wood poles on the system from approximately 50% today to 25%.

d. Discuss any 2018 projected activities and budget levels.

Distribution

Duke Energy Florida Distribution's storm hardening strategy and activities for 2018 are still ongoing and under development. At this time, however, DEF Distribution reports as follows:

Existing Overhead to Underground Conversion:

Major Underground Conversions are a customer driven activity based upon a willingness to pay the conversion costs. While specific annual totals are difficult to forecast, the trend indicated by Attachment L, "Major Conversions Historical Data" over the last 15 years is expected to continue.

New Construction Cable footage installed underground:
The specific span miles of new underground cable installed is driven by the level of new connect activity. While the number of span miles installed varies from year to year, the percentage of new primary distribution span miles installed underground is expected to continue.

Network Maintenance and Replacement:
2018 Budgets - $1.3m

Switchgear Replacement
2018 Budgets - $4.0m

Wood Pole Inspection and Treatment:
2018 Budgets - $4.8m

Wood Pole Reinforcements & Replacement:
2018 Budgets - $25.7m

Padmount Transformer Replacement:
2018 Budgets - $5.6m

Storm Hardening Projects
2018 Budgets - $7.0m

Grid Investment Projects
2018 Budgets - $55.7M

The Grid Investment Projects include the Self-Optimizing Grid, Deteriorated Conductor, Transformer Retrofit and Targeted Underground programs.

Transmission

Duke Energy Florida Transmission's storm hardening strategy and activities for 2018 are still ongoing and under development. At this time, however, DEF Transmission projects as follows:

Line Maintenance Change outs
Duke Energy Florida Transmission is projecting replacement of approximately 540 poles in 2018. Capital Budget for Line Maintenance is $27.5 million for 2018 which includes pole change outs, insulator replacements and any overhead ground wire (OHGW) replacements.

DOT/Customer Relocations and Line Upgrades and Additions
Duke Energy Florida Transmission is projecting replacement of approximately 462 poles in 2018. Current identified DOT/Customer Relocation Projects and Line Upgrades and Additions have a capital budget of $ 91.2 million.

III. STORM SEASON READINESS

a. Describe the efforts the Company is taking to be storm-ready by June 1, 2018

Distribution

DEF's Distribution Storm Plan will be reviewed and revised if necessary, as of June 2017 (See Attachment X). The Distribution organization will conduct a storm readiness drill in preparation of the 2017 hurricane season. By the start of storm season, all feeder backbones will be surveyed for tree conditions and corrective work completed. System reliability is continually monitored and upgraded through DEF's storm hardening efforts. Critical restoration material and fuel will be ready and available from multiple sources, and DEF has taken steps to ensure that outside line and tree trimming resources are ready and available.

Transmission

DEF's Transmission System Storm Operational Plan has been reviewed and revised as of December 2017 (Attachment Y). The Transmission Department conducted multiple storm readiness training exercises during the 2nd and 3rd quarters of 2017. Transmission will conduct its 2018 storm trainings and drills in conjunction with Distribution during 2nd and 3rd quarters of 2018. Also, aerial patrols for DEF's entire transmission system took place between April-May and September-October, 2017. The next aerial patrols are scheduled between March-April and September-October, 2018.

IV. WOOD POLE INSPECTION PROGRAM

a. Provide a detailed description of the Company's wood pole inspection program.

Duke Energy Florida's wood pole inspection program's philosophy is to determine the condition of the wood pole plant and provide remediation for any wood poles that are showing signs of decay or fall below the minimum strength requirements outlined by NESC standards.

Duke Energy is utilizing the expertise of Osmose Utilities Services, Inc. for distribution and Utilimap for transmission to perform the inspections on an eight year cycle. Inspections include visual inspection, sound and boring, and full excavation down to 18 inches below ground line to determine the condition of all poles with the exception of CCA poles less than 16 years of age and poles that cannot be excavated due to obstructions. For CCA poles less than 16 years of age, inspections include visual and sound, as well as, selective boring to determine the pole condition. In addition, inspections are providing remediation of decayed poles through external and internal treatments. In distribution if the pole is below NESC standards and has the minimum remaining wood above ground line, reinforcement of the pole with steel C-trusses is often performed to bring the pole back to original strength.

For additional information, please see Attachment K - "Wood Pole Inspection Plan".

b. 2017 accomplishments

Distribution

Duke Energy Florida inspected 100,038 wood distribution poles during 2017. This completes 3 years and 8 months of the second 8 year inspection cycle. In addition to the inspections, GPS coordinates and physical attributes were updated and/or verified and inspection results were collected in a central database on all poles inspected.

The distribution wood pole inspection program is planned to complete approximately 1/8 of the distribution pole fleet per year. In cycle 1, the route of the inspections was performed to inspect the coastal poles first, moving inland as the program proceeded. Cycle 2 is being conducted in a manner that provides a more even distribution of work to Duke Energy's engineering and line resources throughout Florida.

Transmission

In 2017 DEF's Transmission ground patrol inspected 12,699 wood pole structures. This represents approximately 60% of the wood pole structures on the DEF Transmission system.

c. Projected accomplishments for 2018

Distribution

DEF's goal for 2018 is to continue cycle two inspections of the system. DEF will continue to utilize the same inspection procedures in 2018 that were used in the past. Projected cost for the 2018 distribution pole inspection program is $4.1m.

Transmission

Plans for 2018 are to perform a visual and sounding inspection on 1/3 of the wood pole system. A sound and bore inspection will be performed on at least 1/8 of the wood pole system. Both inspections will be performed by outside contractors. The entire system will also be flown aerially twice via helicopter in 2018.

d. Wood pole inspection reports.

Each wood pole inspection report contains the following:

- A description of the methods used for structural analysis and pole inspection,
- A description of the selection criteria that was used to determine which poles would be inspected, and
- A summary report of the inspection data.

Distribution

Please see Attachment O – 2017 Annual Wood Pole Inspection Report filed with the FPSC on March 1, 2018.

For a description of the methods used for structural analysis and pole inspection – please refer to Attachment K - "Wood Pole Inspection Plan", pages 6 - 8.

For the summary report of the inspection data - See Attachment P – a CD containing Excel file - "2017DEF Distribution Pole Inspection Data".

Transmission

Please see Attachment O - 2017 Annual Wood Pole Inspection Report filed with the FPSC on March 1, 2018.

For a description of the methods used for structural analysis and pole inspection – please refer to Attachment K - "Wood Pole Inspection Plan", pages 1 -6.

For the summary report of the inspection data – See Attachment Q – CD containing Excel files - "2017 Pole Data,""2017 Pole Visual Data", and "2017 Structure Data".

CCA Pole Sampling Report

Pursuant to Order No. PSC-08-0615-PAA-EI issued September 23, 2008 in Docket No. 080219-EI, the Commission approved modification to the sounding and boring excavation requirements of Order No. 06-0144-PAA-EI with regard to CCA wood poles less than 16 years old. On Pages 3 and 4 of Order No. PSC-08-0615-PAA-EI, it states,

> *"ORDERED that, consistent with the deviation granted to Gulf Power Company in Order No. PSC-07-0078-PAA-EU, Progress Energy Florida, Inc., Florida Power & Light Company, and Tampa Electric Company shall be required to sound and selectively bore all CCA poles under the age of 16 years, but shall not be required to perform full excavation on these poles. It is further*
>
> *ORDERED that Progress Energy Florida, Inc., Florida Power & Light Company, and Tampa Electric Company shall also be required to perform full excavation sampling to validate their inspection method. It is further*
>
> *ORDERED that the results of the utilities' sampling shall be filed in their annual distribution reliability reports."*

2017 CCA Pole Sampling Results

Please see Attachment O – Duke Energy's 2017 Annual Wood Pole Inspection Report filed with the FPSC on March 1, 2018. The "CCA Sampling Results for 2017" is included in Duke Energy's Wood Pole Inspection Report as "Attachment B".

V. EIW INITIATIVES

VEGETATION MANAGEMENT – THREE YEAR CYCLE (*Initiative 1*)

a. Provide a complete description of the Company's vegetation management program (policies, guidelines, practices) for 2017 and 2018 in terms of both activity and costs.

- *See Attachment R - "Internal Policy & Guidelines".*
- *For activities and costs - See information herein on pages 49-55.*

b. Describe tree clearing practices in utility easements and authorized rights-of-ways.

See Attachment R - "Internal Policy & Guidelines".

c. Identify relevant portions of utility tariffs pertaining to utility vegetation management activities within easements and authorized rights-of-ways.

DEF's tariffs do not contain specific language pertaining to utility vegetation management activities within easements and authorized rights-of-ways.

d. Describe tree removal practices for trees that abut and/or intrude into easements and authorized rights-of-ways.

See Attachment R - "Internal Policy & Guidelines".

e. Describe tree clearing practices outside of utility easements and authorized rights-of-ways.

See Attachment R - "Internal Policy & Guidelines".

f. Identify relevant portions of utility tariffs pertaining to utility vegetation management activities outside of easements and authorized rights-of-ways.

DEF's tariffs do not contain specific language pertaining to utility vegetation management activities outside of easements and authorized rights-of-ways.

g. Describe tree removal practices for trees outside of easements and authorized rights-of-ways.

See Attachment R - "Internal Policy & Guidelines".

h. Identify relevant portions of utility tariffs pertaining to customer vegetation management obligations as a term or condition of electric service.

There is no specific language in DEF's tariffs that pertain to customer vegetation management obligations as a term or condition of electric service. However, in Section 4 of DEF's tariff book, Sheet 4.032, reference is made to a customer's responsibility for providing DEF with a cleared route for line extensions, upgrades or service drops. Implied in the obligation to provide a clear route to obtain service is the obligation to maintain the route sufficiently clear to not interfere with DEF's facilities.

i. Describe Company practices regarding customer trim requests.

When a customer calls into the call center, either a tree work ticket is generated or a Duke Energy Florida field resource will submit a ticket using the work management system. For the remaining process, please see Attachment S - "Vegetation Management – Customer Demand Tree Trimming Requests".

j. Describe the criteria used to determine whether to remove a tree, replace a tree, spot-trim, demand trim, or mid-cycle trim, etc.

The criteria used is comprised of a number of considerations, i.e., location, customers on the line, removal vs. trim candidate, species, customer permission, easement rights and risk. Apart from identifying these factors, as a general matter, DEF cannot elaborate as to how these factors may apply in a given factual circumstance.

k. Discuss any 2018 projected activities and budget levels.

See charts below.

SYSTEM VEGETATION MANAGEMENT PERFORMANCE METRICS

	Feeders			Laterals		
	Unadjusted*	Adjusted	Diff.	Unadjusted*	Adjusted	Diff.
(A) Number of Outages	N/A *	149	N/A *	N/A *	7,248	N/A *
(B) Customer Interruptions	N/A *	152,084	N/A *	N/A *	220,944	N/A *
(C) Miles Cleared	N/A *	2,106	N/A *	N/A *	1,909	N/A *
(D) Remaining Miles	N/A *	0	N/A *	N/A *	0	N/A *
(E) Outages per Mile [A ÷ (C + D)]	N/A *	0.07	N/A *	N/A *	3.80	N/A *
(F) Vegetation CI per Mile [B ÷ (C + D)]	N/A *	72.22	N/A *	N/A *	115.73	N/A *
(G) Number of Hotspot trims	N/A *	17,668	N/A *	N/A *	14,781	N/A *
(H) All Vegetation Management Costs	N/A *	$ 15,891,286	N/A *	N/A *	$ 13,830,899	N/A *
(I) Customer Minutes of Interruption	N/A *	9,986,592	N/A *	N/A *	27,937,454	N/A *
(J) Outage restoration costs	N/A *	***	N/A *	N/A *	***	N/A *
(K) Vegetation Management Budget (current year) – 2017	N/A *	$ 15,920,698	N/A *	N/A *	$ 14,618,524	N/A *
(L) Vegetation Goal (current year) - 2017	N/A *	2,106	N/A *	N/A *	1,909	N/A *
(M) Vegetation Management Budget (next year) – 2018	N/A *	$ 6,590,692	N/A *	N/A *	$ 29,446,454	N/A *
(N) Vegetation Management Goal (next year) – 2018	N/A *	684	N/A *	N/A *	2,805	N/A *
(O) Trim-Back Distance	N/A *	***	N/A *	N/A *	***	N/A *

Note: Total miles cleared in 2017 was 4,015. Annual variations from target are expected as DEF manages resource and unit cost factors associated with its integrated vegetation management plan. Based on the 3-year system weighted average feeder / 5 year system weighted average lateral tree trimming cycle. DEF is at 100% of total 3-year cycle feeder miles and 29 % of total 5-year cycle lateral miles since the beginning of the current respective cycles. The term "feeder" within the vegetation management program is defined as the "backbone or big wire" portion of the 3 phase circuit typically within a substation breaker's zone of protection, and the lateral is defined as section of the circuit that is an extension beyond the "backbone or big wire" segment normally sectionalized by a line fuse or recloser. The vegetation management lateral line miles are defined in column AA of Attachment G. These definitions are consistent with the PSC filing in 2006.

With the vegetation management program in DEF trim frequency being based on segments of conductor being identified as either "feeder" or " lateral" beginning in 2018 Vegetation Management will align trimming activities with other business processes' definition of "feeder." We will now define "Feeder" as a portion of the 3 phase circuit typically within a substation breaker's zone of protection; however it does not require a specific size of conductor or "big wire." This change in "feeder" definition will be observed predominantly in the North Coastal and South Central rural service areas due to wire size and system configuration.
While this change will increase the total defined "feeder" miles and reduce the total defined "lateral" miles, we have no indication this will impact our ability to meet the upcoming trimming anniversaries. This definition change will increase the overall "feeder" designation by 1,224 miles. Having just completed the feeder anniversary in 2017, this seems like the optimal time to make this transition and align with our other business processes.

* There is no unadjusted data on tree caused storm events that would be relevant to DEF's tree trimming program. It would not be reasonably possible to gather this data and furthermore the data would not be accurate if we could obtain it. It would take extraordinary effort and considerable conjecture to estimate the impact of trees on DEF's distribution system for outage causes that are currently coded "storm". It would not be reasonably possible to gather such data because contractors move around the System and operate under a myriad of restoration contracts and agreements. To track this data, it would require the establishment of both a financially based tracking system to monitor costs as well as crew activity system-wide during a catastrophic event. Additionally, it is not practical to perform a forensic analysis of all outages during a catastrophic event for the purpose of obtaining the root cause since several agencies assist in the effort as well as the magnitude of damage that impact a localized area of the system. DEF conducts forensic analysis of distribution poles and structures as outlined in the Storm Preparedness Plan. During a storm event, outage tracking migrates from Outage Management System event to a Damage Assessment event.

** This data is actually completed in 2017 and scheduled in 2016.

***Distance varies according to species' growth rates.

**** This data was not previously tracked. A means of extracting tree outage data from total storm restoration costs is still being investigated.

MANAGEMENT ZONE (NORTH CENTRAL) VEGETATION MANAGEMENT PERFORMANCE METRICS

	Feeders			Laterals		
	Unadjusted*	Adjusted	Diff.	Unadjusted*	Adjusted	Diff.
(A) Number of Outages	N/A *	44	N/A *	N/A *	1,638	N/A *
(B) Customer Interruptions	N/A *	43,901	N/A *	N/A *	45,769	N/A *
(C) Miles Cleared	N/A *	455	N/A *	N/A *	357	N/A *
(D) Remaining Miles	N/A *	0	N/A *	N/A *	0	N/A *
(E) Outages per Mile [A ÷ (C + D)]	N/A *	0.10	N/A *	N/A *	4.59	N/A *
(F) Vegetation CI per Mile [B ÷ (C + D)]	N/A *	96.45	N/A *	N/A *	128.38	N/A *
(G) Number of Hotspot trims	N/A *	3,915	N/A *	N/A *	3,067	N/A *
(H) All Vegetation Management Costs	N/A *	$ 4,075,760	N/A *	N/A *	$ 3,192,329	N/A *
(I) Customer Minutes of Interruption	N/A *	3,517,679	N/A *	N/A *	5,429,012	N/A *
(J) Outage restoration costs	N/A *	***	N/A *	N/A *	***	N/A *
(K) Vegetation Management Budget (current year) – 2017	N/A *	$ 4,758,698	N/A *	N/A *	$ 3,727,239	N/A *
(L) Vegetation Goal (current year) - 2017	N/A *	455	N/A *	N/A *	357	N/A *
(M) Vegetation Management Budget (next year) – 2018	N/A *	$ 1,563,355	N/A *	N/A *	$ 7,277,082	N/A *
(N) Vegetation Management Goal (next year) – 2018	N/A *	132	N/A *	N/A *	612	N/A *
(O) Trim-Back Distance	N/A *	***	N/A *	N/A *	***	N/A *

MANAGEMENT ZONE (SOUTH CENTRAL) VEGETATION MANAGEMENT PERFORMANCE METRICS

	Feeders			Laterals		
	Unadjusted*	Adjusted	Diff.	Unadjusted*	Adjusted	Diff.
(A) Number of Outages	N/A *	39	N/A *	N/A *	1,022	N/A *
(B) Customer Interruptions	N/A *	38,362	N/A *	N/A *	27,761	N/A *
(C) Miles Cleared	N/A *	525	N/A *	N/A *	121	N/A *
(D) Remaining Miles	N/A *	0	N/A *	N/A *	0	N/A *
(E) Outages per Mile [A ÷ (C + D)]	N/A *	0.07	N/A *	N/A *	8.42	N/A *
(F) Vegetation CI per Mile [B ÷ (C + D)]	N/A *	73.05	N/A *	N/A *	228.70	N/A *
(G) Number of Hotspot trims	N/A *	4,773	N/A *	N/A *	1,103	N/A *
(H) All Vegetation Management Costs	N/A *	$ 3,597,648	N/A *	N/A *	$ 831,616	N/A *
(I) Customer Minutes of Interruption	N/A *	2,045,070	N/A *	N/A *	3,767,785	N/A *
(J) Outage restoration costs	N/A *	***	N/A *	N/A *	***	N/A *
(K) Vegetation Management Budget (current year) – 2017	N/A *	$ 3,360,074	N/A *	N/A *	$ 776,700	N/A *
(L) Vegetation Goal (current year) - 2017	N/A *	525	N/A *	N/A *	121	N/A *
(M) Vegetation Management Budget (next year) – 2018	N/A *	$ 1,123,905	N/A *	N/A *	$ 2,879,901	N/A *
(N) Vegetation Management Goal (next year) – 2018	N/A *	86	N/A *	N/A *	221	N/A *
(O) Trim-Back Distance	N/A *	***	N/A *	N/A *	***	N/A *

MANAGEMENT ZONE (NORTH COASTAL) VEGETATION MANAGEMENT PERFORMANCE METRICS

	Feeders			Laterals		
	Unadjusted*	Adjusted	Diff.	Unadjusted*	Adjusted	Diff.
(A) Number of Outages	N/A *	43	N/A *	N/A *	2,478	N/A *
(B) Customer Interruptions	N/A *	35,527	N/A *	N/A *	82,467	N/A *
(C) Miles Cleared	N/A *	391	N/A *	N/A *	987	N/A *
(D) Remaining Miles	N/A *	0	N/A *	N/A *	0	N/A *
(E) Outages per Mile [A ÷ (C + D)]	N/A *	0.11	N/A *	N/A *	2.51	N/A *
(F) Vegetation CI per Mile [B ÷ (C + D)]	N/A *	90.95	N/A *	N/A *	83.58	N/A *
(G) Number of Hotspot trims	N/A *	2,696	N/A *	N/A *	6,809	N/A *
(H) All Vegetation Management Costs	N/A *	$ 2,517,324	N/A *	N/A *	$ 6,358,883	N/A *
(I) Customer Minutes of Interruption	N/A *	2,613,556	N/A *	N/A *	10,654,510	N/A *
(J) Outage restoration costs	N/A *	***	N/A *	N/A *	***	N/A *
(K) Vegetation Management Budget (current year) – 2017	N/A *	$ 2,808,409	N/A *	N/A *	$ 7,094,178	N/A *
(L) Vegetation Goal (current year) - 2017	N/A *	391	N/A *	N/A *	987	N/A *
(M) Vegetation Management Budget (next year) – 2018	N/A *	$ 3,099,598	N/A *	N/A *	$ 9,029,079	N/A *
(N) Vegetation Management Goal (next year) – 2018	N/A *	404	N/A *	N/A *	1,176	N/A *
(O) Trim-Back Distance	N/A *	***	N/A *	N/A *	***	N/A *

MANAGEMENT ZONE (SOUTH COASTAL) VEGETATION MANAGEMENT PERFORMANCE METRICS

	Feeders			Laterals		
	Unadjusted*	Adjusted	Diff.	Unadjusted*	Adjusted	Diff.
(A) Number of Outages	N/A *	23	N/A *	N/A *	2,110	N/A *
(B) Customer Interruptions	N/A *	34,294	N/A *	N/A *	64,947	N/A *
(C) Miles Cleared	N/A *	735	N/A *	N/A *	445	N/A *
(D) Remaining Miles	N/A *	0	N/A *	N/A *	0	N/A *
(E) Outages per Mile [A ÷ (C + D)]	N/A *	0.03	N/A *	N/A *	4.75	N/A *
(F) Vegetation CI per Mile [B ÷ (C + D)]	N/A *	46.65	N/A *	N/A *	146.07	N/A *
(G) Number of Hotspot trims	N/A *	6,285	N/A *	N/A *	3,801	N/A *
(H) All Vegetation Management Costs	N/A *	$ 5,700,554	N/A *	N/A *	$ 3,448,070	N/A *
(I) Customer Minutes of Interruption	N/A *	1,810,287	N/A *	N/A *	8,086,147	N/A *
(J) Outage restoration costs	N/A *	***	N/A *	N/A *	***	N/A *
(K) Vegetation Management Budget (current year) – 2017	N/A *	$ 4,993,517	N/A *	N/A *	$ 3,020,408	N/A *
(L) Vegetation Goal (current year) - 2017	N/A *	735	N/A *	N/A *	445	N/A *
(M) Vegetation Management Budget (next year) – 2018	N/A *	$ 803,834	N/A *	N/A *	$ 10,260,392	N/A *
(N) Vegetation Management Goal (next year) – 2018	N/A *	62.33	N/A *	N/A *	795.60	N/A *
(O) Trim-Back Distance	N/A *	***	N/A *	N/A *	***	N/A *

Local Community Participation: A discussion was held addressing utility efforts to collect and use input from local communities and governments regarding (a) r-o-w tree clearing, (b) easement tree clearing, (c) hard-to-access facilities, (d) priority trees not within r-o-w or within easements where the utility has unobstructed authority to remove the danger tree, and (e) trim-back distances.

Please see pages 73-79.

Priority Trees

a. Number of priority trees removed? **6,797**
b. Expenditures on priority tree removal? **$853,640.28**
   -includes tree removal, removal trims, overhang & vines
c. Number of request for removals that were denied? ***58***
   -These trees were on private property. The owners refused a request for removal. DEF instead trimmed the trees as much as possible within its legal rights to do so.
d. Avoided CI with priority trees removed (estimate)? ***See Below***
e. Avoided CMI with priority trees removed (estimate)? ***See Below***

In response to items d) and e), the determination of the number of customers (CI) that would have been interrupted and/or the extent of an outage (CMI) is dependent upon a number of variables such as: species of tree; tree wind resistance characteristics; age of tree; condition of tree; type of failure – electrical vs. mechanical (limb or stem); location along the feeder; soil conditions, the extent of any disease and/or insect infestation; the type, magnitude and duration of a storm; etc. To quantify or estimate the avoided CI or CMI as a general matter for all possible conditions would require DEF to guess and speculate on conditions for which it has neither reliable nor supporting data. DEF therefore cannot provide data for these fields.

JOINT-USE POLE ATTACHMENT AUDITS FOR THE YEAR 2017 (*Initiative 2*)

a. **Percent of system audited.** *Feeders and Laterals: 100%*
b. **Date audit conducted?** *A Joint-Use Pole Loading Analysis is conducted every eight (8) years per FPSC requirements. In 2017, one-eighth (1/8) of the joint attachments were audited to fulfill the 8-year requirement.*
c. **Date of previous audit?** *2017 Partial Joint Use Structural Analysis System Audit.*
d. **List of audits conducted annually.** *Partial system audits are conducted annually. A full Joint-Use Pole Loading Analysis is conducted every eight years.*

2017 Joint-Use Structural Audits – Distribution Poles (all pole types)

(A) Number of company owned distribution poles.	1,012,804
(B) Number of company distribution poles leased.	485,512
(C) Number of owned distribution pole attachments (cable & phone attachments on DEF poles)	789,319
(D) Number of leased distribution pole attachments. (DEF attachments on phone poles)	16,654
(E) Number of authorized attachments. (7,423 new attachments approved in 2017)	789,319
(F) Number of unauthorized attachments.	0
(G) Number of distribution poles strength tested. (complete loading analysis needed)	57,605
(H) Number of distribution poles passing strength test. (complete loading analysis needed) *	57,460
(I) Number of distribution poles failing strength test (overloaded).	145
(J) Number of distribution poles failing strength test (other reasons). (Hardware upgrades required)	0
(K) Number of distribution poles to be corrected (strength failure) (added down guy)	30
(L) Number of distribution poles corrected (other reasons).	2
(M) Number of distribution poles to be replaced. (Overloaded poles entered into the FMDR database)	113
(N) Number of apparent NESC violations involving electric infrastructure.	None
(O) Number of apparent NESC violations involving 3rd party facilities.	None

** For each group of poles in a tangent line, the pole that had the most visible loading, line angle, and longest or uneven span length was selected to be modeled for wind loading analysis. If that one pole failed, the next worst case pole in that group of tangent poles was analyzed as well. Each pole analyzed determined the existing pole loading of all electric and communication attachments on that pole. If the existing analysis determined the pole was overloaded, that pole was added to a current year work plan to be corrected. Should the original pole analyzed meet the NESC loading requirements, all similar poles in that tangent line of poles was noted as structurally sound and entered into the database as "PASSED" structural analysis.*

2017 Joint-Use Attachment Audits – Transmission Poles (all pole types)

(A) Number of company owned transmission poles.	57,717
(B) Number of company transmission poles leased.	5,761
(C) Number of owned transmission pole attachments (cable & phone attachments on DEF poles)	8,511
(D) Number of leased transmission pole attachments. (DEF attachments on phone poles)	0
(E) Number of authorized attachments. (112 new attachments approved in 2017)	8,511
(F) Number of unauthorized attachments.	0
(G) Number of transmission poles strength tested.	277
(H) Number of transmission poles passing strength test.	263
(I) Number of transmission poles failing strength test (overloaded).	14
(J) Number of transmission poles failing strength tests (other reasons).	0
(K) Number of transmission poles corrected (data provided to transmission for replacement)	14
(L) Number of transmission poles corrected (other reasons).	0
(M) Number of transmission poles replaced	0
(N) Number of apparent NESC violations involving electric infrastructure.	None
(O) Number of apparent NESC violations involving 3rd party facilities.	0

State whether pole rents are jurisdictional or non-jurisdictional. If pole rents are jurisdictional, then provide an estimate of lost revenue and describe the company's efforts to minimize the lost revenue.

Pole attachment rents are jurisdictional and are booked in Account 454 – "Rent from Electric Property". DEF conducts partial audits of its pole attachments throughout the year. A full Joint-Use Pole Loading Analysis is conducted every eight years. When DEF discovers unauthorized attachments on DEF poles, DEF follows-up with the attacher who owns the unauthorized attachments and DEF seeks all revenue applicable under controlling laws, rules, and regulations.

SIX YEAR INSPECTION CYCLE FOR TRANSMISSION STRUCTURES (*Initiative 3*)

Describe the extent of the inspection and results pertaining to transmission wires, towers, and substations for reliability and NESC safety matters. The intent is to assure the Commission that utilities know the status of their facilities and that reasonable efforts are taken to address transmission structure reliability and NESC safety matters.

Duke Energy Florida's Transmission Department follows Procedure TECP-MIM-TRM-00026 titled "Ground Patrols" (Attachment M) to periodically assess the condition of the transmission circuits. The primary goal of the ground patrol is to inspect transmission line structures and associated hardware and conductor on a routine basis to identify any required material repairs or replacements. Please also see Initiative 3 in DEF's Storm Hardening Plan.

Transmission Circuit, Substation and Other Equipment Inspections

	2017 Activity		2017 Current Budget		Next Year (2018)	
	Goal	Actual	Budget	Actual	Goal	Budget
(A)Total transmission circuits	N/A	822	$ 2,230,904	$ 1,242,836	N/A	$ 1,123,233
(B) Planned transmission circuit inspections	195	N/A	N/A	N/A	261	N/A
(C) Completed transmission	N/A	215	N/A	N/A	N/A	N/A
(D) Percent of transmission	N/A	26.2%	N/A	N/A	31.8%	N/A
(E) Planned transmission substation	N/A	501	$4,648,181	$ 5,649,691	501	$ 6,261,714
(F) Completed transmission	N/A	501	N/A	N/A	N/A	N/A
(G) Percent transmission	N/A	100%	N/A	N/A	N/A	N/A
(H) Planned transmission	N/A	N/A	N/A	N/A	N/A	N/A
(I) Completed transmission	N/A	N/A	N/A	N/A	N/A	N/A
(J) Percent of transmission	N/A	N/A	N/A	N/A	N/A	N/A

Note: For most entries of "N/A" in the chart above, DEF does not specifically budget for Transmission line or substation inspections on an item by item basis. The budget and actual figures that are entered include inspections, emergency response, preventative maintenance, training, and other O&M Costs.

Transmission Tower Structure Inspections

	2017 Activity		2017 - Current Budget		Next Year (2018)	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total transmission tower structures.	N/A	3435	Please see note 1	N/A	N/A	Please see note 1
(B) Planned transmission tower structure inspections	N/A	Please see note 2	N/A	Please see note 2	N/A	N/A
(C) Completed transmission tower structure inspections.	N/A	514	N/A	N/A	N/A	N/A
(D) Percent of transmission tower structure inspections completed.	N/A	15%	N/A	N/A	N/A	N/A

Note 1: Please see the previous budget and actuals on page 58 for line inspections. All inspections for wood poles, towers, steel and concrete structures are included in the O&M budget. Duke Energy Florida does not specifically budget for Transmission line or substation inspections on an item by item basis. The budget and actual figures that are entered include inspections, emergency response, preventative maintenance, training, and other O&M Costs.

Note 2: Transmission circuits with towers are inspected on a 5-year cycle. Inspections are planned and completed based upon the 5-year cycle.

Transmission Pole Inspections

	2017 Activity		Current Budget (2017		Next Year (2018)	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of transmission pole structures.	N/A	50,734	$2,230,904	$1,242,836 See Note 1	N/A	$1,123,233
(B) Number of transmission pole structures strength tested. *Item A: number of poles analyzed* *Item B: Number of pole structures ground inspected*	N/A	A: B: 12,699	N/A	N/A	N/A	N/A
(C) Number of transmission pole structures passing strength test. *Item A: number of poles analyzed* *Item B: Number of pole structures ground inspected*	N/A	A: B: 12,699	N/A	N/A	N/A	N/A
(D) Number of transmission poles failing strength test (overloaded).	N/A	0	N/A	N/A	N/A	N/A
(E) Number of transmission poles failing for other reasons – *Ground Inspection (See Note 2)*	N/A	2,969		N/A	N/A	N/A
(F) Number of transmission poles corrected (strength failure).	N/A			N/A	N/A	N/A
(G) Number of transmission poles corrected for other reasons - *Ground Inspection*	N/A	0 see note 2	N/A	N/A	N/A	N/A
(H) Total transmission poles replaced.	N/A	530	N/A	N/A	N/A	N/A

Note 1: Duke Energy Florida does not specifically budget for Transmission line or substation inspections on an item by item basis. The budget and actual figures that are entered include inspections, emergency response, preventative maintenance, training, and other O&M costs.

Note 2: Duke Energy Florida Transmission has prioritized the remaining number of transmission poles that need to be corrected based upon the inspection results and the status of the poles. Poles that needed to be replaced quickly have already been replaced as reflected above. Poles that can remain in service have been prioritized and DEF is in the process of working through corrections based on those prioritizations.

Note 3: Transmission circuits are inspected on a 3 or 5 year cycle depending on structural material. Inspections are planned and completed based on the 5 year cycle.

Please also see Attachment O – "Wood Pole Inspection Report" filed on March 1, 2018 with the FPSC.

STORM HARDENING ACTIVITIES FOR TRANSMISSION STRUCTURES (*Initiative 4*)

Describe the extent of any upgrades to transmission structures for purposes of avoiding extreme weather, storm surge or flood-caused outages, and to reduce storm restoration costs. The intent is to assure the Commission that utilities are looking for and implementing storm hardening measures.

Hardening of Existing Transmission Structures

	2017 Activity		Current Budget (2017)		Next Year (2018)	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Transmission structures scheduled for	1,199	N/A	$115.5M	N/A	1,002	$118.7M
(B) Transmission structures hardening	N/A	976	N/A	$109.8M	N/A	N/A
(C) Percent transmission structures hardening	N/A	81%	N/A	N/A	N/A	N/A

Note: Budget and Actual costs include maintenance pole change-outs, insulator replacements, and other capital costs. The budget and actual figures also include DOT/Customer Relocations, line rebuilds and System Planning additions. Structures are designed to withstand current NESC Wind Requirements and are build utilizing steel or concrete structures. DEF does not break out the cost of the structures separately and is reporting the entire construction costs for the Transmission Line Projects.

Storm Hardening Activity and Remaining Population

Report Year	Maintenance Change outs	DOT/Relocation, Upgrades and Rebuilds	**Total**
2017	530	455	**985**
2016	698	469	**1167**
2015	1,738	559	**2,297**
2014	2,028	1,440	**3,468**
2013	1,384	857	**2,241**
2012	1,080	857	**1,937**
2011	635	915	**1,550**
Report Year	Wood Pole Beginning Balance	Current Balance	**Poles changed**
2017	23,567	21,285	**2282**
2016	24,265	23,567	**698**
2015	25,370	24,265	**1,105**
2014	28,000	25,370	**2,630**

Note: The 2017 current balance variance includes updated replacements from previous years found during data reconciliation in the asset management software.

GEOGRAPHIC INFORMATION SYSTEM (GIS) (*Initiative 5*)

In 2017, Duke Energy rolled out a new Geographical Information System (GIS), Work Management system, and Asset Management system for the entire enterprise. As a result, in November 2017, DEF transitioned to those new systems. The new Smallworld GIS system is a Duke Energy enterprise-wide solution for GIS which is an asset and location based GIS system that is consistent with Commission Order No. PSC-06-0351-PAA-EI. These systems allow DEF to facilitate the tracking, maintenance, planning, and risk management of the major Distribution and Transmission assets.

In addition, Duke Energy has a dedicated local GIS department in each region across the enterprise to ensure the accuracy and quality of the data within the GIS and the Outage Management System (OMS) with a focus on business processes. These GIS departments continue to focus on key performance indicators that are used to measure and monitor the quality of the GIS and OMS data. The consistency, accuracy, and dependability of these systems have led to improvements in the reliability and performance of our utility system, contributing to the safety of the DEF field crews.

Distribution OH Data Input

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of system wide OH assets for input.	N/A	N/A	N/A	N/A	N/A	N/A
(B) Number of OH assets currently on system.	N/A	1,366,812	N/A	N/A	N/A	N/A
(C) Percent of OH assets already on system.	N/A	100%	N/A	N/A	N/A	N/A
(D) Annual OH assets targeted for input (goal).	N/A	N/A	N/A	N/A	N/A	N/A
(E) Annual OH assets input to system (actual).	N/A	N/A	N/A	N/A	N/A	N/A
(F) Annual percent of OH assets input.	N/A	100%	N/A	N/A	N/A	N/A

DEF cannot necessarily report data in the form of items (A)-(F) above given that such items are not entirely consistent and in line with the status of DEF's current GIS system and DEF's ongoing efforts to upgrade that system.

Distribution UG Data Input

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of system wide UG assets for input.	N/A	N/A	N/A	N/A	N/A	N/A
(B) Number of UG assets currently on system.	N/A	182,615	N/A	N/A	N/A	N/A
(C) Percent of UG assets already on system.	N/A	100%	N/A	N/A	N/A	N/A
(D) Annual UG assets targeted for input (goal).	N/A	N/A	N/A	N/A	N/A	N/A
(E) Annual UG assets input to system (actual).	N/A	N/A	N/A	N/A	N/A	N/A
(F) Annual percent of UG assets input.	N/A	100%	N/A	N/A	N/A	N/A

DEF cannot necessarily report data in the form of items (A)-(F) above given that such items are not entirely consistent and in line with the status of DEF's current GIS system and DEF's ongoing efforts to upgrade that system.

Transmission OH Data Input

	Activity (2017)		Current Budget (2017)		Next Year (2018)	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of system wide OH transmission assets for input.	N/A	48,984	N/A	N/A	N/A	N/A
(B) Number of OH transmission assets currently on system.	N/A	48,896	N/A	N/A	N/A	N/A
(C) Percent of OH transmission assets already on	N/A	99.8%	N/A	N/A	N/A	N/A
(D) Annual OH transmission assets targeted for	N/A	N/A	N/A	N/A	N/A	N/A
(E) Annual OH transmission assets input to	N/A	N/A	N/A	N/A	N/A	N/A
c(F) Annual percent of OH transmission assets	N/A	100%	N/A	N/A	N/A	N/A

DEF cannot necessarily report data in the form of items (A)-(F) above given that such items are not entirely consistent and in line with the status of DEF's current GIS system and DEF's ongoing efforts to upgrade that system.

Transmission UG Data Input

	Activity (2017)		Current Budget (2017)		Next Year (2018)	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of system wide UG transmission assets for input.	N/A	69.87 miles	N/A	N/A	N/A	N/A
(B) Number of UG transmission assets currently on system.	N/A	69.87 miles	N/A	N/A	N/A	N/A
(C) Percent of UG transmission assets already on	N/A	100%	N/A	N/A	N/A	N/A
(D) Annual UG transmission assets targeted for	N/A	N/A	N/A	N/A	N/A	N/A
(E) Annual UG transmission assets input to	N/A	N/A	N/A	N/A	N/A	N/A
(F) Annual percent of UG transmission assets	N/A	100%	N/A	N/A	N/A	N/A

POST-STORM DATA COLLECTION AND FORENSIC ANALYSIS (*Initiative 6*)

a) **Has a forensics team been established?**

Distribution

Yes.

Transmission

Yes.

b) **Have forensics measurements been established? If yes, please describe/provide.**

Distribution

Yes. During the field observations, Forensic Assessors collect various information regarding poles damaged during storm events:

- *Data points typically collected during the initial approach to the pole would include: pole type, number of conductors, joint-use status, number of transformers and other distribution equipment attached, etc.*
- *Data points typically collected during the pole detail review would include: birth date, pole class, pole height, etc.*
- *Data points typically collected during the site review would include a free form rendering of the site as well as qualitative data about damaged pole structures (e.g. whether the pole is leaning, broken, location of break, etc.).*

Transmission

Yes. The forensic team collects sufficient data at the failure sites to determine the nature and cause of the failure. Data collection includes the following:

- *Structure identification*
- *Photographs*
- *Sample of damaged components as necessary*
- *Field technical assessment (soil conditions, exposure, vegetation, etc.)*
- *Inventory of attachments and guys*

Forensic Analysis: Data and forensic samples will be analyzed to determine the cause and correlating factors contributing to the failure. Analysis will include as required:

- *Conditional assessment of failed components*
- *Structural evaluations*
- *Failure analysis*
- *Correlation with storm path and intensity*
- *Correlation with GIS data*

c) **Has a forensics database format been established?**

Distribution

Yes, in collaboration with the University of Florida's Public Utility Research Center (PURC), DEF and the other Florida investor owned utilities developed a common format to collect and track data related to damage discovered during a forensics investigation. This ensures that DEF is collecting compatible data to allow analysis of performance and refinement of the inputs to OH to UG Cost/Benefit model.

Transmission

Yes, DEF Transmission uses a spreadsheet tool to manage the data described in subsection (b) above.

d) **Describe/provide GIS and forensics data tracking integration.**

Distribution

Pole location information is manually collected during forensic inspections in the field. Data is then available for analysis using GIS applications.

DEF has re-assessed statistical pods in DEF's GIS system to ensure their accuracy and statistical validity as a sample of the Duke Energy Florida service territory. The statistical pods are a post-storm sample used to quickly forecast the level of damage sustained by DEF's facilities following a major storm or hurricane. The damage assessment that results from these statistical samples allows more accurate targeting of the need and location for forensics teams.

Transmission

The forensic data that is collected is identified and cataloged by the structure number or GPS coordinate if the structure number is not available. The failure data can then be correlated with the data contained in the MapInfo GIS system. The maintenance history of the poles/structures will be populated in the GIS system.

e) **Describe/provide forensics and restoration process integration. (Established and documented processes to capture forensics data during the restoration process.)**

See Attachment T - "Damage Assessment" – GDLP-EMG-DOS-00008- Distribution's damage assessment process and "Transmission Storm Forensic Analysis Specification".

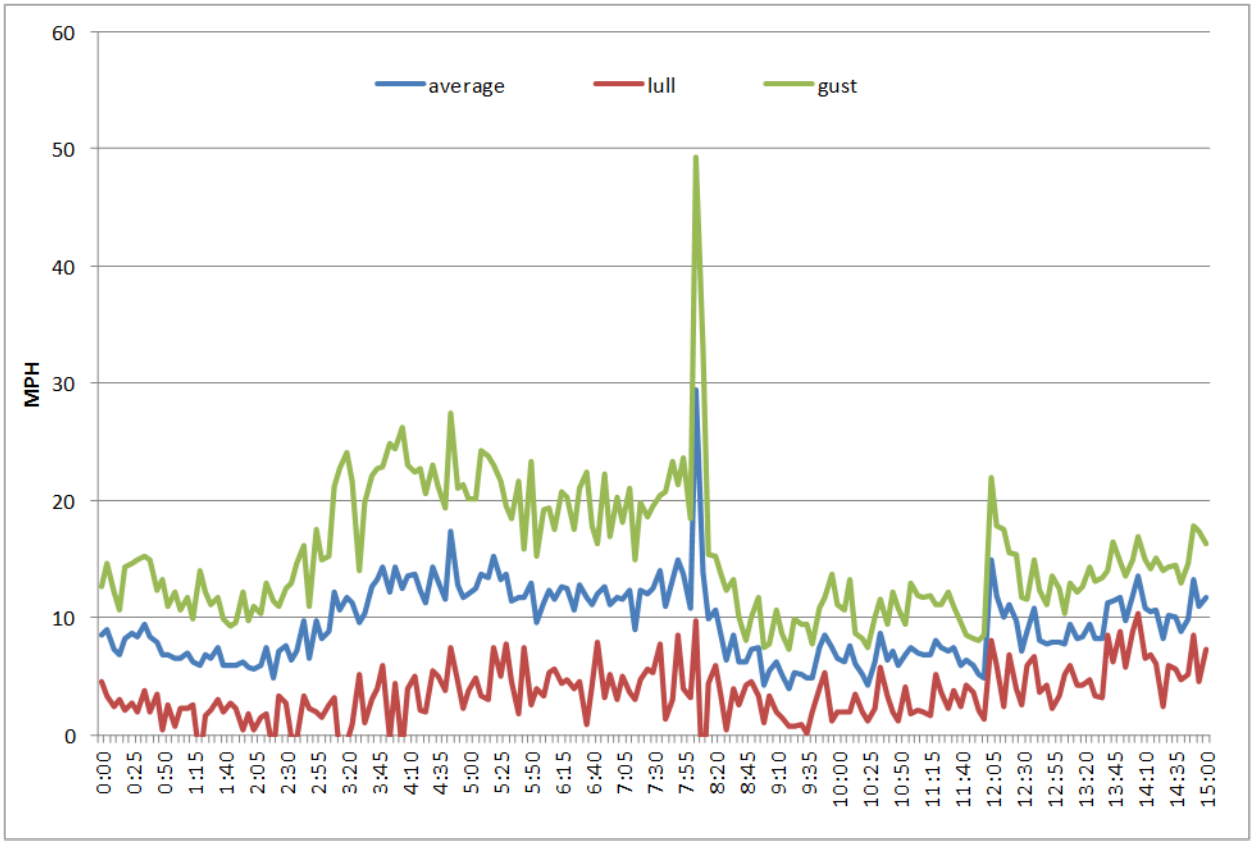
f) **Describe/provide any forensics data sampling methodology.**

Distribution

Forensic assessors are mobilized to areas predicted to have the highest sustained wind speeds within the service territory to identify pole failure modes in a manner that will minimize interference with the restoration process.

As a result of the installation of weather stations across Florida (as part of the collaborative research project done with PURC and the other Florida electric utilities), DEF is now able to correlate, at a high level, experienced outages with nearby wind speeds. The graph below shows the registered wind speeds (mph) at the Land O Lakes substation weather station as

severe weather caused more than 500 outages on April 5, 2017. This type of information is augmented with on-site forensics data following a major storm or hurricane.



Transmission

See Attachment T.

g) **Describe/provide forensics reporting format used to report forensics results to the Company and the Commission.**

See Attachment T - "Damage Assessment" – GDLP-EMG-DOS-00008- Distribution's damage assessment process and "Transmission Storm Forensic Analysis Specification".

OVERHEAD/UNDERGROUND RELIABILITY (OH/UG) (INITIATIVE 7)

a. Describe the five year patterns/trends in reliability performance of underground systems vs. overhead systems. See separate spreadsheet attachment.

See Attachment U -"Comparison of Historical Trends-Overhead vs. Underground"

b. Describe Company efforts to separately track the reliability of overhead and underground systems.

Following is a description of the process that will be used to separately track the reliability of overhead and underground systems:

DEF will collect information to determine the percentage of storm caused outages on overhead systems and underground systems. Some assumptions are required when assessing the performance of overhead systems versus underground systems. For example, underground systems are typically protected by overhead fuses. DEF will provide for these factors in its analysis.

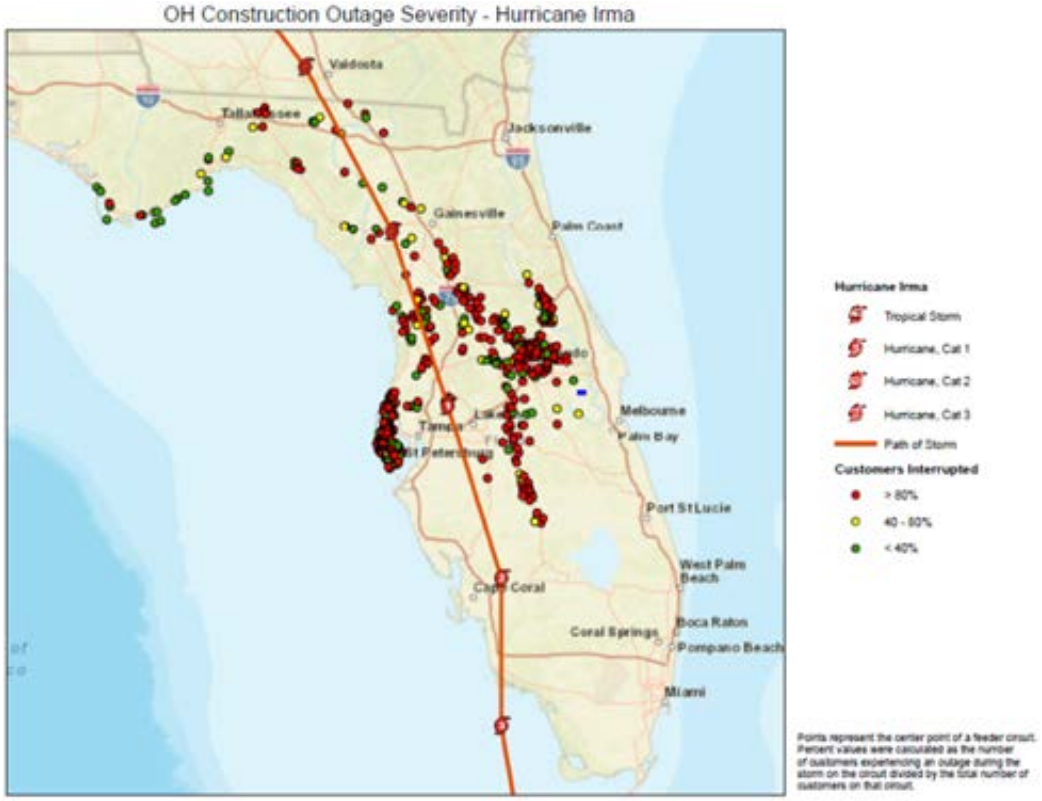
DEF has an internal hierarchy in its Outage Management System (OMS) that models how all of its facilities are connected to each other. This information provides the connection to the feeder breaker down to the individual transformer. DEF's Customer Service System (CSS) captures which customer is tied to what individual transformer. DEF's Geographical Information System (GIS) provides several sets of data and information points regarding DEF's assets. DEF uses these systems to help analyze the performance of the following types of overhead and underground assets:

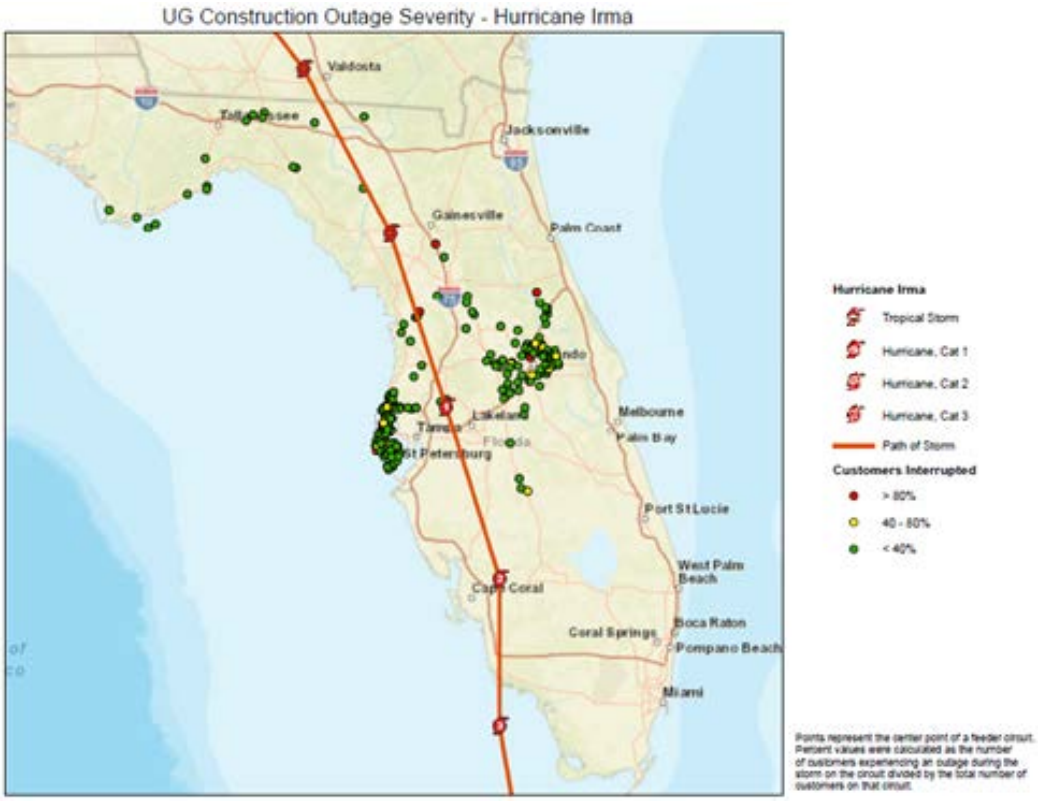
- *Breakers*
- *Electronic Reclosers*
- *Fuses*
- *Hydraulic Reclosers*
- *Interrupters*
- *Motor Operated Switches*
- *OH Conductors*
- *OH Transformers*
- *Primary Meters*
- *Switch Gear Fuses*
- *Sectionalizers*
- *Services*
- *Switches*
- *Terminal Pole Fuses*
- *Under Ground Conductors*
- *Under Ground Transformers*

As part of this process, the location of each feeder circuit point is determined by approximating the geographic midpoint of each circuit. Outages experienced as a result of a named storm will be extracted from system data. The outages will then be grouped by feeder

circuit ID and by outage type, where outage type is either overhead or underground. The number of customers interrupted by an overhead device will then be summed by feeder circuit ID and the number of customers interrupted by an underground device will be summed by feeder circuit ID. A single feeder circuit may have overhead and underground outages, so approximations will be made in those circumstances.

Once this information is collected, the percentage of customers interrupted will be calculated by dividing the sum of customers interrupted per feeder circuit by the total customers served for that feeder circuit. This process is applied as the sum of customers interrupted by all overhead devices on a feeder circuit divided by the number of customers served by the feeder circuit and the sum of customers interrupted by all underground devices on a feeder circuit divided by the number of customers served by the feeder circuit. As a result of this process, DEF will produce graphic representations of performance such as those depicted below for Hurricane Irma:





DEF will also collect available performance information as a part of the storm restoration process via servicemen in the field, such as:

- *Restore time;*
- *Cause code;*
- *Observations and comments;*
- *Failed device name;*
- *Failed device size;*
- *Failed device type;*
- *Failed device phase; and*
- *Failed device location.*

c. Describe the process used by your company to identify and select the actions to promote underground distribution systems.

DEF notes that it does not necessarily promote underground distribution systems in all instances. Rather, DEF's programs are designed to identify areas where an underground distribution system would be effective both from an operational and cost/benefit perspective, and to help customers considering underground projects to receive the information that they need to make a well-thought decision.

In 2007, DEF created a project management organization dedicated to streamlining the engineering and construction of all infrastructure projects including underground conversions.

In 2017, DEF installed 227 circuit miles of new underground cable. Overall, the DEF distribution system consists of 44% primary underground circuit miles (14,140 circuit miles).

d. Provide Overhead/Underground metrics (miles, # of customers, CMI, CI, MAIFIe, CEMI5 and L-Bar for the Calendar Year).

See Attachment V-"Overhead/Underground Metrics"

See Separate Spreadsheet with data listed (a) through (j).

(k) Overhead equipment of performance analysis by type per system. (wood pole vs. concrete pole, etc.) will not be available:

COORDINATION WITH LOCAL GOVERNMENTS (*Initiative 8*)

Update on Duke Energy Florida's (DEF) local government storm preparation, storm hardening, and storm response coordination activities:

This part of DEF's storm planning and response program addresses increased coordination with local governments to enhance DEF's ability to prepare for and respond to storms and other severe weather events. DEF's goal is to provide excellent customer service through a collaborative partnership with local governments before, during, and after emergencies through year-round dialogue and planning, strong relationships, the provision of resources, and communication and feedback mechanisms.

Specifically, DEF focuses on the following in implementing DEF's storm planning and response program in conjunction with local governments:

- *Identify opportunities throughout the year to improve preparedness on both the part of the utility and the public taking advantage of government's local knowledge and existing organization.*
- *Develop enhanced organization and planning to improve readiness.*
- *Educate the public on proper storm preparation and restoration actions.*
- *Provide local governments with the support needed to facilitate the coordination of outage restoration in a safe and efficient manner.*
- *Provide local governments with ongoing information and updates in advance of, during and after storm events to assist them with their local storm preparation and restoration efforts including informing the public.*

DEF's storm planning and response program is operational twelve months out of the year and response activities can be implemented at any time. In order to meet the requirements of FPSC Order No. PSC-06-0351-PAA-EI, DEF has established an internal team focused on local governmental coordination activities. These activities include dedicated resources, training, continuous coordination with government, storm preparation and restoration, and an Emergency Operation Center (EOC) program. DEF provides local governments with resource and restoration information before, during and after storm events to assist with their local emergency response. Currently, there are approximately eighty resources assigned to coordination with local government as part of an emergency planning and response program. Also, approximately seventy employees are assigned full-time, year-round, to coordinate with local government on issues such as emergency planning, vegetation management, undergrounding and service related issues and governmental coordination.
In addition to DEF's resources in Florida, DEF also has access to resources throughout the Duke Energy multi-state organization, which provide important extra resources. All of Duke Energy's jurisdictions are prepared to provide assistance.

Emergency Planning and Storm Coordination *– DEF's team works with counties and municipalities year round and during major storm events. Prior to storm season, DEF holds meetings with communities to discuss emergency planning preparations and coordination, participates in county drills and training exercises, and holds community education workshops and events.*

Annually, DEF conducts an internal system-wide storm drill in which all members of the team participate. This supports initiatives to coordinate with local government including emergency management organizations throughout the year. Storm preparedness training prior to storm season simulates the response to a real storm including pre-storm preparations activities during a major storm event and post-storm response. Staffing scenarios are created to simulate different storm impacts and staffing assignments to support each impact scenario. During this exercise, the county EOCs are engaged as part of the simulation. Additionally, the DEF State EOC Representatives team works with the state agencies to coordinate DEF's participation in the annual state storm drill.

DEF has enhanced the capability to produce detailed electronic outage information which is provided to county EOCs specifically for that county. The information is available in multiple formats, including formats that may be imported into county GIS systems. The information includes detailed outage data per each square mile within the county and is produced periodically during each day of a significant mid-level event.

DEF has a dedicated storm web page with an interactive map that is available to the public, including the media and local governments. The interactive map provides access to the latest outage information twenty-four hours a day, seven days a week. These maps provide county-specific estimates for power restoration when available, and the ability to search by address. Also, DEF has developed a system to report outages online via computer or other mobile devices. This online reporting tool gives DEF's customers another way to communicate with DEF, helping ensure any disruptions in service are recognized immediately and that power is restored as quickly and safely as possible.

Vegetation Management *– It has become essential to implement programs designed to improve coordination with communities regarding vegetation management. DEF is responsible for maintaining approximately 46,000 miles of power lines in Florida and proactively manages trees and other vegetation to help ensure safe, reliable service for 1.7 million customers across our 20,000 square-mile service area. Maintaining trees and vegetation along distribution and transmission right of ways help reduce outages on a day to day basis as well as during storm events and enhances safety for customers, the public, and DEF's employees and contractors. DEF manages tree placement under transmission and distribution lines through the "Know Where You Grow" outreach program. DEF maintains a rigorous inspection process that identifies vegetation encroachments and ensures vegetation management activities follow required pruning and clearance specifications. To enhance communication with DEF's communities regarding specific tree trimming projects, DEF meets with municipalities prior to implementation of significant projects in order to inform them of the general areas that are expected to be impacted, note concerns, and answer questions. DEF also conducts communication and outreach to customers along the impacted areas for significant activities to inform them of the project, as well as explain the need for vegetation management. DEF has completed the development of a community vegetation*

management education program, designed to ensure that DEF customers will have received some form of vegetation management education through community outreach, events, website information, advertising and other communication outlets.

In 2017, DEF was designated a "Tree Line USA Utility." This designation is given by the National Arbor Day Foundation, in cooperation with the National Association of State Foresters. It recognizes public and private utilities across the nation that demonstrate practices that protect and enhance community forests while managing the need for reliable electric power. DEF has received the Tree Line USA designation for multiple years. In partnership with the Arbor Day Foundation's Energy-Saving Trees program, in 2017, DEF provided 2,200 trees in 1-gallon pots to customers – for free – to honor Florida Arbor Day. The Arbor Day Foundation's Energy-Saving Trees and Tree Line USA programs demonstrate how trees and utilities can co-exist for the benefit of communities and citizens by highlighting best management practices in public and private utility arboriculture.

***Undergrounding** – The impact of hurricanes in Florida in 2016 and 2017 has renewed local governments' interest in burying converting overhead power lines to underground facilities. In an effort to work with communities to address this continued interest in undergrounding their utilities, DEF is enhancing its programs in this area and has seen a marked increase in interest in the programs. DEF works with communities to inform them of available undergrounding options and to be a part of their planning processes. This assists them in several ways, including better fiscal planning, coordination with other utilities, and improved communications with affected residents. DEF also coordinates with local governments on subaqueous cable projects to DEF's beach and island communities to improve reliability and storm restoration efforts.*

***Other Construction Projects** – In addition to undergrounding conversion projects, there are planned transmission and distribution enhancement projects that are expected to result in improvements to system reliability during storm events. DEF works extensively with local governments and communities to coordinate such projects.*

***Educational Outreach** - DEF continues to expand the live line demonstrations, which include critical information for first responders and emergency management personnel. DEF's team of experts recreate live-voltage scenarios such as downed power lines, trees, animals, and/or ladders on power lines, vehicle wrecks involving power lines, and digging into underground facilities incidents. DEF also provides a safety presentation at the session, as well as sharing DEF's storm coordination and planning efforts in a separate presentation. DEF shares this information with city, county and emergency personnel to assist them in planning and safety instruction. Additionally, these live line demonstrations were conducted in conjunction with select county high school and grade schools. In total, in 2017, DEF held eleven individual sessions, targeted towards first responders and other municipal personnel such as utility and parks/recreation staff.*

DEF continues its educational efforts in communicating with government leaders and customers by creating storm preparedness publications for use by community relations personnel at public events, participating in storm discussions on the radio and in television storm discussion broadcasts and

advertising in newspaper inserts and storm preparedness publications. Additionally, DEF has greatly enhanced storm preparedness communications and information via social media outlets.

EOC Road Clearing Program *- In 2017, DEF further enhanced and enacted the "Make It Safe" road clearing program to provide dedicated resources to assist County EOC road clearing programs within DEF's service territories for the first 24 – 48 hours of storm restoration with road clearing and "make it safe" activities. DEF resources work with county road clearing crews and remove DEF facilities from across roads, allowing the county to safely clear the roads. DEF has dedicated crews for each service territory zone staged at county facilities or DEF operations centers. The benefits of this program include improved response time to county priorities, improve customer satisfaction by reducing customer outage times, reduced exposure to night time storm hazards, and increased DEF crew productivity during daylight hours.*

Hurricane Irma *- Hurricane Irma was a historic hurricane that caused widespread, devastating damage across Florida. In DEF's service territory, more than 12,000 line and field workers replaced approximately 1,800 distribution poles, 140 transmission poles and 1,100 transformers. Duke Energy restored power to 1.3 million customers during the event, with more than 75 percent of its customers restored in just three days and 99 percent within eight days.*

DEF provided around the clock support for the State EOC and County EOC support for all thirty-five (35) of DEF's counties. The EOCs were staffed with DEF EOC representatives during daytime operations and remotely after hours. DEF's EOC representatives, Government and Community Relations Managers and the DEF Operations Centers worked closely with EOCs in areas to enact the Make It Safe Road clearing program in twelve counties with distribution field support to collaborate with county resources to clear the roads of DEF facilities. The Make it Safe process was a lesson learned from prior storms and ongoing collaboration with the counties. While the intent of the process is to provide resources to assist County EOC road clearing programs within DEF service territories for the first 24 – 48 hours of storm restoration, DEF provided Make It Safe resource support to the County EOCs well beyond the 24-48 hour guidelines. DEF also worked in collaboration with the County EOCs to de-energize areas due to flooding. Additionally, DEF created a new internal internet based issues tracking spreadsheet in order to record, track and prioritize EOC requests. As part of DEF's yearly planning process, DEF works with counties to identify and prioritize specific infrastructure within the counties. This prioritization of these critical accounts is factored into DEF's tactical restoration plan. DEF's County and State EOC representatives processed over 4,500 critical issues from the EOCs during the event.

In an effort to keep local governments and the public informed, during the event, DEF used the power of the media. Despite some IT and communication challenges, over 5.7 million outbound customer messages sent over duration of event. Using DEF's social media sites, DEF had 18.9 million views on 126 storm posts. DEF conducted print and broadcast interviews providing preparation, storm status, and restoration updates as well as several national interviews with the Duke Energy Florida State President, who participated in daily round table calls facilitated by Florida Governor Rick Scott. DEF also produced four storm update videos, distributed 13 news releases in both English and Spanish, and also had radio, TV and digital paid advertising in five markets throughout the event.

To assist its communities, customers and neighbors devastated by Hurricane Irma, the Duke Energy

Foundation announced a donation of $1,000,000 to assist organizations and agencies that provide communities with response and recovery activities.

The funds were distributed in the following ways to assist communities through state, regional and local organizations:

•$350,000: Local community agencies in Duke Energy's service territories in Florida through community partnerships.

•$250,000: Volunteer Florida Foundation – Florida Disaster Fund to assist Florida communities with response and recovery activities.

•$250,000: 14 United Way agencies serving Duke Energy communities, including Heart of Florida United Way, United Way Suncoast, United Way of Central Florida, United Way Volusia and Flagler, United Way of Pasco, United Way of Lake and Sumter, United Way of Marion County, United Way of Citrus County, United Way of Big Bend, United Way of North Central Florida, United Way of Hernando County, United Way of Northwest Florida, United Way of Suwannee Valley and United Way of Brevard.

•$150,000: Duke Energy's Energy Neighbor Fund to assist eligible Duke Energy customers in Florida with their home energy bill during times of crisis.

The Duke Energy Foundation also matched employee donations to hurricane relief efforts, resulting in a company match of more than $108,000 for Hurricanes Harvey and Irma for a total donation of $216,000.

Hurricanes Maria and Nate – *While no County EOCs requested EOC support during these events, DEF provided support at the State EOC until the State EOC was deactivated.*

2017 Activities

The following activities are not an exhaustive list, but include examples of the activities associated with DEF's coordination activities with state and local governments for 2017:

- *Emergency Operation Center visits were performed in Alachua, Bay, Citrus, Columbia, Franklin, Gadsden, Gilchrist, Gulf, Hamilton, Hardee, Hernando, Highlands, Jefferson, Lafayette, Lake, Liberty, Leon, Levy, Madison, Marion, Orange, Osceola, Pasco, Pinellas, Polk, Seminole, Sumter, Suwannee, Taylor, Volusia and Wakulla counties. During those visits, DEF participated in EOC exercises to review storm procedures prior to storm season and to discuss the Make It Safe road clearing program. (April – August 2017)*

- *Live Line Demonstrations – From March to July, DEF held eleven individual live line demonstration sessions across its service territory. One additional event was held in November after the end of hurricane season. These events provided a forum for collaboration on emergency response and general safety awareness. Attendees included representatives from sheriff's departments, public works, fire and rescue departments, public schools, emergency*

management, large account customers, and elementary, high school and college students. (March – November 2017)

Duke Energy Florida Storm Drill Exercise – As part of DEF's ongoing effort to ensure that DEF employees can perform their storm roles and processes are validated, DEF prepares a week long storm drill engaging various organizations across within the company, performing a review of existing storm plans and incorporates improvements from lessons learned processes following recent storm events and from identified organizational gaps discovered during structured storm drills and deployments. The purpose of a system level drill is to provide storm personnel an opportunity to evaluate, during a "realistic" storm scenario, their storm response concepts, plans and capabilities in response to a major hurricane. During the system level drill, EOC Representatives prepared mock storm scenarios and coordinated the event with the EOCs throughout the region. (April 2017)

- *Pinellas County Emergency Management meetings -*

  DEF held several meetings with the Pinellas County Emergency Management to discuss the collaborative restoration partnership between the Pinellas County EOC and Duke Energy Florida. DEF's Government and Community Relations Managers and Large Account Managers work throughout the year to validate Duke Energy Florida has critical accounts that serve general public health and safety to DEF's communities, such as hospitals, water and sewer plants, evacuation shelters and EOC's. DEF uses this information to assist with the restoration prioritization. DEF also presented the process for the Make It Safe program including the number of crews, the staging locations and the roads to be cleared. (April- July 2017)

- *Florida Statewide Hurricane Exercise - Representatives throughout the DEF service territory participated in storm preparedness activities throughout this event. (May 2017)*

- *Executive EOC Visits – DEF Executive Leaders, Government and Community Relations Managers, and EOC representatives met with the EOC Directors and staff to discuss storm coordination for 2017 in Pinellas, Pasco, Orange, Seminole and Volusia counties. (May and August 2017)*

- *Annual Orange County Hurricane Exposition – DEF sponsored a booth at this event held by the Orange County Emergency Management to assist residents prepare for storm season. (June 2017)*

2018 Activities

The following activities are currently planned activities associated with DEF's coordination activities with state and local governments for 2018:

State Activities:

- *Florida Division of Emergency Management's Severe Weather Awareness Week (January 22 - 26, 2018)*
- *National Hurricane Conference (March 26-29, 2018)*
- *32nd Annual Governor's Hurricane Conference (May 10 - 18, 2018)*

2018 County/City Activities:

- *DEF representatives will meet with county representatives in each of DEF's counties throughout the service territory during the year as well as participate in pre-storm season planning activities such as mock drills at the County EOCs. These meetings and visits will also include updating the EOCs on DEF emergency response policies and DEF website demonstrations on how to access electronic outage information during storm events. Some examples are provided below.*
    - *DEF conducts ongoing communications with municipalities to provide information about DEF's emergency response planning, respond to inquiries, and to update county contact information for all EOCs.*
    - *DEF executives will meet with many of the county EOC directors and their staff to discuss DEF's storm response planning and enhancement of the coordination between the company and county emergency management.*
- *DEF is planning to continue to expand the number of live line demonstrations across the service territory. These events will take place from January – May and continue after the end of the hurricane season.*
- *DEF will meet with school board superintendents and their staff to discuss storm coordination, restoration prioritization, shelter locations and back-up generation availability.*
- *DEF will participate in many community hurricane and storm expos held by counties or federal or state agencies throughout DEF's service territory to inform the public and encourage appropriate storm preparation by residents and business.*

COLLABORATIVE RESEARCH (*Initiative 9*)

Project Planning Report: For each project identified by the Steering Committee, provide a report that includes the purpose, scope, objectives, research method, data inputs, expected costs and benefits, sources of funding, schedule, and findings to date.

Please see Attachment W - "PURC Report on Collaborative Research for Hurricane Hardening" dated February 2018.

Annual Progress Report: For each project previously identified by the Steering Committee for which ongoing research is being pursued but not completed, provide an annual report, including updates on all aspects of the Project Planning Report.

Please see Attachment W - "PURC Report on Collaborative Research for Hurricane Hardening" dated February 2018.

Project Completion Summary Report: For each concluded project identified by the Steering Committee, provide a report that includes an assessment of the success of the research project, as well as any proposed implementation plan for any results or findings for each utility. Describe the benefits expected or realized as a result of plan implementation on storm hardening for each utility.

Please see Attachment W - "PURC Report on Collaborative Research for Hurricane Hardening" dated February 2018.

Annual Report of the Collaborative Research Effort: Provide a report to include an overall assessment of the collaborative research program to date, as described in the Memorandum of Understanding (MOU) dated January 1, 2010, including its operational and financial viability and future planning of the organization. Identify any extension of the MOU contemplated or finalized by the Steering Committee.

Please see Attachment W - "PURC Report on Collaborative Research for Hurricane Hardening" dated February 2018.

Describe the projects promoted, costs incurred, and benefits achieved. A single joint filing can address all collaborative research. Utilities should also discuss any additional independent activities in which it is engaged, such as EPRI, private research, or through universities.

Please see Attachment W - "PURC Report on Collaborative Research for Hurricane Hardening dated February 2018. In addition to DEF's involvement with PURC, DEF is actively engaged as both participant and presenter in a variety of technical and professional organizations where hardening alternatives are reviewed and assessed. Examples include the Southeastern Electric Exchange (SEE), Edison Electric Institute (EEI), Institute of Electrical and Electronics Engineers (IEEE), Chartwell Hardening Teleconference, and Davies Consulting Asset Management Conference. DEF Standards engineers also assess new products on a continuous basis.

DISASTER PREPAREDNESS AND RECOVERY PLAN (*Initiative 10*)

Submit formal disaster preparedness plan annually by March 1st. Include disaster recovery training completed, pre-storm preparation and staging activities, post storm recovery plans, lessons learned, and plan modifications or changes.

Duke Energy has an established storm recovery plan that is reviewed and updated annually based on lessons learned from the previous storm season and organizational needs.

For Distribution - See Attachment X – "Distribution System Storm Operational Plan (DSSOP).

For Transmission – See Attachment Y – "Transmission Storm Plan".

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VI. Other Storm Hardening Initiatives (OH/UG)

a. For each of the other ongoing storm hardening initiatives provide a detailed discussion describing the activity and costs incurred for 2017 and projected for 2018.

Please see DEF's Storm Hardening Plan – Attachment J. Also, please see response on pages 38-41.

b. Overhead/Underground

i. Describe the process used by your company to identify the scope of storm hardening projects.

ii. Provide any quantified expected benefits.

iii. If benefit quantification is not practical or possible at this time, explain when or how the cost-effectiveness of the activity is assessed.

Please see DEF's Storm Hardening Plan – Attachment J. Also, please see response on pages 38-41.

INDEX for Reliability Report

Eight-Year Wood Pole Inspection Programs

Ten Initiatives

INDEX for Reliability Report

Reliability Performance

INDEX for Reliability Report

ATTACHMENT A

DEF Transmission Outages-2017 Major Events Excluded

For Reporting Year 2017

OUTAGE_ID	LOCATION	OUTAGE_START_TIME	INITIATINGCAUSE	SUSTAINEDCAUSE	RETAIL_CMI	GRID_CMI
61253	WEWAHOOTEE 69KV (0150)	2/15/2017 15:19	SUB - EQUIPMENT - DISCONNECT	SUB - EQUIPMENT - DISCONNECT		554
61376	OCCIDENTAL #1 115KV (0177)	4/4/2017 23:08	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63463	OCCIDENTAL #1 115KV (0177)	8/6/2017 18:10	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61083	OCCIDENTAL #1 115KV (0177)	3/13/2017 15:45	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61131	FORT GREEN #10 69KV (0463)	3/18/2017 16:01	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61705	PASADENA 230KV (0135)	4/28/2017 7:25	RELAY - HUMAN ERROR - INADVERTENT TRIP	- -		0
61795	DESOTO CITY - LAKE PLACID NORTH 69KV (DLP-1)	5/1/2017 19:35	LINE - WEATHER -	- -		0
61810	AVON PARK PL - WAUCHULA 69KV (APW-1)	5/2/2017 14:57	LINE - LIGHTNING -	- -		0
63425	INVERNESS 115KV (0028)	7/2/2017 6:20	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER	121278	121278
63476	WEKIVA 230KV (0269)	7/23/2017 2:41	RELAY - EQUIPMENT -	- -	36790	36790
63477	OCOEE 69KV (0169)	7/14/2017 19:53	LINE - CUSTOMER -	- -		0
60467	FORT GREEN #4 69KV (0335)	1/4/2017 23:37	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60471	PEACOCK 69KV (0461)	1/6/2017 2:17	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60490	MAXIMO - BAYWAY 115KV RADIAL (MT-1)	1/8/2017 11:47	LINE - ANIMAL - BIRD - CLEARANCE	- -		0
60478	SUWANNEE RIVER - LIVE OAK (FP&L) 115KV (SF-1)	1/6/2017 20:56	LINE - NEIGHBORING UTILITY - OTHER	LINE - NEIGHBORING UTILITY - OTHER		0
60558	OCCIDENTAL #1 115KV (0177)	1/14/2017 8:32	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

60559	FT WHITE - PERRY 69KV (FP-1)	1/14/2017 17:03	LINE - PUBLIC INTERFERENCE - OTHER	LINE - PUBLIC INTERFERENCE - OTHER	5736	37110.9
60879	JASPER - OCC SWIFT CREEK #1 115KV (JS-1)	2/15/2017 13:33	LINE - OPERATIONAL - EMERGENCY	LINE - EQUIPMENT - INSULATOR		0
61084	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	3/13/2017 16:55	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63570	UCF - WINTER PARK EAST 69KV (WF-1)	8/12/2017 16:17	LINE - LIGHTNING -	- -		0
64653	FORT GREEN #10 69KV (0463)	9/28/2017 8:30	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64712	BROOKRIDGE - BROOKSVILLE WEST (BBW CKT #2) 115KV (BBW-2)	10/3/2017 17:02	LINE - EQUIPMENT - CONDUCTOR/STATIC	SUB - EQUIPMENT - BREAKER/TRANS - MECHANICAL		0
64717	AVON PARK PL - WAUCHULA 69KV (APW-1)	10/3/2017 20:06	LINE - EQUIPMENT - GROUND/GUY	- -		0
60443	JACKSON BLUFF-LIBERTY 69KV (JBL-1)	1/3/2017 1:46	LINE - WEATHER -	- -		0
60480	DUNNELLON TOWN - INGLIS 69KV (IO-3)	1/7/2017 1:45	LINE - WEATHER -	- -		0
60485	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	1/7/2017 15:40	LINE - WEATHER -	SUB - EQUIPMENT - BREAKER/TRANS - OTHER	0	3247
60535	FORT GREEN #4 69KV (0335)	1/11/2017 17:39	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60568	TAFT INDUSTRIAL 69KV (0350)	1/16/2017 19:34	RELAY - HUMAN ERROR - SETTING ERROR	RELAY - HUMAN ERROR - SETTING ERROR		170
60588	OCCIDENTAL #1 115KV (0177)	1/21/2017 18:30	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61840	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	5/4/2017 17:10	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62360	OCCIDENTAL #1 115KV (0177)	6/7/2017 8:37	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62403	DENHAM - ODESSA 69KV (TZ-6)	6/11/2017 16:26	LINE - ANIMAL - BIRD - CLEARANCE	LINE - ANIMAL - BIRD - CLEARANCE		0

63807	FT MEADE - SOUTH POLK 230KV (AF-2)	8/29/2017 22:18	LINE - EQUIPMENT - POLE FAILURE - PREVENTABLE	LINE - EQUIPMENT - POLE FAILURE - PREVENTABLE	0	6
63824	ATWATER - LIBERTY 115KV (ATL-1)	8/31/2017 11:49	LINE - LIGHTNING -	- -		0
63825	UNIVERSITY OF FLORIDA 69KV (0091)	8/31/2017 14:09	SUB - EQUIPMENT - TRANSFORMER - OTHER	SUB - EQUIPMENT - TRANSFORMER - OTHER		0
63829	DUNNELLON TOWN - HOLDER 69KV (HDU-1)	8/31/2017 15:41	LINE - WEATHER -	- -		0
63832	BROOKSVILLE - FLORIDA ROCK 69KV RADIAL (BFR-1)	8/31/2017 16:27	LINE - LIGHTNING -	- -		0
63886	BUSHNELL EAST - SUMTERVILLE 69KV (BCF-5)	9/4/2017 16:23	LINE - LIGHTNING -	- -		0
63911	CENTRAL FLA - COLEMAN 69KV (BCF-2)	9/6/2017 9:57	LINE - LIGHTNING -	- -		0
63912	HAINES CREEK - LEESBURG EAST 69KV (LE-2)	9/6/2017 10:19	LINE - LIGHTNING -	- -		0
63913	WAUCHULA 69KV (0130)	9/6/2017 10:31	LINE - EQUIPMENT - SWITCH	- -		0
63935	ODESSA - TARPON SPRINGS 69KV (TZ-2)	9/8/2017 18:02	LINE - WEATHER -	- -		0
63954	OCALA AIRPORT 69KV (7988)	9/10/2017 11:36	LINE - TREE - NON-PREVENTABLE	- -		0
60670	FT GREEN SPRINGS - VANDOLAH #2 CKT 69KV (VFGS-1)	1/29/2017 14:30	SUB - EQUIPMENT - LIGHTNING ARRESTER	- -		0
60752	FORT GREEN #4 69KV (0335)	2/1/2017 15:39	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60835	LAKE WALES 69KV (0318)	2/10/2017 8:39	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - ELECTRICAL	35855	35855
62161	CENTRAL PARK - PARKWAY 69KV (WR-1)	5/24/2017 15:42	LINE - LIGHTNING -	- -		0
62352	MANLEY ROAD 115KV (0004)	6/6/2017 15:53	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

62433	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	6/13/2017 16:04	LINE - LIGHTNING -	- -	0
63971	HIGGINS PL - GRIFFIN 115KV (HG-1)	9/10/2017 19:53	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE	0
64759	FORT GREEN #11 69KV (0472)	10/7/2017 7:45	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
60687	WINTER SPRINGS 230KV (0252)	1/8/2017 5:15	LINE - CUSTOMER - DISTRIBUTION	LINE - CUSTOMER - DISTRIBUTION	0
62986	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	7/12/2017 6:51	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63996	LAKE BRYAN - LAKE CECILE (CITY OF KISSIMMEE) 69KV (LBX-1)	9/10/2017 21:09	LINE - WEATHER - MAJOR STORM - HURRICANE	- -	0
60900	EATONVILLE - WOODSMERE 69KV (WO-4)	2/20/2017 5:18	LINE - EQUIPMENT - CROSSARM	LINE - EQUIPMENT - CROSSARM	0
61092	GATEWAY - 32ND ST 115KV (HD-6)	3/14/2017 3:41	LINE - WEATHER -	- -	0
61086	OCCIDENTAL #1 115KV (0177)	3/13/2017 17:30	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
61249	JASPER - OCC SWIFT CREEK #1 115KV (JS-1)	2/15/2017 11:30	LINE - EQUIPMENT - INSULATOR	RELAY - HUMAN ERROR - SETTING ERROR	0
61268	MANLEY ROAD 115KV (0004)	3/29/2017 6:03	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
61279	FORT GREEN #6 69KV (0437)	3/29/2017 18:05	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
61316	OCOEE - WINTER GARDEN 69KV (WCE-2)	4/2/2017 8:20	RELAY - EQUIPMENT - OTHER	RELAY - EQUIPMENT - OTHER	0
61349	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	4/3/2017 21:31	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
61352	CRAWFORDVILLE - SUB #32 (CITY OF TALLAH) 230KV (CRAW-1)	4/4/2017 2:10	SUB - EQUIPMENT - INSULATOR	SUB - EQUIPMENT - INSULATOR	0
61411	FT WHITE - PERRY 69KV (FP-1)	4/6/2017 1:18	LINE - LIGHTNING -	- -	0
61413	HOLDER - INVERNESS 69KV (HB-3)	4/6/2017 4:04	LINE - WEATHER -	- -	0

61420	BARCOLA - FT MEADE 69KV (BF-1)	4/6/2017 6:39	LINE - LIGHTNING -	LINE - LIGHTNING -		0
62180	BONNET CREEK 69KV (0244)	5/1/2017 8:16	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - OTHER	12594	12594
62911	BARCOLA - WEST SUB (CITY OF LAKELAND) 230KV (BLX)	7/9/2017 17:04	LINE - LIGHTNING -	- -		0
64844	SAND LAKE 69KV (0124)	8/29/2017 22:18	LINE - EQUIPMENT - POLE FAILURE - PREVENTABLE	LINE - EQUIPMENT - POLE FAILURE - PREVENTABLE	163686	163686
64889	BAY HILL 69KV (0208)	9/5/2017 5:55	SUB - UNKNOWN -	- -		0
64990	HIGHLANDS 69KV (0214)	9/22/2017 18:46	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	327001	327001
65073	DISSTON 115KV (0015)	10/24/2017 10:29	SUB - CUSTOMER - DISTRIBUTION	SUB - CUSTOMER - DISTRIBUTION		0
60755	BARNUM CITY - CITRUS CITY 69KV (ICB-3)	2/1/2017 17:57	LINE - UNKNOWN -	- -		0
60779	ALTAMONTE - NORTH LONGWOOD CKT2 69KV (NLA-1)	2/6/2017 14:17	LINE - UNKNOWN - INVESTIGATION COMPLETE	LINE - UNKNOWN - INVESTIGATION COMPLETE		0
60803	BARCOLA - WEST SUB (CITY OF LAKELAND) 230KV (BLX)	2/8/2017 2:25	LINE - ANIMAL - BIRD - CLEARANCE	LINE - ANIMAL - BIRD - CLEARANCE		0
60810	NORTH BARTOW - SOUTH ELOISE (TECO) 230KV (WLXT-2)	2/8/2017 8:39	LINE - OPERATIONAL - EMERGENCY	LINE - OPERATIONAL - EMERGENCY		0
60838	HAINES CREEK - SORRENTO 230KV (CFS-2)	2/10/2017 16:58	LINE - UNKNOWN -	- -		0
60839	MULBERRY - MULBERRY COGEN CKT#1A 69KV (BH-3)	2/11/2017 12:01	LINE - CUSTOMER - GENERATION	- -		0
60891	AVON PARK PL - WAUCHULA 69KV (APW-1)	2/18/2017 16:21	LINE - OPERATIONAL - EMERGENCY	- -		0
60930	OCCIDENTAL #1 115KV (0177)	2/25/2017 10:26	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61134	MONTVERDE - WINTER GARDEN 69KV (WCE-1)	3/19/2017 8:49	LINE - UNKNOWN -	- -		0
61202	APOPKA SOUTH 69KV (0216)	3/22/2017 20:39	SUB - UNKNOWN -	- -		0

61203	PIEDMONT - PLYMOUTH 69KV (PP-1)	3/22/2017 20:39	LINE - UNKNOWN -	SUB - EQUIPMENT - BREAKER/DIST - OTHER		0
62996	BROOKRIDGE - TWIN COUNTY RANCH 115KV - CLEARWATER (CRB-1)	7/12/2017 16:32	LINE - LIGHTNING -	- -		0
64284	LAKE BRYAN 230KV (0206)	9/11/2017 1:28	SUB - WEATHER - MAJOR STORM - HURRICANE	- -		0
64317	WILLISTON 69KV (0096)	9/14/2017 0:02	LINE - WEATHER -	- -		0
64318	FORT GREEN #4 69KV (0335)	9/14/2017 2:23	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64319	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	9/14/2017 2:58	LINE - CUSTOMER - INDUSTRIAL	SUB - EQUIPMENT - CT		0
64333	FORT GREEN #6 69KV (0437)	9/14/2017 12:40	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64338	BAY RIDGE 69KV (0351)	7/28/2017 16:00	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	35250	35250
64362	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	9/16/2017 7:52	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64363	OCCIDENTAL #1 115KV (0177)	9/16/2017 12:49	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64408	VANDOLAH - WAUCHULA 69KV (VW-1)	9/20/2017 10:16	LINE - HUMAN ERROR - SWITCHING ERROR - TRANS	- -		0
64410	FLORA MAR - SEVEN SPGS 115KV (SFM-1)	9/20/2017 13:54	LINE - EQUIPMENT - ARRESTER	LINE - EQUIPMENT - ARRESTER		0
61458	LAKE BRYAN - WINDERMERE 230KV (WIC-2)	4/7/2017 12:53	LINE - UNKNOWN -	- -		0
61489	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	4/10/2017 15:18	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61532	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	4/13/2017 22:11	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61559	MARTIN WEST - SILVER SPRINGS 69KV (MS-1)	4/17/2017 16:55	LINE - EQUIPMENT - CONDUCTOR/STATIC	RELAY - MISOPERATION -		0

61560	MARTIN WEST - MARTIN 69KV RADIAL (MM-1)	4/17/2017 16:55	LINE - EQUIPMENT - CONDUCTOR/STATIC	RELAY - MISOPERATION -		0
63273	FORT GREEN #10 69KV (0463)	7/24/2017 16:00	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63415	MAXIMO 115KV (0029)	6/11/2017 18:54	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	106449	106449
63516	WEKIVA 230KV (0269)	8/5/2017 7:07	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - TRIP COIL	24219	24219
63548	ZEPHYRHILLS NORTH - DADE CITY (TECO) 69KV (BZ-6)	8/11/2017 16:53	LINE - UNKNOWN - INVESTIGATION COMPLETE	LINE - NEIGHBORING UTILITY - EQUIPMENT	0	5446.8
64764	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	10/7/2017 12:05	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64777	LAKE BRANCH 115KV (0475)	10/8/2017 5:10	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64818	BROOKER CREEK - TARPON SPRINGS 115KV (HTE-1)	10/9/2017 13:50	RELAY - HUMAN ERROR - SETTING ERROR	SUB - OPERATIONAL - EMERGENCY		0
64859	CARRABELLE - CRAWFORDVILLE 69KV (JA-2)	10/13/2017 9:48	LINE - PUBLIC INTERFERENCE - VEHICLE	LINE - PUBLIC INTERFERENCE - VEHICLE		0
64863	IDYLWILD - PHIFER CEC 69KV RADIAL (IR-1)	10/14/2017 12:18	LINE - CUSTOMER - REA/EMC	LINE - CUSTOMER - REA/EMC		0
64870	HOLOPAW - OSCEOLA PL (RELIANT ENERGY) 230KV HREX1 (HREX-1)	10/15/2017 7:12	LINE - LIGHTNING -	SUB - EQUIPMENT - LIGHTNING ARRESTER	6120	6120
64900	PASADENA - SEMINOLE 230KV (LSP-1)	10/18/2017 13:00	SUB - OPERATIONAL - EMERGENCY	SUB - OPERATIONAL - EMERGENCY		0
64907	EUSTIS 69KV (0313)	10/7/2017 7:25	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	96528	96528
61220	NORTH BARTOW - SOUTH ELOISE (TECO) 230KV (WLXT-2)	3/27/2017 0:18	LINE - NEIGHBORING UTILITY - EQUIPMENT	- -		0
61226	OCCIDENTAL #1 115KV (0177)	3/27/2017 9:12	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

61244	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	3/28/2017 9:01	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61291	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	3/30/2017 22:55	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61292	CONWAY - PINECASTLE 69KV (WR-4)	3/30/2017 23:51	LINE - PUBLIC INTERFERENCE - VEHICLE	SUB - EQUIPMENT - BREAKER	160095	160095
61348	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	4/3/2017 21:01	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61353	CRAWFORDVILLE - ST MARKS EAST 230KV (CP-1)	4/4/2017 2:10	RELAY - EQUIPMENT - CARRIER	- -		0
61476	PEACOCK 69KV (0461)	4/10/2017 2:06	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61528	MANLEY ROAD 115KV (0004)	4/13/2017 16:14	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64430	BAY HILL 69KV (0208)	9/21/2017 22:44	SUB - EQUIPMENT - BREAKER/TRANS - OTHER	- -		0
61673	DUNDEE 230KV (0083)	4/23/2017 6:54	SUB - ANIMAL - SQUIRREL	SUB - EQUIPMENT - INSULATOR		0
61701	ALTAMONTE - SANFORD (FP&L) 230KV (DA-1)	4/27/2017 6:57	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -		0
61819	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	5/3/2017 8:09	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61961	EUSTIS SOUTH 69KV (0167)	2/1/2017 20:43	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - ELECTRICAL	49445	49445
61991	TAVARES EAST 69KV (0220)	5/13/2017 9:32	SUB - ANIMAL - SQUIRREL	SUB - ANIMAL - SQUIRREL	150111	150111
63513	ORANGE SWITCHING STA - SOUTH BARTOW 69KV RADIAL (FMB-5)	8/9/2017 11:20	LINE - EQUIPMENT - CROSSARM	LINE - EQUIPMENT - CROSSARM	804	929
64770	OCCIDENTAL #1 115KV (0177)	10/7/2017 18:09	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64763	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	10/7/2017 9:59	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

64773	DELAND WEST - SILVER SPRINGS 230KV (SDW-1)	10/7/2017 19:45	LINE - WEATHER -	- -		0
64807	APOPKA SOUTH 69KV (0216)	9/29/2017 7:30	LINE - TREE - NON-PREVENTABLE	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	123656	123656
64819	HIGGINS PL - BROOKER CREEK 115KV (HTE-2)	10/9/2017 14:17	LINE - OPERATIONAL - EMERGENCY	LINE - OPERATIONAL - EMERGENCY		0
64837	BARTOW PL - NORTHEAST UG3 230KV (UGBN-3)	10/11/2017 6:18	RELAY - EQUIPMENT - RELAY PROBLEM	RELAY - EQUIPMENT - RELAY PROBLEM		0
64838	NORTHEAST - PILSBURY 115KV (NP-1)	10/11/2017 6:18	RELAY - HUMAN ERROR - SETTING ERROR	- -		0
64864	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	10/14/2017 18:11	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64919	FORT GREEN #6 69KV (0437)	10/21/2017 14:49	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61658	MULBERRY 69KV (0424)	4/24/2017 15:09	SUB - HUMAN ERROR - CONTRACTOR - MAINTENANCE	SUB - HUMAN ERROR - CONTRACTOR - MAINTENANCE		0
61676	FOLEY 69KV (0247)	4/25/2017 17:34	LINE - NEIGHBORING UTILITY - EQUIPMENT	LINE - NEIGHBORING UTILITY - EQUIPMENT		0
61829	CRYSTAL RIVER PL - CENTRAL FLA 500KV (CRCF-1)	5/3/2017 21:01	SUB - EQUIPMENT - BREAKER/TRANS - OTHER	SUB - EQUIPMENT - BREAKER/TRANS - OTHER		0
61971	DRIFTON - HANSON 115KV (JQ-4)	5/12/2017 22:52	LINE - WEATHER -	- -		0
62108	GATEWAY 115KV (0382)	4/6/2017 5:30	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	210710	210710
62256	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	5/30/2017 21:11	SUB - LIGHTNING -	SUB - EQUIPMENT - BREAKER	0	92880
62257	CENTRAL FLA - CLERMONT EAST - METROWEST (OUC) 230KV - HAINES CITY (CFW-4)	5/30/2017 21:30	LINE - LIGHTNING -	- -		0
62258	OCCIDENTAL #1 115KV (0177)	5/30/2017 22:10	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62267	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	5/31/2017 11:08	LINE - CUSTOMER - INDUSTRIAL	- -		0

62069	REDDICK - WILLISTON 69KV (SI-5)	5/19/2017 18:42	LINE - WEATHER -	LINE - EQUIPMENT - SWITCH	253570	509530
62114	BARBERVILLE - DELAND WEST 69KV (DWB-1)	5/22/2017 18:40	LINE - LIGHTNING -	- -		0
62137	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	5/23/2017 19:59	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62162	OVIEDO - WINTER SPRINGS 69KV (WO-7)	5/24/2017 16:04	LINE - LIGHTNING -	- -		0
62170	INGLIS MINING 115KV (0395)	5/25/2017 6:55	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62304	SUWANNEE RIVER - LIVE OAK (FP&L) 115KV (SF-1)	6/3/2017 19:21	LINE - WEATHER -	- -		0
62310	FT WHITE - JASPER 69KV (JF-1)	6/4/2017 17:05	LINE - LIGHTNING -	- -		0
62319	TURNER PLANT 115KV (0501)	6/4/2017 21:41	SUB - ANIMAL - SNAKE	SUB - UNKNOWN - UNDER INVESTIGATION	347203	347203
62327	PEACOCK 69KV (0461)	6/5/2017 11:26	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60929	INGLIS MINING 115KV (0395)	2/24/2017 15:05	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62283	FT MEADE - HOMELAND 69KV (FMB-1)	6/1/2017 18:42	LINE - ANIMAL - BIRD - CLEARANCE	- -	0	134
62286	MANLEY ROAD 115KV (0004)	6/2/2017 5:01	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62296	OCCIDENTAL #1 115KV (0177)	6/2/2017 13:37	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62333	ORANGEWOOD 69KV (0239)	6/3/2017 7:01	SUB - ANIMAL - SQUIRREL	- -	3184	3184
62346	BROOKRIDGE - BROOKSVILLE WEST (BBW CKT) 115KV (BBW-1)	6/6/2017 11:50	LINE - LIGHTNING -	- -		0
62349	OCCIDENTAL #1 115KV (0177)	6/6/2017 13:55	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62382	HORSE CREEK - HORSE CREEK #2 69KV RADIAL (FSD-2)	6/9/2017 0:35	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

62395	LAKE LOUISA SEC - CLERMONT EAST 69KV - HAINES CITY (CEB-3)	6/10/2017 14:51	LINE - LIGHTNING -	- -		0
62397	BROOKSVILLE - BUSHNELL EAST 69KV (BCF-BW-1)	6/11/2017 6:46	LINE - ANIMAL - BIRD - CLEARANCE	- -		0
62442	FT WHITE - JASPER EAST CKT 115KV (IJ-1)	6/13/2017 18:39	LINE - WEATHER -	- -		0
62445	NEW RIVER - HANDCART (TECO) 69KV (TZ-4)	6/14/2017 6:40	LINE - WEATHER -	- -		0
62447	DRIFTON-PERRY CIRCUIT #2 (DP-2)	1/22/2017 15:36	RELAY - HUMAN ERROR - SETTING ERROR	RELAY - HUMAN ERROR - SETTING ERROR	0	1315.5
62457	VANDOLAH - MYAKKA PREC 69KV RADIAL (VHC-1)	6/14/2017 14:34	LINE - LIGHTNING -	- -		0
62460	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	6/14/2017 15:14	LINE - LIGHTNING -	- -		0
62478	WAUCHULA 69KV (0130)	6/1/2017 7:30	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - PREVENTABLE	174444	174444
62347	CARRABELLE - CRAWFORDVILLE 69KV (JA-2)	6/6/2017 12:31	LINE - LIGHTNING -	- -		0
62348	BELLEAIR - CLEARWATER 69KV (LECW-1)	6/6/2017 13:03	SUB - EQUIPMENT - BREAKER/TRANS - ELECTRICAL	SUB - EQUIPMENT - BREAKER/TRANS - ELECTRICAL		0
62351	FT MEADE - VANDOLAH 230KV (FV-1)	6/6/2017 15:39	LINE - ANIMAL - BIRD - CLEARANCE	LINE - ANIMAL - BIRD - CLEARANCE		0
62357	MULBERRY - NORTHWEST (CITY OF BARTOW) 69KV (MSW-NWSW-1)	6/6/2017 21:04	LINE - ANIMAL - BIRD - CLEARANCE	- -		0
62362	CAMP LAKE - HOWEY BKR STA (SEC)69KV (CLL-1)	6/7/2017 10:16	LINE - LIGHTNING -	- -		0
62372	DESOTO CITY - LAKE PLACID NORTH 69KV (DLP-1)	6/8/2017 1:51	LINE - ANIMAL - BIRD - CLEARANCE	- -		0
62373	DESOTO CITY - LAKE PLACID NORTH 69KV (DLP-1)	6/8/2017 3:09	LINE - ANIMAL - BIRD - CLEARANCE	LINE - ANIMAL - BIRD - CLEARANCE	155220	277044.6
62374	DESOTO CITY - LAKE PLACID NORTH 69KV (DLP-1)	6/8/2017 3:09	LINE - ANIMAL - BIRD - CLEARANCE	- -		0

62379	BARCOLA - WEST SUB (CITY OF LAKELAND) 230KV (BLX)	6/8/2017 13:58	LINE - ANIMAL - BIRD - CLEARANCE	- -		0
62392	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	6/9/2017 16:08	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62398	MANLEY ROAD 115KV (0004)	6/11/2017 15:28	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62402	FORT GREEN #4 69KV (0335)	6/11/2017 15:55	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62416	SUN N LAKES 69KV (0268)	6/12/2017 17:32	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - PROTECTION/CONTROL	6253	6253
62419	COUNTRY OAKS - DUNDEE 69KV (DCO-1)	6/13/2017 13:33	LINE - LIGHTNING -	- -		0
62479	OLD TOWN NORTH SW STA - WILCOX 69KV (376159701)	6/15/2017 14:40	LINE - LIGHTNING -	- -		0
62485	NORTH BARTOW - PEBBLEDALE (TECO) 230KV (WLXT-1)	6/15/2017 15:57	LINE - WEATHER -	- -		0
62523	FT MEADE - HOMELAND 69KV (FMB-1)	6/16/2017 15:36	LINE - WEATHER -	- -		0
62526	JACKSON BLUFF-TALLAHASSEE 69KV (JBT-1)	6/17/2017 11:42	LINE - LIGHTNING -	- -		0
62556	OKAHUMPKA 69KV (0278)	6/6/2017 13:01	LINE - EQUIPMENT - SWITCH	LINE - EQUIPMENT - SWITCH	8378	8378
61039	OCCIDENTAL #1 115KV (0177)	3/5/2017 17:58	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61074	OCCIDENTAL #1 115KV (0177)	3/10/2017 18:58	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61465	KATHLEEN - ZEPHYRHILLS NORTH 230KV (KZN-1)	4/8/2017 10:31	SUB - EQUIPMENT - LIGHTNING ARRESTER	SUB - EQUIPMENT - LIGHTNING ARRESTER		0
62518	LAKE BRANCH 115KV (0475)	6/16/2017 13:40	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62528	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	6/17/2017 18:51	LINE - LIGHTNING -	- -		0
62545	FORT GREEN #11 69KV (0472)	6/18/2017 15:25	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

62560	NEW PORT RICHEY 115KV (0070)	6/19/2017 11:39	SUB - ANIMAL - SQUIRREL	SUB - EQUIPMENT - SWITCH	0	30229.6
62607	NEWBERRY - TRENTON 69KV (NT-1)	6/21/2017 12:53	LINE - OPERATIONAL - EMERGENCY	LINE - TREE - NON-PREVENTABLE		0
62611	CROOKED LAKE 69KV (0215)	6/18/2017 10:12	SUB - ANIMAL - SQUIRREL	SUB - ANIMAL - SQUIRREL	103194	103194
62613	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	6/21/2017 17:30	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62615	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	6/21/2017 18:24	LINE - WEATHER -	- -		0
60455	BAYBORO - 16TH ST 115KV (BFE-1)	1/4/2017 0:57	SUB - ANIMAL - BIRD - EXCREMENT	SUB - EQUIPMENT - BUSHING - CONTAMINATION	36663	36663
60456	16TH ST - 40TH ST 115KV (BFE-2)	1/4/2017 0:57	SUB - ANIMAL - BIRD - EXCREMENT	SUB - EQUIPMENT - BUSHING - CONTAMINATION	0	0
60647	DRIFTON - WAUKEENAH 115KV RADIAL (DWH-WHX-1)	1/24/2017 19:16	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -		0
60748	APOPKA SOUTH 69KV (0216)	1/9/2017 16:01	LINE - EQUIPMENT - CONDUCTOR/STATIC	LINE - EQUIPMENT - CONDUCTOR/STATIC	109916	109916
60768	FORT GREEN #6 69KV (0437)	2/4/2017 7:26	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60775	LARGO 230KV (0123)	2/6/2017 8:06	LINE - EQUIPMENT - GROUND/GUY	- -		0
60824	OCCIDENTAL #1 115KV (0177)	2/9/2017 9:50	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60829	HIGGINS PL - LAKE TARPON 230KV (LTH-1)	2/9/2017 16:42	LINE - OPERATIONAL - EMERGENCY	LINE - OPERATIONAL - EMERGENCY		0
62616	BUSHNELL EAST - CENTER HILL RADIAL 69KV (BW-1)	6/21/2017 18:43	LINE - WEATHER -	- -		0
62650	DENHAM - DALE MABRY (TECO) 69KV (DX-1)	6/23/2017 16:46	LINE - NEIGHBORING UTILITY - OTHER	LINE - NEIGHBORING UTILITY - OTHER		0
62654	HORSE CREEK 69KV (0006)	6/24/2017 5:04	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62671	CASSADAGA - DELTONA 115KV (DC-1)	6/25/2017 19:20	LINE - WEATHER -	- -		0

62672	FORT GREEN #11 69KV (0472)	6/25/2017 21:12	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62674	VANDOLAH - WAUCHULA 69KV (VW-1)	6/25/2017 21:19	LINE - LIGHTNING -	LINE - LIGHTNING -	1394	1394
62685	FORT GREEN #6 69KV (0437)	6/26/2017 20:52	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62690	CHIEFLAND - INGLIS 69KV (IS-1)	6/27/2017 13:47	LINE - WEATHER -	- -		0
62691	GEORGIA PACIFIC 69KV (0178)	6/27/2017 14:10	LINE - WEATHER -	- -		0
62693	FORT GREEN #6 69KV (0437)	6/27/2017 14:53	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62695	FISHEATING CREEK - SUN N LAKES 69KV (ALP-SUC-1)	6/27/2017 15:57	LINE - LIGHTNING -	- -		0
62710	FORT GREEN #6 69KV (0437)	6/28/2017 13:51	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62725	KELLY PARK 69KV (0384)	6/25/2017 18:33	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	90113	90113
62749	LIBERTY 69KV (0466)	7/1/2017 11:24	LINE - CUSTOMER - INDUSTRIAL	- -		0
62760	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	7/2/2017 7:20	LINE - CUSTOMER - INDUSTRIAL	- -		0
62763	MULBERRY - NORTHWEST (CITY OF BARTOW) 69KV (MSW-NWSW-1)	7/2/2017 18:02	LINE - EQUIPMENT - GROUND/GUY	LINE - EQUIPMENT - GROUND/GUY	0	3
62788	DALLAS AIRPORT - WILDWOOD 69KV (AND-2)	7/4/2017 6:54	LINE - EQUIPMENT - CONDUCTOR/STATIC	- -	0	10428
62819	CITRUS HILLS - INVERNESS 115KV (BI-1)	7/5/2017 20:08	SUB - EQUIPMENT - LIGHTNING ARRESTER	SUB - EQUIPMENT - LIGHTNING ARRESTER		0
62881	BROOKRIDGE - BROOKSVILLE WEST (BBW CKT #2) 115KV (BBW-2)	7/8/2017 11:34	LINE - LIGHTNING -	- -		0
60921	OCCIDENTAL SWIFT CREEK #1 - OCCIDENTAL METERING 115KV (JS-3)	2/23/2017 10:52	LINE - ANIMAL - OTHER	LINE - ANIMAL - OTHER	18279	18360

60935	CROSS CITY - OLD TOWN NORTH SW STA 69KV (TC-2)	2/26/2017 23:09	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -	0	0
60941	CROSSROADS - KENNETH UG 115KV (KXUG)	1/4/2017 0:57	RELAY - MISOPERATION -	- -		0
61009	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	3/2/2017 6:12	LINE - CUSTOMER - INDUSTRIAL	- -		0
61702	FORT GREEN #11 69KV (0472)	4/27/2017 12:40	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61749	MANLEY ROAD 115KV (0004)	4/29/2017 22:34	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62074	OCCIDENTAL #1 115KV (0177)	5/20/2017 22:34	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62075	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	5/21/2017 7:30	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62111	KENNETH 115KV (0174)	5/15/2017 12:34	RELAY - HUMAN ERROR - SETTING ERROR	RELAY - HUMAN ERROR - SETTING ERROR	283069	283069
62135	JASPER - OCC SWIFT CREEK #1 115KV (JS-1)	5/23/2017 19:22	LINE - LIGHTNING -	- -		0
62153	WILLISTON 69KV (0096)	5/24/2017 12:26	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE	223171	223314
62223	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	5/29/2017 4:16	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62633	DENHAM - DALE MABRY (TECO) 69KV (DX-1)	6/22/2017 21:09	LINE - WEATHER -	- -		0
62649	DENHAM - DALE MABRY (TECO) 69KV (DX-1)	6/23/2017 16:21	LINE - NEIGHBORING UTILITY - OTHER	LINE - NEIGHBORING UTILITY - OTHER		0
62651	FOLEY 69KV (0247)	6/23/2017 16:47	LINE - TREE - NON-PREVENTABLE	LINE - TREE - NON-PREVENTABLE		77.7
62670	AVON PARK PL - WAUCHULA 69KV (APW-1)	6/25/2017 18:37	LINE - UNKNOWN - INVESTIGATION COMPLETE	LINE - UNKNOWN - INVESTIGATION COMPLETE	10506	25600.2
62673	VANDOLAH - MYAKKA PREC 69KV RADIAL (VHC-1)	6/25/2017 21:15	LINE - LIGHTNING -	- -		0

62694	AVON PARK PL - DESOTO CITY 69KV (AD-1)	6/27/2017 15:19	LINE - LIGHTNING -	- -		0
62697	HAINES CITY - HAINES CITY EAST 69KV (HP-1)	6/27/2017 18:47	LINE - WEATHER -	- -		0
62699	DUNDEE - LAKE WALES 69KV (ICLW-3)	6/27/2017 20:26	LINE - WEATHER -	- -		0
62707	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	6/28/2017 8:39	LINE - CUSTOMER - INDUSTRIAL	RELAY - EQUIPMENT - OTHER		83
62715	MEADOW WOODS SOUTH - HUNTER CREEK 69KV (MSH-1)	6/28/2017 19:10	LINE - WEATHER -	- -		0
62723	MANLEY ROAD 115KV (0004)	6/29/2017 12:27	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62740	LAKE BRYAN - LAKE CECILE (CITY OF KISSIMMEE) 69KV (LBX-1)	6/30/2017 17:02	LINE - LIGHTNING -	SUB - EQUIPMENT - BREAKER	0	113
62761	CIRCLE SQUARE 69KV (0354)	7/2/2017 16:19	LINE - LIGHTNING -	- -		0
62766	HOMELAND - MULBERRY 69KV (BH-2)	7/3/2017 1:33	LINE - WEATHER -	- -		0
62785	LISBON TEMP 69KV (0027)	6/12/2017 11:25	SUB - EQUIPMENT - BUS - BUS WORK	SUB - EQUIPMENT - BUS - BUS WORK	203533	203533
62791	DAVENPORT - HAINES CITY 69KV (ICLW-6)	7/4/2017 16:16	LINE - LIGHTNING -	- -		0
60950	PAISLEY (SEC) REA 69KV (6809)	2/28/2017 17:24	LINE - EQUIPMENT - CONDUCTOR/STATIC	LINE - EQUIPMENT - CONDUCTOR/STATIC	0	123591
61060	CLEARWATER 69KV (0082)	2/15/2017 15:12	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	60405	60405
61088	NORTHEAST - ULMERTON CKT#2 230KV (NC-3)	3/13/2017 19:29	LINE - EQUIPMENT - INSULATOR	LINE - EQUIPMENT - INSULATOR		0
61093	LISBON TEMP 69KV (0027)	3/5/2017 7:15	SUB - ANIMAL - SQUIRREL	SUB - ANIMAL - SQUIRREL	156252	156252
61152	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	3/20/2017 16:13	LINE - ANIMAL - BIRD - CLEARANCE	LINE - OTHER - POLE FIRE	0	9313.4
61176	FORT GREEN #11 69KV (0472)	3/21/2017 20:40	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61199	FORT GREEN #6 69KV (0437)	3/22/2017 17:09	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

62900	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	7/9/2017 7:57	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62929	CRAWFORDVILLE - PORT ST JOE 230KV (CPS-1)	7/10/2017 13:50	LINE - LIGHTNING -	- -		0
62938	OCCIDENTAL #1 115KV (0177)	7/10/2017 20:54	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62981	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	7/11/2017 18:24	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62995	HORSE CREEK 69KV (0006)	7/12/2017 15:22	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63019	FT MEADE - WEST LAKE WALES 230KV (FWL-1)	7/13/2017 11:22	LINE - LIGHTNING -	- -		0
63031	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	7/13/2017 15:49	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63051	FORT GREEN #6 69KV (0437)	7/14/2017 13:34	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63080	FORT GREEN #6 69KV (0437)	7/16/2017 5:57	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63089	EAST CLEARWATER - ULMERTON 230KV (NC-1)	7/16/2017 22:54	LINE - LIGHTNING -	- -		0
63116	EAST LAKE WALES - INDIAN LAKES ESTATES 69KV RADIAL (ELX-AL-1)	7/18/2017 15:27	LINE - WEATHER -	- -		0
63117	EAST LAKE WALES - INDIAN LAKES ESTATES 69KV RADIAL (ELX-AL-1)	7/18/2017 15:31	LINE - WEATHER -	- -		0
63139	LAKE BRANCH 115KV (0475)	7/19/2017 15:45	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63136	UCF 69KV (0200)	7/17/2017 17:46	LINE - PUBLIC INTERFERENCE - VEHICLE	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	195675	195675
63140	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	7/19/2017 15:47	LINE - LIGHTNING -	- -		0
63173	SUWANNEE RIVER PL - JASPER 115KV (SW-JQ-2)	7/20/2017 16:55	LINE - LIGHTNING -	- -		0
63175	LAKE BRYAN -VINELAND 69KV (LV-1)	7/20/2017 17:29	LINE - WEATHER -	- -		0

63184	BRONSON - CHIEFLAND 69KV (BC)	7/20/2017 21:03	LINE - LIGHTNING -	- -		0
63196	FROSTPROOF - LAKE WALES 69KV (AL-3)	7/21/2017 13:45	LINE - LIGHTNING -	- -		0
63198	HAVANA - TALLAHASSEE 69KV (TQ-HH-1)	7/21/2017 15:30	LINE - LIGHTNING -	- -		0
63207	CENTRAL PLAZA 115KV (0057)	7/22/2017 10:02	RELAY - HUMAN ERROR - OTHER	- -		0
63211	OCOEE - WINTER GARDEN 69KV (WCE-2)	7/22/2017 13:19	LINE - LIGHTNING -	- -		0
62814	PALM HARBOR 230KV (0079)	6/28/2017 21:23	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE	84666	84666
62824	HOLDER - INVERNESS 69KV (HB-3)	7/5/2017 20:11	LINE - OPERATIONAL -	- -		0
62838	CROSS CITY - WILCOX 69KV (WCC-1)	7/6/2017 13:13	LINE - LIGHTNING -	- -		0
62843	AVON PARK NORTH - FROSTPROOF 69KV (AL-1)	7/6/2017 17:39	LINE - LIGHTNING -	- -		0
62861	MANLEY ROAD 115KV (0004)	7/7/2017 21:25	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62859	COUNTRY OAKS - DUNDEE 69KV (DCO-1)	7/7/2017 19:41	LINE - LIGHTNING -	- -		0
62860	COUNTRY OAKS - DUNDEE 69KV (DCO-1)	7/7/2017 20:14	LINE - LIGHTNING -	RELAY - EQUIPMENT - RTU FAILURE		0
62863	VANDOLAH - WAUCHULA 69KV (VW-1)	7/7/2017 22:12	LINE - EQUIPMENT - CONDUCTOR/STATIC	LINE - EQUIPMENT - CONDUCTOR/STATIC	26780	78624
62882	CENTRAL FLA - ORANGE BLOSSOM 69KV (DLL-OCF-1)	7/8/2017 12:04	LINE - LIGHTNING -	SUB - EQUIPMENT - BREAKER/TRANS - MECHANICAL		0
62890	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	7/8/2017 16:15	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62902	JASPER - TWIN LAKES (GA PWR) 69KV (JV-1)	7/9/2017 14:57	LINE - WEATHER -	- -		0
62903	OCCIDENTAL #1 115KV (0177)	7/9/2017 15:17	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

62905	LAKE BRANCH 115KV (0475)	7/9/2017 16:06	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63397	CLERMONT EAST 230KV (0194)	8/2/2017 14:49	LINE - WEATHER -	- -		0
63402	FT WHITE - PERRY 69KV (FP-1)	8/2/2017 16:52	LINE - LIGHTNING -	- -		0
63403	SIXTEENTH STREET 115KV (0011)	7/22/2017 8:45	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE	118392	118392
63426	EUSTIS 69KV (0313)	7/26/2017 4:15	LINE - CUSTOMER - DISTRIBUTION	LINE - PUBLIC INTERFERENCE - VEHICLE	101037	101037
63452	CABBAGE ISLAND - POINCIANA 69KV (ICP-2)	8/5/2017 20:12	LINE - WEATHER -	- -		0
63482	OCCIDENTAL #1 115KV (0177)	8/7/2017 18:19	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63560	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	8/11/2017 23:39	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63595	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	8/14/2017 17:26	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63596	OCCIDENTAL #1 115KV (0177)	8/14/2017 17:31	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63598	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	8/14/2017 19:11	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63613	DINNER LAKE 69KV (0415)	8/3/2017 15:28	LINE - PUBLIC INTERFERENCE - VEHICLE	SUB - EQUIPMENT - BREAKER/DIST - ELECTRICAL	126718	126718
63615	DELAND 69KV (0301)	8/15/2017 20:01	SUB - EQUIPMENT - BREAKER/TRANS - OTHER	SUB - EQUIPMENT - BREAKER/TRANS - OTHER		0
63649	FROSTPROOF - LAKE WALES 69KV (AL-3)	8/17/2017 19:41	LINE - LIGHTNING -	- -		0
63659	BROOKRIDGE-HUDSON 230kV (CC-2)	8/18/2017 13:06	LINE - EQUIPMENT - INSULATOR	LINE - EQUIPMENT - INSULATOR		0
63653	AVON PARK PL - SOUTH POLK 230KV (AF-1)	8/18/2017 6:58	LINE - EQUIPMENT - INSULATOR	LINE - EQUIPMENT - INSULATOR		0
63668	NORTH LONGWOOD 230KV (0066)	8/18/2017 14:52	SUB - EQUIPMENT - BREAKER/DIST - OTHER	SUB - EQUIPMENT - BREAKER	62604	62604
63671	ROSS PRAIRIE 230KV (0407)	8/18/2017 16:15	LINE - LIGHTNING -	- -		0

63674	FORT GREEN #11 69KV (0472)	8/18/2017 18:06	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63675	VANDOLAH - WAUCHULA 69KV (VW-1)	8/18/2017 18:49	LINE - LIGHTNING -	LINE - EQUIPMENT - CONDUCTOR/STATIC	37680	241267.4
63680	FT MEADE - VANDOLAH 230KV (FV-1)	8/18/2017 19:28	LINE - LIGHTNING -	- -		0
63683	HOLOPAW - POINSETT (FP&L) 230KV (WLXF-2)	8/19/2017 3:26	LINE - WEATHER -	- -		0
63685	LAKE BRANCH 115KV (0475)	8/19/2017 9:04	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63690	CHAMPIONS GATE - DAVENPORT 69KV (ICLW-5)	8/20/2017 17:41	LINE - LIGHTNING -	- -		0
62906	LAKE BRANCH 115KV (0475)	7/9/2017 16:20	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62907	MULBERRY - NORTHWEST (CITY OF BARTOW) 69KV (MSW-NWSW-1)	7/9/2017 16:21	LINE - LIGHTNING -	- -		0
62908	BARCOLA - FT MEADE 69KV (BF-1)	7/9/2017 16:21	LINE - LIGHTNING -	- -		0
62909	BARCOLA - FT MEADE 69KV (BF-1)	7/9/2017 16:34	LINE - LIGHTNING -	- -		0
62910	BARCOLA 230KV (0199)	7/9/2017 16:39	LINE - LIGHTNING -	SUB - EQUIPMENT - BUS - INSULATORS		0
62914	CAMP LAKE - HOWEY BKR STA (SEC)69KV (CLL-1)	7/9/2017 18:01	LINE - LIGHTNING -	SUB - EQUIPMENT - BREAKER	0	10729.4
63575	LAKE BRANCH 115KV (0475)	8/13/2017 3:34	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62917	NEW RIVER - HANDCART (TECO) 69KV (TZ-4)	7/9/2017 20:21	LINE - LIGHTNING -	- -		0
62924	DESOTO CITY - LAKE PLACID NORTH 69KV (DLP-1)	7/10/2017 10:39	LINE - LIGHTNING -	- -		0
62935	BROOKSVILLE - UNION HALL 69KV (BZ-1)	7/10/2017 18:03	LINE - LIGHTNING -	- -		0
62975	CHIEFLAND - INGLIS 69KV (IS-1)	7/11/2017 14:54	LINE - LIGHTNING -	- -		0
62991	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	7/12/2017 13:30	LINE - LIGHTNING -	- -		0

62993	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	6/28/2017 16:03	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62994	REDDICK-WILLISTON 69KV (RDW-1)	7/12/2017 14:57	LINE - ANIMAL - OTHER	LINE - ANIMAL - OTHER	87843	139359
63024	DUNNELLON TOWN - ADAMS 69KV RADIAL (IO-2)	7/13/2017 14:23	LINE - LIGHTNING -	- -		0
63028	BROOKSVILLE - FLORIDA ROCK 69KV RADIAL (BFR-1)	7/13/2017 15:16	LINE - LIGHTNING -	- -		0
63065	ATWATER - LIBERTY 115KV (ATL-1)	7/15/2017 15:37	LINE - LIGHTNING -	- -		0
63691	DAVENPORT - WEST DQVENPORT 69KV (DWD-1)	8/20/2017 17:46	LINE - WEATHER -	- -		0
63692	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	8/20/2017 17:45	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63693	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	8/20/2017 18:41	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63756	LIBERTY 69KV (0466)	8/25/2017 18:21	LINE - WEATHER -	- -		0
63821	AVON PARK PL - SOUTH POLK 230KV (AF-1)	8/30/2017 19:57	SUB - OPERATIONAL - EMERGENCY	SUB - OPERATIONAL - EMERGENCY		0
63833	ATWATER - QUINCY 115KV (QX-1)	8/31/2017 17:52	LINE - LIGHTNING -	LINE - EQUIPMENT - CONDUCTOR/STATIC		0
63835	LOCKHART - WOODSMERE 230KV (ASW-2)	8/31/2017 19:26	LINE - LIGHTNING -	LINE - EQUIPMENT - CONDUCTOR/STATIC		0
63849	CHIEFLAND-GA PACIFIC 69KV (CGP-1/IS-5)	9/1/2017 11:18	LINE - LIGHTNING -	- -		0
63850	DEARMIN - SILVER SPRINGS NORTH SECI 230KV (DSNX-1)	9/1/2017 15:12	LINE - LIGHTNING -	- -		0
63852	DUNDEE 230KV (0083)	8/31/2017 22:27	SUB - EQUIPMENT - TRANSFORMER - WINDING	SUB - EQUIPMENT - TRANSFORMER - WINDING	513848	513848
63858	FT GREEN SPRINGS - VANDOLAH #1 CKT 69KV (VFG-1)	9/1/2017 18:33	LINE - LIGHTNING -	- -		0
63864	EATONVILLE - SPRING LAKE 69KV (SLE-1)	9/1/2017 21:09	LINE - LIGHTNING -	- -		0
63865	AVON PARK PL - FT MEADE 230KV (AF2-1)	9/1/2017 22:33	LINE - EQUIPMENT - CONDUCTOR/STATIC	LINE - EQUIPMENT - CONDUCTOR/STATIC		0

63872	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	9/2/2017 18:54	LINE - CUSTOMER - REA/EMC	LINE - CUSTOMER - REA/EMC		0
63885	HOLOPAW - POINSETT (FP&L) 230KV (WLXF-2)	9/4/2017 16:07	LINE - LIGHTNING -	- -		0
63893	WINTER PARK EAST 230KV (0133)	9/1/2017 21:17	LINE - LIGHTNING -	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE	332767	332767
63083	FORT GREEN #10 69KV (0463)	7/16/2017 10:58	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63086	PARKWAY - TAFT 69KV (WR-5)	7/16/2017 15:39	LINE - EQUIPMENT - CROSSARM	LINE - EQUIPMENT - CROSSARM	0	450
63098	ROSS PRAIRIE - MARION OAKS SEC 69KV RADIAL (RPMX-1)	7/17/2017 15:02	LINE - LIGHTNING -	- -		0
63099	BROOKRIDGE - BROOKSVILLE WEST (BBW CKT) 115KV (BBW-1)	7/17/2017 15:38	LINE - LIGHTNING -	- -		0
63101	DELAND - DELTONA 69KV (TD-1)	7/17/2017 17:21	LINE - LIGHTNING -	- -		0
63103	DELAND - DELTONA 69KV (TD-1)	7/17/2017 17:37	LINE - PLANNED -	- -		0
63118	LAKE BRANCH 115KV (0475)	7/18/2017 15:41	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63123	CASSELBERRY - LAKE ALOMA 69KV (CLA-1)	7/18/2017 18:41	LINE - LIGHTNING -	- -		0
63124	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	7/18/2017 19:23	LINE - WEATHER -	- -		0
63135	FORT GREEN #10 69KV (0463)	7/19/2017 11:56	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63134	CENTRAL FLA - HAINES CREEK 230KV (CFS-1)	7/19/2017 11:58	LINE - OPERATIONAL - OTHER	LINE - OPERATIONAL - OTHER		0
63137	FT MEADE - HOMELAND 69KV (FMB-1)	7/19/2017 15:31	LINE - LIGHTNING -	- -		0
63141	MANLEY ROAD 115KV (0004)	7/19/2017 16:04	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63142	AVON PARK NORTH - FROSTPROOF 69KV (AL-1)	7/19/2017 16:31	LINE - LIGHTNING -	- -		0

63143	BARCOLA - WEST SUB (CITY OF LAKELAND) 230KV (BLX)	7/19/2017 16:40	LINE - OPERATIONAL - EMERGENCY	- -		0
63144	CRYSTAL RIVER EAST - INGLIS CKT1 115KV (IT-CKT1)	7/19/2017 16:54	LINE - LIGHTNING -	- -		0
63177	HULL ROAD - UNIVERSITY FLA 69KV (AUF-2)	7/20/2017 19:53	LINE - TREE - NON-PREVENTABLE	LINE - TREE - NON-PREVENTABLE		0
63195	FROSTPROOF - LAKE WALES 69KV (AL-3)	7/21/2017 13:45	LINE - LIGHTNING -	- -		0
63206	LAKE BRANCH 115KV (0475)	7/22/2017 6:58	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63209	CAMP LAKE - HOWEY BKR STA (SEC)69KV (CLL-1)	7/22/2017 12:40	LINE - LIGHTNING -	- -		0
60439	DEBARY PLANT 230KV (0246)	1/2/2017 9:40	SUB - UNKNOWN -	- -		0
60668	FORT GREEN #10 69KV (0463)	1/28/2017 12:01	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60751	CROSSROADS - KENNETH UG 115KV (KXUG)	2/1/2017 14:57	RELAY - HUMAN ERROR - SETTING ERROR	RELAY - EQUIPMENT - AUTO RECLOSING CUT SWITCH FAILURE	114950	114950
60856	KENNETH 115KV (0174)	1/16/2017 17:25	RELAY - HUMAN ERROR - INADVERTENT TRIP	RELAY - HUMAN ERROR - OTHER	9202	9202
60865	HOLDER 230KV (0203)	2/14/2017 15:44	RELAY - HUMAN ERROR - SELF INFLICTED	RELAY - HUMAN ERROR - SELF INFLICTED		0
60889	FORT GREEN #6 69KV (0437)	2/17/2017 8:00	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63895	PARKWAY - TAFT 69KV (WR-5)	9/5/2017 11:07	LINE - EQUIPMENT - CONDUCTOR/STATIC	LINE - EQUIPMENT - CONDUCTOR/STATIC	0	10
63900	OCCIDENTAL #1 115KV (0177)	9/5/2017 18:29	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63926	FORT GREEN #6 69KV (0437)	9/7/2017 2:49	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63984	ALTAMONTE - NORTH LONGWOOD CKT1 69KV (WO-2)	9/10/2017 20:38	LINE - WEATHER - MAJOR STORM - HURRICANE	- -	0	0
64105	EUSTIS - EUSTIS SOUTH 69KV (EP-1)	9/11/2017 1:15	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE		0

63301	VANDOLAH - WHIDDON 230KV (VWX-1)	7/26/2017 19:05	LINE - LIGHTNING -	- -		0
63305	HAINES CITY EAST - PONICIAN 69KV (HP-2)	7/26/2017 23:42	LINE - LIGHTNING -	LINE - LIGHTNING -	116072	116072
63306	CABBAGE ISLAND - POINCIANA 69KV (ICP-2)	7/26/2017 23:42	LINE - LIGHTNING -	- -		0
63308	AVON PARK PL - WAUCHULA 69KV (APW-1)	7/27/2017 1:25	LINE - LIGHTNING -	- -		0
63352	AVON PARK PL - SOUTH POLK 230KV (AF-1)	7/31/2017 5:14	LINE - EQUIPMENT - INSULATOR	LINE - EQUIPMENT - INSULATOR		0
63363	BAYVIEW 115KV (0050)	7/30/2017 14:01	SUB - EQUIPMENT - INSULATOR	SUB - EQUIPMENT - INSULATOR	258874	258874
63383	DUNNELLON TOWN - ADAMS 69KV RADIAL (IO-2)	8/2/2017 9:33	LINE - WEATHER -	- -		0
63399	AVON PARK PL - FISHEATING CREEK 230KV (AFC-1)	8/2/2017 16:32	LINE - LIGHTNING -	- -		0
63407	TURNER - FP&L TIE (SANFORD-BARWICK) 115KV (TSX-1)	8/2/2017 17:28	LINE - OPERATIONAL - EMERGENCY	- -		0
64202	FORT GREEN #4 69KV (0335)	9/11/2017 11:03	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE		0
64212	TARPON SPRINGS 115KV (0019)	9/11/2017 13:15	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE		0
64222	SEVEN SPRINGS - TARPON SPRINGS EAST CKT 115KV (ST-1)	9/11/2017 14:14	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE		0
63408	OLD TOWN TAP (CFEC) RADIAL 69KV (376160001)	8/3/2017 0:09	LINE - WEATHER -	- -		0
63413	OLD TOWN NORTH SW STA - DEMPSEY (CFEC) RADIAL 69KV (376159901)	8/3/2017 8:39	LINE - LIGHTNING -	- -		0
63418	SUN N LAKES - DINNER LAKE (TECO) 69KV (ALP-3)	8/3/2017 15:28	LINE - PUBLIC INTERFERENCE - VEHICLE	- -		0

63420	EAST LAKE WALES - INDIAN LAKES ESTATES 69KV RADIAL (ELX-AL-1)	8/3/2017 18:24	LINE - WEATHER -	- -		0
63424	THIRTY SECOND STREET 115KV (0366)	5/27/2017 7:54	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - PREVENTABLE	64649	64649
63436	BELLEVIEW - DALLAS 69KV (CFO-1)	8/4/2017 19:22	LINE - LIGHTNING -	LINE - LIGHTNING -	89262	89262
63451	HOLOPAW - WEST LAKE WALES 230KV (WLXF-3)	8/5/2017 18:16	LINE - LIGHTNING -	- -		0
63464	MULBERRY - NORTHWEST (CITY OF BARTOW) 69KV (MSW-NWSW-1)	8/6/2017 20:49	LINE - WEATHER -	- -		0
63465	FORT GREEN #10 69KV (0463)	8/7/2017 1:29	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63480	CRYSTAL RIVER SOUTH 115KV - LECANTO (CSB-1)	8/7/2017 16:44	LINE - LIGHTNING -	LINE - EQUIPMENT - CONDUCTOR/STATIC	3072	3072
63483	FT GREEN SPRINGS - VANDOLAH #2 CKT 69KV (VFGS-1)	8/7/2017 18:36	LINE - WEATHER -	- -		0
63488	TAVARES SEC - DEER ISLAND SEC 69KV (TDX-1)	8/7/2017 22:50	LINE - LIGHTNING -	- -		0
63499	KELLY PARK - ZELLWOOD 69KV (EP-3)	8/8/2017 23:14	LINE - LIGHTNING -	- -		0
63502	OCCIDENTAL #1 115KV (0177)	8/9/2017 3:44	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64343	OCCIDENTAL #1 115KV (0177)	9/14/2017 23:17	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64355	VINELAND 69KV (0374)	8/26/2017 18:56	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - ELECTRICAL		0
64369	CHIEFLAND - INGLIS 69KV (IS-1)	9/17/2017 16:33	LINE - CUSTOMER - DISTRIBUTION	LINE - CUSTOMER - DISTRIBUTION	0	5313
64370	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	9/17/2017 21:46	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

64395	SEVEN SPRINGS - TARPON SPRINGS EAST CKT 115KV (ST-1)	9/19/2017 14:02	LINE - EQUIPMENT - ARRESTER	LINE - EQUIPMENT - ARRESTER		0
64396	OCCIDENTAL #1 115KV (0177)	9/19/2017 14:08	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64425	FORT GREEN #6 69KV (0437)	9/21/2017 15:23	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64427	DRIFTON - PERRY 69KV (DP-1)	9/21/2017 16:48	LINE - LIGHTNING -	- -		0
63510	ATWATER - US HYDRO WOODRUFF DAM 115KV (QX-2)	8/9/2017 8:47	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE	SUB - EQUIPMENT - FUSE		0
63512	BAY RIDGE 69KV (0351)	7/17/2017 16:31	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL		0
63514	LAKE HELEN 115KV (0261)	8/6/2017 9:18	SUB - ANIMAL - SQUIRREL	SUB - ANIMAL - SQUIRREL	193114	193114
63542	VANDOLAH 230KV (0284)	8/11/2017 16:44	LINE - WEATHER -	- -		0
63557	QUINCY NORTH (CITY OF) 69KV (7914)	8/11/2017 21:11	LINE - WEATHER -	- -		0
63559	OCCIDENTAL #1 115KV (0177)	8/11/2017 23:26	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63646	MIDWAY 69KV (0493)	8/17/2017 17:48	LINE - LIGHTNING -	- -		0
63647	DEBARY PLANT 230KV (0246)	8/17/2017 18:43	SUB - WEATHER -	SUB - UNKNOWN - INVESTIGATION COMPLETE		0
63670	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	8/18/2017 15:33	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63677	LAKE BRANCH 115KV (0475)	8/18/2017 19:20	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63682	FT WHITE - JASPER WEST CKT 115KV (IJ-2)	8/18/2017 19:28	LINE - WEATHER -	- -		0
63694	CARRABELLE - GUMBAY 69KV (GBC-1)	8/21/2017 1:14	LINE - LIGHTNING -	- -		0
63697	PLYMOUTH SOUTH 69KV (0525)	8/21/2017 12:51	LINE - LIGHTNING -	RELAY - EQUIPMENT - AUTO RECLOSING CUT SWITCH FAILURE	23560	23560

63727	JASPER 115KV (0074)	8/23/2017 14:01	SUB - EQUIPMENT - PT	SUB - EQUIPMENT - PT		0
63728	RIVER JUNCTION (CHATTAHOOCHEE) 115KV (0038)	8/9/2017 8:47	SUB - ANIMAL - SQUIRREL	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE		1260
63742	OCCIDENTAL #1 115KV (0177)	8/24/2017 14:16	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63746	FT WHITE - JASPER EAST CKT 115KV (IJ-1)	8/24/2017 17:36	LINE - LIGHTNING -	- -		0
63747	FT WHITE - JASPER WEST CKT 115KV (IJ-2)	8/24/2017 17:36	LINE - LIGHTNING -	- -		0
63748	DUNNELLON TOWN - RAINBOW LK EST SEC 69KV RADIAL (DR-1)	8/24/2017 20:02	LINE - LIGHTNING -	LINE - PLANNED - MAINTENANCE AND CONSTRUCTION	17592	46032
63749	LAKE WALES - WEST LAKE WALES CKT#1 69KV (WLLW-1)	8/24/2017 20:26	RELAY - UNKNOWN - INVESTIGATION COMPLETE	- -		0
63753	FORT GREEN #1 69KV (0266)	8/25/2017 6:52	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63754	BROOKSVILLE 115KV (0026)	7/23/2017 2:03	SUB - HUMAN ERROR - OTHER	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	20804	20804
63755	LAKE BRANCH 115KV (0475)	8/25/2017 13:43	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63757	AVON PARK PL - WAUCHULA 69KV (APW-1)	8/25/2017 21:05	LINE - LIGHTNING -	LINE - LIGHTNING -	3632	6899.4
60808	BARCOLA - WEST SUB (CITY OF LAKELAND) 230KV (BLX)	2/8/2017 7:56	LINE - ANIMAL - BIRD - CLEARANCE	LINE - ANIMAL - BIRD - CLEARANCE		0
60851	OCHLOCKONEE 69KV (0217)	2/8/2017 12:45	RELAY - HUMAN ERROR - OTHER	RELAY - HUMAN ERROR - OTHER	207184	207184
60863	MYRTLE LAKE 230KV (0394)	2/4/2017 4:38	LINE - ANIMAL - OTHER	SUB - EQUIPMENT - BREAKER/DIST - OTHER		0
61076	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	3/11/2017 15:51	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61146	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	3/20/2017 12:43	LINE - ANIMAL - BIRD - CLEARANCE	- -		0

61251	OCC SWIFT CREEK #1 - SUWANNEE RIVER 115KV (SSC-1)	2/15/2017 11:30	RELAY - HUMAN ERROR - SETTING ERROR	RELAY - HUMAN ERROR - SETTING ERROR	0	1310.4
61272	CLERMONT - CLERMONT EAST 69KV (CLC-2)	3/29/2017 8:52	SUB - EQUIPMENT - TRANSFORMER - ARRESTER	SUB - EQUIPMENT - TRANSFORMER - ARRESTER		0
61303	PASADENA - SEMINOLE 230KV (LSP-1)	3/31/2017 9:44	LINE - OPERATIONAL - EMERGENCY	LINE - OPERATIONAL - EMERGENCY		0
61304	51ST STREET - PASADENA 230KV (FSP-2)	3/31/2017 9:44	LINE - OPERATIONAL - EMERGENCY	LINE - OPERATIONAL - EMERGENCY		0
61347	ATWATER - LIBERTY 115KV (ATL-1)	4/3/2017 19:39	LINE - LIGHTNING -	- -		0
61358	JACKSON BLUFF 69KV (0078)	4/4/2017 5:46	SUB - WEATHER -	SUB - CUSTOMER - GENERATION		0
61487	OCCIDENTAL #1 115KV (0177)	4/10/2017 13:05	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61494	FT WHITE - NEWBERRY 230KV (CF-3)	4/11/2017 5:08	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -		0
61459	LAKE BRYAN - WINDERMERE 230KV CKT 2 (LBW-1)	4/7/2017 12:53	LINE - OTHER - WILDFIRE	LINE - OTHER - WILDFIRE		0
61540	CASSADAGA - DELTONA 115KV (DC-1)	4/15/2017 16:00	LINE - OTHER - WILDFIRE	- -		0
61561	MARTIN WEST - REDDICK 69KV (SI-4)	4/17/2017 16:55	LINE - EQUIPMENT - CONDUCTOR/STATIC	RELAY - MISOPERATION -		0
61562	REDDICK - WILLISTON 69KV (SI-5)	4/17/2017 16:55	LINE - EQUIPMENT - CONDUCTOR/STATIC	RELAY - HUMAN ERROR - SETTING ERROR	425020	431312.5
61700	MULBERRY 69KV (0424)	4/27/2017 6:53	SUB - EQUIPMENT - LIGHTNING ARRESTER	SUB - EQUIPMENT - LIGHTNING ARRESTER		0
61718	DESOTO CITY - LAKE PLACID NORTH 69KV (DLP-1)	4/29/2017 7:12	LINE - WEATHER -	- -		0
61355	FLORIDA GAS TRANSMISSION - ST MARKS EAST 230KV (CP-3)	4/4/2017 4:09	LINE - LIGHTNING -	- -		0
61363	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	4/4/2017 10:44	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

61367	GA PACIFIC - WILCOX 69KV (WGP-1)	4/4/2017 10:26	LINE - WEATHER -	- -	0
61373	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	4/4/2017 22:04	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
61374	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	4/4/2017 22:03	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
61394	OCCIDENTAL #1 115KV (0177)	4/5/2017 15:40	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
61409	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	4/6/2017 0:25	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
61427	FORT GREEN #6 69KV (0437)	4/6/2017 8:54	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
61466	TAVARES SEC - DEER ISLAND SEC 69KV (TDX-1)	4/8/2017 12:13	SUB - HUMAN ERROR - SELF INFLICTED	- -	0
61467	MANLEY ROAD 115KV (0004)	4/8/2017 14:11	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
61473	BROOKRIDGE - FL CRUSHED STONE COGEN PL 115KV (BWX-2)	4/9/2017 15:51	SUB - CUSTOMER - INDUSTRIAL	SUB - CUSTOMER - INDUSTRIAL	0
61514	MULBERRY - MULBERRY COGEN CKT#1A 69KV (BH-3)	4/11/2017 16:31	LINE - CUSTOMER - GENERATION	LINE - CUSTOMER - GENERATION	0
61521	CENTRAL FLA - HOLDER 230KV (CCF-3)	4/12/2017 9:45	RELAY - EQUIPMENT - RELAY PROBLEM	RELAY - EQUIPMENT - RELAY PROBLEM	0
61606	CENTRAL FLA - HOLDER 230KV (CCF-3)	4/20/2017 10:00	LINE - UNKNOWN - UNDER INVESTIGATION	SUB - EQUIPMENT - BREAKER/TRANS - OTHER	0
61354	SUWANNEE RIVER PL - MADISON 115KV (SP-SUM-1)	4/4/2017 3:49	LINE - WEATHER -	- -	0
61553	APOPKA SOUTH - WOODSMERE 69KV (WP-2)	4/17/2017 11:48	LINE - OTHER - CONTACT OF LINES	LINE - OTHER - CONTACT OF LINES	0
61592	DESOTO CITY - LAKE PLACID NORTH 69KV (DLP-1)	4/19/2017 19:48	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -	0
61627	OCCIDENTAL #1 115KV (0177)	4/22/2017 7:51	LINE - CUSTOMER - INDUSTRIAL	- -	0
61763	PEACOCK 69KV (0461)	4/30/2017 20:45	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0

61792	NORTHEAST - ULMERTON CKT#2 230KV (NC-3)	5/1/2017 18:51	SUB - EQUIPMENT - BREAKER/TRANS - ELECTRICAL	SUB - EQUIPMENT - BREAKER/TRANS - ELECTRICAL		0
61794	NORTHEAST - ULMERTON CKT#2 230KV (NC-3)	5/1/2017 19:34	SUB - EQUIPMENT - BREAKER/TRANS - ELECTRICAL	SUB - EQUIPMENT - BREAKER/TRANS - ELECTRICAL		0
61798	FORT GREEN #10 69KV (0463)	5/2/2017 0:54	SUB - EQUIPMENT - METERING	SUB - EQUIPMENT - METERING		0
61538	HIGH SPRINGS - HULL ROAD 69KV (GH-1)	4/15/2017 1:14	LINE - NEIGHBORING UTILITY - EQUIPMENT	- -		0
61799	HOMELAND - MULBERRY 69KV (BH-2)	5/2/2017 2:07	LINE - ANIMAL - BIRD - CLEARANCE	LINE - ANIMAL - BIRD - CLEARANCE		0
61887	ANCLOTE PL - LARGO 230KV (ANL-1)	5/8/2017 17:01	LINE - OPERATIONAL - EMERGENCY	SUB - HUMAN ERROR - OTHER	0	0
61889	EAST CLEARWATER - LAKE TARPON 230KV (NC-LTC-1)	5/9/2017 8:28	SUB - OPERATIONAL - EMERGENCY	SUB - OPERATIONAL - EMERGENCY		0
61947	CURLEW 115KV (0149)	5/3/2017 10:19	LINE - CUSTOMER - DISTRIBUTION	SUB - HUMAN ERROR - OTHER	144668	144668
61967	OCCIDENTAL SWIFT CREEK #1 - OCCIDENTAL METERING 115KV (JS-3)	5/12/2017 19:45	LINE - WEATHER -	- -		0
61972	VANDOLAH - MYAKKA PREC 69KV RADIAL (VHC-1)	5/13/2017 1:39	LINE - WEATHER -	- -		0
61975	BROOKSVILLE - INVERNESS 69KV - WILDWOOD (HB-2)	5/13/2017 12:56	LINE - LIGHTNING -	- -		0
61978	ALTAMONTE - SPRING LAKE 230KV (ASW-1)	5/13/2017 17:14	LINE - EQUIPMENT - CONNECTOR	LINE - EQUIPMENT - CONDUCTOR/STATIC		0
61979	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	5/13/2017 19:21	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61980	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	5/14/2017 5:39	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61984	FORT GREEN #6 69KV (0437)	5/15/2017 11:52	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61987	DALLAS - SILVER SPRINGS SHORES 69KV (DW-OCF-1)	5/16/2017 6:24	LINE - WEATHER -	- -		0

62000	WEKIVA 230KV (0269)	4/17/2017 14:59	SUB - ANIMAL - SNAKE	SUB - EQUIPMENT - BREAKER/DIST - TRIP COIL	37838	37838
61825	HEMPLE 69KV (0340)	4/24/2017 6:15	SUB - ANIMAL - OTHER	SUB - ANIMAL - OTHER	83511	83511
61844	HIGH SPRINGS - HULL ROAD 69KV (GH-1)	5/4/2017 17:44	LINE - LIGHTNING -	- -		0
62165	HAINES CITY - HAINES CITY EAST 69KV (HP-1)	5/24/2017 18:12	LINE - WEATHER -	- -		0
62266	ANCLOTE PL - LARGO 230KV (ANL-1)	5/31/2017 10:44	LINE - OPERATIONAL - EMERGENCY	LINE - OPERATIONAL - EMERGENCY		0
62281	HIGH SPRINGS - HULL ROAD 69KV (GH-1)	6/1/2017 16:50	LINE - CUSTOMER - REA/EMC	RELAY - HUMAN ERROR - SETTING ERROR	6462	43677
62350	FOUR CORNERS - LAKE WILSON 69KV (LF-1)	6/6/2017 14:13	LINE - LIGHTNING -	- -		0
61807	BARCOLA - WEST SUB (CITY OF LAKELAND) 230KV (BLX)	5/2/2017 9:28	LINE - ANIMAL - BIRD - CLEARANCE	LINE - ANIMAL - BIRD - CLEARANCE		0
61864	BROOKSVILLE ROCK 69KV (0125)	5/6/2017 5:11	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61877	FORT GREEN #10 69KV (0463)	5/8/2017 6:57	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61904	HAINES CREEK - LEESBURG EAST 69KV (LE-2)	5/9/2017 13:11	LINE - PUBLIC INTERFERENCE - VEHICLE	- -		0
61964	STARKEY ROAD 69KV (0234)	4/29/2017 7:50	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	116080	116080
62043	FORT GREEN #6 69KV (0437)	5/18/2017 16:25	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62278	WAUCHULA 69KV (0130)	5/26/2017 19:41	SUB - OPERATIONAL - EMERGENCY	SUB - EQUIPMENT - TRANSFORMER - OTHER	462732	462732
62294	DENHAM - CABBAGE HILL (TECO) 69KV (TZ-1)	6/2/2017 11:30	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -		0

62299	CYPRESSWOOD - HAINES CITY 69KV (ICLW-2)	6/2/2017 16:06	LINE - WEATHER -	- -		0
62378	LAKE PLACID - LAKE PLACID NORTH 69KV (DLP-2)	6/8/2017 12:11	LINE - LIGHTNING -	- -		0
62401	FT MEADE - VANDOLAH 230KV (FV-1)	6/11/2017 15:37	LINE - LIGHTNING -	LINE - LIGHTNING -		0
62412	HOLOPAW 230KV (0161)	6/12/2017 17:02	SUB - ANIMAL - BIRD - DAMAGE	SUB - ANIMAL - BIRD - DAMAGE	60966	60966
62427	DESOTO CITY - PHILLIPS PL (TECO) 69KV (AD-2)	6/13/2017 15:05	LINE - WEATHER -	- -		0
62979	AVON PARK PL - SOUTH POLK 230KV (AF-1)	7/11/2017 17:27	LINE - EQUIPMENT - POLE ROT	LINE - EQUIPMENT - POLE ROT		0
63004	HAINES CITY - HAINES CITY EAST 69KV (HP-1)	7/12/2017 18:09	LINE - WEATHER -	- -		0
63027	TRENTON - WILCOX 69KV (376159801)	7/13/2017 14:47	LINE - LIGHTNING -	- -		0
63032	CLERMONT EAST 230KV (0194)	7/13/2017 15:45	LINE - LIGHTNING -	- -		0
63042	CENTRAL PLAZA 115KV (0057)	7/14/2017 2:16	RELAY - HUMAN ERROR - OTHER	- -		0
61946	FISHEATING CREEK - SUN N LAKES 69KV (ALP-SUC-1)	5/11/2017 15:59	LINE - WEATHER -	- -		0
61977	OCC SWIFT CREEK #1 - SUWANNEE RIVER 115KV (SSC-1)	5/13/2017 14:22	LINE - WEATHER -	- -		0
62154	ARCHER - WILLISTON 69KV (AW-1)	5/24/2017 12:26	SUB - EQUIPMENT - FUSE MISOPERATION	- -		0
63100	BAY RIDGE - SORRENTO 69KV (SB-1)	7/17/2017 16:55	LINE - LIGHTNING -	- -		0
63166	PEACOCK 69KV (0461)	7/20/2017 15:13	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63168	FROSTPROOF - LAKE WALES 69KV (AL-3)	7/20/2017 15:42	LINE - LIGHTNING -	- -		0
63183	CROSS CITY - OLD TOWN NORTH SW STA 69KV (TC-2)	7/20/2017 20:53	LINE - LIGHTNING -	- -		0
63213	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	7/22/2017 13:22	LINE - LIGHTNING -	- -		0

63199	OVIEDO - WINTER SPRINGS 69KV (WO-7)	7/21/2017 15:41	LINE - LIGHTNING -	- -		0
63270	AVALON - CAMP LAKE 230KV - HAINES CITY (CFW-2)	7/24/2017 15:20	LINE - LIGHTNING -	- -		0
63298	CROSS CITY INDUSTRIAL 69KV (0204)	7/22/2017 3:58	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE	73788	73788
63314	FORT GREEN #4 69KV (0335)	7/27/2017 16:15	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63315	FT GREEN SPRINGS - DUETTE PREC 69KV RADIAL (FSD-1)	7/27/2017 16:22	LINE - LIGHTNING -	- -		0
63318	PARKWAY - TAFT 69KV (WR-5)	7/27/2017 17:41	LINE - LIGHTNING -	- -		0
63319	RIO PINAR PL - FLORIDA GAS TRANSMISSION EAST 69KV (RW-4)	7/27/2017 18:06	LINE - LIGHTNING -	LINE - EQUIPMENT - POLE FAILURE - NON PREVENTABLE		0
63351	AVON PARK PL - SOUTH POLK 230KV (AF-1)	7/31/2017 4:56	LINE - EQUIPMENT - INSULATOR	- -		0
63370	DEBARY PLANT 230KV (0246)	8/1/2017 8:14	SUB - EQUIPMENT - BREAKER/TRANS - OTHER	- -		0
62366	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	6/7/2017 11:32	LINE - LIGHTNING -	LINE - EQUIPMENT - SWITCH	0	38310.6
62367	HIGH SPRINGS - HULL ROAD 69KV (GH-1)	6/7/2017 11:48	LINE - LIGHTNING -	- -		0
62380	ULMERTON 230KV (0126)	6/8/2017 13:59	SUB - ANIMAL - BIRD - CLEARANCE	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	68303	68303
62394	CRYSTAL RIVER PLANT 230KV (0171)	6/10/2017 2:28	SUB - ANIMAL - RACCOON	SUB - EQUIPMENT - TRANSFORMER - BUSHING		0
62396	DALLAS - SILVER SPRINGS SHORES 69KV (DW-OCF-1)	6/10/2017 18:06	LINE - WEATHER -	- -		0
62399	FORT GREEN #11 69KV (0472)	6/11/2017 15:37	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62400	FORT GREEN #6 69KV (0437)	6/11/2017 15:40	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

62458	FORT GREEN #11 69KV (0472)	6/14/2017 14:54	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
62462	OCCIDENTAL #1 115KV (0177)	6/14/2017 15:42	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
62463	MARTIN WEST - REDDICK 69KV (SI-4)	6/14/2017 17:31	LINE - LIGHTNING -	- -	0
62684	LAKE WEIR - CENTRAL TOWER CEC 69KV RADIAL (LC-1)	6/26/2017 16:51	LINE - LIGHTNING -	- -	0
62717	LAKE TARPON - SHELDON ROAD CKT#1 (TECO) 230KV (LTX-1)	6/28/2017 21:06	RELAY - EQUIPMENT - OTHER	RELAY - EQUIPMENT - OTHER	0
62782	CROSS CITY - OLD TOWN NORTH SW STA 69KV (TC-2)	7/3/2017 15:57	LINE - LIGHTNING -	- -	0
62805	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	7/5/2017 11:43	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
62568	CABBAGE ISLAND - POINCIANA 69KV (ICP-2)	6/19/2017 20:26	LINE - WEATHER -	- -	0
63113	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	7/18/2017 12:33	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63155	OCCIDENTAL #1 115KV (0177)	7/20/2017 9:08	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63187	CENTRAL PLAZA 115KV (0057)	7/21/2017 7:44	RELAY - HUMAN ERROR - OTHER	- -	0
63208	AVON PARK PL - WAUCHULA 69KV (APW-1)	7/22/2017 12:06	LINE - LIGHTNING -	- -	0
63210	MONTVERDE - WINTER GARDEN 69KV (WCE-1)	7/22/2017 13:19	LINE - LIGHTNING -	- -	0
63268	EAST ORANGE - RIO PINAR 69KV (REO)	7/24/2017 15:06	LINE - LIGHTNING -	- -	0
63272	CENTRAL FLA - CLERMONT EAST - METROWEST (OUC) 230KV - HAINES CITY (CFW-4)	7/24/2017 15:20	LINE - LIGHTNING -	- -	0
63299	ANCLOTE PL - LARGO 230KV (ANL-1)	7/26/2017 13:16	LINE - OPERATIONAL - EMERGENCY	- -	0
63302	VANDOLAH - WAUCHULA 69KV (VW-1)	7/26/2017 19:51	LINE - LIGHTNING -	- -	0

63303	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	7/26/2017 21:27	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63304	VANDOLAH - WAUCHULA 69KV (VW-1)	7/26/2017 23:33	LINE - LIGHTNING -	- -	0
63307	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	7/27/2017 1:19	LINE - CUSTOMER - INDUSTRIAL	RELAY - MISOPERATION -	113
63189	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	7/21/2017 8:50	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63394	NORTH BARTOW - ORANGE SWITCHING STA 69KV (FMB-3)	8/2/2017 13:27	LINE - LIGHTNING -	LINE - EQUIPMENT - CONDUCTOR/STATIC	0
63396	AVON PARK PL - WAUCHULA 69KV (APW-1)	8/2/2017 13:41	LINE - LIGHTNING -	- -	0
63454	FORT GREEN #10 69KV (0463)	8/6/2017 0:39	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63486	DALLAS - SILVER SPRINGS SHORES 69KV (DW-OCF-1)	8/7/2017 19:48	LINE - LIGHTNING -	- -	0
63498	MULBERRY 69KV (0424)	8/8/2017 22:07	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63524	BROOKSVILLE WEST - HUDSON 115KV (BWR-1)	8/9/2017 17:22	LINE - LIGHTNING -	- -	0
63526	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	8/10/2017 7:10	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63531	VANDOLAH - WAUCHULA 69KV (VW-1)	8/10/2017 17:47	LINE - LIGHTNING -	- -	0
63533	JASPER 115KV (0074)	8/11/2017 8:19	LINE - CUSTOMER - REA/EMC	- -	0
63549	HORSE CREEK #2 69KV (0409)	8/11/2017 17:11	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63556	BRONSON - CHIEFLAND 69KV (BC)	8/11/2017 18:15	LINE - LIGHTNING -	RELAY - EQUIPMENT - RELAY PROBLEM	0
63611	BARBERVILLE - DELAND WEST 69KV (DWB-1)	8/15/2017 12:09	LINE - WEATHER -	- -	0
63616	KELLY PARK - MT DORA 69KV (EP-5)	8/15/2017 20:23	LINE - LIGHTNING -	- -	0
63643	MARTIN WEST - SILVER SPRINGS NORTH SECI 230KV (FO-6)	8/17/2017 17:24	LINE - NEIGHBORING UTILITY - EQUIPMENT	LINE - NEIGHBORING UTILITY - EQUIPMENT	0

61973	FORT GREEN #4 69KV (0335)	5/13/2017 9:21	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63423	JACKSON BLUFF - TALLAHASSEE 69KV (JT-1)	8/4/2017 12:32	LINE - TREE - NON-PREVENTABLE	LINE - TREE - NON-PREVENTABLE		0
63672	ROSS PRAIRIE - MARION OAKS SEC 69KV RADIAL (RPMX-1)	8/18/2017 16:23	LINE - LIGHTNING -	- -		0
63684	FORT GREEN #6 69KV (0437)	8/19/2017 7:17	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63689	FORT GREEN #6 69KV (0437)	8/19/2017 15:55	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63760	FROSTPROOF - LAKE WALES 69KV (AL-3)	8/26/2017 2:20	LINE - EQUIPMENT - CROSSARM	LINE - EQUIPMENT - CROSSARM	7476	7476
63794	PEMBROKE 69KV (0327)	8/9/2017 22:43	SUB - EQUIPMENT - TRANSFORMER - WINDING	SUB - EQUIPMENT - TRANSFORMER - WINDING	37107	37107
63802	COLONIAL 69KV (0441)	8/17/2017 17:42	LINE - LIGHTNING -	RELAY - MISOPERATION -	1286067	1286067
63816	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	8/30/2017 13:15	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63834	BRADFORDVILLE WEST - TIE #3 (CITY OF TALLAH) 115KV (JQ-3)	8/31/2017 17:55	LINE - EQUIPMENT - CONDUCTOR/STATIC	LINE - CUSTOMER - MUNICIPALITY		0
63838	BRADFORDVILLE WEST - DRIFTON 115KV (JQ-2)	8/31/2017 17:55	LINE - WEATHER -	- -	5436	5436
63841	HAVANA-QUINCY CKT#2, 69KV (HQ-2)	8/31/2017 17:55	LINE - WEATHER -	- -	0	15.9
63843	FORT GREEN SPRINGS 69KV (0439)	8/31/2017 21:31	LINE - LIGHTNING -	- -		0
63844	SHINGLE CREEK 69KV (0336)	8/31/2017 22:45	SUB - EQUIPMENT -	- -		0
63845	SHINGLE CREEK 69KV (0336)	8/31/2017 23:22	SUB - EQUIPMENT - BREAKER	- -		0
63846	DUNDEE - LAKE MARION 69KV (DLM-1)	9/1/2017 0:55	LINE - LIGHTNING -	- -		0
63847	DUNDEE - LAKE MARION 69KV (DLM-1)	9/1/2017 1:10	LINE - LIGHTNING -	- -		0
63848	OLD TOWN NORTH SW STA - WILCOX 69KV (376159701)	9/1/2017 10:22	LINE - LIGHTNING -	- -		0

63859	FORT GREEN #11 69KV (0472)	9/1/2017 18:36	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63878	MANLEY ROAD 115KV (0004)	9/4/2017 0:10	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63889	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	9/5/2017 9:21	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
62856	INVERNESS - LECANTO 115KV (IL-1)	7/7/2017 14:15	LINE - LIGHTNING -	- -	0
62888	PORT ST JOE - APALACHICOLA CKT#2 69KV (PSJA-3)	7/8/2017 14:14	LINE - WEATHER -	- -	0
62897	MANLEY ROAD 115KV (0004)	7/8/2017 21:00	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
62913	HORSE CREEK #2 69KV (0409)	7/9/2017 17:42	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
62958	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	7/11/2017 10:31	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63030	AVALON - LAKE LUNTZ 69KV (AH-1)	7/13/2017 15:36	LINE - LIGHTNING -	- -	0
63449	DAVENPORT - HAINES CITY 69KV (ICLW-6)	8/5/2017 17:28	LINE - LIGHTNING -	- -	0
63457	OCCIDENTAL #1 115KV (0177)	8/6/2017 9:16	LINE - CUSTOMER - INDUSTRIAL	- -	0
63475	EAST ORANGE 69KV (0346)	7/12/2017 19:53	LINE - UNKNOWN -	- -	0
63496	OCCIDENTAL #1 115KV (0177)	8/8/2017 17:41	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63525	SUWANNEE RIVER - LIVE OAK (FP&L) 115KV (SF-1)	8/9/2017 18:54	LINE - WEATHER -	- -	0
63558	MARTIN WEST - SILVER SPRINGS 69KV (MS-1)	8/11/2017 22:43	LINE - WEATHER -	- -	0
63561	FORT GREEN #10 69KV (0463)	8/12/2017 1:16	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
63316	OTTER CREEK CENTRAL FLA CO-OP 69KV (6826)	7/27/2017 17:00	LINE - LIGHTNING -	LINE - LIGHTNING -	1674
63317	OTTER CREEK CENTRAL FLA CO-OP 69KV (6826)	7/27/2017 17:06	LINE - WEATHER -	LINE - WEATHER - ICE/SNOW	613.8
63340	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	7/28/2017 20:07	LINE - WEATHER -	- -	0

63362	FT WHITE - NEWBERRY 230KV (CF-3)	7/31/2017 13:07	SUB - PLANNED - EMERGENT	SUB - EQUIPMENT - CCVT		0
63365	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	7/31/2017 18:43	LINE - WEATHER -	- -		0
63376	REDDICK 69KV (0058)	5/5/2017 11:56	LINE - CUSTOMER - DISTRIBUTION	RELAY - HUMAN ERROR - SETTING ERROR	12179	12179
63378	FISHEATING CREEK - LAKE PLACID 69KV (ALP-2)	8/1/2017 19:18	LINE - LIGHTNING -	- -		0
63404	AVON PARK PL - WAUCHULA 69KV (APW-1)	8/2/2017 17:56	LINE - LIGHTNING -	- -		0
63405	FORT GREEN #10 69KV (0463)	8/2/2017 19:58	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63758	DRIFTON - WAUKEENAH 115KV RADIAL (DWH-WHX-1)	8/25/2017 23:26	LINE - LIGHTNING -	- -		0
63827	ZEPHYRHILLS 69KV (0021)	8/8/2017 18:15	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	94319	94319
63857	AVON PARK PL - WAUCHULA 69KV (APW-1)	9/1/2017 18:30	LINE - LIGHTNING -	- -		0
63860	LAKE BRANCH 115KV (0475)	9/1/2017 18:55	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63862	VANDOLAH - WAUCHULA 69KV (VW-1)	9/1/2017 19:01	LINE - LIGHTNING -	- -		0
63871	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	9/2/2017 17:23	LINE - CUSTOMER - REA/EMC	LINE - CUSTOMER - REA/EMC		0
63877	MANLEY ROAD 115KV (0004)	9/3/2017 13:43	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63676	LAKE BRANCH 115KV (0475)	8/18/2017 19:02	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63696	TIMBER SW STA - TIMBER ENERGY 69KV RADIAL (JH-2)	8/21/2017 10:08	LINE - CUSTOMER - GENERATION	- -		0
63839	BRADFORDVILLE WEST-HAVANA 115KV (BWH-1)	8/31/2017 17:55	LINE - WEATHER -	- -		0
63840	HAVANA-QUINCY CK#1 115KV (HQ-1)	8/31/2017 17:55	LINE - WEATHER -	- -		0

63842	HAVANA - TALLAHASSEE 69KV (TQ-HH-1)	8/31/2017 17:55	LINE - WEATHER -	LINE - EQUIPMENT - CONDUCTOR/STATIC	24224	393069.3
63866	AVON PARK PL - WAUCHULA 69KV (APW-1)	9/1/2017 23:12	LINE - PUBLIC INTERFERENCE - VEHICLE	LINE - PUBLIC INTERFERENCE - VEHICLE	0	5446
63958	OCALA AIRPORT 69KV (7988)	9/10/2017 13:16	LINE - TREE -	- -		0
64004	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	9/10/2017 21:06	LINE - WEATHER - MAJOR STORM - HURRICANE	- -		0
64169	BARTOW PLANT - NORTHEAST UG8 230KV (UGBNU-8)	9/11/2017 5:30	LINE - OPERATIONAL - SYSTEM VOLTAGE LIMIT MITIGATION	LINE - OPERATIONAL - SYSTEM VOLTAGE LIMIT MITIGATION		0
61995	OKAHUMPKA 69KV (0278)	5/13/2017 15:37	SUB - EQUIPMENT - INSULATOR - CONTAMINATION	SUB - EQUIPMENT - INSULATOR - CONTAMINATION	220088	220088
63976	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	9/10/2017 20:23	LINE - WEATHER -	- -		0
63567	CARRABELLE - CRAWFORDVILLE 69KV (JA-2)	8/12/2017 11:27	LINE - LIGHTNING -	- -		0
63568	COUNTRY OAKS - DUNDEE 69KV (DCO-1)	8/12/2017 15:58	LINE - LIGHTNING -	- -		0
63569	COUNTRY OAKS - DUNDEE 69KV (DCO-1)	8/12/2017 16:04	LINE - LIGHTNING -	- -		0
63571	NORTH BARTOW - ORANGE SWITCHING STA 69KV (FMB-3)	8/12/2017 17:31	LINE - LIGHTNING -	- -		0
63572	FROSTPROOF - LAKE WALES 69KV (AL-3)	8/12/2017 17:48	LINE - LIGHTNING -	- -		0
63573	CAMP LAKE - HOWEY BKR STA (SEC)69KV (CLL-1)	8/12/2017 18:34	LINE - LIGHTNING -	- -		0
63580	NEW RIVER - CABBAGE HILL (TECO) 69KV (TZ-3)	8/13/2017 12:03	LINE - LIGHTNING -	- -		0
63625	ROSS PRAIRIE - SILVER SPRINGS 69KV (IO-4)	8/16/2017 12:56	LINE - LIGHTNING -	- -		0
63626	JACKSON BLUFF 69KV (0078)	8/16/2017 19:24	SUB - CUSTOMER - GENERATION	- -		0
63644	RIO PINAR PL - EAST ORANGE 69KV (FTR-3)	8/17/2017 17:50	LINE - LIGHTNING -	- -		0

63645	NORTH BARTOW - WEST LAKE WALES 69KV (BWL-2)	8/17/2017 17:46	LINE - LIGHTNING -	- -		0
63648	OCCIDENTAL #1 115KV (0177)	8/17/2017 17:50	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63815	CENTRAL FLORIDA 500KV (0170)	8/30/2017 10:09	SUB - EQUIPMENT - TRANSFORMER - OTHER	SUB - HUMAN ERROR - WIRING		0
63931	LAKE WALES - WEST LAKE WALES CKT#1 69KV (WLLW-1)	8/31/2017 22:10	LINE - LIGHTNING -	SUB - EQUIPMENT - BREAKER/TRANS - OTHER		0
63959	GATEWAY - ULMERTON 115KV (HD-5)	9/10/2017 15:07	LINE - WEATHER -	- -		0
63939	OCC SWIFT CREEK #1 - OCC SWIFT CREEK #2 115KV (SCSC-1)	9/9/2017 7:14	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63896	TAYLOR AVE - WALSINGHAM 69KV (DL-LTW-1)	9/5/2017 13:43	LINE - LIGHTNING -	RELAY - HUMAN ERROR - WIRING ERROR		0
64131	ANCLOTE PL - EAST CLEARWATER 230KV (ANEC-1)	9/11/2017 3:59	LINE - WEATHER - MAJOR STORM	- -		0
64314	OCCIDENTAL #1 115KV (0177)	9/13/2017 20:06	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64432	LAKE BRANCH 115KV (0475)	9/22/2017 3:06	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64433	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	9/22/2017 4:10	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64636	OCCIDENTAL #1 115KV (0177)	9/26/2017 13:47	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64711	AVON PARK PL - WAUCHULA 69KV (APW-1)	10/3/2017 16:22	LINE - EQUIPMENT - GROUND/GUY	LINE - EQUIPMENT - GROUND/GUY	6858	12576.2
64367	LIBERTY 69KV (0466)	9/17/2017 14:00	LINE - WEATHER - MAJOR STORM - HURRICANE	- -		0
64372	OCCIDENTAL #1 115KV (0177)	9/17/2017 22:51	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64579	HINES - WEST LAKE WALES 230KV (HWLW-1)	9/25/2017 1:08	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -		0

64649	MANLEY ROAD 115KV (0004)	9/27/2017 15:40	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
64668	FORT GREEN #6 69KV (0437)	9/30/2017 4:55	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
64667	FORT GREEN #10 69KV (0463)	9/29/2017 14:01	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
64672	MEADOW WOODS SOUTH - HUNTER CREEK 69KV (MSH-1)	10/1/2017 12:57	LINE - UNKNOWN -	- -	0
64708	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	10/3/2017 14:11	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -	0
64716	AVON PARK PL - WAUCHULA 69KV (APW-1)	10/3/2017 19:51	LINE - EQUIPMENT - GROUND/GUY	- -	0
64769	FROSTPROOF - LAKE WALES 69KV (AL-3)	10/7/2017 17:46	LINE - LIGHTNING -	- -	0
64772	CRYSTAL RIVER SOUTH - HOMOSASSA 115KV RADIAL (TROPIC TERRACE NO) (HCR-HT-1)	10/7/2017 19:32	LINE - WEATHER -	- -	0
64774	GINNIE - TRENTON 69KV (IS-4)	10/7/2017 20:20	LINE - WEATHER -	- -	0
61832	BEACON HILL - PORT ST JOE 69KV RADIAL (PBH-1)	5/4/2017 8:44	LINE - WEATHER -	- -	0
64271	DEBARY PL - NORTH LONGWOOD 230KV (DL-1)	9/12/2017 15:15	LINE - OTHER -	- -	0
64429	BAY HILL 69KV (0208)	9/21/2017 21:13	LINE - UNKNOWN -	- -	0
64435	LAKE BRANCH 115KV (0475)	9/22/2017 4:25	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
64576	FORT GREEN #10 69KV (0463)	9/24/2017 13:18	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
60912	OKAHUMPKA - LAKE COUNTY RR 69KV (OLR-1)	2/21/2017 11:18	SUB - CUSTOMER - GENERATION	SUB - CUSTOMER - GENERATION	0
64334	OCCIDENTAL #1 115KV (0177)	9/14/2017 13:05	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
64891	FT WHITE - SUWANNEE RIVER 230KV (SF2-1)	10/17/2017 11:50	RELAY - EQUIPMENT - OTHER	RELAY - EQUIPMENT - OTHER	0
64359	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	9/15/2017 16:38	LINE - CUSTOMER - INDUSTRIAL	SUB - EQUIPMENT - CT	0

64394	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	9/19/2017 11:38	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64860	FT WHITE - JASPER 69KV (JF-1)	10/13/2017 14:58	LINE - WEATHER -	- -		0
65094	PIEDMONT 230KV (0064)	10/28/2017 13:10	LINE - PUBLIC INTERFERENCE - VEHICLE	SUB - EQUIPMENT - BREAKER/TRANS - MECHANICAL		0
65098	TURNER PL - DELTONA EAST 115KV (TDE-1)	10/29/2017 12:05	LINE - UNKNOWN -	- -		0
65130	LAKE BRANCH 115KV (0475)	10/31/2017 20:11	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65131	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	11/1/2017 1:42	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65138	FOLEY 69KV (0247)	11/1/2017 9:11	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65143	MONASTERY 115KV (0435)	10/24/2017 16:18	LINE - EQUIPMENT - JUMPER	RELAY - UNKNOWN -		0
65144	CASSADAGA 115KV (0397)	10/24/2017 16:18	LINE - EQUIPMENT - JUMPER	- -		0
61219	OCCIDENTAL #1 115KV (0177)	3/26/2017 16:28	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61269	OCCIDENTAL #1 115KV (0177)	3/29/2017 7:39	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64236	GATEWAY - ULMERTON 115KV (HD-5)	9/11/2017 2:02	RELAY - EQUIPMENT - SUPV	- -		0
64798	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	10/9/2017 1:15	LINE - CUSTOMER - INDUSTRIAL	- -		0
64842	LAKE OF THE HILLS 69KV (0207)	9/1/2017 1:05	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	81594	81594
64846	CARRABELLE - GUMBAY 69KV (GBC-1)	10/11/2017 19:27	LINE - WEATHER -	- -		0
64890	SUWANNEE PEAKERS PL - SUWANNEE RIVER 230KV (SPS-1)	10/17/2017 11:50	RELAY - EQUIPMENT - OTHER	RELAY - EQUIPMENT - OTHER		0
64914	WEIRSDALE 69KV (0250)	10/14/2017 3:40	SUB - ANIMAL - RACCOON	SUB - ANIMAL - RACCOON		0

60659	FT WHITE - JASPER 69KV (JF-1)	1/26/2017 10:15	LINE - WEATHER -	SUB - PLANNED - MAINTENANCE AND CONSTRUCTION	0	18124
61539	CASSADAGA - DELTONA 115KV (DC-1)	4/15/2017 14:55	LINE - OTHER - WILDFIRE	- -		0
61610	MULBERRY 69KV (0424)	4/20/2017 15:53	SUB - HUMAN ERROR - CONTRACTOR - MAINTENANCE	SUB - HUMAN ERROR - CONTRACTOR - MAINTENANCE		0
63291	OCCIDENTAL #1 115KV (0177)	7/25/2017 18:05	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63292	SUWANNEE RIVER PL - JASPER 115KV (SW-JQ-2)	7/25/2017 19:34	LINE - LIGHTNING -	- -		0
63698	OVIEDO - WINTER SPRINGS 69KV (WO-7)	8/21/2017 12:57	LINE - LIGHTNING -	- -		0
64988	DELTONA 115KV (0047)	10/24/2017 16:18	LINE - EQUIPMENT - JUMPER	RELAY - UNKNOWN - UNDER INVESTIGATION	2414934	2414934
62089	SORRENTO - WELCH ROAD 230KV (PS-2)	5/21/2017 15:32	LINE - PUBLIC INTERFERENCE - VEHICLE	LINE - EQUIPMENT - INSULATOR		0
64339	OCCIDENTAL #1 115KV (0177)	9/14/2017 16:50	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64834	BROOKER CREEK 115KV (0373)	10/9/2017 13:50	SUB - EQUIPMENT - TRANSFORMER - OTHER	SUB - EQUIPMENT - TRANSFORMER - OTHER	1284227	1284227
64836	NORTHEAST 230KV (0077)	10/11/2017 6:20	SUB - EQUIPMENT - TRANSFORMER - ARRESTER	SUB - EQUIPMENT - TRANSFORMER - ARRESTER		0
65080	BAY HILL 69KV (0208)	10/26/2017 20:55	SUB - EQUIPMENT - TRANSFORMER - OTHER	- -		0
65086	FORT GREEN #10 69KV (0463)	10/27/2017 15:46	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65128	WOODSMERE - PINE HILLS (OUC) 230KV (WX-1)	10/31/2017 16:47	LINE - PLANNED - EMERGENT	- -		0
61312	OCCIDENTAL #1 115KV (0177)	4/1/2017 11:32	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

60882	CROSSROADS - KENNETH UG 115KV (KXUG)	2/15/2017 23:39	SUB - HUMAN ERROR - WIRING	SUB - HUMAN ERROR - WIRING	479807	479807
61087	OCC SWIFT CREEK #1 - OCC SWIFT CREEK #2 115KV (SCSC-1)	3/13/2017 18:26	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61098	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	3/14/2017 14:49	LINE - ANIMAL - BIRD - CLEARANCE	- -		0
61113	ANDERSEN - BUSHNELL SEC 69KV (BCF-1)	3/15/2017 20:27	LINE - CUSTOMER - REA/EMC	LINE - CUSTOMER - REA/EMC		0
61115	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	3/16/2017 12:15	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61201	PLYMOUTH - ZELLWOOD 69KV (EP-4)	3/22/2017 20:26	LINE - UNKNOWN -	- -		0
62426	CLARCONA - OCOEE 69KV (OCC-1)	6/13/2017 14:54	LINE - LIGHTNING -	- -		0
62432	FISHEATING CREEK - SUN N LAKES 69KV (ALP-SUC-1)	6/13/2017 16:04	LINE - LIGHTNING -	LINE - LIGHTNING -	326090	408863
62444	LAKE BRANCH 115KV (0475)	6/14/2017 3:54	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62492	OCCIDENTAL #1 115KV (0177)	6/15/2017 17:43	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62522	MEADOW WOODS SOUTH - HUNTER CREEK 69KV (MSH-1)	6/16/2017 14:28	LINE - LIGHTNING -	- -		0
62527	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	6/17/2017 15:57	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62537	FISHEATING CREEK - SUN N LAKES 69KV (ALP-SUC-1)	6/18/2017 13:42	LINE - LIGHTNING -	- -		0
62680	CAMP LAKE - HOWEY BKR STA (SEC)69KV (CLL-1)	6/26/2017 14:57	LINE - LIGHTNING -	- -		0
62726	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	6/29/2017 19:35	LINE - WEATHER -	- -		0
62727	FORT GREEN #11 69KV (0472)	6/29/2017 19:38	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62728	LEESBURG - OKAHUMPKA 69KV (CLL-2)	6/29/2017 20:31	LINE - LIGHTNING -	- -		0

62738	DUNNELLON TOWN - RAINBOW LK EST SEC 69KV RADIAL (DR-1)	6/30/2017 16:37	LINE - LIGHTNING -	- -		0
62739	BONNET CREEK - LAKE BRYAN 69KV (ICBL-2)	6/30/2017 17:02	LINE - LIGHTNING -	SUB - EQUIPMENT - BREAKER/TRANS - MECHANICAL		0
62744	FLORIDA GAS TRANSMISSION EAST - WEWAHOOTEE 69KV (RW-3)	6/30/2017 20:35	LINE - WEATHER -	- -		0
63395	AVON PARK PL - WAUCHULA 69KV (APW-1)	8/2/2017 13:40	LINE - WEATHER -	- -		0
62112	KENNETH 115KV (0174)	5/15/2017 13:16	RELAY - HUMAN ERROR - SETTING ERROR	RELAY - HUMAN ERROR - SETTING ERROR	31165	31165
64340	BAY RIDGE 69KV (0351)	9/1/2017 21:59	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	49166	49166
65156	TURNER PLANT 115KV (0501)	10/24/2017 18:39	SUB - UNKNOWN -	- -		0
65157	MYRTLE LAKE 230KV (0394)	10/27/2017 10:29	LINE - EQUIPMENT - CONDUCTOR/STATIC	LINE - EQUIPMENT - CONDUCTOR/STATIC		0
65158	LAKE WILSON 69KV (0156)	10/27/2017 14:25	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	50368	50368
65159	HUDSON - PASCO COUNTY RR 115KV (BWR-3)	11/2/2017 13:54	LINE - CUSTOMER - GENERATION	LINE - CUSTOMER - GENERATION		0
65198	MANLEY ROAD 115KV (0004)	11/4/2017 11:17	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62167	CENTRAL PARK - PARKWAY 69KV (WR-1)	5/24/2017 20:25	LINE - LIGHTNING -	SUB - EQUIPMENT - SWITCH		0
62201	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	5/27/2017 20:57	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62221	AVON PARK PL - WAUCHULA 69KV (APW-1)	5/28/2017 21:10	LINE - WEATHER -	- -		0
62249	TROPIC TERRACE 115KV (0281)	4/7/2017 12:30	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	19565	19565

62353	FROSTPROOF - LAKE WALES 69KV (AL-3)	6/6/2017 16:14	LINE - LIGHTNING -	- -		0
62415	SUN N LAKES 69KV (0268)	6/9/2017 17:13	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - PROTECTION/CONTROL	6422	6422
62477	PIEDMONT 230KV (0064)	6/15/2017 9:46	SUB - ANIMAL - SQUIRREL	SUB - ANIMAL - SQUIRREL	198882	198882
62521	MULBERRY - NORTHWEST (CITY OF BARTOW) 69KV (MSW-NWSW-1)	6/16/2017 13:41	LINE - LIGHTNING -	- -		0
62619	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	6/22/2017 3:21	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61414	DALLAS - SILVER SPRINGS SHORES 69KV (DW-OCF-1)	4/6/2017 4:29	LINE - WEATHER -	- -		0
61421	FROSTPROOF - LAKE WALES 69KV (AL-3)	4/6/2017 8:01	LINE - LIGHTNING -	- -		0
61471	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	4/9/2017 11:26	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61536	FORT GREEN #6 69KV (0437)	4/14/2017 14:26	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62073	VANDOLAH - MYAKKA PREC 69KV RADIAL (VHC-1)	5/20/2017 19:52	LINE - LIGHTNING -	- -		0
62087	PIEDMONT 230KV (0064)	5/21/2017 10:39	LINE - CUSTOMER - DISTRIBUTION	RELAY - HUMAN ERROR - SETTING ERROR	174920	174920
62115	LAKE BRYAN - DISNEY WORLD LAKE BUENA VISTA 69KV (LBV-1)	5/22/2017 19:41	LINE - LIGHTNING -	LINE - LIGHTNING -		0
62116	BAY HILL 69KV (0208)	5/22/2017 19:40	LINE - LIGHTNING -	- -		0
62117	FORT GREEN #10 69KV (0463)	5/23/2017 6:00	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62149	HIGH SPRINGS - HULL ROAD 69KV (GH-1)	5/24/2017 9:04	LINE - WEATHER -	- -		0
63072	INVERNESS - LECANTO 115KV (IL-1)	7/15/2017 17:27	LINE - LIGHTNING -	- -		0

63090	OCCIDENTAL #1 115KV (0177)	7/17/2017 0:59	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63102	CASSADAGA - DELTONA 115KV (DC-1)	7/17/2017 17:28	LINE - WEATHER -	- -		0
63105	MEADOW WOODS SOUTH 230KV (0378)	7/17/2017 18:06	LINE - LIGHTNING -	- -		0
63112	CENTRAL PLAZA 115KV (0057)	7/18/2017 11:11	RELAY - HUMAN ERROR - OTHER	- -		0
63176	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	7/20/2017 19:25	LINE - LIGHTNING -	- -		0
63178	TAFT INDUSTRIAL 69KV (0350)	7/20/2017 19:58	SUB - EQUIPMENT - BREAKER/TRANS - OTHER	RELAY - EQUIPMENT - OTHER		0
63226	MANLEY ROAD 115KV (0004)	7/23/2017 7:19	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65199	FORT GREEN #6 69KV (0437)	11/5/2017 6:49	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65200	OCCIDENTAL #1 115KV (0177)	11/5/2017 9:18	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65201	FORT GREEN #6 69KV (0437)	11/5/2017 10:40	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62480	CROSS CITY 69KV (0081)	6/15/2017 14:40	LINE - LIGHTNING -	- -		0
62517	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	6/16/2017 12:33	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62520	LAKE BRANCH 115KV (0475)	6/16/2017 13:40	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62736	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	6/30/2017 12:04	LINE - CUSTOMER - INDUSTRIAL	- -		0
62737	FLORIDA GAS TRANSMISSION EAST - WEWAHOOTEE 69KV (RW-3)	6/30/2017 15:28	LINE - WEATHER -	- -		0
62747	VANDOLAH - WAUCHULA 69KV (VW-1)	6/30/2017 20:30	LINE - EQUIPMENT - POLE ROT	LINE - EQUIPMENT - POLE ROT	7217	7217
62762	CIRCLE SQUARE 69KV (0354)	7/2/2017 16:46	LINE - LIGHTNING -	- -		0
62765	DUNDEE - LAKE MARION 69KV (DLM-1)	7/2/2017 22:25	LINE - LIGHTNING -	- -		0

62781	LEESBURG - OKAHUMPKA 69KV (CLL-2)	7/3/2017 15:09	LINE - LIGHTNING -	- -		0
62915	NEW RIVER - HANDCART (TECO) 69KV (TZ-4)	7/9/2017 20:16	LINE - LIGHTNING -	LINE - LIGHTNING -	0	14901.7
62954	ATWATER - US HYDRO WOODRUFF DAM 115KV (QX-2)	7/11/2017 9:09	LINE - CUSTOMER - GENERATION	LINE - CUSTOMER - GENERATION		0
62983	OCCIDENTAL #1 115KV (0177)	7/12/2017 3:11	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62992	FISHEATING CREEK - LAKE PLACID 69KV (ALP-2)	7/12/2017 13:44	LINE - LIGHTNING -	- -		0
63026	DUNNELLON TOWN - HOLDER 69KV (HDU-1)	7/13/2017 14:42	LINE - LIGHTNING -	- -		0
63038	FT WHITE - JASPER WEST CKT 115KV (IJ-2)	7/13/2017 19:28	LINE - WEATHER -	- -		0
63450	COUNTRY OAKS - EAST LAKE WALES 69KV (LEL-1)	8/5/2017 17:56	LINE - LIGHTNING -	- -		0
62152	CRYSTAL RIVER PL - BRONSON 230KV - CREW88 (CF-1)	5/24/2017 12:09	LINE - LIGHTNING -	- -		0
63056	APOPKA SOUTH - WOODSMERE 69KV (WP-2)	7/14/2017 17:20	LINE - LIGHTNING -	- -		0
63059	BARTOW PLANT - NORTHEAST UG7 230KV (UGBNU-7)	7/15/2017 5:37	LINE - OPERATIONAL - SYSTEM VOLTAGE LIMIT MITIGATION	- -		0
63122	INTERCESSION CITY PL - CABBAGE ISLAND 69KV (ICP-1)	7/18/2017 18:19	LINE - LIGHTNING -	- -		0
63138	LAKE BRANCH 115KV (0475)	7/19/2017 15:43	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63194	FROSTPROOF - LAKE WALES 69KV (AL-3)	7/21/2017 13:32	LINE - WEATHER -	- -		0
63224	CRYSTAL RIVER EAST - INGLIS CKT1 115KV (IT-CKT1)	7/23/2017 6:27	LINE - LIGHTNING -	- -		0
63248	FT WHITE - JASPER EAST CKT 115KV (IJ-1)	7/23/2017 14:45	LINE - LIGHTNING -	- -		0
63256	CRYSTAL RIVER EAST - INGLIS CKT2 115KV (IT-CKT2)	7/24/2017 2:37	LINE - LIGHTNING -	- -		0

64282	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	9/13/2017 2:26	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64502	CASSADAGA - SMYRNA UTILITIES 115KV (CNS-1)	9/22/2017 14:13	LINE - WEATHER -	- -		0
64575	OCCIDENTAL #1 115KV (0177)	9/24/2017 11:58	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
64578	FT MEADE - WEST LAKE WALES 230KV (FWL-1)	9/24/2017 20:19	RELAY - EQUIPMENT - RELAY PROBLEM	- -		0
61365	DINNER LAKE - PHILLIPS 69KV (PDL-1)	4/4/2017 11:18	LINE - UNKNOWN -	- -		0
62155	IDYLWILD - WILLISTON 69KV (SI-3)	5/24/2017 12:26	SUB - EQUIPMENT - FUSE MISOPERATION	- -		0
62156	REDDICK - WILLISTON 69KV (SI-5)	5/24/2017 12:29	SUB - EQUIPMENT - FUSE MISOPERATION	- -		0
62244	BELLEVIEW 69KV (0370)	1/22/2017 17:14	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER	97394	97394
62358	DALLAS - SILVER SPRINGS SHORES 69KV (DW-OCF-1)	6/7/2017 6:47	LINE - WEATHER -	- -		0
62631	BROOKSVILLE - FLORIDA ROCK 69KV RADIAL (BFR-1)	6/22/2017 18:27	LINE - LIGHTNING -	- -		0
62675	VANDOLAH - WAUCHULA 69KV (VW-1)	6/25/2017 21:31	LINE - WEATHER -	- -		0
62692	AVON PARK PL - WAUCHULA 69KV (APW-1)	6/27/2017 14:49	LINE - LIGHTNING -	LINE - LIGHTNING -	2516	7233
62792	CONWAY - PINECASTLE 69KV (WR-4)	7/4/2017 17:36	LINE - LIGHTNING -	- -	0	0
62798	TAVARES 69KV (0479)	7/5/2017 7:43	LINE - PLANNED - MAINTENANCE AND CONSTRUCTION	LINE - EQUIPMENT - SWITCH		45660
62809	TRENTON 69KV (0076)	7/5/2017 16:17	LINE - EQUIPMENT - CONDUCTOR/STATIC	LINE - EQUIPMENT - CONDUCTOR/STATIC	30720	481553
62818	OCCIDENTAL #1 115KV (0177)	7/5/2017 17:49	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61217	FORT GREEN #6 69KV (0437)	3/25/2017 8:06	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

62110	PORT RICHEY WEST 115KV (0164)	4/26/2017 7:16	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	85157	85157
62136	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	5/23/2017 19:33	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63055	CIRCLE SQUARE 69KV (0354)	7/14/2017 16:53	LINE - LIGHTNING -	- -		0
63069	ATWATER - US HYDRO WOODRUFF DAM 115KV (QX-2)	7/15/2017 15:55	LINE - LIGHTNING -	- -		0
63071	APALACHICOLA - CARRABELLE 69KV (JA-1)	7/15/2017 17:21	LINE - LIGHTNING -	- -		0
63121	DALLAS - SILVER SPRINGS SHORES 69KV (DW-OCF-1)	7/18/2017 18:15	LINE - LIGHTNING -	- -		0
63133	CRAWFORDVILLE - ST MARKS EAST 230KV (CP-1)	7/10/2017 13:50	RELAY - MISOPERATION -	- -		0
63174	BAY HILL - VINELAND 69KV (BHV-1)	7/20/2017 17:24	LINE - LIGHTNING -	- -		0
63214	SUN N LAKES - DINNER LAKE (TECO) 69KV (ALP-3)	7/22/2017 13:51	LINE - WEATHER -	- -		0
63228	INTERCESSION CITY PLANT 230KV (0166)	7/23/2017 7:59	SUB - CUSTOMER - GENERATION	SUB - CUSTOMER - GENERATION		0
63722	SUWANNEE RIVER PL - SUWANNEE RIVER 115KV (SF-3)	7/25/2017 19:34	RELAY - MISOPERATION -	- -		0
63752	UCF 69KV (0200)	8/25/2017 4:00	LINE - LIGHTNING -	SUB - EQUIPMENT - LIGHTNING ARRESTER		0
65162	LEESBURG 69KV (0045)	11/2/2017 12:53	SUB - HUMAN ERROR - CONTRACTOR - CONSTRUCTION	SUB - HUMAN ERROR - CONTRACTOR - CONSTRUCTION		1
65219	HORSE CREEK #2 69KV (0409)	11/5/2017 18:31	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60438	RED LEVEL (WREC) REA 69KV (6763)	1/1/2017 23:57	LINE - EQUIPMENT - CONDUCTOR/STATIC	LINE - EQUIPMENT - CONDUCTOR/STATIC	6139	6139
60442	LIBERTY 69KV (0466)	1/3/2017 0:26	LINE - WEATHER -	- -		0
60444	OCCIDENTAL #1 115KV (0177)	1/3/2017 2:39	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

61059	TAFT 69KV (0163)	3/6/2017 14:11	RELAY - HUMAN ERROR - SETTING ERROR	RELAY - HUMAN ERROR - SETTING ERROR	43683	43683
61708	WINTER GARDEN 69KV (0311)	4/20/2017 8:56	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - PROTECTION/CONTROL	10720	10720
62224	EATONVILLE - WINTER PARK 69KV (WO-3)	5/29/2017 7:52	SUB - ANIMAL - SQUIRREL	SUB - ANIMAL - SQUIRREL		0
62255	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	5/30/2017 21:08	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62409	FORT GREEN #6 69KV (0437)	6/12/2017 18:24	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62418	COUNTRY OAKS - DUNDEE 69KV (DCO-1)	6/13/2017 13:30	LINE - LIGHTNING -	- -		0
62425	CLARCONA - OCOEE 69KV (OCC-1)	6/13/2017 14:39	LINE - LIGHTNING -	- -		0
62428	FISHEATING CREEK - SUN N LAKES 69KV (ALP-SUC-1)	6/13/2017 15:49	LINE - LIGHTNING -	- -		0
62429	VANDOLAH - MYAKKA PREC 69KV RADIAL (VHC-1)	6/13/2017 15:47	LINE - WEATHER -	- -		0
62857	LAKE BRANCH 115KV (0475)	7/7/2017 16:42	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62854	EAST LAKE WALES 69KV (0223)	7/7/2017 13:13	LINE - WEATHER -	- -		0
62895	BARCOLA - FT MEADE 69KV (BF-1)	7/8/2017 19:00	LINE - LIGHTNING -	- -		0
62921	OCCIDENTAL #1 115KV (0177)	7/10/2017 9:38	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
62930	HOLDER - DUNNELLON 69KV (HDT-1)	7/10/2017 15:28	LINE - LIGHTNING -	- -		0
62957	WEST DAVENPORT 69KV (0380)	7/4/2017 15:56	LINE - LIGHTNING -	SUB - EQUIPMENT - BREAKER/DIST - ELECTRICAL	48488	48488
63104	DEBARY PL - LAKE EMMA 230KV (DWS-1)	7/17/2017 17:59	LINE - LIGHTNING -	- -		0
63169	FROSTPROOF - LAKE WALES 69KV (AL-3)	7/20/2017 15:54	LINE - LIGHTNING -	- -		0

63172	AVON PARK PL - WAUCHULA 69KV (APW-1)	7/20/2017 16:13	LINE - WEATHER -	- -		0
63222	FT GREEN SPRINGS - DUETTE PREC 69KV RADIAL (FSD-1)	7/22/2017 18:45	LINE - LIGHTNING -	- -		0
63225	CRYSTAL RIVER EAST - INGLIS CKT2 115KV (IT-CKT2)	7/23/2017 6:27	LINE - LIGHTNING -	- -		0
63257	NORTH BARTOW - PEBBLEDALE (TECO) 230KV (WLXT-1)	7/24/2017 3:24	LINE - NEIGHBORING UTILITY - EQUIPMENT	LINE - NEIGHBORING UTILITY - EQUIPMENT		0
63346	FT WHITE - NEWBERRY 230KV (CF-3)	7/30/2017 5:18	SUB - EQUIPMENT - CCVT	- -		0
63349	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	7/30/2017 13:21	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63350	ALAFAYA - OVIEDO 69KV (AO-1)	7/30/2017 19:39	LINE - WEATHER -	- -		0
63353	VANDOLAH - CHARLOTTE (FPL) 230KV (VCX-1)	7/31/2017 6:35	LINE - WEATHER -	- -		0
63354	CRYSTAL RIVER PLANT 230KV (0171)	7/30/2017 5:18	SUB - EQUIPMENT - PT	- -		0
63361	BAYVIEW 115KV (0050)	7/30/2017 6:40	SUB - EQUIPMENT - INSULATOR	SUB - EQUIPMENT - INSULATOR	42870	42870
63419	BELLEVIEW 69KV (0370)	6/15/2017 16:47	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER	95976	95976
63763	PEACOCK 69KV (0461)	8/26/2017 15:31	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
63765	AVON PARK PL - WAUCHULA 69KV (APW-1)	8/18/2017 18:50	LINE - EQUIPMENT - POLE ROT	LINE - EQUIPMENT - POLE ROT	65450	65450
63766	U.C.F. NORTH 69KV (0008)	8/26/2017 23:45	LINE - LIGHTNING -	- -		0
64707	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	10/3/2017 14:00	LINE - WEATHER -	- -		0
64731	OCCIDENTAL #1 115KV (0177)	10/5/2017 1:24	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60445	FORT WHITE 230KV (0111)	1/3/2017 2:42	LINE - WEATHER -	- -		0
60446	FT WHITE - JASPER EAST CKT 115KV (IJ-1)	1/3/2017 3:26	LINE - WEATHER -	- -		0
60447	FT WHITE - JASPER WEST CKT 115KV (IJ-2)	1/3/2017 3:26	LINE - WEATHER -	- -		0

60448	FT WHITE - JASPER WEST CKT 115KV (IJ-2)	1/3/2017 4:47	LINE - WEATHER -	- -		0
60487	CYPRESSWOOD - HAINES CITY 69KV (ICLW-2)	1/8/2017 4:17	LINE - EQUIPMENT - INSULATOR	LINE - EQUIPMENT - INSULATOR	342	345
60479	CRYSTAL RIVER PLANT 500KV (8920)	1/6/2017 22:32	SUB - EQUIPMENT - BREAKER/DIST - PREVENTABLE	SUB - EQUIPMENT - BREAKER/DIST - PREVENTABLE		0
60669	FT GREEN SPRINGS - VANDOLAH #2 CKT 69KV (VFGS-1)	1/29/2017 13:50	SUB - EQUIPMENT - LIGHTNING ARRESTER	- -		0
60675	FT GREEN SPRINGS - VANDOLAH #2 CKT 69KV (VFGS-1)	1/30/2017 12:31	SUB - EQUIPMENT - LIGHTNING ARRESTER	- -		0
60802	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	2/8/2017 0:37	LINE - WEATHER -	- -		0
60874	SUWANNEE RIVER - LIVE OAK (FP&L) 115KV (SF-1)	2/15/2017 10:26	LINE - WEATHER -	- -		0
60880	FROSTPROOF - LAKE WALES 69KV (AL-3)	2/15/2017 14:06	LINE - OTHER - WILDFIRE	- -		0
61089	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	3/13/2017 20:22	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60475	BROOKSVILLE - BUSHNELL EAST 69KV (BCF-BW-1)	1/6/2017 17:23	LINE - WEATHER -	- -		0
60481	CRYSTAL RIVER EAST - INGLIS CKT1 115KV (IT-CKT1)	1/7/2017 2:04	LINE - WEATHER -	- -		0
60482	DUNNELLON TOWN - RAINBOW LK EST SEC 69KV RADIAL (DR-1)	1/7/2017 3:27	LINE - WEATHER -	- -		0
60483	FISHEATING CREEK - SUN N LAKES 69KV (ALP-SUC-1)	1/7/2017 7:19	LINE - WEATHER -	- -		0
60489	BAYBORO 115KV (0010)	1/8/2017 7:52	SUB - EQUIPMENT - TRANSFORMER - OTHER	SUB - EQUIPMENT - TRANSFORMER - OTHER	271175	271175
60537	NORTH BARTOW - PEBBLEDALE (TECO) 230KV (WLXT-1)	1/12/2017 2:50	SUB - OPERATIONAL - EMERGENCY	SUB - OPERATIONAL - EMERGENCY		0
60538	NORTH BARTOW - SOUTH ELOISE (TECO) 230KV (WLXT-2)	1/12/2017 2:50	SUB - OPERATIONAL - EMERGENCY	SUB - OPERATIONAL - EMERGENCY		0

60631	LAKE TARPON - ULMERTON 230KV (CC-NC-1)	1/23/2017 0:30	LINE - WEATHER -	LINE - EQUIPMENT - INSULATOR		0
60634	OCCIDENTAL #1 115KV (0177)	1/23/2017 12:50	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61070	FORT GREEN #6 69KV (0437)	3/10/2017 6:34	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61195	PORT ST. JOE INDUSTRIAL 69KV (0152)	2/8/2017 8:27	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE	468	468
60746	PEACOCK 69KV (0461)	2/1/2017 4:49	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60771	OCCIDENTAL #1 115KV (0177)	2/5/2017 17:24	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60772	OCCIDENTAL #1 115KV (0177)	2/5/2017 17:24	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60837	BARNUM CITY - CITRUS CITY 69KV (ICB-3)	2/10/2017 16:40	LINE - EQUIPMENT - CONDUCTOR/STATIC	RELAY - HUMAN ERROR - INCORRECT SETTING APPLIED		0
60841	ROSS PRAIRIE 230KV (0407)	2/12/2017 11:59	LINE - WEATHER -	SUB - EQUIPMENT - LIGHTNING ARRESTER	9654	23701.5
60873	LAKE BRANCH 115KV (0475)	2/15/2017 10:08	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
60876	OCCIDENTAL SWIFT CREEK #1 - OCCIDENTAL METERING 115KV (JS-3)	2/15/2017 11:30	RELAY - HUMAN ERROR - SETTING ERROR	RELAY - HUMAN ERROR - SETTING ERROR	1360	1368
60677	U.C.F. NORTH 69KV (0008)	1/30/2017 14:37	LINE - UNKNOWN -	- -		0
60888	THIRTY SECOND STREET 115KV (0366)	2/4/2017 4:36	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - TRIP COIL	401969	401969
60905	LOUGHMAN 69KV (0444)	2/10/2017 16:40	LINE - EQUIPMENT - CONDUCTOR/STATIC	RELAY - HUMAN ERROR - INCORRECT SETTING APPLIED	228989	228989
60917	DUNEDIN 69KV (0059)	2/8/2017 23:25	SUB - EQUIPMENT - TRANSFORMER - OTHER	SUB - EQUIPMENT - TRANSFORMER - OTHER	18008	18008

61359	INGLIS MINING 115KV (0395)	4/4/2017 6:43	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61410	OCCIDENTAL #1 115KV (0177)	4/6/2017 1:17	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
61412	FT WHITE - JASPER 69KV (JF-1)	4/6/2017 1:41	LINE - LIGHTNING -	- -		0
65327	KATHLEEN - WEST SUB (CITY OF LAKELAND) 230KV (KWX-1)	11/13/2017 16:39	LINE - TREE - NON-PREVENTABLE	LINE - TREE - NON-PREVENTABLE		0
65598	BAYVIEW 115KV (0050)	12/12/2017 21:24	SUB - EQUIPMENT - TRANSFORMER - ARRESTER	SUB - EQUIPMENT - BREAKER/DIST - OTHER	55330	55330
65641	TROPIC TERRACE 115KV (0281)	12/12/2017 8:27	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE	39120	39120
65304	LAKE WALES - WEST LAKE WALES CKT#1 69KV (WLLW-1)	11/11/2017 15:20	LINE - WEATHER -	- -		0
65396	DISSTON 115KV (0015)	11/8/2017 5:04	LINE - CUSTOMER - DISTRIBUTION	SUB - ANIMAL - OTHER	51903	51903
65401	CHIEFLAND - INGLIS 69KV (IS-1)	11/22/2017 10:32	LINE - WEATHER -	- -		0
65424	WEST DAVENPORT 69KV (0380)	11/22/2017 23:52	SUB - EQUIPMENT - BREAKER/DIST - ELECTRICAL	SUB - EQUIPMENT - BREAKER/DIST - ELECTRICAL	145580	145580
65435	BELLEAIR 69KV (0055)	10/29/2017 16:54	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - ELECTRICAL	78958	78958
65440	CRYSTAL RIVER PL - BRONSON 230KV - CREW88 (CF-1)	11/28/2017 16:00	LINE - EQUIPMENT - CONDUCTOR/STATIC	LINE - PLANNED - EMERGENT		0
65268	SOUTH FORT MEADE 115KV (0360)	11/7/2017 18:21	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65601	TIGER BAY COGEN 230KV (0230)	12/13/2017 12:09	SUB - CUSTOMER - GENERATION	SUB - CUSTOMER - GENERATION		0
65617	ODESSA - TARPON SPRINGS 69KV (TZ-2)	12/14/2017 13:51	LINE - LIGHTNING -	- -		0
65294	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	11/10/2017 4:43	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65295	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	11/10/2017 6:22	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

65423	DUNNELLON TOWN 69KV (0035)	11/13/2017 0:59	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - NON PREVENTABLE	126270	126270
65448	PASADENA - SEMINOLE 230KV (LSP-1)	11/29/2017 16:26	SUB - OPERATIONAL - EMERGENCY	SUB - OPERATIONAL - EMERGENCY		0
65549	HAINES CREEK - SORRENTO 230KV (CFS-2)	12/9/2017 0:10	LINE - LIGHTNING -	LINE - LIGHTNING -		0
65587	SAFETY HARBOR 115KV (0238)	12/11/2017 15:20	SUB - EQUIPMENT - SWITCH	SUB - EQUIPMENT - SWITCH	355415	355415
65589	LIBERTY 69KV (0466)	12/11/2017 19:45	LINE - CUSTOMER - GENERATION	- -		0
65606	OCCIDENTAL #1 115KV (0177)	12/14/2017 0:33	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65577	HINES ENERGY COMPLEX PL - FT MEADE 230KV (HEFM-1)	12/11/2017 2:46	RELAY - EQUIPMENT - FORIEGN MATERIAL	RELAY - EQUIPMENT - FORIEGN MATERIAL		0
65582	MANLEY ROAD 115KV (0004)	12/11/2017 10:13	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65624	FORT GREEN #11 69KV (0472)	12/15/2017 11:43	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65283	OCCIDENTAL #1 115KV (0177)	11/9/2017 6:10	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65302	OCCIDENTAL #1 115KV (0177)	11/11/2017 1:45	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65305	AVON PARK PL - FISHEATING CREEK 230KV (AFC-1)	11/11/2017 21:49	LINE - WEATHER -	- -		0
65657	BARTOW PLANT 230KV (0093)	12/21/2017 4:00	SUB - CUSTOMER - GENERATION	SUB - CUSTOMER - GENERATION		0
65660	ODESSA - TARPON SPRINGS 69KV (TZ-2)	12/21/2017 18:15	LINE - UNKNOWN - INVESTIGATION COMPLETE	SUB - EQUIPMENT - BREAKER/TRANS - OTHER	534439	534439
65679	LARGO 230KV (0123)	12/26/2017 15:29	SUB - ANIMAL - OTHER	SUB - EQUIPMENT - CT		0
65709	HUDSON 230KV (0273)	11/2/2017 13:54	RELAY - EQUIPMENT - RELAY PROBLEM	- -		0
65225	LAKE TARPON 500KV (0179)	11/5/2017 19:00	SUB - EQUIPMENT - BREAKER/TRANS - ELECTRICAL	SUB - EQUIPMENT - BREAKER/TRANS - ELECTRICAL		0

65250	FT WHITE - SUWANNEE AM CMT PL 115KV RADIAL (FWSAX-1)	11/6/2017 19:03	LINE - OPERATIONAL - OTHER	LINE - EQUIPMENT - SWITCH	0	443.6
65265	WINTER GARDEN 69KV (0311)	11/1/2017 14:00	LINE - EQUIPMENT - CONDUCTOR/STATIC	LINE - EQUIPMENT - CONDUCTOR/STATIC		0
65315	MARTIN WEST - SILVER SPRINGS 69KV (MS-1)	11/13/2017 13:15	LINE - WEATHER -	- -		0
65402	OCCIDENTAL #1 115KV (0177)	11/23/2017 5:16	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65664	40TH ST - NORTHEAST 230KV (NF-1)	12/22/2017 2:59	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -		0
65671	AVON PARK PL - FT MEADE 230KV (AF2-1)	12/23/2017 1:51	LINE - ANIMAL - BIRD - CLEARANCE	LINE - ANIMAL - BIRD - CLEARANCE		0
65687	PORT ST JOE - CALLAWAY (GULF PWR) 230KV (PX-1)	12/28/2017 11:30	LINE - WEATHER -	LINE - ANIMAL - OTHER		0
65349	TIMBER SW STA - TIMBER ENERGY 69KV RADIAL (JH-2)	11/16/2017 8:07	LINE - CUSTOMER - GENERATION	- -		0
65367	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	11/18/2017 9:24	LINE - CUSTOMER - INDUSTRIAL	- -		0
65665	FT MEADE - VANDOLAH 230KV (FV-1)	12/22/2017 8:09	LINE - UNKNOWN - INVESTIGATION COMPLETE	LINE - UNKNOWN - INVESTIGATION COMPLETE		0
65365	MANLEY ROAD 115KV (0004)	11/17/2017 10:20	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65301	FORT GREEN #4 69KV (0335)	11/10/2017 16:16	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65303	OCCIDENTAL #1 115KV (0177)	11/11/2017 10:01	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65705	TARPON SPRINGS 115KV (0019)	12/21/2017 18:16	SUB - EQUIPMENT - BREAKER/TRANS - OTHER	RELAY - OTHER - SYSTEM OPERATION		0
65475	JASPER - OCC SWIFT CREEK #1 115KV (JS-1)	12/3/2017 4:52	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -		0
65520	HORSE CREEK 69KV (0006)	12/5/2017 8:52	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

65557	FORT GREEN #10 69KV (0463)	12/9/2017 9:41	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
65596	NORTH BARTOW - PEBBLEDALE (TECO) 230KV (WLXT-1)	12/12/2017 14:24	LINE - NEIGHBORING UTILITY - EQUIPMENT	LINE - NEIGHBORING UTILITY - EQUIPMENT	0
65264	LOCKHART 230KV (0385)	10/31/2017 20:30	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	0
65398	MANLEY ROAD 115KV (0004)	11/21/2017 18:26	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
65470	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	12/2/2017 3:46	LINE - UNKNOWN -	- -	0
65543	LAKE BRANCH 115KV (0475)	12/7/2017 18:46	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
65548	HAINES CREEK - LEESBURG EAST 69KV (LE-2)	12/8/2017 23:35	LINE - LIGHTNING -	- -	0
65284	OCCIDENTAL #1 115KV (0177)	11/9/2017 7:32	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
65334	LIBERTY 69KV (0466)	11/14/2017 17:33	LINE - CUSTOMER - GENERATION	- -	0
65395	FORT GREEN #6 69KV (0437)	11/21/2017 10:13	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
65407	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	11/26/2017 9:50	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
65464	BONNET CREEK - LAKE BRYAN 69KV (ICBL-2)	12/1/2017 0:04	LINE - UNKNOWN -	- -	0
65550	AVON PARK PL - FISHEATING CREEK 230KV (AFC-1)	12/9/2017 4:01	LINE - LIGHTNING -	- -	0
65422	UNIVERSITY OF FLORIDA 69KV (0091)	11/27/2017 14:38	LINE - CUSTOMER - MUNICIPALITY	LINE - CUSTOMER - MUNICIPALITY	0
65463	U.C.F. NORTH 69KV (0008)	11/30/2017 21:40	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -	0
65474	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	12/3/2017 2:08	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0
65476	OCCIDENTAL #1 115KV (0177)	12/3/2017 20:43	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL	0

65471	OCCIDENTAL #1 115KV (0177)	12/2/2017 6:58	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65553	GA PACIFIC - WILCOX 69KV (WGP-1)	12/9/2017 7:20	LINE - UNKNOWN - INVESTIGATION COMPLETE	- -		0
65632	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	12/17/2017 6:30	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65523	LAKE OF THE HILLS 69KV (0207)	12/3/2017 1:39	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - BREAKER/DIST - MECHANICAL	40014	40014
65551	SUN N LAKES - DINNER LAKE (TECO) 69KV (ALP-3)	12/9/2017 4:03	LINE - LIGHTNING -	- -		0
65643	CENTRAL FLA - LEESBURG (CFLE) 69KV (CFLE-1)	12/19/2017 3:10	LINE - PUBLIC INTERFERENCE - VEHICLE	LINE - PUBLIC INTERFERENCE - VEHICLE		0
65663	PALM HARBOR - TARPON SPRINGS 69KV (ECTW-4)	12/21/2017 18:15	SUB - EQUIPMENT - BREAKER/DIST - OTHER	- -		0
65677	HOLOPAW - POINSETT (FP&L) 230KV (WLXF-2)	12/25/2017 15:21	SUB - EQUIPMENT - LIGHTNING ARRESTER	SUB - EQUIPMENT - LIGHTNING ARRESTER		0
65404	LAKE JOSEPHINE 69KV (GEC) (6882)	11/23/2017 21:40	SUB - ANIMAL - OTHER	SUB - ANIMAL - OTHER		404668
65403	OCCIDENTAL #1 115KV (0177)	11/23/2017 22:04	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0
65680	LARGO 230KV (0123)	12/27/2017 7:02	SUB - ANIMAL - OTHER	SUB - EQUIPMENT - CT		0
65343	SOUTH FORT MEADE 115KV (0360)	11/15/2017 12:53	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL		0

ATTACHMENT B

DEF Transmission Outages-Major Events Only

OUTAGE_ID	LOCATION	OUTAGE_START_TIME	INITIATINGCAUSE	SUSTAINEDCAUSE
60599	AVON PARK PL - WAUCHULA 69KV (APW-1)	1/22/2017 12:48	LINE - OPERATIONAL - EMERGENCY	LINE - EQUIPMENT - POLE ROT
60600	EAST CLEARWATER - LAKE TARPON 230KV (NC-LTC-1)	1/22/2017 12:59	LINE - EQUIPMENT - INSULATOR	LINE - EQUIPMENT - INSULATOR
60801	DUNNELLON TOWN - RAINBOW LK EST SEC 69KV RADIAL (DR-1)	2/7/2017 23:01	LINE - TREE - NON-PREVENTABLE	LINE - EQUIPMENT - CONDUCTOR/STATIC
60604	SUWANNEE RIVER PL - MADISON 115KV (SP-SUM-1)	1/22/2017 13:47	LINE - WEATHER -	- -
60627	OCC SWIFT CREEK #1 - SUWANNEE RIVER 115KV (SSC-1)	1/22/2017 17:21	LINE - WEATHER - WIND	RELAY - EQUIPMENT - RELAY PROBLEM
64220	ALDERMAN - CURLEW 115KV (HTW-1)	9/11/2017 14:14	SUB - WEATHER - MAJOR STORM - HURRICANE	SUB - WEATHER - MAJOR STORM - HURRICANE
60595	JACKSON BLUFF 69KV (0078)	1/22/2017 6:53	SUB - CUSTOMER - GENERATION	SUB - CUSTOMER - GENERATION
60606	LIBERTY 69KV (0466)	1/22/2017 14:46	LINE - TREE - NON-PREVENTABLE	LINE - CUSTOMER - GENERATION
60607	LIBERTY 69KV (0466)	1/22/2017 14:41	LINE - WEATHER -	- -
60609	IDYLWILD - WILLISTON 69KV (SI-3)	1/22/2017 14:53	LINE - TREE - NON-PREVENTABLE	LINE - TREE - NON-PREVENTABLE
60610	ATWATER - QUINCY 115KV (QX-1)	1/22/2017 15:01	LINE - WEATHER - WIND	LINE - TREE - NON-PREVENTABLE
60611	QUINCY - GRETNA TEC 69KV RADIAL (QX-3)	1/22/2017 15:00	LINE - WEATHER - WIND	LINE - CUSTOMER - REA/EMC
60617	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	1/22/2017 17:04	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
60618	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	1/22/2017 17:04	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
60619	OCCIDENTAL #1 115KV (0177)	1/22/2017 17:32	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
63954	OCALA AIRPORT 69KV (7988)	9/10/2017 11:36	LINE - TREE - NON-PREVENTABLE	- -
63968	SOUTH POLK - SOUTH FT MEADE 115KV RADIAL (AF2-2)	9/10/2017 19:38	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM

63983	NORTHEAST - PILSBURY 115KV (NP-1)	9/10/2017 20:40	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63969	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	9/10/2017 19:38	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
63971	HIGGINS PL - GRIFFIN 115KV (HG-1)	9/10/2017 19:53	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64083	ST JOHNS (SEC) - UMATILLA (SEC) 69KV (ED-4)	9/11/2017 1:56	- -	- -
64088	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	9/11/2017 2:04	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64269	COUNTRY OAKS - LAKE WALES 69KV (LEL-2)	9/10/2017 22:07	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64321	CRAWFORDVILLE 230KV (0147)	9/11/2017 18:02	SUB - WEATHER - MAJOR STORM - HURRICANE	SUB - WEATHER - MAJOR STORM - HURRICANE
64360	FORT GREEN SPRINGS 69KV (0439)	9/15/2017 19:19	LINE - WEATHER - MAJOR STORM	- -
60625	JASPER - OCC SWIFT CREEK #1 115KV (JS-1)	1/22/2017 17:21	LINE - WEATHER - WIND	RELAY - EQUIPMENT - RELAY PROBLEM
60628	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	1/22/2017 20:22	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
60629	OCCIDENTAL METERING - OCCIDENTAL COGEN 115KV (JS-2)	1/22/2017 17:21	LINE - WEATHER - WIND	RELAY - EQUIPMENT - RELAY PROBLEM
60630	NORTH BARTOW - PEBBLEDALE (TECO) 230KV (WLXT-1)	1/22/2017 21:19	LINE - NEIGHBORING UTILITY - OTHER	- -
63960	FISHEATING CREEK - SUN N LAKES 69KV (ALP-SUC-1)	9/10/2017 18:26	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63966	DUNDEE - LAKE MARION 69KV (DLM-1)	9/10/2017 19:25	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63974	ZEPHYRHILLS NORTH - DADE CITY (TECO) 69KV (BZ-6)	9/10/2017 20:17	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63975	HOWEY SEC - OKAHUMPKA (CLL-3)	9/10/2017 20:21	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
63991	LAKE WALES - WEST LAKE WALES CKT#1 69KV (WLLW-1)	9/10/2017 21:22	LINE - WEATHER - MAJOR STORM	- -
63996	LAKE BRYAN - LAKE CECILE (CITY OF KISSIMMEE) 69KV (LBX-1)	9/10/2017 21:09	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
63999	CAMP LAKE - CENTRAL FLA 230KV (CFW-1)	9/10/2017 21:49	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64000	BITHLO - POINSETT 230KV TIE (FPL) (PBX)	9/10/2017 21:52	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64005	FROSTPROOF - LAKE WALES 69KV (AL-3)	9/10/2017 22:04	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM

64047	FOLEY 69KV (0247)	9/11/2017 0:22	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64026	BARCOLA - WEST SUB (CITY OF LAKELAND) 230KV (BLX)	9/10/2017 23:12	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64037	FT MEADE - SAND MOUNTAIN 69KV RADIAL (FSM-1)	9/10/2017 22:59	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64054	DEBARY PL - SANFORD (FP&L) 230KV (DA-2)	9/11/2017 0:38	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64125	UMERTON WEST - WALSINGHAM 69KV (DLW-6)	9/11/2017 3:49	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64127	TAYLOR AVE - WALSINGHAM 69KV (DL-LTW-1)	9/11/2017 3:46	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64130	LARGO - PALM HARBOR 230KV (LTL-1)	9/11/2017 3:58	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64132	REDDICK - WILLISTON 69KV (SI-5)	9/11/2017 3:53	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64133	LARGO - PALM HARBOR 230KV (LTL-1)	9/11/2017 4:02	LINE - WEATHER - MAJOR STORM	- -
64138	ANCLOTE PL - EAST CLEARWATER 230KV (ANEC-1)	9/11/2017 4:11	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64140	ANCLOTE PL - EAST CLEARWATER 230KV (ANEC-1)	9/11/2017 4:13	LINE - WEATHER - MAJOR STORM	- -
64155	OCC SWIFT CREEK #1 - SUWANNEE RIVER 115KV (SSC-1)	9/11/2017 3:47	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64157	CRYSTAL RIVER PL - CENTRAL FLA 500KV (CRCF-1)	9/11/2017 3:08	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64161	LARGO 230KV (0123)	9/11/2017 4:59	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
64162	OCC SWIFT CREEK #1 - SUWANNEE RIVER 115KV (SSC-1)	9/11/2017 5:06	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64163	CLEARWATER 69KV (0082)	9/11/2017 5:07	SUB - WEATHER - MAJOR STORM	- -
64164	DRIFTON - WAUKEENAH 115KV RADIAL (DWH-WHX-1)	9/11/2017 5:16	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64165	DRIFTON - MONTICELLO 69KV (DB-1)	9/11/2017 5:18	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64168	GATEWAY - 32ND ST 115KV (HD-6)	9/11/2017 5:23	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64182	OAKHURST - WALSINGHAM 69KV (DLW-3)	9/11/2017 6:42	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM

64184	DUNEDIN - HIGHLANDS 69KV (ECTW-1)	9/11/2017 6:43	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64185	UMERTON WEST - WALSINGHAM 69KV (DLW-6)	9/11/2017 6:43	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64218	CENTRAL FLA - ORANGE BLOSSOM 69KV (DLL-OCF-1)	9/11/2017 1:14	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64225	BROOKRIDGE - FL CRUSHED STONE COGEN PL 115KV (BWX-2)	9/11/2017 14:39	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64331	DOUGLAS AVE - SPRING LAKE 69KV (ASL-2)	9/11/2017 0:40	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
60797	FT WHITE - JASPER EAST CKT 115KV (IJ-1)	2/7/2017 21:00	LINE - TREE - NON-PREVENTABLE	LINE - EQUIPMENT - SWITCH
60800	BROOKRIDGE - BROOKSVILLE WEST (BBW CKT) 115KV (BBW-1)	2/7/2017 22:49	LINE - WEATHER -	- -
64284	LAKE BRYAN 230KV (0206)	9/11/2017 1:28	SUB - WEATHER - MAJOR STORM - HURRICANE	- -
64263	BROOKRIDGE - BROOKSVILLE WEST (BWX CKT) 115KV (BWX-1)	9/11/2017 0:37	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64266	CROSS CITY 69KV (0081)	9/12/2017 12:56	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - TREE - NON-PREVENTABLE
64272	BAYVIEW 115KV (0050)	9/11/2017 0:43	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
64277	LARGO 230KV (0123)	9/12/2017 20:44	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
64273	WOLF LAKE 69kv (0430)	9/11/2017 5:46	- -	- -
64288	KELLY PARK - MT DORA 69KV (EP-5)	9/11/2017 3:38	LINE - WEATHER - MAJOR STORM	- -
64297	FT WHITE - JASPER 69KV (JF-1)	9/13/2017 12:42	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64302	LAKE WALES - WEST LAKE WALES CKT#2 69KV (WLL-1)	9/13/2017 11:34	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64303	SOUTH POLK - SOUTH FT MEADE 115KV RADIAL (AF2-2)	9/10/2017 19:38	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64313	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	9/13/2017 18:00	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64317	WILLISTON 69KV (0096)	9/14/2017 0:02	LINE - WEATHER -	- -
64318	FORT GREEN #4 69KV (0335)	9/14/2017 2:23	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64319	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	9/14/2017 2:58	LINE - CUSTOMER - INDUSTRIAL	SUB - EQUIPMENT - CT
64333	FORT GREEN #6 69KV (0437)	9/14/2017 12:40	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL

64362	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	9/16/2017 7:52	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64363	OCCIDENTAL #1 115KV (0177)	9/16/2017 12:49	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64262	LARGO - TAYLOR AVE 69KV (LTW-1)	9/11/2017 4:12	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64332	REDDICK - WILLISTON 69KV (SI-5)	9/14/2017 10:16	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64808	PINECASTLE 69KV (0102)	9/19/2017 9:12	SUB - ANIMAL - SQUIRREL	SUB - ANIMAL - SQUIRREL
64886	PINECASTLE 69KV (0102)	9/18/2017 14:24	SUB - UNKNOWN -	- -
60605	OCCIDENTAL #1 115KV (0177)	1/22/2017 13:55	LINE - CUSTOMER - INDUSTRIAL	- -
60799	HIGH SPRINGS - HULL ROAD 69KV (GH-1)	2/7/2017 21:33	LINE - CUSTOMER - REA/EMC	RELAY - HUMAN ERROR - SETTING ERROR
60608	JACKSON BLUFF 69KV (0078)	1/22/2017 14:40	SUB - WEATHER -	SUB - CUSTOMER - GENERATION
60615	MONTICELLO - MONTICELLO TREC 69KV RADIAL (DB-3)	1/22/2017 15:52	LINE - WEATHER -	- -
60620	FT WHITE - JASPER WEST CKT 115KV (IJ-2)	1/22/2017 17:16	LINE - WEATHER - WIND	- -
60622	SUWANNEE RIVER - LIVE OAK (FP&L) 115KV (SF-1)	1/22/2017 17:45	LINE - NEIGHBORING UTILITY - OTHER	LINE - NEIGHBORING UTILITY - OTHER
60623	BROOKRIDGE-HUDSON 230kV (CC-2)	1/22/2017 18:49	LINE - EQUIPMENT - INSULATOR	LINE - EQUIPMENT - INSULATOR
63950	VANDOLAH - WAUCHULA 69KV (VW-1)	9/10/2017 8:58	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
63953	MULBERRY 69KV (0424)	9/10/2017 10:05	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
63962	DESOTO CITY 69KV (0031)	9/10/2017 18:33	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
63970	AVON PARK PL - WAUCHULA 69KV (APW-1)	9/10/2017 19:42	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63965	AVALON - CLERMONT EAST 69KV (CET-1)	9/10/2017 19:06	LINE - WEATHER -	- -
63973	DESOTO CITY - PHILLIPS PL (TECO) 69KV (AD-2)	9/10/2017 20:07	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63978	HUDSON - SHADY HILLS GEN STA 230KV (HSHX-1)	9/10/2017 20:38	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63980	BROOKSVILLE - UNION HALL 69KV (BZ-1)	9/10/2017 20:39	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63997	COUNTRY OAKS - DUNDEE 69KV (DCO-1)	9/10/2017 21:41	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63984	ALTAMONTE - NORTH LONGWOOD CKT1 69KV (WO-2)	9/10/2017 20:38	LINE - WEATHER - MAJOR STORM - HURRICANE	- -

63986	BAY RIDGE - KELLY PK 69KV (BK-1)	9/10/2017 21:02	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64011	DELAND - DELTONA 69KV (TD-1)	9/10/2017 22:15	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64012	ALTAMONTE - CASSELBERRY 69KV (WA-1)	9/10/2017 20:38	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64025	HOWEY SEC - OKAHUMPKA (CLL-3)	9/10/2017 20:55	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64027	CASSADAGA - SMYRNA UTILITIES 115KV (CNS-1)	9/10/2017 23:33	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64028	MAITLAND - WINTER PARK 69KV (WO-5)	9/10/2017 23:33	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64030	BROOKSVILLE WEST - HUDSON 115KV (BWR-1)	9/10/2017 23:25	LINE - WEATHER - MAJOR STORM	- -
64032	SUWANNEE RIVER - LIVE OAK (FP&L) 115KV (SF-1)	9/10/2017 23:37	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64033	LEESBURG - OKAHUMPKA 69KV (CLL-2)	9/10/2017 22:50	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64038	CHAMPIONS GATE - DAVENPORT 69KV (ICLW-5)	9/10/2017 23:24	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64039	UCF - WINTER PARK EAST 69KV (WF-1)	9/11/2017 0:05	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64040	FT WHITE - HIGH SPRINGS 69KV (FH-1)	9/10/2017 23:56	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64041	CRAWFORDVILLE - JACKSON BLUFF 69KV (JA-3)	9/10/2017 23:56	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64043	DELAND EAST - DELAND (FPL) 115KV (DEX-1)	9/10/2017 23:43	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64049	IDYLWILD - WILLISTON 69KV (SI-3)	9/11/2017 0:21	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64052	DAVENPORT - WEST DQVENPORT 69KV (DWD-1)	9/11/2017 0:43	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64055	SEMINOLE - STARKEY ROAD 69KV (DLW-5)	9/11/2017 0:53	LINE - WEATHER - MAJOR STORM	- -
64067	ARCHER - WILLISTON 69KV (AW-1)	9/11/2017 0:57	LINE - WEATHER - MAJOR STORM - HURRICANE	- -

64077	FT WHITE - JASPER EAST CKT 115KV (IJ-1)	9/11/2017 1:11	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64078	IDYLWILD - PHIFER CEC 69KV RADIAL (IR-1)	9/11/2017 1:40	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64089	ROSS PRAIRIE - MARION OAKS SEC 69KV RADIAL (RPMX-1)	9/11/2017 2:05	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64090	TWIN COUNTY RANCH 115KV (0233)	9/11/2017 1:21	SUB - WEATHER - MAJOR STORM	- -
64094	FT WHITE - JASPER WEST CKT 115KV (IJ-2)	9/11/2017 1:47	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64097	FT MEADE - HOMELAND 69KV (FMB-1)	9/11/2017 2:11	LINE - WEATHER - MAJOR STORM	- -
64099	EUSTIS SOUTH - MT DORA 69KV (EP-2)	9/11/2017 1:15	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64102	RIO PINAR PL - ECON 230KV (NR-3)	9/10/2017 22:46	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64103	HAINES CITY - HAINES CITY EAST 69KV (HP-1)	9/11/2017 2:30	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64104	OCCIDENTAL #1 115KV (0177)	9/11/2017 2:33	LINE - CUSTOMER - INDUSTRIAL	- -
64105	EUSTIS - EUSTIS SOUTH 69KV (EP-1)	9/11/2017 1:15	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64110	BROOKRIDGE - TWIN COUNTY RANCH 115KV - CLEARWATER (CRB-1)	9/11/2017 2:42	LINE - WEATHER - MAJOR STORM	- -
64111	OCCIDENTAL #1 115KV (0177)	9/11/2017 3:00	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64112	SUWANNEE RIVER - LIVE OAK (FP&L) 115KV (SF-1)	9/11/2017 2:53	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64124	SEMINOLE 230KV (0051)	9/11/2017 3:46	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
64142	ANCLOTE PL - EAST CLEARWATER 230KV (ANEC-1)	9/11/2017 4:17	LINE - WEATHER - MAJOR STORM	- -
64146	GE PINELLAS - LARGO 69KV (LD-3)	9/11/2017 4:23	LINE - WEATHER - MAJOR STORM	- -
64148	SUWANNEE RIVER - LIVE OAK (FP&L) 115KV (SF-1)	9/11/2017 4:26	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64149	BELLEAIR - LARGO 69KV (LECW-2)	9/11/2017 4:18	LINE - WEATHER - MAJOR STORM	- -
64152	OCCIDENTAL #1 115KV (0177)	9/11/2017 4:35	LINE - CUSTOMER - INDUSTRIAL	- -

64153	CRYSTAL RIVER PL - BROOKRIDGE 500KV (CLT-2)	9/11/2017 4:38	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64154	CROSS BAYOU - GE PINELLAS 69KV (LD-2)	9/11/2017 4:22	LINE - WEATHER - MAJOR STORM	- -
64156	BAYVIEW 115KV (0050)	9/11/2017 4:46	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64158	BROOKRIDGE - LAKE TARPON 500KV (CLT-1)	9/11/2017 4:26	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64159	PARKWAY - TAFT 69KV (WR-5)	9/11/2017 4:52	LINE - WEATHER -	- -
64323	WEST LAKE WALES 230KV (0065)	9/14/2017 8:33	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
64174	FT WHITE - PERRY 69KV (FP-1)	9/11/2017 6:00	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64176	ANCLOTE PL - SEVEN SPRINGS 230KV (ANS-1)	9/11/2017 6:05	LINE - WEATHER - MAJOR STORM	- -
64316	NORTH BARTOW - PEBBLEDALE (TECO) 230KV (WLXT-1)	9/10/2017 23:36	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64186	CITY OF BARTOW - NORTH BARTOW CKT2 69KV (BWL-1)	9/11/2017 6:42	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64189	CASSADAGA - SMYRNA UTILITIES 115KV (CNS-1)	9/10/2017 23:39	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64190	CASSADAGA - DELTONA 115KV (DC-1)	9/11/2017 6:57	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64193	ELFERS 115KV (0197)	9/11/2017 7:07	SUB - WEATHER - MAJOR STORM	- -
64195	FOLEY 69KV (0247)	9/11/2017 7:10	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64197	CRAWFORDVILLE - SUB #32 (CITY OF TALLAH) 230KV (CRAW-1)	9/11/2017 8:02	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - TREE - NON-PREVENTABLE
64200	HAVANA - HINSON TEC 69KV RADIAL (HH-1)	9/11/2017 8:23	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64202	FORT GREEN #4 69KV (0335)	9/11/2017 11:03	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64209	NORTH BARTOW - WEST LAKE WALES 69KV (BWL-2)	9/11/2017 0:56	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64212	TARPON SPRINGS 115KV (0019)	9/11/2017 13:15	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64213	CRYSTAL RIVER PLANT 230KV (0171)	9/11/2017 1:10	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64219	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	9/11/2017 14:15	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL

64222	SEVEN SPRINGS - TARPON SPRINGS EAST CKT 115KV (ST-1)	9/11/2017 14:14	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64227	DAVENPORT - WEST DQVENPORT 69KV (DWD-1)	9/11/2017 1:21	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64231	GOSPEL ISLAND TAP (9570)	9/11/2017 15:12	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64232	CRYSTAL RIVER SOUTH - HOMOSASSA 115KV RADIAL (TROPIC TERRACE NO) (HCR-HT-1)	9/11/2017 15:19	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64235	ARCHER - HULL ROAD 69KV (AUF-1)	9/11/2017 1:59	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64241	JASPER 115KV (0074)	9/11/2017 4:20	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64243	VANDOLAH - WAUCHULA 69KV (VW-1)	9/10/2017 8:58	LINE - WEATHER - MAJOR STORM	- -
64289	JASPER 115KV (0074)	9/13/2017 9:35	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64247	TARPON SPRINGS 115KV (0019)	9/11/2017 22:25	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
64285	FORT WHITE 230KV (0111)	9/11/2017 1:14	SUB - WEATHER - MAJOR STORM - HURRICANE	SUB - WEATHER - MAJOR STORM - HURRICANE
64308	AVON PARK SUN N LAKES 69kV (APS-1)	9/10/2017 21:10	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
64309	ANCLOTE PLANT 230KV (0183)	9/11/2017 6:28	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
64310	VANDOLAH - WAUCHULA 69KV (VW-1)	9/13/2017 18:00	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64311	DINNER LAKE - PHILLIPS 69KV (PDL-1)	9/13/2017 16:43	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64312	FT MEADE - WEST LAKE WALES 230KV (FWL-1)	9/13/2017 16:53	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64335	FOLEY 69KV (0247)	9/14/2017 13:21	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64343	OCCIDENTAL #1 115KV (0177)	9/14/2017 23:17	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64348	REDDICK - WILLISTON 69KV (SI-5)	9/15/2017 10:36	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64369	CHIEFLAND - INGLIS 69KV (IS-1)	9/17/2017 16:33	LINE - CUSTOMER - DISTRIBUTION	LINE - CUSTOMER - DISTRIBUTION
64370	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	9/17/2017 21:46	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL

60601	NEW RIVER - CABBAGE HILL (TECO) 69KV (TZ-3)	1/22/2017 12:58	LINE - EQUIPMENT - INSULATOR	LINE - EQUIPMENT - INSULATOR
63958	OCALA AIRPORT 69KV (7988)	9/10/2017 13:16	LINE - TREE -	- -
63985	EUSTIS SOUTH - SORRENTO 69KV (SES-1)	9/10/2017 21:00	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
63982	LAKE BRYAN -VINELAND 69KV (LV-1)	9/10/2017 20:43	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
63989	AVON PARK PL - SOUTH POLK 230KV (AF-1)	9/10/2017 21:03	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63990	CURRY FORD - STANTON (OUC) 230KV (RX-1)	9/10/2017 21:18	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
63995	AVON PARK PL - FT MEADE 230KV (AF2-1)	9/10/2017 21:10	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64013	BARCOLA - FT MEADE 69KV (BF-1)	9/10/2017 22:23	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64004	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	9/10/2017 21:06	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64017	HUDSON - NEW PORT RICHEY 115KV (BWR-HPNR-2)	9/10/2017 22:28	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64029	SEMINOLE - STARKEY ROAD 69KV (DLW-5)	9/10/2017 23:30	LINE - WEATHER - MAJOR STORM	- -
64023	CHAMPIONS GATE - DAVENPORT 69KV (ICLW-5)	9/10/2017 23:01	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64031	CASSADAGA - SMYRNA UTILITIES 115KV (CNS-1)	9/10/2017 23:37	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64034	DAVENPORT - WEST DQVENPORT 69KV (DWD-1)	9/10/2017 23:39	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64044	ODESSA - TARPON SPRINGS 69KV (TZ-2)	9/11/2017 0:18	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64051	ALTAMONTE - DOUGLAS AVE 69KV (ASL-1)	9/11/2017 0:40	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64058	DELAND - DELTONA 69KV (TD-1)	9/11/2017 1:04	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64062	REDDICK - WILLISTON 69KV (SI-5)	9/11/2017 1:08	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64085	CRYSTAL RIVER SOUTH 115KV - LECANTO (CSB-1)	9/11/2017 1:21	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64086	ARCHER - WILLISTON 69KV (AW-1)	9/11/2017 2:01	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE

64107	ENOLA - UMATILLA 69KV (UEN-1)	9/11/2017 1:15	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64098	EUSTIS SOUTH 69KV (0167)	9/11/2017 1:15	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64169	BARTOW PLANT - NORTHEAST UG8 230KV (UGBNU-8)	9/11/2017 5:30	LINE - OPERATIONAL - SYSTEM VOLTAGE LIMIT MITIGATION	LINE - OPERATIONAL - SYSTEM VOLTAGE LIMIT MITIGATION
64180	AVON PARK PL - AVON PARK NORTH 69KV (AL-2)	9/11/2017 6:38	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64194	JACKSON BLUFF - TALLAHASSEE 69KV (JT-1)	9/11/2017 7:25	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64201	QUINCY NORTH (CITY OF) 69KV (7914)	9/11/2017 8:59	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64215	FOLEY 69KV (0247)	9/11/2017 6:44	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64230	PAISLEY (SEC) REA 69KV (6809)	9/10/2017 18:31	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64234	FT WHITE - JASPER EAST CKT 115KV (IJ-1)	9/11/2017 1:47	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64258	FT WHITE - JASPER EAST CKT 115KV (IJ-1)	9/11/2017 2:02	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64292	FT WHITE - JASPER WEST CKT 115KV (IJ-2)	9/13/2017 10:07	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64307	AVON PARK PL - AVON PARK NORTH 69KV (AL-2)	9/12/2017 17:48	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63956	NORTH BARTOW - ORANGE SWITCHING STA 69KV (FMB-3)	9/10/2017 12:40	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63976	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	9/10/2017 20:23	LINE - WEATHER -	- -
63967	CENTER HILL 69KV (0240)	9/10/2017 19:44	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
63977	AVON PARK NORTH - FROSTPROOF 69KV (AL-1)	9/10/2017 20:25	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
63987	OCOEE - HEMPLE 69KV (OH-1)	9/10/2017 20:55	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
63988	HAINES CITY - HAINES CITY EAST 69KV (HP-1)	9/10/2017 21:05	LINE - WEATHER - MAJOR STORM	- -

63994	CASSELBERRY - LAKE ALOMA 69KV (CLA-1)	9/10/2017 21:24	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
63998	ALTAMONTE - DOUGLAS AVE 69KV (ASL-1)	9/10/2017 21:05	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64003	BITHLO - SANFORD 230KV TIE (FPL) (SBX)	9/10/2017 21:52	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64007	COUNTRY OAKS - EAST LAKE WALES 69KV (LEL-1)	9/10/2017 22:08	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64009	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	9/10/2017 20:53	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64010	BOGGY MARSH - LAKE LOUISA SEC 69KV (CEB-2)	9/10/2017 21:38	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64014	NORTHEAST - ULMERTON CKT#1 230KV (NC-2)	9/10/2017 22:27	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64015	HIGH SPRINGS - HULL ROAD 69KV (GH-1)	9/10/2017 22:30	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64016	G. E. ALACHUA 69KV (0160)	9/10/2017 22:47	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64020	DALLAS - SILVER SPRINGS SHORES 69KV (DW-OCF-1)	9/10/2017 22:39	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64022	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	9/10/2017 23:10	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64024	HOLDER - INVERNESS 69KV (HB-3)	9/10/2017 23:05	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64045	FT GREEN SPRINGS - FT MEADE 69KV (FFG-1)	9/10/2017 22:48	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64042	HINES - WEST LAKE WALES 230KV (HWLW-1)	9/10/2017 23:24	LINE - WEATHER - MAJOR STORM	- -
64057	CYPRESSWOOD - DUNDEE 69KV (ICLW-1)	9/11/2017 0:38	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64053	AVON PARK PLANT 230KV (0503)	9/10/2017 21:10	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
64063	SUN N LAKES - DINNER LAKE (TECO) 69KV (ALP-3)	9/10/2017 21:10	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64064	LAKE WALES - WEST LAKE WALES CKT#2 69KV (WLL-1)	9/11/2017 0:56	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64101	CAMP LAKE - CENTRAL FLA 230KV (CFW-1)	9/10/2017 21:09	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64066	INTERCESSION CITY PL - CABBAGE ISLAND 69KV (ICP-1)	9/11/2017 1:23	LINE - WEATHER - MAJOR STORM - HURRICANE	- -

64068	LARGO - SEMINOLE 230KV (LSP-UL-1)	9/11/2017 0:56	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64070	DELAND - DELTONA 69KV (TD-1)	9/11/2017 1:22	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64081	CLARCONA - OCOEE 69KV (OCC-1)	9/11/2017 1:42	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64074	ARCHER - HULL ROAD 69KV (AUF-1)	9/11/2017 1:34	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64080	FT WHITE - JASPER EAST CKT 115KV (IJ-1)	9/11/2017 1:14	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64210	NORTH BARTOW 230KV (0348)	9/11/2017 3:52	SUB - WEATHER - MAJOR STORM	- -
64084	HIGH SPRINGS - HULL ROAD 69KV (GH-1)	9/11/2017 1:13	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - TREE - NON-PREVENTABLE
64095	FT WHITE - JASPER EAST CKT 115KV (IJ-1)	9/11/2017 2:10	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64096	DAVENPORT - WEST DQVENPORT 69KV (DWD-1)	9/11/2017 1:19	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64121	PASADENA - SEMINOLE 230KV (LSP-1)	9/11/2017 3:38	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64128	LARGO - ULMERTON WEST 69KV (DLW-2)	9/11/2017 3:29	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64183	SEMINOLE - OAKHURST 69KV (DLW-4)	9/11/2017 6:42	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64175	BRADFORDVILLE WEST - DRIFTON 115KV (JQ-2)	9/11/2017 6:02	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64178	ANCLOTE PL - SEVEN SPRINGS 230KV (ANS-1)	9/11/2017 6:28	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64188	BARBERVILLE - DELAND WEST 69KV (DWB-1)	9/11/2017 6:51	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64191	VANDOLAH - WHIDDON 230KV (VWX-1)	9/11/2017 7:05	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64196	ATWATER - QUINCY 115KV (QX-1)	9/11/2017 7:54	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64240	KELLY PARK 69KV (0384)	9/11/2017 3:38	SUB - WEATHER -	- -
63959	GATEWAY - ULMERTON 115KV (HD-5)	9/10/2017 15:07	LINE - WEATHER -	- -
63939	OCC SWIFT CREEK #1 - OCC SWIFT CREEK #2 115KV (SCSC-1)	9/9/2017 7:14	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64021	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	9/10/2017 23:08	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL

64091	BROOKER CREEK - TARPON SPRINGS 115KV (HTE-1)	9/11/2017 1:59	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64109	FT WHITE - JASPER 69KV (JF-1)	9/11/2017 2:48	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64106	EUSTIS - UMATILLA 69KV (EU-1)	9/11/2017 1:15	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64108	UMATILLA - UMATILLA (SEC)69KV (ED-3)	9/11/2017 1:15	LINE - CUSTOMER - REA/EMC	LINE - CUSTOMER - REA/EMC
64136	LARGO - PALM HARBOR 230KV (LTL-1)	9/11/2017 4:08	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64115	NEWBERRY - TRENTON 69KV (NT-1)	9/11/2017 2:39	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64119	LAKE BRYAN -VINELAND 69KV (LV-1)	9/11/2017 3:34	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64137	CROSS CITY - OLD TOWN NORTH SW STA 69KV (TC-2)	9/11/2017 3:47	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64113	CITRUS COMBINED CYCLE PLANT (0545)	9/11/2017 2:22	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64116	UMERTON WEST - WALSINGHAM 69KV (DLW-6)	9/11/2017 3:11	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64117	FT WHITE - NEWBERRY 230KV (CF-3)	9/11/2017 3:25	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - TREE - NON-PREVENTABLE
64118	ANCLOTE PL - LARGO 230KV (ANL-1)	9/11/2017 3:24	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64123	UMERTON WEST - WALSINGHAM 69KV (DLW-6)	9/11/2017 3:45	LINE - WEATHER - MAJOR STORM	- -
64131	ANCLOTE PL - EAST CLEARWATER 230KV (ANEC-1)	9/11/2017 3:59	LINE - WEATHER - MAJOR STORM	- -
64134	CLEARWATER - HIGHLANDS 69KV (HCL-1)	9/11/2017 4:03	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64170	ANCLOTE PL - SEVEN SPRINGS 230KV (ANS-1)	9/11/2017 5:40	LINE - WEATHER - MAJOR STORM	- -
64177	ANCLOTE PL - SEVEN SPRINGS 230KV (ANS-1)	9/11/2017 6:24	LINE - WEATHER - MAJOR STORM	- -
64205	OCCIDENTAL #1 115KV (0177)	9/11/2017 11:25	LINE - CUSTOMER - INDUSTRIAL	- -
64314	OCCIDENTAL #1 115KV (0177)	9/13/2017 20:06	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64239	KELLY PARK - ZELLWOOD 69KV (EP-3)	9/10/2017 3:38	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64256	CYPRESSWOOD - HAINES CITY 69KV (ICLW-2)	9/11/2017 2:30	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM

64274	CURLEW 115KV (0149)	9/11/2017 14:14	SUB - WEATHER - MAJOR STORM	SUB - WEATHER - MAJOR STORM
64286	ROSS PRAIRIE - SILVER SPRINGS 69KV (IO-4)	9/11/2017 5:43	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64305	SEVEN SPRINGS - TARPON SPRINGS WEST CKT 115KV (ST-2)	9/11/2017 13:15	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64367	LIBERTY 69KV (0466)	9/17/2017 14:00	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64368	BARCOLA - FT MEADE 69KV (BF-1)	9/17/2017 15:39	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64372	OCCIDENTAL #1 115KV (0177)	9/17/2017 22:51	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64143	CLEARWATER - EAST CLEARWATER 69KV (LECW-3)	9/11/2017 4:17	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64271	DEBARY PL - NORTH LONGWOOD 230KV (DL-1)	9/12/2017 15:15	LINE - OTHER -	- -
64145	JASPER - TWIN LAKES (GA PWR) 69KV (JV-1)	9/11/2017 4:19	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64144	CLEARWATER - HIGHLANDS 69KV (HCL-1)	9/11/2017 4:19	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64147	EAST CLEARWATER - HIGHLANDS 69KV (ECTW-3)	9/11/2017 4:17	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64150	ANCLOTE PL - EAST CLEARWATER 230KV (ANEC-1)	9/11/2017 4:32	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64151	PALM HARBOR - TARPON SPRINGS 69KV (ECTW-4)	9/11/2017 4:33	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64166	DUNEDIN - PALM HARBOR 69KV (ECTW-2)	9/11/2017 5:20	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64167	DRIFTON - WAUKEENAH 115KV RADIAL (DWH-WHX-1)	9/11/2017 5:23	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64173	CIRCLE SQUARE 69KV (0354)	9/11/2017 5:43	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64301	LAKE WALES - WEST LAKE WALES CKT#1 69KV (WLLW-1)	9/10/2017 21:22	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64334	OCCIDENTAL #1 115KV (0177)	9/14/2017 13:05	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64359	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	9/15/2017 16:38	LINE - CUSTOMER - INDUSTRIAL	SUB - EQUIPMENT - CT
64223	PLYMOUTH - ZELLWOOD 69KV (EP-4)	9/11/2017 5:46	LINE - WEATHER - MAJOR STORM	- -
64236	GATEWAY - ULMERTON 115KV (HD-5)	9/11/2017 2:02	RELAY - EQUIPMENT - SUPV	- -

64035	NORTH BARTOW - SOUTH ELOISE (TECO) 230KV (WLXT-2)	9/10/2017 23:36	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64059	AVON PARK PL - DESOTO CITY 69KV (AD-1)	9/10/2017 21:10	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64060	AVON PARK PL - FISHEATING CREEK 230KV (AFC-1)	9/10/2017 21:10	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64120	UMERTON WEST - WALSINGHAM 69KV (DLW-6)	9/11/2017 3:40	LINE - WEATHER - MAJOR STORM	- -
64122	CHIEFLAND - INGLIS 69KV (IS-1)	9/11/2017 3:42	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - TREE - NON-PREVENTABLE
64126	BAYVIEW 115KV (0050)	9/11/2017 3:50	LINE - WEATHER - MAJOR STORM	- -
64171	ANCLOTE PL - SEVEN SPRINGS 230KV (ANS-1)	9/11/2017 5:52	LINE - WEATHER - MAJOR STORM	- -
64172	LAKE TARPON - PALM HARBOR 230KV (CC-LTL-1)	9/11/2017 5:55	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64265	SILVER SPRINGS 230KV (0034)	9/11/2017 5:43	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64304	WEST DAVENPORT 69KV (0380)	9/10/2017 23:39	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64339	OCCIDENTAL #1 115KV (0177)	9/14/2017 16:50	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
60793	HUNTERS CREEK - SHINGLE CREEK 69KV (SCH-1)	2/7/2017 8:57	LINE - UNKNOWN -	- -
64253	CROSS CITY - WILCOX 69KV (WCC-1)	9/12/2017 5:19	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64056	HIGGINS PL - CURLEW CKT2 115KV (HGC-1)	9/11/2017 0:54	LINE - WEATHER - MAJOR STORM	- -
64071	FISHEATING CREEK - LAKE PLACID 69KV (ALP-2)	9/10/2017 21:10	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64075	DESOTO CITY - LAKE PLACID NORTH 69KV (DLP-1)	9/10/2017 21:10	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64076	LAKE PLACID - LAKE PLACID NORTH 69KV (DLP-2)	9/10/2017 21:10	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64248	SUWANNEE RIVER - LIVE OAK (FP&L) 115KV (SF-1)	9/11/2017 22:31	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
64255	DAVENPORT - HAINES CITY 69KV (ICLW-6)	9/11/2017 2:30	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
60614	DRIFTON 115KV (0095)	1/22/2017 15:36	LINE - WEATHER - WIND	RELAY - HUMAN ERROR - SETTING ERROR
60616	DUNNELLON TOWN - HOLDER 69KV (HDU-1)	1/22/2017 15:56	LINE - WEATHER - WIND	LINE - TREE - NON-PREVENTABLE
60612	JACKSON BLUFF 69KV (0078)	1/22/2017 14:46	SUB - WEATHER -	SUB - CUSTOMER - GENERATION

64187	DELAND WEST - DELEON SPRINGS 115KV (DWDS-1)	9/11/2017 6:51	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64206	HULL ROAD 69KV (0138)	9/10/2017 23:55	LINE - WEATHER - MAJOR STORM - HURRICANE	- -
64221	ALDERMAN - TARPON SPRINGS 115KV (HTW-2)	9/11/2017 14:14	LINE - WEATHER - MAJOR STORM	LINE - WEATHER - MAJOR STORM
64282	OCCIDENTAL SWIFT CREEK #2 115KV (0272)	9/13/2017 2:26	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
64329	IDYLWILD - WILLISTON 69KV (SI-3)	9/14/2017 10:19	LINE - WEATHER - MAJOR STORM - HURRICANE	LINE - WEATHER - MAJOR STORM - HURRICANE
60598	JACKSON BLUFF - TALLAHASSEE 69KV (JT-1)	1/22/2017 12:30	LINE - WEATHER - WIND	LINE - EQUIPMENT - POLE FAILURE - NON PREVENTABLE
60594	LIBERTY 69KV (0466)	1/22/2017 6:53	LINE - WEATHER -	- -
60602	FT WHITE - PERRY 69KV (FP-1)	1/22/2017 12:39	LINE - WEATHER -	- -
60613	BRADFORDVILLE WEST - DRIFTON 115KV (JQ-2)	1/22/2017 15:35	LINE - WEATHER -	- -
60621	FT WHITE - JASPER WEST CKT 115KV (IJ-2)	1/22/2017 17:37	LINE - WEATHER - WIND	- -
60626	CONWAY - PINECASTLE 69KV (WR-4)	1/22/2017 19:22	LINE - WEATHER -	- -
60624	FT MEADE - VANDOLAH 230KV (FV-1)	1/22/2017 18:54	LINE - EQUIPMENT - INSULATOR	LINE - EQUIPMENT - INSULATOR
60795	OCCIDENTAL SWIFT CREEK #1 115KV (0260)	2/7/2017 20:48	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
60796	OCCIDENTAL #1 115KV (0177)	2/7/2017 20:55	LINE - CUSTOMER - INDUSTRIAL	LINE - CUSTOMER - INDUSTRIAL
60913	BROOKSVILLE 115KV (0026)	1/22/2017 18:53	LINE - CUSTOMER - DISTRIBUTION	SUB - EQUIPMENT - SWITCH

ATTACHMENT C

Summary of Severe Weather Dates 2017

a. Include in the discussion, the type of weather event, strength (wind speeds/surge-flood levels), locations affected, source of meteorological information, and the performance of overhead and underground systems.

Dates	Type of Weather Event	Strength (Wind Speeds/surge-flood levels)	Locations affected	Source of Metrological Information	Performance of Overhead and Underground Systems
1/22/2017	Tornado	Unknown Wind Speed	Inverness	National Weather Service	See response to
			Monticello		Section (d) - pg. 10 of
			Ocala		Reliability Report
7/31/2017	Tropical Storm Emily	35 to 70 mph	Apopka	National Weather Service	See response to
			Deland		Section (d) - pg. 10 of
			Jamestown		Reliability Report
			Longwood		
			Inverness		
			Monticello		
			Ocala		
			Buena Vista		
			Clermont		
			Highlands		
			Lake Wales		
			SE Orlando		
			Winter Garden		
			Clearwater		
			Seven Springs		
			St. Petersburg		
			Walsingham		
			Zephyrhills		
9/09/17 to 9/20/17	Hurricane Irma	96 to 110 mph	Apopka	National Weather Service	See response to
		Category 2 Storm	Deland		Section (d) - pg. 10 of
			Jamestown		Reliability Report
			Longwood		
			Inverness		
			Monticello		
			Ocala		
			Buena Vista		
			Clermont		
			Highlands		
			Lake Wales		
			SE Orlando		
			Winter Garden		
			Clearwater		
			Seven Springs		
			St. Petersburg		
			Walsingham		
			Zephyrhills		

b. Describe the Company's efforts to avoid or minimize in terms of costs incurred and outage duration any similar events in the future.
(Example: Reference specific storm hardening activity.)

Item b: Please see response to Storm Hardening Facilities (I).

c. If the method of deriving the weather exclusion is different from the method used for 2016, please explain the changes and provide the CMI and CI for 2017 using the prior method.

c. The exclusion method used is the same since 2005.

d. (Appendix) Provide the 2016 service reliability data for each extreme weather outage event that is excluded from your Company's 2017 Annual Distribution Reliability Report pursuant to Rule 25-6.0455.

i. A Table
ii. Electronic File
iii. Overhead and Underground statistics & forensics. (C, CMI, CI, L-Bar, repair cost, etc.)

Dates	Overhead vs. Underground	C	CMI	CI	Duration	L-Bar	N
1/22/2017	OH	203,300	6,253,236	24,925	129,325	489.9	264
	UG		46,805	96	4,845	346.1	14
7/31/2017	OH	1,777,249	708,184	9,643	18,350	101.9	180
	UG		31,411	166	6,477	158.0	41
9/09 - 9/20/2017	OH	1,777,249	3,757,013,136	1,385,787	87,655,770	3,057.0	28,674
	UG		623,983,325	156,959	15,857,472	2,670.1	5,939

Distribution
Exclusion Summary - 2017

Cause Code Types		C	CMI	CI	Duration	L-Bar	N
Reported Actual Data		1,777,249	4,572,731,881	4,056,764	110,695,910	1,258.7	87,947
Exclusions:							
Severe Weather (Distribution)	(Tornados & Named Storms)		4,372,206,322	1,559,637	103,511,983	2,963.6	34,928
Distribution (Non Severe Weather)			13,203	30,977	11,891	2.9	4,044
Transmission (Severe Weather)			161,406	2,121	102	102.2	1
Transmission (Non Severe Weather)			18,148,483	397,194	23,348	82.8	282
Emergency Shutdowns (Severe Weather)	(DEF/Govt/Customer Decisions)		15,638,336	15,596	154,983	1,019.6	152
Emergency Shutdowns (Non Severe Weathe	(DEF/Govt/Customer Decisions)		11,389,990	358,429	290,652	93.2	3,118
Prearranged (Severe Weather)			30,033	222	5,172	166.8	31
Prearranged (Non Severe Weather)			8,129,628	50,080	773,767	166.5	4,647
Adjusted Data		1,777,249	147,014,480	1,642,508	5,924,012	145.4	40,744

Actual Data: Customer Minutes of Interruption (CMI), Customer Interruptions (CI) and Documented Exclusions

Year	Customer minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	4,572,731,881	100%	4,056,764	100%
Documented Exclusions				
Planned Service Interruptions	19,532,821	0.43%	439,486	10.83%
Named Storm	4,381,736,056	95.82%	1,552,555	38.27%
Tornadoes	6,300,041	0.14%	25,021	0.62%
Ice on Lines	0	0.00%	0	0.00%
Planned Load Management Events	0	0.00%	0	0.00%
Generation/Transmission Events	18,148,483	0.40%	397,194	9.79%
Extreme Weather (EOC Activation/Fire)	-	0.00%	-	0.00%
Reported Adjusted Data	147,014,480	3.22%	1,642,508	40.49%

ATTACHMENT D

CAUSES OF OUTAGE EVENTS – ADJUSTED

Utility Name: Duke Energy Florida Years: **2013 to 2017**

	2017			2016			2015			2014			2013		
Cause (a)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)	Number of Outage Events(N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1. Animals	5,596	80.0	63.9	5,369	80.3	63.1	5,321	74.7	63.6	5,020	75.4	64.7	5,967	73.0	62.9
2. Vegetation	8,143	150.1	102.8	7,879	144.8	99.8	8,240	136.1	83.1	9,816	137.0	85.4	9,143	140.7	86.9
3. Lightning	1,261	151.4	80.2	1,216	150.3	85.8	1,201	144.5	80.7	1,647	166.3	69.3	1,344	178.4	82.8
4. Other Weather	5,478	145.2	95.4	4,965	133.7	97.2	7,141	133.6	88.7	5,875	107.5	76.8	4,920	116.2	104.5
5. Vehicle	505	223.2	103.2	429	235.2	102.0	412	227.2	100.2	420	240.9	88.8	392	222.0	88.7
6. Defective Equipment	10,475	150.0	91.0	9,195	146.7	82.4	8,572	141.6	76.7	7,221	150.3	76.7	6,536	145.0	73.9
7. Unknown	998	93.9	64.5	1,097	90.3	63.1	1,224	77.2	57.9	2,867	81.5	65.6	3,333	83.6	71.4
All Other Causes	8,287	179.8	76.1	7,390	173.8	72.6	7,900	166.6	79.8	8,073	170.3	73.6	8,232	176.0	75.1
System Totals:	40,743	145.4	89.5	37,540	139.9	86.4	40,011	134.1	81.0	40,939	132.5	78.4	39,867	132.8	81.6

ATTACHMENT E

DUKE ENERGY.

2018 PROGRAM BUDGET

CAPITAL													
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Annual
Circuit Sectionalization	(4,319)	(4,324)	(4,310)	(4,320)	86,064	(4,334)	(4,349)	(4,326)	18,299	(4,393)	(4,409)	(4,498)	60,780
DTUG Capital	138,743	138,895	138,443	138,762	139,283	139,216	139,700	138,974	140,020	141,118	(23,303)	(23,770)	1,346,080
Line Patrol Repl	3,487	3,488	3,485	(4,231)	(379)	3,489	(4,260)	3,488	(388)	(402)	(4,319)	(4,405)	(946)
Major Reliability Cap	290,665	563,198	728,784	772,027	900,376	778,312	633,232	370,685	297,479	146,175	61,457	(24,169)	5,518,222
Other Asset Repl	874,688	810,608	856,767	862,680	825,943	896,851	1,043,014	1,143,190	909,139	1,060,655	936,285	645,322	10,865,142
Pole Repl	2,710,147	2,269,524	2,473,055	2,497,870	2,452,521	2,295,116	2,395,027	2,439,780	2,116,872	1,969,838	1,309,216	791,965	25,720,933
Recloser Repl	206,964	279,263	392,475	338,718	369,504	213,358	204,609	283,095	151,662	291,342	314,159	235,181	3,280,330
Reliability Capital	2,759,793	2,977,240	3,014,246	3,118,899	3,125,145	3,398,818	3,387,639	3,262,907	2,984,866	2,823,046	2,510,074	1,872,032	35,234,706
Switch Repl	274,759	295,422	429,708	454,609	300,136	332,007	300,297	442,336	387,871	264,199	305,634	221,438	4,008,415
System Capacity Dist	3,524,968	3,604,039	3,657,298	3,760,293	3,442,055	3,269,752	2,965,704	2,901,468	3,328,398	2,235,340	2,156,068	2,154,572	36,999,955
Transformer Repl	594,985	425,182	482,350	585,424	363,794	678,452	378,764	374,821	479,822	428,347	595,415	264,740	5,652,095
UG Cable Other Repl	230,574	604,565	608,462	604,153	611,092	610,884	607,053	610,124	769,157	305,175	126,060	128,426	5,815,726
UG Cable Repl	1,300,894	1,321,614	1,473,696	1,331,620	821,133	1,456,417	507,257	1,546,931	912,579	1,269,101	2,162,551	1,000,203	15,103,997
Volt Cntrl Device Repl	88,510	141,963	117,915	81,492	104,883	204,623	147,084	98,648	134,052	60,541	124,039	103,207	1,406,958
Sum:	12,994,858	13,430,678	14,372,374	14,537,996	13,541,551	14,272,964	12,700,771	13,612,121	12,629,829	10,990,081	10,568,927	7,360,244	151,012,394

O&M													
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Sum:
Corr Maint OM OH	320,949	292,632	130,062	95,001	91,562	93,046	252,537	243,817	489,543	313,938	308,422	329,714	2,961,222
Corr Maint OM UG	159,837	66,730	54,743	82,656	76,537	40,410	182,364	236,022	244,417	130,448	126,210	153,609	1,553,984
Environmental OM	1,121	1,121	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	13,841
OM on Capacity Capital	8,237	8,237	8,237	8,237	8,237	8,237	8,237	8,237	8,237	8,237	8,237	8,237	98,840
OM on Maintain Capital	358,604	358,761	358,710	358,618	358,657	358,737	358,608	358,717	358,715	358,705	358,773	358,815	4,304,419
Other Environ Remediation	108,074	108,074	108,074	108,074	108,074	108,074	108,074	112,349	108,074	108,074	108,074	108,074	1,301,166
Pdmt Single Phase Spill	93,000	48,000	72,000	51,000	21,000	123,000	87,000	60,000	96,000	57,000	90,000	57,000	855,000
Pdmt Three Phase Spill	115,000	92,000	80,500	138,000	46,000	149,500	23,000	57,500	80,500	69,000	80,500	34,500	966,000
Pole Inspections	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000			4,800,000
Sum:	1,644,821	1,455,555	1,293,486	1,322,745	1,191,227	1,362,163	1,500,980	1,557,802	1,866,646	1,526,561	1,081,375	1,051,109	16,854,471

ATTACHMENT F

SYSTEM RELIABILITY INDICES – ADJUSTED

Utility Name: Duke Energy Florida Year: **2013 to 2017**

	2017					2016					2015					2014					2013				
District or Service Area (a)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)	SAIDI (b)	CAIDI (c)	SAIFI (d)	MAIFIe (e)	CEMI5 (f)
North Coastal Region	154.3	106.6	1.45	8.2	2.83%	154.8	111.3	1.39	7.8	4.00%	144.9	98.9	1.47	7.1	3.96%	159.3	101.4	1.57	10.0	3.47%	147.3	97.4	1.51	8.1	4.13%
South Coastal Region	75.0	85.1	0.88	6.8	0.21%	72.7	81.1	0.90	7.3	0.68%	71.5	73.7	0.97	11.2	0.43%	65.5	68.4	0.96	10.8	1.36%	71.2	68.7	1.04	9.9	0.38%
North Central Region	75.5	90.0	0.84	7.6	0.37%	78.1	87.0	0.90	8.6	0.36%	71.5	84.1	0.85	8.3	0.32%	83.8	75.5	1.11	10.8	1.07%	91.1	82.3	1.11	8.9	1.53%
South Central Region	69.6	83.3	0.84	6.9	0.87%	78.8	78.2	1.01	7.0	1.06%	70.7	77.3	0.91	8.1	0.64%	82.8	79.6	1.04	10.3	1.04%	88.2	90.6	0.97	7.8	0.80%
System Averages	82.7	89.5	0.92	7.2	0.73%	85.0	86.4	0.98	7.6	1.09%	79.7	81.0	0.98	9.2	0.87%	85.1	78.4	1.09	10.6	1.45%	89.1	81.6	1.09	8.9	1.19%

ATTACHMENT G

2017 FEEDER SPECIFIC
PROVIDED ON CD

2017 Summer Feeder Peaks

Load Area	NAME	BANK	FEEDER NAME	PLANNER PEAK MVA
SOUTH COASTAL	ALDERMAN	1	C5000	8.0
SOUTH COASTAL	ALDERMAN	1	C5001	5.2
SOUTH COASTAL	ALDERMAN	1	C5003	7.2
SOUTH COASTAL	ALDERMAN	2	C5008	8.1
SOUTH COASTAL	ALDERMAN	2	C5009	9.2
SOUTH COASTAL	ALDERMAN	3	C5010	4.6
SOUTH COASTAL	ALDERMAN	3	C5011	5.9
SOUTH COASTAL	ALDERMAN	3	C5012	11.5
SOUTH COASTAL	ALDERMAN	2	C5013	8.1
SOUTH COASTAL	ANCLOTE	8	C4201	9.5
SOUTH COASTAL	ANCLOTE	8	C4202	8.0
SOUTH COASTAL	ANCLOTE	8	C4203	9.4
SOUTH COASTAL	ANCLOTE	8	C4204	7.3
SOUTH COASTAL	ANCLOTE	7	C4206	5.4
SOUTH COASTAL	ANCLOTE	7	C4207	11.2
SOUTH COASTAL	ANCLOTE	7	C4208	11.8
SOUTH COASTAL	BAYBORO PLANT	2	X9	10.7
SOUTH COASTAL	BAYBORO PLANT	1	X10	1.4
SOUTH COASTAL	BAYBORO PLANT	2	X13	3.3
SOUTH COASTAL	BAYBORO PLANT	1	X15	3.6
SOUTH COASTAL	BAYBORO PLANT	2	X16	9.5
SOUTH COASTAL	BAYBORO PLANT	1	X17	4.0
SOUTH COASTAL	BAYBORO PLANT	2	X18	7.4
SOUTH COASTAL	BAYBORO PLANT	1	X19	6.5
SOUTH COASTAL	BAYBORO PLANT	1	X20	6.3
SOUTH COASTAL	BAYBORO PLANT	2	X21	7.8
SOUTH COASTAL	BAYVIEW	1	C651	11.9
SOUTH COASTAL	BAYVIEW	1	C652	9.9
SOUTH COASTAL	BAYVIEW	1	C653	12.5
SOUTH COASTAL	BAYVIEW	1	C654	10.7
SOUTH COASTAL	BAYVIEW	2	C655	7.5
SOUTH COASTAL	BAYVIEW	2	C656	10.2
SOUTH COASTAL	BAYVIEW	2	C657	10.3
SOUTH COASTAL	BAYVIEW	2	C658	7.0
SOUTH COASTAL	BAYWAY	2	X96	9.7
SOUTH COASTAL	BAYWAY	2	X97	11.6
SOUTH COASTAL	BAYWAY	2	X99	11.3
SOUTH COASTAL	BAYWAY	2	X100	3.1
SOUTH COASTAL	BELLEAIR	1	C1002	9.1

SOUTH COASTAL	BELLEAIR	1	C1003	10.0
SOUTH COASTAL	BELLEAIR	1	C1004	2.0
SOUTH COASTAL	BELLEAIR	2	C1005	11.2
SOUTH COASTAL	BELLEAIR	2	C1007	7.2
SOUTH COASTAL	BELLEAIR	2	C1008	13.2
SOUTH COASTAL	BELLEAIR	1	J1001	7.5
SOUTH COASTAL	BROOKER CREEK	1	C5400	8.2
SOUTH COASTAL	BROOKER CREEK	1	C5401	4.1
SOUTH COASTAL	BROOKER CREEK	1	C5402	8.8
SOUTH COASTAL	BROOKER CREEK	2	C5404	8.4
SOUTH COASTAL	BROOKER CREEK	2	C5405	11.4
SOUTH COASTAL	BROOKER CREEK	2	C5406	11.0
SOUTH COASTAL	CENTRAL PLAZA	1	X262	10.3
SOUTH COASTAL	CENTRAL PLAZA	2	X263	2.0
SOUTH COASTAL	CENTRAL PLAZA	2	X265	5.2
SOUTH COASTAL	CENTRAL PLAZA	1	X266	1.6
SOUTH COASTAL	CENTRAL PLAZA	2	X267	10.2
SOUTH COASTAL	CENTRAL PLAZA	1	X268	11.2
SOUTH COASTAL	CLEARWATER	1	C4	7.9
SOUTH COASTAL	CLEARWATER	1	C5	11.7
SOUTH COASTAL	CLEARWATER	1	C6	2.2
SOUTH COASTAL	CLEARWATER	1	C7	5.3
SOUTH COASTAL	CLEARWATER	2	C9	3.7
SOUTH COASTAL	CLEARWATER	2	C10	9.1
SOUTH COASTAL	CLEARWATER	2	C11	8.0
SOUTH COASTAL	CLEARWATER	3	C12	10.4
SOUTH COASTAL	CLEARWATER	3	C13	4.8
SOUTH COASTAL	CLEARWATER	3	C14	7.4
SOUTH COASTAL	CLEARWATER	3	C15	7.3
SOUTH COASTAL	CLEARWATER	4	C16	9.5
SOUTH COASTAL	CLEARWATER	4	C17	9.4
SOUTH COASTAL	CLEARWATER	4	C18	6.3
SOUTH COASTAL	CLEARWATER	4	C19	4.9
SOUTH COASTAL	CROSS BAYOU	3	J140	6.1
SOUTH COASTAL	CROSS BAYOU	3	J141	12.1
SOUTH COASTAL	CROSS BAYOU	1	J142	11.9
SOUTH COASTAL	CROSS BAYOU	1	J143	10.0
SOUTH COASTAL	CROSS BAYOU	1	J144	2.3
SOUTH COASTAL	CROSS BAYOU	1	J145	8.5
SOUTH COASTAL	CROSS BAYOU	2	J146	11.5
SOUTH COASTAL	CROSS BAYOU	2	J147	12.7
SOUTH COASTAL	CROSS BAYOU	2	J148	10.6
SOUTH COASTAL	CROSS BAYOU	3	J150	10.5
SOUTH COASTAL	CROSSROADS	1	X132	9.6

SOUTH COASTAL	CROSSROADS	1	X133	8.3
SOUTH COASTAL	CROSSROADS	1	X134	8.2
SOUTH COASTAL	CROSSROADS	2	X135	12.3
SOUTH COASTAL	CROSSROADS	2	X136	2.4
SOUTH COASTAL	CROSSROADS	2	X137	3.3
SOUTH COASTAL	CROSSROADS	2	X138	6.9
SOUTH COASTAL	CURLEW	3	C4972	7.6
SOUTH COASTAL	CURLEW	3	C4973	8.5
SOUTH COASTAL	CURLEW	2	C4976	6.0
SOUTH COASTAL	CURLEW	2	C4985	5.3
SOUTH COASTAL	CURLEW	2	C4986	11.1
SOUTH COASTAL	CURLEW	3	C4987	5.9
SOUTH COASTAL	CURLEW	3	C4988	9.3
SOUTH COASTAL	CURLEW	1	C4989	8.8
SOUTH COASTAL	CURLEW	1	C4990	9.5
SOUTH COASTAL	CURLEW	1	C4991	13.7
SOUTH COASTAL	DENHAM	1	C151	9.1
SOUTH COASTAL	DENHAM	1	C152	8.7
SOUTH COASTAL	DENHAM	2	C153	9.9
SOUTH COASTAL	DENHAM	2	C154	6.6
SOUTH COASTAL	DENHAM	2	C155	8.7
SOUTH COASTAL	DENHAM	3	C156	10.0
SOUTH COASTAL	DENHAM	3	C157	10.5
SOUTH COASTAL	DENHAM	3	C158	13.0
SOUTH COASTAL	DENHAM	1	C159	10.0
SOUTH COASTAL	DISSTON	1	X60	10.7
SOUTH COASTAL	DISSTON	1	X61	4.2
SOUTH COASTAL	DISSTON	1	X62	11.4
SOUTH COASTAL	DISSTON	1	X63	10.7
SOUTH COASTAL	DISSTON	2	X64	9.4
SOUTH COASTAL	DISSTON	2	X65	2.7
SOUTH COASTAL	DISSTON	2	X66	11.6
SOUTH COASTAL	DISSTON	2	X67	8.8
SOUTH COASTAL	DUNEDIN	1	C102	9.7
SOUTH COASTAL	DUNEDIN	1	C103	8.7
SOUTH COASTAL	DUNEDIN	2	C104	8.3
SOUTH COASTAL	DUNEDIN	2	C106	5.7
SOUTH COASTAL	DUNEDIN	3	C107	9.7
SOUTH COASTAL	DUNEDIN	3	C108	7.7
SOUTH COASTAL	EAST CLEARWATER	1	C900	12.4
SOUTH COASTAL	EAST CLEARWATER	1	C901	6.5
SOUTH COASTAL	EAST CLEARWATER	1	C902	11.5
SOUTH COASTAL	EAST CLEARWATER	1	C903	7.1
SOUTH COASTAL	EAST CLEARWATER	2	C904	11.6

SOUTH COASTAL	EAST CLEARWATER	2	C905	8.3
SOUTH COASTAL	EAST CLEARWATER	2	C906	10.4
SOUTH COASTAL	EAST CLEARWATER	2	C907	10.4
SOUTH COASTAL	EAST CLEARWATER	3	C908	11.2
SOUTH COASTAL	EAST CLEARWATER	3	C909	8.3
SOUTH COASTAL	EAST CLEARWATER	3	C910	10.4
SOUTH COASTAL	EAST CLEARWATER	3	C911	8.2
SOUTH COASTAL	ELFERS	2	C950	7.9
SOUTH COASTAL	ELFERS	2	C951	6.6
SOUTH COASTAL	ELFERS	2	C952	6.8
SOUTH COASTAL	ELFERS	2	C953	7.0
SOUTH COASTAL	ELFERS	1	C954	5.0
SOUTH COASTAL	ELFERS	1	C955	9.6
SOUTH COASTAL	ELFERS	1	C956	9.3
SOUTH COASTAL	ELFERS	1	C957	9.2
SOUTH COASTAL	FIFTY FIRST STREET	2	X101	6.2
SOUTH COASTAL	FIFTY FIRST STREET	1	X102	8.2
SOUTH COASTAL	FIFTY FIRST STREET	2	X103	10.0
SOUTH COASTAL	FIFTY FIRST STREET	1	X104	5.9
SOUTH COASTAL	FIFTY FIRST STREET	2	X105	9.1
SOUTH COASTAL	FIFTY FIRST STREET	1	X106	4.1
SOUTH COASTAL	FIFTY FIRST STREET	2	X107	7.8
SOUTH COASTAL	FIFTY FIRST STREET	1	X108	6.5
SOUTH COASTAL	FLORA-MAR	1	C4000	8.1
SOUTH COASTAL	FLORA-MAR	1	C4001	8.3
SOUTH COASTAL	FLORA-MAR	1	C4002	10.1
SOUTH COASTAL	FLORA-MAR	1	C4003	8.6
SOUTH COASTAL	FLORA-MAR	2	C4006	10.0
SOUTH COASTAL	FLORA-MAR	2	C4007	9.4
SOUTH COASTAL	FLORA-MAR	2	C4008	7.3
SOUTH COASTAL	FLORA-MAR	2	C4009	8.7
SOUTH COASTAL	FORTIETH STREET	1	X81	5.1
SOUTH COASTAL	FORTIETH STREET	1	X82	8.9
SOUTH COASTAL	FORTIETH STREET	2	X83	7.7
SOUTH COASTAL	FORTIETH STREET	2	X84	8.0
SOUTH COASTAL	FORTIETH STREET	2	X85	6.6
SOUTH COASTAL	GATEWAY	1	X111	12.2
SOUTH COASTAL	GATEWAY	1	X112	7.4
SOUTH COASTAL	GATEWAY	1	X113	8.7
SOUTH COASTAL	GATEWAY	1	X114	3.4
SOUTH COASTAL	GATEWAY	2	X118	8.0
SOUTH COASTAL	GATEWAY	2	X119	9.0
SOUTH COASTAL	GATEWAY	2	X120	9.3
SOUTH COASTAL	GATEWAY	3	X121	9.0

SOUTH COASTAL	GATEWAY	3	X123	6.5
SOUTH COASTAL	GATEWAY	3	X125	6.1
SOUTH COASTAL	HIGHLANDS	2	C2802	9.3
SOUTH COASTAL	HIGHLANDS	2	C2803	6.6
SOUTH COASTAL	HIGHLANDS	2	C2804	9.9
SOUTH COASTAL	HIGHLANDS	1	C2805	8.4
SOUTH COASTAL	HIGHLANDS	1	C2806	11.3
SOUTH COASTAL	HIGHLANDS	1	C2807	5.6
SOUTH COASTAL	HIGHLANDS	2	C2808	7.3
SOUTH COASTAL	KENNETH	1	X50	10.6
SOUTH COASTAL	KENNETH	1	X51	4.9
SOUTH COASTAL	KENNETH	1	X53	10.8
SOUTH COASTAL	KENNETH	2	X55	6.1
SOUTH COASTAL	KENNETH	2	X56	11.7
SOUTH COASTAL	KENNETH	2	X57	10.4
SOUTH COASTAL	LAND-O-LAKES	1	C140	4.4
SOUTH COASTAL	LAND-O-LAKES	1	C141	7.1
SOUTH COASTAL	LAND-O-LAKES	1	C143	13.2
SOUTH COASTAL	LAND-O-LAKES	2	C146	10.3
SOUTH COASTAL	LARGO	1	J402	3.3
SOUTH COASTAL	LARGO	1	J403	10.1
SOUTH COASTAL	LARGO	1	J404	8.2
SOUTH COASTAL	LARGO	1	J405	7.0
SOUTH COASTAL	LARGO	2	J406	8.1
SOUTH COASTAL	LARGO	2	J407	11.1
SOUTH COASTAL	LARGO	2	J408	5.2
SOUTH COASTAL	LARGO	2	J409	6.6
SOUTH COASTAL	MAXIMO	3	X140	9.6
SOUTH COASTAL	MAXIMO	3	X141	9.3
SOUTH COASTAL	MAXIMO	3	X142	9.3
SOUTH COASTAL	MAXIMO	1	X143	10.9
SOUTH COASTAL	MAXIMO	1	X144	0.3
SOUTH COASTAL	MAXIMO	1	X146	7.9
SOUTH COASTAL	MAXIMO	1	X147	10.8
SOUTH COASTAL	MAXIMO	2	X149	10.4
SOUTH COASTAL	MAXIMO	2	X150	8.5
SOUTH COASTAL	MAXIMO	2	X151	11.3
SOUTH COASTAL	MAXIMO	2	X152	0.3
SOUTH COASTAL	NEW PORT RICHEY	1	C441	7.5
SOUTH COASTAL	NEW PORT RICHEY	1	C442	6.7
SOUTH COASTAL	NEW PORT RICHEY	2	C443	10.2
SOUTH COASTAL	NEW PORT RICHEY	2	C444	7.2
SOUTH COASTAL	NORTHEAST	1	X282	6.3
SOUTH COASTAL	NORTHEAST	1	X283	5.6

SOUTH COASTAL	NORTHEAST	1	X284	12.0
SOUTH COASTAL	NORTHEAST	1	X285	8.4
SOUTH COASTAL	NORTHEAST	1	X286	8.9
SOUTH COASTAL	NORTHEAST	2	X287	10.6
SOUTH COASTAL	NORTHEAST	2	X288	8.9
SOUTH COASTAL	NORTHEAST	2	X289	9.8
SOUTH COASTAL	NORTHEAST	2	X290	6.6
SOUTH COASTAL	NORTHEAST	2	X291	3.7
SOUTH COASTAL	OAKHURST	1	J221	8.4
SOUTH COASTAL	OAKHURST	3	J223	8.8
SOUTH COASTAL	OAKHURST	3	J224	10.0
SOUTH COASTAL	OAKHURST	2	J226	10.7
SOUTH COASTAL	OAKHURST	2	J227	9.5
SOUTH COASTAL	OAKHURST	1	J228	10.4
SOUTH COASTAL	OAKHURST	1	J229	8.2
SOUTH COASTAL	ODESSA	2	C4320	13.6
SOUTH COASTAL	ODESSA	1	C4322	10.6
SOUTH COASTAL	ODESSA	2	C4323	9.6
SOUTH COASTAL	ODESSA	1	C4329	8.0
SOUTH COASTAL	OLDSMAR	1	C603	0.4
SOUTH COASTAL	OLDSMAR	2	C604	1.4
SOUTH COASTAL	PALM HARBOR	1	C752	9.5
SOUTH COASTAL	PALM HARBOR	1	C753	8.3
SOUTH COASTAL	PALM HARBOR	2	C755	9.3
SOUTH COASTAL	PALM HARBOR	2	C756	7.5
SOUTH COASTAL	PALM HARBOR	2	C757	10.3
SOUTH COASTAL	PASADENA	2	X211	10.3
SOUTH COASTAL	PASADENA	2	X212	5.7
SOUTH COASTAL	PASADENA	2	X213	5.8
SOUTH COASTAL	PASADENA	2	X214	7.3
SOUTH COASTAL	PASADENA	2	X215	3.6
SOUTH COASTAL	PASADENA	1	X216	5.4
SOUTH COASTAL	PASADENA	1	X217	4.2
SOUTH COASTAL	PASADENA	1	X219	10.4
SOUTH COASTAL	PASADENA	1	X220	7.9
SOUTH COASTAL	PILSBURY	1	X252	11.6
SOUTH COASTAL	PILSBURY	1	X253	10.9
SOUTH COASTAL	PILSBURY	1	X254	9.9
SOUTH COASTAL	PILSBURY	1	X255	9.4
SOUTH COASTAL	PILSBURY	2	X256	11.3
SOUTH COASTAL	PILSBURY	2	X257	12.2
SOUTH COASTAL	PILSBURY	2	X258	9.6
SOUTH COASTAL	PILSBURY	2	X259	12.4
SOUTH COASTAL	PINELLAS WELL FIELD	1	C801	1.2

SOUTH COASTAL	PORT RICHEY WEST	2	C202	9.0
SOUTH COASTAL	PORT RICHEY WEST	2	C203	8.2
SOUTH COASTAL	PORT RICHEY WEST	1	C205	4.7
SOUTH COASTAL	PORT RICHEY WEST	1	C206	10.5
SOUTH COASTAL	PORT RICHEY WEST	1	C207	6.9
SOUTH COASTAL	PORT RICHEY WEST	3	C208	7.3
SOUTH COASTAL	PORT RICHEY WEST	3	C209	10.1
SOUTH COASTAL	PORT RICHEY WEST	3	C210	8.5
SOUTH COASTAL	SAFETY HARBOR	1	C3518	6.6
SOUTH COASTAL	SAFETY HARBOR	2	C3521	8.8
SOUTH COASTAL	SAFETY HARBOR	2	C3523	7.4
SOUTH COASTAL	SAFETY HARBOR	2	C3524	7.6
SOUTH COASTAL	SAFETY HARBOR	1	C3525	9.4
SOUTH COASTAL	SAFETY HARBOR	1	C3527	9.9
SOUTH COASTAL	SAFETY HARBOR	1	C3528	7.6
SOUTH COASTAL	SEMINOLE	2	J889	11.0
SOUTH COASTAL	SEMINOLE	2	J890	9.2
SOUTH COASTAL	SEMINOLE	2	J891	7.8
SOUTH COASTAL	SEMINOLE	1	J892	10.0
SOUTH COASTAL	SEMINOLE	1	J893	6.7
SOUTH COASTAL	SEMINOLE	1	J894	9.4
SOUTH COASTAL	SEMINOLE	1	J895	11.0
SOUTH COASTAL	SEMINOLE	2	J888	5.7
SOUTH COASTAL	SEVEN SPRINGS	4	C4500	6.8
SOUTH COASTAL	SEVEN SPRINGS	4	C4501	9.6
SOUTH COASTAL	SEVEN SPRINGS	6	C4502	6.9
SOUTH COASTAL	SEVEN SPRINGS	5	C4507	7.5
SOUTH COASTAL	SEVEN SPRINGS	5	C4508	12.4
SOUTH COASTAL	SEVEN SPRINGS	5	C4509	7.9
SOUTH COASTAL	SEVEN SPRINGS	4	C4510	7.2
SOUTH COASTAL	SEVEN SPRINGS	6	C4512	9.5
SOUTH COASTAL	SIXTEENTH STREET	1	X31	10.6
SOUTH COASTAL	SIXTEENTH STREET	2	X32	2.0
SOUTH COASTAL	SIXTEENTH STREET	1	X33	3.8
SOUTH COASTAL	SIXTEENTH STREET	2	X34	8.2
SOUTH COASTAL	SIXTEENTH STREET	1	X35	2.8
SOUTH COASTAL	SIXTEENTH STREET	2	X36	7.7
SOUTH COASTAL	SIXTEENTH STREET	2	X42	6.6
SOUTH COASTAL	SIXTEENTH STREET	1	X43	4.7
SOUTH COASTAL	SIXTEENTH STREET	1	X45	8.8
SOUTH COASTAL	SIXTEENTH STREET	2	X46	7.5
SOUTH COASTAL	STARKEY ROAD	1	J112	7.6
SOUTH COASTAL	STARKEY ROAD	1	J113	6.3
SOUTH COASTAL	STARKEY ROAD	1	J114	7.6

SOUTH COASTAL	STARKEY ROAD	2	J115	8.7
SOUTH COASTAL	STARKEY ROAD	2	J116	11.6
SOUTH COASTAL	STARKEY ROAD	2	J117	4.2
SOUTH COASTAL	STARKEY ROAD	2	J118	10.2
SOUTH COASTAL	TARPON SPRINGS	1	C301	6.6
SOUTH COASTAL	TARPON SPRINGS	1	C302	8.6
SOUTH COASTAL	TARPON SPRINGS	1	C303	9.0
SOUTH COASTAL	TARPON SPRINGS	1	C304	9.4
SOUTH COASTAL	TARPON SPRINGS	2	C305	10.1
SOUTH COASTAL	TARPON SPRINGS	2	C306	8.3
SOUTH COASTAL	TARPON SPRINGS	2	C307	11.1
SOUTH COASTAL	TARPON SPRINGS	2	C308	9.2
SOUTH COASTAL	TAYLOR AVENUE	2	J2902	8.8
SOUTH COASTAL	TAYLOR AVENUE	2	J2903	10.0
SOUTH COASTAL	TAYLOR AVENUE	2	J2904	9.3
SOUTH COASTAL	TAYLOR AVENUE	1	J2905	8.6
SOUTH COASTAL	TAYLOR AVENUE	1	J2906	8.8
SOUTH COASTAL	TAYLOR AVENUE	1	J2907	10.4
SOUTH COASTAL	THIRTY SECOND STREET	1	X22	11.5
SOUTH COASTAL	THIRTY SECOND STREET	1	X23	5.3
SOUTH COASTAL	THIRTY SECOND STREET	1	X24	5.0
SOUTH COASTAL	THIRTY SECOND STREET	1	X25	8.1
SOUTH COASTAL	THIRTY SECOND STREET	2	X26	7.6
SOUTH COASTAL	THIRTY SECOND STREET	2	X27	10.8
SOUTH COASTAL	THIRTY SECOND STREET	2	X28	9.0
SOUTH COASTAL	TRI-CITY	3	J5030	7.4
SOUTH COASTAL	TRI-CITY	3	J5032	9.6
SOUTH COASTAL	TRI-CITY	2	J5034	9.3
SOUTH COASTAL	TRI-CITY	2	J5036	4.4
SOUTH COASTAL	TRI-CITY	2	J5038	7.7
SOUTH COASTAL	TRI-CITY	3	J5040	8.3
SOUTH COASTAL	ULMERTON	1	J240	8.4
SOUTH COASTAL	ULMERTON	1	J241	9.3
SOUTH COASTAL	ULMERTON	1	J242	8.0
SOUTH COASTAL	ULMERTON	1	J243	9.6
SOUTH COASTAL	ULMERTON	2	J244	6.3
SOUTH COASTAL	ULMERTON	2	J245	11.2
SOUTH COASTAL	ULMERTON	2	J246	8.9
SOUTH COASTAL	ULMERTON	2	J247	8.1
SOUTH COASTAL	ULMERTON WEST	1	J680	5.7
SOUTH COASTAL	ULMERTON WEST	1	J682	10.4
SOUTH COASTAL	ULMERTON WEST	1	J684	9.4
SOUTH COASTAL	ULMERTON WEST	2	J689	5.1
SOUTH COASTAL	ULMERTON WEST	2	J690	8.1

SOUTH COASTAL	ULMERTON WEST	2	J691	7.6
SOUTH COASTAL	ULMERTON WEST	2	J692	6.3
SOUTH COASTAL	VINOY	1	X70	9.6
SOUTH COASTAL	VINOY	2	X71	5.9
SOUTH COASTAL	VINOY	2	X72	11.0
SOUTH COASTAL	VINOY	2	X73	3.0
SOUTH COASTAL	VINOY	2	X74	2.0
SOUTH COASTAL	VINOY	2	X75	3.5
SOUTH COASTAL	VINOY	1	X76	4.0
SOUTH COASTAL	VINOY	1	X77	4.9
SOUTH COASTAL	VINOY	1	X78	11.3
SOUTH COASTAL	VINOY	1	X79	3.1
SOUTH COASTAL	VINOY	1	X80	6.6
SOUTH COASTAL	WALSINGHAM	2	J551	11.4
SOUTH COASTAL	WALSINGHAM	2	J552	9.4
SOUTH COASTAL	WALSINGHAM	2	J553	7.4
SOUTH COASTAL	WALSINGHAM	2	J554	10.8
SOUTH COASTAL	WALSINGHAM	1	J555	7.6
SOUTH COASTAL	WALSINGHAM	1	J556	9.1
SOUTH COASTAL	WALSINGHAM	1	J557	10.6
SOUTH COASTAL	WALSINGHAM	1	J558	8.1
SOUTH COASTAL	ZEPHYRHILLS	2	C851	9.9
SOUTH COASTAL	ZEPHYRHILLS	2	C852	7.9
SOUTH COASTAL	ZEPHYRHILLS	2	C853	4.4
SOUTH COASTAL	ZEPHYRHILLS	1	C854	4.9
SOUTH COASTAL	ZEPHYRHILLS	1	C855	9.1
SOUTH COASTAL	ZEPHYRHILLS	1	C856	7.8
SOUTH COASTAL	ZEPHYRHILLS	1	C857	3.9
SOUTH COASTAL	ZEPHYRHILLS NORTH	2	C340	3.2
SOUTH COASTAL	ZEPHYRHILLS NORTH	2	C341	8.0
SOUTH COASTAL	ZEPHYRHILLS NORTH	1	C342	7.4
SOUTH COASTAL	ZEPHYRHILLS NORTH	1	C343	8.0
SOUTH COASTAL	ZEPHYRHILLS NORTH	1	C344	10.9
SOUTH COASTAL	ZEPHYRHILLS NORTH	2	C345	3.7
SOUTH CENTRAL	ARBUCKLE CREEK	1	K1361	5.1
SOUTH CENTRAL	AVON PARK NORTH	2	K891	5.7
SOUTH CENTRAL	AVON PARK NORTH	2	K892	2.7
SOUTH CENTRAL	AVON PARK NORTH	1	K893	7.1
SOUTH CENTRAL	AVON PARK NORTH	1	K894	5.4
SOUTH CENTRAL	AVON PARK PLANT	5	K116	4.4
SOUTH CENTRAL	AVON PARK PLANT	5	K117	6.9
SOUTH CENTRAL	AVON PARK PLANT	4	K118	6.5
SOUTH CENTRAL	AVON PARK PLANT	4	K119	7.8
SOUTH CENTRAL	BABSON PARK	1	K1195	3.3

SOUTH CENTRAL	BABSON PARK	1	K1196	4.1
SOUTH CENTRAL	BARNUM CITY	1	K1501	8.1
SOUTH CENTRAL	BARNUM CITY	2	K1503	10.4
SOUTH CENTRAL	BARNUM CITY	1	K3360	10.5
SOUTH CENTRAL	BARNUM CITY	2	K3362	11.4
SOUTH CENTRAL	BARNUM CITY	1	K3364	1.9
SOUTH CENTRAL	BAY HILL	3	K67	8.7
SOUTH CENTRAL	BAY HILL	3	K68	10.2
SOUTH CENTRAL	BAY HILL	1	K72	7.8
SOUTH CENTRAL	BAY HILL	1	K73	11.8
SOUTH CENTRAL	BAY HILL	1	K74	11.4
SOUTH CENTRAL	BAY HILL	2	K75	9.7
SOUTH CENTRAL	BAY HILL	2	K76	8.5
SOUTH CENTRAL	BAY HILL	2	K77	5.2
SOUTH CENTRAL	BAY HILL	3	K79	9.4
SOUTH CENTRAL	BOGGY MARSH	2	K957	8.7
SOUTH CENTRAL	BOGGY MARSH	1	K958	8.3
SOUTH CENTRAL	BOGGY MARSH	1	K959	7.2
SOUTH CENTRAL	BOGGY MARSH	2	K960	8.6
SOUTH CENTRAL	BOGGY MARSH	2	K961	10.4
SOUTH CENTRAL	BOGGY MARSH	1	K964	8.3
SOUTH CENTRAL	BONNET CREEK	2	K1230	2.5
SOUTH CENTRAL	BONNET CREEK	2	K1231	7.8
SOUTH CENTRAL	BONNET CREEK	2	K1232	5.8
SOUTH CENTRAL	BONNET CREEK	2	K1234	4.8
SOUTH CENTRAL	BONNET CREEK	1	K973	3.3
SOUTH CENTRAL	BONNET CREEK	1	K974	3.9
SOUTH CENTRAL	BONNET CREEK	1	K975	7.2
SOUTH CENTRAL	BONNET CREEK	1	K976	9.0
SOUTH CENTRAL	CABBAGE ISLAND	3	K1613	5.2
SOUTH CENTRAL	CABBAGE ISLAND	2	K1614	6.3
SOUTH CENTRAL	CABBAGE ISLAND	3	K1615	1.8
SOUTH CENTRAL	CABBAGE ISLAND	2	K1616	7.5
SOUTH CENTRAL	CABBAGE ISLAND	2	K1618	4.0
SOUTH CENTRAL	CANOE CREEK	1	W0105	2.9
SOUTH CENTRAL	CELEBRATION	2	K2701	9.3
SOUTH CENTRAL	CELEBRATION	3	K2703	8.2
SOUTH CENTRAL	CELEBRATION	2	K2704	3.8
SOUTH CENTRAL	CELEBRATION	3	K2706	10.3
SOUTH CENTRAL	CENTRAL PARK	1	K495	5.8
SOUTH CENTRAL	CENTRAL PARK	2	K499	11.2
SOUTH CENTRAL	CENTRAL PARK	3	K800	8.4
SOUTH CENTRAL	CENTRAL PARK	1	W0493	9.9
SOUTH CENTRAL	CENTRAL PARK	1	W0494	6.0

SOUTH CENTRAL	CENTRAL PARK	2	W0496	5.9
SOUTH CENTRAL	CENTRAL PARK	2	W0497	8.5
SOUTH CENTRAL	CENTRAL PARK	2	W0498	6.2
SOUTH CENTRAL	CENTRAL PARK	3	W0500	9.5
SOUTH CENTRAL	CENTRAL PARK	3	W0501	6.1
SOUTH CENTRAL	CHAMPIONS GATE	2	K1761	6.2
SOUTH CENTRAL	CHAMPIONS GATE	1	K1762	13.1
SOUTH CENTRAL	CHAMPIONS GATE	2	K1763	9.0
SOUTH CENTRAL	CHAMPIONS GATE	1	K1764	6.0
SOUTH CENTRAL	CITRUSVILLE	1	K35	5.4
SOUTH CENTRAL	CITRUSVILLE	1	K61	8.6
SOUTH CENTRAL	CITRUSVILLE	1	K62	6.3
SOUTH CENTRAL	CLARCONA	1	M337	9.0
SOUTH CENTRAL	CLARCONA	2	M339	2.8
SOUTH CENTRAL	CLARCONA	2	M340	6.1
SOUTH CENTRAL	CLARCONA	3	M342	8.8
SOUTH CENTRAL	CLARCONA	1	M343	7.7
SOUTH CENTRAL	CLARCONA	2	M345	10.0
SOUTH CENTRAL	CLARCONA	2	M346	7.8
SOUTH CENTRAL	CLARCONA	3	M348	6.4
SOUTH CENTRAL	CLARCONA	3	M351	5.8
SOUTH CENTRAL	CLERMONT	1	K601	10.8
SOUTH CENTRAL	CLERMONT	1	K602	8.2
SOUTH CENTRAL	CLERMONT	1	K603	9.9
SOUTH CENTRAL	CLERMONT	2	K605	6.8
SOUTH CENTRAL	CLERMONT	2	K606	10.2
SOUTH CENTRAL	CLERMONT	2	K607	8.3
SOUTH CENTRAL	COLONIAL	1	K2476	10.5
SOUTH CENTRAL	COLONIAL	1	K2477	5.2
SOUTH CENTRAL	CONWAY	2	W0404	8.3
SOUTH CENTRAL	CONWAY	2	W0405	8.4
SOUTH CENTRAL	CONWAY	1	W0407	6.9
SOUTH CENTRAL	CONWAY	1	W0408	9.6
SOUTH CENTRAL	COUNTRY OAKS	1	K1443	4.2
SOUTH CENTRAL	COUNTRY OAKS	1	K1446	2.1
SOUTH CENTRAL	COUNTRY OAKS	2	K1447	9.3
SOUTH CENTRAL	CROOKED LAKE	1	K1772	8.6
SOUTH CENTRAL	CROWN POINT	1	K278	7.7
SOUTH CENTRAL	CROWN POINT	1	K279	5.4
SOUTH CENTRAL	CURRY FORD	1	W0595	4.6
SOUTH CENTRAL	CURRY FORD	1	W0597	9.2
SOUTH CENTRAL	CURRY FORD	1	W0601	12.9
SOUTH CENTRAL	CURRY FORD	2	W0596	9.2
SOUTH CENTRAL	CURRY FORD	2	W0598	7.3

SOUTH CENTRAL	CYPRESSWOOD	1	K317	3.5
SOUTH CENTRAL	CYPRESSWOOD	2	K561	3.5
SOUTH CENTRAL	CYPRESSWOOD	2	K562	9.8
SOUTH CENTRAL	CYPRESSWOOD	1	K563	5.3
SOUTH CENTRAL	DAVENPORT	1	K7	3.6
SOUTH CENTRAL	DAVENPORT	1	K8	5.2
SOUTH CENTRAL	DAVENPORT	1	K9	6.7
SOUTH CENTRAL	DESOTO CITY	1	K3220	5.8
SOUTH CENTRAL	DESOTO CITY	1	K3221	1.0
SOUTH CENTRAL	DESOTO CITY	2	K3222	1.8
SOUTH CENTRAL	DINNER LAKE	2	K1684	1.6
SOUTH CENTRAL	DINNER LAKE	2	K1685	7.5
SOUTH CENTRAL	DINNER LAKE	2	K1687	2.4
SOUTH CENTRAL	DINNER LAKE	2	K1688	4.6
SOUTH CENTRAL	DINNER LAKE	2	K1689	5.3
SOUTH CENTRAL	DINNER LAKE	1	K1690	8.7
SOUTH CENTRAL	DINNER LAKE	1	K1691	8.0
SOUTH CENTRAL	DUNDEE	2	K3244	7.8
SOUTH CENTRAL	DUNDEE	2	K3245	6.7
SOUTH CENTRAL	DUNDEE	2	K3246	1.7
SOUTH CENTRAL	EAST LAKE WALES	1	K1030	6.7
SOUTH CENTRAL	EAST LAKE WALES	2	K1031	12.5
SOUTH CENTRAL	EAST LAKE WALES	1	K1032	4.3
SOUTH CENTRAL	FISHEATING CREEK	1	K1560	9.6
SOUTH CENTRAL	FORT MEADE	3	K170	0.3
SOUTH CENTRAL	FORT MEADE	3	K171	2.7
SOUTH CENTRAL	FOUR CORNERS	1	K1404	9.6
SOUTH CENTRAL	FOUR CORNERS	2	K1406	6.8
SOUTH CENTRAL	FOUR CORNERS	1	K1407	7.3
SOUTH CENTRAL	FOUR CORNERS	2	K1409	4.9
SOUTH CENTRAL	FOUR CORNERS	3	K1411	8.1
SOUTH CENTRAL	FOUR CORNERS	3	K1414	5.3
SOUTH CENTRAL	FOUR CORNERS	3	K1416	8.2
SOUTH CENTRAL	FROSTPROOF	1	K100	4.7
SOUTH CENTRAL	FROSTPROOF	1	K101	5.2
SOUTH CENTRAL	FROSTPROOF	1	K102	5.4
SOUTH CENTRAL	FROSTPROOF	2	K103	2.0
SOUTH CENTRAL	FROSTPROOF	2	K104	4.8
SOUTH CENTRAL	GROVELAND	1	K673	5.0
SOUTH CENTRAL	GROVELAND	1	K674	8.6
SOUTH CENTRAL	GROVELAND	2	K675	7.9
SOUTH CENTRAL	HAINES CITY	2	K16	10.8
SOUTH CENTRAL	HAINES CITY	2	K17	8.8
SOUTH CENTRAL	HAINES CITY	1	K18	11.5

SOUTH CENTRAL	HAINES CITY	1	K19	5.5
SOUTH CENTRAL	HAINES CITY	2	K20	6.5
SOUTH CENTRAL	HAINES CITY	1	K21	8.8
SOUTH CENTRAL	HAINES CITY	1	K22	7.6
SOUTH CENTRAL	HEMPLE	2	K2244	7.1
SOUTH CENTRAL	HEMPLE	3	K2246	6.5
SOUTH CENTRAL	HEMPLE	2	K2247	10.9
SOUTH CENTRAL	HEMPLE	3	K2249	7.0
SOUTH CENTRAL	HEMPLE	1	K2250	9.8
SOUTH CENTRAL	HEMPLE	2	K2252	2.7
SOUTH CENTRAL	HEMPLE	3	K2253	9.0
SOUTH CENTRAL	HEMPLE	1	K2255	10.9
SOUTH CENTRAL	HOLOPAW	2	W0629	7.4
SOUTH CENTRAL	HOLOPAW	1	W0630	4.0
SOUTH CENTRAL	HOWEY	1	K564	4.8
SOUTH CENTRAL	HOWEY	1	K565	5.8
SOUTH CENTRAL	HUNTERS CREEK	1	K40	11.6
SOUTH CENTRAL	HUNTERS CREEK	2	K42	11.7
SOUTH CENTRAL	HUNTERS CREEK	2	K43	9.8
SOUTH CENTRAL	HUNTERS CREEK	3	K45	10.4
SOUTH CENTRAL	HUNTERS CREEK	3	K48	7.0
SOUTH CENTRAL	HUNTERS CREEK	3	K49	6.6
SOUTH CENTRAL	HUNTERS CREEK	1	K51	8.8
SOUTH CENTRAL	INTERCESSION CITY	1	K966	10.8
SOUTH CENTRAL	INTERCESSION CITY	1	K967	9.5
SOUTH CENTRAL	INTERNATIONAL DRIVE	3	K4815	8.3
SOUTH CENTRAL	INTERNATIONAL DRIVE	2	K4817	6.9
SOUTH CENTRAL	INTERNATIONAL DRIVE	3	K4818	8.0
SOUTH CENTRAL	INTERNATIONAL DRIVE	2	K4820	5.6
SOUTH CENTRAL	ISLEWORTH	2	K779	11.0
SOUTH CENTRAL	ISLEWORTH	3	K781	8.9
SOUTH CENTRAL	ISLEWORTH	3	K782	8.4
SOUTH CENTRAL	ISLEWORTH	2	K784	8.3
SOUTH CENTRAL	ISLEWORTH	3	K789	9.8
SOUTH CENTRAL	ISLEWORTH	2	K792	12.9
SOUTH CENTRAL	LAKE BRYAN	3	K230	8.9
SOUTH CENTRAL	LAKE BRYAN	3	K231	6.7
SOUTH CENTRAL	LAKE BRYAN	3	K232	9.6
SOUTH CENTRAL	LAKE BRYAN	2	K238	11.3
SOUTH CENTRAL	LAKE BRYAN	2	K239	3.9
SOUTH CENTRAL	LAKE BRYAN	1	K240	1.6
SOUTH CENTRAL	LAKE BRYAN	1	K242	3.2
SOUTH CENTRAL	LAKE BRYAN	2	K244	10.1
SOUTH CENTRAL	LAKE LUNTZ	1	K3282	11.7

SOUTH CENTRAL	LAKE LUNTZ	2	K3283	6.8
SOUTH CENTRAL	LAKE LUNTZ	1	K3284	9.4
SOUTH CENTRAL	LAKE LUNTZ	2	K3285	12.0
SOUTH CENTRAL	LAKE LUNTZ	2	K3286	13.0
SOUTH CENTRAL	LAKE LUNTZ	1	K3287	10.9
SOUTH CENTRAL	LAKE MARION	1	K1286	7.1
SOUTH CENTRAL	LAKE MARION	2	K1287	11.3
SOUTH CENTRAL	LAKE MARION	1	K1288	5.3
SOUTH CENTRAL	LAKE OF THE HILLS	1	K1884	8.0
SOUTH CENTRAL	LAKE OF THE HILLS	1	K1885	4.3
SOUTH CENTRAL	LAKE PLACID	1	K757	3.1
SOUTH CENTRAL	LAKE PLACID	1	K758	4.6
SOUTH CENTRAL	LAKE PLACID	2	K1066	7.6
SOUTH CENTRAL	LAKE PLACID	2	K1320	5.4
SOUTH CENTRAL	LAKE PLACID NORTH	1	K24	3.6
SOUTH CENTRAL	LAKE PLACID NORTH	2	K27	2.1
SOUTH CENTRAL	LAKE WALES	1	K53	5.4
SOUTH CENTRAL	LAKE WALES	1	K54	7.8
SOUTH CENTRAL	LAKE WALES	1	K55	7.4
SOUTH CENTRAL	LAKE WALES	2	K56	2.8
SOUTH CENTRAL	LAKE WALES	2	K57	4.4
SOUTH CENTRAL	LAKE WALES	2	K58	7.2
SOUTH CENTRAL	LAKE WILSON	1	K881	7.6
SOUTH CENTRAL	LAKE WILSON	1	K882	8.3
SOUTH CENTRAL	LAKE WILSON	2	K883	9.3
SOUTH CENTRAL	LAKE WILSON	2	K884	7.5
SOUTH CENTRAL	LAKEWOOD	1	K1693	6.8
SOUTH CENTRAL	LAKEWOOD	1	K1694	4.6
SOUTH CENTRAL	LAKEWOOD	1	K1695	5.7
SOUTH CENTRAL	LAKEWOOD	2	K1705	5.9
SOUTH CENTRAL	LAKEWOOD	2	K1706	7.6
SOUTH CENTRAL	LEISURE LAKES	1	K1415	5.8
SOUTH CENTRAL	MAGNOLIA RANCH	2	W0502	7.4
SOUTH CENTRAL	MAGNOLIA RANCH	2	W0503	6.3
SOUTH CENTRAL	MAGNOLIA RANCH	1	W0504	9.2
SOUTH CENTRAL	MARLEY ROAD	1	K120	9.5
SOUTH CENTRAL	MEADOW WOODS EAST	1	K1060	12.6
SOUTH CENTRAL	MEADOW WOODS EAST	1	K1061	9.7
SOUTH CENTRAL	MEADOW WOODS SOUTH	2	K1775	8.6
SOUTH CENTRAL	MEADOW WOODS SOUTH	3	K1777	9.9
SOUTH CENTRAL	MEADOW WOODS SOUTH	2	K1778	8.4
SOUTH CENTRAL	MEADOW WOODS SOUTH	3	K1780	5.7
SOUTH CENTRAL	MEADOW WOODS SOUTH	2	K1781	12.7
SOUTH CENTRAL	MEADOW WOODS SOUTH	1	K1783	9.2

SOUTH CENTRAL	MEADOW WOODS SOUTH	1	K1789	3.5
SOUTH CENTRAL	MIDWAY	1	K1472	7.5
SOUTH CENTRAL	MIDWAY	1	K1473	9.4
SOUTH CENTRAL	MIDWAY	1	K1475	4.9
SOUTH CENTRAL	MINNEOLA	1	K946	5.0
SOUTH CENTRAL	MINNEOLA	2	K948	7.7
SOUTH CENTRAL	MINNEOLA	1	K949	6.9
SOUTH CENTRAL	MONTVERDE	1	K4831	6.7
SOUTH CENTRAL	MONTVERDE	2	K4833	5.5
SOUTH CENTRAL	MONTVERDE	1	K4834	5.3
SOUTH CENTRAL	MONTVERDE	2	K4836	7.9
SOUTH CENTRAL	MONTVERDE	1	K4837	7.6
SOUTH CENTRAL	MONTVERDE	2	K4840	10.5
SOUTH CENTRAL	MONTVERDE	1	K4841	9.7
SOUTH CENTRAL	MONTVERDE	2	K4845	5.9
SOUTH CENTRAL	NARCOOSSEE	1	W0212	10.5
SOUTH CENTRAL	NARCOOSSEE	1	W0213	10.3
SOUTH CENTRAL	NARCOOSSEE	1	W0214	6.5
SOUTH CENTRAL	NARCOOSSEE	2	W0215	9.7
SOUTH CENTRAL	NARCOOSSEE	2	W0217	9.0
SOUTH CENTRAL	NARCOOSSEE	3	W0219	10.9
SOUTH CENTRAL	NARCOOSSEE	3	W0220	9.0
SOUTH CENTRAL	NORTHRIDGE	1	K1822	8.3
SOUTH CENTRAL	NORTHRIDGE	1	K1825	5.5
SOUTH CENTRAL	OCOEE	3	M1086	3.4
SOUTH CENTRAL	OCOEE	3	M1087	7.4
SOUTH CENTRAL	OCOEE	3	M1088	9.6
SOUTH CENTRAL	OCOEE	1	M1090	9.8
SOUTH CENTRAL	OCOEE	1	M1091	6.0
SOUTH CENTRAL	OCOEE	1	M1092	9.6
SOUTH CENTRAL	OCOEE	2	M1094	8.6
SOUTH CENTRAL	OCOEE	2	M1095	4.4
SOUTH CENTRAL	OCOEE	2	M1096	9.8
SOUTH CENTRAL	OKAHUMPKA	1	K284	7.0
SOUTH CENTRAL	OKAHUMPKA	2	K285	6.9
SOUTH CENTRAL	OKAHUMPKA	2	K286	0.9
SOUTH CENTRAL	ORANGEWOOD	1	K217	3.9
SOUTH CENTRAL	ORANGEWOOD	2	K218	4.3
SOUTH CENTRAL	ORANGEWOOD	1	K220	2.7
SOUTH CENTRAL	ORANGEWOOD	1	K221	5.1
SOUTH CENTRAL	ORANGEWOOD	1	K222	10.9
SOUTH CENTRAL	ORANGEWOOD	1	K223	3.6
SOUTH CENTRAL	ORANGEWOOD	1	K224	3.9
SOUTH CENTRAL	ORANGEWOOD	2	K225	4.2

SOUTH CENTRAL	ORANGEWOOD	2	K226	7.4
SOUTH CENTRAL	ORANGEWOOD	2	K227	3.4
SOUTH CENTRAL	ORANGEWOOD	2	K228	7.6
SOUTH CENTRAL	ORANGEWOOD	2	K229	2.3
SOUTH CENTRAL	PEMBROKE	1	K3205	0.0
SOUTH CENTRAL	PINECASTLE	2	K396	8.8
SOUTH CENTRAL	PINECASTLE	1	W0391	3.2
SOUTH CENTRAL	PINECASTLE	1	W0392	8.9
SOUTH CENTRAL	PINECASTLE	2	W0395	11.0
SOUTH CENTRAL	POINCIANA	1	K1236	10.7
SOUTH CENTRAL	POINCIANA	1	K1237	9.9
SOUTH CENTRAL	POINCIANA	2	K1508	10.5
SOUTH CENTRAL	POINCIANA	2	K1509	6.2
SOUTH CENTRAL	POINCIANA	2	K1556	10.6
SOUTH CENTRAL	POINCIANA	1	K1558	10.2
SOUTH CENTRAL	POINCIANA	2	K1561	11.1
SOUTH CENTRAL	POINCIANA NORTH	3	K629	6.3
SOUTH CENTRAL	POINCIANA NORTH	3	K631	10.6
SOUTH CENTRAL	REEDY LAKE	2	K1102	4.4
SOUTH CENTRAL	REEDY LAKE	1	K1104	4.5
SOUTH CENTRAL	REEDY LAKE	2	K1108	1.7
SOUTH CENTRAL	REEDY LAKE	1	K1110	8.6
SOUTH CENTRAL	RIO PINAR	1	W0968	9.1
SOUTH CENTRAL	RIO PINAR	1	W0969	6.3
SOUTH CENTRAL	RIO PINAR	1	W0970	11.9
SOUTH CENTRAL	RIO PINAR	4	W0971	4.9
SOUTH CENTRAL	RIO PINAR	4	W0972	11.3
SOUTH CENTRAL	RIO PINAR	4	W0973	8.9
SOUTH CENTRAL	RIO PINAR	4	W0974	10.5
SOUTH CENTRAL	RIO PINAR	1	W0975	8.9
SOUTH CENTRAL	SAND LAKE	1	K920	2.4
SOUTH CENTRAL	SAND LAKE	2	K922	5.6
SOUTH CENTRAL	SAND LAKE	2	K923	3.2
SOUTH CENTRAL	SAND LAKE	1	K925	4.8
SOUTH CENTRAL	SAND LAKE	1	K926	4.3
SOUTH CENTRAL	SAND LAKE	2	K928	4.2
SOUTH CENTRAL	SAND LAKE	2	K929	5.4
SOUTH CENTRAL	SAND LAKE	1	K931	3.3
SOUTH CENTRAL	SAND LAKE	1	K932	3.3
SOUTH CENTRAL	SAND LAKE	2	K934	6.9
SOUTH CENTRAL	SAND MOUNTAIN	1	K3201	0.3
SOUTH CENTRAL	SEBRING EAST	1	K541	2.5
SOUTH CENTRAL	SEBRING EAST	1	K542	6.2
SOUTH CENTRAL	SHINGLE CREEK	2	K855	8.6

SOUTH CENTRAL	SHINGLE CREEK	1	K857	9.7
SOUTH CENTRAL	SHINGLE CREEK	2	K858	7.0
SOUTH CENTRAL	SHINGLE CREEK	1	K860	7.6
SOUTH CENTRAL	SHINGLE CREEK	1	K861	8.3
SOUTH CENTRAL	SHINGLE CREEK	2	K863	8.7
SOUTH CENTRAL	SHINGLE CREEK	2	K868	9.2
SOUTH CENTRAL	SKY LAKE	1	W0362	2.5
SOUTH CENTRAL	SKY LAKE	1	W0363	11.8
SOUTH CENTRAL	SKY LAKE	1	W0364	7.6
SOUTH CENTRAL	SKY LAKE	2	W0365	9.2
SOUTH CENTRAL	SKY LAKE	2	W0366	6.3
SOUTH CENTRAL	SKY LAKE	3	W0367	8.8
SOUTH CENTRAL	SKY LAKE	3	W0368	7.3
SOUTH CENTRAL	SKY LAKE	3	W0369	12.0
SOUTH CENTRAL	SUN'N LAKES	2	K1135	6.0
SOUTH CENTRAL	SUN'N LAKES	2	K1136	5.9
SOUTH CENTRAL	SUN'N LAKES	2	K1137	3.5
SOUTH CENTRAL	SUN'N LAKES	1	K1296	11.5
SOUTH CENTRAL	SUN'N LAKES	1	K1297	5.6
SOUTH CENTRAL	SUN'N LAKES	1	K1300	5.4
SOUTH CENTRAL	TAFT	2	K1023	2.5
SOUTH CENTRAL	TAFT	2	K1024	10.7
SOUTH CENTRAL	TAFT	2	K1025	6.6
SOUTH CENTRAL	TAFT	1	K1026	7.6
SOUTH CENTRAL	TAFT	1	K1027	7.3
SOUTH CENTRAL	TAFT	1	K1028	8.9
SOUTH CENTRAL	TAUNTON ROAD	1	K1081	5.1
SOUTH CENTRAL	TAUNTON ROAD	1	K1083	3.2
SOUTH CENTRAL	VINELAND	1	K901	6.1
SOUTH CENTRAL	VINELAND	2	K903	10.7
SOUTH CENTRAL	VINELAND	2	K904	7.7
SOUTH CENTRAL	VINELAND	3	K906	9.6
SOUTH CENTRAL	VINELAND	1	K907	5.2
SOUTH CENTRAL	VINELAND	2	K909	5.0
SOUTH CENTRAL	VINELAND	2	K910	9.0
SOUTH CENTRAL	VINELAND	3	K912	10.3
SOUTH CENTRAL	VINELAND	1	K913	7.5
SOUTH CENTRAL	VINELAND	3	K915	8.0
SOUTH CENTRAL	WAUCHULA	1	K245	4.3
SOUTH CENTRAL	WAUCHULA	2	K246	5.4
SOUTH CENTRAL	WEST DAVENPORT	2	K1521	12.5
SOUTH CENTRAL	WEST DAVENPORT	1	K1523	6.8
SOUTH CENTRAL	WEST DAVENPORT	1	K1524	5.0
SOUTH CENTRAL	WEST DAVENPORT	2	K1526	7.9

SOUTH CENTRAL	WEST LAKE WALES	2	K866	4.1
SOUTH CENTRAL	WESTRIDGE	1	K420	9.8
SOUTH CENTRAL	WESTRIDGE	2	K421	7.6
SOUTH CENTRAL	WESTRIDGE	1	K425	6.2
SOUTH CENTRAL	WESTRIDGE	2	K426	6.3
SOUTH CENTRAL	WESTRIDGE	2	K428	4.2
SOUTH CENTRAL	WEWAHOOTEE	1	W1198	1.1
SOUTH CENTRAL	WINDERMERE	3	K302	7.1
SOUTH CENTRAL	WINDERMERE	1	K303	8.3
SOUTH CENTRAL	WINDERMERE	1	K304	4.8
SOUTH CENTRAL	WINTER GARDEN	2	K201	11.5
SOUTH CENTRAL	WINTER GARDEN	2	K202	8.3
SOUTH CENTRAL	WINTER GARDEN	2	K203	8.1
SOUTH CENTRAL	WINTER GARDEN	1	K204	10.9
SOUTH CENTRAL	WINTER GARDEN	1	K205	9.1
SOUTH CENTRAL	WINTER GARDEN	1	K206	11.1
SOUTH CENTRAL	WINTER GARDEN	1	K207	10.4
SOUTH CENTRAL	WOODSMERE	3	M252	6.4
SOUTH CENTRAL	WOODSMERE	3	M253	4.1
SOUTH CENTRAL	WOODSMERE	3	M254	6.0
SOUTH CENTRAL	WOODSMERE	4	M255	6.9
SOUTH CENTRAL	WOODSMERE	4	M256	8.4
SOUTH CENTRAL	WORLD GATEWAY	1	K187	7.2
SOUTH CENTRAL	WORLD GATEWAY	1	K189	8.0
NORTH COASTAL	ADAMS	1	A199	5.5
NORTH COASTAL	ADAMS	1	A200	3.9
NORTH COASTAL	ALACHUA	1	A143	1.4
NORTH COASTAL	ALACHUA	1	A144	3.0
NORTH COASTAL	APALACHICOLA	1	N58	5.2
NORTH COASTAL	APALACHICOLA	1	N59	6.3
NORTH COASTAL	ARCHER	1	A195	1.5
NORTH COASTAL	ARCHER	2	A196	5.2
NORTH COASTAL	BEACON HILL	2	N515	2.1
NORTH COASTAL	BEACON HILL	1	N516	7.6
NORTH COASTAL	BEACON HILL	2	N527	5.3
NORTH COASTAL	BELLEVIEW	1	A1	8.6
NORTH COASTAL	BELLEVIEW	2	A2	8.2
NORTH COASTAL	BELLEVIEW	1	A3	10.8
NORTH COASTAL	BELLEVIEW	2	A4	7.1
NORTH COASTAL	BELLEVIEW	2	A6	11.0
NORTH COASTAL	BEVERLY HILLS	2	A72	6.3
NORTH COASTAL	BEVERLY HILLS	2	A73	4.7
NORTH COASTAL	BEVERLY HILLS	1	A74	7.1
NORTH COASTAL	BEVERLY HILLS	1	A75	6.8

NORTH COASTAL	BEVILLES CORNER	1	A561	1.9
NORTH COASTAL	BEVILLES CORNER	1	A562	3.8
NORTH COASTAL	BROOKSVILLE	3	A95	6.6
NORTH COASTAL	BROOKSVILLE	3	A96	8.6
NORTH COASTAL	BROOKSVILLE	2	A97	5.4
NORTH COASTAL	BROOKSVILLE	2	A98	5.8
NORTH COASTAL	BUSHNELL EAST	1	A170	6.8
NORTH COASTAL	CARRABELLE	1	N42	2.2
NORTH COASTAL	CARRABELLE	1	N43	6.9
NORTH COASTAL	CARRABELLE BEACH	1	N48	2.6
NORTH COASTAL	CIRCLE SQUARE	2	A250	5.7
NORTH COASTAL	CIRCLE SQUARE	1	A251	6.6
NORTH COASTAL	CIRCLE SQUARE	1	A253	4.6
NORTH COASTAL	CITRUS HILLS	2	A282	4.7
NORTH COASTAL	CITRUS HILLS	3	A283	6.5
NORTH COASTAL	CITRUS HILLS	2	A284	8.0
NORTH COASTAL	CITRUS HILLS	3	A285	4.9
NORTH COASTAL	CITRUS HILLS	2	A286	5.7
NORTH COASTAL	COLEMAN	1	A105	2.0
NORTH COASTAL	COLEMAN	1	A106	5.0
NORTH COASTAL	COLEMAN	2	A107	4.3
NORTH COASTAL	CRAWFORDVILLE	3	N35	6.1
NORTH COASTAL	CRAWFORDVILLE	2	N36	5.1
NORTH COASTAL	CROSS CITY	1	A118	4.5
NORTH COASTAL	CROSS CITY	1	A119	9.0
NORTH COASTAL	CROSS CITY INDUSTRIAL	1	A46	4.2
NORTH COASTAL	CRYSTAL RIVER NORTH	1	A161	6.7
NORTH COASTAL	CRYSTAL RIVER NORTH	1	A162	7.5
NORTH COASTAL	CRYSTAL RIVER SOUTH	1	A159	5.2
NORTH COASTAL	DUNNELLON TOWN	2	A68	7.4
NORTH COASTAL	DUNNELLON TOWN	2	A69	5.6
NORTH COASTAL	DUNNELLON TOWN	1	A70	6.1
NORTH COASTAL	DUNNELLON TOWN	1	A71	5.3
NORTH COASTAL	EAGLES NEST	2	A224	6.2
NORTH COASTAL	EAGLES NEST	1	A228	6.3
NORTH COASTAL	EAST POINT	1	N230	2.8
NORTH COASTAL	EAST POINT	1	N231	4.9
NORTH COASTAL	FLORAL CITY	1	A87	3.0
NORTH COASTAL	FLORAL CITY	1	A88	2.8
NORTH COASTAL	FORT WHITE	2	A20	4.0
NORTH COASTAL	GEORGIA PACIFIC	1	A45	5.7
NORTH COASTAL	HERNANDO AIRPORT	1	A430	9.6
NORTH COASTAL	HERNANDO AIRPORT	1	A431	8.7
NORTH COASTAL	HIGH SPRINGS	1	A15	7.6

NORTH COASTAL	HIGH SPRINGS	2	A16	7.9
NORTH COASTAL	HOLDER	1	A47	6.0
NORTH COASTAL	HOLDER	2	A48	6.5
NORTH COASTAL	HOLDER	1	A49	4.2
NORTH COASTAL	HOMOSASSA	3	A271	7.6
NORTH COASTAL	HOMOSASSA	3	A272	7.0
NORTH COASTAL	INDIAN PASS	1	N556	10.9
NORTH COASTAL	INGLIS	2	A78	4.5
NORTH COASTAL	INVERNESS	1	A81	6.3
NORTH COASTAL	INVERNESS	1	A82	7.5
NORTH COASTAL	INVERNESS	1	A83	8.0
NORTH COASTAL	INVERNESS	2	A84	8.4
NORTH COASTAL	INVERNESS	2	A85	10.4
NORTH COASTAL	JASPER	2	N191	4.7
NORTH COASTAL	JASPER	2	N192	4.8
NORTH COASTAL	JENNINGS	1	N195	2.4
NORTH COASTAL	LADY LAKE	1	A243	8.2
NORTH COASTAL	LADY LAKE	2	A244	5.5
NORTH COASTAL	LADY LAKE	2	A245	7.1
NORTH COASTAL	LADY LAKE	1	A246	9.0
NORTH COASTAL	LAKE WEIR	1	A61	5.2
NORTH COASTAL	LAKE WEIR	2	A64	7.5
NORTH COASTAL	LEBANON	1	A132	5.9
NORTH COASTAL	LURAVILLE	1	A192	4.5
NORTH COASTAL	MADISON	2	N1	4.5
NORTH COASTAL	MADISON	2	N2	5.8
NORTH COASTAL	MADISON	1	N3	7.4
NORTH COASTAL	MADISON	1	N4	3.5
NORTH COASTAL	MARICAMP	1	A333	9.4
NORTH COASTAL	MARICAMP	2	A334	8.4
NORTH COASTAL	MARICAMP	1	A335	7.8
NORTH COASTAL	MARICAMP	2	A336	7.8
NORTH COASTAL	MARTIN	1	A38	10.2
NORTH COASTAL	MARTIN	1	A39	7.1
NORTH COASTAL	MCINTOSH	1	A50	3.5
NORTH COASTAL	MCINTOSH	2	A51	5.1
NORTH COASTAL	MONTICELLO	1	N66	3.6
NORTH COASTAL	MONTICELLO	1	N67	6.0
NORTH COASTAL	MONTICELLO	2	N68	2.4
NORTH COASTAL	MONTICELLO	2	N69	6.0
NORTH COASTAL	NEWBERRY	1	A94	8.9
NORTH COASTAL	OBRIEN	1	A379	4.6
NORTH COASTAL	OCHLOCKONEE	2	N37	4.8
NORTH COASTAL	OCHLOCKONEE	1	N38	4.6

NORTH COASTAL	ORANGE BLOSSOM	2	A309	5.4
NORTH COASTAL	ORANGE BLOSSOM	1	A310	8.9
NORTH COASTAL	ORANGE BLOSSOM	2	A388	7.4
NORTH COASTAL	ORANGE BLOSSOM	1	A389	7.0
NORTH COASTAL	ORANGE BLOSSOM	1	A392	7.7
NORTH COASTAL	ORANGE BLOSSOM	2	A394	8.7
NORTH COASTAL	PERRY	2	N10	7.0
NORTH COASTAL	PERRY	1	N7	5.6
NORTH COASTAL	PERRY	1	N8	2.3
NORTH COASTAL	PERRY	2	N9	5.9
NORTH COASTAL	PERRY NORTH	1	N14	7.4
NORTH COASTAL	PERRY NORTH	1	N15	9.1
NORTH COASTAL	PINE RIDGE	1	A422	7.5
NORTH COASTAL	PINE RIDGE	1	A423	7.2
NORTH COASTAL	PINE RIDGE	1	A425	5.8
NORTH COASTAL	PORT ST. JOE	2	N52	3.8
NORTH COASTAL	PORT ST. JOE	2	N53	4.9
NORTH COASTAL	PORT ST. JOE	2	N54	4.7
NORTH COASTAL	PORT ST. JOE	2	N55	0.2
NORTH COASTAL	PORT ST. JOE INDUSTRIAL	1	N202	3.7
NORTH COASTAL	PORT ST. JOE INDUSTRIAL	1	N203	1.0
NORTH COASTAL	RAINBOW SPRINGS	1	A368	5.3
NORTH COASTAL	RAINBOW SPRINGS	2	A369	3.9
NORTH COASTAL	REDDICK	2	A34	4.9
NORTH COASTAL	REDDICK	2	A35	5.4
NORTH COASTAL	REDDICK	1	A36	5.3
NORTH COASTAL	ROSS PRAIRIE	3	A112	4.9
NORTH COASTAL	SANTOS	1	A230	6.2
NORTH COASTAL	SANTOS	2	A231	8.3
NORTH COASTAL	SANTOS	1	A233	3.8
NORTH COASTAL	SILVER SPRINGS	3	A153	9.5
NORTH COASTAL	SILVER SPRINGS	3	A154	6.4
NORTH COASTAL	SILVER SPRINGS SHORES	2	A128	5.5
NORTH COASTAL	SILVER SPRINGS SHORES	1	A129	8.8
NORTH COASTAL	SILVER SPRINGS SHORES	1	A130	6.7
NORTH COASTAL	SILVER SPRINGS SHORES	2	A131	10.8
NORTH COASTAL	SOPCHOPPY	1	N327	5.0
NORTH COASTAL	ST MARKS WEST	2	N331	3.9
NORTH COASTAL	ST MARKS WEST	1	N332	6.3
NORTH COASTAL	ST MARKS WEST	2	N336	3.3
NORTH COASTAL	ST. GEORGE ISLAND	1	N233	8.6
NORTH COASTAL	ST. GEORGE ISLAND	1	N234	4.0
NORTH COASTAL	SUWANNEE RIVER PLANT	5	N324	4.0
NORTH COASTAL	SUWANNEE RIVER PLANT	4	N323	1.3

NORTH COASTAL	SUWANNEE RIVER PLANT	5	N325	5.5
NORTH COASTAL	TANGERINE	3	A262	10.7
NORTH COASTAL	TANGERINE	3	A263	4.9
NORTH COASTAL	TANGERINE	3	A264	4.4
NORTH COASTAL	TRENTON	1	A90	6.3
NORTH COASTAL	TRENTON	1	A91	2.0
NORTH COASTAL	TROPIC TERRACE	2	A207	6.0
NORTH COASTAL	TROPIC TERRACE	2	A208	3.0
NORTH COASTAL	TROPIC TERRACE	1	A212	6.8
NORTH COASTAL	TWIN COUNTY RANCH	1	A216	5.2
NORTH COASTAL	TWIN COUNTY RANCH	2	A218	5.5
NORTH COASTAL	TWIN COUNTY RANCH	2	A219	4.0
NORTH COASTAL	TWIN COUNTY RANCH	1	A221	5.3
NORTH COASTAL	WAUKEENAH	1	N64	2.4
NORTH COASTAL	WAUKEENAH	1	N65	2.1
NORTH COASTAL	WEIRSDALE	1	A321	6.7
NORTH COASTAL	WEIRSDALE	2	A322	6.0
NORTH COASTAL	WHITE SPRINGS	2	N375	2.7
NORTH COASTAL	WILDWOOD CITY	1	A395	8.4
NORTH COASTAL	WILDWOOD CITY	1	A396	6.7
NORTH COASTAL	WILLISTON	1	A124	5.3
NORTH COASTAL	WILLISTON	2	A125	9.1
NORTH COASTAL	ZUBER	1	A202	5.2
NORTH COASTAL	ZUBER	1	A203	5.2
NORTH COASTAL	ZUBER	2	A204	6.9
NORTH COASTAL	ZUBER	2	A205	7.4
NORTH CENTRAL	ALAFAYA	2	W0289	9.4
NORTH CENTRAL	ALAFAYA	2	W0290	8.4
NORTH CENTRAL	ALAFAYA	3	W0297	10.8
NORTH CENTRAL	ALAFAYA	3	W0298	10.3
NORTH CENTRAL	ALTAMONTE	1	M571	5.1
NORTH CENTRAL	ALTAMONTE	1	M572	8.9
NORTH CENTRAL	ALTAMONTE	1	M573	3.2
NORTH CENTRAL	ALTAMONTE	1	M574	5.3
NORTH CENTRAL	ALTAMONTE	2	M575	6.6
NORTH CENTRAL	ALTAMONTE	2	M576	8.5
NORTH CENTRAL	ALTAMONTE	2	M578	9.2
NORTH CENTRAL	ALTAMONTE	2	M579	9.1
NORTH CENTRAL	APOPKA SOUTH	3	M720	8.9
NORTH CENTRAL	APOPKA SOUTH	3	M721	9.8
NORTH CENTRAL	APOPKA SOUTH	1	M723	7.5
NORTH CENTRAL	APOPKA SOUTH	1	M724	4.9
NORTH CENTRAL	APOPKA SOUTH	2	M725	10.3
NORTH CENTRAL	APOPKA SOUTH	2	M726	7.6

NORTH CENTRAL	APOPKA SOUTH	2	M727	5.5
NORTH CENTRAL	BARBERVILLE	1	W0902	6.9
NORTH CENTRAL	BARBERVILLE	2	W0903	1.8
NORTH CENTRAL	BARBERVILLE	2	W0904	4.1
NORTH CENTRAL	BAY RIDGE	2	M445	3.6
NORTH CENTRAL	BAY RIDGE	1	M447	7.4
NORTH CENTRAL	BAY RIDGE	2	M451	9.2
NORTH CENTRAL	BAY RIDGE	1	M453	6.4
NORTH CENTRAL	BITHLO	1	W0951	10.1
NORTH CENTRAL	BITHLO	1	W0952	4.5
NORTH CENTRAL	BITHLO	1	W0953	9.9
NORTH CENTRAL	BITHLO	2	W0954	9.1
NORTH CENTRAL	BITHLO	2	W0955	9.4
NORTH CENTRAL	BITHLO	2	W0956	9.5
NORTH CENTRAL	CASSADAGA	3	W0515	5.1
NORTH CENTRAL	CASSADAGA	3	W0516	7.4
NORTH CENTRAL	CASSADAGA	3	W0517	5.1
NORTH CENTRAL	CASSADAGA	2	W0523	4.7
NORTH CENTRAL	CASSADAGA	2	W0524	7.9
NORTH CENTRAL	CASSELBERRY	1	W0017	6.8
NORTH CENTRAL	CASSELBERRY	1	W0018	4.5
NORTH CENTRAL	CASSELBERRY	1	W0019	8.4
NORTH CENTRAL	CASSELBERRY	1	W0020	9.5
NORTH CENTRAL	CASSELBERRY	2	W0021	5.0
NORTH CENTRAL	CASSELBERRY	2	W0022	10.1
NORTH CENTRAL	CASSELBERRY	2	W0025	5.7
NORTH CENTRAL	CASSELBERRY	2	W0026	9.8
NORTH CENTRAL	CASSELBERRY	3	W0027	10.6
NORTH CENTRAL	CASSELBERRY	3	W0028	5.0
NORTH CENTRAL	CASSELBERRY	3	W0029	7.1
NORTH CENTRAL	DELAND	1	W0803	7.7
NORTH CENTRAL	DELAND	1	W0804	5.9
NORTH CENTRAL	DELAND	1	W0805	6.7
NORTH CENTRAL	DELAND	2	W0806	7.7
NORTH CENTRAL	DELAND	2	W0807	7.2
NORTH CENTRAL	DELAND	2	W0808	7.3
NORTH CENTRAL	DELAND	2	W0809	8.5
NORTH CENTRAL	DELAND EAST	3	W1102	6.1
NORTH CENTRAL	DELAND EAST	3	W1103	7.1
NORTH CENTRAL	DELAND EAST	3	W1104	6.5
NORTH CENTRAL	DELAND EAST	2	W1105	5.9
NORTH CENTRAL	DELAND EAST	2	W1106	5.7
NORTH CENTRAL	DELAND EAST	2	W1107	7.4
NORTH CENTRAL	DELAND EAST	1	W1108	9.0

NORTH CENTRAL	DELAND EAST	1	W1109	4.8
NORTH CENTRAL	DELAND EAST	1	W1110	10.6
NORTH CENTRAL	DELEON SPRINGS	1	W0032	7.5
NORTH CENTRAL	DELEON SPRINGS	1	W0034	5.2
NORTH CENTRAL	DELTONA	3	W4550	9.8
NORTH CENTRAL	DELTONA	3	W4553	7.7
NORTH CENTRAL	DELTONA	1	W4555	7.4
NORTH CENTRAL	DELTONA	3	W4556	8.3
NORTH CENTRAL	DELTONA	2	W4558	7.9
NORTH CENTRAL	DELTONA	1	W4561	4.4
NORTH CENTRAL	DELTONA	3	W4562	9.0
NORTH CENTRAL	DELTONA	2	W4564	10.0
NORTH CENTRAL	DELTONA	2	W4565	6.2
NORTH CENTRAL	DELTONA	1	W4567	6.8
NORTH CENTRAL	DELTONA EAST	3	W0121	7.3
NORTH CENTRAL	DELTONA EAST	2	W0123	7.9
NORTH CENTRAL	DELTONA EAST	3	W0124	10.1
NORTH CENTRAL	DELTONA EAST	2	W0126	5.2
NORTH CENTRAL	DELTONA EAST	3	W0130	8.8
NORTH CENTRAL	DELTONA EAST	2	W0132	8.1
NORTH CENTRAL	DOUGLAS AVENUE	1	M1704	5.7
NORTH CENTRAL	DOUGLAS AVENUE	2	M1706	6.7
NORTH CENTRAL	DOUGLAS AVENUE	1	M1707	5.7
NORTH CENTRAL	DOUGLAS AVENUE	2	M1709	6.7
NORTH CENTRAL	DOUGLAS AVENUE	2	M1712	5.8
NORTH CENTRAL	EAST ORANGE	2	W0250	12.6
NORTH CENTRAL	EAST ORANGE	3	W0252	8.9
NORTH CENTRAL	EAST ORANGE	2	W0253	8.1
NORTH CENTRAL	EAST ORANGE	3	W0255	3.9
NORTH CENTRAL	EAST ORANGE	2	W0265	8.5
NORTH CENTRAL	EAST ORANGE	2	W0271	9.9
NORTH CENTRAL	EAST ORANGE	1	W0273	3.3
NORTH CENTRAL	EAST ORANGE	3	W0274	10.5
NORTH CENTRAL	EAST ORANGE	1	W0276	4.3
NORTH CENTRAL	EATONVILLE	1	M1131	5.5
NORTH CENTRAL	EATONVILLE	1	M1132	8.7
NORTH CENTRAL	EATONVILLE	1	M1133	5.0
NORTH CENTRAL	EATONVILLE	2	M1135	10.1
NORTH CENTRAL	EATONVILLE	2	M1136	8.8
NORTH CENTRAL	EATONVILLE	2	M1137	8.1
NORTH CENTRAL	EATONVILLE	3	M1138	6.8
NORTH CENTRAL	EATONVILLE	3	M1139	8.6
NORTH CENTRAL	ECON	2	W0318	5.8
NORTH CENTRAL	ECON	1	W0320	10.2

NORTH CENTRAL	ECON	2	W0321	8.1
NORTH CENTRAL	ECON	2	W0324	8.6
NORTH CENTRAL	ECON	1	W0326	10.2
NORTH CENTRAL	ECON	2	W0327	9.1
NORTH CENTRAL	ECON	1	W0329	7.5
NORTH CENTRAL	EUSTIS	2	M499	6.3
NORTH CENTRAL	EUSTIS	2	M500	4.9
NORTH CENTRAL	EUSTIS	2	M501	4.5
NORTH CENTRAL	EUSTIS	1	M503	6.0
NORTH CENTRAL	EUSTIS	1	M504	9.7
NORTH CENTRAL	EUSTIS SOUTH	2	M1054	5.1
NORTH CENTRAL	EUSTIS SOUTH	2	M1055	9.0
NORTH CENTRAL	EUSTIS SOUTH	2	M1056	6.1
NORTH CENTRAL	EUSTIS SOUTH	1	M1057	6.6
NORTH CENTRAL	EUSTIS SOUTH	1	M1058	7.7
NORTH CENTRAL	EUSTIS SOUTH	1	M1059	6.3
NORTH CENTRAL	FERN PARK	1	M907	6.2
NORTH CENTRAL	FERN PARK	1	M908	4.9
NORTH CENTRAL	FERN PARK	1	M909	5.1
NORTH CENTRAL	KELLER ROAD	1	M1	8.9
NORTH CENTRAL	KELLER ROAD	2	M2	2.7
NORTH CENTRAL	KELLER ROAD	1	M3	10.4
NORTH CENTRAL	KELLER ROAD	2	M4	4.6
NORTH CENTRAL	KELLY PARK	2	M821	5.5
NORTH CENTRAL	KELLY PARK	2	M822	4.2
NORTH CENTRAL	LAKE ALOMA	1	W0151	6.1
NORTH CENTRAL	LAKE ALOMA	1	W0153	6.8
NORTH CENTRAL	LAKE ALOMA	2	W0158	3.5
NORTH CENTRAL	LAKE ALOMA	2	W0161	9.2
NORTH CENTRAL	LAKE EMMA	2	M421	6.3
NORTH CENTRAL	LAKE EMMA	2	M422	5.9
NORTH CENTRAL	LAKE EMMA	2	M423	4.5
NORTH CENTRAL	LAKE EMMA	2	M424	4.7
NORTH CENTRAL	LAKE EMMA	1	M425	3.8
NORTH CENTRAL	LAKE EMMA	1	M426	6.4
NORTH CENTRAL	LAKE EMMA	1	M427	5.1
NORTH CENTRAL	LAKE EMMA	1	M428	8.1
NORTH CENTRAL	LAKE HELEN	1	W1700	6.8
NORTH CENTRAL	LAKE HELEN	2	W1701	4.9
NORTH CENTRAL	LAKE HELEN	1	W1703	7.1
NORTH CENTRAL	LAKE HELEN	2	W1704	8.1
NORTH CENTRAL	LISBON	2	M1517	9.2
NORTH CENTRAL	LISBON	1	M1518	5.9
NORTH CENTRAL	LISBON	2	M1519	7.0

NORTH CENTRAL	LISBON	1	M1520	6.0
NORTH CENTRAL	LOCKHART	1	M400	8.3
NORTH CENTRAL	LOCKHART	2	M402	10.9
NORTH CENTRAL	LOCKHART	1	M406	7.6
NORTH CENTRAL	LOCKHART	2	M408	4.1
NORTH CENTRAL	LOCKHART	1	M412	9.1
NORTH CENTRAL	LOCKHART	2	M414	5.5
NORTH CENTRAL	LOCKHART	2	M417	8.6
NORTH CENTRAL	LOCKWOOD	1	W0480	8.8
NORTH CENTRAL	LOCKWOOD	1	W0481	8.4
NORTH CENTRAL	LOCKWOOD	1	W0482	8.6
NORTH CENTRAL	LONGWOOD	1	M142	10.2
NORTH CENTRAL	LONGWOOD	1	M143	7.4
NORTH CENTRAL	LONGWOOD	2	M144	6.6
NORTH CENTRAL	LONGWOOD	2	M145	6.5
NORTH CENTRAL	MAITLAND	3	M80	8.4
NORTH CENTRAL	MAITLAND	1	M81	6.2
NORTH CENTRAL	MAITLAND	1	M82	8.5
NORTH CENTRAL	MAITLAND	1	M84	3.8
NORTH CENTRAL	MAITLAND	2	M85	6.1
NORTH CENTRAL	MAITLAND	3	W0079	6.1
NORTH CENTRAL	MAITLAND	2	W0086	5.2
NORTH CENTRAL	MAITLAND	2	W0087	11.3
NORTH CENTRAL	MONASTERY	1	W0201	5.9
NORTH CENTRAL	MONASTERY	1	W0202	5.9
NORTH CENTRAL	MONASTERY	1	W0203	9.1
NORTH CENTRAL	MYRTLE LAKE	2	M648	8.1
NORTH CENTRAL	MYRTLE LAKE	2	M649	9.4
NORTH CENTRAL	MYRTLE LAKE	2	M650	6.5
NORTH CENTRAL	MYRTLE LAKE	2	M651	7.2
NORTH CENTRAL	MYRTLE LAKE	3	M657	8.9
NORTH CENTRAL	MYRTLE LAKE	3	M658	6.3
NORTH CENTRAL	MYRTLE LAKE	3	M659	7.9
NORTH CENTRAL	NORTH LONGWOOD	6	M1749	8.3
NORTH CENTRAL	NORTH LONGWOOD	7	M1751	10.2
NORTH CENTRAL	NORTH LONGWOOD	6	M1755	5.9
NORTH CENTRAL	NORTH LONGWOOD	7	M1757	7.7
NORTH CENTRAL	NORTH LONGWOOD	6	M1758	5.5
NORTH CENTRAL	NORTH LONGWOOD	7	M1760	6.4
NORTH CENTRAL	NORTH LONGWOOD	6	M1761	12.4
NORTH CENTRAL	NORTH LONGWOOD	7	M1763	8.6
NORTH CENTRAL	ORANGE CITY	3	W0370	7.0
NORTH CENTRAL	ORANGE CITY	2	W0372	12.6
NORTH CENTRAL	ORANGE CITY	3	W0376	8.7

NORTH CENTRAL	ORANGE CITY	2	W0378	3.9
NORTH CENTRAL	ORANGE CITY	3	W0382	6.5
NORTH CENTRAL	OVIEDO	1	W0171	7.7
NORTH CENTRAL	OVIEDO	1	W0172	8.8
NORTH CENTRAL	OVIEDO	2	W0174	8.2
NORTH CENTRAL	OVIEDO	2	W0175	6.4
NORTH CENTRAL	OVIEDO	3	W0176	8.8
NORTH CENTRAL	OVIEDO	3	W0181	6.5
NORTH CENTRAL	PIEDMONT	2	M471	8.6
NORTH CENTRAL	PIEDMONT	2	M472	7.9
NORTH CENTRAL	PIEDMONT	2	M473	9.6
NORTH CENTRAL	PIEDMONT	2	M474	9.2
NORTH CENTRAL	PIEDMONT	1	M475	8.6
NORTH CENTRAL	PIEDMONT	1	M476	5.1
NORTH CENTRAL	PIEDMONT	1	M477	8.6
NORTH CENTRAL	PIEDMONT	1	M478	9.1
NORTH CENTRAL	PLYMOUTH	1	M702	0.5
NORTH CENTRAL	PLYMOUTH	1	M704	9.7
NORTH CENTRAL	PLYMOUTH	2	M706	3.1
NORTH CENTRAL	PLYMOUTH	2	M707	5.6
NORTH CENTRAL	SPRING LAKE	2	M662	6.8
NORTH CENTRAL	SPRING LAKE	2	M663	5.8
NORTH CENTRAL	SPRING LAKE	2	M664	9.3
NORTH CENTRAL	SPRING LAKE	1	M666	5.0
NORTH CENTRAL	SPRING LAKE	1	M667	6.2
NORTH CENTRAL	SPRING LAKE	1	M668	10.2
NORTH CENTRAL	SPRING LAKE	3	M669	6.9
NORTH CENTRAL	SPRING LAKE	3	M670	7.1
NORTH CENTRAL	SUNFLOWER	1	W0469	5.6
NORTH CENTRAL	SUNFLOWER	1	W0470	14.0
NORTH CENTRAL	SUNFLOWER	1	W0471	8.2
NORTH CENTRAL	SUNFLOWER	2	W0472	11.7
NORTH CENTRAL	SUNFLOWER	2	W0473	10.8
NORTH CENTRAL	SUNFLOWER	2	W0474	12.4
NORTH CENTRAL	TAVARES EAST	1	M580	5.3
NORTH CENTRAL	TAVARES EAST	1	M581	5.0
NORTH CENTRAL	TURNER PLANT	8	W0761	8.2
NORTH CENTRAL	TURNER PLANT	8	W0762	6.2
NORTH CENTRAL	TURNER PLANT	10	W0763	6.9
NORTH CENTRAL	TURNER PLANT	10	W0764	5.4
NORTH CENTRAL	UCF	1	W1012	9.6
NORTH CENTRAL	UCF	1	W1013	7.2
NORTH CENTRAL	UCF	1	W1014	2.5
NORTH CENTRAL	UCF	2	W1015	7.8

NORTH CENTRAL	UCF	2	W1016	9.1
NORTH CENTRAL	UCF	2	W1017	10.7
NORTH CENTRAL	UCF	2	W1018	7.7
NORTH CENTRAL	UCF NORTH	1	W0942	2.5
NORTH CENTRAL	UCF NORTH	1	W0980	9.1
NORTH CENTRAL	UCF NORTH	2	W0981	8.0
NORTH CENTRAL	UCF NORTH	2	W0982	8.3
NORTH CENTRAL	UCF NORTH	1	W0983	6.1
NORTH CENTRAL	UCF NORTH	3	W0988	2.9
NORTH CENTRAL	UCF NORTH	1	W0989	0.5
NORTH CENTRAL	UCF NORTH	2	W0992	11.6
NORTH CENTRAL	UCF NORTH	3	W0994	10.2
NORTH CENTRAL	UMATILLA	2	M4405	6.2
NORTH CENTRAL	UMATILLA	1	M4407	7.1
NORTH CENTRAL	UMATILLA	1	M4408	5.4
NORTH CENTRAL	WEKIVA	1	M101	5.3
NORTH CENTRAL	WEKIVA	2	M103	5.0
NORTH CENTRAL	WEKIVA	2	M104	5.2
NORTH CENTRAL	WEKIVA	1	M106	5.8
NORTH CENTRAL	WEKIVA	1	M107	6.4
NORTH CENTRAL	WEKIVA	2	M109	5.0
NORTH CENTRAL	WEKIVA	2	M110	7.9
NORTH CENTRAL	WEKIVA	1	M112	5.4
NORTH CENTRAL	WEKIVA	2	M113	4.9
NORTH CENTRAL	WEKIVA	1	M115	4.8
NORTH CENTRAL	WELCH ROAD	1	M542	8.6
NORTH CENTRAL	WELCH ROAD	1	M543	5.0
NORTH CENTRAL	WELCH ROAD	3	M545	10.4
NORTH CENTRAL	WELCH ROAD	3	M548	6.8
NORTH CENTRAL	WELCH ROAD	1	M550	9.1
NORTH CENTRAL	WELCH ROAD	1	M552	5.8
NORTH CENTRAL	WELCH ROAD	3	M554	7.6
NORTH CENTRAL	WEST CHAPMAN	3	W0700	9.1
NORTH CENTRAL	WEST CHAPMAN	2	W0702	5.8
NORTH CENTRAL	WEST CHAPMAN	3	W0703	8.4
NORTH CENTRAL	WEST CHAPMAN	2	W0705	5.0
NORTH CENTRAL	WEST CHAPMAN	3	W0708	9.6
NORTH CENTRAL	WINTER PARK	4	W0014	2.1
NORTH CENTRAL	WINTER PARK	4	W0015	7.2
NORTH CENTRAL	WINTER PARK	4	W0016	5.0
NORTH CENTRAL	WINTER PARK EAST	1	W0924	9.6
NORTH CENTRAL	WINTER PARK EAST	1	W0925	11.4
NORTH CENTRAL	WINTER PARK EAST	1	W0926	9.2
NORTH CENTRAL	WINTER PARK EAST	1	W0927	8.2

NORTH CENTRAL	WINTER PARK EAST	3	W0928	9.3
NORTH CENTRAL	WINTER PARK EAST	3	W0929	10.2
NORTH CENTRAL	WINTER PARK EAST	3	W0930	6.2
NORTH CENTRAL	WINTER PARK EAST	3	W0931	10.5
NORTH CENTRAL	WINTER SPRINGS	3	W0187	7.6
NORTH CENTRAL	WINTER SPRINGS	3	W0188	11.9
NORTH CENTRAL	WINTER SPRINGS	3	W0189	8.6
NORTH CENTRAL	WINTER SPRINGS	1	W0192	8.7
NORTH CENTRAL	WINTER SPRINGS	1	W0194	7.5
NORTH CENTRAL	WINTER SPRINGS	2	W0195	10.0
NORTH CENTRAL	WINTER SPRINGS	2	W0196	11.4
NORTH CENTRAL	ZELLWOOD	1	M31	7.2
NORTH CENTRAL	ZELLWOOD	1	M32	8.9
NORTH CENTRAL	ZELLWOOD	2	M33	8.4
NORTH CENTRAL	ZELLWOOD	2	M34	8.1
NORTH CENTRAL	WEKIVA	2	M104	5.0
NORTH CENTRAL	WEKIVA	2	M109	4.9
NORTH CENTRAL	WEKIVA	2	M110	7.8
NORTH CENTRAL	WEKIVA	2	M113	6.9
NORTH CENTRAL	WELCH ROAD	1	M542	8.9
NORTH CENTRAL	WELCH ROAD	1	M543	4.8
NORTH CENTRAL	WELCH ROAD	1	M550	8.3
NORTH CENTRAL	WELCH ROAD	1	M552	5.3
NORTH CENTRAL	WELCH ROAD	3	M545	10.2
NORTH CENTRAL	WELCH ROAD	3	M548	6.7
NORTH CENTRAL	WELCH ROAD	3	M554	7.1
NORTH CENTRAL	WEST CHAPMAN	2	W0702	5.5
NORTH CENTRAL	WEST CHAPMAN	2	W0705	4.3
NORTH CENTRAL	WEST CHAPMAN	3	W0700	9.1
NORTH CENTRAL	WEST CHAPMAN	3	W0703	8.2
NORTH CENTRAL	WEST CHAPMAN	3	W0708	9.4
NORTH CENTRAL	WINTER PARK	4	W0014	2.2
NORTH CENTRAL	WINTER PARK	4	W0015	7.2
NORTH CENTRAL	WINTER PARK	4	W0016	5.0
NORTH CENTRAL	WINTER PARK EAST	1	W0924	9.6
NORTH CENTRAL	WINTER PARK EAST	1	W0925	11.0
NORTH CENTRAL	WINTER PARK EAST	1	W0926	8.9
NORTH CENTRAL	WINTER PARK EAST	1	W0927	8.3
NORTH CENTRAL	WINTER PARK EAST	3	W0928	9.1
NORTH CENTRAL	WINTER PARK EAST	3	W0929	10.4
NORTH CENTRAL	WINTER PARK EAST	3	W0930	5.9
NORTH CENTRAL	WINTER PARK EAST	3	W0931	10.3
NORTH CENTRAL	WINTER SPRINGS	1	W0192	8.4
NORTH CENTRAL	WINTER SPRINGS	1	W0194	7.1

NORTH CENTRAL	WINTER SPRINGS	2	W0195	9.0
NORTH CENTRAL	WINTER SPRINGS	2	W0196	8.7
NORTH CENTRAL	WINTER SPRINGS	3	W0187	7.5
NORTH CENTRAL	WINTER SPRINGS	3	W0188	7.9
NORTH CENTRAL	WINTER SPRINGS	3	W0189	8.1
NORTH CENTRAL	WOLF LAKE	1	M563	0.0
NORTH CENTRAL	WOLF LAKE	1	M564	0.0
NORTH CENTRAL	WOODSMERE	3	M254	5.0
NORTH CENTRAL	ZELLWOOD	1	M31	7.6
NORTH CENTRAL	ZELLWOOD	1	M32	9.0
NORTH CENTRAL	ZELLWOOD	2	M33	7.8
NORTH CENTRAL	ZELLWOOD	2	M34	7.6

ATTACHMENT H

Received Jan 1 to Dec 31, 2017

96 Complaints

DEF logged as Power Quality & Reliability

Date Received	PSC Complaint #	DEF Category	PSC Ruling	PSC Closure Code
1/3/2017	1232162E	Equipment/Facilities Issues	Non-Infraction	GI-17 Safety Issues
1/4/2017	1232331E	Outage	Non-Infraction	GI-15 Outages
1/6/2017	1232566E	Outage	Non-Infraction	GI-15 Outages
1/23/2017	1233945E	Outage	Non-Infraction	GI-15 Outages
2/2/2017	1235114E	Lighting	Non-Infraction	GI-17 Safety Issues
2/3/2017	1232893E	Outage	Non-Infraction	GI-15 Outages
2/27/2017	1237071E	Lighting	Non-Infraction	GI-11 Repair Service
3/13/2017	1238804E	Outage	Non-Infraction	GI-15 Outages
3/13/2017	1238881E	Lighting	Non-Infraction	GI-11 Repair Service
3/21/2017	1239418E	Outage	Non-Infraction	GI-15 Outages
3/21/2017	1239439E	Outage	Non-Infraction	GI-15 Outages
3/29/2017	1240018E	Equipment/Facilities Issues	Non-Infraction	GI-18 Tree Trimming
4/5/2017	1240406E	Lighting	Non-Infraction	GI-11 Repair Service
4/10/2017	1240759E	Lighting	Non-Infraction	GI-11 Repair Service
4/19/2017	1241428E	Vegetation Management Distribution	Non-Infraction	GI-18 Tree Trimming
4/24/2017	1241642E	Outage	Non-Infraction	GI-15 Outages
4/26/2017	1241853E	Equipment/Facilities Issues	Non-Infraction	GI-30 Quality of Service
5/2/2017	1242258E	Lighting	Non-Infraction	GI-29 Delay in Connection
5/5/2017	1242554E	Outage	Non-Infraction	GI-15 Outages
5/5/2017	1242552E	Outage	Non-Infraction	GI-15 Outages
5/5/2017	1242578E	Equipment/Facilities Issues	Non-Infraction	GI-11 Repair Service
5/8/2017	1242613E	Outage	Non-Infraction	GI-15 Outages
5/8/2017	1242622E	Outage	Non-Infraction	GI-15 Outages
5/15/2017	1243084E	Outage	Non-Infraction	GI-15 Outages
5/24/2017	1243729E	Outage	Non-Infraction	GI-15 Outages
5/26/2017	1243899E	Outage	Non-Infraction	GI-15 Outages
6/7/2017	1244588E	Vegetation Management Distribution	Non-Infraction	GI-18 Tree Trimming
6/16/2017	1245264E	Outage	Non-Infraction	GI-15 Outages
6/19/2017	1245371E	Outage	Non-Infraction	GI-15 Outages
6/22/2017	1245704E	Vegetation Management Distribution	Non-Infraction	GI-30 Quality of Service
7/3/2017	1246412E	Outage	Non-Infraction	GI-15 Outages
7/3/2017	1246481E	Outage	Non-Infraction	GI-15 Outages
7/17/2017	1247387E	Outage	Non-Infraction	GI-15 Outages
7/19/2017	1247779E	Equipment/Facilities Issues	Non-Infraction	GI-17 Safety Issues
7/31/2017	1248834E	Outage	Non-Infraction	GI-11 Repair Service
7/31/2017	1248876E	Outage	Non-Infraction	GI-15 Outages
8/1/2017	1248890E	Outage	Non-Infraction	GI-15 Outages
8/3/2017	1249242E	Outage	Non-Infraction	GI-15 Outages
8/4/2017	1249384E	Voltage Problems	Non-Infraction	GI-15 Outages
8/4/2017	1249365E	Outage	Non-Infraction	GI-15 Outages
8/4/2017	1249366E	Vegetation Management Distribution	Non-Infraction	GI-15 Outages
8/8/2017	1249569E	Outage	Non-Infraction	GI-15 Outages
8/8/2017	1249568E	Outage	Non-Infraction	GI-15 Outages
8/10/2017	1249970E	Outage	Non-Infraction	GI-15 Outages
8/17/2017	1250654E	Lighting	Non-Infraction	GI-11 Repair Service
8/30/2017	1251796E	Equipment/Facilities Issues	Non-Infraction	GI-30 Quality of Service

Received Jan 1 to Dec 31, 2017

86 Complaints

PSC Service Reliability Only Closure Codes

Date Received	PSC Complaint #	DEF Category	PSC Closure Code
1/3/2017	1232162E	Equipment/Facilities Issues	GI-17 Safety Issues
1/4/2017	1232331E	Outage	GI-15 Outages
1/6/2017	1232566E	Outage	GI-15 Outages
1/23/2017	1233945E	Outage	GI-15 Outages
2/2/2017	1235114E	Lighting	GI-17 Safety Issues
2/3/2017	1232893E	Outage	GI-15 Outages
2/27/2017	1237071E	Lighting	GI-11 Repair Service
3/13/2017	1238804E	Outage	GI-15 Outages
3/13/2017	1238881E	Lighting	GI-11 Repair Service
3/21/2017	1239418E	Outage	GI-15 Outages
3/21/2017	1239439E	Outage	GI-15 Outages
3/29/2017	1240018E	Equipment/Facilities Issues	GI-18 Tree Trimming
4/5/2017	1240406E	Lighting	GI-11 Repair Service
4/10/2017	1240759E	Lighting	GI-11 Repair Service
4/19/2017	1241428E	Vegetation Management Distribution	GI-18 Tree Trimming
4/24/2017	1241642E	Outage	GI-15 Outages
5/5/2017	1242554E	Outage	GI-15 Outages
5/5/2017	1242552E	Outage	GI-15 Outages
5/5/2017	1242578E	Equipment/Facilities Issues	GI-11 Repair Service
5/8/2017	1242613E	Outage	GI-15 Outages
5/8/2017	1242622E	Outage	GI-15 Outages
5/15/2017	1243084E	Outage	GI-15 Outages
5/24/2017	1243729E	Outage	GI-15 Outages
5/26/2017	1243899E	Outage	GI-15 Outages
6/7/2017	1244588E	Vegetation Management Distribution	GI-18 Tree Trimming
6/16/2017	1245264E	Outage	GI-15 Outages
6/19/2017	1245371E	Outage	GI-15 Outages
7/3/2017	1246412E	Outage	GI-15 Outages
7/3/2017	1246481E	Outage	GI-15 Outages
7/17/2017	1247387E	Outage	GI-15 Outages
7/19/2017	1247779E	Equipment/Facilities Issues	GI-17 Safety Issues
7/31/2017	1248834E	Outage	GI-11 Repair Service
7/31/2017	1248876E	Outage	GI-15 Outages
8/1/2017	1248890E	Outage	GI-15 Outages
8/3/2017	1249242E	Outage	GI-15 Outages
8/4/2017	1249384E	Voltage Problems	GI-15 Outages
8/4/2017	1249365E	Outage	GI-15 Outages
8/4/2017	1249366E	Vegetation Management Distribution	GI-15 Outages
8/8/2017	1249569E	Outage	GI-15 Outages
8/8/2017	1249568E	Outage	GI-15 Outages
8/10/2017	1249970E	Outage	GI-15 Outages
8/17/2017	1250654E	Lighting	GI-11 Repair Service
8/31/2017	1251851E	Outage	GI-15 Outages
9/5/2017	1251722E	Outage	GI-15 Outages
9/6/2017	1252202E	Equipment/Facilities Issues	GI-17 Safety Issues
9/13/2017	1252469E	Outage	GI-15 Outages

8/31/2017	1251851E	Outage	Non-Infraction	GI-15 Outages
9/5/2017	1252114E	Outage	Non-Infraction	GI-30 Quality of Service
9/5/2017	1251722E	Outage	Non-Infraction	GI-15 Outages
9/6/2017	1252202E	Equipment/Facilities Issues	Non-Infraction	GI-17 Safety Issues
9/13/2017	1252469E	Outage	Non-Infraction	GI-15 Outages
9/20/2017	1254905E	Outage	Non-Infraction	GI-30 Quality of Service
9/20/2017	1254820E	Outage	Non-Infraction	GI-11 Repair Service
9/20/2017	1254796E	Vegetation Management Distribution	Non-Infraction	GI-18 Tree Trimming
9/21/2017	1255230E	Outage	-	-
9/25/2017	1255615E	Outage	Non-Infraction	GI-15 Outages
9/25/2017	1255619E	Outage	Non-Infraction	GI-15 Outages
9/25/2017	1255640E	Outage	Non-Infraction	GI-15 Outages
9/25/2017	1255642E	Outage	Non-Infraction	GI-15 Outages
9/25/2017	1255650E	Outage	Non-Infraction	GI-15 Outages

9/20/2017	1254820E	Outage	GI-11 Repair Service
9/20/2017	1254796E	Vegetation Management Distribution	GI-18 Tree Trimming
9/25/2017	1255615E	Outage	GI-15 Outages
9/25/2017	1255619E	Outage	GI-15 Outages
9/25/2017	1255640E	Outage	GI-15 Outages
9/25/2017	1255642E	Outage	GI-15 Outages
9/25/2017	1255650E	Outage	GI-15 Outages
9/27/2017	1255867E	Outage	GI-15 Outages
9/27/2017	1255868E	Equipment/Facilities Issues	GI-17 Safety Issues
9/27/2017	1255869E	Outage	GI-15 Outages
9/28/2017	1256036E	Outage	GI-15 Outages
9/29/2017	1256137E	Outage	GI-15 Outages
10/2/2017	1256295E	Outage	GI-15 Outages
10/3/2017	1256454E	Outage	GI-15 Outages

9/27/2017	1255867E	Outage	Non-Infraction	GI-15 Outages
9/27/2017	1255868E	Equipment/Facilities Issues	Non-Infraction	GI-17 Safety Issues
9/27/2017	1255869E	Outage	Non-Infraction	GI-15 Outages
9/28/2017	1256036E	Outage	Non-Infraction	GI-15 Outages
9/29/2017	1256137E	Outage	Non-Infraction	GI-15 Outages
10/2/2017	1256295E	Outage	Non-Infraction	GI-15 Outages
10/3/2017	1256454E	Outage	Non-Infraction	GI-15 Outages
10/3/2017	1256500E	Outage	Non-Infraction	GI-15 Outages
10/3/2017	1256508E	Outage	Non-Infraction	GI-15 Outages
10/3/2017	1256482E	Outage	Non-Infraction	GI-15 Outages
10/3/2017	1256511E	Outage	Non-Infraction	GI-15 Outages
10/3/2017	1256528E	Outage	Non-Infraction	GI-18 Tree Trimming
10/4/2017	1256656E	Outage	Non-Infraction	GI-15 Outages
10/5/2017	1256684E	Equipment/Facilities Issues	Non-Infraction	GI-11 Repair Service
10/11/2017	1257499E	Outage	Non-Infraction	GI-15 Outages
10/16/2017	1258114E	Outage	Infraction	EB-24 Billing Wrong Customer
10/23/2017	1258977E	Outage	Non-Infraction	GI-15 Outages
10/25/2017	1259264E	Lighting	Non-Infraction	GI-11 Repair Service
10/27/2017	1259596E	Outage	Non-Infraction	GI-15 Outages
10/31/2017	1260053E	Outage	Non-Infraction	GI-15 Outages
11/6/2017	1260596E	Outage	Non-Infraction	GI-15 Outages
11/6/2017	1260666E	Outage	Non-Infraction	GI-15 Outages
11/6/2017	1260670E	Outage	Non-Infraction	GI-15 Outages
11/6/2017	1260769E	Outage	Non-Infraction	GI-15 Outages
11/6/2017	1260811E	Outage	Non-Infraction	GI-15 Outages
11/15/2017	1261927E	Lighting	Non-Infraction	GI-11 Repair Service
11/16/2017	1262121E	Outage	Non-Infraction	GI-15 Outages
11/17/2017	1262213E	Voltage Problems	Non-Infraction	GI-11 Repair Service
11/28/2017	1262841E	Lighting	Non-Infraction	GI-11 Repair Service
11/29/2017	1263059E	Outage	Non-Infraction	GI-15 Outages
12/6/2017	1264087E	Lighting	Non-Infraction	GI-11 Repair Service
12/11/2017	1264430E	Lighting	Non-Infraction	GI-11 Repair Service
12/11/2017	1264432E	Lighting	Non-Infraction	GI-11 Repair Service

10/3/2017	1256500E	Outage	GI-15 Outages
10/3/2017	1256508E	Outage	GI-15 Outages
10/3/2017	1256482E	Outage	GI-15 Outages
10/3/2017	1256511E	Outage	GI-15 Outages
10/3/2017	1256528E	Outage	GI-18 Tree Trimming
10/4/2017	1256656E	Outage	GI-15 Outages
10/5/2017	1256684E	Equipment/Facilities Issues	GI-11 Repair Service
10/11/2017	1257499E	Outage	GI-15 Outages
10/23/2017	1258977E	Outage	GI-15 Outages
10/25/2017	1259264E	Lighting	GI-11 Repair Service
10/27/2017	1259596E	Outage	GI-15 Outages
10/31/2017	1260053E	Outage	GI-15 Outages
11/6/2017	1260596E	Outage	GI-15 Outages
11/6/2017	1260666E	Outage	GI-15 Outages
11/6/2017	1260670E	Outage	GI-15 Outages
11/6/2017	1260769E	Outage	GI-15 Outages
11/6/2017	1260811E	Outage	GI-15 Outages
11/15/2017	1261927E	Lighting	GI-11 Repair Service
11/16/2017	1262121E	Outage	GI-15 Outages
11/17/2017	1262213E	Voltage Problems	GI-11 Repair Service
11/28/2017	1262841E	Lighting	GI-11 Repair Service
11/29/2017	1263059E	Outage	GI-15 Outages
12/6/2017	1264087E	Lighting	GI-11 Repair Service
12/11/2017	1264430E	Lighting	GI-11 Repair Service
12/11/2017	1264432E	Lighting	GI-11 Repair Service
12/27/2017	1265891E	Lighting	GI-11 Repair Service

12/20/2017	1265568E	Equipment/Facilities Issues	Non-Infraction	GI-30 Quality of Service
12/27/2017	1265891E	Lighting	Non-Infraction	GI-11 Repair Service
12/28/2017	1266044E	Vegetation Management Distribution	-	-

ATTACHMENT I

Storm Hardening Projects 2016-2018

Op Center	Project Name	Sub Category	Year Completed	Region
St Petersburg	15 Ave S Feeder Tie between 37th st S and 49th St S	Feeder Tie	Planned 2018 Completion	South Coastal
Highlands	Lakeview Dr.Reconductor	Feeder Tie	Planned 2018 Completion	South Central
Buena Vista	K4426 on Bay Hill K74	Feeder Tie	Planned 2018 Completion	South Central
Highlands	Airport Rd 2/3	Feeder Tie	Completed in 2017	South Central
Highlands	Airport Rd 3/3	Feeder Tie	Planned 2018 Completion	South Central
Lake Wales	K55 Reconductor	Feeder Tie	Planned 2018 Completion	South Central
Clermont	Suburban Terrace Small Wire Reconductor	Small Wire	Planned 2018 Completion	South Central
Winter Garden	Tilden to Stonrybrook Feeder Tie	Feeder Tie	Planned 2018 Completion	South Central
Winter Garden	Ingram Road Reconductor	Feeder Tie	Planned 2018 Completion	South Central
Longwood	Lake Maitland Terrace Reliability- UG Conversion	OH-to-UG Conversion	Planned 2018 Completion	North Central
Jamestown	Cleburne Rd	Small Wire	Completed in 2017	North Central
Apopka	Feeder tie Lockhart M408-M412 to Eatonville M1137	Feeder Tie	Completed in 2017	North Central
Deland	Feeder tie Deltona east W0124 to W0123	Feeder Tie	Completed in 2017	North Central
Apopka	Feeder tie Zellwood M31-M32	Feeder Tie	Planned 2018 Completion	North Central
Monticello	Indian Pass N556 Reconductor - Phase 1	Feeder Tie	Planned 2018 Completion	North Coastal
Monticello	Indian Pass N556 Reconductor - Phase 2 Extreme Wind	Alternative NESC Construction Standards (Extreme Wind)	Planned 2018 Completion	North Coastal
Ocala	Reddick A35 - Phase 1	Feeder Tie	Planned 2018 Completion	North Coastal
Ocala	Reddick A35 - Phase 2	Feeder Tie	Planned 2018 Completion	North Coastal
Ocala	Reddick A35 - Phase 3 Extreme Wind	Alternative NESC Construction Standards (Extreme Wind)	Planned 2018 Completion	North Coastal
Ocala	Micanopy - Recond #4 along SE 199th Ave	Small Wire	Completed in 2017	North Coastal
Ocala	NW 63rd St., Kendric reconductor #4 to 1/0 AAAC	Small Wire	Planned 2018 Completion	North Coastal
Ocala	Oklawaha - CR 464C Reconductor	Small Wire	Planned 2018 Completion	North Coastal
Ocala	Martin - Reconduc #6 cu on NW 100th st.	Small Wire	Planned 2018 Completion	North Coastal
Ocala	Weirsdale - Recond SE 175th St	Small Wire	Planned 2018 Completion	North Coastal
Lake Wales	6358879 off TS Wilson Road	Small Wire	Completed in 2017	South Central
Monticello	Apalachicola N58 - Feeder Upgrade	Feeder Tie	Planned 2018 Completion	North Coastal
Inverness	Floral City Reconductor	Feeder Tie	Planned 2018 Completion	North Coastal

Clearwater	C4 Clearwater Beach Reconductor	Small Wire	Planned 2018 Completion	South Coastal
Clearwater	Belleair C1005 Brookhill Terrace Subdivision	Small Wire	Planned 2018 Completion	South Coastal
Clearwater	City of St Pete Beach - Pass a Grille - Phase 1	Submersible UG	Completed in 2016	South Coastal

ATTACHMENT J

I. Introduction:

Rule 25-6.0342, Florida Administrative Code ("F.A.C"), requires investor-owned electric utilities in Florida to file a Storm Hardening Plan with the Florida Public Service Commission ("FPSC") on or before May 7, 2007 and every three years thereafter as a matter of course. Rule 25-6.0342 specifies what must be included in utility storm hardening plans, and Duke Energy Florida, LLC ("DEF") has tracked those rule provisions in its Storm Hardening Plan below:

25-6.0342(3): *Each utility storm hardening plan shall contain a detailed description of the construction standards, policies, practices and procedures employed to enhance the reliability of overhead and underground electrical transmission and distribution facilities.*

DEF's construction standards, policies, practices, and procedures related to storm hardening issues are listed below and are attached hereto as **Attachment A**:

Distribution OH Construction Manual

i. Cover page
    1. *Addresses NESC adherence standards.*
ii. General Overhead section
    1. *Discusses company policy on extreme wind.*
    2. *Details Florida's extreme wind contour lines.*
    3. *Discusses the use of the Pole Foreman program.*
iii. Poles, Guys and Anchors Section
    1. *Discusses DEF's standard pole strengths, sizes, and limitations.*
iv. Primary Construction section
    1. *Discusses corporate practices for primary line construction.*
v. Coastal and Contaminated area section
    1. *Discusses corporate practices for primary line construction in coastal areas.*

Distribution UG Construction Manual

vi. Cover page
    1. *Addresses NESC adherence standards.*
vii. Underground General Section
    1. *Discusses location of UG facilities in accessible locations.*
viii. OH-UG Transition section
    1. *Discusses corporate practices for primary framing on dip poles.*
ix. Trenching and Conduit section
    1. *Discusses corporate practices for trenching and use of conduit on primary UG circuits.*
x. Flooding and Storm Surge Requirements
    1. *Discusses corporate procedures for the installation of UG equipment in areas targeted for storm surge hardening.*

Distribution Engineering Manual

xi. Overhead Design guide section
    1. *Addresses line location in accessible location.*
    2. *Addresses NESC compliance.*
    3. *Discusses Pole Foreman program.*
xii. Underground Design guide section
    1. *Addresses line location in accessible location.*
    2. *Addresses NESC compliance.*

Transmission - Extreme Wind Loading Design Criteria Guideline for Overhead Transmission Line Structures

xiii. Standards Position Statement
    1. *Addresses NESC compliance.*
    2. *Addresses American Society of Civil Engineer's Manual 74 (ACSE 74).*
    3. *Discusses transmission line importance for reliability.*

4. *Details Florida's extreme wind contour lines.*

Transmission - Line Engineering Design Philosophy

xiv. Overhead Line Design philosophy
   1. *Addresses NESC compliance.*
   2. *Addresses insulator loading criteria.*
   3. *Addresses guy / anchor capacity ratings.*
   4. *Addresses design load cases.*
   5. *Addresses extreme wind guidelines.*
   6. *Addresses structural guidelines.*

Joint Use – Pole Attachment Guidelines and Clearances

xv. Pole Attachment Guidelines
   1. *Addresses Pole Attachment and Overlash Procedures.*
   2. *Addresses Joint Use Construction.*
   3. *Addresses Guys and Anchors.*

xvi. Joint Use Clearances
   1. *Addresses Line Clearances.*
   2. *Addresses Joint Use Clearances.*

In addition to the standards, practices, policies, and procedures identified above, DEF's Wood Pole Inspection Plan, Storm Hardening Plan, as noted in the 2015 PSC Reliability Report Excerpts, all contain standards, practices, policies, and procedures that address system reliability and issues related to extreme weather events. These plans are included herewith as **Attachment B**.

25-6.0342(3)(a): *Each filing shall, at a minimum, address the extent to which the utility's storm hardening plan complies, at a minimum, with the National Electric Safety Code that is applicable pursuant to subsection 25-6.0345(2), F.A.C.*

All standards, practices, policies, and procedures in the manuals and plans listed above are

based on accepted industry practices designed to meet or exceed the requirements of the National Electric Safety Code (NESC). These standards, practices, policies, and procedures are followed on all new construction and all rebuilding and relocations of existing facilities.

25-6.0342(3)(b): *Each filing shall, at a minimum, address the extent to which the utility's storm hardening plan adopts the extreme wind loading standards specified by Figure 250-2(d) of the 2007 edition of the NESC for new construction, major planned work, and critical infrastructure.*

New Construction:

With respect to new construction for transmission poles, DEF's transmission department is building all new construction with either steel or concrete pole material. Virtually all new transmission structures exceed a height of sixty feet above ground and therefore will be constructed using the NESC Extreme Wind Loading criteria.

DEF's design standards can be summarized as: 1) quality construction in adherence with current NESC requirements, 2) well defined and consistently executed maintenance plans, and 3) prudent end-of-life equipment replacement programs. When these elements are coupled with a sound and practiced emergency response plan, construction grades as defined by the NESC provide the best balance between cost and performance.

DEF has extensive experience with the performance of Grade C and Grade B construction standards as defined by the NESC. That experience, which includes several hurricane seasons and other severe weather events, indicates that properly constructed and maintained distribution lines meeting all provisions of the NESC perform satisfactorily and provide a prudent and responsible balance between cost and performance.

DEF has not adopted extreme wind standards for all new distribution construction because of the following reasons:

1. Section 250C of the 2012 version of the NESC does not call for the extreme wind design standard for distribution poles which are less than sixty feet in height. Based on the fact that DEF's distribution poles are less than sixty feet, the extreme wind standard outlined in figure 250-2(d) do not apply.
2. All credible research, which includes extensive studies by the NESC rules committee, demonstrates that applying extreme winds standards would not benefit distribution poles. See Exhibit 4 filed in Docket No. 060172-EU, August 31, 2006 Workshop.
3. Utility experience from around the country further indicates that electrical distribution structures less than sixty feet in height are damaged in extreme wind events by trees, tree limbs, and other flying debris. Thus, applying the extreme wind standard to distribution poles would result in large increases in cost and design complexity without a commensurate benefit.
4. DEF's experience was consistent with that of the other utilities around the nation who found that vegetation and flying debris were the main causes of distribution pole damage, a condition that the extreme wind standard will not address. In 2004, approximately 96% of DEF's pole failures were attributable to flying debris and/or super extreme wind events such as tornadoes and micro-bursts.

Major planned work:

Consistent with NESC Rule 250C, DEF will use the extreme wind standard for all major planned transmission work, including expansions, rebuilds, and relocations of existing facilities. For the reasons discussed in the new construction section above, DEF has not adopted the extreme wind standard for major planned distribution work, including expansions, rebuilds, or relocations of existing facilities.

Critical infrastructure:

With respect to transmission, virtually all new transmission structures exceed a height of sixty feet above ground and therefore are constructed using the NESC extreme wind loading criteria. Accordingly, DEF will use the extreme wind standard for all major planned

transmission work, including expansions, rebuilds, and relocations of existing facilities, irrespective of whether they can be classified as "critical" or "major."

DEF, for the reasons discussed in the new construction section above, has not adopted the extreme wind standard for any of its distribution level critical infrastructure. Placing distribution poles constructed to extreme wind standards around facilities such as hospitals and police stations in DEF's service territory would unnecessarily increase costs and restoration time if those poles are knocked down by falling trees or flying debris such as roofs or signs. DEF's current level of construction, around critical facilities and around all other facilities, has performed well during weather events and any pole failures due solely to wind impact were caused by "super extreme" wind events such as tornados and "micro bursts," conditions that would have caused and did cause extreme wind construction to fail as well.

While no current data or research supports the application of the extreme wind standard to distribution pole construction, DEF is analyzing the extreme wind standard by using its prioritization model for implementation purposes in selected locations throughout DEF's service territory. Since the submittal of the 2007 Storm Hardening plan, DEF constructed several pilot projects using the extreme wind standard. To date, there has not been a significant weather event that allowed DEF to assess the performance of these projects. In conjunction with wind measuring devices, DEF will study the performance of the extreme wind standard at these various sites when a weather event allows for such analysis. From this process, DEF expects to continue to learn and adjust its extreme weather strategy based on information that it will collect and gather from other utilities in Florida and throughout the nation as new standards and applications are applied and tested.

25-6.0342(3)(c): *Each filing shall, at a minimum, address the extent to which the utility's storm hardening plan is designed to mitigate damage to underground and supporting overhead transmission and distribution facilities due to flooding and storm surges.*

Based on DEF's experience in the 2004 and 2005 hurricane seasons, along with the

experiences of other utilities in Florida reported to the FPSC after those seasons, DEF has concluded that underground applications may not be best suited for all areas. DEF has identified areas in its service territory where current underground equipment should be replaced with overhead due to the fact that those areas are subject to frequent and prolonged flooding resulting in damage from water intrusion on underground equipment. Thus, one of DEF's most effective tools in its hardening arsenal is to identify areas where underground equipment should and should not be used.

In areas where underground equipment may be exposed to minor storm surge and/or shorter term water intrusion, DEF has used its prioritization model (discussed in detail below) to identify areas where certain mitigation projects will be put into place to test whether flood mitigation techniques and devices can be used to protect equipment such as switchgears, padmounted transformers and pedestals. In these selected project sites, DEF will test:

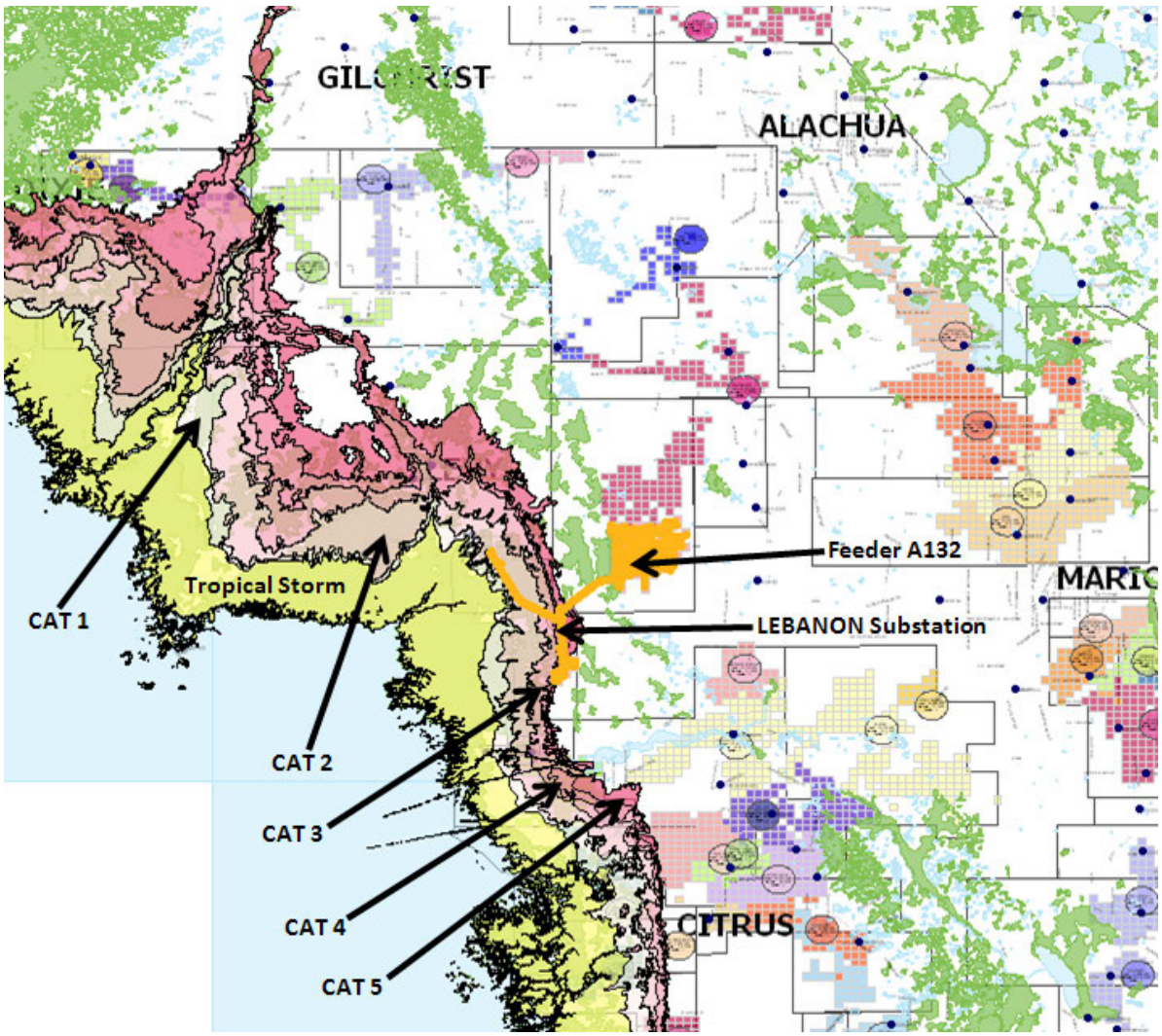
- Stainless steel equipment;
- Submersible connectors;
- Raised mounting boxes;
- Cold shrink sealing tubes; and
- Submersible secondary blocks.

Throughout the year after a significant weather event, DEF will monitor these installations to collect and analyze data to determine how this equipment performs relative to DEF's current design with respect to outage prevention, reduced maintenance, and reduced restoration times. From this process, DEF will continue to learn and will adapt its flood and storm surge strategies based on information that it will collect and based on the information gathered by other utilities in Florida and throughout the nation as new standards and applications are applied and tested.

St. George Island in Franklin County was one of the areas where DEF used its submersible underground strategy to retrofit its existing facilities using the submersible standards listed above. St George Island is a good example of an area that would be susceptible to surges during a severe storm. The project was completed in 2007 and subsequent construction has

conformed to the design standard for areas susceptible to storm surge.

DEF also utilizes ESRI's ArcGIS software to determine the optimum location for submersible underground facilities. The flood zones were provided by the state and overlaid onto DEF's land base computer system along with other facilities. This method allows DEF to visually determine which geographic areas would most benefit from submersible facilities. See example below.



In addition to the actions discussed above, during major storm events, substations that are in the forecast strike zone will have sandbags placed in strategic areas to attempt to eliminate water intrusion into control houses. In the event of water intrusion causing extensive damage requiring prolonged repair, DEF will employ mobile substations to affected areas, where possible, in order to restore power.

25-6.0342(3)(d): *Each filing shall, at a minimum, address the extent to which the utility's storm hardening plan provides for the placement of new and replacement distribution facilities so as to facilitate safe and efficient access for installation and maintenance pursuant to Rule 25-6.0341, F.A.C.*

DEF will continue to use front lot construction for all new distribution facilities and all replacement distribution facilities unless a specific operational, safety, or other site-specific reason exists for not using such construction at a given location. See Distribution Engineering Manual, Page 3.

25-6.0342(4): *Each utility storm hardening plan shall explain the systematic approach the utility will follow to achieve the desired objectives of enhancing reliability and reducing restoration costs and outage times associated with extreme weather events.*

As part of its systematic approach to storm hardening for the 2007-2009 Storm Hardening plan, DEF engaged industry expert Davies Consulting ("DCI") in developing a comprehensive prioritization model that has helped DEF identify potential hardening projects, procedures, and strategies. DCI has worked with a number of utilities nationally to evaluate their respective power delivery system major storm preparedness. They have also evaluated options for infrastructure hardening to improve performance and reliability not only day-to-day, but also during major storms. Collaborating with DCI, DEF created an evaluation framework for various hardening options and prioritization of potential alternatives. Since 2007, the model has been improved and enhanced to better reflect the changes in DEF's overall storm hardening strategy. The structure of the model was adjusted to use more consistent scoring criteria to evaluate the pilot projects. New software technology such as ESRI's ArcGIS will be incorporated into the

model. As more data becomes available, DEF will continue to adjust its prioritization model as appropriate.

Using a similar evaluation framework for the 2016-2018 Storm Hardening plan, DEF will prioritize its proposed projects based on various components that will be discussed in more details below.

Under the foregoing components of the evaluation framework, the prioritization model is set up to analyze the following hardening alternatives for DEF:

- OH-to-UG Conversions
  - Taking existing overhead (OH) electric lines and facilities and placing them underground (UG) via the use of specialized UG equipment and materials. The primary purpose of this hardening activity is to attempt to eliminate tree and debris related outages in the area of exposure. When applied to crossings on major highways, this hardening activity can also mitigate potential interference with first responders and other emergency response personnel caused by fallen lines.

- Small Wire Upgrade
  - The conversion of an existing overhead line currently with either #4 AL or #6 Cu conductor to a thicker gauge conductor of 1/0 or greater. The primary purpose of this hardening activity is to attempt to utilize stronger conductor that may be better able to resist breakage from falling tree branches and debris.

- Backlot to Frontlot Conversion
  - Taking an existing overhead line located in the rear of a customer's property and relocating it to the front of the customers property. This involves the removal of the existing line in the rear of the property and construction of a new line in the front of the property along with re-

routing service drops to individual customer meters. The primary purpose of this hardening activity is to minimize the number of tree exposures to the line to prevent outages and to expedite the restoration process by allowing faster access in the event an outage occurs.

- Submersible UG
  - Taking an existing UG line and equipment and hardening it to withstand a storm surge via the use of the current DEF storm surge standards. This involves the use of specialized stainless steel equipment and submersible connections. The primary purpose of this hardening activity is to attempt to minimize the damage caused by a storm surge to the equipment and thus expedite the restoration after the storm surge has receded.

- Alternative NESC Construction Standards
  - Building OH line and equipment segments to the extreme wind standard as shown in the NESC extreme wind contour lines of figure 250-2(d). This will be done via the use of the current extreme wind standards which call for the use of the industry accepted Pole Foreman program to calculate the necessary changes. Typical changes include shorter span lengths and higher class (stronger) poles. The primary purpose of this hardening activity is to attempt to reduce the damage caused by elevated winds during a major storm. Locations have been chosen to provide contrasting performance data between open coastal and inland heavily treed environments.

- Feeder ties
  - Tying radial feeders together to provide switching capabilities to reduce outage duration. This hardening alternative will mitigate long outages that would have otherwise occurred as a result of the inability

to transfer load/customers to an alternate source.

Although the concept of storm hardening is generally thought of as outage prevention, it is inevitable that outages will still occur during a severe storm (e.g., as a result of vegetation and flying debris). Feeder ties will help mitigate the duration of such outages. Tying multiple feeders together will give DEF the ability to minimize duration by serving customers from an alternate source while repairs are being made on the affected segment. Based on DEF's experience in the 2004-2005 hurricane seasons as well as more recent tropical storms, feeder ties are crucial for a distribution system as it provides the opportunity to maximize the number of customers restored in the shortest timeframe possible. Regardless of what caused the outage during a severe storm, a radial feeder will be out for as long as it takes to make the necessary repairs. On the other hand, a feeder tie would allow DEF to restore as many customers as possible, thereby minimizing the number of customers that are without power for the length of the repair.

The development of the prioritization model begins with compiling a list of desired projects submitted by engineers and field personnel most familiar with the specific region. Each project is then evaluated based on the following criteria:

- Major Storm Outage Reduction Impact
  - Determines the potential benefits that the project provides during a major storm based on reduced damages or the ability to restore power more rapidly.
- Community Storm Impact
  - Evaluates the potential benefits that the proposed project will have on a community's ability to cope with damage.
- Third Party Impact
  - Captures complexities of proposed projects in terms of coordination with third parties such as telecommunication, Cable TV, permitting, easements, costs, etc.
- Overall Reliability
  - Captures the overall potential reliability benefits that the project

provides on a day to day basis in terms of reduced customer interruptions and outage duration.

- Financial Cost
  - Provides the financial value of the proposed project based on cost per customer and cost per foot of newly installed wire/cable.

The prioritization model is set up to address the following hardening project questions:

- How many customers are served from the upstream protective device?
- What will be the impact of this project on the restoration time during a major storm?
- At what level of hurricane will the area served by this feeder flood due to storm surges?
- What is the tree density in the area served by this feeder or section?
- What level of tree damage will this project mitigate during a major storm?
- How many critical infrastructure components (lift stations, shelters, hospitals, police, etc…) does this project address?
- How valuable will the project be perceived by the community?
- What are the major obstacles/risks for completing the project, i.e. easements, permits, etc. ?
- What type of investment is required by joint users (telecoms and cable) to complete this project?
- What is the 3-year average number of CEMI4 customers on this feeder?
- What is the 3-year average number of CMI on this feeder?
- What is the change in the annual CAIDI that this project will result in (on the feeder or section)?
- Will this project reduce the number of momentary customer interruptions on this section?
- What is the 3-year average number of CELID CI on this feeder?
- What is the construction Cost per customer?

Each answer to the questions listed above is assigned a numerical value and subsequently weighted to produce an overall rating for each specific hardening project. The prioritization model is based on a structured methodology for evaluating the benefits associated with various hardening options. The model allows for the ranking of the overall list of projects. It enables DEF to strategically determine the order in which these projects are constructed, based on their order of ranking.

DEF is using the prioritization model to ensure a systematic and analytical approach to deploying storm hardening options within its service territory. For proven hardening options that DEF is already using as part of its construction standards and policies, the prioritization model will help DEF best locate and prioritize areas within its system where those options should be used. For unproven or experimental hardening options, such as the extreme wind standard for distribution pole construction, DEF is using its prioritization model to identify areas within its service territory where analytical data collection projects can be used to evaluate the performance and results of such hardening options. Examples of specific projects that took place between 2007 and 2015 are discussed later.

25-6.0342(4)(a): *A description of the facilities affected, including technical design specifications, construction standards, and construction methodologies employed.*

All of DEF's facilities are affected to some degree by the standards, policies, procedures, practices, and applications discussed throughout this document. Specific facilities are also addressed herein in detail (e.g., upgrading all transmission poles to concrete and steel, using front lot construction for all new distribution lines where possible). Technical design specifications, construction standards, and construction methodologies are specifically discussed at pages 1 through 3 of this plan and are included in **Attachments A** and **B**.

25-6.0342(4)(b): *The communities and areas within the utility's service area where the electric infrastructure improvements are to be made.*

As discussed above, all of DEF's facilities are affected to some degree by the standards, policies, procedures, practices, and applications discussed throughout this document. As a result, all areas of DEF's service territory are impacted by DEF's storm hardening efforts. Based on DEF's recent storm experience and/or through the prioritization model a number of projects were identified, please see **Attachment D** for the Distribution Projects completed between 2007 and 2015.

Distribution:

The list below is a sampling of the proposed 2016-2018 Storm Hardening projects:

Op Center	Project Name	Sub Category
Saint Petersburg	15th Ave S Feeder Tie between 37th St S and 49th St S	Feeder Tie
Highlands	Lakeview Dr. Reconductor	Feeder Tie
Buena Vista	K4426 on Bay Hill K74	Feeder Tie
Highlands	Airport Rd 2/3	Feeder Tie
Highlands	Airport Rd 3/3	Feeder Tie
Lake Wales	K55 Reconductor	Feeder Tie
Clermont	Suburban Terrace Small Wire Reconductor	Small Wire
Winter Garden	Tilden to Stoneybrook Feeder Tie	Feeder Tie
Winter Garden	Ingram Road Reconductor	Feeder Tie
Longwood	Lake Maitland Terrace Reliability- UG Conversion	OH-to-UG Conversion
Jamestown	Cleburne Rd	Small Wire
Apopka	Feeder tie Lockhart M408-M412 to Eatonville M1137	Feeder Tie
Deland	Feeder tie Deltona east W0124 to W0123	Feeder Tie
Apopka	Feeder tie Zellwood M31-M32	Feeder Tie
Monticello	Indian Pass N556 Reconductor - Phase 1	Feeder Tie
Monticello	Indian Pass N556 Reconductor - Phase 2 Extreme Wind	Alternative NESC Construction Standards (Extreme Wind)
Ocala	Reddick A35 - Phase 1	Feeder Tie
Ocala	Reddick A35 - Phase 2	Feeder Tie

Ocala	Reddick A35 - Phase 3 Extreme Wind	Alternative NESC Construction Standards (Extreme Wind)
Ocala	Micanopy - Recond #4 Al along SE 199th Ave	Small Wire
Ocala	NW 63rd St., Kendric reconductor #4 to 1/0 AAAC	Small Wire
Ocala	Oklawaha - CR 464C reconductor	Small Wire
Ocala	Martin - Recond #6 cu on NW 100th St.	Small Wire
Ocala	Weirsdale - Recond SE 175th St	Small Wire
Lake Wales	6358879 off TS Wilson Road	Small Wire
Monticello	Apalachicola N58 - Feeder upgrade	Feeder Tie
Inverness	Floral City Reconductor	Feeder Tie
Clearwater	C4 Clearwater Beach Reconductor	Small Wire
Clearwater	Belleair C1005 Brookhill Terrace Subdivision	Small Wire
Clearwater	City of St Pete Beach - Pass a Grille - Phase 1	Submersible UG

With regard to system hardening projects in general, DEF's approach is to consider the unique circumstances of each potential location considered for hardening by taking into account variables such as:

- operating history and environment;
- community impact and customer input;
- exposure to storm surge and flooding;
- equipment condition;
- historical and forecast storm experience; and
- potential impacts on third parties;

This surgical approach leads to the best solution for each discrete segment of the delivery system.

For example, Pasadena Feeder X220 was selected as a storm hardening candidate for 2009. X220 is a mainly an overhead feeder along Pasadena Avenue running from the substation south to the Palms of Pasadena Hospital. Engineering was initiated, and pole foreman was used for pole size selection and pole spacing. It was calculated that a 100 foot spacing and pole

classes H1, 0, 1, and 2 would be required to meet the extreme wind loading criteria. Class H poles are normally transmission poles, and have a large ground or butt circumference. The general distribution guidelines for pole spacing are between 175 to 220 feet.

The Town of Pasadena was contacted by our Public Affairs Department, given the project scope information, and was made aware of the positive impacts of the project. The city was adamantly opposed to the storm hardening of X220 due to the larger class poles, closer pole spacing, and the perceived overall aesthetic impact. Due to the overwhelming negative reaction of the town, this project was cancelled. On the other hand, the San Blass Extreme wind project in Monticello was well received by the community. The project was discussed with the County Manager and the County Commissioner for the District. This project was also discussed with a local civic club where many of the members were residents in the project area. This project was completed in 2009. This is a real life example of why "one size does not fit all" when it comes to storm hardening.

In areas like Gulf Boulevard and other coastal communities in Pinellas County, local governments have worked with DEF to identify areas where overhead facilities have been or will be placed underground, and this option will help to mitigate storm outages caused by vegetation and flying debris. DEF is also working in these areas to evaluate upgrading portions of those facilities to the surge-resistant design discussed above. Again, these hardening options may work well in these communities, but may not be ideal or desirable in others.

Transmission:

The Transmission Department is employing a system-based approach to changing out wood poles to either concrete or steel poles based upon the inspection cycle and condition of pole. These projects are identified during the transmission pole inspection cycles. Specific new, rebuilt or relocated projects that are planned over the next three years are listed below:

NORTH FLORIDA AREA	Project Type	County	Third Party Impact

Alachua to GE Alachua (GH-2, 4.37mi) 69kV Line Rebuild	Rebuild	Alachua	Likely
Alachua Tap to Alachua (GH-3, 2.31mi) 69kV Line Rebuild	Rebuild	Alachua	Likely
Nobleton Tap - Floral City Tap 69 kV line rebuild	Rebuild	Citrus	Possible
QX 115kV 10.85 mile rebuild (Atwater - Quincy (QX-1))	Rebuild	Gadsden	Unlikely
Jackson Bluff to Brickyard Tap	Rebuild	Hamilton	Unlikely
JQ 1.7 West Lake-Burnham Tap 115 kV rebuild; 1.53 mi	Rebuild	Madison	Unlikely
Lake Bryan to Vineland (LV) - 69 kV Line Rebuild	Rebuild	Orange	Possible
Plymouth South Sub - Relocation of PP, WP & EP Lines	Rebuild	Orange	Likely
JF-3 Ft White - Live Oak 69kV rebuild, 25.45 miles	Rebuild	Suwannee	Unlikely
PC line; Rebuild Line-Replace 132 Wood Poles w/ Steel[PRG]	Rebuild	Taylor	Possible
Bell Tap - Neals Tap (IS-8) 69 kV Line Rebuild	Rebuild	Gilchrist	Unlikely
Central Florida to Picciola Tap - Rebuild 69 kV (OCF) Line	Rebuild	Lake	Likely
Deleon Springs to Barberville - 115/69 kV Line Rebuild	Rebuild	Volusia	Possible
DF - Zuber - Loop in MS 69kV to Rebuilt Sub	Rebuild	Marion	Unlikely
Dunnellon Tn -Rainbow Spgs Tp 69kV Rbld Phase 1	Rebuild	Marion	Likely

Dunnellon Tn -Rainbow Spgs Tp 69kV Rbld Phase 2	Rebuild	Marion	Likely
Eustis-Dona Vista 69 kV (EU) Line Rebuild	Rebuild	Lake	Likely
GE Alachua to Hull Road (GH-1, 16.5) 69kV Line Rebuild	Rebuild	Alachua	Likely
Ginnie - Neals Tap (IS-8B) 69 kV Line Rebuild	Rebuild	Gilchrist	Unlikely
Havana-OakCty (TQ) 69kV: rbld as dbl ckt 115 and 69kV	Rebuild	Leon	Unlikely
Hemple to Ocoee - 69 kV Line Rebuild	Rebuild	Orange	Likely
Hinson (TEC DP) - TEC will rebuild the station	Rebuild	Madison	Possible
Idylwild - Wacahoota Tap (SI) - Rebuild 11.62 mi 69 kV line	Rebuild	Alachua	Possible
JA-4 Ochlockonee Tap to Carrabelle Sub line Rebuild	Rebuild	Franklin	Possible
Lake Bryan to Vineland (LV) - 69 kV Line Rebuild	Rebuild	Orange	Possible
Myrtle Lake to Wekiva (NLP-2) - 230 kV Line Rebuild	Rebuild	Seminole	Likely
NLongwood to FPL Sylvan (NLSX Double-Circuit)- 230kV Rebuild	Rebuild	Seminole	Likely
NLongwood to FPL Sylvan (NLSX Single-Circuit)- 230kV Rebuild	Rebuild	Seminole	Likely
NLongwood to Myrtle Lake (NLP Double-Circuit)- 230kV Rebuild	Rebuild	Seminole	Likely
Nobleton Tap - Floral City Tap (HB)69 kV line rebuild	Rebuild	Citrus	Possible

OakCty-Tall (TQ) 69kV: rbld as dbl ckt 115 and 69kV	Rebuild	Leon	Unlikely
Oviedo to Winter Springs - 69 kV Rebuild	Rebuild	Seminole	Likely
Piedmont to Wekiva (NLP-3) - 230 kV Line Rebuild	Rebuild	Seminole	Likely
Rio Pinar to Econ - 230 kV Line Rebuild & Add Fiber	Rebuild	Orange	Likely
Ross Prairie-Marion Oaks Tap (RPMX) 69 kV Rebuild	Rebuild	Marion	Likely
Silver Springs - Maricamp 69 kV Line Rebuild	Rebuild	Marion	Possible
West Chapman to Winter Park East - 69 kV Line Rebuild	Rebuild	Seminole	Likely
Williston-Wacahoota Tap (SI-3B) - Rebuild 6.02 mi 69 kV line	Rebuild	Levy	Possible
GUF Alachua Archer Rd frm SW16th -SW13th City of Gainesville	Governmental	Alachua	Likely
HCR-12 115kV; 405822-2-52-01; SR 55 (US 19) from N of West Green Acres St to N of West Jump Ct; Road Widening, Improvements & Drainage	Governmental	Citrus	Unlikely
OLR-69kV-CR. 470 widening Lake Co. PWDED	Governmental	Lake	Possible
LC ## 238395-5-52-01 Lake SR500 Lake Ella to Avenida Central	Governmental	Lake	Unlikely
DR-90 to DR-98 238720-1-52-01 Marion SR40; SR45/US41 to CR328	Governmental	Marion	Unlikely
DR-36 to DR-94 238648-1 Marion SR45	Governmental	Marion	Unlikely

410674-3-52-01;SR 40 East of CR 314 to east of CR 314A;	Governmental	Marion	Possible
WO 69kV Underground Relocation on Fairbanks Avenue	Governmental	Orange	Yes
SLE 69kV relocation for Kennedy Blvd widening (Orange Cnty)	Governmental	Orange	Likely
SLM 69kV relocations for Kennedy Blvd widening (Orange Cnty)	Governmental	Orange	Likely
WO 69kV relocation for Kennedy Blvd widening (Orange Cnty)	Governmental	Orange	Likely
69kV BK 431081 Wekiva Pkwy at the Y interchange	Governmental	Orange	Unlikely
230kV PS-94 431081 Wekiva Pkwy at the Y interchange	Governmental	Orange	Yes
69kV EP 431081 Wekiva Pkwy at US441 and SR 46	Governmental	Orange	Unlikely
WR and RW 69kV Relocation for Econ Trail	Governmental	Orange	Likely
FTO FTO-141 415030-1-38-01 SEMINOLE CO. SR426/CR419 WIDENING	Governmental	Seminole	Unlikely
WEWC-WF 417545-1-52-01, SEMINOLE, SR417 BRIDGE MOD @ SR426	Governmental	Seminole	Unlikely
WF 69kV & WEWC 69kV CIP 001981-01; Dean Road widening;	Governmental	Seminole	Possible
230kV DA, DL & DWS 431081 Wekiva Pkwy at I-4 and SR 46/SR 417	Governmental	Seminole	Unlikely
DWB,410251-1-52-01, Volusia Co, SR 15/US 17	Governmental	Volusia	Possible
WO 69kV Underground Relocation on Fairbanks Avenue	Governmental	Orange	Possible

WF- 63-77 69kV, Dean Rd Widening. 00198-31 Orange County	Governmental	Orange	Possible
HCR-12 115kV SR- 55 CITRUS.405822-2-52-01	Governmental	Citrus	Possible
GH-37 to 38_61st ST. @ 20th Ave.INTER. IMPROV._ALACHUA	Governmental	Alachua	Possible
WO-230 to WO-232_Galloway Dr Improvement_Seminole_PW2012-009	Governmental	Seminole	Possible
SLE 69kV relocation for Kennedy Blvd widening (Orange Cnty)	Governmental	Orange	Possible
SLM 69kV relocations for Kennedy Blvd widening (Orange Cnty)	Governmental	Orange	Possible
WO 69kV relocation for Kennedy Blvd widening (Orange Cnty)	Governmental	Orange	Possible
WO 69kV Underground Relocation on Fairbanks Avenue	Governmental	Orange	Possible
BK 69kV Wekiva Pkwy_OOCEA 431081-1-32-01 OrangeCo	Governmental	Orange	Possible
PS 230kV Wekiva Pkwy_OOCEA 431081-1-32-01 OrangeCo	Governmental	Orange	Possible
BK (non-comp) 69kV Wekiva Pkwy_OOCEA 431081-1-32-01 OrangeCo	Governmental	Orange	Possible
BK Removal 69kV Wekiva Pkwy OOCEA 431081-1-32-01 Orange Cnty	Governmental	Orange	Possible
BK Removal (non-comp) 69kV Wekiva Pkwy OOCEA (CFX)	Governmental	Orange	Possible

SOUTH FLORIDA AREA	**Project Type**	**County**	**Third Party Impact**

HCR-12 115kV SR- 55 CITRUS.405822-2-52-01	Rebuild	Citrus	Possible
FV124-128 230kv 5mi Relocation for CF Industries	Rebuild	Hardee	Likely
Denham to Morgan Rd Line #1	Rebuild	Pasco	Possible
Land O Lakes - Denham line reroute to Morgan Road substation	Rebuild	Pinellas	Possible
Denham - Tampa Downs line reroute to Morgan Road substation	Rebuild	Pinellas	Possible
Oakhurst - Seminole - Rebuild 69kV Line	Rebuild	Pinellas	Possible
WLLW 69kV 4.52 mile rebuild (West Lk Wales-LkWales #1)	Rebuild	Polk	Possible
40th Street to 16th Street (BFE-2) - 115 kV Line Rebuild	Rebuild	Pinellas	Likely
Bayview to East Clearwater (HD-3) - 115 kV Line Rebuild	Rebuild	Pinellas	Possible
Belleair to Largo (LECW-1) - 69 kV Line Rebuild	Rebuild	Pinellas	Possible
Bithlo to UCF (FTR) 69 kV Rebuild	Rebuild	Orange	Possible
Brooksville to Tangerine - 115 kV Line Rebuilds	Rebuild	Hernando	Likely
Davenport to West Davenport (DWD) - 69 kV Rebuild	Rebuild	Polk	Likely

Denham to Sunlake (DX-1.3) - 69 kV Line Rebuild	Rebuild	Pasco	Likely
Desoto City to Desoto City Tap 69 kV Rebuild of Last Spans	Rebuild	Highlands	Possible
Fort Meade to West Lake Wales Line Rebuild	Rebuild	Polk	Possible
Gateway to 32nd Street (HD-7) - 115 kV Line Rebuild	Rebuild	Pinellas	Likely
Gateway to Ulmerton (HD-6) - 115 kV Line Rebuild	Rebuild	Pinellas	Likely
Hudson Tp - New Port Richey 115kV Line Rebuild	Rebuild	Pasco	Likely
Keller Road to Spring Lake - 69 kV Line Rebuild	Rebuild	Seminole	Possible
Largo to Taylor Ave (LTW-1) - 69 kV Line Rebuild	Rebuild	Pinellas	Likely
Largo to Taylor Ave (LTW-1) - 69 kV Line Rebuild	Rebuild	Pinellas	Possible
Oakhurst to Seminole (DLW-3) - 69 kV Line Rebuild	Rebuild	Pinellas	Possible

Rio Pinar to Curry Ford (RX) - 230 kV Rebuild	Rebuild	Orange	Likely
Rio Pinar to Fla Gas Transmission East (RW) - 69 kV Rebuild	Rebuild	Orange	Likely
SYS-Hexam Tap-Weeki Wachee Sw 115kV Line Rebuild (BBW-1)	Rebuild	Hernando	Unlikely
HT-39, -40 & -42; 405822-3-52-01 SR 55 from Jump Ct to W Fort Island Trail (SR 44)	Governmental	Citrus	Unlikely
CLT-175 TO CLT-178_257298-6-52-01_HERNANDO_CR578	Governmental	Hernando	Unlikely
WR and RW 69kV Relocation for Econ Trail	Governmental	Orange	Possible
TMS 69kV Relocation Taft-Vineland Rd from SOBT to Orange Ave	Governmental	Orange	Possible
69kV TMS-89 & -90 412994; Sunrail Phase II, Meadow Woods Park and Ride Station	Governmental	Orange	Yes
ZNR 44, 57, 58 CIP 6360 Pasco Co Zephyrhills Bypass West Gap	Governmental	Pasco	Likely
416561-2-52-01; SR 54 from eo CR 577 to eo CR 579 (Morris Bridge Rd)	Governmental	Pasco	Likely
LSP LSP-12 922252 PINELLAS CO. STARKEY ROAD	Governmental	Pinellas	Unlikely
LSP-71-74 PID921321 PINELLAS TRAIL 97TH WAY	Governmental	Pinellas	Unlikely
413622-2-52-01 - CR-296 (118TH AVE.)	Governmental	Pinellas	Unlikely

ZNR 115kV-SR 54 Pasco County-Fin # 416561-2-52-01	Governmental	Pasco	Possible
GW- NC 230kV, HD115kV PINELLAS CO SR690 FPID#413622-2-52-01	Governmental	Pinellas	Possible
0600010_ICLW-61to63_ERNIE CALDWELL BLVD._POLK	Governmental	Polk	Possible
Desoto City Sub to Desoto City Tap Permit T-316 Tractor Rd	Governmental	Highlands	Possible
TZ 69KV Rel. 256339-2-52-01,SR 54-Meadowbrook to US 41,Pasco	Governmental	Pinellas	Possible
238422-1-52-01 US 27 Boggy Marsh Rd to Lake Louisa Rd	Governmental	Lake	Possible
RW-87 to RW91_ALL ABOARD FLA._ORANGE	Governmental	Orange	Possible
CR-468 / US301 TO CR 505 WIDENING	Governmental	Sumter	Possible
432586-1-52-01_ANL-137 to ANL-139_LANE&INTER IMPROV_PINELLAS	Governmental	Pinellas	Possible
WR 69kV Landstreet SR 528 bxout Orange Cnty FN437156-1-52-01	Governmental	Orange	Possible

CRB & CSB- Suncoast Pkwy 2 -CR 490 Cross Over -FPID 405270-4	Governmental	Citrus	Possible
BCF-353 to BCF-355, CR 468 / US301 Widening, Sumter	Governmental	Hernando	Possible

25-6.0342(4)(c): *The extent to which the electric infrastructure improvements involve joint use facilities on which third-party attachments exist.*

In the description of specific hardening projects above, DEF has provided information as to whether the projects involve joint use facilities on which third-party attachments exist. Since 2009, all joint use poles changed out in support of Rule 25-6.0342(6) are scheduled within the company FMDR system. Communication carriers are notified at the time of the pole change out that transfers are needed. This process is in line with the other company pole maintenance programs and the cost to the communication carriers is minimized. DEF completed the required inspection of every joint use pole on the system in the yearend of 2013. We are currently in the 3rd year of the second round of inspections and anticipate completing the cycle by yearend of 2020.

25-6.0342(4)(d): *An estimate of the costs and benefits to the utility of making the electric infrastructure improvements, including the effect on reducing storm restoration costs and customer outages.*

With respect to system-wide storm and extreme weather applications identified in **Attachment B**, DEF has provided any available cost/benefit information within the documents in **Attachment B**. Additionally, please see the following chart for money that DEF has spent in 2013, 2014 and 2015 on storm hardening and maintenance:

Duke Energy Florida Storm Hardening and Maintenance Costs

Description	2013 Actuals	2014 Actuals	2015 Actuals
Vegetation Management (Distribution & Transmission)	$39,881,024.87	$42,263,966.70	$44,493,393.01
Joint Use Pole Inspection Audit	$430,282	$433,069	$516,587
Transmission Pole Inspections	$2,711,308	$3,480,621	$3,269,495
Other Transmission Inspections and Maintenance	$15,023,532	$13,267,395	$11,735,877
Transmission Hardening Projects	$140,278,933	$134,800,155	$142,992,995
Distribution Pole Inspections & Treatments	$2,679,895	$2,659,514	$2,895,478
Distribution Hardening Projects	$31,091,153	$39,097,831	$58,759,175
Total	**$232,096,127.87**	**$236,002,551.70**	**$264,663,000.01**

25-6.0342(4)(e): *An estimate of the costs and benefits, obtained pursuant to Rule 25-6.0342(6), provided to third-party attachers affected by the electric infrastructure improvements, including the effect on reducing storm restoration costs and customer outages realized by the third-party attachers.*

With respect to system-wide storm and extreme weather applications identified in **Attachments A** and **B**, DEF believes that any entity jointly attached to DEF's equipment would enjoy any benefit that DEF would enjoy from that same application, and DEF has provided any available cost/benefit information within the documents in those attachments.

25-6.0342(5): *Each utility shall maintain written safety, reliability, pole loading capacity, and engineering standards and procedures for attachments by others.*

Please see **Attachment A** and **Attachment C**.

25-6.0342(5): *The attachment standards and procedures shall meet or exceed the NESC so as to assure that third-party facilities do not impair electric safety, adequacy, or pole reliability; do not exceed pole loading capacity; and are constructed, installed, maintained, and operated in accordance with generally accepted engineering practices for the utility's service territory.*

All third-party joint use attachments on DEF's distribution and transmission poles are engineered and designed to meet or exceed current NESC clearance and wind loading standards. New attachment requests are field inspected before and after attachments to assure company construction standards are being met. All entities proposing to attach joint use attachments to DEF's distribution and transmission poles are given a copy of the company-prepared "Joint Use Attachment Guidelines." Attached hereto as **Attachment C**. These guidelines are a comprehensive collection of information spelling out the company's joint use process, construction standards, timelines, financial responsibilities, and key company contacts responsible for the completing permit requests. All newly proposed joint use attachments are field checked and designed using generally accepted engineering practices to assure the new attachments do not overload the pole or impact safety or reliability of the electric or other attachments. Additionally, annual and full-system audits are performed as detailed in DEF's annual March 1 comprehensive reliability report. For details on this activity, please see **Attachment B**.

25-6.0342(6): *Each utility shall seek input from and attempt in good faith to accommodate concerns raised by other entities with existing agreements to share the use of its electric facilities.*

Since 2009, DEF has continued to communicate with the telecommunications carriers regarding the pole loading project. DEF has diligently cut cost for carriers by suggesting make ready solutions for over loaded pole conditions that do not include pole change outs. Additional guying and attachment rearrangement solutions have saved the communications carriers thousands of dollars annually. DEF continues to answer any questions and address concerns

expressed verbally by joint attachers. DEF has taken all input received into consideration in the development and finalization of this storm hardening plan.

2016 Storm Hardening Plan Attachment List

Attachment A:

1. Distribution Overhead Construction Manual
2. Distribution Underground Construction Manual
3. Distribution Engineering Manual
4. Transmission Extreme Winds Loading Design Criteria Guideline for Overhead Transmission Line Structures
5. Transmission Line Engineering Design Philosophy
6. Joint Use-Pole Attachment Guidelines and Clearances

Attachment B:

1. Distribution Standards
2. Pole Inspection Plan
3. 2015 PSC Reliability Report, pages 39-42, 44-64

Attachment C:

1. Joint Use Pole Guidelines

Attachment D:

1. Completed Distribution Storm Hardening Projects 2007 through 2015

ATTACHMENT K

Purpose and Intent of the Plan:

To implement and update a wood pole inspection program that complies with FPSC Order No. PSC-06-0144-PAA-EI issued February 27, 2006 (the "Plan"). The Plan concerns inspection of wooden transmission and distribution poles, as well as pole inspections for strength requirements related to pole attachments. The Plan is based on the requirements of the National Electric Safety Code ("NESC") and an average eight-year inspection cycle. The Plan provides a detailed program for gathering pole-specific data, pole inspection enforcement, co-located pole inspection, and estimated program funding. This Plan also sets forth pole inspection standards utilized by Duke Energy Florida ("DEF") that meet or exceed the requirements of the NESC.

The Plan includes the following specific sub-plans:

- Transmission Wood Pole Inspection Plan ("Transmission Plan").
- Distribution Wood Pole Inspection Plan ("Distribution Plan").
- Joint Use Wood Pole Inspection Plan ("Joint Use Plan").

These three inspection sub-plans are outlined and described below. All of these sub-plans will be evaluated on an ongoing basis to address trends, external factors beyond the Company's control (such as storms and other weather events), and cost effectiveness.

1) Transmission Wood Pole Inspection Plan

A. Introduction

Ground-line inspection and treatment programs detect and treat decay and mechanical damage of in-service wood poles. DEF's Transmission Department accomplishes this by identifying poles that are 8 years of age or older and treating these poles as necessary in order to extend their useful life. As required, DEF also assesses poles and structures for incremental attachments that may create additional loads. Poles that can no longer maintain the safety margins required by the NESC (ANSI C2-2002) will be remediated. These inspections result in one of four or a combination of the following actions: (1) No action required; (2) Application of treatment; (3) Repaired; (4) Replaced.

B. General Plan Provisions

(i). Pole Inspection Selection Criteria

Transmission performs ground patrols to inspect transmission system line assets to allow for the planning, scheduling, and prioritization of corrective and preventative maintenance work. These patrols assess the overall condition of the assets including insulators, connections, grounding, and signs, as well as an assessment of pole integrity. These patrols are done on a three-year cycle and the assessment data and

reports generated from these patrols are used to plan the ground-line inspections set forth in Section 1B(ii) below. The ground patrol inspections categorize wood poles into four conditions or states (State 2-5). DEF conducts ground-line inspections of State 2 and 3 poles. State 3 poles are given priority for ground-line inspection scheduling. DEF replaces State 4 and 5 poles. DEF no longer utilizes the State 1 category.

In performing inspection and patrols, the following Transmission Line Wood Poles Inspection State Categories shall apply:

State 2 : Meeting all of the criteria listed below:

- No woodpecker holes or woodpecker holes have been repaired.
- A pole that has been cut and capped.
- Checks/cracks show no decay or insect damage.
- Ground-line inspected/treated with no data in the remarks field of the report and no noted reduction in effective pole diameter.
- Hammer test indicates a hard pole.
- No pole top deflection noted.

State 3 : Meeting one or more of the criteria listed below:

- Checks/cracks show decay or insect damage, or the presence of minimal shell cracking.
- Ground-line inspected/treated with decay noted in the remarks field of the report and a noted reduction in effective pole diameter.
- Hammer test indicates a minimal amount of ground-line decay.
- Pole has been repaired (e.g., C-truss).
- Poles with a wood bayonet or a pole that needs to be cut and capped.
- Pole can be partially hollow but with no less than 3 – 4 inches of shell thickness and cannot be caved during a hammer test.
- Pole top deflection is less than 3 feet.

State 4 : Meeting one or more of the criteria listed below and should be scheduled to be replaced:

- Woodpecker holes which have deep cavities and are not repairable.
- Checks/cracks show significant decay or insect damage, or the presence of substantial shell cracking.
- Decay in the pole top is extensive such that the pole cannot be cut and capped nor is the pole top section a candidate for a bayonet.
- Ground-line inspected/treated and identified as rejected/restorable or rejected/non-restorable.
- When hammer tested, ground-line decay pockets are found and are greater than 5 inches wide and 2 inches deep.
- Pole is hollow with less than 3 – 4 inches of shell thickness extending over more than one-quarter of the pole circumference, determined by hammer test and/or a screw driver.

• Pole top deflection is between 3 to 5 feet.

State 5 : Meeting one or more of the criteria listed below. (This pole should be scheduled to be replaced as soon as possible):

• Woodpecker holes which have deep cavities and are not repairable, severely affecting the integrity of the pole.
• Ground-line inspection indicates the pole as "priority."
• When hammer tested, ground-line decay pockets are found and are greater than 8 inches wide by 3 inches deep.
• Pole is hollow with less than 2 inches of shell thickness extending over more than one-third of the pole circumference.
• Pole deflection exceeds 5 feet.

(ii). Ground-Line Inspections

Ground-line inspections of wood transmission poles are conducted by qualified pole inspectors on an average 8-year cycle. This results in, on average, approximately 12.5% of the remaining population of wood poles receiving this type of inspection on an annual basis. Treatment and inspection work shall be done or supervised by a foreman with a minimum of six months experience and who is certified as g qualified for this work.

For poles without an existing inspection hole, the pole will be bored at a 45 degree angle below the ground line to a depth that extends past the center of the pole. For previously inspected poles, the original ground-line inspection plug shall be bored out and the depth of the inspection hole measured to ensure that the pole has been bored to the required depth. Treatment application plug(s) will be bored out and the depth of these holes measured to ensure compliance. Hammer marks should be evident to show that the pole has been adequately sounded.

All work done, materials used, and materials disposed of shall be in compliance and accordance with all local, municipal, county, state, and federal laws and regulations applicable to said work. Preservatives used shall conform to the minimum requirements as set forth in this Transmission Plan.

The inspection method used is a sound and bore inspection that will include the following components:

- Above Ground Observations - Visual inspection of the exterior condition of the pole and visual inspection of components hanging from the pole.
- Sound with Hammer – The exterior of the pole is tested with a hammer and the inspector listens for "hollowness" of the pole.

- Bore at Ground Line – The pole is bored at a 45 degree angle below the ground line. This inspection method helps to determine internal decay at the base as well as measure the amount of "good wood" left on the interior of the pole.
- Excavate to 18 inches (Full Ground Line Inspection) – The soil is removed 18 inches below ground line. Decay pockets are identified and bored to determine the extent of decay.
- Removal of Surface Decay – Identified areas of decay are removed down to "good wood" using a sharp pick.
- Assessment of Remaining Strength – All data collected from the inspection will be used to determine effective circumference and remaining strength of the pole. In evaluating pole conditions, deductions shall be made from the original ground line circumference of a pole to account for hollow heart, internal decay pockets, and removal of external decay. The measured effective critical circumference shall be at the point of greatest decay removal in the vicinity of the ground line taking into account the above applicable deductions. A pole circumference calculator shall be used to determine the measured effective critical circumference. To remain in service "as-is," the pole shall meet minimum NESC strength requirements. The measured effective critical circumference will be compared to the minimum acceptable circumference for the applicable class pole listed in the latest version of ANSI 05.1-1992, American National Standard for Wood Poles and NESC-C2-1990(1). Poles below the minimum acceptable circumference shall be rejected and will be marked in the field for replacement as either a State 4 or State 5 pole.
- Where excavation at the ground line cannot be achieved due to concrete or similar barriers, pole integrity will be assessed using a drilling resistance measuring device. These devices are now available on the market and are able to accurately detect voids and decay in poles at and below the ground where excavation is not possible.

(iii) Structural Integrity Evaluation

As part of the visual inspection of the poles, the inspector will note and record the type and location of non-native utility pole attachments to the pole or structure. This information will be used by the Joint Use Department to perform a loading analysis on certain poles or structures, where necessary, as more fully described in the Joint Use section of this Plan. In such cases, the loading information obtained from this analysis will be used along with the strength determined in the ground-line inspection. If the loads exceed: a) the strength of the structure when new and b) the strength of the existing structure exceeds the strength required at replacement, according to the NESC, the structure will either be braced to the required strength or will be replaced with a pole of sufficient strength. Specific information on this process is contained in the Joint Use section of this Plan.

(iv). Records and Reporting

A pole inspection report will be filed with the Florida Public Service Commission by March 1st of each year. The report shall contain the following information:

1) A description of the methods used for structural analysis and pole inspection.

2) A description of the selection criteria that was used to determine which poles would be inspected.

3) A summary report of the inspection data including the following:

   a. Total number of wood poles in Company inventory.
   b. Number of pole inspections planned.
   c. Number of poles inspected.
   d. Number of poles failing inspection.
   e. Pole failure rate (%) of poles inspected.
   f. Number of poles designated for replacement.
   g. Total number of poles replaced.
   h. Number of poles requiring minor follow-up.
   i. Number of poles overloaded.
   j. Methods of inspection used.
   k. Number of pole inspections planned for next annual inspection cycle.
   l. Total number of poles inspected (cumulative) in the 8-year cycle to date.
   m. Percentage of poles inspected (cumulative) in the 8-year cycle to date.

4) A pole inspection report that contains the following detailed information:

   a. Transmission circuit name.
   b. Pole identification number.
   c. Inspection results.
   d. Remediation recommendation.
   e. Status of remediation.

C. Program Cost and Funding

- DEF continues to meet the obligations set forth in Order No. PCS-06-0144-PAA-EI. The number of poles inspected per year will start at approximately 3,800 poles, but may vary from year to year depending on previous years' accomplishments.

DEF is currently on track to meet the 8-year cycle requirements. The number of poles inspected may vary year to year depending on the previous year's accomplishments with the intent to complete inspections in the required timeframe. The estimated figures in the chart below are "best estimates," given information and facts known at this time and are subject to change or modification.

Wood Pole Program Cost Estimates

Annual Unit & Cost Estimate		
Cycle		
Years per cycle	8	
Poles inspected per year	3,800	On average; may vary year to year
Assumed poles replaced*	5%	Current future projections
O&M Cost		
GL Inspection & Treatment	$250,000	On average; may vary year to year
Capital Cost		
Pole & Insulator Replacements	$6,000,000	On average; may vary year to year
Hurricane Hardening	$7,000,000	On average; may vary year to year

* Assumption is made that approximately 5% of the poles inspected will be identified for replacement.

2) Distribution Wood Pole Inspection Plan

A. Introduction

In accordance with FPSC Order No. PSC-06-0144-PAA-EI, DEF's Distribution Department inspects Company-owned wood poles on an average 8-year cycle. These inspections determine the extent of pole decay and any associated loss of strength. The information gathered from these inspections is used to determine pole replacements and to effectuate the extension of pole life through treatment and reinforcement. Additionally, information collected from the wood pole inspections is used to populate regulatory reporting requirements, provide data for loading analyses, identify other equipment maintenance issues, and used to track the results of the inspection program over time.

B. General Plan Provisions

(i). Ground-line Inspection Purpose

- The ground-line inspection process is the industry standard for determining the existing condition of wood pole assets. This inspection helps to determine extent of decay and the remaining strength of a pole. Ground-line inspections also provide insight into the remaining life of a wood pole.

- The ground-line inspection is performed at the base of the pole because the base is the location of the largest "bending moment," as well as the area subject to the most fungal decay and insect attack. Assessing the condition of the pole at the base is the most efficient way to effectively treat and restore a wood pole.

(ii). Pole Inspection Process

When a wood distribution pole, other than a CCA pole, is inspected, the tasks listed below will be performed. For a CCA type wood distribution pole less than 16 years of age, the inspection will consist of a visual above ground inspection and sounding with hammer, both procedures are described below. For CCA poles 16 years of age and greater, all inspection methods described below are used. Boring at Ground Line is also performed on type CCA poles when decay is present.

- Above Ground Observations - Visual inspection of the exterior condition of the pole and visual inspection of components hanging from the pole.
- Partial Excavation – The soil is removed around the base of the pole and the pole is inspected for signs of decay.
- Sound with Hammer – The exterior of the pole is tested with a hammer and the inspector listens for "hollowness" of the pole.
- Bore at Ground Line – The pole is bored at a 45 degree angle below the ground line. This inspection method helps to determine internal decay at the base as well as measure the amount of "good wood" left on the interior of the pole.
- Excavate to 18 Inches (Full Ground Line Inspection) – If significant decay is found during the full excavation, the soil is removed 18 inches below ground line. Decay pockets are identified and bored to determine the extent of decay.
- Removal of Surface Decay – Identified areas of decay are removed down to "good wood" using a sharp pick.
- Prioritization of rejected poles – rejected poles shall be assessed on their overall condition and then prioritized accordingly. Generally these poles will then be replaced in order of priority, from highest to lowest.
- For poles where obstructions, such as concrete encasement, make full excavation impractical DEF will utilize the best economical inspection process in accordance with Order No. PSC-08-0644-PAA-EI issued October 6, 2008.

(iii) Data Collection

All data collected through the inspection process will be submitted to DEF's Distribution Department in electronic format by inspection personnel. This data will be used to determine effective circumference and remaining strength of the pole. In evaluating pole conditions, deductions shall be made from the original ground line circumference of a pole to account for hollow heart, internal decay pockets, and removal of external decay. The measured effective critical circumference shall be at the point of greatest decay removal in the vicinity of the ground line taking into account the above applicable deductions. A pole circumference calculator shall be used to determine the measured effective critical circumference. To remain in service "as-is," the pole shall meet minimum NESC strength requirements. The measured effective critical circumference will be compared to the applicable minimum acceptable circumference listed in the most current versions of ANSI 05.1-1992, American National Standard for Wood Poles, and

NESC-C2-1990(1). Poles below the minimum acceptable circumference shall be rejected and will be marked in the field for replacement.

(iv). Structural Integrity Evaluation

- See Joint Use Pole Inspection Plan, section B, paragraph (i).

(v). Records and Reporting

A pole inspection report will be filed with the Florida Public Service Commission by March 1st of each year. The report shall contain the following information:

1) A description of the methods used for structural analysis and pole inspection.

2) A description of the selection criteria that was used to determine which poles would be inspected.

3) A summary report of the inspection data including the following:

a. Total number of wood poles in Company inventory.
b. Number of pole inspections planned.
c. Number of poles inspected.
d. Number of poles failing inspection.
e. Pole failure rate (%) of poles inspected.
f. Number of poles designated for replacement.
g. Total number of poles replaced.
h. Number of poles requiring minor follow-up.
i. Number of poles overloaded.
j. Methods of inspection used.
k. Number of pole inspections planned for next annual inspection cycle.
l. Total number of poles inspected (cumulative) in the 8-year cycle to date.
m. Percentage of poles inspected (cumulative) in the 8-year cycle to date.

4) A pole inspection report that contains the following detailed information:

a. Distribution circuit name.
b. Pole identification number.
c. Inspection results.
d. Remediation recommendation.
e. Status of remediation.

C. Program Cost and Funding

(i). Poles Program Cost Estimates

DEF continues to successfully meet the obligations set forth in Order No. PSC-06-0144-PAA-EI and continues to inspect poles based on the 8-year cycle as mandated by the FPSC. The number of poles inspected per year is expected to be approximately 96,000 poles, but may vary from year to year depending on previous years' accomplishments with the intent to complete inspections in the required timeframe. Funding requirements to meet all aspects of this program will be adjusted from year to year, as well. DEF is currently on track to meet the 8-year cycle requirements.

The estimated figures in the charts below are "best estimates," given information and facts known at this time and are subject to change or modification.

Annual Unit Estimate				
Years per Cycle	# of Wood Poles to be inspected per year	Replacements	Bracing	Treatments
8	96,000	7,000	368	25,600

Annual Cost Estimate							
Years per Cycle	O&M Costs		Capital		O&M Total	Capital Total	Program Total Cost
	Inspections (S&B + Excavation)	Treatments (add'l to inspection)	Replacements	Braces			
8	$ 1,800,000	$ 200,000	$ 28,000,000	$ 422,000	$ 2,000,000	$ 28,422,000	$ 30,000,000

3) Joint Use Pole Inspection Plan

A. Introduction

DEF currently has approximately 774,000 joint use attachments on distribution poles and approximately 7,400 joint use attachments on transmission poles. On average, DEF receives approximately 3,000 new attachment requests per year. All new attachment requests are reviewed in the field to assure the new attachments meet NESC and company clearance and structural guidelines. The information provided below outlines DEF's attachment permitting process and how DEF intends to gather structural information on certain existing joint use poles over an average 8-year inspection cycle to meet the obligations set forth in Order No. PCS-06-0144-PAA-EI.

B. General Plan Provisions

(i). Structural Analysis for a Distribution Pole New Joint Use Attachment

When the Joint Use Department receives a request to attach a new communication line to a distribution pole, the following is done to ensure that NESC clearance and loading requirements are met before permitting the new attachment:

- Each pole is field inspected, and the attachment heights of all electric and communication cables and equipment are collected. The pole number, pole size and class (type) are noted as well as span lengths of cables and wires on all sides of the pole.
- For each group of poles in a tangent line, the pole that has the most visible loading, line angle and longest or uneven span length is selected to be modeled for wind loading analysis.
- The selected pole's information is loaded into a software program called "SPIDA CALC" from IJUS. The pole information is analyzed and modeled under the NESC Light District settings of 9psf, no ice, 30° F, at 60 MPH winds to determine current loading percentages.
- If that one pole fails, the next worst case pole in that group of tangent poles is analyzed as well.
- Each pole is analyzed to determine existing pole loading and the proposed loading with the new attachment.
- If the existing analysis determines the pole is overloaded, a work order is issued to correct the overload. The remedy may include replacing the pole with a larger class pole. If the pole fails only when the new attachment is considered, a work order estimate is made and presented to the communication company wishing to attach.

(ii). Structural Analysis for a Transmission Pole New Joint Use Attachment

When the Joint Use Department receives a request to attach a new communication line to a transmission pole with distribution underbuild, the following will be done to ensure that NESC clearance and loading requirements are met before permitting the new attachment:

- Each pole is field inspected, and the attachment heights of all electric and communication cables and equipment are collected. The pole number, pole size and class (type) are noted as well as span lengths of cables and wires on all sides of the pole.
- All pole information including structural plan and profiles are sent to the engineering company, Stantec, to be modeled in PLS-CADD/LITE and PLS-POLE for structural analysis.
- Stantec engineers determine the worst case structures in a tangent line and request the structural drawings and attachment information on those selected poles. Typically, transmission poles with line angle and uneven span lengths are the poles considered for wind loading analysis.
- The selected pole information is loaded into the PLS-CADD and PLS-POLE software. Depending on the pole location per the NESC wind charts, one of the following load cases is run. NESC Light District: 9psf, no ice, 30° F, 60mph; NESC Extreme: 3 sec gust for the specific county, no ice, 60° F (Ex: Orange County is 110 mph); or DEF Extreme at 36psf, 75° F, wind chart mph

- If that one pole fails, the next worst case pole in that group of tangent poles is analyzed as well.
- Each pole is analyzed to determine existing pole loading and the proposed loading with the new attachment.
- If the existing analysis determines the pole is overloaded, a work order is issued to correct the overload. The remedy may include replacing the pole with a larger class pole. If the pole fails only when the new attachment is considered, a work order estimate is made and presented to the communication company wishing to attach.

(iii). Analysis of Existing Joint Use Attachments On Distribution Poles

There are approximately 774,000 joint use attachments on approximately 450,000 distribution poles in the DEF system. All distribution poles with joint use attachments will be inspected on an average 8-year audit cycle to determine existing structural analysis for wind loading. These audits will start at the sub-station where the feeder originates. For each group of poles in a tangent line, the pole that has the most visible loading, line angle, and longest or uneven span length will be selected to be modeled for wind loading analysis. Each pole modeled will be field inspected. The attachment heights of all electric and communication cables and equipment will be collected. The pole age, pole type, pole number, pole size / class, span lengths of cables and wires, and the size of all cables and wires on all sides of the pole will be collected.

The selected pole's information will then be loaded into a software program called "SPIDA CALC" from IJUS. The pole information will be analyzed and modeled under the NESC Light District settings of 9psf, no ice, 30° F, at 60 MPH winds to determine current loading percentages. If that one pole fails, the next worst case pole in that group of tangent poles will be analyzed as well. Each pole analyzed will determine the existing pole loading of all electric and communication attachments on that pole. If the existing analysis determines the pole is overloaded, a work order will be issued to correct the overload. The remedy may include replacing the pole with a larger class pole. Should the original pole analyzed meet the NESC loading requirements, all similar poles in that tangent line of poles will be noted as structurally sound and entered into the database as "PASSED" structural analysis. Poles rated at 100% or lower will be designated as "PASSED." Poles that are analyzed and determined to be more than 100% loaded will be designated as "FAILED," and corrected. If the pole is changed out, the GIS database will be updated to reflect the date the new pole was installed.

(iv). Analysis of Existing Joint Use Attachments On Transmission Poles

There are approximately 7,400 joint use attachments on approximately 5,600 transmission poles in the DEF system. All transmission poles with joint use attachments will be inspected on an average 8-year audit cycle to determine existing structural analysis for wind loading. Audits will start at the sub-station where the feeder originates. All pole information (pole size, class, type, age, pole number, cable, wire, equipment attachment heights, span lengths) including structural plan and profiles will be sent to the engineering company, Stantec, to be modeled in PLS-CADD/LITE and PLS-POLE for structural analysis. Stantec engineers will determine the worst case structures in a tangent line and request the structural

drawings and attachment information on those selected poles. Typically, transmission poles with line angle and uneven span lengths are the poles considered for wind loading analysis.

The selected pole information will be loaded into the PLS-CADD and PLS-POLE software. Depending on the pole location per the NESC wind charts, one of the following load cases is run. **NESC Light District:** 9psf, no ice, 30° F, 60mph; **NESC Extreme:** 3 sec gust for the specific county, no ice, 60° F (Ex: Orange County is 110 mph); or **DEF Extreme** at 36psf, 75° F, wind chart mph. If that one transmission pole fails, the next worst case pole in that group of tangent poles will be analyzed as well. Each transmission pole analyzed will determine the existing pole loading of all electric and communication attachments on that pole. If the existing analysis determines the transmission pole is overloaded, a work order will be issued to correct the overload. The remedy may include replacing the pole with a larger class pole. Should the original pole analyzed meet the NESC loading requirements, all similar poles in that tangent line of poles will be noted as structurally sound and entered into the database as "PASSED" structural analysis.

Transmission poles rated at 100% or lower will be designated as "PASSED." Transmission poles that are analyzed and determined to be more than 100% loaded will be designated as "FAILED," and corrected. If the transmission pole is changed out, the GIS database will be updated to reflect the date the new pole was installed.

(v). Records and Reporting

A pole inspection report will be filed with the Florida Public Service Commission by March 1st of each year. The report shall contain the following information:

1) A description of the methods used for structural analysis and pole inspection.

2) A description of the selection criteria that was used to determine which poles would be inspected.

3) A summary report of the inspection data including the following:

   a. Number of poles inspected.
   b. Number of poles not requiring remediation.
   c. Number of poles requiring remedial action.
   d. Number of pole requiring minor follow up.
   e. Number of poles requiring a change in inspection cycle.
   f. Number of poles that were overloaded.
   g. Number of inspections planned.

C. Program Cost and Funding

(i). Pole Analysis Funding

As stated above, there are currently approximately 774,000 joint use attachments on approximately 450,000 distribution poles and approximately 7,400 joint use attachments on approximately 5,600 transmission poles. DEF will analyze the "worst case" poles in a tangent line of similar poles as deemed appropriate during field inspections.

In order to meet the obligations set forth in Order No. PCS-06-0144-PAA-EI, DEF requires incremental funding annually to successfully gather data and enter it into the required reporting format. See calculation that follows. The estimated figures in these charts are "best estimates," given information and facts known at this time and are subject to change or modification.

Annual Unit & Cost Estimate									
Distribution poles with joint use	Annual inspected (8-yr cycle)	10% of Distribution poles analyzed	1% of Distribution poles replaced	Transmission poles with joint use	Annual inspected (8-yr cycle)	30% of Transmission poles analyzed	10% of Transmission poles replaced	Total cost to analyze poles (O&M)	Total cost to replace poles (capital)
450,000	56,000	5,600	56	5,600	700	210	21	$551,950	$585,000

ATTACHMENT L

Major Conversions Historical Data

		WRs Completed																
		All Years	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**
No. of WRs		360	7	4	1	-	3	6	9	57	10	42	42	40	43	26	51	19
Manhour Estimate		188,910	1,968	5,657	302	-	1,582	6,214	2,732	16,655	2,517	41,151	27,719	25,415	37,511	10,558	7,711	1,218
Manhours Charged		171,446	1,137	1,113	-	-	45	2,098	2,185	10,057	2,528	41,167	27,994	25,527	38,080	10,571	7,720	1,223
No. of Units (Ft)		437,522	19,424	34,094	5,422	-	6,852	16,196	7,124	85,920	4,961	74,467	48,197	52,807	55,108	11,121	14,117	1,712
No. of Units (Miles)		83	3.68	6.46	1.03	-	1.30	3.07	1.35	16.27	0.94	14.10	9.13	10.00	10.44	2.11	2.67	0.32
Estimated Cost		22,444,707	537,971	1,522,620	41,459	-	225,660	1,135,639	363,620	2,079,768	391,373	$ 4,824,690	$ 3,734,020	$ 2,934,875	$ 2,686,765	$ 882,087	$ 914,825	$ 169,334
CIAC		17,729,513	738,367	1,160,019	39,958	-	230,187	649,801	662,461	2,376,753	462,338	$ 2,681,567	$ 3,866,787	$ 2,045,350	$ 1,649,664	$ 710,797	$ 377,393	$ 78,071
No of WRs with CIAC Paid (in STORMS/WMIS)	59%	214	7	1	1	-	3	6	7	18	9	31	29	27	23	17	24	11
Est. Cost of those WRs with no CIAC Paid	29%	6,611,660	-	334,203	-	-	-	-	$ 17,845	$ 954,068	$ 30,904	$ 1,172,514	$ 1,363,212	$ 717,415	$ 1,467,711	$ 165,739	$ 336,120	$ 51,929
Est Cost of those WRs with CIAC Paid	71%	15,833,046	537,971	1,188,417	41,459	-	225,660	1,135,639	$ 345,775	$ 1,125,700	$ 360,469	$ 3,652,176	$ 2,370,808	$ 2,217,460	$ 1,219,054	$ 716,348	$ 578,705	$ 117,405
CIAC Ratio of those with CIAC Paid		112%	137%	98%	96%	0%	102%	57%	192%	211%	128%	73%	163%	92%	135%	99%	65%	66%
CIAC Ratio Overall		79%	137%	76%	96%	0%	102%	57%	182%	114%	118%	56%	104%	70%	61%	81%	41%	46%
Based on Units >50																		
No of WRs with >50 Units	58%	209	1	2	1	0	2	6	6	36	9	30	32	32	23	13	14	2
Est Cost of WRs with >50 units	92%	$ 20,613,759	$ 1,125,337	$ 1,448,823	$ 41,459	$ -	$ 224,134	$ 1,135,639	$ 344,147	$ 1,809,600	$ 380,285	$ 4,390,458	$ 3,177,390	$ 2,895,514	$ 2,563,259	$ 627,324	$ 400,182	$ 50,208
Manhours Est of WRs with >50 Units	96%	164,447	920	4,914	302	-	1,575	6,214	2,592	14,737	2,452	37,109	22,737	24,383	35,633	6,703	3,936	241
No of Units (Ft) for WRs with >50 Units	100%	437,372	19,424	34,094	5,422	-	6,852	16,196	7,122	85,913	4,959	74,440	48,194	52,775	55,068	11,115	14,094	1,704
No of Units (Miles) for WRs with >50 Units		82.84	3.68	6.46	1.03	-	1.30	3.07	1.35	16.27	0.94	14.10	9.13	10.00	10.43	2.11	2.67	0.32
Cost per manhour of WRs with >50 Units		$ 125.35	$ 1,223.05	$ 294.85	$ 137.27	$ -	$ 142.34	$ 182.77	$ 132.79	$ 122.79	$ 155.09	$ 118.31	$ 139.75	$ 118.75	$ 71.93	$ 93.59	$ 101.67	$ 208.33
Cost per manhour of All WRs		$ 130.91	$ 473.15	$ 1,368.03	$ -	$ -	$ 4,981.47	$ 541.19	$ 166.42	$ 206.80	$ 154.82	$ 117.20	$ 133.39	$ 114.97	$ 70.56	$ 83.44	$ 118.50	$ 138.46
Cost per Unit (Ft) of WRs with >50 Units		$ 47.13	$ 57.94	$ 42.49	$ 7.65	$ -	$ 32.71	$ 70.12	$ 48.32	$ 21.06	$ 76.69	$ 58.98	$ 65.93	$ 54.87	$ 46.55	$ 56.44	$ 28.39	$ 29.46
Cost per Unit (Ft) of All WRs		$ 51.30	$ 27.70	$ 44.66	$ 7.65	$ -	$ 32.93	$ 70.12	$ 51.04	$ 24.21	$ 78.89	$ 64.79	$ 77.47	$ 55.58	$ 48.75	$ 79.32	$ 64.80	$ 98.91
Cost per Unit (Mile) of WRs with >50 Units		$ 248,851	$ 305,899	$ 224,373	$ 40,374	$ -	$ 172,713	$ 370,226	$ 255,139	$ 111,214	$ 404,901	$ 311,413	$ 348,106	$ 289,689	$ 245,769	$ 298,000	$ 149,919	$ 155,574
Cost per Unit (Mile) of All WRs		$ 270,862	$ 146,236	$ 235,802	$ 40,374	$ -	$ 173,889	$ 370,226	$ 269,500	$ 127,807	$ 416,539	$ 342,089	$ 409,063	$ 293,449	$ 257,424	$ 418,795	$ 342,160	$ 522,245
Manhour per Unit (Ft) of WRs with >50 Units		0.38	0.05	0.14	0.06	0.00	0.23	0.38	0.36	0.17	0.49	0.50	0.47	0.46	0.65	0.60	0.28	0.14
Manhour per Unit (Ft) of All WRs		0.39	0.06	0.03	0.00	0.00	0.01	0.13	0.31	0.12	0.51	0.55	0.58	0.48	0.69	0.95	0.55	0.71
Manhour per Unit (Mile) of WRs with >50 Units		1,985	250	761	294	-	1,213	2,026	1,921	906	2,611	2,632	2,491	2,439	3,417	3,184	1,475	747
Manhour per Unit (Mile) of All WRs		2,069	309	172	-	-	35	684	1,619	618	2,691	2,919	3,067	2,552	3,649	5,019	2,887	3,772

Note: Data is from STORMS/WMIS and only those WRs that are completed.

	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
No. of Units (Miles)	0.32	2.67	2.11	10.43	10.00	9.13	14.10	0.94	16.27	1.35	3.07	1.30	-	1.03	6.46	3.68
Estimated Cost	$ 169,334	$ 914,825	$ 882,087	$ 2,686,765	$ 2,934,875	$ 3,734,020	$ 4,824,690	$ 391,373	$ 2,079,768	$ 363,620	$ 1,135,639	$ 225,660	$ -	$ 41,459	$ 1,522,620	$ 537,971
Cost per Unit (Ft) of WRs with >50 Units	$ 29.46	$ 28.39	$ 56.44	$ 46.55	$ 54.87	$ 65.93	$ 58.98	$ 76.69	$ 21.06	$ 48.32	$ 70.12	$ 32.71	$ -	$ 7.65	$ 42.49	$ 57.94

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ATTACHMENT M

Document title:	Document number:
Transmission Line Material Condition Assessment Procedure; Ground Patrols	TECP-MIM-TRM-00026
	Revision No.: 002
Keywords: TEEM-EE; transmission, line patrols, inspections	Applies to: Transmission – All Regions

1.0 Introduction

1.1 The material condition of the transmission line structures must be periodically inspected to ensure the assets are in optimum condition. The primary goal of the line assessment is to inspect transmission line structures and components to document material deficiencies so corrective repair/replacement work orders are written.

1.2 All structures on a line are to be inspected during a ground patrol, regardless of the pole material, inspections should extend from substation to substation, and are to include structures on any connected taps. A variety of materials, including wood, steel, concrete, and lattice towers are often present on a line. This document covers all types, but a separate inspection procedure document will be used for detailed lattice tower steel inspections outside the scope of this document.

1.2.1 All wood poles inspected by the Duke Energy contractors shall utilize inspection techniques as detailed on other procedures included in the bid documentation including sound & bore, excavation, and treatment requirements.

1.2.2 The definitions contained herein are not only to be utilized by contractors but are also a useful guide for Duke Energy line technicians, field supervision, and other field personnel.

1.2.3 In some Duke Energy jurisdictions regulatory requirements are more stringent than what is contained in this document; when that is the case the regulatory criteria shall be followed.

1.2.4 Inspection of ALL transmission structure components on a line, including poles, insulators, crossarms, guying, bonding, conductors, statics, and grounding systems is expected. Any attached distribution underbuild is also to be inspected for signs of obvious defects.

1.2.5 The intent of this guidance procedure is to capture component deficiencies in a consistent manner acrosse the entire Duke Energy System. Deficient material replacements are identified as either a Priority 0, 1, & 2, and repairs as a Priority 9. These conditions are used to create corrective work orders using Duke Energy software.

2.0 Component Assessment Definitions

2.1 **PRIORITY 0** is a condition that poses an immediate threat to either safety or system integrity. When this condition is encountered, a phone call to field supervision shall be immediately made and the contractor must stay on site until Duke Energy personnel arrives and the area is secured. (Note; examples of this condition are NOT shown in the next section).

2.2 **PRIORITY 1** components are deteriorated and require attention, but does not pose an immediate threat to safety or the system. Depending on specific regional instuctions, a phone call may be required to the field supervison when this condition is found (expectations vary between regions). A Priority 1 corrective work order will be written when this condition is reported and replacement/repairs completed within 12 weeks.

2.3 **PRIORITY 2** components are deteriorated and in need of replacement. A Priority 2 corrective work order will be written when this condition is reported.

2.4 **PRIORITY 9** has some maintenance issues requiring repair, consisting of non-critical work, but the component is in otherwise good condition.

3.0 Structure Components & Priority Codes

3.1 Transmission Wood Poles

3.1.1 **Priority 9** is described as meeting ANY of the conditions listed below and should have a repair work order writtten:

- Woodpecker holes are present but can be patched and repaired
- Woodpecker holes are not located in critical pole locations
- Woodpecker holes are limited to “baseball” size in diameter, they do not extend into the pole more than 4 inches, and will not hold water
- Earth washout at pole base requires mitigation

Priority 9 Woodpecker Holes
(Not in critical locations)

Priority 9 Woodpecker Hole
(Does not hold water & can be repaired)

3.1.2 **Priority 2** is described as meeting ANY of the conditions listed below and should have a replacement work order written:

- Hammer reveals significant groundline decay pockets that are greater than 6 inches wide and 3 inches deep extending over more than one-quarter of the pole circumference
- Pole is hollow with less than 4 inches of shell thickness extending over more than one-quarter of the pole circumference
- Hammer reveals significant shell cracking or soft wood, indicated by sound or caving of the wood
- Woodpecker holes are extensive and generally at least “softball” sized or greater and extend to the pole center, severely affecting the pole integrity
- Woodpecker holes contain extensive nesting cavities in critical locations. including vicinity of crossarm, plankarm, crossbrace, guy, or insulator connections
- Woodpecker holes contain nesting cavities, or can be seen to hold water
- Pole checks reveal significant evidence of decay, insect damage, or shell seperation, as indicated by caving the pole, sawdust, or sound
- Longitudinal pole top deflection is between 3 to 5 feet
- Transverse pole deflection of more than 20 degrees
- Earth washout at pole base is so substantial it requires replacement
- Pole top decay shall be identified as a pole replacement **ONLY** if the hardware supporting the static has moved or has been jeopardized, the pole top has a significant split, or woodpecker holes are evaluated to be extensive. ***Duke Energy employees are responsible for accessing pole top decay during routine aerial inspections.***

Priority 2 Split Pole Top & Vertical Woodpecker Holes

Priority 2 Woodpecker Holes
(located in critical spots)

Priority 2 Woodpecker Holes
(Quantity and orientation indicates significant pole decay)

3.1.3 **Priority 1** is described as meeting ANY of the conditions listed below. This pole should have a replacement work order written:

- Hammer and probing reveals decay extending towards the polel center
- Pole is hollow with less than 2 inches of shell thickness extending over more than one-quarter of the pole circumference
- Woodpecker holes extend through the pole and daylight is visible.
- Longitudinal pole deflection exceeds 5 feet
- Extensive longitudinal cracking exists through critical attachments of the pole
- Earth washout at pole base possibly compromises the structure integrity

Priority 1 Internal Decay
(Shell thickness less than 1 inch)

Priority 1 Internal Decay
(Deep decay pocket)

Green Growth
(May be an indicator of substantial pole decay)

Priority 1 Woodpecker holes
with a large internal cavity

Priority 1 Groundline Pole Decay

3.2 Transmission Line Crossarms, Plankarms, Crossbraces, & Kneebraces

3.2.1 **Priority 9** is described as meeting one or more of the conditions listed below. Repairs work orders will be written.

- Hardware is missing or is visually seen to be loose

3.2.2 **Priority 2** is described as meeting ANY of the conditions listed below and should be scheduled to be replaced:

- Member has wide (> 1 inch) cracks that can hold water
- When hammer tested member can be caved
- Separation exists between laminate sections of crossbraces
- Woodpecker holes are present
- Crossarm out of plumb or rolled by more than 45 degrees
- Crossarm supporting brace is broken

Priority 2 Rolled Pin Type Insulator Mounted above Wood Arm

3.2.3 **Priority 1** is described as meeting ANY of the conditions listed below and should be scheduled to be replaced:

- Member is either split or broken

3.3 Transmission Line Porcelain Insulators

3.3.1 **Priority 9** is described as meeting the condition listed below. A repair work order will be written.

- Insulator units with significant bird contamination

3.3.2 **Priority 2** is described as meeting one or more of the conditions listed below and should be replaced:

- Suspension type insulators have pin rust with some loss of material and/or swelling of the pin base
- Suspension type insulators with two or more significantly broken insulators or in a string at 44 kV, three or more at 69/115 kV, and four or more at 230/345/500 kV. NOTE: Chipped Insulators do not meet the definition of broken.
- Insulators with significant signs of flashing or burn. ***Duke Energy employees are responsible for accessing flashed insulators during routine aerial inspections.***
- Pin type insulators mounted above crossarms have broken 2 or more broken skirts or the top skirt is broken
- Pin type insulators mounted above crossarms are rolled more than 30 degrees from vertical

3.3.3 **Priority 1** is described as meeting ANY of the conditions listed below and should be scheduled to be replaced:

- Suspension type insulators have advanced pin rust with significant loss of material and/or swelling of the pin base
- Suspension type insulators have more than half of their bells broken.
- Pin type insulators mounted above crossarms have more than half of their skirts broken

Priority 1 Porcelain Spark Erosion
These can be difficult to see/evaluate

Typical Priority 1 “Ball & Socket” Insulator

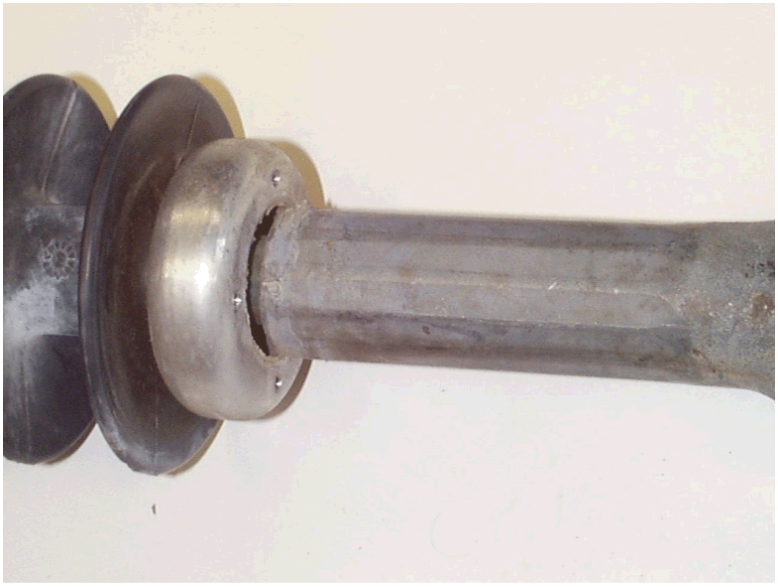
3.4 Transmission Line Polymer Insulators

3.4.1 **Priority 9** is described as meeting any of the conditions listed below. A repair work order will be written.

- Polymer deadend or suspension insulator has either a missing or incorrectly installed corona ring at 138 kV or above (does not apply to line post insulators)

3.4.2 **Priority 2** is described as meeting one or more of the conditions listed below and should be replaced:

- Polymer has an exposed fiberglass rod
- Polymer has open splits or gaps in the rubber housing
- Polymer displays evidence of electrical tracking or leaking interface compound



Priority 2 Polymer Insulator
Exposed Fiberglass Rod (Ohio Brass)

Priority 2 Polymer Insulator
Split Housing (Ohio Brass)

3.4.3 **Priority 1** is described as meeting ANY of the conditions listed below and should be scheduled to be replaced:

- Polymer displays severe damage due to mechanical or electrical reasons

3.5 Transmission Line Conductors & Splices

3.5.1 **Priority 9** is described as meeting the condition listed below and should be repaired:

- Conductor has been shot through any of the aluminum strands
- Conductor aluminum strands are unraveled

3.5.2 **Priority 1** is described as meeting ANY of the conditions listed below and should be scheduled to be repaired or replaced:

- Conductor has been shot through any of the steel strands
- Conductor splice has high infrared readings
- Ohm-stick conductor splice resistance guidelines recommend an immediate replacement

3.6 Transmission Line Overhead Ground Wires (Statics, OHGW, OHG, OPGW)

3.6.1 **Priority 2** is described as meeting ANY of the conditions listed below and should be repaired or replaced:

- Any broken strands
- Static is significantly rusted, corroded, or deeply pitted
- Static is dark brown or black in color
- Static is missing between spans

3.6.2 **Priority 1** is described as meeting ANY of the conditions listed below and should be scheduled to be repaired or replaced:

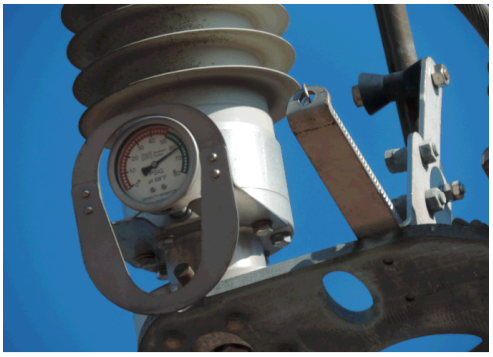
- Static is broken, detached, on the ground, or laying on a crossarm.

3.7 Transmission Line Switches

3.7.1 **Priority 2** is described as meeting ANY of the conditions listed below and should be repaired:

.

- Mechanical gas targets for interrupter SF6 gas levels are present or SF6 gas gauges are in the red zone
- Switch has known mechanical issues
- Infrared readings are high and require adjustment of blade/jaw interface or replacement
- The switch is tagged out of service with the ECC due to mechanical or operational problems
- Electrical testing indicates that a vacuum interrupter has lost dielectric strength, i.e. vacuum is not present
- Manual operator has been vandalized or Duke Energy lock is missing



SF6 Gas Level on Southern States must be in the Green Region

S&C Target is Normally White Red Target Indicates Low Gas

3.8 Transmission Line Lattice Towers, Steel & Concrete Poles

3.8.1 **Priority 9** is described as meeting ANY of the conditions listed below. Repairs or replacement may be necessary.

- Concrete poles has rust stains originating from inside the crack from the reinforcing steel or cracks more than ¼ inch wide
- Galvanized or painted steel pole or towers have rust and needs painting
- Groundline treatment on steel poles or tower is cracked, or peeled, but rusting has not yet occurred
- Earth washout at pole base requires mitigation

3.8.2 **Priority 2** is described as meeting ANY of the conditions listed below. Repairs or replacement may be necessary

- Galvanized or painted steel pole or towers have deep rust, needs cleaning, priming, & painting
- Weathering steel poles or towers exhibit heavy pack-out including deformed or missing members or bolts
- Groundline treatment on steel pole or tower is peeled or missing, and pole is actively rusting
- Aluminum towers exhibit deformed or missing members or bolts
- Earth washout at pole base is so substantial it requires replacement

3.8.3 **Priority 1** is described as meeting ANY of the conditions listed below and should be scheduled to be replaced:

- Lattice Tower, Steel or Concrete poles have significant damage requiring they be replaced
- Earth washout at pole base possibly compromises the structure integrity

3.9 Transmission Minor Components

3.9.1 **Aerial Marker Balls**; Inspect for partially detached or broken marker balls.

3.9.2 **Arrestors;** Inspect for loose hardware, detached jumpers, cracks, signs of being burned, or with high infrared readings.

3.9.3 **Bird Contamination;** Inspect for bird droppings on porcelain or polymer insulator strings. Significant activity may warrant the installation of protective bird guards or insulator replacement

3.9.4 **Conductor Splices;** Inspect for rusted strands or a discharge of the conductive grease at the splice ends. The color will normally be black. Elevated infrared readings will indicate if the splice is in a critical state. The “Ohmstick” is an effective means of evaluating a splices’ integrity.

3.9.5 **Connections;** Inspect for bent, cracked, or missing hardware, and loose or missing bolts.

3.9.6 **Dampers;** Inspect for bent, cracked, or missing nuts. Look for signs of being broken loose and sliding away from the insulator.

3.9.7 **Distribution Underbuild**; Inspect for obious hazards and safety concerns such as crossarm integrity, signs of transformer oil spillage, blown insulators, or loose grounds adjacent to primary conductors.

3.9.8 **Grounding;** Inspect for broken or deteriorated pole grounds and for unattached flying taps or bonding straps to the overhead ground wire.

3.9.9 **Guy Strain Insulators;** Inspect coatings for cracking and chipping as they protect the fiberglass insulator rod from ultraviolet radiation. Inspect end fittings for deterioration. Insulators with significantly frayed glass or splintering should be replaced.

3.9.10 **Hairpin Type Conductor Phase Spacers**; Inspect for overall integrity, any broken strands, and signs of collapsing.

3.9.11 **Line Traps;** Inspect for missing or broken nylon nuts used on the long longitudinal bolts holding the trap together as they are UV sensitive and have a history of failure.

3.9.12 **Pole Bands;** Inspect for broken thru bolts and pulled out lag screws, particularly on conductor deadends.

3.9.13 **ROW Condition;** Inspect for any leaning tree or hazard that may come in contact with the line.

3.9.14 **U-bolts used on steel crossarms;** Inspect for broken U-bolts, particulary on lines with large conductors. Particular attention should be given to all weathering U-bolts as significant rusting and section loss often occurs at the crossarm attachment.

3.9.15 **Chevrons and Marker Balls;** Inspect for faded, detached or missing chevrons and hazard balls. Insure the orange and yellow marker balls used as warning devices for helicopter patrols are present at all line crossings.

4.0 Revision History

Revison	Date	Description
002	3/2017	Revised Corrective Maintenance Priority Codes to match new standard guidance.

Document Approval Form

published 3/22/17

Section A: Document identification and type of action

Document no.: TECP-MIM-TRM-00026 | Revision no.: 002

Document title: Transmission Line Material Condition Assessment Procedure; Ground Patrols

Type of action:

- ☐ New
- ☐ Cancellation
- ☐ Suspension
- ☐ Renumber
- ☐ Ownership Change
- ☑ Revision
- ☐ Periodic review completed, as required

For Corporate Document Center use only:

- ☐ Editorial Change
- ☐ Migration
- ☐ Control element revision _____ (does not require approval authority signature)

Applies to: (Select all that apply)

- ☑ Duke Energy
- ☐ Duke Energy Carolinas, LLC
- ☐ Duke Energy Progress, LLC
- ☐ Duke Energy Florida, LLC
- ☐ Duke Energy Indiana, Inc.
- ☐ Duke Energy Kentucky, Inc.
- ☐ Duke Energy Ohio, Inc.
- ☐ Group _____
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☑ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☑ None
- ☐ State Codes/Standards
- ☐ HIPAA
- ☐ Sarbanes-Oxley
- ☐ OSHA _____
- ☐ NERC
- ☐ FERC Standards of Conduct
- ☐ Patriot Act
- ☐ Other _____

Applicable to forms only: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☐ Yes (Procedure No:_____)

How is the form to be completed or used? ☐ Hard Copy Completion (by hand) ☐ Online Data Entry

- ☐ Communication plan established
- ☑ Impact Reviews completed

Description of document action or summary of changes:

Procedure revisions included modifying Work Order Codes to a Priority 0, 1, 2, & 9 System. This procedure was reviewed by both Line AMET members and persons assigned to the 2016 contract pole inspection bid team.

Section B: Approval **Who should sign?** see instructions on page 2

Preparer(s)/Author(s)/Writer(s) (*signature not required*):

Dan Chapoton

Approval recommended (*print name*): Dan Chapoton	Dan Chapoton — Digitally signed by Dan Chapoton DN: cn=Dan Chapoton, o=Asset Management, ou=Equipment Engineering, email=dan.chapoton@duke-energy.com, c=US Date: 2017.03.09 12:31:57 -05'00'	*(signature)*	Date: 03/09/17
Approval recommended *(print name)*:		*(signature)*	Date:
Approval recommended *(print name)*: Dan Chapoton		*(signature)*	Date:
Final Approval *(print name)*: Dan Maley	Daniel Maley — Digitally signed by i40384 (327799) DN: dc=com, dc=duke-energy, dc=ent, dc=nam, ou=Accounts, ou=Personal, ou=PNTransitional, cn=i40384 (327799), email=Daniel.Maley@duke-energy.com Date: 2017.03.21 15:17:51 -04'00'	*(signature)*	Date: 3/21/17

RETURN SIGNED FORM AS SCANNED PDF VIA E-MAIL OR FAX TO (919) 235-3165

ATTACHMENT N

DUKE ENERGY®

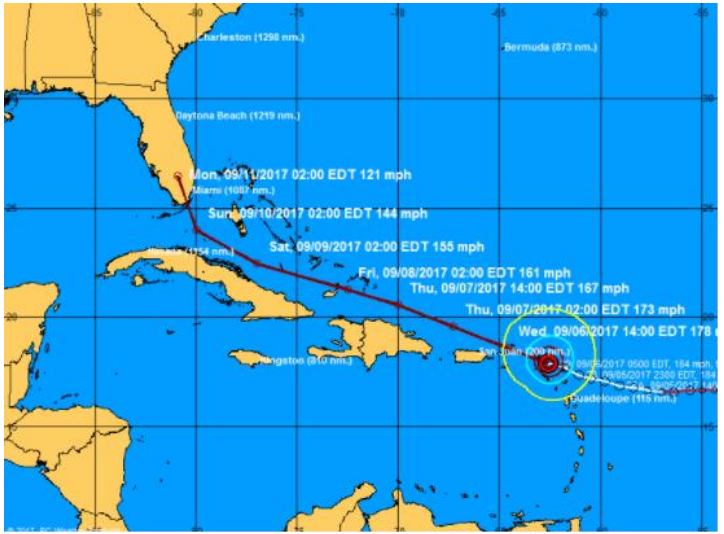
1 Distribution Force - DEF

Hurricane Irma Storm Review

Hurricane Irma – Distribution Overview

Restoration Performance

- 1.74M* Customers Restored
  - 1.28M Peak Customers Out
  - 35,196 Outage Events
- 12,668 Total Resources
  - 7,660 Line Techs
  - 2,600 Vegetation
  - 2,408 Damage Assessment / Support



Customer

- Priority given to restoration of critical service infrastructure
- Operations centers worked closely with EOCs on emergent issues and activated our Road Clearing/Make It Safe
- Duke Energy State President participated in daily round table calls facilitated by Florida Governor Rick Scott
- 2,132,836 Florida calls handled by Customer Care Operations during Irma
- Customers were kept informed through emails, outbound calls, TV and radio releases and social media

Hurricane Irma - Weather

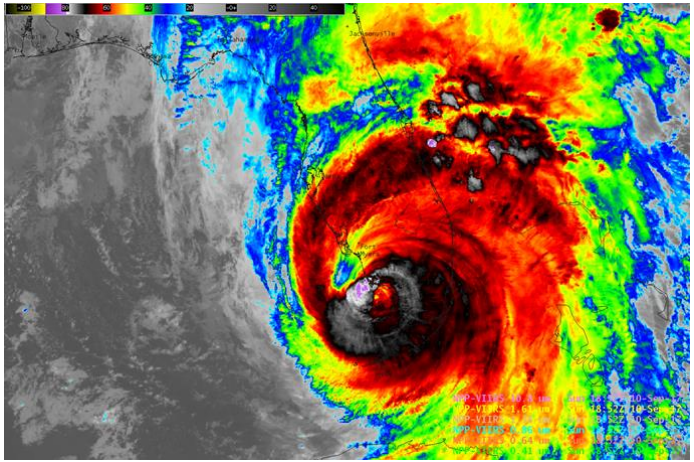
Hurricane Irma was a long-duration storm causing catastrophic damage to the northeastern Leeward Islands, the Cuban coast and eventually making a northerly turn toward Florida on Sunday, September 10th. Hurricane Irma had maximum sustained winds of 185 mph, which it maintained for over 35 hours, making it one of the strongest storms on record in the Atlantic Basin as well as the longest lived storm of that intensity anywhere in the satellite era. Irma's first US landfall occurred at Cudjoe Key in the Florida Keys on Sunday morning, then at 3:35PM made its second landfall over Marco Island, FL as a Category 2 (110mph) storm. The first storm of this intensity to make landfall in Florida since 2004. Irma's unique track northward across central Florida resulted in broad tropical to hurricane strength winds, with peak gusts 80 to 85 mph in Hardee, Highlands and Polk Counties where the eye tracked. Tropical storm force gusts where also broadly observed along the I-4 corridor with peak gusts 60-70 mph in St Petersburg, Tampa, and Orlando, as well as surrounding areas. Highest rainfall amounts 10-15" were observed in central and eastern Florida.

Impact:

Wind

The strongest, hurricane-strength winds were observed in Hardee, Highlands and Polk Counties, with peak gust of 86 mph officially registered at Sebring Regional Airport and 80-85 mph near Bartow, FL. Gusts 70-80 mph were also observed in Osceola and Orange Counties. Tropical storm force conditions were observed elsewhere generally along the I-4 corridor at inland locations, with weaker winds northward.

- Sebring – 50-60 mph sustained winds, 86 mph peak gust
- Orlando International – 45-55 mph sustained winds, 79 mph peak gust
- North Central Zones – 35-45 mph sustained winds, 60-75 mph gusts
- St Petersburg/Clearwater International – 35-45 mph sustained winds, 74 mph peak gust
- Panhandle/North Coastal – 25-35 mph sustained winds, 45-55 mph gusts



Rainfall

The highest totals generally ranged 10-15" in the North and South Central zones.
High rainfall led to major river flooding and record crests in some areas, including the Anclote River.

- Eastern Orlando – ~13.79"
- Oviedo – ~12.14"
- Deland/Apopka - ~11.50"

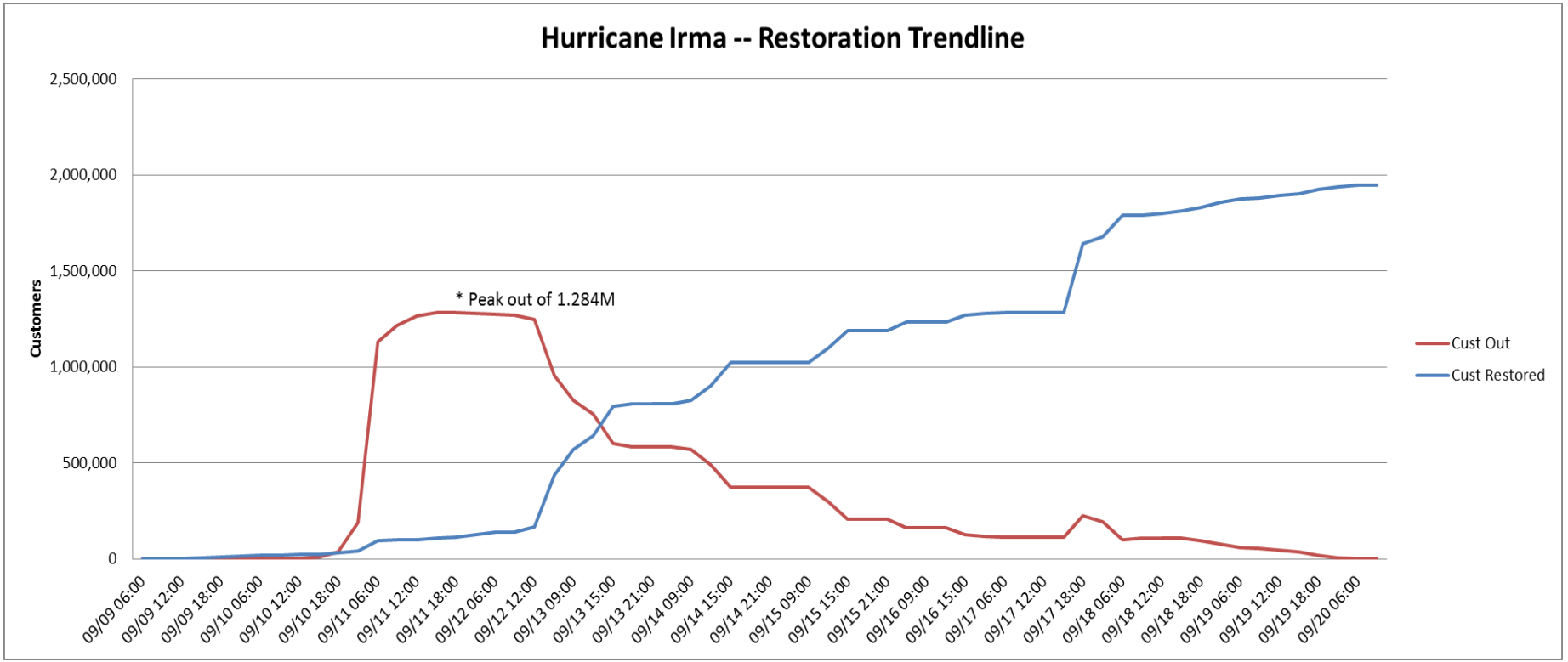
Storm Surge

- Irma's track over central Florida was favorable for lesser impacts along the Gulf Coast. The Gulf Coast saw gulf and bay waters recede upwards of 10 feet after as a result of days of persistent north-northeast winds. As Irma passed to the north and winds became southerly, waters returned rapidly and peaked at 3-5 feet. Storm surge ranged 3-6 feet along the Atlantic coast, including a record-breaking 5.57 feet in downtown Jacksonville and high tide peaked near 8 feet in Naples.

Restoration Performance - Communications

- Emails sent to residential and commercial customers prior to the storm educating customers on preparedness
- Duke Energy provided communications to approximately 1,400 medical essential customers
- Duke Energy completed outbound call campaigns to customers in Florida, reaching 5.7M customers
  - JIC and FL Corp Communication teams were activated and coordinated external communications
  - Customers were kept informed:
    - 18.6M views of social media content (120 original posts)
    - 2.2M residential customer communication emails sent
    - 110,000 LAM and SMB customer communication emails sent
  - Conducted interviews with TV and Radio stations providing storm updates, preparations and restoration updates
  - Produced 3 real-time segments and promoted via Social Media
  - Captured photos and videos of resources performing restoration in the field
  - Duke Energy Florida distributed 13 news releases in both English and Spanish
- Staffing plans were developed to support State and County EOCs
- County and State EOC representatives coordinated emergent and priority issues with the local operations centers
- Duke Energy Florida State President, Harry Sideris participated in daily round table calls with the Gov Scott and the other IOU's
- Duke Energy thanked our workers and customers through 18 publications, 2 social media posts, 735,000 thank you emails to our customers

Restoration Performance - Timeline



Outage data provided to the State EOC

Key Metrics

	North Central	North Coastal	South Central	South Coastal
% Peak Customers Out	77.6%	72.2%	61.2%	78.0%
Peak Customers Out	309,942	148,557	294,977	531,340

Florida Total	
Total Outage Events	35,196
Total Customers Restored	1,738,030

	Line	Veg	DA	Total
Resources Per Outage Event	0.236	0.052	0.033	.322
Resources Per Customer	0.006	0.001	0.001	0.008

Revised Forensic Process

- 656 Distribution Poles Assessed
- 29 Storm Hardening Projects
- 50 Automated Devices

Distribution Asset Performance (Material Charged to the Storm)			
	Storm Damage	Population (System)	% Damaged (System)
Wood Poles	1,841	802,113	.020%
Primary / Secondary	940,634	498,656,400	.188%
Transformer	1,106	348,338	.317%

Wood Pole Forensics

- Site investigation performed on 526 broken poles (29% of poles issued by Stores)
- Falling trees/limbs contributed to 72%
- 23% failed near top of pole
- 37% failed near bottom of pole
- 60% of broke poles were less than 40 years old


DUKE
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ATTACHMENT O

Matthew R. Bernier
Associate General Counsel

March 1, 2018

VIA ELECTRONIC MAIL

Ms. Carlotta Stauffer, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: *2017 Annual Wood Pole Inspection Report; Undocketed*

Dear Ms. Stauffer;

Pursuant to Order Numbers PSC-06-0144-PAA-EI and PSC-07-0918-PAA-PU, please find enclosed Duke Energy Florida, LLC's ("DEF") Annual Wood Pole Inspection Report for CY 2017. This information is also contained in DEF's 2017 Annual Service Reliability Report dated March 1, 2018.

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
Enclosure

cc: Penelope Buys, FPSC Division of Engineering

106 East College Avenue, Suite 800 ▪ Tallahassee, Florida 32301
Phone: 850.521.1428 ▪ Fax: 727.820.5041 ▪ Email: matthew.bernier@duke-energy.com

Duke Energy Florida (Distribution)
Annual Wood Pole Inspection Report
(Reporting Year 2017)

a	b	c	d	e	f	g	h	i	j	k	l	m
Total # of Wooden Poles in the Company Inventory	# of Pole Inspections Planned this Annual Inspection	# of Poles Inspected this Annual Inspection	# of Poles Failing Inspection this Annual Inspection	Pole Failure Rate (%) this Annual Inspection	# of Poles Designated for Replacement this Annual Inspection	Total # of Poles Replaced this Annual Inspection	# of Poles Requiring Minor Follow-up this Annual Inspection	# of Poles Overloaded this Annual Inspection	Method(s) V = Visual E = Excavation P= Prod S = Sound B= Bore	# of Pole Inspections Planned for Next Annual Inspection Cycle	Total # of Poles Inspected (Cumulative) in the 8-Year Cycle To Date	% of Poles Inspected (Cumulative) in the 8-Year Cycle To Date
795,260	100,000	100,038	1,727	1.72%	1,727	2,654	5,238	N/A	V, E, S, B, P	100,000	395,296	49.7%
If b - c > 0, provide explanation	N/A											
If d - g > 0, provide explanation	Poles are prioritized for replacement with the worst priority poles replaced first. In addition, where possible poles are re-enforced to restore the pole to better than original strength.											
Description of selection criteria for inspections	Poles for inspection in 2017 were chosen based on geographic location to continue cycle 2.											

- Poles noted in column d are for ground line rejects only. Additional poles are replaced based on pole top issues, but are not included in this number.
- Failure rate in column e is for ground line rejects only.

Duke Energy Florida (Transmission)
Annual Wood Pole Inspection Report
(Reporting Year 2017)

a	b	c	d	e	f	g	h	i	j	k	l	m
Total # of Wooden Poles in the Company Inventory	# of Pole Inspections Planned this Annual Inspection	# of Poles Inspected this Annual Inspection	# of Poles Failing Inspection this Annual Inspection	Pole Failure Rate (%) this Annual Inspection	# of Poles Designated for Replacement this Annual Inspection	Total # of Poles Replaced this annual Inspection	# of Poles Requiring Minor Follow-up this Annual Inspection	# of Poles Overloaded this Annual Inspection	Methods(s) V=Visual E=Excavation P= Prod S=Sound B=Bore R=Resistograph	# of Poles Inspections Planned for Next Annual Inspection Cycle	Total # of Poles Inspected (cumulative in the 8-Year Cycle to Date	% of Poles Inspected (Cumulative) in the 8-Year Cycle to Date
21,285 Wood Poles	7,500	12,699	2,969	23.38%	685	530	3,904	0	V= 10,766 S&B= 1,933 Total= 12,699	7,500	~~Inspected 07 = 12,287~~ ~~Inspected 08 = 10,520~~ ~~Inspected 09 = 4,585~~ Inspected 10 = 5,375 Inspected 11=11,687 Inspected 12=13,914 Inspected 13=14,999 Inspected 14=4,891 Inspected 15=5,856 Inspected 16 = 15,761 Inspected 17 = 12,699 Total = 85,182	100.00%
If b - c > 0, Provide Explaination												
If d - g > 0, provide explanation	Inspections were completed through the end of the year. Some poles found to be defective in 2016 were replaced in 2016 while others were prioritized and worked into schedule for 2017. Defective poles found in late 2017 will be prioritized and worked into schedule for 2018. Not all poles that “failed inspection” were in need of immediate replacement and poles are prioritized for replacement based on the individual pole's characterisitics.											
Description of Selection Criteria for Inspections	DEF Transmission Inspects transmission lines with wood poles on a 3 year cycle. DEF also inspects Transmission lines with Steel or Concrete Poles and Lattice Towers on a 5 year cycle. Inspection criteria is included in Attachment K, GDLP-MNT-TRM-000010 and Attachment M,TECP-MIM-TRM-00026 contained in DEF's Annual Service Reliablity Report											

Attachment B

Duke Energy Florida
CCA Pole Sampling Results (Less than 16 Years of Age)
(Reporting Year 2017)

a	b	c	d	e	f	g	h	i	j	k	l	m
Total # of CCA Poles Less than 16 Years of Age in the Company Inventory	Total # of Pole Inspections Planned this Annual Inspection	# of CCA Poles Less than 16 years of age Inspected this Annual Inspection	# of CCA Poles Less than 16 years of age sampled this Annual Inspection	# of CCA Poles Less than 16 Years of Age Failing Inspection this Annual Inspection	CCA Poles Less than 16 Years of Age Failure Rate (%) this Annual Inspection	# of CCA Poles Less than 16 Years of Age Designated for Replacement this Annual Inspection	Total # of Poles Replaced this Annual Inspection	# of CCA Poles Less than 16 Years of Age Requiring Minor Follow-up this Annual Inspection	# of Poles Overloaded this Annual Inspection	Method(s) V = Visual E = Excavation P= Prod S = Sound B= Bore	# of Pole Inspections Planned for Next Annual Inspection Cycle	Total # of Poles Inspected (Cumulative) in the 8-Year Cycle To Date
62,667	100,000	18,824	381	7	0.03%	4	N/A	429	N/A	V, E, S, B, P	N/A	N/A
If b - c > 0, provide explanation		N/A										
If d - g > 0, provide explanation		N/A										
Description of selection criteria for inspections		CCA poles to experience full inspection are randomly selected to represent a quantity of 1% or more of the total CCA poles less than 16 years of age in the inspection zone.										

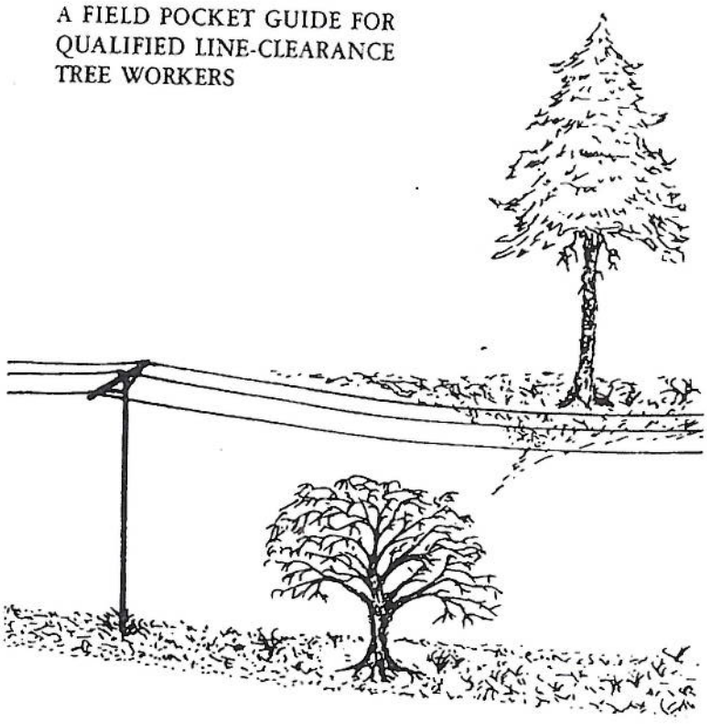
ATTACHMENT P
on CD

ATTACHMENT Q
on CD

ATTACHMENT R

PRUNING TREES
NEAR ELECTRIC UTILITY LINES

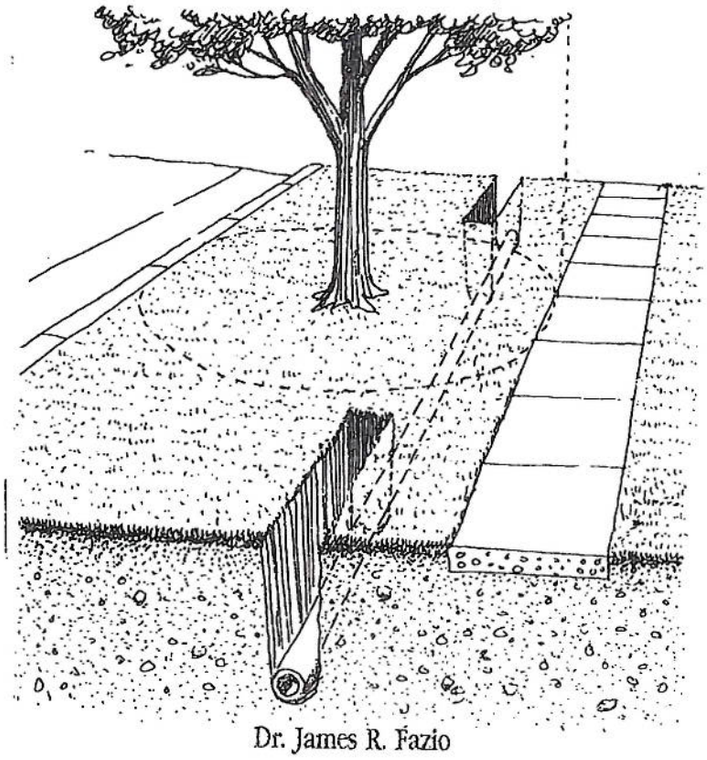
A FIELD POCKET GUIDE FOR
QUALIFIED LINE-CLEARANCE
TREE WORKERS



DR. ALEX L. SHIGO

Trenching & Tunneling Near Trees

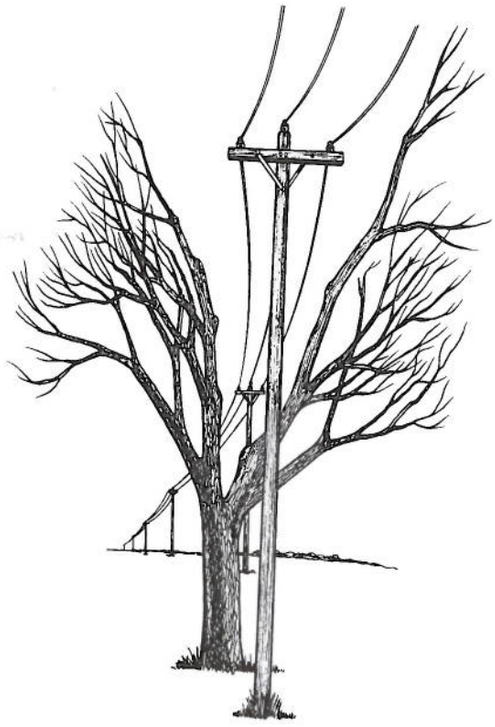
A Field Pocket Guide For Qualified Utility Workers



Dr. James R. Fazio

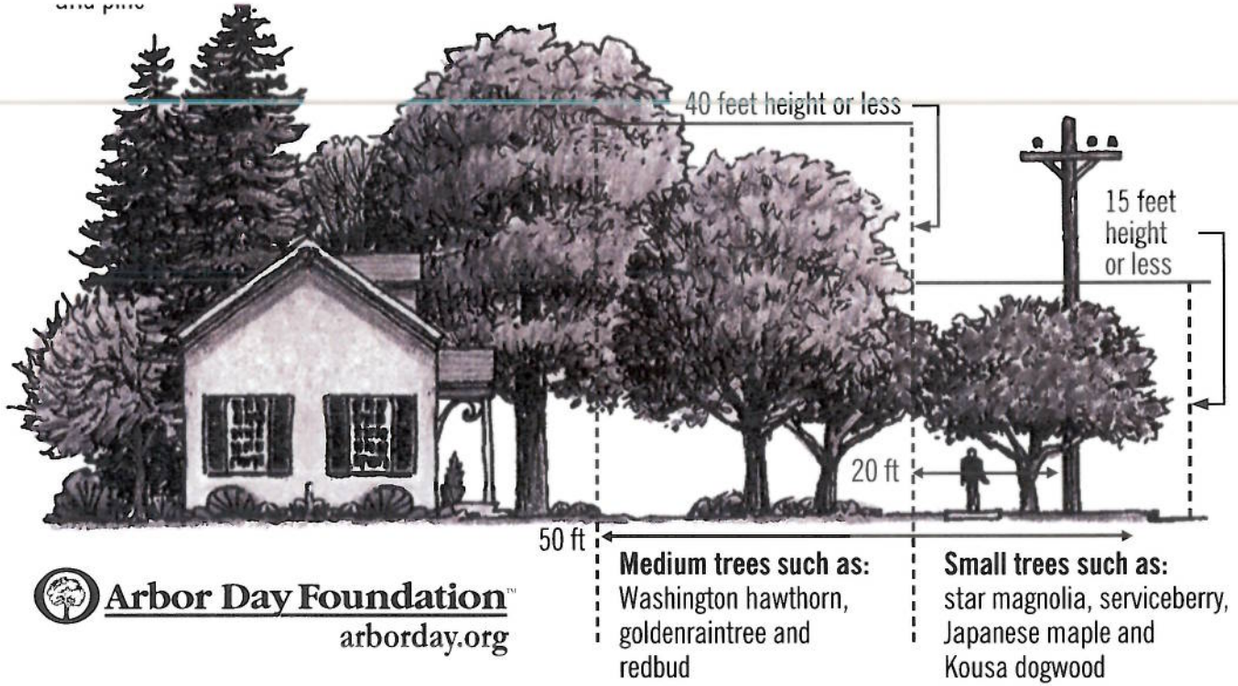
Utility Pruning of Trees

Best Management Practices



UTILITY ARBORIST ASSOCIATION

CAUTION: Do not attempt to prune or remove trees in contact or near electric lines unless OSHA line clearance certified. Contact your local electric utility before pruning near overhead electric wires.



Arbor Day Foundation™
arborday.org

Selecting a Tree

Proper spacing is important to the growth and health of trees. A good rule of thumb is trees should be planted no closer together than the height they will become at maturity. The following trees thrive in the Carolinas:

Small Trees (trees that can be easily maintained below 15 feet):

- crepe myrtles (certain varieties)
- flowering crabapples (certain varieties)
- Kousa dogwood
- Japanese maple
- fringetree
- common smoketree
- amur maple
- dwarf amur maple
- dwarf red buckeye
- star magnolia
- serviceberry

Medium Trees (grow 15 to 40 feet and should be planted 20 to 50 feet from power lines):

- Yoshino flowering cherry
- aristocrat callery pear
- trident maple
- little leaf linden
- American hornbeam
- Washington hawthorn
- flowering dogwood
- wax myrtle
- saucer magnolia
- redbud

Large Trees (grow over 40 feet and should be planted at least 50 feet from power lines):

- willow oak
- white oak
- red maple
- ginko
- red oak
- sugar maple
- southern magnolia

Call Before You Dig

When digging in your yard, be careful where you dig. If you have underground electrical service, you could hit an underground power line and be seriously or fatally injured.

Always call an underground line locating service before you dig. There is no charge for the service, and the call is toll-free.

- **North Carolina:** Call the N.C. One Call Center at 800-632-4949. Please call at least 48 hours prior to digging.
- **South Carolina:** Call the Palmetto Utility Protection Service (PUPS) at 888-721-7877. Please give PUPS at least 72 hours notice.

Each of these services will mark any underground lines on your property.

Stock Code 465104 (05/13)

DUKE ENERGY®

The Kindest Cut of All

TREE MAINTENANCE PROGRAM FOR DISTRIBUTION POWER LINES

Delivering Power to Millions Daily

Duke Energy provides safe, reliable electricity by maintaining high standards for the power lines serving your home or business. These standards include constantly inspecting and clearing electrical lines through a scheduled tree pruning and right-of-way management program. Each day, we deliver safe, dependable electricity to more than 2 million Carolinians. We contract professional tree crews to provide healthy pruning for the trees along more than 50,000 miles of overhead power lines.

To help ensure uninterrupted service, trees already growing close to power lines must be pruned or taken down. When trees grow near or into overhead power lines, they become a source of danger. The high winds of a sudden summer thunderstorm or a winter ice storm can send limbs crashing to the ground, bringing power lines with them. And even mild breezes can cause limbs to brush power lines and possibly disrupt electric service to an entire neighborhood. Trees planted outside the right of way often require little or no pruning. Typical distribution power line rights-of-way are 30 to 50 feet in width.

Duke Energy's pruning techniques were developed by national experts in tree care and tree health maintenance. These techniques are in accordance with the guidelines outlined in the American National Standards Institute (ANSI) A300 Pruning Standards document.

Duke Energy's Pruning Philosophy

Trees and plants with shorter heights at maturity can be planted under neighborhood power lines and may never need pruning. However, tall or spreading trees, when planted under or near power lines, inevitably will require pruning or taking down.

It is a matter of safety and reliability. When our professional tree crews prune trees near power lines, they follow these guidelines:

- Use a combination of natural and directional pruning to minimize potential damage to trees.
- Prune enough to ensure reliable electric service to the customer for several years.
- Make an effort to contact customers prior to taking down a neighborhood tree, except during emergencies.
- Cut the wood and leave it on the customer's property.

By using these guidelines, tree crews are able to make decisions about pruning a particular tree based on its:

- natural shape
- average annual growth rate
- approximate height at maturity.

These factors help determine the most suitable pruning required to achieve proper line clearance and the accelerated rate of re-growth caused by pruning.

Making a Healthy Cut

Natural pruning refers to the removal of limbs from the trunk or parent limb without damaging the trunk or leaving a protruding stub. Most pruning jobs incorporate one or more of these three types: height reduction pruning, side pruning or directional pruning.

Whenever a tree's height is reduced, the upper crown of the tree is cut back to provide proper clearance. Height reduction is most often required when a tree is growing directly under a power line. Sometimes a crown is reduced through a technique known as a "v-cut." Regardless of the type of pruning, the objective of the pruning crews is to leave as much foliage and limbs on the tree while obtaining the proper, safe and reliable clearances.

Side pruning involves removing side limbs near power lines. Limbs overhanging power lines also are removed. A tree limb properly pruned will form a "doughnut" at the point of the cut about a year after the pruning. A "doughnut" is a callus formation of wood that develops around proper tree cuts and will eventually grow over the entire surface where the limb was removed.

Directional pruning means cutting to lateral limbs that are growing away from power lines.

If you have questions about your trees or Duke Energy's Tree Maintenance Program, call our 24-hour Customer Contact Center at 800-777-9898 where our representatives are available to assist you, or visit our Web site at *www.duke-energy.com.*

Compatible planting of crepe myrtles beneath the power lines

Plan Before You Plant

Customers need to plan carefully when planting near power lines. Homeowners should avoid planting a row of trees that will mature to a large size along a property line. Property lines also are frequently the area where power lines are placed, which means years later when the trees mature, they have to be pruned to ensure safe, reliable electric service. Planning ahead of time is important:

- A common species that many landscaping experts recommend for screening is wax myrtles because they do not grow tall enough to interfere with power lines and make a good choice for landscaping near power lines.
- Tall-growing trees should be planted at least 40 feet from power lines.
- Choose shrubs or low-growing trees if you plant in the vicinity of a power line.
- If you're uncertain about how large a tree will be at maturity, consult a landscaping expert.

RIGHT TREE / RIGHT PLACE

SELECTING & PLANTING

Trees for the Central Florida URBAN FOREST

Florida Urban Forestry Council

Document title:	Document number:
Duke Energy Florida (DEF) Distribution Technical Specifications	MNT-DEOX-00002
	Revision No.: 0
Keywords: Distribution; vegetation maintenance; vegetation management; contract	Applies to: Distribution Vegetation Management – Duke Energy Florida

Duke Energy Florida (DEF) Distribution Technical Specifications

Applicable to all Vegetation Management Activity, Including Time and Equipment and Planned Vegetation Maintenance

2015 to 2017

Duke Energy Vegetation Management Services

Rev: 07-30-14

Suppliers who participate in this Duke Energy RFP Event must keep all information provided by Duke Energy confidential in accordance with signed 2009 Mutual Confidentiality Agreement. All information provided by Duke Energy, whether written, oral, observed, or in electronic form, should be considered confidential. This includes all bidding information submitted and witnessed in the online marketplace.

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Table of Contents

1 Definitions

Note: This is a comprehensive list of definitions for all areas. Some definitions may not apply to all areas.

Area: The Duke Energy Vegetation Management Specialist area of responsibility.

Base Location or Designated Starting Point: Location where Contractor production equipment is assembled as a complete work unit at a designated starting point as mutually agreed with the Owner.

Brush: A perennial woody stem that is less than or equal to 6 in, in diameter, measured at breast height (DBH).

Circuit Miles (for reference and reporting purposes): The distance, in miles, of primary voltage electric lines from the substation to the end of the circuit, including single phase, two-phase and three-phase configurations. The distance is measured to the nearest one-tenth of a mile.

Circuit Miles (for scope of work purposes): All lines miles of the circuit, including primary, secondary and service conductors that may or may not be shown on the circuit maps. Conductors that are represented as secondary or service wires are not considered additional miles.

Close Overhang: Overhang that is within the 10 ft space above the primary conductors and extends at least 5 ft past the vertical plane formed by the primary conductor on single-phase lines and the outside primary conductors on three-phase lines.

Customer: A person, household, business or other entity that receives electric service from the Owner. Customers may or may not also be property owners.

Danger Tree: Any tree inside or outside of the right-of-way that is tall enough to strike electrical lines or distribution system equipment.

DBH: Abbreviation for diameter at breast height; tree diameter measured outside bark, typically at 4.5 ft.

Duke Energy Carolinas: The Duke Energy operating company in North Carolina and South Carolina known as Duke Energy Carolinas (abbreviated as DEC). Duke Energy Carolinas is sometimes referred to as Carolinas West.

Duke Energy Florida: The Duke Energy operating company in Florida (abbreviated as DEF).

Duke Energy Mid-West: The Duke Energy operating companies in Indiana, Ohio and Kentucky, collectively referred to as DEM.

Duke Energy Progress: The Duke Energy operating company in North Carolina and South Carolina known as Duke Energy Progress (abbreviated as DEP). Duke Energy Progress is sometimes referred to as Carolinas East.

Hazard tree: A tree that is dead, structurally unsound, dying, diseased, leaning or damaged, whether on or off the right-of-way, and that could strike electrical lines or distribution system equipment if it falls or is cut.

Hinge Point: The point at which a hinged limb could break and fall clear of the conductor.

Maintained Area: An area where cut brush cannot be left on-site. Maintained areas are considered improved areas. Examples of maintained areas include but are not limited to yards, landscaped areas, pastures, agricultural crops, fields and nurseries.

Multi-Stem Tree: A tree that has multiple trunks that are supported by a common root system. All stems of a multi-stem tree make up one tree for billing and record keeping purposes.

Non-Maintained Area: Any area where cut brush can be left on-site. Non-maintained areas are considered unimproved areas. Examples of non-maintained areas include but are not limited to rural areas, wood lots and natural areas.

Open Wire Secondary (OWS): A distribution line configuration that uses three or four uninsulated conductors stacked vertically with 12-in. spacing between conductors and that is used to deliver secondary voltages ranging from 120 to 600V to customers.

Owner: Representative of Duke Energy. The Owner should be, but is not limited to, the Vegetation Management Specialists, Division Vegetation Management Specialists or Contract Representative.

Overbuild: A type of electric power line construction; refers specifically to conductors and equipment that are built over primary distribution lines (usually transmission voltage power lines).

Primary Conductor: An electric conductor energized at more than 600V electricity.

Property Owner: Person or entity that retains legal ownership of land.

Reactive Work: Work that is unplanned or any work that is not considered planned maintenance work. Examples of reactive work include (but are not limited to) emergency work and work that results from ground and aerial patrols and property owner requests.

Region: Duke Energy Carolinas, Duke Energy Florida, Duke Energy Progress and Duke Energy Midwest.

ROW: Abbreviation for right-of-way.

Secondary Conductor: An electric conductor energized at 600V electricity or less.

Service Triplex or Multiplex Line: Electric conductors energized at 600V electricity or less and that terminate at a service delivery point. Triplex and multiplex lines are bundles of three or four conductors that are commonly used to provide aerial service to homes and businesses and have three or four polyethylene-coated conductors wrapped around a bare, aluminum conductor.

Sharpened Stub: The remaining portion of a tree left in place after being topped with a mechanical trimmer.

Single-Phase Primary: A type of electric power line construction that contains one conductor energized at primary voltage.

Span: A unit of primary conductor line between two poles.

Three-Phase Primary: A type of electric power line construction that contains three conductors energized at primary voltage.

Tree: A perennial woody stem that is more than 6 in. in diameter, measured at breast height (DBH).

Two-Phase or Open Wye: A type of electric power line construction that contains two conductors energized at primary voltage.

Unit-Mile: A mile within a circuit that must be or has been trimmed according to Contract specifications.

Work Plan (Annual Work Plan): Work that is identified to be performed during a particular year.

2 DEF Maintenance Specifications

2.1 General

2.1.1 All work must be performed in conformance to requirements of the Owner, the Occupational Safety and Health Administration (OSHA) and the American National Standards Institute (ANSI) A300 and Z133, as well as other federal, state, county and local ordinances that may apply.

2.2 Annual Work Plan

2.2.1 Work identified to be managed for the year may be selected based on circuits using a cycle-based approach in conjunction with a reliability-based prioritization model. Actual circuits to be worked shall be provided to the Contractor by the Owner.

2.3 Reactive, Revenue and Maintenance Resource Planning

2.3.1 The Contractor shall provide a qualified workforce of sufficient size and type to support all assigned tasks, including but not limited to minor storm, reactive, revenue and maintenance tree work. The Contractor shall also be responsible for managing all work associated with the work types. If there is insufficient work of a given type to support a crew, the Contractor shall work with the Owner to use crews in the most efficient manner on other work types.

2.3.2 If the Owner determines that the Contractor is in jeopardy of not meeting maintenance, reactive or revenue work plan goals, the Owner will notify the Contractor in writing and instruct the Contractor to add resources. The Owner will offer the Contractor the opportunity to address the concerns and the Contractor shall be required to provide the Owner with a written plan to address the concerns. If the Contractor does not satisfactorily address the concerns within a mutually agreed period, the Owner may offer the work to other Contractors. The Contractor shall be responsible for any additional costs or premiums the Owner incurs due to hiring another Contractor to complete the work in the timeframe necessary to meet Owner expectations.

2.4 Business Plan

2.4.1 At the beginning of each year, if requested by the Owner, the Contractor will be required to provide a business plan that includes at least the number, size and types of crews to be used to perform maintenance work for the year.

2.4.2 Maintenance work will include all necessary work on overhead primary, open wire secondary and guy wires, as well as insulated secondary, including street light circuits. The Owners expectations for clearances are defined in this document.

2.5 Contractor Work Scope Tracking

2.5.1 The Contractor shall be responsible for tracking all costs, customer/property owner notification documentation and work scope progress for maintenance, reactive, revenue, mowing, herbicide and other types of vegetation work. If requested by the Owner, Contractor management shall be required to meet with the Owner as needed to formally present this information.

2.5.2 Contractor presentation material shall include (but not be limited to) information by region and area, unless otherwise specified by the Owner. Data will include (but not be limited to) maintenance or herbicide miles in the work scope assigned, completed and

remaining; units worked; average cost per mile; percentages for revenue, reactive and maintenance work; and safety status.

3 Process Specifications

3.1 Proactive Customer Notification

3.1.1 The Contractor shall install a door hanger on the customer/property owner premise or use other Owner-approved method of notice in advance of performing any maintenance work on the customer/property owner's property. The notification process is to be carried out by the Contractor's General Foreperson or designee so that routine maintenance is not negatively affected. The Contractor shall install door hangers a minimum of 3 calendar days, but not more than 14 calendar days, prior to commencement of the work (or according to other advance notice requirements approved by the Owner). Reactive crews are exempt from leaving door hangers unless they cannot make contact with the customer/property owner prior to completing the work. In such cases, the Contractor shall leave a door hanger letting the customer/property owner know that the Owner was on site performing work. Maintenance work or other planned vegetation work shall follow Owner-approved documentation procedures. Customer notification logs shall be maintained by the Contractor as specified by Owner and shall be available at the Owner's request.

3.1.2 Removal of trees in maintained areas above 6 in. DBH shall require the Contractor to obtain customer/property owner consent before work takes place. The need for signed permissions for tree and/or brush removal(s) is at the Contractor's discretion. The Owner strongly recommends signed permissions for maintained areas.

3.2 Maintenance

3.2.1 The Contractor, with input and agreement from Owner, shall determine the number, type and composition of maintenance crews. A workforce sufficient to complete 100% of the assigned maintenance work plan is expected in each area. Work shall be performed so that all work scheduled for each quarter is completed in each area.

3.2.2 Circuit miles in the annual plan may be selected using a cycle-based approach in conjunction with a reliability-based prioritization model to support the Owner's annual strategic vegetation management goals. The plan may contain work information by area, circuit and the year last trimmed. The actual plan and circuits are subject to change based on factors such as but not limited to weather, availability of Contractor resources, system reliability and funding levels. After the circuits are selected and the annual maintenance work plan is developed, the Owner shall provide the work plan to the Contractor.

3.2.3 The Owner and the Contractor will jointly review (inventory) and evaluate each circuit to identify the quantity of work units (by span) needed to complete line clearing activities. This inventory should generally occur between 30 and 60 days prior to starting any work.

3.3 Reactive Work

3.3.1 The Contractor will be responsible for providing a reactive workforce suitable in size and qualifications to complete work requests within the time allotted by the Owner's work request assignment system or the work order preparer. Reactive crews may or may not actually be assigned to a specific operations center, but one reactive crew will be available for use by each center. Daily management of the reactive crews will be by the Contractor, with concurrence from the Owner. The Contractor shall be responsible for completing reactive work assigned by the Owner. Both parties will mutually agree on the timeframe for reactive work completion. Reactive work consists of internal and external customer requests, which may include but are not limited to small storms and non-scheduled emergencies.

3.3.2 Reactive work requests will be field-evaluated, approved and assigned by the Owner. If approved by the Owner, the work with instructions will be assigned to the Contractor for distribution to a reactive crew. Payment for reactive crews will be time and equipment (T&E) through the Owner's invoicing system at the contracted rates.

3.3.3 The Owner reserves the right to make changes to resource levels based on workload and other considerations. In addition, the Owner reserves the right to make changes to resource composition and/or Contractor personnel if work performance is not satisfactory.

3.4 Pruning Work Specifications

3.4.1 Primary conductors: at a minimum, primary conductors shall be cleared by the Contractor to the previously established ROW. All trees will be pruned back to the full width of the established ROW, typically 15 ft on each side of the center point of the line, or to the greatest extent possible in Florida. Unspecified ROW widths will be cleared to 30 ft (15 ft on each side of the center point of the line) unless prohibited by federal regulations, state statutes and/or local ordinances. Every effort shall be made to make cuts at or beyond the old cuts. Other exceptions may include, but are not limited to:

- The proper cut based on ANSI A300 standards is not exactly 15 ft from the center line.
- The trunk of a mature tree is established within 15 ft of the center line.
- The trees are inhabited by an endangered species, such as Indiana bats or red cockaded woodpeckers.
- The tree is a slow-growing species (section 7 Appendix).
- There is a Department of Transportation encroachment.

Overhang: Where not limited by government regulations, minimum accepted clearance above the conductor will be the height that can be reached with a 55- to 60-ft lift and a 10- to 12-ft pruner or the hinge point whichever is greater. The only exception is that in some urban areas, there may be large mature overhang that the Owner has allowed to remain for various reasons. If the Owner specifies that this mature overhang must be removed, obtaining the permission to remove the overhang shall be the responsibility of the Owner. Payment for such removal shall be made using T&E rates. Backlot lines that are not accessible by standard street-buckets will be cleared ground-to-sky of all dead, diseased, dying or incipient growth as part of the unit to avoid letting new overhang become established in inaccessible areas. The Owner may grant other exceptions on a case-by-case basis in areas where overhang within the hinge point has been established for years. In any case where overhang is allowed to remain, all hazardous overhang (e.g., dead, dying, diseased, structurally unsound) shall be removed.

3.4.2 The Contractor shall ensure that a column consisting of an 8-ft radius (or the greatest extent possible, if less than 8 ft) around the pole shall be cleared from the ground to the

hinge point when pruning around primary device/switch poles, including but not limited to oil switches, manual switches, air break switches, capacitor banks, regulators and fused cutouts (not including transformer poles), to ensure that switches can be operated safely.

3.4.3 The Contractor shall obtain a minimum of 6 ft clearance below the neutral conductor (or the full extent possible, if less than 6 ft clearance) using proper arboricultural techniques. If the appropriate clearance cannot be obtained using ANSI A300 standards, the Contractor should contact the Owner for approval to remove the trees with the appropriate tree removal unit. Trees shall not be topped under any circumstances.

3.4.4 All circuit work shall start at the substation and proceed to the end of the circuit, unless otherwise directed or approved by the Owner.

3.4.5 Mechanical trimming performed with a mechanical trimmer or similar equipment shall be done in a manner that does not increase the likelihood of the tree dying and creating a threat to the Owner's facilities or to the public's safety.

- Trees shall be side-trimmed according to approved standards.
- Under no circumstances should a substantial portion of the live crown be removed from species such as pine, which will likely result in the demise of the tree and require costly follow-up to address hazard tree removals in the future.
- Cuts shall not be made that top trees low to the ground, leaving sharpened stubs in place. When removing trees and cutting underbrush, make all cuts as close to the ground as practical and preferably no more than 2 in. above the ground. All cuts will be made parallel to the ground.
- Any tree that would require topping, such as a leaning pine, should be left such that it cannot strike the line if it falls.

3.4.6 Open wire secondary shall be pruned back from the established ROW to a distance of 20 ft (10 ft on either side of the center line). The floor shall be maintained to the full width of the ROW.

3.4.7 Multiplex cables and guy wires shall be pruned if limbs are in direct contact and are load bearing on the conductors. Load bearing refers to limbs that are in contact with conductors and have a size and weight that causes tension on the conductor or interference with the normal sag or alignment of the conductor. The Contractor shall exercise prudent judgment and special consideration during winter months, when the weights of leaves may be off of the limbs. This work shall be considered part of the span unit.

3.5 Debris

3.5.1 In areas with customer/property owner impact (e.g., landscaped areas, maintained areas, urban areas, high-use areas) brush and debris shall be chipped, captured and removed from site. No brush is to be left overnight in maintained areas without the consent of the customer/property owner or their agent. Debris shall be removed daily by the Contractor as required by local ordinances or as instructed by the Owner. Our policy is for the Contractor to cut the wood into manageable pieces (18-24 in.) and leave on site. In certain circumstances, at the Owner's direction, wood that cannot be chipped may be removed from site in areas where community requirements or past operational practices exist. Lawn areas and hardscapes (e.g., patios, sidewalks, driveways) shall be cleaned up and returned to their condition prior to work at the time of entry on the property.

3.5.2 In non-maintained areas, every effort shall be made to hash down the debris in a timely manner so is it not readily visible to the public and does not create complaints. Typically,

the mowing/hand-cutting should take place no more than 1 week after the trimming was performed. Storm debris shall not be removed or chipped from any location. The Contractor should consider public safety and the potential to cause property damage when leaving debris under any circumstances.

3.6 Underbrush

3.6.1 All brush (typically less than 6 in. DBH), limbs and other vegetation underneath the primary within the floor of the ROW should be cleared appropriately as dictated by the line's location and customer/property owner circumstances. As a general rule, all brush, understory stems and side growth shall be cleared from underneath the conductors as part of the unit when performing maintenance work. Palm and Brazilian pepper trees that are 12 ft or less in height will be removed as part of the span or floor unit if located within the ROW. Palm trees will be measured at the palm head and not the frond when determining their heights.

3.7 Vines

3.7.1 All vines growing on the Owner's facilities (poles, conductors, guys) shall be cut and treated with approved herbicides as they are encountered during maintenance work by the Contractor. For safety purposes, vines that are cut shall have a noticeable section (12 in.) of vine removed so they can be clearly identified as cut vines. Vines that are missed while performing maintenance work shall be the responsibility of the Contractor as rework at no additional expense to Owner. This work shall be considered part of the span unit.

3.8 Underneath the Primary

- Brush, limbs and other vegetation shall be cleared as appropriately dictated by line location and customer/property owner circumstances. As a general rule, all vegetation 6 in. DBH or less, understory stems and side growth shall be cleared from underneath the conductors as part of the unit during maintenance work. The widths of the ROWs in Florida may vary for many reasons. Therefore, the amount of brush removed will be dictated by the width of the aerial corridor being maintained (i.e., tree line to tree line). Customer/property owner consent shall be required for all removals of trees greater than 6 in. DBH in maintained areas.

Exceptions include the following:

- Low-growing species may be left. Species are considered low-growing when they mature at typically less than 15 ft. (for example wax myrtles)
- Shelf limbs may be left where necessary on front-lot construction.
- For shelf limbs on the switch side of the primary device/switch poles, including but not limited to oil switches, manual switches, air break switches, capacitor banks, regulators or fused cutouts, the Contractor shall ensure that a column consisting of a radius of 8 ft (or the greatest extent possible, if less than 8 ft) around the pole shall be cleared from the ground to the hinge point to allow safe operation of the device.

3.9 Removals

3.9.1 Maintenance inside ROW (O&M expense):

- If conditions permit, the Contractor shall remove all trees within the ROW that are 6 in. DBH or less as part of the trim or brush unit price.
- Live healthy trees within the ROW that are more than 6 in. DBH shall require

approval from the Owner before being removed.

- Brazilian pepper trees that are 12 ft or less in height will be included in the routine span or floor unit. All trees that are more than 12 ft in height will be exempt from the 6 in. DBH requirement for floor work and removed with approval from the Owner using the Removal and Chip 12 in. DBH to 24 in. DBH unit.
- Palm trees will be measured at the palm head and not the frond when determining the height for removal. Palms that are 12 ft. or less in height will be included in the trim or floor unit. All trees greater than 12 ft will be exempt from the 6 in. DBH requirement for floor work and removed with approval from the Owner using the Removal and Chip 8 in. DBH to 12 in. DBH unit.
- Danger and hazard trees inside the ROW up to 12 in. DBH shall be removed as part of the trim or floor unit price.

- Hazard trees inside the ROW that are more than 12 in. DBH require approval from the Owner before being removed and shall be billed using the appropriate removal unit.

3.9.2 Maintenance outside ROW (Capital expense):

- Hazard trees up to 30 in. DBH shall be removed if they are within 45 ft of the center line and billed using the appropriate tree removal unit.
- Hazard trees greater than 30 in. DBH shall be removed on a T&E basis with Owner approval.
- Non-hazard trees outside the ROW should not be removed.
- No hazard tree removals outside the existing ROW are included in the maintenance unit.
- Maintenance circuits that have a substantial number of dead trees (such as fire kills, beetle damage, drought kills and beaver swamps) shall be considered reactive work and worked as directed by the Owner. Brazilian pepper trees that are more than 12 ft in height shall be removed using a Removal and Chip 12 in. DBH to 24 in. DBH unit.
- Palm trees typically require much less labor for removal and will be removed using a removal unit applicable for the time and equipment required for the removal. All palm trees that are more than 12 ft in height shall be removed using the Removal and Chip 8 in. DBH to 12 in. DBH unit. Palms that are 12 ft or less in height will be measured at the palm head and not the frond.

3.10 Stumps

3.10.1 Stumps shall be treated with herbicides approved by the Owner. These applications are required where future foliar treatments will not be appropriate (e.g., landscapes, beddings and fence rows). The Contractor will procure and store herbicides to be used in such areas. Treatment will be included in the appropriate removal unit or equipment and/or labor rates and shall not be billed separately.

3.10.2 When removing trees and cutting underbrush, make all cuts as close to the ground as practical and preferably no more than 2 in. above the ground. All cuts will be made parallel to the ground.

4 Quality of Work

4.1 General

4.1.1 The Contractor shall adhere to the specifications set forth in this document. All work performed by the Contractor shall be field-checked by the Contractor. The Contractor shall be expected to map the crews' completed work on the circuit map (or using a method approved by the Owner). The Contractor shall make special note of any temporary skips or refusals to document locations that require follow up prior to completion of the circuit. The Owner expects that when the Contractor reports their circuit map as complete, all segments of the represented circuit shall comply with the Owner's specifications. If the work is complete and acceptable, the Owner will approve processing of the final invoicing for the work. If the Owner identifies and documents certain trees, taps and/or other line segments that do not meet Owner's specifications during the Owner's quality assessment of the circuit, the Owner shall return deficiencies to the Contractor for correction. The Contractor may be required to correct such work quality deficiencies at no cost to the Owner. In addition, such deficiencies may result in a work stoppage under the contract and a termination for cause.

4.1.2 The Owner shall have 30 working days to inspect for conformance or rejection of the work completed after the Owner acknowledges notice by a Contractor representative that the work is ready for inspection.

4.1.3 Any work that is identified during Owner inspections as not meeting Owner specifications shall be forwarded to the Contractor for rework at the Contractor's expense. The Contractor will have 5 business days to respond to the Owner about the rework notification. The Contractor shall complete all rework within 10 business days of the Contractor's response to Owner. After the Contractor completes the rework, the Contractor shall notify the Owner of completion. The Owner shall re-inspect the work/rework. If quality is again unacceptable, the Owner reserves the right to invoice the Contractor for all labor and equipment costs for the re-inspection and any subsequent inspection costs until the work meets the Owner's specifications.

4.1.4 If line segments were skipped (regardless of segment length) or improperly maintained and it is determined that the work was in flagrant violation of the Owner's specifications, the Owner will return the map to the Contractor with no assessment details. It will be the Contractor's responsibility to revisit the area and ensure that all spans have been maintained properly.

4.1.5 If Owner and Contractor field representatives do not agree on the findings of the quality assessment, they will jointly evaluate the work in question to make a mutually agreeable determination. If a determination cannot be made, the issue shall be referred to the Owner's and Contractor's managements for resolution.

5 Maintenance Units

5.1 Line Clearing Units

Applicable for distribution circuit maintenance tree pruning and removals.

Type	Cleanup	Sides	Complexity	Unit Name	Unit of Measurement
Conventional	Chip	1-sided	Standard	C-C1S	$/Span
	Chip	1-sided	Complex	C-C1C	$/Span
	Chip	2-sided	Standard	C-C2S	$/Span
	Chip	2-sided	Complex	C-C2C	$/Span
	No-chip	1-sided	Standard	C-N1S	$/Span
	No-chip	1-sided	Complex	C-N1C	$/Span
	No-chip	2-sided	Standard	C-N2S	$/Span
	No-chip	2-sided	Complex	C-N2C	$/Span
	Single Tree Prune			C-1TP	$/Unit
Bucket	Chip	1-sided	Standard	B-C1S	$/Span
	Chip	1-sided	Complex	B-C1C	$/Span
	Chip	2-sided	Standard	B-C2S	$/Span
	Chip	2-sided	Complex	B-C2C	$/Span
	No-chip	1-sided	Standard	B-N1S	$/Span
	No-chip	1-sided	Complex	B-N1C	$/Span
	No-chip	2-sided	Standard	B-N2S	$/Span
	No-chip	2-sided	Complex	B-N2C	$/Span
	Single Tree Prune			B-1TP	$/Unit

5.2 Brush Clearing Units

Applicable for floor clearing when trimming work is not required.

Type	Cleanup	Unit Name	Unit of Measurement
Brush mowing		BH	$/Span
Hand cutting	Chip	HC	$/Span
	No-chip	HN	$/Span
Pole clearing	Chip	PC	$/Unit
	No-chip	PN	$/Unit

5.3 Tree Removals

Applicable when removals are necessary but are not included in another unit.

Type	Cleanup	Unit Name	Unit of Measurement
Removal 5-8 in. DBH	Chip	R5-8C	$/Unit
	No-chip	R5-8NC	$/Unit
Removal 8-12 in. DBH	Chip	R8-12C	$/Unit
	No-chip	R8-12NC	$/Unit
Removal 12-24 in. DBH	Chip	R12-24C	$/Unit
	No-chip	R12-24NC	$/Unit
Removal 24-30 in. DBH	Chip	R24-30C	$/Unit
	No-chip	R24-30NC	$/Unit

5.1 General

5.1.1 The unit costs shall include any and all costs required to complete the work.

5.1.2 Removal of trees 30 in. DBH or more will be paid on a T&E basis at the applicable labor and equipment rates. Removal of trees 30 in. DBH or more must be approved by the Owner.

5.2 Maintenance Unit Descriptions

5.2.1 Type

- Conventional units: spans that are not accessible by standard street buckets.
- Bucket units: spans that are accessible by standard street buckets.

5.2.2 Cleanup

- Chip units: units in which it is reasonable to assume that cleanup of debris and chipping of brush will be necessary. Typically, chip are located in urban or maintained areas with neighborhoods and landscaped settings.
- No-chip units: units in which it is reasonable to assume that cleanup of debris and limbs will **NOT** be necessary. Typically, no-chip units are located in rural or unmaintained areas.

5.2.3 Sides

- 1-sided: spans that require pruning along only one side of the ROW. Typically, 1-sided units are located along streets and highways.
- 2-sided: spans with trees that require maintenance on both sides of the ROW. Typically, 2-sided units are located in backlot and cross-country lines.

5.2.4 Complex

- Standard units: spans that are not exceptionally overgrown. Typically, in standard units, side growth has not grown to the point of breaking the vertical plane of the primary conductors, and underbrush has not grown up through the primary conductors. Overhang situations may occur, but not close overhang.

- Complex units: spans that are severely overgrown from underneath or severely overgrown from side growth. Underbrush must be grown up through the primary conductors such that it cannot be cut from the base, and the brush must have upper portions of the stem removed prior to felling. Side growth must have at least grown into lines such that the vertical plane of the primary conductor has been breached. Close overhang will qualify a span as a complex unit. A minimum of 50% of the span's length must be affected for a span to qualify as a complex unit.

5.2.5 Other

- Removals: conditions permitting, the Contractor will remove all trees within the utility ROWs according to the region-specified DBH as part of the trim or brush unit price. As indicated within the Owner's specifications, tree removals may not constitute separate units. Where specified, removals shall be included within the particular unit estimated for a given span.
- Span: a span must be at least 50 ft in length to qualify as a unit. Multiple primary poles clustered together in a 50-ft measured length or less for the sole purpose of regulators, underground cable exits and/or other overhead equipment will not constitute an additional span and will be treated as a single pole location and calculated in the previous span.
- Single tree prune: One single tree prune unit will be used per span in two situations: where only one tree within a span requires pruning and typically requires 45 minutes or less to complete the work, or for spans shorter than 50 ft that require trimming.

5.2.6 Brush Floor Clearing Units

- Brush mowing: a span of line that only requires brush to be cut (no trees to prune alongside of ROW). Brush mowing units are located in areas that would be considered appropriate for brush mowing work.
- Hand cutting: a span of line that only requires brush to be cut (no trees to prune alongside of ROW). Hand cutting units are located in areas that would be considered inappropriate for brush mowing or may be inaccessible to mechanical equipment due to geography, remoteness or terrain.
- Pole clear: a unit that provides clearing of vegetation around a pole that has no other tree pruning or floor work.

5.3 Unit Application Business Rules

5.3.1 Conditions permitting, the Contractor will remove all trees and brush within the utility ROWs according to the region-specified DBH as part of the trim or brush unit price. As indicated within the Owner's specifications, tree removals above the region-specified DBH constitute separate removal units.

5.3.2 All unit rates will include necessary work zone and/or flagging costs.

5.3.3 Spans with a tree located directly underneath the line such that V-trimming is required shall be considered a 1-sided unit.

5.3.4 Spans with a tree located directly underneath the line such that V-trimming is required and additional side pruning is required on trees that are not directly underneath the line but are limited to only one side of the ROW shall be considered a 1-sided unit.

5.3.5 A tree whose trunk resides within a given span and whose limbs encroach upon adjacent spans will not justify payment of an additional span or unit.

5.3.6 Perpendicular spans, with a tree located near poles such that limbs affect both spans will not justify payment of an additional span or unit.

5.3.7 Spans that cut diagonally across a road and that require pruning on one side of the span on one end and the other side of the span on the opposite end will be considered a 1-sided unit.

6 Reference Documents

- None identified

7 Appendix

7.1 Slow-Growing Species

A list of slow-growing species to consider when determining proper clearances but not limited to the following species:

- Ironwood (*Carpinus caroliniana*).
- Pignut Hickory (*Carya glabra*).
- Buttonbush (*Cephalanthus occidentalis*).
- Flowering Dogwood (*Cornus florida*).
- Rusty Lyonia (*Lyonia ferruginea*).
- Southern Magnolia (*Magnolia grandiflora*).
- Devilwood (*Osmanthus americana*).
- Swamp Bay (*Persea palustris*).
- Myrtle Oak (*Quercus myrtifolia*).
- Wax Myrtle (*Myrica cerifera*).
- Citrus spp. Eastern Redbud (*Cercis canadensis*).
- Yaupon Holly (*Ilex vomitoria*).
- Southern Red Cedar (*Juniperus silicicola*).
- Eastern Red Cedar (*Juniperus virginiana*).

Slow-growing species may also include any species defined as having a slow growth rate in the Institute of Food and Agricultural Sciences (IFAS) database.

ANSI®
A300 (Part 1)-2008

for Tree Care Operations — Tree, Shrub, and Other Woody Plant Management — Standard Practices *(Pruning)*

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Contents

* The term pruning type is replaced with the term pruning method. The purpose of this is to label the processes detailed in section 6 with greater accuracy.

Foreword This foreword is not part of American National Standard A300 (Part 1)-2008 *Pruning*

ANSI A300 Standards are divided into multiple parts, each focusing on a specific aspect of woody plant management (e.g. Pruning, Fertilization, etc).

These standards are used to develop written specifications for work assignments. They are not intended to be used as specifications in and of themselves. Management objectives may differ considerably and therefore must be specifically defined by the user. Specifications are then written to meet the established objectives and must include measurable criteria.

ANSI A300 standards apply to professionals who provide for or supervise the management of trees, shrubs, and other woody landscape plants. Intended users include businesses, government agencies, property owners, property managers, and utilities. The standard does not apply to agriculture, horticultural production, or silviculture, except where explicitly noted otherwise.

This standard has been developed by the Tree Care Industry Association (TCIA), an ANSI-accredited Standards Developing Organization (SDO). TCIA is secretariat of the ANSI A300 standards, and develops standards using procedures accredited by the American National Standards Institute (ANSI).

Consensus for standards writing was developed by the Accredited Standards Committee on Tree, Shrub, and Other Woody Plant Management Operations – Standard Practices, A300 (ASC A300).

Prior to 1991, various industry associations and practitioners developed their own standards and recommendations for tree care practices. Recognizing the need for a standardized, scientific approach, green industry associations, government agencies and tree care companies agreed to develop consensus for an official American National Standard.

The result – ANSI A300 standards – unify and take authoritative precedence over all previously existing tree care industry standards. ANSI requires that approved standards be developed according to accepted principles, and that they be reviewed and, if necessary, revised every five years.

TCIA was accredited as a standards developing organization with ASC A300 as the consensus body on June 28, 1991. ASC A300 meets regularly to write new, and review and revise existing ANSI A300 standards. The committee includes industry representatives with broad knowledge and technical expertise from residential and commercial tree care, utility, municipal and federal sectors, landscape and nursery industries, and other interested organizations.

Suggestions for improvement of this standard should be forwarded to: A300 Secretary, c/o Tree Care Industry Association, Inc., 136 Harvey Road - Suite B101-B110, Londonderry, NH, 03053.

ANSI A300 (Part 1)-2008 Pruning was approved as an American National Standard by ANSI on May 1, 2008. ANSI approval does not require unanimous approval by ASC A300. The ASC A300 committee contained the following members at the time of ANSI approval:

Tim Johnson, Chair
(Artistic Arborist, Inc.)

Bob Rouse, Secretary
(Tree Care Industry Association, Inc.)

(Continued)

Organizations Represented	*Name of Representative*
American Nursery and Landscape Association	Warren Quinn
	Craig J. Regelbrugge (Alt.)
American Society of Consulting Arborists	Donald Zimar
American Society of Landscape Architects	Ron Leighton
Asplundh Tree Expert Company	Geoff Kempter
	Peter Fengler (Alt.)
Bartlett Tree Expert Company	Peter Becker
	Dr. Thomas Smiley (Alt.)
Davey Tree Expert Company	Joseph Tommasi
	R.J. Laverne (Alt.)
International Society of Arboriculture	Bruce Hagen
	Sharon Lilly (Alt.)
National Park Service	Robert DeFeo
	Dr. James Sherald (Alt.)
Professional Grounds Management Society	Thomas Shaner
Professional Land Care Network	Preston Leyshon
Society of Municipal Arborists	Gordon Mann
	Andy Hillman (Alt.)
Tree Care Industry Association	Dane Buell
	James McGuire (Alt.)
USDA Forest Service	Ed Macie
	Keith Cline (Alt.)
Utility Arborist Association	Matthew Simons
	Jeffrey Smith (Alt.)

Additional organizations and individuals:

American Forests (Observer)
Mike Galvin (Observer)
Peter Gerstenberger (Observer)
Dick Jones (Observer)
Myron Laible (Observer)
Beth Palys (Observer)
Richard Rathjens (Observer)
Richard Roux (NFPA-780 Liaison)

ASC A300 mission statement:

Mission: To develop consensus performance standards based on current research and sound practice for writing specifications to manage trees, shrubs, and other woody plants.

American National Standard for Tree Care Operations –

Tree, Shrub, and Other Woody Plant Management – Standard Practices *(Pruning)*

1 ANSI A300 standards

1.1 Scope

ANSI A300 standards present performance standards for the care and management of trees, shrubs, and other woody plants.

1.2 Purpose

ANSI A300 performance standards are intended for use by federal, state, municipal and private entities including arborists, property owners, property managers, and utilities for developing written specifications.

1.3 Application

ANSI A300 performance standards shall apply to any person or entity engaged in the management of trees, shrubs, or other woody plants.

2 Part 1 – Pruning standards

2.1 Purpose

The purpose of Part 1 – *Pruning* is to provide performance standards for developing written specifications for pruning.

2.2 Reasons for pruning

The reasons for tree pruning may include, but are not limited to, reducing risk, managing tree health and structure, improving aesthetics, or achieving other specific objectives. Pruning practices for agricultural, horticultural production, or silvicultural purposes are exempt from this standard unless this standard, or a portion thereof, is expressly referenced in standards for these other related areas.

2.3 Implementation

2.3.1 Specifications for pruning should be written and administered by an arborist.

2.3.1.1 Specifications should include location of tree(s), objectives, methods (types), and extent of pruning (location, percentage, part size, etc).

2.3.2 Pruning specifications shall be adhered to.

2.4 Safety

2.4.1 Pruning shall be implemented by an arborist, familiar with the practices and hazards of pruning and the equipment used in such operations.

2.4.2 This performance standard shall not take precedence over applicable industry safe work practices.

2.4.3 Performance shall comply with applicable Federal and State Occupational Safety and Health standards, ANSI Z133.1, Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and other Federal Environmental Protection Agency (EPA) regulations, as well as state and local regulations.

3 Normative references

The following standards contain provisions, which, through reference in the text, constitute provisions of this American National Standard. All standards are subject to revision, and parties to agreements based on this American National Standard shall apply the most recent edition of the standards indicated below.

ANSI Z60.1, Nursery stock
ANSI Z133.1, Arboriculture – Safety requirements
29 CFR 1910, General industry [1)]
29 CFR 1910.268, Telecommunications [1)]
29 CFR 1910.269, Electric power generation, transmission, and distribution [1)]
29 CFR 1910.331 - 335, Electrical safety-related work practices [1)]

4 Definitions

4.1 arboriculture: The art, science, technology, and business of commercial, public, and utility tree care.

1) Available from U.S. Department of Labor, 200 Constitution Avenue, NW, Washington, DC 20210

4.2 arborist: An individual engaged in the profession of arboriculture who, through experience, education, and related training, possesses the competence to provide for or supervise the management of trees and other woody plants.

4.3 arborist trainee: An individual undergoing on-the-job training to obtain the experience and the competence required to provide for or supervise the management of trees and other woody plants. Such trainees shall be under the direct supervision of an arborist.

4.4 branch: A shoot or stem growing from a parent branch or stem (See Fig. 4.4).

4.4.1 codominant branches/codominant leaders: Branches or stems arising from a common junction, having nearly the same size diameter (See Fig. 4.4).

4.4.2 lateral branch: A shoot or stem growing from another branch (See Fig. 4.4).

4.4.3 parent branch or stem: A tree trunk or branch from which other branches or shoots grow (See Fig. 4.4).

4.4.4 scaffold branch: A primary branch that forms part of the main structure of the crown (See Fig. 4.4).

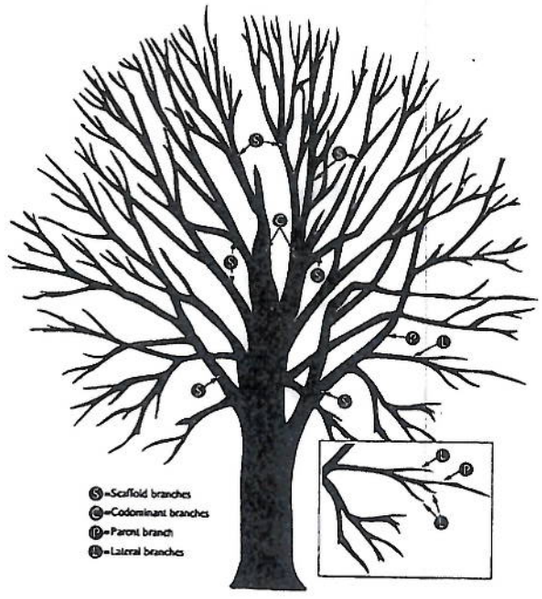


Figure 4.4 Standard branch definitions.

4.5 branch bark ridge: The raised area of bark in the branch crotch that marks where the branch and parent stem meet. (See Figs. 5.3.2 and 5.3.3).

4.6 branch collar: The swollen area at the base of a branch.

4.7 callus: Undifferentiated tissue formed by the cambium around a wound.

4.8 cambium: The dividing layer of cells that forms sapwood (xylem) to the inside and inner bark (phloem) to the outside.

4.9 clean: Selective pruning to remove one or more of the following non-beneficial parts: dead, diseased, and/or broken branches (7.2).

4.10 climbing spurs: Sharp, pointed devices strapped to a climber's lower legs used to assist in climbing trees. (syn.: gaffs, hooks, spurs, spikes, climbers)

4.11 closure: The process in a woody plant by which woundwood grows over a pruning cut or injury.

4.12 crown: Upper part of a tree, measured from the lowest branch, including all the branches and foliage.

4.13 decay: The degradation of woody tissue caused by microorganisms.

4.14 espalier: The combination of pruning, supporting, and training branches to orient a plant in one plane (6.5).

4.15 establishment: The point after planting when a tree's root system has grown sufficiently into the surrounding soil to support growth and anchor the tree.

4.16 facility: A structure or equipment used to deliver or provide protection for the delivery of an essential service, such as electricity or communications.

4.17 frond: A leaf structure of a palm.

4.18 heading: The reduction of a shoot, stem, or branch back to a bud or to a lateral branch not large enough to assume the terminal role.

4.19 interfering branches: Crossing, rubbing, or upright branches that have the potential to damage tree structure and/or health.

4.20 internode: The area between lateral branches or buds.

4.21 job briefing: The communication of at least the following subjects for arboricultural operations: work specifications, hazards associated with the job, work procedures involved, special precautions, electrical hazards, job assignments, and personal protective equipment.

4.22 leader: A dominant, typically upright, stem – usually the main trunk. There can be several leaders in one tree.

4.23 lion's tailing: The removal of an excessive number of inner and/or lower lateral branches from parent branches. Lion's tailing is not an acceptable pruning practice (6.1.7).

4.24 live crown ratio: Crown height relative to overall plant height.

4.25 mechanical pruning: A pruning technique where large-scale power equipment is used to cut back branches (9.3.2).

4.26 method: A procedure or process for achieving an objective.

4.27 peeling: The removal of dead frond bases without damaging living trunk tissue at the point they make contact with the trunk. (syn.: shaving)

4.28 petiole: A stalk of a leaf or frond.

4.29 pollarding: Pruning method in which tree branches are initially headed and then reduced on a regular basis without disturbing the callus knob (6.6).

4.30 pruning: The selective removal of plant parts to meet specific goals and objectives.

4.31 qualified line-clearance arborist: An individual who, through related training and on-the-job experience, is familiar with the equipment and hazards in line clearance and has demonstrated the ability to perform the special techniques involved. This individual may or may not be currently employed by a line-clearance contractor.

4.32 qualified line-clearance arborist trainee: An individual undergoing line-clearance training under the direct supervision of a qualified line-clearance arborist. In the course of such training, the trainee becomes familiar with the equipment and hazards in line clearance and demonstrates ability in the performance of the special techniques involved.

4.33 raise: Pruning to provide vertical clearance (7.3).

4.34 reduce: Pruning to decrease height and/or spread (7.4).

4.35 remote area: As used in the utility pruning section of this standard, an unpopulated area.

4.36 restoration: Pruning to redevelop structure, form, and appearance of topped or damaged trees (6.3).

4.37 rural area: As used in the utility pruning section of this standard, a sparsely populated place away from large cities, suburbs, or towns but distinct from remote areas.

4.38 shall: As used in this standard, denotes a mandatory requirement.

4.39 shoot: Stem or branch and its leaves, especially when young.

4.40 should: As used in this standard, denotes an advisory recommendation.

4.41 specifications: A document stating a detailed, measurable plan or proposal for provision of a product or service.

4.42 sprouts: New shoots originating from epicormic or adventitious buds, not to be confused with suckers. (syn.: watersprouts, epicormic shoots)

4.43 standard, ANSI A300: The performance parameters established by industry consensus as a rule for the measure of extent, quality, quantity, value or weight used to write specifications.

4.44 stem: A woody structure bearing buds, foliage, and giving rise to other stems.

4.45 structural pruning: Pruning to improve branch architecture (6.2).

4.46 stub: Portion of a branch or stem remaining after an internodal cut or branch breakage.

4.47 subordination: Pruning to reduce the size and ensuing growth rate of a branch or leader in relation to other branches or leaders.

4.48 sucker: Shoot arising from the roots.

4.49 thin: pruning to reduce density of live branches (7.5).

4.50 throw line: A small, lightweight line with a weighted end used to position a climber's rope in a tree.

4.51 topping: Reduction of tree size using internodal cuts without regard to tree health or structural integrity. Topping is not an acceptable pruning practice (6.1.7).

4.52 tracing: The removal of loose, damaged tissue from in and around the wound.

4.53 trunk: The main woody part of a tree beginning at and including the trunk flare and extending up into the crown from which scaffold branches grow.

4.54 trunk flare: 1. The area at the base of the plant's trunk where it broadens to form roots. 2. The area of transition between the root system and trunk (syn.: root flare).

4.55 urban/residential areas: Populated areas including public and private property that are normally associated with human activity.

4.56 utility: A public or private entity that delivers a public service, such as electricity or communications.

4.57 utility space: The physical area occupied by a utility's facilities and the additional space required to ensure its operation.

4.58 vista/view prune: Pruning to enhance a specific view without jeopardizing the health of the tree (6.4).

4.59 wound: An opening that is created when the bark of a live branch or stem is cut, penetrated, damaged, or removed.

4.60 woundwood: Partially differentiated tissue responsible for closing wounds. Woundwood develops from callus associated with wounds.

5 Pruning practices

5.1 Tree inspection

5.1.1 An arborist or arborist trainee shall visually inspect each tree before beginning work.

5.1.2 If a condition is observed requiring attention beyond the original scope of the work, the condition should be reported to an immediate supervisor, the owner, or the person responsible for authorizing the work.

5.1.3 Job briefings shall be performed as outlined in ANSI Z133.1, subclause 3.1.4.

5.2 Tools and equipment

5.2.1 Equipment, tools, and work practices that damage living tissue and bark beyond the scope of normal work practices shall be avoided.

5.2.2 Climbing spurs shall not be used when entering and climbing trees for the purpose of pruning.

Exceptions:
- when branches are more than throw-line distance apart and there is no other means of climbing the tree;
- when the outer bark is thick enough to prevent damage to the inner bark and cambium;
- in remote or rural utility rights-of-way.

5.3 Pruning cuts

5.3.1 Pruning tools used in making pruning cuts shall be sharp.

5.3.2 A pruning cut that removes a branch at its point of origin shall be made close to the trunk or parent branch without cutting into the branch bark ridge or branch collar or leaving a stub (see Figure 5.3.2).

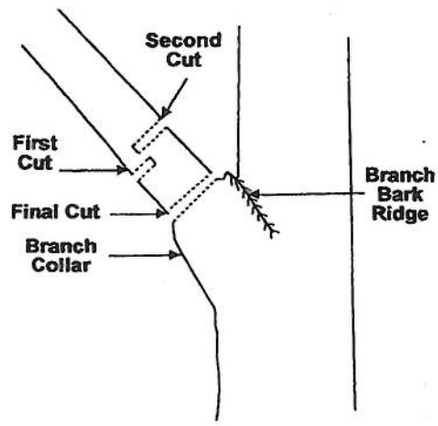


Figure 5.3.2. A cut that removes a branch at its point of origin. (See Annex A – Pruning cut guideline).

5.3.3 A pruning cut that reduces the length of a branch or parent stem shall be made at a slight downward angle relative to the remaining stem and not damage the remaining stem. Smaller cuts shall be preferred (see Fig. 5.3.3).

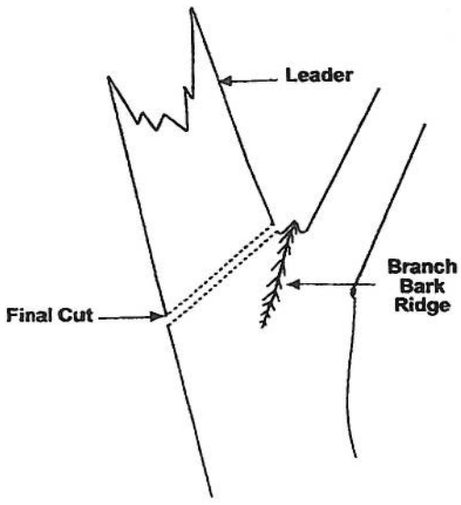


Figure 5.3.3. A cut that reduces the length of a branch or parent stem.

5.3.4 When pruning to a lateral, the remaining lateral branch should be large enough to assume the terminal role.

5.3.5 The final cut should result in a flat surface with adjacent bark firmly attached.

5.3.6 When removing a dead branch, the final cut shall be made just outside the collar of living tissue.

5.3.7 Tree branches shall be removed in such a manner so as to avoid damage to other parts of the tree or to other plants or property. Branches too large to support with one hand shall be precut to avoid splitting of the wood or tearing of the bark (see Figure 5.3.2). Where necessary, ropes or other equipment shall be used to lower large branches or portions of branches to the ground.

5.3.8 A cut that removes a branch with a narrow angle of attachment should be made from the outside of the branch to prevent damage to the parent branch (see Figure 5.3.8).

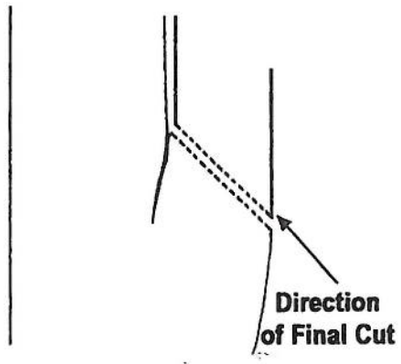


Figure 5.3.8. A cut that removes a branch with a narrow angle of attachment.

5.3.9 Severed branches shall be removed from the crown upon completion of the pruning, at times when the tree would be left unattended, or at the end of the workday.

5.4 Wound treatment

5.4.1 Wound treatments shall not be used to cover wounds or pruning cuts, except when necessary for disease, insect, mistletoe, or sprout control, or for cosmetic reasons.

5.4.2 Wound treatments that are damaging to tree tissues shall not be used.

5.4.3 When tracing wounds, only loose, damaged tissue shall be removed.

6 Pruning objectives

6.1 Pruning objectives shall be established prior to beginning any pruning operation.

6.1.1 Objectives should include, but are not limited to, one or more of the following:

- Risk reduction
- Manage health
- Clearance
- Structural improvement/correction
- View improvement/creation
- Aesthetic improvement
- Restoration

6.1.2 Established objectives should be specified in writing (See Annex B – *Specification writing guideline*).

6.1.3 To obtain the defined objective, the growth cycles, structure, species, and the extent of pruning to be performed shall be considered.

6.1.4 Not more than 25 percent of the foliage should be removed within an annual growing season. The percentage and distribution of foliage to be removed shall be adjusted according to the plant's species, age, health, and site.

6.1.5 When frequent excessive pruning is necessary for a tree to avoid conflicts with elements such as infrastructure, view, traffic, or utilities, removal or relocation of the tree shall be considered.

6.1.6 Pruning cuts should be made in accordance with section 5.3 *Pruning cuts*.

6.1.7 Topping and lion's tailing shall be considered unacceptable pruning practices for trees.

6.2 Structural: Structural pruning shall consist of selective pruning to improve tree and branch architecture primarily on young- and medium-aged trees.

6.2.1 Size and location of leaders or branches to be subordinated or removed should be specified.

6.2.2 Dominant leader(s) should be selected for development as appropriate.

6.2.3 Strong, properly spaced scaffold branch structure should be selected and maintained by reducing or removing others.

6.2.4 Temporary branches should be retained or reduced as appropriate.

6.2.5 Interfering, overextended, defective, weak, and poorly attached branches should be removed or reduced.

6.2.6 At planting, pruning should be limited to cleaning (7.2).

6.3 Restoration: Restoration shall consist of selective pruning to redevelop structure, form, and appearance of severely pruned, vandalized, or damaged trees.

6.3.1 Location in tree, size range of parts, and percentage of sprouts to be removed should be specified.

6.4 Vista/view: Vista/view pruning shall consist of the use of one or more pruning methods (types) to enhance a specific line of sight.

6.4.1 Pruning methods (types) shall be specified.

6.4.2 Size range of parts, location in tree, and percentage of foliage to be removed should be specified.

6.5 Espalier

6.5.1 Branches that extend outside the desired plane of growth shall be pruned or tied back.

6.5.2 Ties should be replaced as needed to prevent girdling the branches at the attachment site.

6.6 Pollarding

6.6.1 Consideration shall be given to the ability of the individual tree to respond to pollarding.

6.6.2 Management plans shall be made prior to the start of the pollarding process for routine removal of sprouts.

6.6.3 Heading cuts shall be made at specific locations to start the pollarding process. After the initial cuts are made, no additional heading cuts shall be made.

6.6.4 Sprouts growing from the cut ends of branches (knuckles) should be removed annually during the dormant season.

7 Pruning methods (types)

7.1 One or more of the following methods (types) shall be specified to achieve the objective.

7.2 Clean: Cleaning shall consist of pruning to remove one or more of the following non-beneficial parts: dead, diseased, and/or broken branches.

7.2.1 Location of parts to be removed shall be specified.

7.2.2 Size range of parts to be removed shall be specified.

7.3 Raise: Raising shall consist of pruning to provide vertical clearance.

7.3.1 Clearance distance shall be specified.

7.3.2 Location and size range of parts to be removed should be specified.

7.3.3 Live crown ratio should not be reduced to less than 50 percent.

7.4 Reduce: Reducing shall consist of pruning to decrease height and/or spread.

7.4.1 Consideration shall be given to the ability of a species to tolerate this type of pruning.

7.4.2 Location of parts to be removed or clearance requirements shall be specified.

7.4.3 Size of parts should be specified.

7.5 Thin: Thinning shall consist of selective pruning to reduce density of live branches.

7.5.1 Thinning should result in an even distribution of branches on individual branches and throughout the crown.

7.5.2 Not more than 25 percent of the crown should be removed within an annual growing season.

7.5.3 Location of parts to be removed shall be specified.

7.5.4 Percentage of foliage and size range of parts to be removed shall be specified.

8 Palm pruning

8.1 Palm pruning should be performed when fronds, fruit, or loose petioles may create a dangerous condition.

8.2 Live healthy fronds should not be removed.

8.3 Live, healthy fronds above horizontal shall not be removed. Exception: Palms encroaching on electric supply lines (see Fig. 8.3a and 8.3b).

Figure 8.3a Frond removal location.

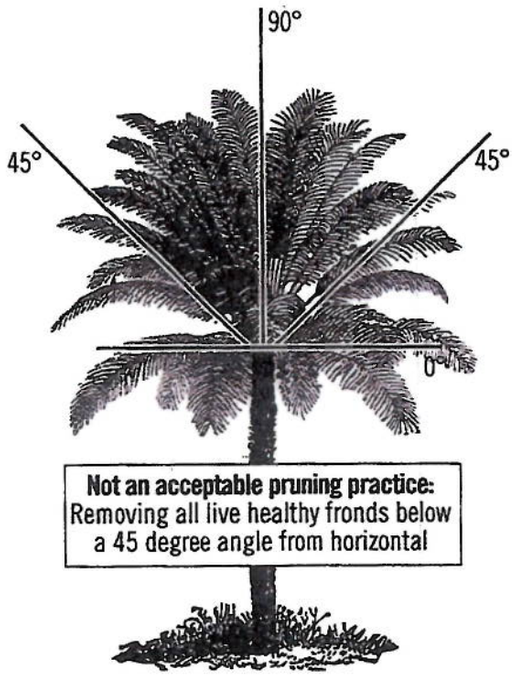


Figure 8.3b An overpruned palm (not an acceptable pruning practice).

8.4 Fronds removed should be severed close to the petiole base without damaging living trunk tissue.

8.5 Palm peeling (shaving) should consist of the removal of only the dead frond bases at the point they make contact with the trunk without damaging living trunk tissue.

9 Utility pruning

9.1 Purpose

The purpose of utility pruning is to prevent the loss of service, comply with mandated clearance laws, prevent damage to equipment, maintain access, and uphold the intended usage of the facility/utility space while adhering to accepted tree care performance standards.

9.2 General

9.2.1 Only a qualified line-clearance arborist or line-clearance arborist trainee shall be assigned to line clearance work in accordance with ANSI Z133.1, 29 CFR 1910.331 – 335, 29 CFR 1910.268 or 29 CFR 1910.269.

9.2.2 Utility pruning operations are exempt from requirements in subclause 5.1, *Tree Inspection*, for conditions outside the utility pruning scope of work.

9.2.3 Job briefings shall be performed as outlined in ANSI Z133.1, subclause 3.1.4.

9.3 Utility crown reduction pruning

9.3.1 Urban/residential areas

9.3.1.1 Pruning cuts should be made in accordance with subclause 5.3, *Pruning cuts*. The following requirements and recommendations of 9.3.1.1 are repeated from subclause 5.3 *Pruning cuts*.

9.3.1.1.1 A pruning cut that removes a branch at its point of origin shall be made close to the trunk or parent branch, without cutting into the branch bark ridge or collar, or leaving a stub (see Figure 5.3.2).

9.3.1.1.2 A pruning cut that reduces the length of a branch or parent stem shall be made at a slight downward angle relative to the remaining stem and not damage the remaining stem. Smaller cuts shall be preferred (see Fig. 5.3.3).

9.3.1.1.3 The final cut shall result in a flat surface with adjacent bark firmly attached.

9.3.1.1.4 When removing a dead branch, the final cut shall be made just outside the collar of living tissue.

9.3.1.1.5 Tree branches shall be removed in such a manner so as not to cause damage to other parts of the tree or to other plants or property. Branches too large to support with one hand shall be precut to avoid splitting of the wood or tearing of the bark (see Figure 5.3.2). Where necessary, ropes or other equipment shall be used to lower large branches or portions of branches to the ground.

9.3.1.1.6 A cut that removes a branch with a narrow angle of attachment should be made from the outside of the branch to prevent damage to the parent branch (see Figure 5.3.8).

9.3.1.2 A minimum number of pruning cuts should be made to accomplish the purpose of facility/utility pruning. The structure and growth habit of the tree should be considered.

9.3.1.3 Trees directly under and growing into facility/utility spaces should be removed or pruned. Such pruning should be done by removing entire branches or leaders or by removing branches that have laterals growing into (or once pruned, will grow into) the facility/utility space.

9.3.1.4 Trees growing next to, and into or toward, facility/utility spaces should be pruned by reducing branches to laterals (5.3.3) to direct growth away from the utility space or by removing entire branches. Branches that, when cut, will produce sprouts that would grow into facilities and/or utility space should be removed.

9.3.1.5 Branches should be cut to laterals or the parent branch and not at a pre-established clearing limit. If clearance limits are established, pruning cuts should be made at laterals or parent branches outside the specified clearance zone.

9.3.2 Rural/remote locations – mechanical pruning

Cuts should be made close to the main stem, outside of th branch bark ridge and branch collar. Precautions should be taken to avoid stripping or tearing of bark or excessive wounding.

9.4 Emergency service restoration

During a utility-declared emergency, service must be restored as quickly as possible in accordance with ANSI Z133.1, 29 CFR 1910.331 – 335, 29 CFR 1910.268, or 29 CFR 1910.269. At such times, it may be necessary, because of safety and the urgency of service restoration, to deviate from the use of proper pruning techniques as defined in this standard. Following the emergency, corrective pruning should be done as necessary.

Annex B
Specification writing guideline

A300 (Part 1)-2008 *Pruning* standards are performance standards, and shall not be used as job specifications. Job specifications should be clearly detailed and contain measurable criteria.

The words "should" and "shall" are both used when writing standards. The word "shall" is used when writing specifications.

Writing specifications can be simple or complex and can be written in a format that suits your company/the job. The specifications consist of two sections.

I. General:

This section contains all aspects of the work to be performed that needs to be documented, yet does not need to be detailed.

Saying under the General section that "all work shall be completed in compliance with A300 Standards" means the clauses covering safety, inspections, cuts, etc. will be adhered to. There is no need to write each and every clause into every job specification.

Other items that may be covered in the General section could be: work hours and dates, traffic issues, disposal criteria, etc.

The second section under Job Specifications would be:

II. Details:

This section provides the clear and measurable criteria; the deliverables to the client.

This section, to be written in compliance with A300 standards, shall contain the following information:

1. **Objective – Clause 6**
   These objectives originate from/with the tree owner or manager. The arborist shall clearly state what is going to be done to achieve the objective(s).

   Objectives can be written for the entire job or individual trees. Rarely can one or two words clearly convey an objective so that all parties involved (client, sales, crew, etc.) can visualize the outcome.

2. **Method – Clause 7**
   Here the method(s) to be used to achieve the objective are stated. Again, depending on the type of job, this can be stated for the individual tree or a group of trees.

3. **Location – Clause 7.2.1, 7.3.2, 7.4.2, 7.5.3**
   This is the location in the tree(s) that the work methods are to take place.

4. **Density – Clause 7.3.1, 7.3.3, 7.5.1, 7.5.2, 7.5.4**
   This is the amount or volume of parts that are to be removed and can be stated exactly or in ranges.

5. **Size – Clause 7.2.2, 7.3.2, 7.4.3, 7.5.4**
   This is the size or range of sizes of cut(s) utilized to remove the volume specified.

   NOTE: Items # 4 & 5 are directly related to resource allocation, staffing and dollars.

SAMPLE PRUNING SPECIFICATIONS

#1.

Scope: Large live oak on west side of pool

Objectives: Increase light penetration through east side of tree. Reduce risk potential of 1-inch-diameter branches falling.

Specifications: All broken branches and 1-inch-plus diameter dead branches shall be removed from the crown.

The three lowest 8-inch-plus diameter branches on the east side shall be thinned 25 percent with 1-inch- to 3-inch-diameter cuts.

NOTE: All work shall be completed in compliance with ANSI A300 and Z133.1 Standards.

#2. **Scope:** 1 Arizona ash

Objective: Enhance structure/structural development.

Specifications: General:

All pruning shall be completed in compliance with A300 Standards.

Detail:

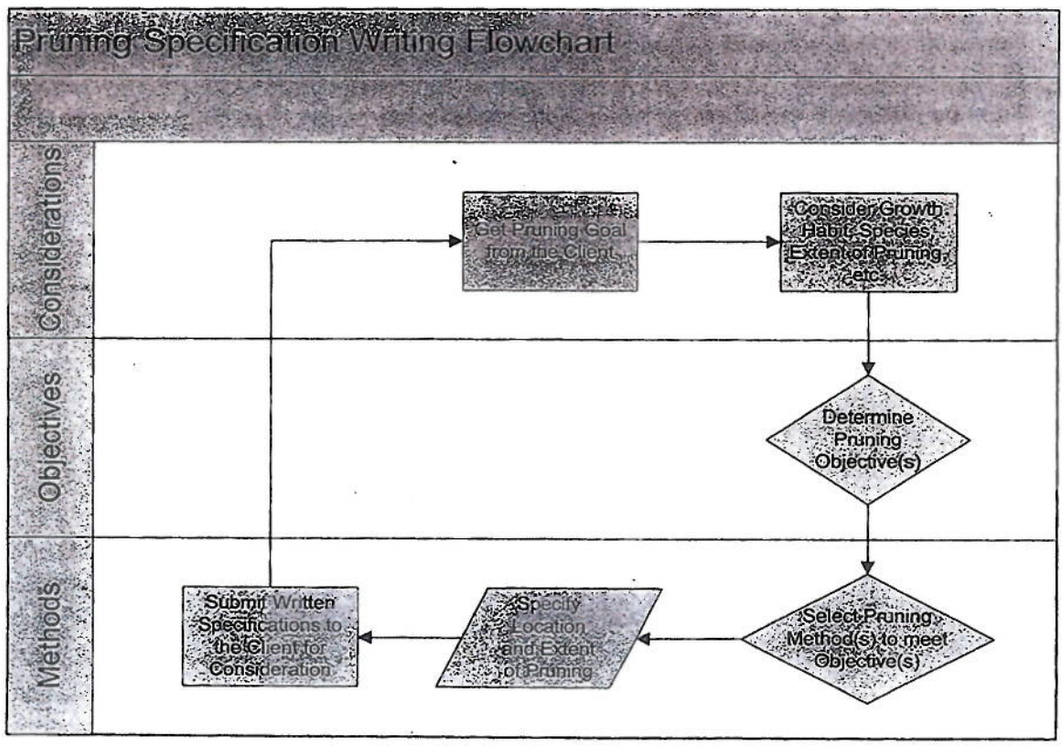
Thin crown 20-25 percent with 1-inch- to 4-inch-diameter cuts. Reduce west codominant leader by approximately 12 feet.

#3. **Scope:** Twenty-three newly installed evergreen elms

Objective: Maximize establishment – reduce nuisance while enhancing natural growth habit.

All work shall be completed in compliance with A300 Standards and the following specifications.

Specifications:
- Retain as much size as possible and 80-90 percent density of foliage.
- Lowest permanent branch will be 6 feet above grade in four to five years.
- Retain all sprout growth originating 18 inches above grade on trunk and 4 inches out from branch attachments throughout crown.
- Remove weakest rubbing branches.
- Remove dead branches.
- Reduce broken branches or branches with dead ends back to live laterals or buds. Heading cuts can be used.
- Maintain 6 inches behind adjacent edge of walks all growth that originates between 1.5 feet (18 inches) and 6 feet (72 inches) above grade. Heading cuts are acceptable.



Annex C
Applicable ANSI A300 interpretations

The following interpretations apply to Part 1 – *Pruning:*

C-1 Interpretation of "should" in ANSI A300 standards

"An advisory recommendation" is the common definition of "should" used in the standards development community and the common definition of "should" used in ANSI standards. An advisory notice is not a mandatory requirement. Advisory recommendations may not be followed when defensible reasons for non-compliance exist.

C-2 Interpretation of "shall" in ANSI A300 standards

"A mandatory requirement" is the common definition of "shall" used in the standards development community and the common definition of "shall" used in ANSI standards. A mandatory requirement is not optional and must be followed for ANSI A300 compliance.

Sorry, we missed you!

Date: _____ Time: _____

We will soon be conducting vegetation maintenance along power lines in your area. After a review of power lines on your property, we found the following:

- ❍ Trees near power lines on your property will require routine trimming.
- ❍ Certain trees on your property present a reliability risk and have been flagged for removal. Please contact us for more information.
- ❍ Power lines are clear of limbs and don't require additional maintenance at this time.
- ❍ Vegetation is interfering with access to a pad-mounted transformer and/or pole on your property and requires maintenance.
- ❍ Limbs are in cable TV and/or telephone lines and are not affecting power lines. No trimming is required.
- ❍ Since the required pruning is the result of storm damage, the brush is being left for your disposal.

If you have questions or concerns, please contact:

_____

_____

DUKE ENERGY®

Duke Energy is committed to providing our customers with safe, reliable electric service.

Maintaining trees and vegetation along our power lines helps to ensure reliability, minimize outages and enhance safety for customers, Duke Energy employees and contractors.

Duke Energy hires qualified, trained tree experts to inspect and clear electric lines on its system. Our crews use industry-approved pruning techniques endorsed by the National Arbor Day Foundation and the International Society of Arboriculture.

All debris from our regular maintenance pruning activities will be cleaned up and disposed of by Duke Energy. Disposal of vegetation resulting from storms and other emergency operations is the responsibility of the property owner.

Learn more about Duke Energy's vegetation management program at **duke-energy.com/trees.**

Pruning vs. cutting down

Each tree is different and must be considered individually. Trees with trunks close to the power lines may require much more pruning than trees located farther from the line. Additionally, not all pruning techniques are appropriate for all tree species.

When pruning, our trimming professionals make every attempt to trim for sufficient clearance until we return on our next planned maintenance.

Before deciding to remove a tree, we first evaluate its health and proximity to the lines. A tree may have a decayed portion on the trunk. The entire tree may be dead or in the process of dying, which might cause it to break or fall. It may have soil that is severely eroded away from the root system, making it more likely to fall.

Sometimes trees are required to be cut down when they are too close to power lines or when they would have to be pruned severely.

Herbicide applications

Duke Energy uses environmentally responsible herbicide applications to control tall growing incompatible plants within power line rights of way. Our objective is to maintain low growing vegetation to minimize potential electric power interruptions, which also enhances wildlife habitat.

We use professional contractors to apply herbicide by utilizing different methods including foliar, stump, stem and vine applications.

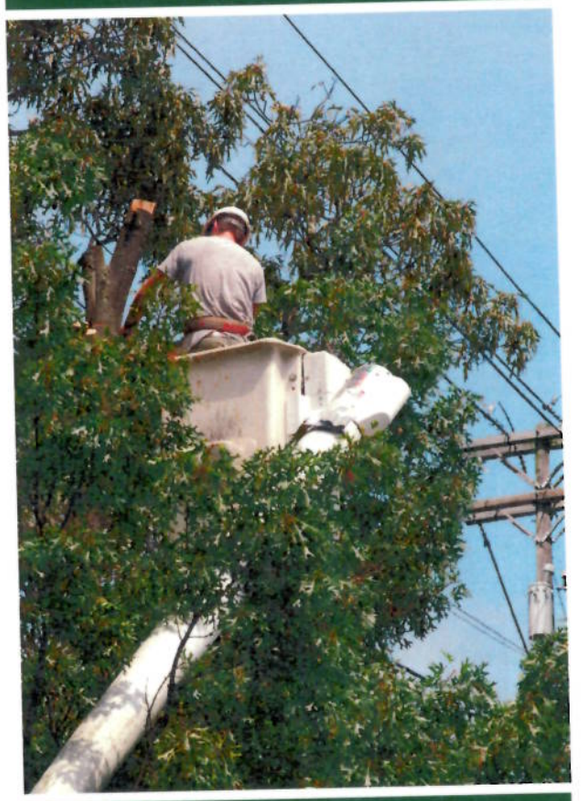
Duke Energy contractors have been trained on the proper, safe and environmentally responsible techniques of managing plant growth. All products used by Duke Energy are registered by the Environmental Protection Agency and approved by appropriate state agencies.

Debris removal

The majority of Duke Energy's pruning and cutting occurs during planned maintenance. We typically dispose of any small limbs and brush in landscaped settings. The larger pieces of wood are cut into manageable lengths for the property owner's use. In non-landscaped sites, pruned vegetation and wood debris are left in place to bio-degrade. When an "Act of God" (e.g., lightning, ice storms, high winds, hurricanes, tornadoes) causes trees or other vegetation to fall across power lines and thus create power outages, we cut the trees and brush so poles and lines can be repaired and re-energized. Disposal of any wood, limbs or debris resulting from this type of emergency operation is the property owner's responsibility.

For more information visit **duke-energy.com/safety/right-of-way-management.asp**.

Visit the Arbor Day Foundation at **arborday.org/treelineusa** for information about planning and planting vegetation around electrical facilities.



Vegetation Management

Keeping the lights on.

Our customers want reliable power – in both good weather and bad. And while the trees that thrive throughout our 104,000 square miles of service area are a source of tremendous pride, they are also one of the main causes of power outages.

Duke Energy works consistently to balance aesthetics with our goal to provide safe, reliable power to the households and businesses that depend on us. It is our responsibility to ensure power lines are free of trees and other obstructions that could disrupt electric service. Trees that are close to power lines must be trimmed or cut down to ensure they don't cause power outages, and Duke Energy does much of this work proactively.

Our crews use a variety of methods to manage vegetation growth along distribution circuits and transmission power line rights of way, including vegetation pruning, felling (cutting down) and herbicides. These methods are based on widely accepted standards developed by the tree care industry and approved by the American National Standards Institute for tree care maintenance and operations.

Examples of typical transmission and distribution structures

Transmission lines

Distribution lines

High-voltage transmission lines provide large amounts of electricity over long distances. The transmission lines in your community are part of the larger, interconnected grid system that powers an entire region, not just the community through which the lines run. Federal rules are more stringent for some transmission lines, depending on the voltage, and may include fines up to $1 million per day for tree-related outages. Duke Energy manages its grid to provide reliable operation of transmission facilities while adhering to regulations and easement rights.

Distribution rights of way

Distribution lines carry power from local substations to homes and businesses. A distribution right of way provides access to a strip of land so that utilities (electric, telephone, cable, water and/or gas) may build and maintain service lines. Duke Energy manages rights of way to provide reliable delivery of electricity.

Vegetation management methods

Duke Energy uses an Integrated Vegetation Management approach, which includes careful pruning, selective herbicidal application and tree felling. This allows us to evaluate power line areas and determine the best method for maintaining reliable service.

The objective of an Integrated Vegetation Management program is to maintain the lines – before the trees and brush are close enough to cause outages – in a manner that is consistent with good arboricultural practices.

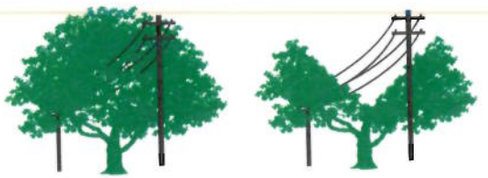
Duke Energy uses specific circuit information, reliability data and other indicators to prioritize lines for tree pruning and removal.

Pruning methods

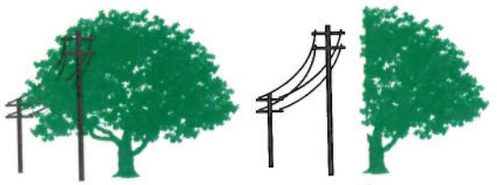
We do not "round" trees over because it's not good for a tree's health. We subscribe to directional or targeted pruning. These methods are endorsed by the tree care industry as the best pruning techniques for tree health.

Examples of trimming methods

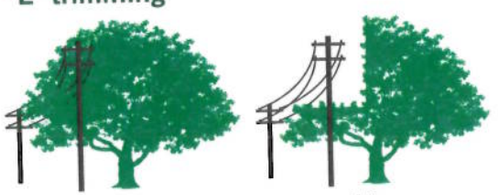
"V" trimming



Side trimming



"L" trimming



Directional pruning involves cutting a limb back to another limb (or lateral) so that future growth of the resulting limb is directed away from the power lines. The basis for this type of pruning is that each limb removed from a tree is removed either where it joins another limb or at the trunk. With directional pruning, tree growth causes less impact to public safety and electrical service. This procedure is different from the philosophy of "rounding" trees over in which limbs are cut at arbitrary points, normally leaving unhealthy "stub" cuts, which can damage the tree.

Document title:	Document number:
TVM: Duke Energy's FAC-003 Vegetation Management Program Document	GDLP-MNT-TRM-00018
	Revision No.: 002
Keywords: vegetation management; transmission; North American Electric Reliability Corporation (NERC); FAC-003; imminent threat; annual work plan; outage reporting	Applies to: Transmission Vegetation Management: DEC, DEF, DEI, DEK, DEO and DEP

Duke Energy's FAC-003 Vegetation Management Program Document

Table of Contents

1.0 Introduction

Duke Energy's (DE) FAC-003 Vegetation Management Program Document defines how the enterprise addresses the latest version of the North American Electric Reliability Corporation (NERC) Standard FAC-003. DE Transmission Vegetation Management (TVM) employs an Integrated Vegetation Management Program (IVMP) and a defense-in-depth strategy that combines various components to manage vegetation on the electric transmission utility right of way (ROW) and minimize encroachments from vegetation located adjacent to the ROW. Through the use of different integrated methods, the optimum results of improved reliability, increased safety, and greater access can be achieved. Maintaining ROWs, in accordance with ANSI, OSHA and other applicable safety requirements/laws as well as Duke Energy specifications, guidelines, and established procedures, prevents the risk of vegetation-related outages that could lead to Cascading.

2.0 Applicability

This FAC-003 Document applies to DE's transmission and generation lines operated at 200kV or higher and to each overhead line operated below 200kV identified as an element of an Interconnection Reliability Operating Limit (IROL) as designated under NERC Standard FAC-014 by the Planning Coordinator based upon the known Planning Horizon.

2.1 Applicable Overhead Transmission Lines (located outside the fenced area of a switchyard, station or substation and any portion of the span of the transmission line that is crossing the substation fence):

2.1.1 DE's Transmission Planning provides facility information to TVM anytime major changes are made to the System.

2.1.2 DE's Transmission Planning and the Compliance Group notifies TVM when a Planning Horizon IROL is identified and/or added to the System.

2.2 Applicable Overhead Generation Lines (that extend greater than one mile beyond the fenced area, or do not have a clear line of sight, of or between the generating station switchyard to the point of interconnection with the Transmission Owner's facility):

2.2.1 DE's Generation Operations requests TVM to maintain those lines determined to be applicable to FAC-003.

2.2.2 TVM maintains those lines in accordance with this FAC-003 VM Program Document and the applicable associated Regional Documents.

3.0 Purpose and Program Scope

3.1 Purpose

The purpose of this document is to facilitate compliance with the NERC Reliability Standard FAC-003 and to serve as a general guide for TVM personnel engaged in supervision of vegetation management activities. This document will be reviewed annually and updated as necessary if / when a revision to the Vegetation Standard occurs or circumstances warrant.

3.2 Program Scope

The visual inspection and appropriate maintenance of transmission line ROWs comprise the FAC-003 Vegetation Management Program. Inspections are performed to monitor vegetation growth and encroachments as well as ROW contractor effectiveness. All work performed by our designated contractors, shall be performed in accordance with ANSI, OSHA and other applicable safety requirements, laws and DE guidelines (Legal and Safety Requirements). Periodic quality assessments will be made by qualified personnel to assure legal and safety requirements are being met. The Regional TVM Manager will maintain the Regional processes, procedures and documentation to ensure that vegetation impacting the transmission system is properly maintained. Vegetation Governance will maintain this FAC-003 VM Program Document as well as other associated System TVM documents.

4.0 Integrated Vegetation Management Program (IVMP)

The IVMP program encompasses environmental stewardship and utilizes various ROW management tools— mechanical, herbicide, and/or manual floor maintenance, tree removal/trimming, and danger/hazard tree cutting. Herbicide use keeps vegetation from posing a threat to the transmission lines and equipment while promoting a transmission ROW compatible ecosystem within the ROW corridor. The IVMP applies to two areas of maintenance: 1) inside ROW corridors and 2) outside ROW corridors.

4.1 Right-of-Way (ROW)

The corridor of land under a transmission line(s) needed to operate the line(s). The width of the corridor is established by engineering or construction standards as documented in either construction documents, pre-2007 vegetation maintenance records, or by the blowout standard in effect when the line was built. The ROW width in no case exceeds the applicable Transmission Owner's or applicable Generator Owner's legal rights but may be less based on the aforementioned criteria.

4.2 Vegetation Inside ROW Corridors

Inside ROW corridors, in general, DE manages vegetation in a manner so as to establish growth of species that will not exceed a height at maturity that will encroach into the Minimum Vegetation Clearance Distance (MVCD).

4.2.1 No Maintenance Areas (Leave Area)

In some ROW corridors (typically in mountainous terrain), line heights are such that matured "tall-growing" species will not threaten the operation of transmission lines, apparatus or equipment, and thus is not dangerous or detrimental to safe and reliable electric service. These sections of lines are integrated into the inspection processes.

4.3 Vegetation Outside the ROW Corridors

Maintenance outside the ROW corridor typically encompasses the felling of danger and/or hazard trees. A danger tree is any tree outside of the ROW tall enough to endanger DE facilities. A hazard tree is a tree that is dead, dying, diseased, leaning, or damaged either on or off the right of way that endangers DE facilities. The felling of hazard or danger trees can be triggered by our inspection processes.

5.0 Vegetation Control Methods

5.1 ROW Herbicides

The preferred method of vegetation control of brush on transmission ROWs is through the use of herbicides. Where herbicides cannot be applied on a case by case basis, ROWs will be mowed or hand-cut. DE will use herbicides where it is the safe and environmentally sound option in order to eliminate undesirable woody species from the rights of way while promoting lower growing vegetation that does not create a hazard to transmission lines and apparatus.

5.2 ROW Mowing

Use of mechanical equipment – e.g., rotary mowers, Kershaw, Hydro-Ax, etc., to reclaim all of the wooded sections of the ROW, where possible, to the width as determined by the ROW definition in 4.1 above.

5.3 ROW Hand Cutting

All of the wooded sections of the ROW that cannot be reclaimed with mechanical equipment are to be hand cut to the width as determined by the ROW definition in 4.1 above.

5.4 Tree Felling/Trimming

All trees requiring felling/trimming shall be managed to prevent encroachment into the MVCD.

5.5 Side-trimming

Trees within and along the edge of the ROW will be selected for felling, and trees outside of the ROW with growth potential into the ROW will be side-trimmed at a minimum (some may require felling if side-trimming is not adequate) to meet clearance requirements. These trees or limbs, due to their height and location, have the potential to make contact with, or be in close proximity to, the conductor due to reasonably expected conductor movement (i.e. conductor blowout).

6.0 Preventing Encroachments into the Minimum Vegetation Clearance Distance (R1 & R2)

Manage vegetation to prevent encroachment into the MVCD for applicable lines that are (R1) or are not (R2) an element of an IROL.

6.1 DE maintains a list of applicable lines subject to R1 and R2. If lines are elements of an IROL, the lines/circuits are noted as to R1 or R2 applicability in that list. If no lines are an element of an IROL, Transmission Planning personnel will provide a letter of attestation, and all FAC-003 applicable lines/circuits will be subject to Requirement 2.

6.2 DE conducts an annual vegetation inspection of its applicable lines. Real-time, observed encroachments into the MVCD during the inspection are reported to the TVM Specialist or Regional TVM Manager. Appropriate information reported by the Inspector is documented and reported to the TVM Specialist or Regional TVM Manager who in turn, reports to the applicable Transmission Energy Control Center and Regulatory Compliance.

6.2.1 The documentation of Type 1 encroachments will be maintained for compliance purposes.

6.2.2 A letter of attestation will be provided if no real time observations of MVCD encroachments absent a sustained outage (Type 1) occur during an audit period.

6.3 DE maintains records of sustained outages from all causes including those applicable to FAC-003 for R1 and R2 (fall-ins from inside the ROW, blowing together of lines and vegetation inside the ROW, and vegetation growth into the MVCD). DE attests that these records are an accurate classification of all FAC-003 sanctioned outages.

6.4 MVCD Definition and Table 2

MVCD is the calculated minimum distance stated in feet to prevent flashover between conductors and vegetation for various altitudes and operating voltages. The MVCD will be maintained under all rated electrical operating conditions. The following is Table 2 from FAC 003-Minimum Vegetation Clearance Distances (MVCD) for Alternating Current Voltages (feet).

6.4 MVCD Definition and Table 2 (Continued)

FAC-003-4 Transmission Vegetation Management

FAC-003 — TABLE 2 — Minimum Vegetation Clearance Distances (MVCD)[17]

For Alternating Current Voltages (feet)

(AC) Nominal System Voltage (KV)*	(AC) Maximum System Voltage (KV)[18]	MVCD (feet) Over sea level up to 500 ft	MVCD feet Over 500 ft up to 1000 ft	MVCD feet Over 1000 ft up to 2000 ft	MVCD feet Over 2000 ft up to 3000 ft	MVCD feet Over 3000 ft up to 4000 ft	MVCD feet Over 4000 ft up to 5000 ft	MVCD feet Over 5000 ft up to 6000 ft	MVCD feet Over 6000 ft up to 7000 ft	MVCD feet Over 7000 ft up to 8000 ft	MVCD feet Over 8000 ft up to 9000 ft	MVCD feet Over 9000 ft up to 10000 ft	MVCD feet Over 10000 ft up to 11000 ft	MVCD feet Over 11000 ft up to 12000 ft	MVCD feet Over 12000 ft up to 13000 ft	MVCD feet Over 13000 ft up to 14000 ft	MVCD feet Over 14000 ft up to 15000 ft
765	800	11.6ft	11.7ft	11.9ft	12.1ft	12.2ft	12.4ft	12.6ft	12.8ft	13.0ft	13.1ft	13.3ft	13.5ft	13.7ft	13.9ft	14.1ft	14.3ft
500	550	7.0ft	7.1ft	7.2ft	7.4ft	7.5ft	7.6ft	7.8ft	7.9ft	8.1ft	8.2ft	8.3ft	8.5ft	8.6ft	8.8ft	8.9ft	9.1ft
345	362[19]	4.3ft	4.3ft	4.4ft	4.5ft	4.6ft	4.7ft	4.8ft	4.9ft	5.0ft	5.1ft	5.2ft	5.3ft	5.4ft	5.5ft	5.6ft	5.7ft
287	302	5.2ft	5.3ft	5.4ft	5.5ft	5.6ft	5.7ft	5.8ft	5.9ft	6.1ft	6.2ft	6.3ft	6.4ft	6.5ft	6.6ft	6.8ft	6.9ft
230	242	4.0ft	4.1ft	4.2ft	4.3ft	4.3ft	4.4ft	4.5ft	4.6ft	4.7ft	4.8ft	4.9ft	5.0ft	5.1ft	5.2ft	5.3ft	5.4ft
161*	169	2.7ft	2.7ft	2.8ft	2.9ft	2.9ft	3.0ft	3.0ft	3.1ft	3.2ft	3.3ft	3.3ft	3.4ft	3.5ft	3.6ft	3.7ft	3.8ft
138*	145	2.3ft	2.3ft	2.4ft	2.4ft	2.5ft	2.5ft	2.6ft	2.7ft	2.7ft	2.8ft	2.8ft	2.9ft	3.0ft	3.0ft	3.1ft	3.2ft
115*	121	1.9ft	1.9ft	1.9ft	2.0ft	2.0ft	2.1ft	2.1ft	2.2ft	2.2ft	2.3ft	2.3ft	2.4ft	2.5ft	2.5ft	2.6ft	2.7ft
88*	100	1.5ft	1.5ft	1.6ft	1.6ft	1.7ft	1.7ft	1.8ft	1.8ft	1.8ft	1.9ft	1.9ft	2.0ft	2.0ft	2.1ft	2.2ft	2.2ft
69*	72	1.1ft	1.1ft	1.1ft	1.2ft	1.2ft	1.2ft	1.2ft	1.3ft	1.3ft	1.3ft	1.4ft	1.4ft	1.4ft	1.5ft	1.6ft	1.6ft

* Such lines are applicable to this standard only if PC has determined such per FAC-014 (refer to the Applicability Section above)

** Table 2 – Table of MVCD values at a 1.0 gap factor (in U.S. customary units), which is located in the EPRI report filed with FERC on August 12, 2015. (The 14000-15000 foot values were subsequently provided by EPRI in an updated Table 2 on December 1, 2015, filed with the FAC-003-4 Petition at FERC)*

[17] The distances in this Table are the minimums required to prevent Flash-over; however prudent vegetation maintenance practices dictate that substantially greater distances will be achieved at time of vegetation maintenance.

[18] Where applicable lines are operated at nominal voltages other than those listed, the applicable Transmission Owner or applicable Generator Owner should use the maximum system voltage to determine the appropriate clearance for that line.

[19] The change in transient overvoltage factors in the calculations are the driver in the decrease in MVCDs for voltages of 345 kV and above. Refer to pp.29-31 in the Supplemental Materials for additional information.

7.0 Documented Maintenance Strategies (R3)

DE has documented maintenance strategies and procedures to prevent vegetation encroachment into the MVCD of its applicable lines. Strategies and procedures account for the movement of applicable line conductors under their rating and all rated electrical conditions while considering the interrelationships between vegetation growth rates, control methods, and previous maintenance activities.

The following clearance considerations ensure that vegetation encroachment into the MVCD do not occur.

7.1 Floor Growth (vertical)

The following criteria for vertical clearances is to be considered in the planning and execution of all TVM work:

7.1.1 The maximum operating sag of the conductor is to be used as the reference point for TVM work for vegetation clearances.

7.1.1.1 If the actual maximum sag ground clearances are not known, the line design ground clearance for the specific voltage is to be used.

7.1.1.2 The appropriate MVCD vegetation to conductor clearance in Table 2 of this document.

7.1.1.3 Any other site specific factors, including but not limited to indigenous vegetation, easement/permit.

7.2 Side Growth (horizontal)

To ensure side growth and conductor movement impacts are limited, the TVM program will ensure vegetation side growth clearance based on the following criteria:

7.2.1 The TVM Program, to address side growth, will be based on reasonable conductor movement (i.e. conductor blowout) with 4.1 psf wind loading or less which is equivalent to approximately 40 mph winds (i.e., sub-tropical storm winds or fresh gale winds) and in no case is greater than the following:

7.2.1.1 The applicable NESC design criteria for conductor blowout used for the line

7.2.1.2 The edge of the defined Right of Way

7.2.1.3 For cases where side growth cannot be managed to meet the above criteria, corrective action measures to achieve sufficient clearances will be developed.

7.3 Each Region maintains records of vegetation control methods and inspections as well as a record of the annual work plan as executed including changes.

8.0 Imminent Threat Communications (R4)

Notify, without intentional time delay, the control center holding switching authority for the associated applicable line once a confirmed vegetation condition exists that is likely to cause a Fault at any moment in accordance with TVM Program Imminent Threat Communication Procedure (GDLP-MNT-TRM-00017) and practices.

8.1 During the course of TVM work and inspections, any vegetation situation or condition that is observed and deemed to present an imminent threat to the Transmission System shall be reported without intentional time delay. Once vegetation is confirmed to be an actual viable imminent threat to the transmission system, DE (TVM) personnel or Field Line/Substation Operations (after consultation with TVM personnel), notify the control center, without intentional time delay.

8.2 Other DE employees, or contractors, may contact Field Operations or TVM Personnel with potential imminent threats prior to confirmation by TVM Personnel. Once the threat is confirmed, without intentional delay, the threat shall be addressed.

8.3 TVM completes and retains documentation for Imminent Threat notification to the applicable control center and actions taken.

9.0 Corrective Action Plan (Mitigation) (R5)

When constrained from performing vegetation work on an applicable line that may lead to a vegetation encroachment into the MVCD prior to implementation of the next Annual Work Plan, corrective action shall be taken to ensure continued vegetation management to prevent encroachments.

9.1 In situations where DE cannot exercise its legal rights or is prevented from performing work that may lead to encroachment prior to the next scheduled maintenance on that circuit, contractors will contact their designated VM Specialist. The VM Specialist will then take the appropriate actions to resolve the issue or implement any corrective action.

9.2 If the hazard is considered an imminent threat, the VM Specialist will initiate the Imminent Threat Process.

9.3 In cases where DE cannot obtain clearance distances due to limited legal rights, the VM Specialist will develop a documented corrective action plan.

10.0 Inspections (R6)

Perform an inspection of 100% of applicable transmission lines at least once per calendar year and with no more than 18 calendar months between inspections on the same ROW to ensure no encroachments occur into the MVCD.

10.1 All transmission circuits (100%) subject to FAC-003 shall be completely inspected at least once a year. The inspection interval should not exceed eighteen months from the last inspection.

10.2 The timing and number of inspections is flexible and may adjusted based on changing conditions.

10.3 DE tracks and maintains inspection documentation as evidence that 100% of its inspections are completed.

11.0 Annual Work Plan (R7)

DE will complete 100% of its annual work plan of applicable lines to ensure no vegetation encroachments occur within the MVCD. Modifications to the work plan in response to changing conditions or to findings from vegetation inspections may be made (provided they do not allow for encroachment of vegetation into the MVCD) and must be documented.

11.1 An annual work plan will be maintained for each area. The plan will be developed using previous work completion dates, inspection data, existing vegetation conditions, and based on anticipated growth rates. Components in the annual work plan may include but are not limited to inspection, herbicide, and maintenance activities.

11.2 DE tracks and maintains its annual work plan documentation by circuit, corridor or other unit of measure as evidence that 100% of the work is completed. Changes to the annual plan shall be documented.

12.0 Transmission Vegetation Outage Reporting

On a periodic basis, as defined by the Region Reliability Organization, DE will report any outage that meets the criteria defined in FAC-003.

A Sustained Outage is to be categorized as one of the following:

o Category 1A — Grow-ins: Sustained Outages caused by vegetation growing into applicable lines, that are identified as an element of an IROL or Major WECC Transfer Path, by vegetation inside and/or outside of the ROW;

o Category 1B — Grow-ins: Sustained Outages caused by vegetation growing into applicable lines, but are not identified as an element of an IROL or Major WECC Transfer Path, by vegetation inside and/or outside of the ROW;

o Category 2A— Fall-ins: Sustained Outages caused by vegetation falling into applicable lines that are identified as an element of an IROL or Major WECC Transfer Path, from within the ROW;

o Category 2B— Fall-ins: Sustained Outages caused by vegetation falling into applicable lines, but are not identified as an element of an IROL or Major WECC Transfer Path, from within the ROW;

o Category 3 — Fall-ins: Sustained Outages caused by vegetation falling into applicable lines from outside the ROW;

o Category 4A— Blowing together: Sustained Outages caused by vegetation and applicable lines that are identified as an element of an IROL or Major WECC Transfer Path, blowing together from within the ROW.

o Category 4B— Blowing together: Sustained Outages caused by vegetation and applicable lines, but are not identified as an element of an IROL or Major WECC Transfer Path, blowing together from within the ROW.

13.0 FAC-003 Vegetation Management Program Document Revision Tracker

Date	Description of Change	Revision by:
06/02/2014	Approval of MNT-TRMX-00305 of FAC-003 VM Program Document, REV 0 effective July 1, 2014.	Cathy Hope, Ron Adams, and Jeff Racey
01/14/2015	Renumbered to GDLP-MNT-TRM-00018 REV 000 with following clarifications and changes: 1.0 Introduction 6.2.1 Type 1 Encroachment Documentation 6.2.2 Attestation in Absence of Type 1 Encroachments 7.1 Floor Growth 7.1.1 Maximum Operating Sag 7.2 Side Growth 7.2.1 Conductor Movement/Blowout 8.0 Referenced Imminent Threat Procedure Document 8.2 Confirmation of Potential Imminent Threat 9.3 Documented Corrective Action Plan	Cathy Hope, Ron Adams, and Jeff Racey
03/02/2016	REV 001: added word “not” to 11.0 to correct typographical error and corrected Revision Tracker. Added hyperlink in 8.0.	Cathy Hope, Ron Adams, and Jeff Racey
07/22/2016	Added new MVCD Table 2 from FAC-003-4 effective October 1, 2016.	Cathy Hope, Ron Adams, and Jeff Racey

The following members of the DE Vegetation Management Team have reviewed and approved this FAC-003 Vegetation Management Program Document:

Catherine Hope – Director, Transmission Vegetation Management

Catherine Hope Date Approved: July 22, 2016

Ron A. Adams – Director, Vegetation Management Governance

Ron A. Adams Date Approved: July 22, 2016

Jeffrey H. Racey - System Transmission Forester, Vegetation Management Governance

Jeffrey H. Racey Date Approved: July 22, 2016

Document Approval Form

published 8/8/16

Section A: Document identification and type of action

Document no.: GDLP-MNT-TRM-00018 | Revision no.: 002

Document title: TVM: Duke Energy's FAC-003 Vegetation Management Program Document

Type of action:

- ☐ New
- ☐ Cancellation
- ☐ Suspension
- ☐ Renumber
- ☐ Ownership Change
- ☑ Revision
- ☑ Periodic review completed, as required

For Corporate Document Center use only:

- ☐ Editorial Change
- ☐ Migration
- ☐ Control element revision _____ (does not require approval authority signature)

Applies to: (Select all that apply)

- ☐ Duke Energy
- ☑ Duke Energy Carolinas, LLC
- ☑ Duke Energy Progress, LLC
- ☑ Duke Energy Florida, LLC
- ☑ Duke Energy Indiana, Inc.
- ☑ Duke Energy Kentucky, Inc.
- ☑ Duke Energy Ohio, Inc.
- ☑ Group Trans. Vegetation Management
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☐ None
- ☑ NERC
- ☐ State Codes/Standards
- ☐ FERC Standards of Conduct
- ☐ HIPAA
- ☐ Patriot Act
- ☐ Sarbanes-Oxley
- ☐ Other _____
- ☐ OSHA _____

Applicable to forms only: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☐ Yes (Procedure No: _____)

How is the form to be completed or used? ☐ Hard Copy Completion (by hand) ☐ Online Data Entry

☑ Communication plan established ☑ Impact Reviews completed

Description of document action or summary of changes:

Added new MVCD Table 2 from FAC-003-4 effective October 1, 2016.

Section B: Approval **Who should sign?** see instructions on page 2

Preparer(s)/Author(s)/Writer(s) (*signature not required*):

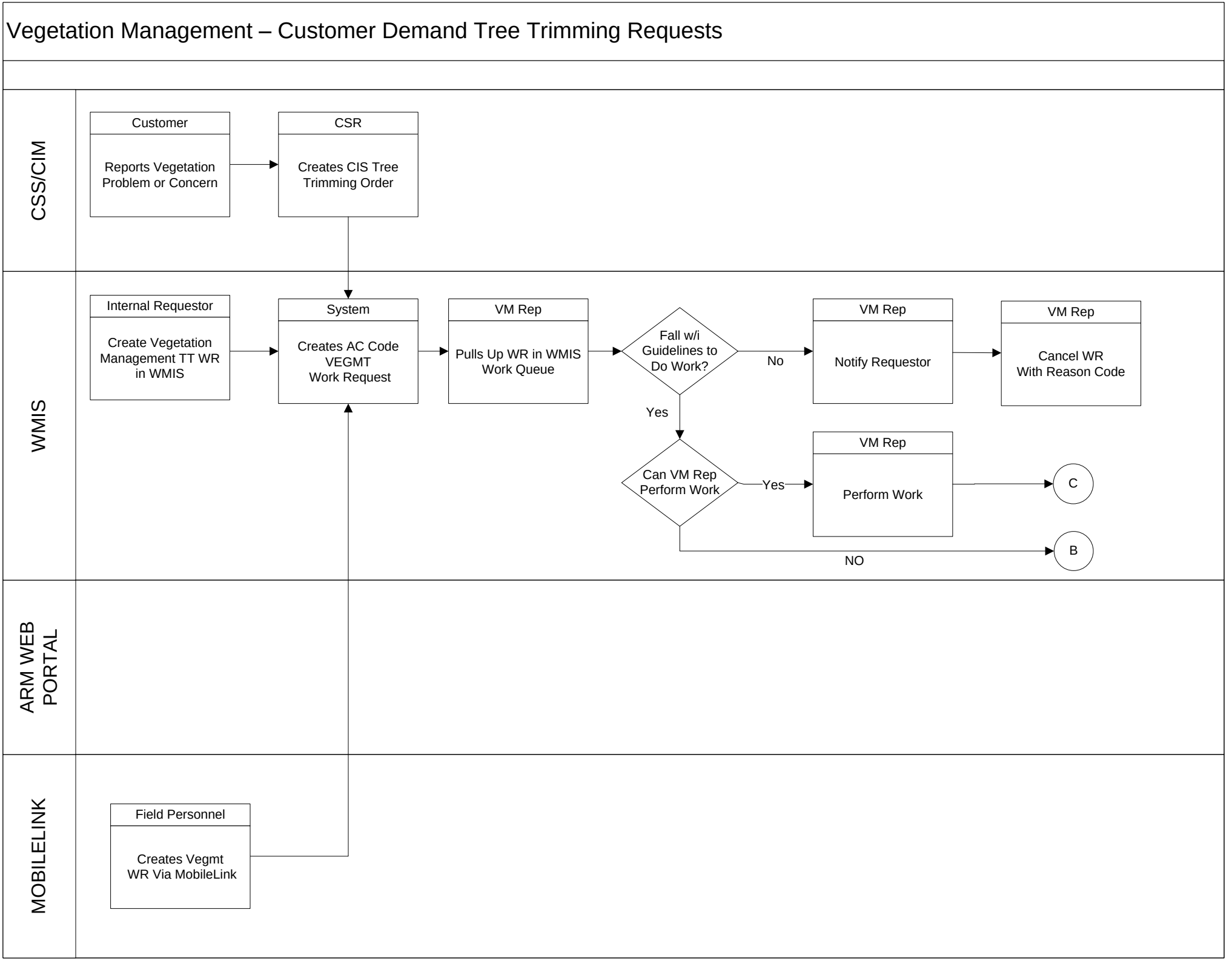
Jeff Racey

Approval recommended (*print name*): Ron Adams	(*signature*) R L. Adams	Date: 7-22-16
Approval recommended (*print name*):	(*signature*)	Date:
Approval recommended (*print name*):	(*signature*)	Date:
Final Approval (*print name*): Cathy Hope	(*signature*) C Hope	Date: 7-29-16

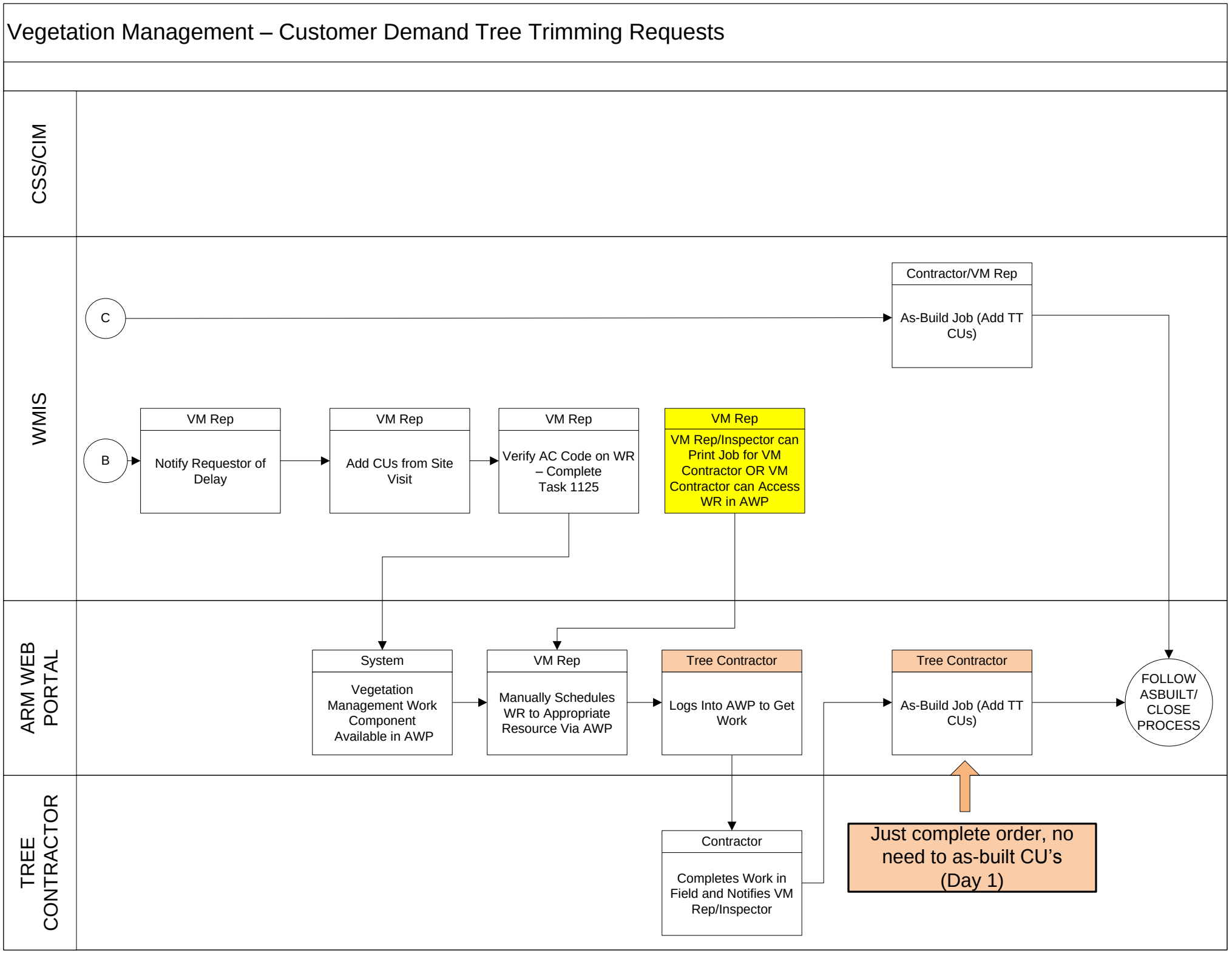
RETURN SIGNED FORM AS SCANNED PDF VIA E-MAIL OR FAX TO (919) 235-3165

ATTACHMENT S

Vegetation Management – Customer Demand Tree Trimming Requests



Vegetation Management – Customer Demand Tree Trimming Requests



ATTACHMENT T

Document title:	Document number:
Damage Assessment	GDLP-EMG-DOS-00008
	Revision No.: 002
Keywords: emergency; distribution system storm operational plan; forensic assessment	Applies to: Duke Energy Florida (Distribution)

Contents

Mission

Damage Assessment (DA) provides predictive and actual information regarding the extent of storm damage to the Duke Energy FL system, estimated number of resources needed and expected time of restoration. This is accomplished by assessing actual damage and estimated time of restoration immediately after the storm exits, and producing specific damage assessment information for restoration forces. Damage Assessment is scalable from Mid-Level storms to Major Storms

Organization Charts

Damage Assessment Org Chart

Definition of Mid-Level or Major Storm Event

Damage Assessment (DA)				
Category	Incident Commander	Level	Central	Coastal
Major	System	IV	System DA - Major Lead	
Mid-Level	DCC	III	DA Mid Lead / Backup DA Mid Lead	DA Mid Lead / Backup DA Mid Lead
		II	DA Mid Lead / Backup DA Mid Lead	DA Mid Lead / Backup DA Mid Lead
		I	DA Mid Lead / Backup DA Mid Lead	DA Mid Lead / Backup DA Mid Lead

Mid-Level Damage Assessment

This process consists of assessing damaged facilities on the load side of open devices during a Mid-Level Storm event. It is based exclusively on Outage Tickets from OMS and is usually run at the Zone and/or Operating Center organization level.

The following personnel are engaged in Mid-Level Damage Assessment:

- Senior Damage Assessor
- Damage Assessor
- Damage Assessor Driver
- Damage Assessment Support
- Operating Center Damage Assessment Coordinator
- Mid-Level Damage Assessment Coordinator (Zone)
- System Damage Assessment Coordinator

Specific Explanations of Mid-Level Damage Assessment

- This process is a logical and scalable version of the DA Major storm restoration process, i.e., the mid-level and major storm restoration processes will be nearly identical in both process and organizational structures. Additionally, it would provide for more opportunities to both practice and prepare for, make adjustments to, as well as execute the major storm process.
- Both the Central and Coastal Zones will have a designated DA Lead and a designated backup DA Lead.
- Prior to or during an event, DA Zone Leads will be engaged by either:
    - DCC / Zone Point Of Contact (ZPOC) / Ops Center Point of Contact (OPOC) request
    - Proactive monitoring of escalating weather conditions by the DA leadership

- Mid-Level DA Leads will either perform or cause the callout to be performed via Call Tree/ARCOS to acquire the requisite Damage Assessors.
- Mid-Level DA Leads will consider contacting R&D management to request driving resources to accompany damage assessors during an event.
- DA Local leads will work *side by side* with the Operations Center Point of Contact (OPOC).
- Damage Assessors will be categorized into two (2) distinct groups:
    - Senior DA - Experienced at Damage Assessment and Mid-Level DA, i.e., fully competent to perform their duties either during the day or at night.
    - Damage Assessor - Relatively Inexperienced at the Damage Assessment and Outage Investigation process, i.e., new to their roles with limited experience performing their duties either during the day or at night.

- DA resources will be deployed as follows and consist of 2 personnel in each vehicle:

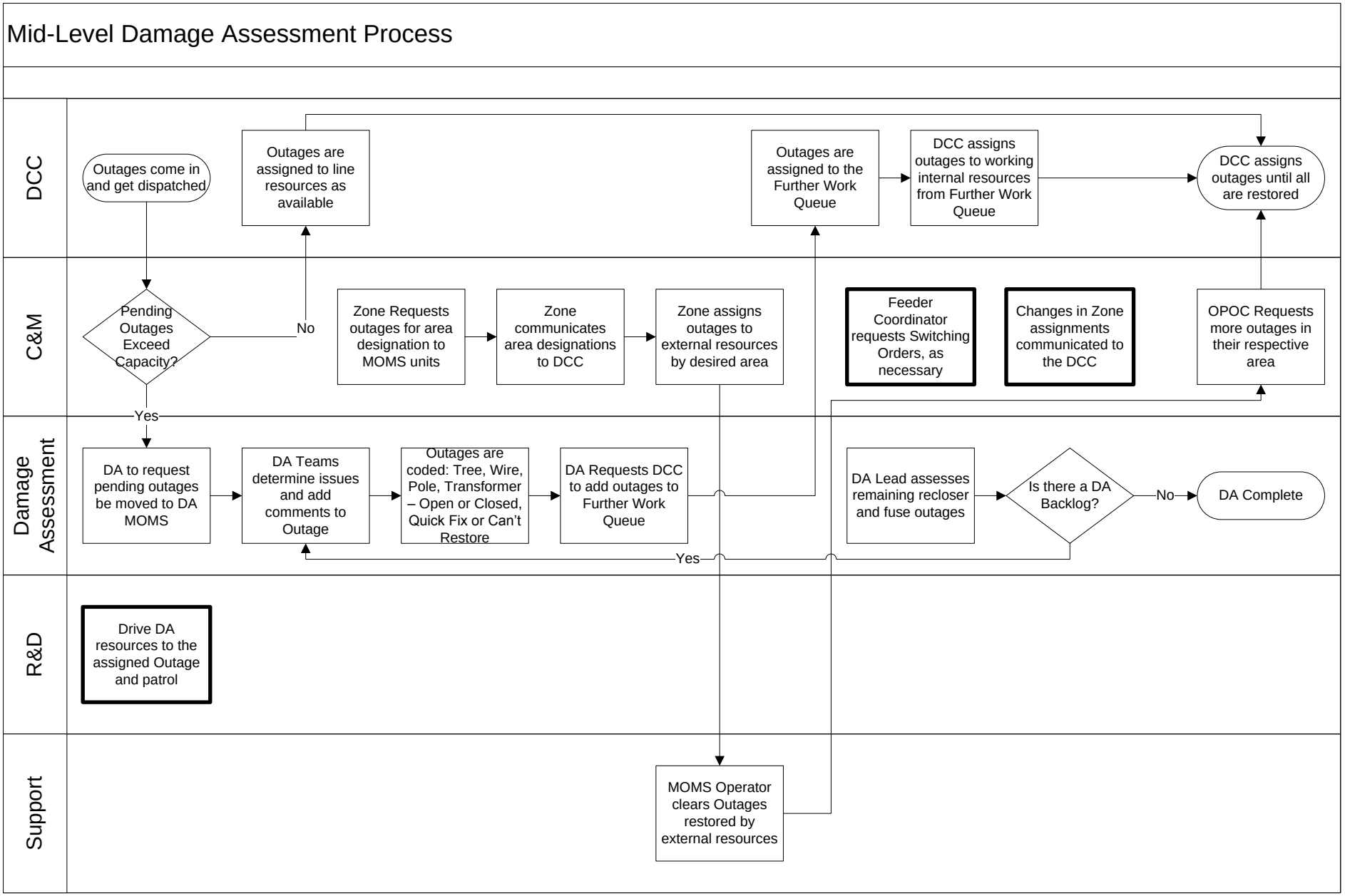
	Senior Damage Assessor	**Damage Assessor**	**R&D Driver (Optional)**
Day	X	X	X
Night (No Backlot)	X	Only w/ Senior DA	X

- The Mid-Level Escalation guideline stipulates DA resources will be prepared to perform damage assessment and be available to respond to IPT's beginning at Level 2 activation.
- DA Local leads will be responsible for identifying the following:
    - How many resources will be required to assist in the restoration efforts,
    - Confirming that the resources have been assigned tasks that are commensurate with their abilities, i.e., DA-1, DA-2.
    - For Levels 1-3, communicating and coordinating submitted outage data to the MOMS operator or inputting the same data into MOMS, if capable.

    - Monitoring the pending tickets as well as communicating with the OPOC to determine the appropriate time to either mobilize DA resources or release them from their assigned duties.

The flowchart shown on the next page provides a detailed view of this sub-process:

Mid-Level Damage Assessment Process



Major Storm Event Damage Assessment

Consists of the following sub-processes:

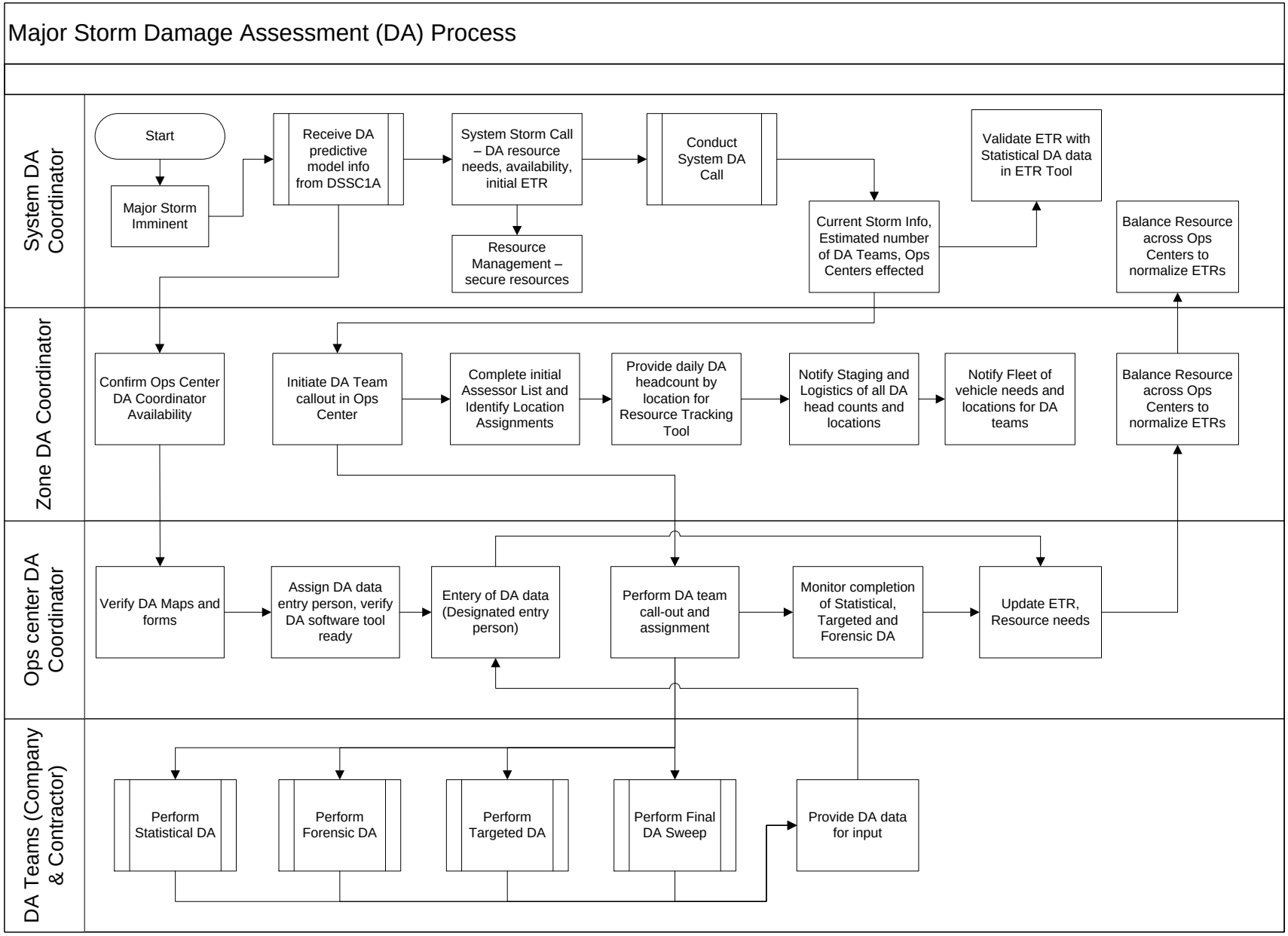
- Statistical Damage Assessment
- Targeted Damage Assessment
- Forensics DA
- Final Sweep

Specific Explanations of Major Storm Event Damage Assessment

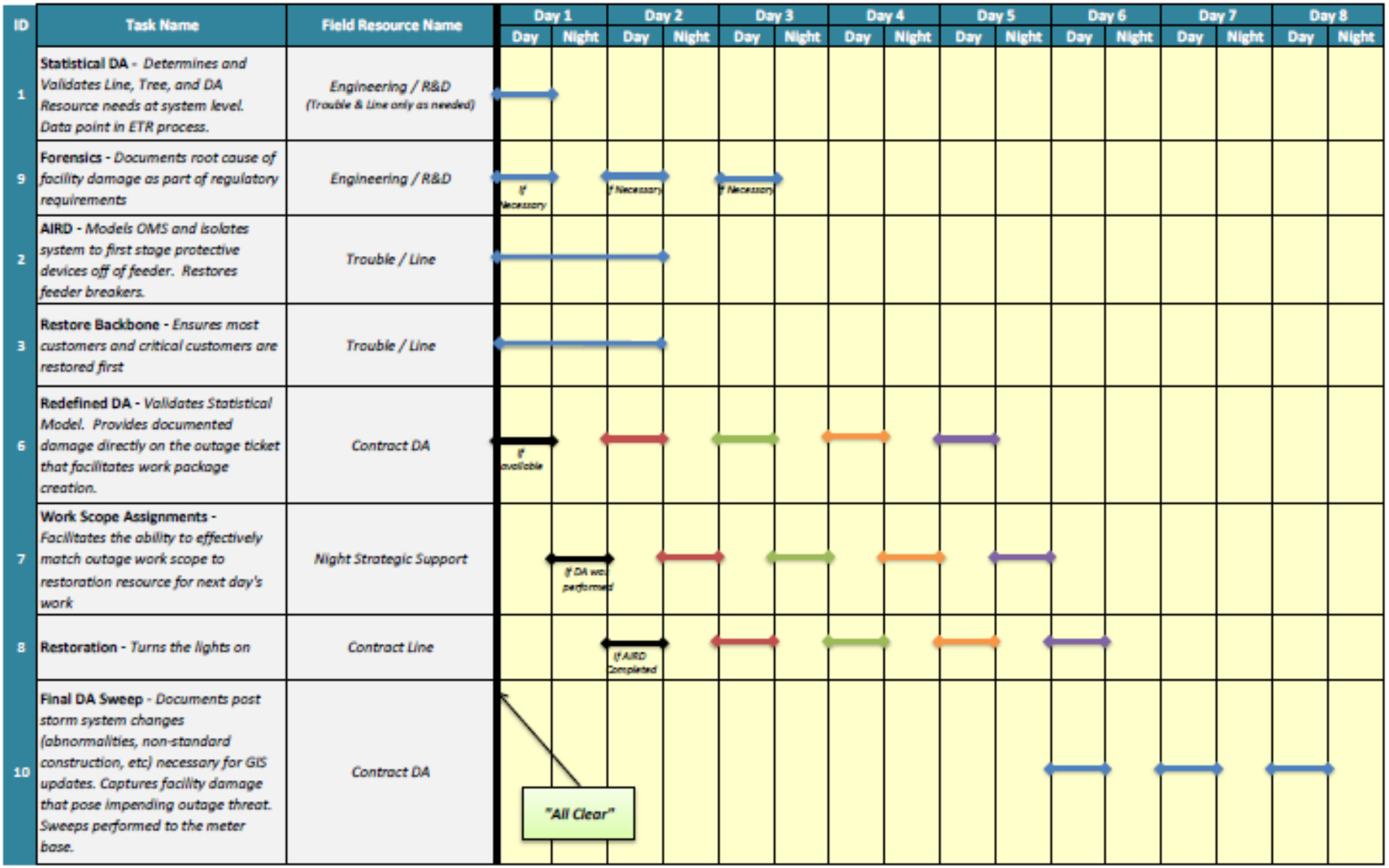
- This process is both a logical and scalable version of the DA Mid-Level restoration process, i.e., the mid-level and major storm restoration processes will be nearly identical
- Outages will be assigned by priority feeder after the AIRD feeders have been assessed and modeled in OMS.
- DA can commence on predicted device outages or reported outages as modeled in OMS based on the data obtained from the AIRD process.
- Outages are documented at the device level and either reported as *Further Work Tickets* or cleared as appropriate.
- Damage data, i.e., Further Work, is entered directly into MOMS.
- Addresses or GPS coordinates can be utilized when assigning work packets to both native and off-system line crews.
- The DA processes to support major storms will be defined in four (4) distinct categories:
    - **Statistical DA (High level tally of pole, wire, transformer damage within a sample areas to assist with damage estimates and ETR**;
    - **Targeted DA(Detailed damage assessment associated with specific outage events**;
    - **Final Sweep DA(Substation to meter assessment to update GIS of any asset changes)** ;
    - **Forensic DA (Specific assessment for analysis for pole damage, usually in response to tornado or high winds)** .
- Damage Assessment teams will be comprised of two (2) distinct groups:
    - Senior DA - Experienced at Damage Assessment and Mid-Level DA, i.e., fully competent to perform their duties
    - Damage Assessor - Relatively Inexperienced at the Damage Assessment and Outage Investigation process, i.e., new to their roles with limited experience performing their duties.
- DA resources will be deployed as follows and consist of 2 personnel in each vehicle:

	Senior Damage Assessor	**Damage Assessor**	**R&D Driver**
Day	X	X	X
Night (No Backlot)	none	none	none

The flowchart below provides a detailed view of this sub-process:



Major Event DA Timeline



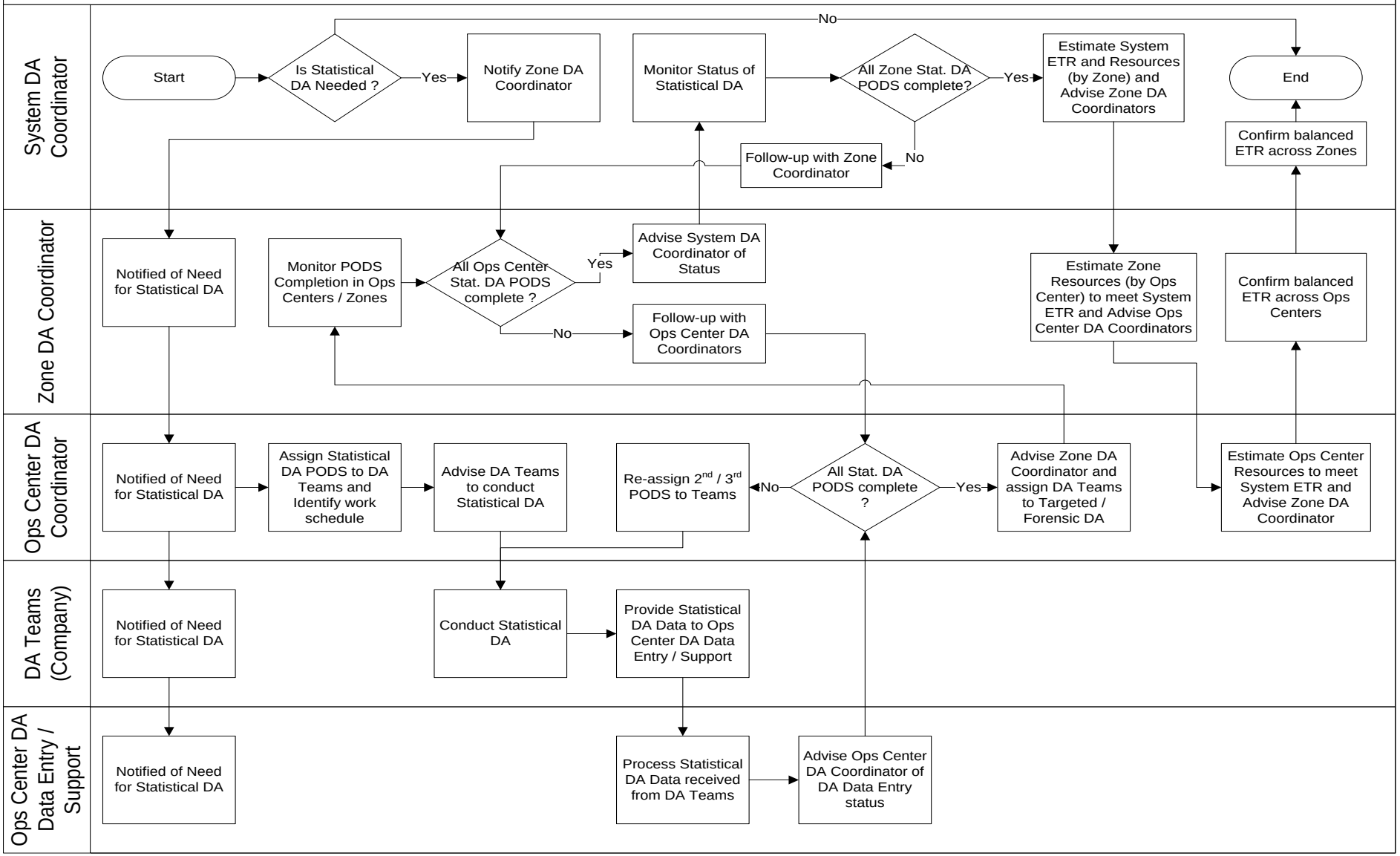
Statistical Damage Assessment

This sub-process consists of assessing approximately 10% of the Distribution facilities (in each Operating Center) and recording the damage found. These results are then projected across all facilities in the operating center to predict total facilities damaged from which resource needs and estimated time of restoration can be calculated. Statistical DA will be completed within 12 hours after the All Clear.
The following personnel are engaged in Statistical Damage Assessment:

- Senior Damage Assessor
- Damage Assessor
- Damage Assessor Driver
- Damage Assessment Support
- Operating Center Damage Assessment Coordinator
- Zone Damage Assessment Coordinator
- System Damage Assessment Coordinator

The flowchart below provides a detailed view of this sub-process:

Statistical Damage Assessment (DA) Process



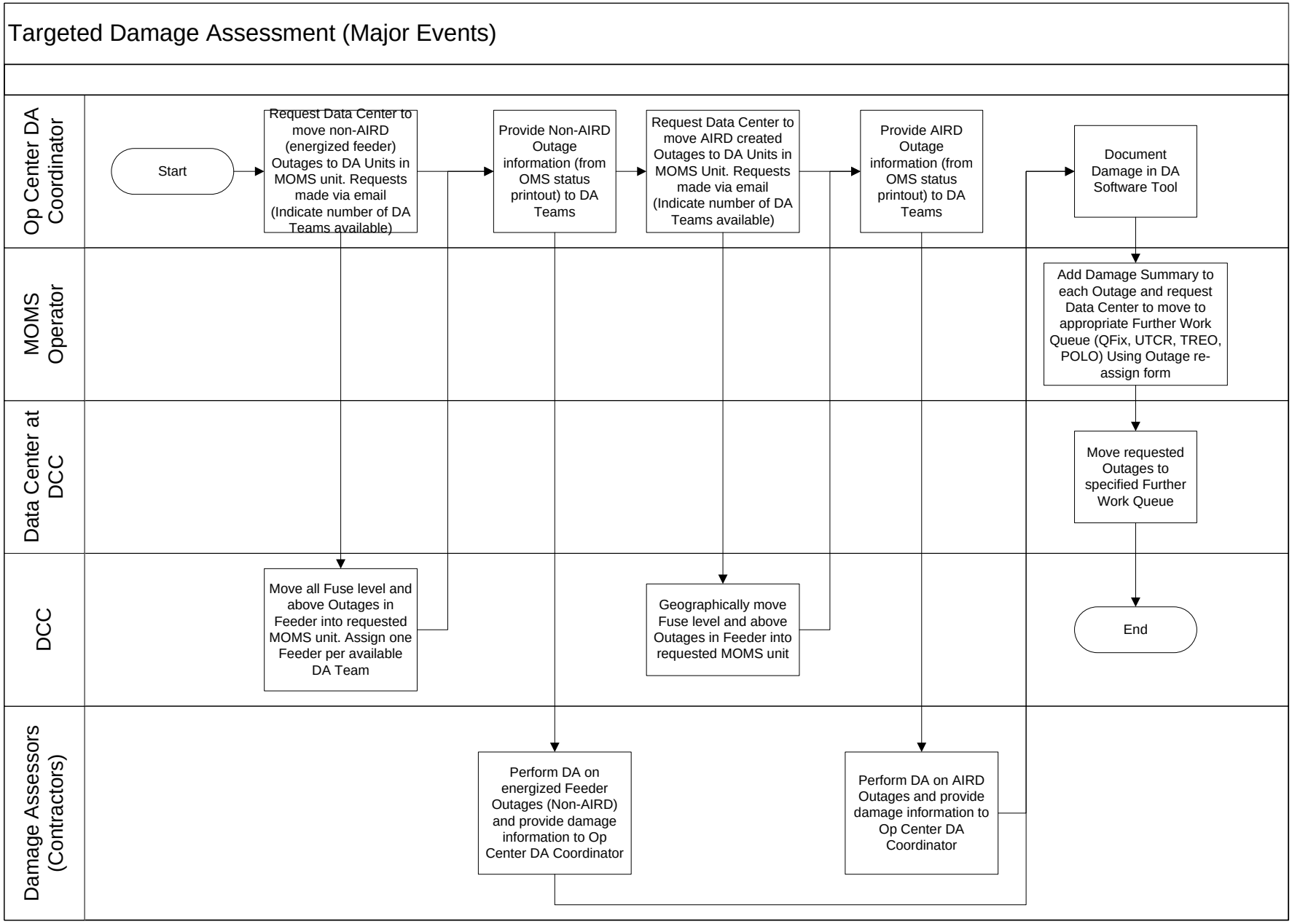
Targeted Damage Assessment

This sub-process provides data for restoring the distribution systems and models OMS.

The following personnel are engaged in Targeted Damage Assessment:

- Senior Damage Assessor
- Damage Assessor
- Damage Assessor Driver
- Damage Assessment Support
- Operating Center Damage Assessment Coordinator
- Zone Damage Assessment Coordinator
- System Damage Assessment Coordinator

The flowchart below provides a detailed view of this sub-process:



Final Sweep

This sub-process provides information regarding the current configuration of the distribution system (i.e., the state of each switch, existing phasing, etc.). Final Sweep teams identify existing distribution devices in need of repair or replacement due to storm damage or restoration actions immediately following the storm. Additionally, the teams record and report final sweep damage assessment information, which is used to assist in identifying the resources needed to return the distribution system to normal configuration. Contractors to complete Final Sweep as defined. Duke Energy to provide adequate oversight of contract resources completing final sweeps.

Final Sweeps Packet:

Final sweeps checklist (Targeted DA Form)

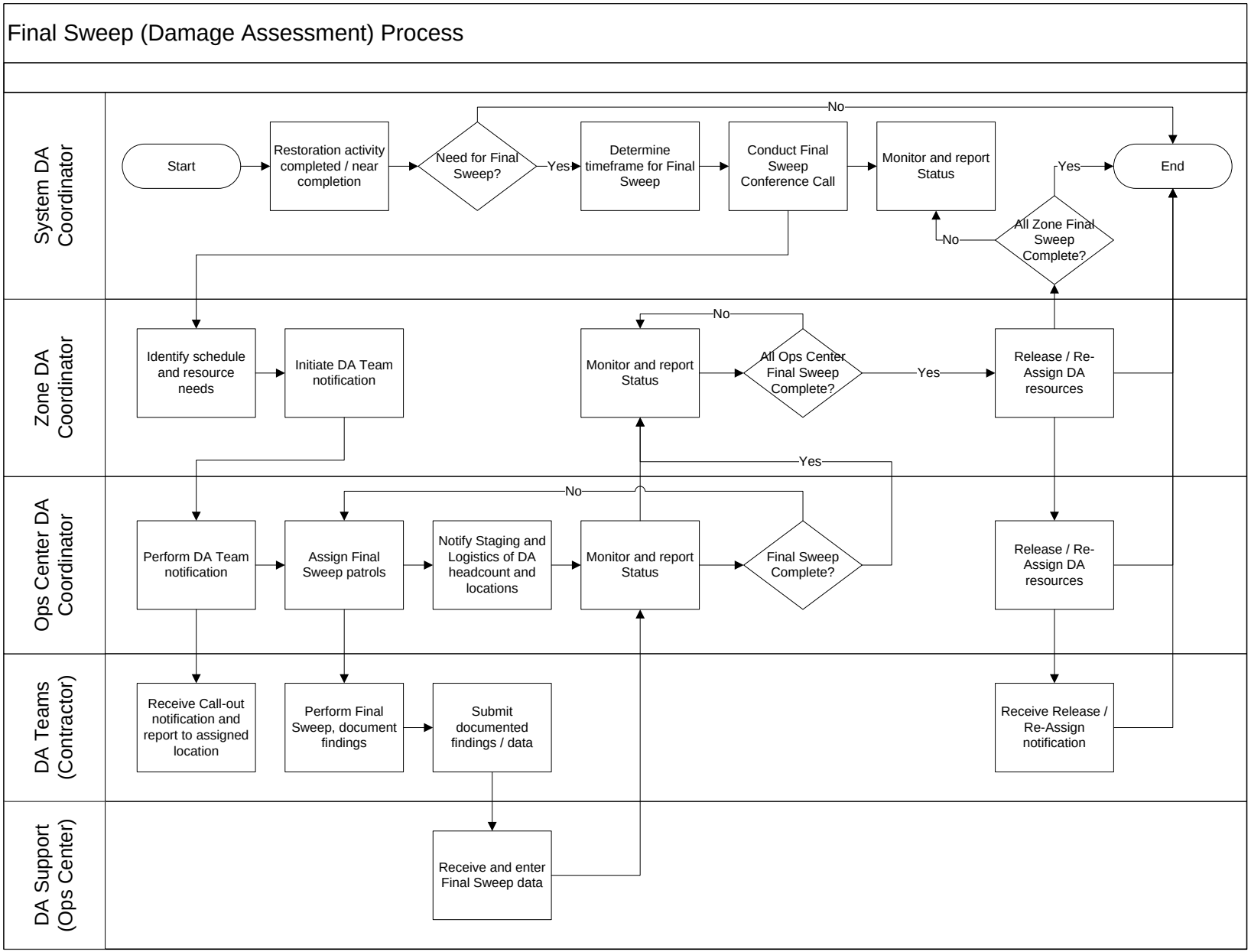
GIS map print of assigned area

Duke Energy contact sheet

The following personnel are engaged in Final Sweep:

- Senior Damage Assessor
- Damage Assessor
- Damage Assessor Driver
- Damage Assessment Support
- Operating Center Damage Assessment Coordinator
- Zone Damage Assessment Coordinator
- System Damage Assessment Coordinator

The flowchart below provides a detailed view of this sub-process:



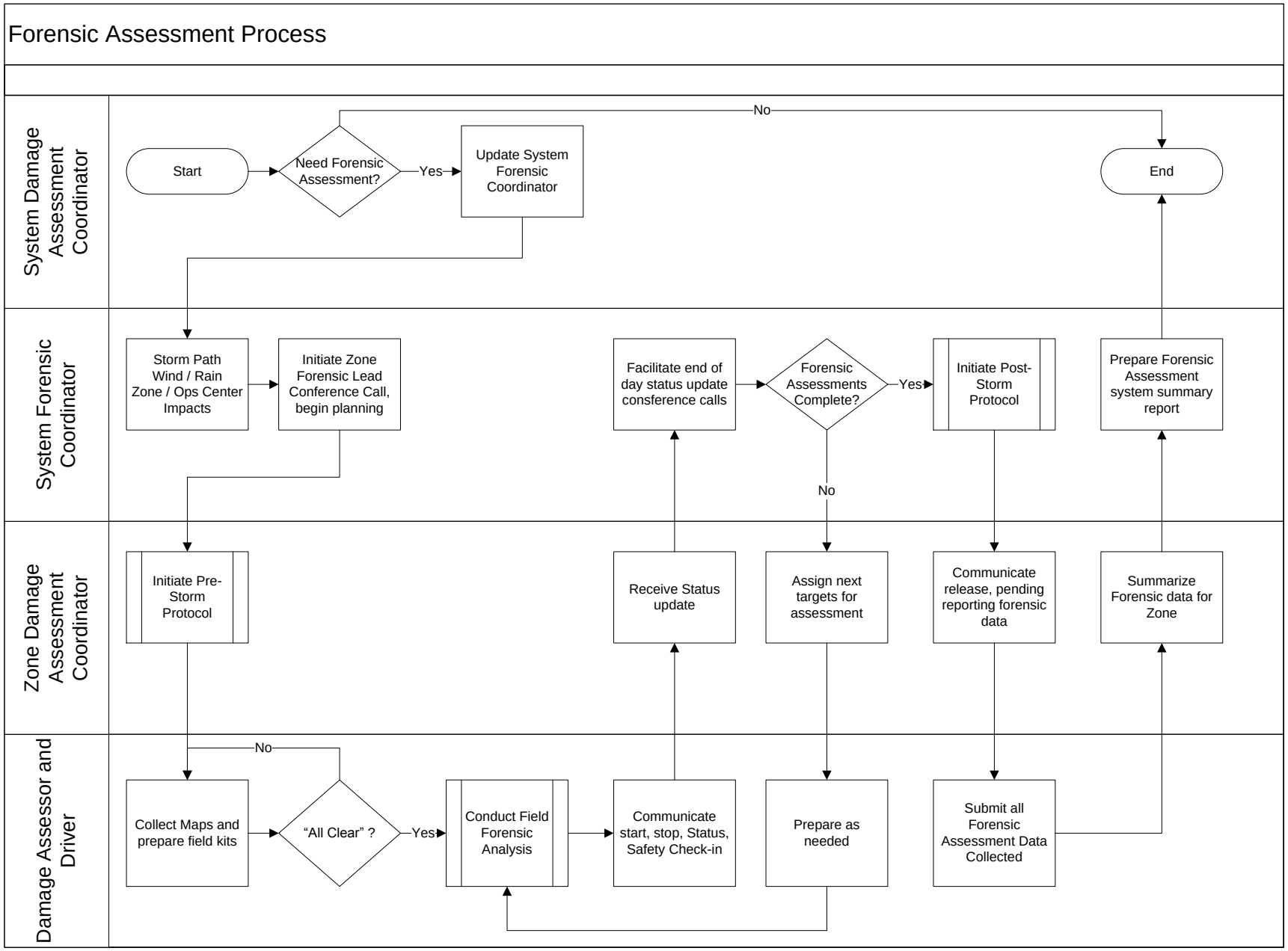
Forensic Assessment

This sub-process is not directly related to the restoration effort. The purpose of forensic assessment is to provide data on causal modes for distribution pole and structure damage due to storm related damage. The following personnel are engaged in Final Sweep:

- System Damage Assessment Coordinator
- System Forensic Coordinator
- Zone Forensic Lead
- Forensic Assessor
- Assessor Support

Forensic Assessment Form

The flowchart below provides a detailed view of this sub-process:



Job Descriptions

System Damage Assessment Coordinator

Job Function

The System Damage Assessment Coordinator is responsible for the overall readiness of the Damage Assessment process at Duke Energy Florida and provides leadership to the process and for the coordination of collecting and collating forensic data of distribution pole and structure damage due to a major storm.

Job Description

- Understand the DSSOP and Damage Assessment Storm Plan and communicate effectively across group and department lines, ensuring that the damage assessment process is properly aligned with storm restoration strategy
- Maintain relationships with field and storm management team members
- Lead lessons learned activities following major events to ensure continual improvement
- Develop and deliver post-storm System Forensic Summary Report within 2 weeks after storm restoration activity has been completed

Key Interface Points

- Distribution System Storm Coordinator Zone Damage Assessment Coordinator
- Operations Center Damage Assessment Coordinator

Checklist of Actions

Before Major Storm

- Recruit skilled (senior) and unskilled Damage Assessors from:
  - Zone/Operations Center personnel
  - RSVP volunteers
  - Retirees
  - Fossil and Nuclear plants
  - Transmission Department
  - Contractors
- Create and maintain Damage Assessment databases and distribution lists
- Develop, schedule, and deliver Damage Assessor training
- Develop and schedule training for Zone and local Operations Center Damage Assessment contacts
- Request storm activation in the DA Software
- Ensure that estimated time of restoration (ETR) tool is maintained and enhanced to meet restoration needs
- Participate in development and administering of system storm drills to ensure readiness
- Develop and maintain specifications for statistical and feeder maps utilized during the Damage Assessment process
- Determine Damage Assessment materials needs, secure funding, purchase, and distribute to Duke FL and other jurisdictions
- Validate Forensic Assessment roles have been assigned and filled for all Zones

During Major Storm

- Participate in all System storm conference calls to develop restoration strategy
- Develop Damage Assessment plan and deploy to the field
- Determine availability of Damage Assessment team members
- Facilitate conference phone calls with Damage Assessment team members
- Develop Damage Assessment team assignments and vehicle deployment plans
- Deploy and communicate Damage Assessment plan to Zone Damage Assessment Coordinator
- Monitor storm progress and make Damage Assessment resource adjustments as necessary
- Monitor data entry into ETR tool across the System
- Provide resource modeling and ETR estimates for the System to the Distribution System Storm Coordinator
- Collect and collate all forensic data

After Major Storm

- Demobilize deployed Damage Assessment teams
- Lead lessons learned activities
- Provide input into DSSOP improvement
- Develop and deliver post-storm System Forensic Summary Report within 2 weeks after storm restoration activity has been completed

Training Requirements

- Review DSSOP and recent lessons learned to ensure understanding of “the big picture” as it pertains to damage assessment, restoration, and customer communications
- Participate in developing storm drill scenarios to ensure readiness of all those involved in the damage assessment process
- Communicate with Human Resources to obtain lists of recent retirees for recruiting purposes
- Review and test tools to ensure workability and competency of users: Resource Tracking, Damage Assessment Data Entry, Damage Assessment ETR (Web-based)
- Review Damage Assessment training module for potential enhancements
- Develop and implement Damage Assessment training classes for newly recruited Damage Assessors and contractors
- Communicate with Damage Assessors to enlist support for upcoming storm season

Engaged in the Following Sub-processes

- Mid-Level Damage Assessment
- Statistical Damage Assessment
- Targeted Damage Assessment
- Final Sweep
- Forensic Assessment

Zone Damage Assessment Coordinator

Job Function

The Zone Damage Assessment Coordinator is responsible for the overall readiness of the Damage Assessment process within the assigned Zone and provides leadership during the process. This includes response to major storms, mid-level events and forensic assessment requests.

Job Description

- Understand the Damage Assessment Storm Plan and communicate effectively across the Zone to ensure that the damage assessment process is in a ready state
- Communicate with the System Damage Assessment Coordinator to ensure linkage with the DSSOP
- Participate in lessons learned activities following major events to ensure continual improvement
- Provide complete Zone Substation Forensic Summary Reports to System Damage Assessment Coordinator within 1 week after storm restoration activity has been completed

Key Interface Points

- Operations Center Damage Assessment Coordinators
- Zone Storm Coordinator
- Damage Assessors
- System Damage Assessment Coordinator

Checklist of Actions

Before Major Storm, Mid-level Event or Forensic Assessment

- Organize and participate in training of Operations Center Damage Assessment personnel
- Stay linked with System Damage Assessment Coordinator to ensure readiness
- Ensure that all Operations Center contacts have the current ETR tool and are trained in its use
- Ensure timely printing of statistical maps for damage assessment
- Work with Zone management to ensure resource-sharing capability in the event the Zone is not impacted by a storm (i.e., how many Damage Assessment teams can be made available elsewhere)

During Major Storm, Mid-level Event or Forensic Assessment

- Participate in Zone storm conference calls
- Communicate with System Damage Assessment Coordinator to ensure that the deployment plan is understood
- Monitor storm progress and make Damage Assessment resource adjustments as necessary
- Monitor ETR tool for data input Duke and maintain communications with Operations Center Damage Assessment contacts to ensure that data flow is timely
- Provide Zone resource modeling from statistical damage assessment data
- If Zone is not impacted by storm, engage Zone Damage Assessment Coordinator to develop a Damage Assessment resource-sharing plan for use elsewhere in the System

After Major Storm, Mid-level Event or Forensic Assessment

- Participate in demobilizing efforts once restoration is complete
- Participate in lessons learned activities
- Ensure that Operations Center feeder maps and statistical sampling maps get restocked for next storm
- Provide complete Zone Substation Forensic Summary Reports to System Damage Assessment Coordinator within 1 week after storm restoration activity has been completed

Training Requirements

- Review Zone Storm Plan and recent lessons learned to ensure understanding of “the big picture” as it pertains to damage assessment, restoration, and customer communications
- Review and test tools to ensure workability and competency of users: Resource Tracking, Damage Assessment Data Entry, and Damage Assessment ETR (Web-based)
- Provide the DA training/safety awareness presentation at the DA staging sites prior to dispatching DA teams

Engaged in the Following Sub-processes

- Mid-Level Damage Assessment
- Statistical Damage Assessment
- Targeted Damage Assessment
- Final Sweep
- Forensic Assessment

Operations Center Damage Assessment Coordinator

Job Function

The Operations Center Damage Assessment Coordinator is responsible for the overall readiness of the damage assessment process within the assigned Operations Center.

Job Description

- Understand the Damage Assessment Storm Plan and communicate effectively within the Operations Center to ensure that the damage assessment process is in a ready state
- Communicate with Zone Damage Assessment Coordinator to ensure linkage with the DSSOP
- Participate in lessons learned activities following major events to ensure continual improvement

Key Interface Points

- Operations Center storm team
- Damage Assessors
- Zone Damage Assessment Coordinator
- System Damage Assessment Coordinator

Checklist of Actions

Before Major Storm, Mid-level Event or Forensic Assessment

- Participate in training of Operations Center Damage Assessment personnel
- Stay linked with Zone Damage Assessment Coordinator to ensure readiness
- Ensure that the most current version of the ETR tool is on appropriate Operations Center computers and that designated personnel are trained in its use
- Ensure that adequate feeder and statistical maps are available for Damage Assessment use
- Provide directions and addresses to beginning points of all statistical sampling maps

During Major Storm, Mid-level Event or Forensic Assessment

- Ensure Safety Briefings are conducted with all DA teams before field work is started
- Ensure “addresses to avoid” within that Operations Center are shared with DA teams before field work is started
- Communicate with Zone Damage Assessment Coordinator to ensure that deployment plan is understood
- Develop logistics and deploy Damage Assessment plan for the Operations Center
- Provide Assignments to DA Teams
- Work with Damage Assessor to provide refresher training to incoming teams
- Input statistical data into ETR tool, perform resource modeling for the Operations Center, and upload data to server
- Input non-emergency environmental reports into environmental tool for tracking by the Zone Environmental Lead
- Ensure a smooth transition for Damage Assessment teams—from performing damage assessment to leading crews, running Outage Tickets, etc.
- If Operations Center is not directly impacted by the storm, offer local resources to Zone Damage Assessment Coordinator for developing a resource-sharing plan

After Major Storm, Mid-level Event or Forensic Assessment

- Participate in demobilization efforts once restoration is complete DA teams are released to the Zone Damage Assessment Coordinator
- Participate in lessons learned activities
- Restock Operations Center feeder maps, statistical sampling maps, and local maps as needed

Training Requirements

- Review Operations Center Storm Plan and recent lessons learned to ensure understanding of "the big picture" as it pertains to restoration and customer communications
- Review and test tools to ensure workability and competency of users: Resource Tracking, Damage Assessment Data Entry, and Damage Assessment ETR (Web-based)
- Ensure the DA training/safety awareness presentation was conducted with all DA teams at the DA staging sites prior to dispatching DA teams

Engaged in the Following Sub-processes

- Mid-Level Damage Assessment
- Statistical Damage Assessment
- Targeted Damage Assessment
- Final Sweep
- Forensic Assessment

Damage Assessor

Job Function

The Damage Assessor performs field damage assessments.

Job Description

- Understand the Damage Assessment Storm Plan and communicate effectively across the Zone to ensure that the damage assessment process is in a ready state

Key Interface Points

- Feeder/Field Coordinators
- Operations Center Damage Assessment Coordinators
- Ops Center MOMS operator

Checklist of Actions

Before Major Storm, Mid-level Event or Forensic Assessment

- Complete Damage Assessment refresher training immediately prior to major storm event.
- Attend Damage Assessment briefing to get assignment, team information, and up-to-date weather update
- Attend pre-storm season training to ensure familiarity with:
  - Damage assessment process, forms, etc.
  - DA ETR tool review

During Major Storm, Mid-level Event or Forensic Assessment

Before traveling to location:

- Receive Safety Briefings conducted by Operations Center DA Coordinator before field work is started
- Receive "addresses to avoid" within that Operations Center from Operations center DA Coordinator before field work is started

- Receive Damage Assessment assignment document / package
- Notify assigned Operations Center of schedule, estimated time of arrival of teams, and preparations needed prior to arrival (vehicle assignment, etc.)
- Determine whether the Operations Center has resource needs (Network routers, office supplies, hardhats, etc.)

After arriving at assigned assessment location:

- Conduct Damage Assessment per training
- Document findings
- Ensure data is reported back to local Operation Center

After Major Storm, Mid-level Event or Forensic Assessment

- Prepare to provide contractor oversight for final sweeps , as needed.
- Prepare to perform forensic DA

Training Requirements

- Review Damage Assessment training materials
- Communicate any changes in contact numbers (home, work, cell phone, e-mail address, etc.) to Ops Center Damage Assessment Coordinator
- Keep abreast of major weather developments and proactively contact Ops Center Damage Assessment Coordinator regarding availability

Engaged in the Following Sub-processes:

- Mid-Level Damage Assessment
- Statistical Damage Assessment
- Targeted Damage Assessment
- Final Sweep
- Forensic Assessment

Damage Assessment Driver

Job Function

This position is typically filled by personnel with no experience in distribution or transmission systems. This position will work with the Damage Assessor.

Job Description

This position is primarily responsible for:

- the safe operation of the patrol vehicle
- entering damage assessment data that Damage Assessor has identified
- performing pre-flight inspections of vehicle
- participate in pre-job briefings prior to each assessment

Systems For Damage Assessment Team

- Damage Assessment Software (PC Based) for Ops center DA Coordinators
- Damage Assessment Software (Web Based) for Zone and System DA Coordinators
- OMS
- Resource On Demand Software
- Environmental input tool

Supplemental Information

FDO Major Storm Workflow Process (from DCC web Site):

FDO Major Storm Workflow Process

DEF Damage Assessment SharePoint Site:

Damage Assessment SharePoint Site

DA Checklist

Damage Assessment Reporting Software (Web Based – System and Zone Level):

Statistical DA Tool-System Level

Storm ETR and Resource Calculator (SERC) Tool:

Mid-Level SERC Tool

ATTACHMENT U

Comparison of Historical Trends
Overhead vs. Underground (Adjusted Data)

OVERHEAD INDICES																
SAIDI	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	73.3	74.0	64.9	60.7	62.4	66.6	63.8	71.2	82.5	76.3	63.3	78.9	74.9	69.9	75.1	72.5
SAIFI																
	1.125	1.155	1.068	0.992	0.986	1.015	0.944	0.986	1.140	0.987	0.880	1.017	1.011	0.914	0.918	0.858
CAIDI																
	65.2	64.0	60.8	61.2	63.3	65.6	67.6	72.2	72.3	77.4	71.9	77.6	74.1	76.5	81.8	84.5
L-Bar																
	102.3	101.3	102.1	105.2	106.7	109.7	104.9	115.6	112.7	125.8	112.7	118.4	119.3	122.4	127.5	132.6

UNDERGROUND INDICES																
SAIDI																
	14.7	11.8	12.0	13.5	12.5	11.9	12.0	11.6	10.8	10.6	10.1	10.2	10.2	9.8	9.9	10.2
SAIFI																
	0.130	0.111	0.122	0.120	0.107	0.112	0.104	0.092	0.086	0.082	0.075	0.075	0.075	0.070	0.065	0.066
CAIDI																
	112.9	106.2	98.7	112.8	116.6	105.6	115.2	125.9	126.0	129.8	134.0	136.0	137.3	140.0	151.0	153.5
L-Bar																
	145.8	141.3	143.7	156.5	155.4	157.2	161.2	169.4	161.3	176.0	182.0	181.3	177.8	171.1	179.2	183.7

ATTACHMENT V

OVERHEAD/UNDERGROUND RELIABILITY (OH/UG) (Initiative 7)
Section D

2017				
OVERHEAD METRICS	# OF Miles	CMI	CI	L-Bar
	25,603	128,876,643	1,524,374	132.6

UNDERGROUND METRICS	# OF Miles	CMI	CI	L-Bar
	23,556	18,137,837	118,134	183.7

ATTACHMENT W

Report on Collaborative Research for Hurricane Hardening

Provided by

The Public Utility Research Center
University of Florida

To the

Utility Sponsor Steering Committee

Final Report dated February 2018

I. Introduction

The Florida Public Service Commission (FPSC) issued Order No. PSC-06-00351-PAA-EI on April 25, 2006 (Order 06-0351) directing each investor-owned electric utility (IOU) to establish a plan that increases collaborative research to further the development of storm resilient electric utility infrastructure and technologies that reduce storm restoration costs and outages to customers. This order directed IOUs to solicit participation from municipal electric utilities and rural electric cooperatives in addition to available educational and research organizations. As a means of accomplishing this task, the IOUs joined with the municipal electric utilities and rural electric cooperatives in the state (collectively referred to as the Project Sponsors) to form a Steering Committee of representatives from each utility and entered into a Memorandum of Understanding (MOU) with the University of Florida's Public Utility Research Center (PURC). The third extension of this MOU was approved last year by the Research Collaboration Partners and now extends through December 31, 2018.

PURC manages the work flow and communications, develops work plans, serves as a subject matter expert, conducts research, facilitates the hiring of experts, coordinates with research vendors, advises the Project Sponsors, and provides reports for Project activities. The collaborative research has focused on undergrounding, vegetation management, hurricane-wind speeds at granular levels, and improved materials for distribution facilities.

This report provides an update on the activities of the Steering Committee since the previous report dated February 2017.

II. Steering Committee Workshop

On December 5, the Steering Committee organized a web-based workshop for over 40 participants from the Project Sponsors hosted by the University of Florida. The workshop was held to orient new members on the model of the costs and benefits of storm hardening strategies and to discuss the integration of data from recent storm activities.

The presenter for the workshop was Ted Kury. He first described the model and the overall flow of the simulation element. He then described the 115 different inputs to the model and demonstrated where to find them. Next, he demonstrated a test run of 50 hurricane years for the state and demonstrated how the model illustrates the shift in the probability distribution of the outcome variables. Finally, he demonstrated the model's ability to simulate single hurricanes, both historical and hypothetical.

Following the demonstration, the members discussed strategies for adding data from recent storm experiences to the model.

III. Undergrounding

The collaborative research on undergrounding has been focused on understanding the existing research on the economics and effects of hardening strategies, including undergrounding, so that informed decisions can be made about undergrounding policies and specific undergrounding projects.

The collaborative has refined the computer model developed by Quanta Technologies and there has been a collective effort to learn more about the function and functionality of the computer code. PURC and the Project Sponsors have worked to fill information gaps for model inputs and significant efforts have been invested in the area of forensics data collection.

In addition, PURC has worked with doctoral and master's candidates in the University of Florida Department of Civil and Coastal Engineering to assess some of the inter-relationships between wind speed and other environmental factors on utility equipment damage. PURC has also been contacted by engineering researchers at the University of Wisconsin and North Carolina State University with an interest in the model, though no additional relationships have been established. In addition to universities, PURC was again contacted by researchers at the Argonne National Laboratory who expressed interest in modeling the effects of storm damage. The researchers developed a deterministic model, rather than a probabilistic one, but did use many of the factors that the Collaborative have attempted to quantify. They are currently working to incorporate stochastic elements into their model and have consulted PURC for guidance. Every researcher that contacts PURC cites the model as the only non-proprietary model of its kind.

The research discussed in previous years' reports on the relationship between wind speed and rainfall is still under review by the engineering press. Further results of this and related research can likely be used to further refine the model.

IV. Wind Data Collection

The Project Sponsors entered into a wind monitoring agreement with WeatherFlow, Inc., in 2007. Under the agreement, Florida Sponsors agreed to provide WeatherFlow with access to their properties and to allow WeatherFlow to install, maintain and operate portions of their wind monitoring network facilities on utility-owned properties under certain conditions in exchange for access to wind monitoring data generated by WeatherFlow's wind monitoring network in Florida. WeatherFlow's Florida wind monitoring network includes 50 permanent wind monitoring stations around the coast of Florida, including one or more stations located on utility-owned property. The wind monitoring agreement expired in early 2012; however, it was renewed in April 2017 and will renew automatically annually on the effective date for an additional one year period, unless terminated by the parties to the agreement.

V. Public Outreach

In last year's report we discussed the impact of increasingly severe storms on greater interest in storm preparedness. PURC researchers continue to discuss the collaborative effort in Florida with the engineering departments of the state regulators in Connecticut, New York, and New Jersey, Pennsylvania, and regulators in Jamaica, Grenada, Curacao, Samoa, and the Philippines. While all of the regulators and policymakers showed great interest in the genesis of the collaborative effort, and the results of that effort, they have not, at this point, shown further interest in participating in the research effort. PURC researchers also engaged with the popular media in preparation for, and in the wake of, Hurricane Irma.

VI. Conclusion

In response to the FPSC's Order 06-0351, IOUs, municipal electric utilities, and rural electric cooperatives joined together and retained PURC to coordinate research on electric infrastructure hardening. The steering committee has taken steps to extend the research collaboration MOU so that the industry will be in a position to focus its research efforts on undergrounding research, granular wind research and vegetation management when significant storm activity affects the state.

ATTACHMENT X

Document title:	Document number:
Distribution System Storm Operational Plan	GDLP-EMG-DOS-00004
	Revision No.: 001
Keywords:	Applies to:
emergency; distribution system storm operational plan	Florida Delivery Operations and Supporting Storm Organizations - Florida

Introduction

At Duke Energy Florida we believe that people succeed because they act with integrity, collaborate effectively, embrace diversity, and communicate. Not only do they take responsibility for their actions and achieve objectives with speed and agility, they are intolerant of mediocrity and produce results that matter.

As a company our goals are to exceed customer expectations, to deliver superior shareholder value, and to challenge employees to excel. With these goals and principles in mind, we have developed the Distribution System Storm Operational Plan (DSSOP).

This plan provides a blueprint for safely restoring power to our customers in the shortest amount of time following a storm event. Designed with the flexibility to respond to both small and large storms, this comprehensive plan reflects an organizational redesign at Duke Energy Florida. The storm plan also incorporates internal feedback, suggestions and customer survey responses, documenting and applying the invaluable knowledge gained from experience.

Zones, Operation Centers and supporting storm organizations are responsible for following the storm plan as identified in this document and linked storm support documents. In addition, each storm organization shall maintain an updated storm organizational chart identifying personnel in key storm roles and contact information. When applicable, this information should be inserted into the storm organizations storm folder located on the storm center web site. Operations and Zone storm centers are responsible for placing their updated storm organizational charts and contact information on their respective web sites prior to the start of hurricane season. This information should be updated, as needed, throughout the storm season.

Built on Experience

At Duke Energy Florida we have faced more than our share of storms and hurricanes. In 2004, our company received the Emergency Response Award from Edison Electric Institute for “outstanding work under extreme conditions” during the unprecedented four hurricanes that pounded Florida and the Carolinas in August and September of that year. We have received this award a record five times, including our responses to hurricanes Bonnie (1998) and Floyd (1999), the January 2000 winter storm, and the December 2002 ice storm. In 2005, our company received the EEI Emergency Assistance award which recognized our storm restoration efforts in support of outside electrical utilities located in the Southeastern Electric Exchange (SEE).

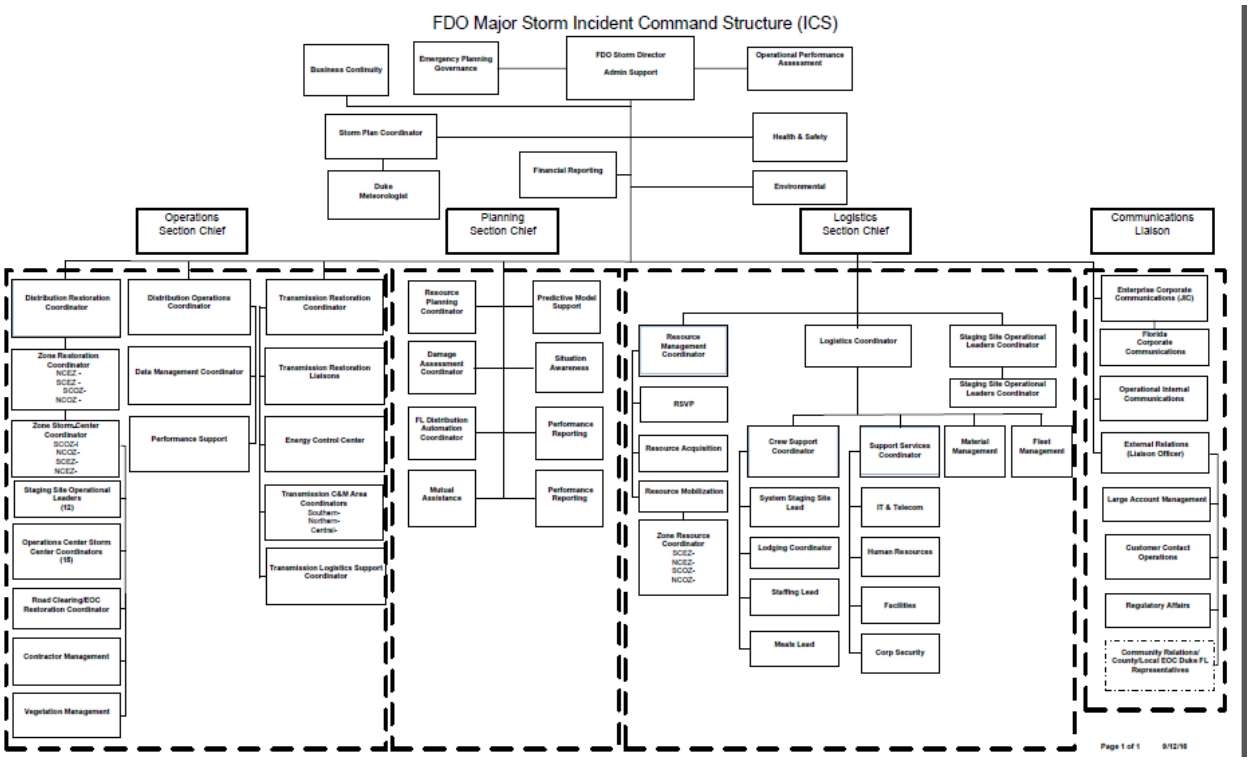
By applying lessons learned from past events and during the 2004 hurricane season, we were able to quickly and efficiently implement best practices, maximize manpower, and reduce damage to equipment. Lessons learned from all past storms and hurricanes have been integrated into this plan, so we may continue to produce results that matter with speed and agility before, during, and after a storm.

Plan Overview

The objective of this plan is to establish a consistent approach and level of responsibility for each emergency response. This document provides the authority and coordination needed to restore electric service and maintain business continuity from emergency storm events. This plan consolidates authority to a System Level “top down” organizational structure for major storm responses and organizational structure for minor storm events.

In addition, the plan offers guidance for transitioning from a minor event that escalates to a system level-major event.

The following is a representation of the Distribution System Storm Organization:



[1DF-DEF Major Storm Incident Command Structure]

[1DF-DEF-Major Storm Incident Command Structure Contacts]

Authority

The VP of Engineering & Construction Planning is the primary owner of this document and shall direct the maintenance of this document through the Distribution Department. The VP of Engineering & Construction fulfills the storm role: Distribution System Storm Coordinator when the Distribution System Storm Center is activated for major system level emergencies. Each storm organization will have an internal command and control structure that ultimately reports to the Distribution System Storm Coordinator.

Referenced Storm Title

Storm Process Owners(Section Chiefs/Liaison) – Each storm organization, as identified in the above storm organizational chart, shall identify a lead or individual person that is responsible for that storm organizations storm plan, preparedness and restoration efforts. This person is typically identified throughout this document as Storm Process Owner.

Supporting Storm Process Owner – Typically those storm organization leads other than the Distribution System Storm Center, Zone or Operations Storm Centers.

Using the Plan

The purpose of the Distribution System Storm Operational Plan (DSSOP) is to ensure that all employees are informed and aware of the roles they serve in the event of a major storm. Many of you whose jobs do not normally require involvement in service restoration will be called upon to offer your talents and services in providing logistics support, guiding crews, answering telephones at the Customer Contact Operations Center, or other critical roles.

To make best use of this plan, carefully read and understand this document and the section or sections that apply to your role for your organizations storm plan listed at the back of this document. It is also helpful to read the roles and responsibilities of your interface contacts, identified and hyper-linked in your storm plan. The table of contents, listed on the end of this document provides links to individualized functional storm plans, each of which contains (or will contain in a future revision as information becomes available) a mission statement, functional process and/or sub-process descriptions, flow charts, organization charts, job descriptions, key interface points, checklists of actions, lists of needed tools and information, an inventory of systems used, and links to supplementary information. Storm role codes are provided for each job title.

All Storm Process Owners will be required to certify annually that their storm organizations are prepared for a major storm event. The document below shall be completed, signed and forwarded to the Distribution System Storm Center each year.

Storm Organization Certification Form

Testing the Plan

Storm Process Owners are responsible for determining if and when testing is necessary for effective storm plan implementation, prior to the start of storm season. Preparedness and action plans to test their individual organizations can include, but are not limited to:

- Simulated emergency conditions
- Drills
- Communication flow reviews
- Personnel and duties assignment listings review
- Resource listings reviews
- Evaluation of action plan readiness
- Priority circuits and customer listing s review
- Damage assessment plans
- Relevance of forms and reports format review

The Distribution System Storm Center will sponsor and facilitate an annual system level storm drill to test organizational preparedness prior to the start of hurricane season. In addition, the DSSC will sponsor a lessons learned process following the drill to ensure existing storm processes are being institutionalized throughout the organization and gaps in storm planning are identified and resolved.

Updating the Plan

The Duke Energy Florida DSSOP is a dynamic document that requires periodic enhancement and regular updates to maintain its effectiveness in time-critical situations. Maintenance of the DSSOP is the responsibility of the Distribution System Storm Coordinator and is accomplished in the following manner:

➢ Updating Key Storm Personnel

Telephone numbers and personnel assignments shall be updated prior to the hurricane season. In addition, updates should be made as they occur during each storm season. Zones and Operations Centers shall post their updated list of storm personnel and contact information on their respective storm web sites by May 30, with further updates required as personnel transition in and out of the organization.

➢ Lessons Learned Process

Each Supporting Storm Process Owner will conduct a lessons learned process with their storm teams within 30 days after each major storm and have each member review and critique planning and restoration efforts. The evaluation process should include the following:

- Things that went well—successes
- Things that need improvement—opportunities
- Lessons learned
- Follow-up action plans

The General Staff shall forward lessons learned and task assignments to the Distribution System Storm Coordinator who will ensure the quality of this integrated storm document.

Each Operations Center Coordinator will send their list of recommended improvements to the Zone Storm Manager, who will compile the zone level list and forward it to the Distribution System Storm Coordinator. The Distribution System Storm Coordinator will then determine which items should be pursued to effect any system-wide changes and will develop an action plan for implementing these improvements.

Lessons Learned

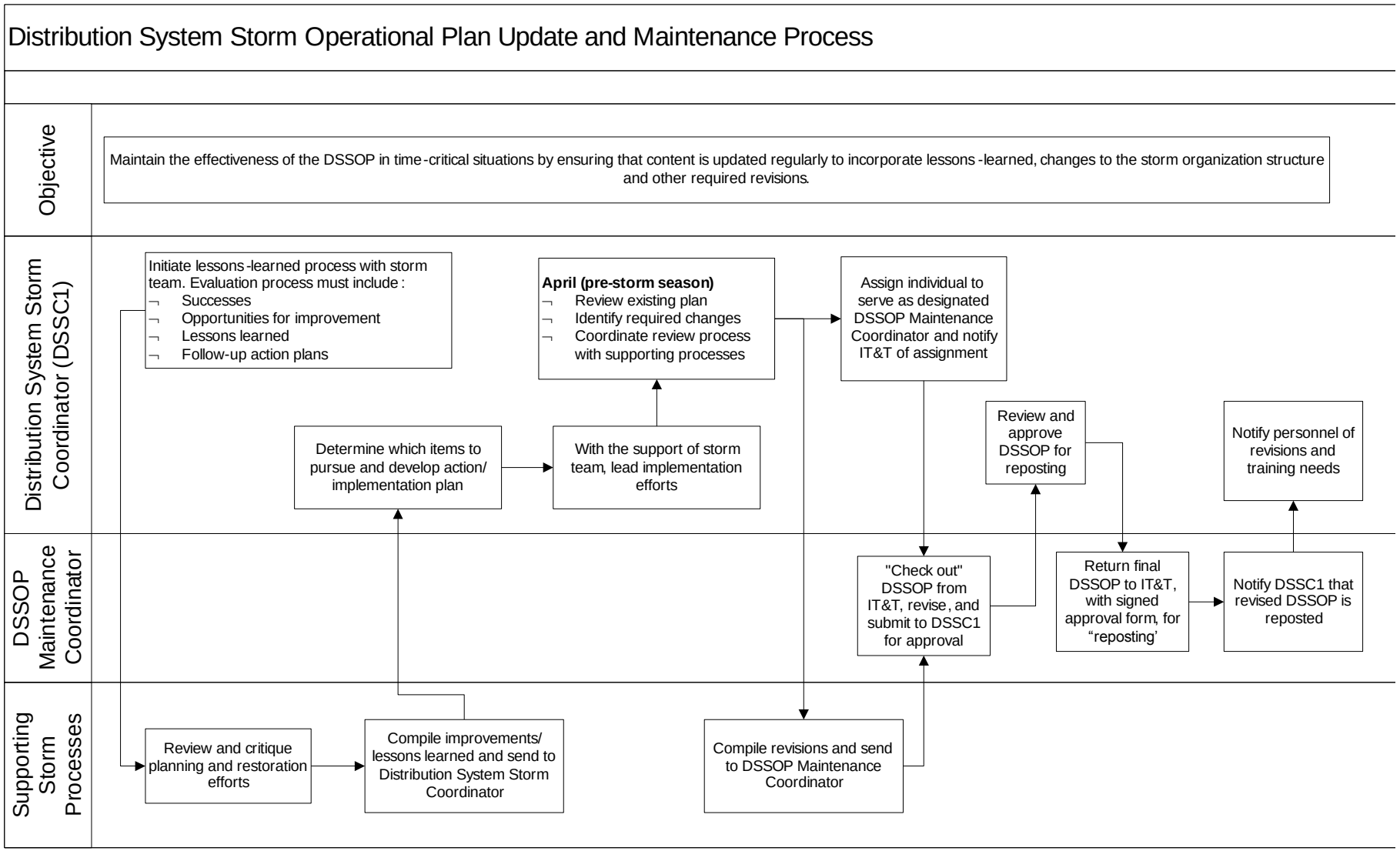
Plan Maintenance

Each spring prior to the start of hurricane season, the Distribution System Storm Coordinator will sponsor a review of the DSSOP for any needed changes. The Distribution System Storm Coordinator Assistant will coordinate the review process with all functional processes supporting the DSSOP. Each functional process owner will be responsible for making revisions. The Distribution System Storm Coordinator, with the support of the Distribution System Storm Coordinator Assistant, will ensure that necessary changes are incorporated.

The Distribution System Storm Coordinator is responsible for notifying Delivery Operations personnel of any revisions to the DSSOP and ensuring that any training needs are accomplished in a timely manner, prior to the start of the hurricane season.

The following sub-process identifies key responsibilities for updating the DSSOP:

Distribution System Storm Operational Plan Update and Maintenance Process



Approach to Storm Preparation

Personal Safety

Personal safety is a shared responsibility of all employees. The safety of our fellow employees as well as the safety of the general public and contract resources is the most important consideration when implementing any major emergency plan:

- Keys of Life principles will be followed at all times.
- Under no circumstances will safety be sacrificed for speed.
- Job briefings are the cornerstone of all work to be performed safely and shall be utilized to identify and mitigate all hazards associated with the work, following appropriate safe work practices.
- No employee shall attempt any restoration activity or establish staging sites where environmental or weather conditions are deemed unsafe.
- Switching and tagging work rules shall be followed at all times, regardless of dispatching authority or control.
- Work at night shall be well planned and organized.

Training

The process owner of each storm organization is responsible for ensuring their personnel are assigned to a response role in the RSVP tool, are trained to the required responsibilities and are able to safely execute their assigned duties.

Environmental Stewardship

Duke Energy Florida has established itself as a good steward of the environment. Environmental concerns such as transformer oil and fuel spills must be reported immediately to the Zone level Environmental Lead/Coordinator or reported to the Oil Spill Hot-Line. Spills should be contained as quickly as possible to mitigate damage to the environment, especially when waterways are at risk.

Major Storm

Damage to facilities may be caused by hurricanes, tornadoes, ice, and other natural causes or disaster, or the damage may be caused by civil disturbances.

The use of the term “Major Storm”, as defined by IEEE Std 85901987; section 6.3.2 (page 10), indicates that weather has exceeded design limits of the facilities and results in all of the following:

1. Extensive damage to facilities
2. More than a percentage of customers out of service (10% or above)
3. Service restoration time is longer than a specified time (24 hours or above)

Note: Typical industry criteria are 10% of customers out of service and 24 hours or more restoration time. Percentage of customers out of service may be related to a company operating area rather than to an entire company.

There are no specific measures for EXTENSIVE MECHANICAL damage. However, the term does not include electrical damage such as internal failures of transformers or conductors. Extensive refers to the magnitude of damage and the distance over which the damage extends. Therefore, it would be expected that the storm was of sufficient severity to cause damage of an unusual magnitude at multiple locations on the system.

Minor Storm

Daily thunderstorm monitoring and coordination of operation center resources for level 1, level 2 and most level 3 storms are generally controlled by the Distribution Control Center (DCC). The DCC facilitates the coordination and management of the Zone Mid-level Storm Plans by supplying information to the Zone General Manager's or (Zone Point of Contacts and local Ops Center Point of Contacts. Enabling them to make informed decisions with regards to storm restoration within their respected zones.

1DF-DEF DCC Mid-Level Escalation Guidelines

Emergency Response Levels

Emergency response levels are generally associated with outages due to storms or other emergency situations. However, a large reduction of employees due to pandemic health outbreaks could also trigger these response levels. There are four (4) interrelated emergency plan levels. Where damage to our lines and equipment has occurred, one or more, or all levels may be implemented. This is dependent upon the intensity and speed of the storm, the amount of damage and the capability of the local personnel to restore service in a timely manner. When activating the various emergency response levels, the controlling authority must remember to "Think to the next level" in order to establish timely transitions between the levels.

The four (4) event levels are:

- **Level 1** - One Ops Center impacted (Resources within zone utilized) - Least Severe, typically with an ETR between 0-6hrs
- **Level 2** - More than one Ops Center impacted within a zone (Resources within zone utilized) – Moderately Severe, typically with an ETR between 6-12hrs
- **Level 3** – One or more Ops centers impacted within a zone(Resources from other zones utilized – Severe, Typically with an ETR between 12-24hrs
- **System (level 4)** – Most Severe, requiring system wide or mutual assistance resource plans, typically with an ETR greater than 24hrs or a forecasted major event (hurricane, national event)

Storm Level Definitions

Storm Level	Normal	Level 1	Level 2	Level 3	Level 4
Resource Scope	On Duty Resources (1st resp)	Op Center Resources (1st and 2nd resp)	Zone Resources	Multiple Zones	System and Mutual Assistance

These levels may be implemented at any given time depending on the emergency. Often, emergency response efforts start out as minor events and then quickly transition into a more significant event. The outage restoration rate, assessment of damage and the number of new outages are important factors in the decision to move to a higher response level. Each level has an identified authority that implements their respective part of this plan and participates in the decision to transition to a higher emergency level.

Contacting Customers

Revenue Customers - Normal work activities will be affected when crews are supporting storm restoration efforts. Customers may understand why their scheduled work could be delayed should a storm event impact their area. However, deployment of local DEF resources to other areas impacted by storm events, that cause similar delays, may not be understood by our customers. To minimize customer concern in these circumstances, proactive calls to the customers should occur when it appears that scheduled work may be delayed due to major events. This will require a collaborative effort between the responsible Operations, Customer Contact Organization and Resource Management team.

Care Customers - Those accounts that are tagged “Life Support” in our CSS data base are to be contacted by the Customer Care Operations (Call Center) prior to the arrival of a Tropical System. The purpose of this function is to ensure all potentially impacted Life Support customers are contacted and advised that Duke Energy Florida will be unable to provide priority restoration. In the advent of an extended outage due to the storm, these customers are to find alternate locations, such as shelters that are suitable for life support functions during the restoration effort.

Weather Information

Duke Energy Florida is supported by the Duke Meteorology Team. The Duke Meteorology Team provides daily weather updates and forecasts for major weather events. During approaching tropical events, the Duke Meteorology Team Weather provides daily graphical tracking maps and projections on wind and rain. The Distribution System Storm Center forwards this information to supporting storm organizations. In addition, these projections will be posted in the Current Storm Information folder located on the Duke Energy Florida Storm Center Major Storm SharePoint page. Finally, the Duke Meteorology Team supports the DCC and Zone Operation and System storm conference calls with updated forecasts and projections for the approaching storm.

Storm Room Standards

Storm rooms or storm centers are the command and control authority while the emergency response plan is in effect. For a system level response, the command and control hierarchy is as follows:

1. System Storm Center
2. Zone Level Storm Room
3. Operations Center Storm Room

Effective operation of a storm center or storm room is critical to efficient and speedy responses to emergency situations. The following guidelines should be utilized:

System Storm Center Activation Checklist

Storm Room Standards

Planning for Storm Events

Restoration Priorities

The following guidelines should be utilized by the Storm Process Owners in coordination with LAM and External Relations to determine restoration priorities:

The following guidelines should be utilized by C&M Operations and the Storm Process Owners in coordination with LAM and External Relations to determine restoration priorities:

- **Priority 1** – Feeders, lines and service drops for nuclear sirens, hospitals, municipal water & sewer treatment plants (high volume lift stations) and emergency shelters. Industrial plants with public safety concerns (Ammonia Plants)
- **Priority 2** – Feeders, lines and service drops for EOCs, law enforcement, fire & rescue stations, central communications centers and food distribution centers.
- **Priority 3** – Feeders, line and service drops for medical assistance facilities and commercial nursing homes identified by Large Account Management
- **Priority 4** - All other feeders, lines, service drops and equipment.

Paralleling these priorities, are requirements for restoring communications links that facilitate the restoration of electric service. The Energy Delivery Group will assist IT&T by giving reasonable priority to electric facilities serving two-way radio sites, PBX sites, fiber optics and microwave sites, etc. In addition, the Delivery Operations Group will make resources available on a priority basis to support restoring fiber optic cables which carry communications traffic for the Company.

Operational Restoration Performance

The purpose is to assess conformance to DSSOP during a major storm restoration.

Operational Performance Time-line

Operational Performance Guiding Principles

Operational Performance Assessment

GIS Data Integrity

Maintaining the data integrity of our distribution information systems is important for day to day operational processes. Construction changes that occur during restoration efforts can negatively impact these information systems if not properly documented. The guiding principle is to restore our electric grid system back to original status. These changes are more economically and efficiently documented at the time the construction change occurred, but isolated cases may take place to support restoration efforts. The need for a re-verification or final sweep of an area after the restoration effort has been completed will be performed and lead by the Damage Assessment group.

At the point during a mid-level or major storm (outage volume threshold) where the determination is made by the Person in charge at the ops center, zone, or system level as to whether the yards will revert to paper during restoration.

Distribution Control Center

The Distribution Control Center (DCC) is responsible for monitoring the status of and issuing switching orders for system level distribution lines and equipment and underground loop designed facilities. As a major tropical system approaches or when restoration efforts require, the DCC may need to delegate their switching and tagging authority and/or dispatching authority for OMS and field equipment to appropriate Zone Storm Centers. The transferal of switching and tagging responsibility from the DCC to Zone Storm Centers and from Zone Storm Centers back to the DCC shall be documented utilizing the following form:

Transfer of Switching and Tagging Authority

Purchase Controls Measures

In support of major emergency events, Delivery Operation's purchase control processes are required to be in alignment with Duke Energy Sourcing and Purchasing guidelines, while enabling emergency response teams to execute plans to support safe and timely restoration. Guidelines and processes have been developed to support organizations establishing contracts for resources acquisition, vendor support, services. The process also provides structured estimation, communication and approval during the actual event.

Resource Management

The largest and most critical storm response resources are company employees and contractor line and tree crews. The efficient use of these valued resources directly affects the level of success with safety, timely restoration and cost for any restoration effort.

1) Duke Energy Florida Employee Mobilization and Tracking

In the event of a hurricane, major ice storm or other system emergencies, it may be necessary to deploy Duke Energy Florida employees across Departmental, Business Unit or Zone boundaries to support a timely restoration effort. The successful use of these resources requires precise communications between various groups and storm room/centers. The Resource Storm Volunteer Program (RSVP) is the authorized mobilization, tracking and release tool for Duke Energy Florida employees, non-line & tree contractors and activated retirees. Each storm organization and Department will identify a RSVP Coordinator and a backup to utilize and maintain the RSVP tool for major emergency responses.

2) On or Off System Crew Mobilization and Tracking

Resource Management within Logistics is responsible for maintaining an updated list of contractors in the service area who have a contract agreement with the company. The Contract Manager is responsible for keeping an updated zone list of contractors available for use during a storm event to support restoration efforts.

In the event of a hurricane, major ice storm or other system emergencies, it may be necessary to bring in off-system line and tree resources to support a timely restoration effort. The successful use of these resources requires precise communications and coordination between various storm rooms/centers. The resource tracking tool is the authorized mobilization, tracking and release tool for contract line and tree resources supporting Delivery Operations. The resource tracking tool shall be utilized by qualified employees at all affected Operations, Zone and System Storm Centers.

Prior to releasing restoration personnel, a thorough ride-out inspection should be performed to ensure restoration repairs and tree work has been completed and any mitigation plans have been established.

The following guideline should be used for the mobilization, tracking and release of off-system resources:

Off-System Crew Mobilization Guidelines

3) Handling of Crews

- Receiving Crews: Upon reporting for duty, the local Resource Management Coordinator should evaluate each person's work history to determine how many hours of work are available before rest should be scheduled. All prior hours worked, including travel time that have not been preceded by an eight hour rest period, should be counted.

- Crew Utilization: The Operations Center Resource Management Coordinator is responsible for making sure the location of each crew compliment is tracked during the storm restoration effort. Each off-system crew should have an assigned Zone/Feeder/Field Coordinator to monitor their work progress. Each crew lead/foreman should be supplied with the following:

    - Local maps
    - Safety information and instructions
    - Emergency contact list
    - Local emergency facilities locations
    - Staging area maps/directions
    - Assigned feeder one lines

    Crew packages should be stored at each Operations Center. Additional information regarding laundry services, food services and lodging should be included, when applicable.

- Transferring Crews: When crews from other areas are in route, the Substation/Zone Coordinator will be given the name of the person in charge, the number of personnel, and the ETA by the Ops Center Resource Management Coordinator. The Substation/Zone Coordinator can then organize them into a work unit and assign a Feeder/Field Coordinator to receive them. The person in charge of the crew will give a list of names and equipment to the Feeder/Field Coordinator. The Feeder/Field Coordinator will verify the list and log the arrival time. Crews will not be released without consent from Substation/Zone Coordinator to do so. When crews are released, the Feeder/Field Coordinator will log their departure time. The Feeder/Field Coordinator in one area may be assigned to deliver the crew to a new Feeder/Field Coordinator in another area. No crews can be released to go off system or travel to another zone without the approval and direction from the System Resource Management Group.

- Working Hours: Standard Hours in response of a Major Event will consist of 2 schedules (Day-time- 5am to 9pm and Night-time- 5pm to 9am). Exceptions will be managed by each Storm Process Owner to establish work shifts for those resources assigned to them. In the initial stages of the restoration effort it is general practice to work up to 16 hours, including travel time, without an extended rest period. As the 16 hour threshold approaches, each Process Owner will evaluate the extended response time needed and implement rotational shift assignments for all personnel, as needed. Operation Center Storm Coordinators should make assignments to utilize a minimum of 80% of their assigned work force during daylight and early evening hours and establish an eight (8) hour rest period, where practical, before beginning a new shift.

- Creature Comforts: Rooms, laundry service, meals, drinks, etc., will be coordinated through the System Logistics group by the Process Owners of each storm organization.

- Vehicles & Equipment: If crew personnel are lodged for the evening, Logistics personnel will identify an area near the lodging establishment for the parking of line vehicles and equipment if the lodging establishment cannot accommodate them. Vehicles and equipment should be safely secured and where possible, security personnel or local police should be asked to patrol the area from time to time to reduce exposure to vandalism or theft.

Logistics - Staging & Mustering Sites

The efficient staging of vehicles and equipment, and providing personnel with meals, medical care, fuel, material and sleeping quarters directly affects the level of success for any restoration effort.

For all level 4 responses and in some Level 3 responses, the normal line & service facility is not able to coordinate the volume of resources required to restore service. For the Florida Service territory, the Zone Storm Managers are responsible for coordinating the identification of staging sites within their respective areas. Ideally, there should be at least two staging areas identified per Operations Centers; the second being available should the first site be flooded or otherwise not available.

The preferred staging site would be able to accommodate at least 500 linemen and 250 line trucks. The staging site should have a prepared layout that indicates traffic flow, security area, pole storage, transformer storage, re-fueling arrangements, old material storage, administrative space with supporting communications lines and equipment, restroom facilities (portable or fixed), electricity, lighting, water & ice storage and food preparation and eating area. These staging sites will normally be manned, maintained and managed by Logistics personnel specifically trained to these responsibilities.

Damage Assessment

Accurate and timely damage assessment information is critical to being able to plan our response efforts and to set accurate Estimated Time of Repairs (ETR's) in our Outage Management Systems (OMS). In assessing damage, qualified employees and/or contractors will be dispatched to identify, document and report the type and severity of damage. In addition, damage assessors play an important role in identifying accounts that cannot receive service due to structural damage and reporting environmental spills to the Zone Environmental Lead or Coordinator.

For level 4 storms, Centralized Damage Assessment teams are available to assist in this process. Normally, a two person Damage Assessment teams are dispatched to assist the Operations Center. To utilize these teams to their fullest, the Operations Center Storm Coordinator should have GIS maps available for the targeted feeders. The Damage Assessment teams will perform a damage assessment in statistically valid areas first, then patrol the target feeders and mark every pole, span of wire and transformer that is down. Line patrolling is performed by both vehicles and helicopters. Once these teams have done their damage assessment assignment they may be available to remain in the Operations Centers to serve as support resources.

Data Management

Data Management plays an increasingly important role in the restoration effort from major events. This group is responsible for updating and tracking OMS outages and customers restored. Data Management is the authorized storm organization that supplies the outage information utilized by the Company for updating employees, customers, news channels and regulatory personnel on the progress of the restoration effort.

The Tactical Management Coordinator in each Operations Center is responsible for seeing that this function is properly manned and managed.

Truck and Vehicle Convoys

Duke Energy Florida's Public Affairs group will initiate the procedures to ensure that state law enforcement agencies cooperate with our need to move trucks, vehicles and other equipment safely and quickly throughout the United States during major emergency responses. Public Affairs will ask state law enforcement officials to waive requirements that utility or contractor vehicles stop at weigh stations. In addition, a request will be made to suspend enforcement of fuel permits, size & weight restrictions, and other requirements for vehicles responding to the emergency. For additional details, see the following guideline:

Storm Plan for Truck Convoys-Waivers

Tracking of Road Closings

Efficiently transporting manpower, materials and fuel is dependent upon our knowledge of road closings. State DOT website postings for road closing information can be inaccurate and may not be up to date. Our local material delivery personnel, line & service employees and field support personnel develop accurate knowledge of road closings while performing their duties. The following procedure should be used to identify and track road closings reported by these individuals:

1. The EOC Representatives supporting County/Local EOCs will communicate any road closures on the Communications call and and inform the System Storm Center.
2. Each affected Zone Storm Center and the System Storm Center shall identify an individual in their center that will act as the single point of contact for consolidating road closing information.
3. The Zone Storm Centers and the System Storm Center shall equally share responsibilities for communicating road closing information.
4. All road closing information shall be sent to the System Storm Center contact, which should be associated with the Crew Mobilization Team.
5. Road closing information shall be consolidated at the System Storm Center into one document titled "Road Closings".
6. The Road Closings document shall be posted and updated as necessary on the storm center intranet site under Current Storm Information for use by traveling members of Duke Energy Florida.

Post Response Plan and Functions

1) Post Emergency Response Recovery Plan – Once restoration efforts have been completed, the following should be utilized as a guideline for establishing a prioritized work list:

- Opening points should be identified and corrected to ensure the integrity of GIS and OMS.
- Primary phasing, recloser status and fuse and transformer size should be verified to ensure the integrity of GIS and OMS.
- Grid Mod asset restoration status
- All DIS or GIS construction changes documented during the restoration effort shall be updated in appropriate applications.
- Vegetation mitigation plan shall be developed and implemented with 10 days of completion of restoration effort.
- Pending customer revenue work should be evaluated and rescheduled.
- Missing or damaged streetlight facilities should be identified and scheduled for repair or replacement.
- Significant amount of missing GIS numbers in an area should be replaced.

The following should be utilized to help establish a recovery plan:

Post Storm Recovery Plan

2) Clean-up Crews - After a major emergency response has been completed, there is often a need to perform “clean-up work”. The work consists of straightening leaning poles, re-sagging lines, re-installing or repairing streetlight fixtures, cutting danger limbs and/or trees and correcting any temporary repairs. The best resource that can be utilized for this work may be the off-system contract crews that can be held over. However, the cost of these resources and any mutual assistance agreements should be considered before utilizing them for this work. The Resource Management Team at the System Storm Center shall identify which contract resources are available for being held over and will work with the zone and operations center management team to develop a plan to efficiently complete this work.

3) Tree Removal Policy – When restoring power to customers as quickly as possible after a major event, line and tree crews cut trees and limbs off and away from power lines and equipment and leave the debris laying in place. Duke Energy Florida does not provide tree debris removal during storm restoration. Customers needing downed trees and limbs removed from their property should contact local tree contractors. Also, Duke Energy Florida does not remove any danger trees during storm restoration unless they pose an immediate threat to our facilities.

4) Revenue Customer Callbacks – Normal work activities will be affected when crews are supporting other areas during emergency responses. Customers may understand why their work could be delayed when they see a storm damage their area; however, when the storm hits elsewhere, customers may not readily tolerate delays in regular work caused by deploying local resources to those hard hit areas. To minimize customer concern in these circumstances, proactively call customers when it appears that regularly scheduled work may be delayed. This requires collaborative effort between the Operations Center and the Customer Service Center.

5) Grid Modernization Infrastructure – As a major emergency response nears completion, there is often a need to perform “Grid Mod clean-up work”. The work consists of Connection to Distribution power source, remounting the Nan device to the pole, antenna connections and reconnection of cable to the battery Access Power Units. The best resource that can be utilized for this work may be the off-system contract crews that can be held over. However, the cost of these resources and any mutual assistance agreements should be considered before utilizing them for this work. The Resource Management Team at the System Storm Center shall identify which contract resources are available for being held over and will work with the zone and operations center management team to develop a plan to efficiently complete this work.

FDO Interim RDR AMI Florida Storm Response Plan

Table of Contents

ATTACHMENT Y

Document title:	Document number:
TSSOP - Transmission System Storm Operational Plan: Introduction and Overview	GDLP-EMG-TRM-00025
	Revision No.: 000
Keywords: Transmission System Storm Center Operational Plan (TSSOP), Transmission Storm Plan, emergency management	Applies to: Transmission - DEF

Table of Contents

This document is the Transmission System Storm Operational Plan (TSSOP); referenced in the Table of Contents above is the complete TSSOP structured within seven (7) documents following Duke Energy document management and Incident Command System / Emergency Response (FEMA) general guidelines. This document, GLDP-EMG-TRM-00025-TSSOP Introduction and Overview provides the overall purpose, means, and structure of the storm response plan. The following six (6) documents listed/linked in the Table of Contents provide the specific approach, organizational structure, action plans for each organization: Transmission-FL System Storm Center; Operations Section, Planning Section, Logistics Section, Communications Section, and Finance Procedures for any given event. Appendices housed within the Transmission System Storm Center share point site contain Definitions, Forms, Process Flows, Checklists linked within these documents.

1.0 Introduction and Overview to the TSSOP – GDLP-EMG-TRM-00025

At Duke Energy Florida, we believe that Transmission succeeds because we act with integrity, collaborate effectively, embrace diversity, and communicate well. Not only do we take responsibility for actions and achieve objectives with speed and agility, we are intolerant of mediocrity and strive to produce results that matter. As a utility, our goals are to exceed customer expectations, to deliver superior shareholder value, and to challenge employees (each other) to excel. With these general operating goals and principles in mind, we have developed the Transmission System Storm Operational Plan (TSSOP).

The TSSOP provides a guideline for safely and efficiently restoring power to our customers following a storm event in which the transmission system impacts customer service. This plan is designed with the flexibility to respond according to most critical system impacts, as well as local community impacts, swiftly and safely. Transmission System, Regional Areas and supporting storm organizations are responsible for ongoing training, updating of this plan and associated org charts, documents, websites, roles and responsibilities annually for proven readiness as we begin storm season each year.

1.1 Mission/Purpose - Experience / Safety

Generally, when a storm event impacts the Florida Transmission System, power outages will be extensive. Where Transmission lines and equipment are damaged, it is likely that the Distribution System will be limited in complete restoration. Therefore, TSSOP mission is always to identify system priorities and the most effective and efficient means to bring back the system safely and swiftly. As a first responder, and public servant organization, our goals – especially when Duke Energy Distribution, other utilities and infrastructure are impacted – are to collaborate effectively, thus bringing the state's power grid back on line as soon as possible. At Duke Energy Florida, we have faced many storms and hurricanes. In 2004, our company received the Emergency Response Award from Edison Electric Institute for 'outstanding work under extreme conditions'.

During that year Florida and Carolinas had an unprecedented number of hurricanes pound the electrical systems. Duke Energy has received this award a record five times, including responding to Bonnie (1998), Floyd (1999), January 2000 Winter Storm, and the December 2002 Ice Storm. In 2005, we received the EEI Emergency Assistance Award which recognized our storm restoration efforts in support of other electrical utilities located in the Southeastern Electric Exchange (SEE).

By applying lessons learned from past events, including 2004 through 2016 hurricane seasons, we are able to apply best practices, maximize human resources, and reduce the likelihood of transmission equipment damage. These lessons learned have been integrated into this plan, so we may continue to produce results that matter with speed and agility before, during and after a storm event.

Human Performance and Safety principles are directly applied and incorporated into this plan. The TSSOP adopts the Health and Safety Vision: A healthy and injury-free workplace, sustained by behaviors that consistently demonstrate our commitment to the welfare of each other, our contractors and the communities we serve. The plan subscribes to the employees responsibilities of taking personal accountability, actively caring, and recognizing hazards. Additionally, Transmission's Keys to Life are expected to be applied and practiced during all storm activities. Responding to any transmission event is dangerous, therefore all responders are expected to work safely. Applying these practiced safety and health habits, Emergency / Storm event response will provide equally safe restoration of the transmission system.

In general, the TSSOP, in keeping with corporate guideline and Incident Command Structure (ICS), has been developed for use when responding to storms in Florida; where either significant damage to transmission facilities has occurred and the repair is beyond the capability of the local Transmission Maintenance Area personnel, or the National Weather Service issues a wide area severe weather warning (e.g., hurricane or ice storm expected to hit the Duke Energy Florida service area).

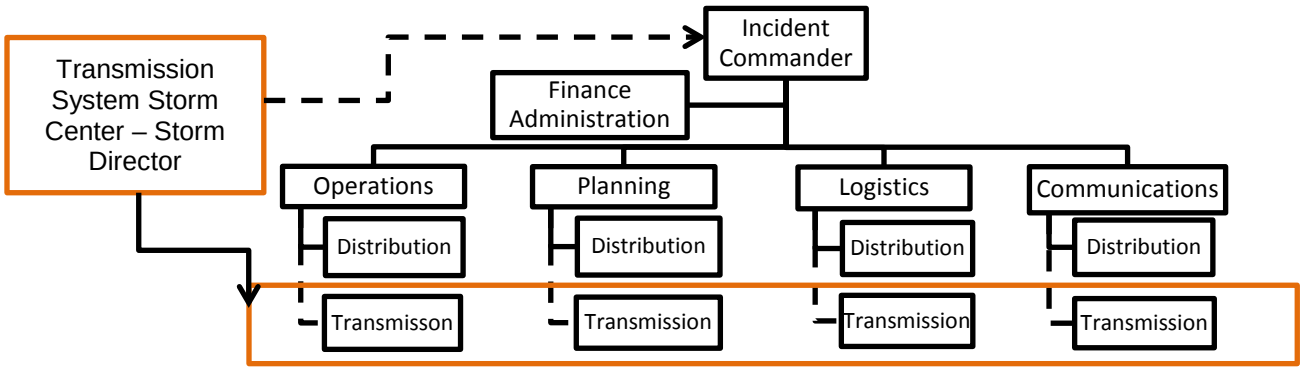
1.2 Plan Overview – Objective and structure

Duke Energy Florida has organized it's major storm organization within a general adaptation of Incident Command System, creating a simple and stable line of communication and event direction. In addition, DEF has committed to the ICS form and function so that DEF can clearly communicate to other utilities and emergency response agencies within Florida at the time of an event.

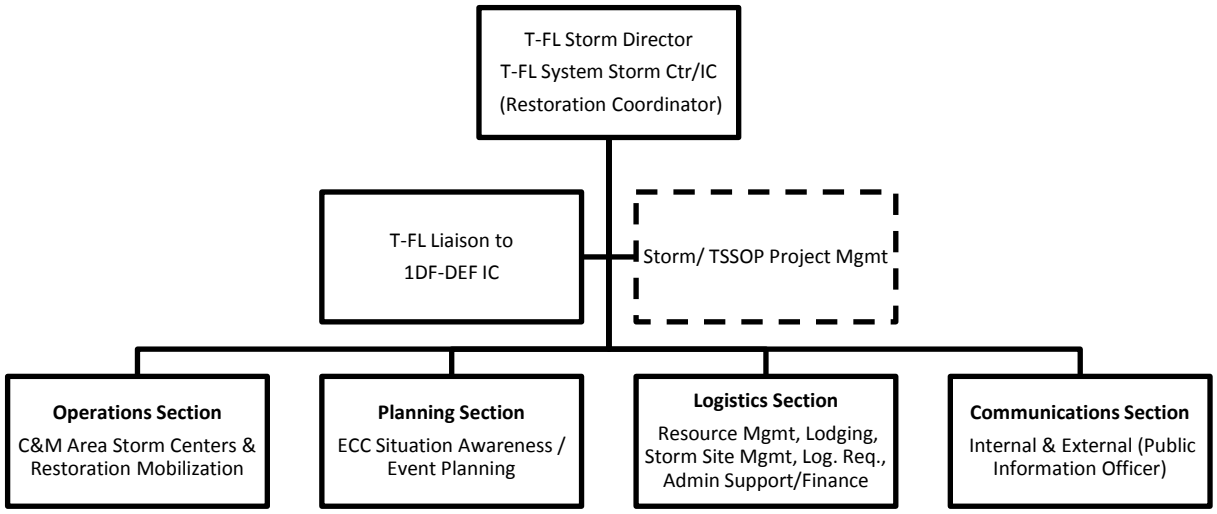
The objective of this plan is to establish a consistent approach and level of responsibility for each emergency response event. This document provides the authority and coordination needed to restore electric service and maintain business continuity from emergency storm events. It consolidates authority to a System Level "top down" organizational structure for major storm responses and organizational structure for minor storm events.

Transmission Florida collaborates and cooperates with Distribution Florida in order to provide synergies, economies of scale, clear protocols and redundancies where appropriate; and Transmission Florida has retained its parallel structure for effectiveness, efficiencies, in addressing Transmission System priorities appropriate to the specific event.

1.2.1 Illustration of ICS org. chart – 1DF-DEF ICS Org Chart



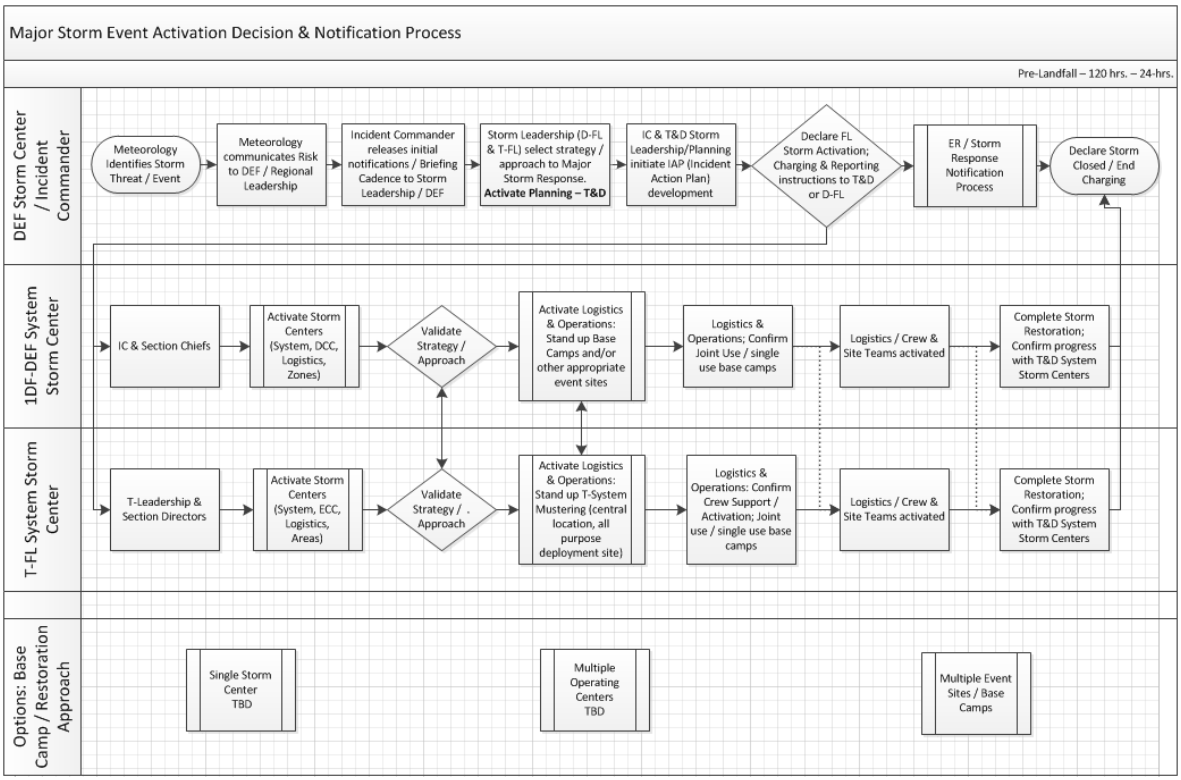
Below is a representation of Transmission Florida's System Storm Center Organizational chart:



Link to active current T-FL Storms Organization Chart-Folder

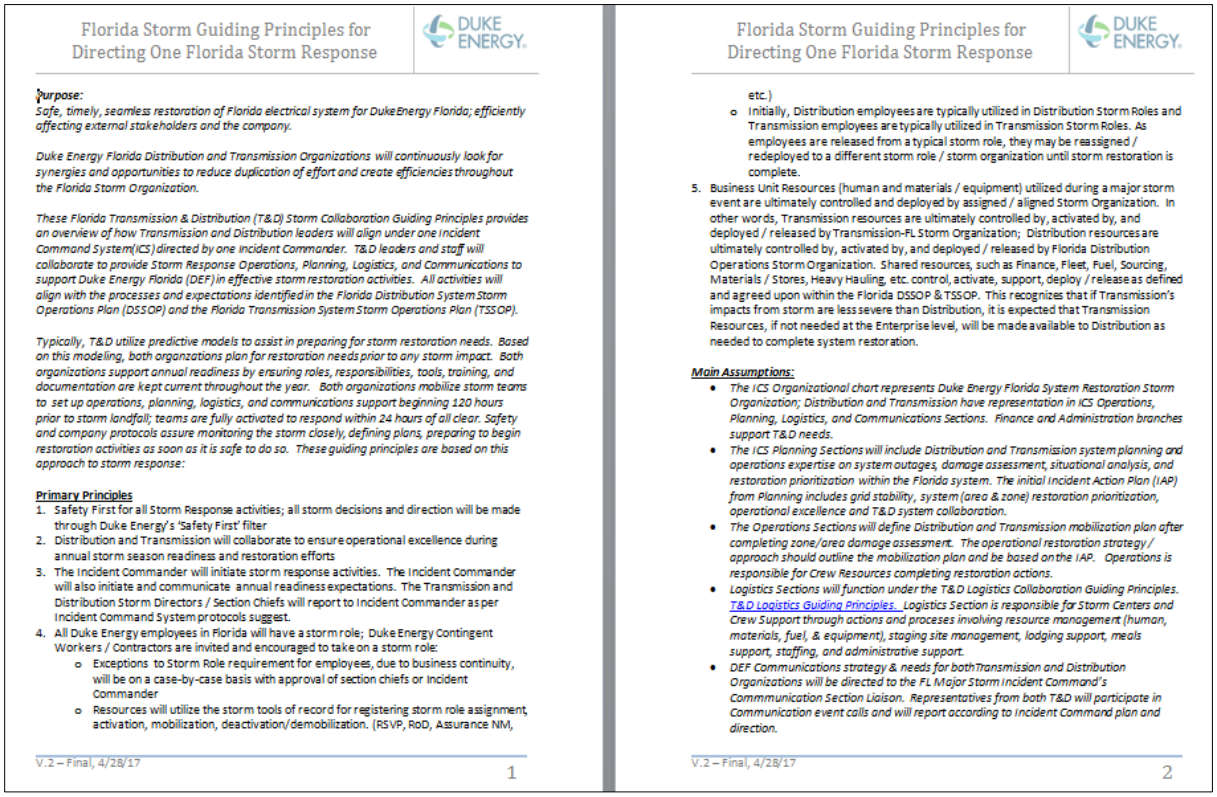
1.2.2 T&D Storm Direction and Planning Process (Activation & Notification)

The illustration (Major Storm Event Activation Decision & Notification process) below provides process for storm leadership to follow at the time a named storm is expected to impact Duke Energy Florida service territory. The Incident Commander, Meteorology, Transmission Storm Director, T&D Storm Section Chiefs/Leadership are expected to gather early and regularly to determine / confirm lines of communication, communication/notification protocols, direction and approach to the particular event.



1.2.3 Guiding Principles for Directing One Florida Storm Response – Link

The Guiding Principles for Storm Directors provides the intention and expectation of how Transmission and Distribution organizations will collaborate, cooperate, and allow each organization the means of support and / or autonomy as the particular event and the storm leadership discern. DEF will work toward *One Storm Response Team: Dual Strategies in Sync*.



Florida Storm Guiding Principles for Directing One Florida Storm Response

DUKE ENERGY

Purpose:
Safe, timely, seamless restoration of Florida electrical system for Duke Energy Florida; efficiently affecting external stakeholders and the company.

Duke Energy Florida Distribution and Transmission Organizations will continuously look for synergies and opportunities to reduce duplication of effort and create efficiencies throughout the Florida Storm Organization.

These Florida Transmission & Distribution (T&D) Storm Collaboration Guiding Principles provides an overview of how Transmission and Distribution leaders will align under one Incident Command System(ICS) directed by one incident Commander. T&D leaders and staff will collaborate to provide Storm Response Operations, Planning, Logistics, and Communications to support Duke Energy Florida (DEF) in effective storm restoration activities. All activities will align with the processes and expectations identified in the Florida Distribution System Storm Operations Plan (DSSOP) and the Florida Transmission System Storm Operations Plan (TSSOP).

Typically, T&D utilize predictive models to assist in preparing for storm restoration needs. Based on this modeling, both organizations plan for restoration needs prior to any storm impact. Both organizations support annual readiness by ensuring roles, responsibilities, tools, training, and documentation are kept current throughout the year. Both organizations mobilize storm teams to set up operations, planning, logistics, and communications support beginning 120 hours prior to storm landfall; teams are fully activated to respond within 24 hours of all clear. Safety and company protocols assure monitoring the storm closely, defining plans, preparing to begin restoration activities as soon as it is safe to do so. These guiding principles are based on this approach to storm response:

Primary Principles

1. Safety First for all Storm Response activities; all storm decisions and direction will be made through Duke Energy's 'Safety First' filter
2. Distribution and Transmission will collaborate to ensure operational excellence during annual storm season readiness and restoration efforts
3. The Incident Commander will initiate storm response activities. The Incident Commander will also initiate and communicate annual readiness expectations. The Transmission and Distribution Storm Directors / Section Chiefs will report to Incident Commander as per Incident Command System protocols suggest.
4. All Duke Energy employees in Florida will have a storm role; Duke Energy Contingent Workers / Contractors are invited and encouraged to take on a storm role:
   - Exceptions to Storm Role requirement for employees, due to business continuity, will be on a case-by-case basis with approval of section chiefs or Incident Commander
   - Resources will utilize the storm tools of record for registering storm role assignment, activation, mobilization, deactivation/demobilization. (RSVP, RoD, Assurance NM, etc.)
   - Initially, Distribution employees are typically utilized in Distribution Storm Roles and Transmission employees are typically utilized in Transmission Storm Roles. As employees are released from a typical storm role, they may be reassigned / redeployed to a different storm role / storm organization until storm restoration is complete.
5. Business Unit Resources (human and materials / equipment) utilized during a major storm event are ultimately controlled and deployed by assigned / aligned Storm Organization. In other words, Transmission resources are ultimately controlled by, activated by, and deployed / released by Transmission-FL Storm Organization; Distribution resources are ultimately controlled by, activated by, and deployed / released by Florida Distribution Operations Storm Organization. Shared resources, such as Finance, Fleet, Fuel, Sourcing, Materials / Stores, Heavy Hauling, etc. control, activate, support, deploy / release as defined and agreed upon within the Florida DSSOP & TSSOP. This recognizes that if Transmission's impacts from storm are less severe than Distribution, it is expected that Transmission Resources, if not needed at the Enterprise level, will be made available to Distribution as needed to complete system restoration.

Main Assumptions:

- *The ICS Organizational chart represents Duke Energy Florida System Restoration Storm Organization; Distribution and Transmission have representation in ICS Operations, Planning, Logistics, and Communications Sections. Finance and Administration branches support T&D needs.*
- *The ICS Planning Sections will include Distribution and Transmission system planning and operations expertise on system outages, damage assessment, situational analysis, and restoration prioritization within the Florida system. The initial Incident Action Plan (IAP) from Planning includes grid stability, system (area & zone) restoration prioritization, operational excellence and T&D system collaboration.*
- *The Operations Sections will define Distribution and Transmission mobilization plan after completing zone/area damage assessment. The operational restoration strategy / approach should outline the mobilization plan and be based on the IAP. Operations is responsible for Crew Resources completing restoration actions.*
- *Logistics Sections will function under the T&D Logistics Collaboration Guiding Principles. T&D Logistics Guiding Principles. Logistics Section is responsible for Storm Centers and Crew Support through actions and processes involving resource management (human, materials, fuel, & equipment), staging site management, lodging support, meals support, staffing, and administrative support.*
- *DEF Communications strategy & needs for both Transmission and Distribution Organizations will be directed to the FL Major Storm Incident Command's Commmunication Section Liaison. Representatives from both T&D will participate in Communication event calls and will report according to Incident Command plan and direction.*

V.2 – Final, 4/28/17 1

V.2 – Final, 4/28/17 2

(Illustration above of Guiding Principles document as of 4/17; document is updated as part of Annual Readiness – please utilize link to ensure most current edition.)

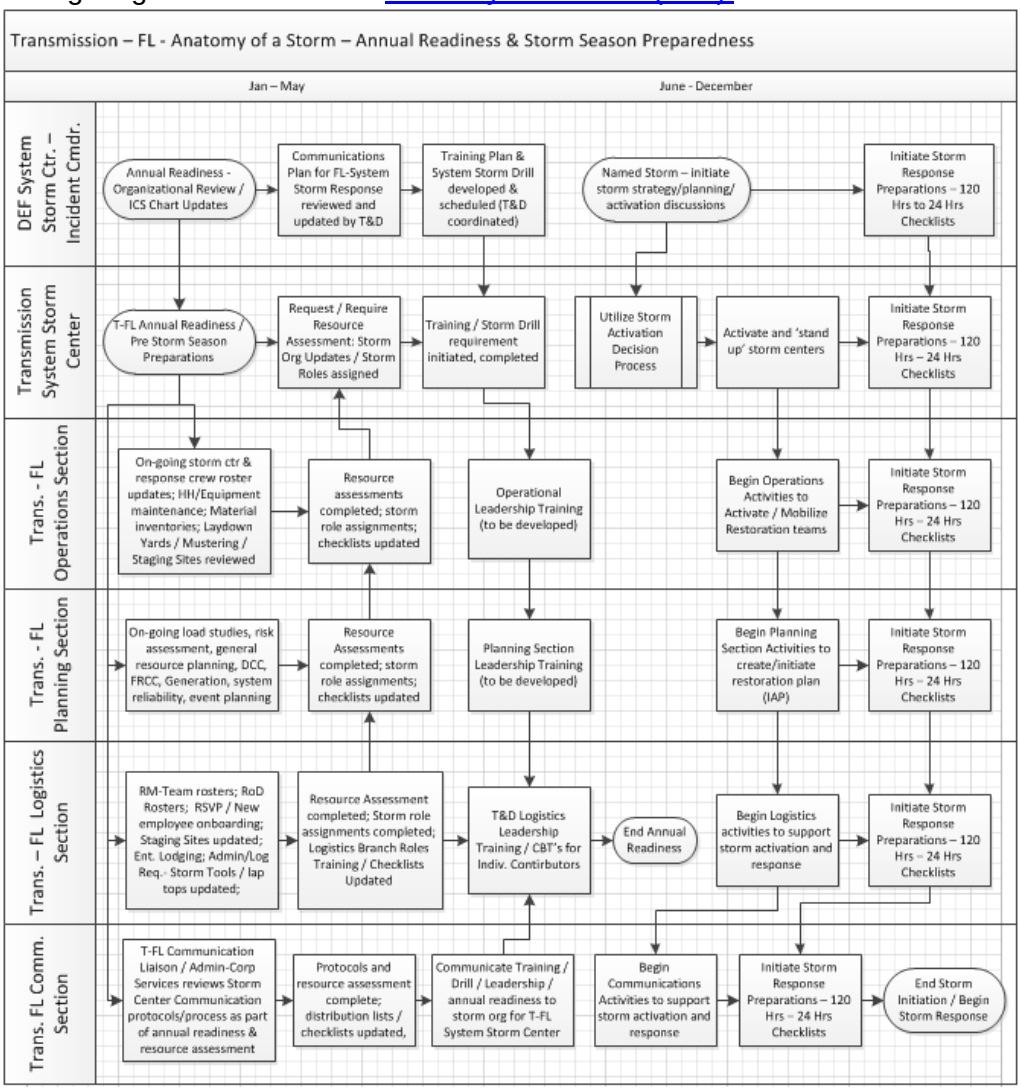
In general, there are Major Storm Events that will impact both Transmission and Distribution. Typically, a Minor Storm Event will not directly impact Transmission. Therefore, when DEF is determining potential impact, activation and mobilization, T&D must confer and intentionally make decisions regarding joint activation and use of the three typical approaches to storm restoration:

- Single Storm Center; i.e. Transmission North FL Storm Center only
- Operating Centers; i.e. Transmission North FL Storm Center and Apalachicola, Mexico Beach Operating Ctrs./ Transmission Substations
- Storm Sites / Base Camp; i.e. T-FL Base Camp (WW/Ocala); North Storm Center; Central Storm Center and identified Staging sites.

1.2.4 Anatomy of a Storm

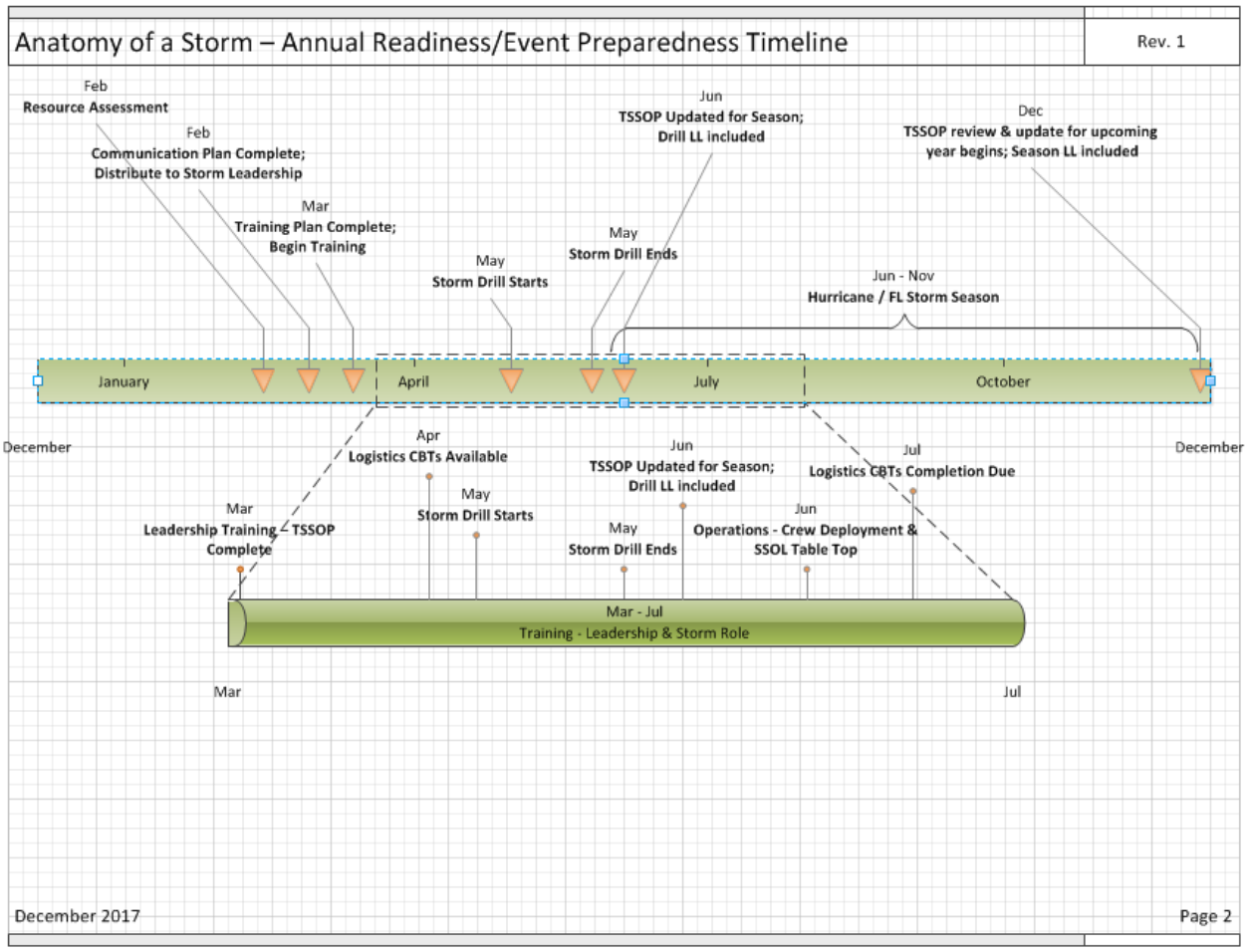
The Anatomy of a Storm is a HIGH LEVEL process flow that illustrates the manner in which Transmission Florida will operate throughout the year to prepare for each storm season and the eventuality of activating, mobilizing, and restoring the Transmission System. The process includes the concepts of Annual Readiness, Resource Assessment, Acquisition, & Mobilization, Incident Command System and storm event plan, storm roles, responsibilities & action / checklists. It includes / points to lower level process flows for each Section and Branches of the storm organization (Operations, Planning, Logistics, Communications, Finance, & Administration).

The following diagram illustrates the Anatomy of a Storm (Link):



The key to storm planning and preparedness is Annual Readiness; the Anatomy of a Storm Timeline illustrates the annual activities that each storm organization undergoes.
Anatomy of a Storm-Timeline-Link.
The timeline presented in the diagram/illustration below provides dates that are over the course of a complete year, hence, Annual Readiness. Each year each storm org / storm role should review and update, revise and make current the storm plan, tools, templates, training at the beginning of the year. This is completed in this manner so that each individual is familiar with their role, reporting guidelines, tools, and not striving to learn, complete tasks in the midst of an emergency. Annual Readiness is likened to continuous improvement and preparedness within DE human performance expectations.

The diagram below illustrates the Annual Readiness / Event Preparedness timeline: Anatomy of a Storm-Timeline-Link.



1.3 Authority – ICS & Transmission Storm Roles

The General Manager of Construction & Maintenance (GM C&M) is the sponsor / primary owner of the TSSOP document. He / She shall direct the maintenance of this document primarily through the Transmission Department and, where aligned and applicable, through Distribution Storm Organization leads. The GM C&M fulfills the storm role: Transmission System Storm Director/Coordinator when the Transmission System Storm Center is activated for major system level emergencies. The Transmission System Storm Coordinator / Director will work together with Transmission Leadership (Director of Engineering, Director of Asset Management, Director of System Planning, Director of ECC, Director / Manager of Work Management, Area Managers & C&M Managers/Supervisors, Managers of Resource Mgmt & Project Mgmt., etc.) to fulfill the necessary storm organizational leadership roles. Each Storm Organization will have an internal command and control structure that ultimately reports to the Transmission System Storm Director/Coordinator and communicates, collaborates, & cooperates with Distribution System Storm Coordinator & aligned Distribution storm organizations.

1.3.1 'Blue Sky' Title and Storm Title / Role

Whereas a storm or emergency response organization is structured to utilize experts in their field for each storm role, 'Blue Sky' or 'Day Job' Title may or may not align with the Storm Role / title. The intent of emergency response planning is to place the experts who can operate under 'rapid fire', emergency situations with calm and clear directional capabilities. Not all 'Day Jobs' directly correlate with Storm / Emergency Response jobs. Therefore, Storm roles/titles and the resources placed within those roles should be regularly reviewed and assessed to assure the validity of the storm organization and plan to be carried out.

1.3.2 Referenced Storm Role / Title

Event Process Owners – Each storm organization (Section / Branch), as identified in the storm organizational chart, shall identify a lead or individual person that is responsible for that organizations emergency response plan, preparedness and restoration efforts. This person is typically identified throughout this document as Event Process Owner. The Event Process Owner is responsible for updates and maintenance of associated section of the TSSOP and its organization (team roles & responsibilities).

Supporting Event Process Owner – Typically those storm organization leads other than the Transmission System Storm Center, Area/Region Storm Center, or Logistics Storm Center. For example, Site Management and Fleet have supporting / sub-processes for processing fuel during a Transmission storm event. Site Management and Fleet would become Supporting Event Process Owners for this particular process.

1.3.3 Employee Expectations / Lines of communication and reporting

It is clearly stated in the DEF Directors Guiding Principles and within this document that every Transmission employee will have a storm role. In addition, every CW employee will be given the opportunity to take on a storm role if contract allows. Storm role assignment should occur during new employee on-boarding. Business Unit Manager is responsible for initial resource assessment and storm role assignment. Once the individual is assigned to a particular role / storm organization, the lead of that Storm Organization should provide access to necessary tools, job descriptions, trainings, annual readiness checklists and event checklists. All this information is accessible and available on the Transmission Florida System Storm Center - SharePoint site.

The employee is responsible to complete all available training, gain accessibility to all tools, be familiar with the TSSOP and any interrelated roles/storm organizations that the individual may need to interface with during an event.

Storm event notifications and Annual Readiness communications will be initiated from the Transmission System Storm Center and / or the Distribution System Storm Center. All Transmission employees should receive initial storm event watch and warning notifications. After an individual is activated for storm duty, they will likely continue to receive system communications however, will take their direction and reporting actions from their Storm Organization Lead. If they have any questions or are not receiving system or storm org communications, it is their responsibility to notify their storm org. lead to correct the situation.

1.4 Using the Plan (how to and expectations of use)

The purpose of the Transmission System Storm Operational Plan (TSSOP) is to ensure that all employees are informed and aware of the roles they serve in the event of a major storm. Many, whose jobs do not normally require involvement in service restoration, will be called upon to offer talents, expertise, and services in providing logistics support, guiding crews, answering telephones, or other critical roles. To make best use of this plan, each employee is expected to carefully read and understand this document and the section or sections that apply to assigned storm role for that organizations storm plan. Each organizations storm plan is listed within the Storm Organization's Section within the TSSOP (links to sections are in the Table of Contents of this document).

It is also helpful to read the roles and responsibilities of al / any interface contacts, identified and hyper-linked in each section storm plan. The Table of Contents provides links to individualized functional storm plans; each contains (or will contain in a future revision as information becomes available) a mission statement, functional process and/or sub-process descriptions, flow charts, organization charts, job descriptions, key interface points, checklists of actions, lists of needed tools and information, an inventory of systems used, and links to supplementary information.

All Storm Process Owners (Storm Org. Section or Branch leads) will be required to certify annually that their storm organizations are prepared for a major storm event. The document below shall be completed, signed and forwarded to the Transmission System Storm Center each year.
Storm Organization Certification Form

<< type name of storm organization here>>

Storm Organization Certification Form

This document shall be completed and signed by the Storm Process Owner for each storm organization by June 1st.

By checking the individual tasks below, you certify that your storm organization is prepared to respond to a major storm event. This document shall be signed, maintained and filed annually in each storm organizations storm folder. In addition, a copy of the signed document shall be forwarded to the Transmission System Storm Center PM (Deb Banister-Hazama, deb.banister-hazama@duke-energy.com).

Checklist Items

- ☐ Employees emergency contact information has been reviewed and updated on the Duke Energy Portal
- ☐ Employees can identify their storm role in their storm organizations storm plan
- ☐ Employees have been trained and can execute their storm role responsibilities
- ☐ Employees can identify their RSVP coordinator
- ☐ Employees are assigned a storm role and within the RSVP tool, if applicable
- ☐ Employees have been made aware/trained of their storm organizations storm plan linked within the TSSOP GDLP-EMG-TRM-00025
- ☐ The organization has conducted exercises or drills to validate organizational readiness
- ☐ Major Storm distribution lists have been reviewed and updated
- ☐ Major Storm mailboxes and distribution list ownerships have been updated
- ☐ All items listed on the annual readiness and/or role checklists have been reviewed and updated

_____ _____

Storm Process Owner Date

The TSSOP has been created as a Word document and is posted on the Duke Energy Florida document management system (FUSION) as a PDF file, making it easy to access, print, and keep on hand.

1.4.1 Operations Section

The Operations Section of the TSSOP contains Operations (C&M) Plan for assessing the area of impact, validating the plan / approach of restoration, and managing all the crew resources, equipment, materials, and vehicles requested / needed during restoration activities. The document that houses the Operations Section is GDLP-EMG-TRM-00027 (link). It, like this document is stored in the DEF document management system and is accessible through the provided link. The Owner of this document / process is Operations Section Lead (Manager Transmission Maint. Area and/or Manager Transmission C&M Services).

1.4.2 Planning Section

The Planning Section of the TSSOP contains Planning's Storm Plan for gathering and assessing the impacts to the Transmission system as a result of the event. Assessing the overall system impact, creating the Incident Action Plan (IAP) which provides the priorities and approach in general toward restoration, and identifying the number of human resources that may be needed to restore the system within the objective time frame. The document that houses the Planning Section is GDLP-EMG-TRM-00028 (link). It, like this document is stored in the DEF document management system and is accessible through the provided link. The Owner of this document / process is Planning Section Lead (Director Transmission System Operations and/or Director Transmission Engineering).

1.4.3 Logistics Section

The Logistics Section of the TSSOP contains Staging & Logistics Storm Plan for gathering, acquiring, and providing all the logistical support required by the restoration efforts (operations crew resources, planning staff, logistics system storm center and area staff, transmission system storm center staff, etc.). The Logistics storm plan provides administrative support (storm center set up, IT, financial, HR, facilities), staging site management, resource management (RSVP, acquisition, mobilization), lodging, meals, engineering and logistics request support throughout the initiation and completion of the event. Logistics provides direction and validation of the IAP and means to support the restoration crews logistically. The document that houses the Logistics Section is GDLP-EMG-TRM-00029 (link). It, like this document is stored in the DEF document management system and is accessible through the provided link. The Owner of this document / process is Logistics Section Lead (Director Transmission Resource & Project Management and/or Manager Transmission Engineering / Manager Project Managers / Manager Project Controls).

1.4.4 Communications Section

The Communications Section of the TSSOP contains the Internal and External Communications Storm Plan for gathering, disseminating, and reporting all the pertinent and relevant issues to DEF, community/agency partners, and the media. The Communications Section storm plan provides general internal and external protocols to system storm center and to storm organizations. The document that houses the Communications Section is GDLP-EMG-TRM-00030 (link). It, like this document is stored in the DEF document management system and is accessible through the provided link. The Owner of this document / process is Communications Section Lead (Transmission Storm Liaison and/or Director Transmission Asset Management and/or Director Transmission Planning and/or Manager Transmission Engineering).

1.4.5 Financial Procedures – GDLP-EMG-TRM-00031

The Financial Procedures section of the TSSOP contains the general guidelines and reference to following regulatory accounting procedures through Storm Accounting Procedures – GDLP-EMG-DOS-00007. The Financial Procedures is the TSSOP document that links Transmission Florida Storm plan to DE Accounting procedures and guidelines; TSSOP-Financial Procedures GDLP-EMG-TRM-00031 (link). It, like this document is stored in the DEF document management system and is accessible through the provided link. The Owner of this document / process is Transmission Storm Director and/or T-FL Finance/Accounting Lead).

1.5 Testing the Plan

Storm Process Owners are responsible for determining if and when testing is necessary for effective storm plan implementation, prior to the start of storm season. Annual Readiness, Storm Season preparedness and action plans to test their individual organizations can include, but are not limited to:

- Simulated emergency conditions
- Drills
- Communication / process flow reviews
- Personnel and duties assignment listings review
- Resource listings reviews

- Evaluation of action plan readiness
- Priority customer (wholesale) listings review
- Damage assessment plans
- Relevance of forms and reports format review

The Transmission System Storm Center and the Distribution System Storm Center will sponsor and facilitate an annual joint system level storm drill to test organizational preparedness prior to the start of hurricane season. In addition, the TSSC & DSSC will sponsor a lessons learned process following the drill to ensure existing storm processes are being validated, updated, socialized, and institutionalized throughout the organization so that gaps in storm planning and restoration efforts are identified and resolved.

1.5.1 Expectations, determine 'how to' test plan

At the end of each year (December - close of Florida hurricane season) each storm organization is expected to document and update their storm plan with any and all lessons learned from the current year's storm season. Then beginning of the next year (January) Storm Leadership begins Annual Readiness activities that confirm lessons learned have been updated and any process, documentation, tool, role, checklist modifications have been completed. In addition, a resource assessment is conducted to validate the current / incoming year's org chart and storm role assignments. During the first two months of the year, discussions of 'testing the plan' should occur between Transmission and Distribution Storm Leadership. A drill and training plan is to be designed and/or updated according to the outcomes of these discussions. The owner of the drill and training plan for Transmission is the Transmission System Storm Coordinator.

1.5.2 Requirements of training, drilling, annual readiness roles and expectations

All storm roles will have a job description / role expectations. In being assigned to a particular role, business unit manager will provide a means for employees to participate in any annual storm drill or training pertaining to the particular role. Storm organization lead will communicate the availability of documentation, tool training, role training and drill participation to all individuals within their storm organization. Some storm roles are activated only during an event; other storm roles are part of annual readiness so may be participating throughout the year. Training and role descriptions should be available and accessible to all employees. If any employee is not notified of storm drill expectations or training availability, it is the employees responsibility to contact their storm org lead.

1.6 Updating the Plan

The Duke Energy Florida TSSOP is a dynamic document that requires periodic enhancement and regular updates to maintain its effectiveness in time-critical situations. Maintenance of the TSSOP is the responsibility of the Transmission System Storm Coordinator (AKA T-FL Storm Director/IC OR Storm PM) and is accomplished in the following manner:

1.6.1 Updating Key Storm Personnel

A highly functioning organizational structure with key personnel in appropriate roles at the start of each season is a deliverable of the Resource Assessment conducted in first Quarter each year. The Org Chart updates are then approved by each Section Chief and all Branch Directors. Once the structure and bench strength for each role is agreed upon, the contact information for all personnel is updated. Telephone numbers and personnel assignments shall be updated prior to the hurricane season. In addition, updates should be made as they occur during each storm season. Area / Regional Storm Centers and Branches shall post their updated list of storm personnel (rosters and contact lists) and contact information on their respective storm web sites by May 31, of each year. As personnel transition around the organization it is expected that further updates will be required. These updates should occur as part of Annual Readiness and employee onboarding.

1.6.2 Lessons Learned Process

Each *Supporting Storm Process Owner* will conduct a lessons learned process with their storm teams within 30 days after the Annual Joint Drill and each major event. Each member of storm org is to review and critique planning and restoration efforts. The evaluation process should include the following:

- Things that went well—successes; repeat these actions; proven best practices
- Things that need improvement—opportunities; continuous improvement
- Lessons learned – actionable items that update plan, roles, responsibilities and processes
- Follow-up action plans – with individual assignments and due dates

The *Storm Process Owners* shall forward lessons learned and task assignments to the Transmission System Storm Coordinator/PM who will ensure the quality of this integrated storm document. Each Area Storm Center Coordinator/PM will send their list of recommended improvements to the Transmission System Storm Coordinator, who will compile a combined Area level list for review with Transmission System Storm Center. The Transmission System Storm Coordinator/PM will then determine which items should be pursued to effect any system-wide changes and will develop an action plan for implementing these improvements.
Lessons Learned (Link)

1.7 Plan Maintenance

The maintenance of the TSSOP is the responsibility of each Process Owner, each Section Chief, each Branch Director. The Transmission System Storm Center Coordinator/PM will submit each section of the TSSOP to each Section Chief for review annually. Review of processes, org charts, role descriptions, and the TSSOP document will occur as part of annual Lessons Learned and as part of closing out each event/season. Annual Readiness within Florida occurs from January through May each year so the Organization is prepared for responding during the Season (June through December).

1.7.1 Based on process ownership at Section and Branch level

At the end of each Drill / Event, each Team, Branch, Section is to collect Lessons Learned feedback and submit to the Leadership team. Those items that are to be repeated are validated within the plan through updating all process flows, roles descriptions, and checklists; those items that are to be corrected, edited, improved upon are to be reviewed within the appropriate roles, team, branches. These process owner teams are to provide recommended updates to the Section Chief. Section Chief / Process Owner approves and change is made within the plan. The Transmission System Storm Center Coordinator/PM will drive the maintenance process through the Annual Readiness Action Plan

1.7.2 Annual Readiness Action Plan

A critical output from each Lessons Learned conducted, is the Action Plan. The Action Plan is a list of actionable items that have been assigned to individuals holding the role of Section Chief and/or Branch Director. The Transmission System Storm Center Coordinator/PM will place all the action items into the Annual Readiness Plan for the Organization. This plan will then be published and distributed among the organization's leadership. The action items will be updated and completed as per plan description and defined deliverables.

1.7.3 Sub Process flow & instructions

Each Section within the TSSOP has processes that are aligned within Incident Command System and within Florida's One Response strategy. Transmission-only processes are defined and utilized within the Operations, Planning, and Logistics Sections. There may be processes that are named a 'Sub-Process' IF it is a process within an existing process shared by T&D. For example, within the Logistics Section, Fleet / Transportation Branch, Transmission has a Sub-Process for Fueling. This process is defined, agreed upon, published and maintained within both organizations Logistics Sections. Transmission is the Process Owner; T&D align and utilize the process.

2.0 Storm Response Annual Planning, Restoration Strategy, and Directing–GDLP-EMG-TRM-00026

This document provides the approach to storm planning through the direction of the system storm center leadership (ICS), safety, training, environmental stewardship, understanding of storm event level/threat, planning to make community and workers safe, ultimately working the storm plan. It introduces the overall annual storm planning process and provides the next steps for post planning, excellence in storm response and restoration.

3.0 Operations – Area Assessment & Restoration, Crew Management–GDLP-EMG-TRM-00027

This section of the TSSOP is the Operations / Construction & Maintenance plan for assessing the area of impact, validating the plan / approach of restoration, and managing all the crew resources, equipment, materials, and vehicles requested / needed during restoration activities. This document covers Operations mission, organization, crew management, area system assessment and work planning, and area logistical support.

4.0 Planning – Event System Priorities, Assessment, Restoration Approach–GDLP-EMG-TRM-00028

This section of the TSSOP is the Planning Section – it provides the processes and guidelines from which T-FL System Storm Center will plan the response to a particular event, by prioritizing system / grid stability and then recommending order of restoration. This document covers Planning mission, organization, process to create the IAP, system priorities, modeling, general event resource assessment, restoration goals, outage management priorities GIS/ data integrity and the energy control center's role.

5.0 Logistics – Administration, Resources, Staging Sites, Crew Support-GDLP-EMG-TRM-00029

This document is the Logistics Section of the TSSOP (Transmission System Storm Operational Plan); the Logistics section covers Logistics Mission & Purpose, Logistics Center Duties & Responsibilities, Staging & Logistics Coordinator role, Administrative & Corporate services branch role and responsibilities, Resource Management branch role and responsibilities, Staging Site management branch roles and responsibilities, lodging branch roles and responsibilities and the Logistics Request & engineering support roles and responsibilities. Click the link to access this document.

6.0 Communications – Internal & External-GDLP-EMG-TRM-00030

This document is the Communications Section of the TSSOP. The Communications section covers Communications mission & purpose, the organization, the approach and need for Internal Communications protocols and schedule, and External Relations T-FL Liaison role for keeping ER and Corp. Comm. updated with Transmission storm response status.

7.0 Finance Procedures – Pre, During, & Post Event–GDLP-EMG-TRM-00031

This document is the Finance Procedure for Transmission – FL Storm Response and is housed within the TSSOP. It covers the use and directs all storm accounting to Storm Accounting Procedures – GDLP-EMG-DOS-00007. It also provides instruction to Transmission on storm activation, storm charging, corp. card use, general staffing, and other Financial FAQs.

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00025

Revision no.: 000

Document title: TSSOP - Transmission System Storm Operational Plan: Introduction and Overview

Type of action:

- ☑ New
- ☐ Revision
- ☐ Renumber
- ☐ Cancellation
- ☑ Ownership Change
- ☐ Periodic review completed, as required
- ☐ Suspension

For Document Management staff use only:

- ☐ Editorial Change
- ☐ Migration
- ☐ Control element revision _____ (does not require approval authority signature)

Applies to: (Select all that apply)

- ☐ Duke Energy
- ☐ Duke Energy Carolinas, LLC
- ☐ Duke Energy Progress, LLC
- ☑ Duke Energy Florida, LLC
- ☐ Duke Energy Indiana, Inc.
- ☐ Duke Energy Kentucky, Inc.
- ☐ Duke Energy Ohio, Inc.
- ☑ Group Transmission
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☑ None
- ☐ NERC
- ☐ State Codes/Standards
- ☐ FERC Standards of Conduct
- ☐ HIPAA
- ☐ Patriot Act
- ☐ Sarbanes-Oxley
- ☐ Other _____
- ☐ OSHA _____

Complete if submitting a form: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☐ Yes (Procedure No: _____)

How is the form to be completed or used? ☐ Hard Copy (completed by hand) ☐ Online Data Entry (fillable PDF)

- ☑ Communication plan established
- ☑ Impact Reviews completed

Description of document action or summary of changes:

Publication of TSSOP - Transmission System Storm Operational Plan for Transmission Florida. Moving Document from Draft form created and proven during 2016 & 2017 seasons; draft document was housed on Transmission System Storm Center -Share Point site: TSSOP-Transmission System Storm Operational Plan.

GDLP-EMG-TRM-00025 is the first of seven documents that make up the TSSOP-Transmission System Storm Operational Plan for DEF-Transmission. This document is the Introduction and Overview of the plan. It contains a general overview of the plan contents, structure, maintenance, and use.

Section B: Approval

Who should sign? see instructions on page 2

Preparer(s)/Author(s)/Writer(s) (*signature not required*):

Deb Banister-Hazama

Approval recommended (*print name*): Ray Desouza	*(signature)*	Date:
Approval recommended *(print name)*: R-B Matthews	*(signature)*	Date:
Approval recommended *(print name)*:	*(signature)*	Date:
Final Approval *(print name)*: Jason Williams	*(signature)* Jason S Williams	Date: 12-11-17

RETURN SIGNED FORM AS SCANNED PDF VIA E-MAIL OR FAX TO (919) 235-3165

Keywords: procedures and forms; procedures program; daf; ADMP-PRO-ADS-00002; document management program
Applies to: Duke Energy - Transmission

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00025 | Revision no.: 000

Document title: TSSOP - Transmission System Storm Operational Plan: Introduction and Overview

Type of action:

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- ☐ Patriot Act
- ☐ Sarbanes-Oxley
- ☐ Other _____
- ☐ OSHA _____

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Preparer(s)/Author(s)/Writer(s) (*signature not required*):
Deb Banister-Hazama

Approval recommended (*print name*): Ray Desouza	(signature)	Date: 12/5/17
Approval recommended (*print name*): R-B Matthews	(signature)	Date:
Approval recommended (*print name*):	(signature)	Date:
Final Approval (*print name*): Jason Williams	(signature)	Date:

RETURN SIGNED FORM AS SCANNED PDF VIA E-MAIL OR FAX TO (919) 235-3165

Document title:	Document number:
TSSOP - Transmission System Storm Operational Plan: Storm Annual Planning, Restoration Strategy & Direction (includes Safety, Training, Annual Readiness & Restoration Strategy)	GDLP-EMG-TRM-00026
	Revision No.: 000
Keywords: Transmission System Storm Center Operational Plan (TSSOP), Transmission Storm Plan, emergency, annual readiness, storm safety, restoration strategy,	Applies to: Transmission - DEF

This document is the Storm Annual Planning, Restoration Strategy & Direction Section of the TSSOP referenced in the Table of Contents in TSSOP – GDLP-EMG-TRM-00025-Introduction and Overview.

Table of Contents

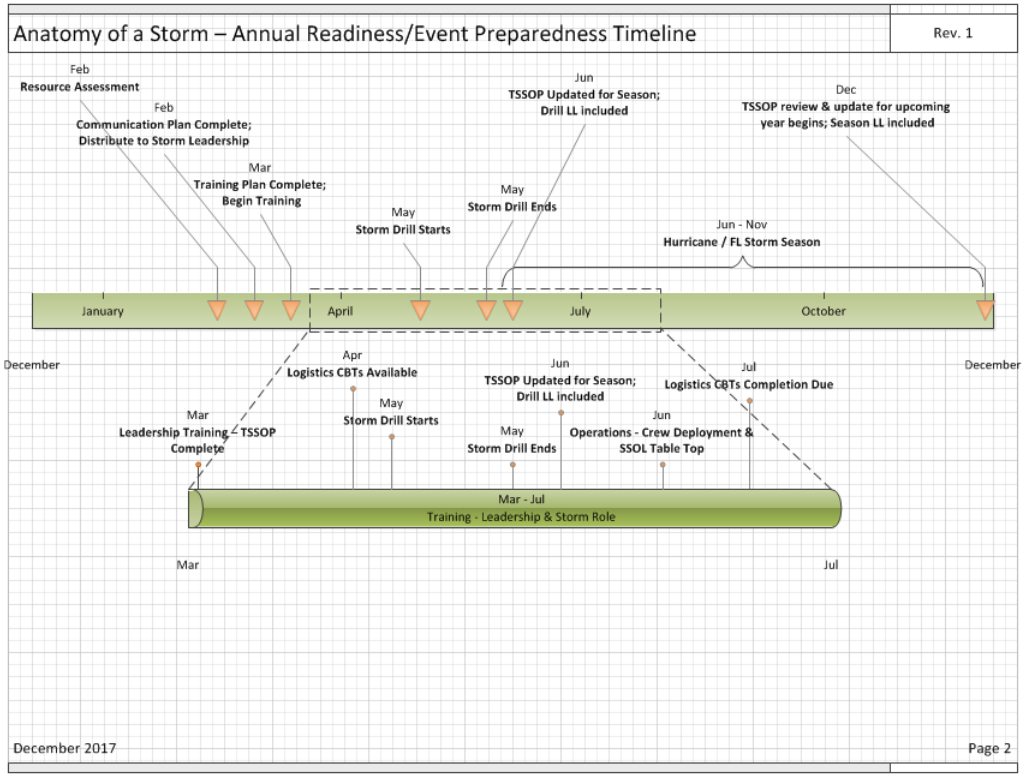
1.0 Approach to Storm Preparation: Transmission – FL System Storm Center

In general, storm preparation is directed from and through the Transmission Florida System Storm Center. The Transmission-FL System Storm Center acts as the director of all storm preparation activities whether the action is for Annual Readiness (pre-season) or Event Activation (during an event/storm season).

During 'Blue Sky' times (pre-season), Annual Readiness process and actions are managed within normal work load. Typically, the Annual Readiness timeline (Link) begins in January of each year with a Resource Assessment which reviews the structure of the storm organization, the bench depth and strength, and resource role assignments. Storm leaders and business unit leaders confirm number of resources needed for storm org functioning and assign employees to appropriate roles. Annual Readiness also includes review of storm role descriptions, tools and processes for those roles, training plan and all training units (Storm Drill, Computer Based Training modules, Table tops, Leadership training sessions, etc.), and the communications plan (protocol, planned communique, and timeline). Annual Readiness process and activities are completed with updating of the storm plan documents each year. The Transmission System Storm Operational Plan (TSSOP) maintenance is outlined in section one (TSSOP-Introduction & Overview - GDLP-EMG-TRM-00025 – Link)

The T-FL System Storm Center will communicate with T-FL storm organization (all transmission with storm roles) regarding Annual Readiness activities being completed by the start of storm season AND the on-set of Storm Season preparedness priorities. At the beginning of Storm Season, all employees will be aware and trained for their will watch for storm system communications and will be prepared to respond to activation notices from Transmission System Storm Center and their specific storm branch/team leader. Annual Readiness activities, training, Lessons Learned updates are the System Storm Center's means to assuring Transmission organization is prepared for emergency response nature of Storm planning and preparedness. Below is the Annual Readiness time line for Transmission System Storm Center event planning approach.

Anatomy of a Storm Process Flow and Timeline - Link



2.0 Safety – Storm /Emergency Response Protocols

Safety during emergency response is critical. Safety at Duke Energy is part of the daily responsibility of every employee. During emergency response, safe human behaviors, work practices, and process habits are key to storm role response. As much as possible, this plan strives to place individuals in roles where the skills they use frequently with the safe work practices are utilized in each role assignment. Human behavior during emergency response often speeds up, relies on habits formed, yet requires that every team member follows the direction of their Section / Branch / Team leader.

2.1 Keys of Life

Identifying the hazards in high-risk activities is a vital step to eliminating fatalities. The Keys to Life highlights hazards that may be encountered and defines behaviors to help maintain safety. We can achieve a zero-injury culture when we work according to our Safety Principles: *personal accountability, hazard recognition and active caring*. Continue to put safety first in all tasks by performing thorough pre-job briefings, wearing appropriate personal protective equipment and following existing safety rules.

2.2 Personal Safety

Personal safety is a shared responsibility of all employees. The safety of our fellow employees as well as the safety of the general public and contract resources is the most important consideration when implementing any major emergency plan:

- Keys of Life principles will be followed at all times.
- Under no circumstances will safety be sacrificed for speed.
- Job briefings are the cornerstone of all work to be performed safely and shall be utilized to identify
- and mitigate all hazards associated with the work, following appropriate safe work practices.
- No employee shall attempt any restoration activity or establish staging sites where environmental or weather conditions are deemed unsafe.
- Switching and tagging work rules shall be followed at all times, regardless of dispatching authority or control.
- Work at night shall be well planned and organized.

3.0 Training – Training Plan: Expectations and plan description

The Process Owner of each organization is responsible for ensuring their personnel are assigned to a response role in the RSVP tool / Outlook tool, are trained to the required responsibilities, and are able to safely execute their assigned duties. Each process owner / team lead should start the training process for each team member during resource assessment and org chart review (1st Quarter of each year). The employee's unit manager and storm branch / team lead will work together to assign employees to roles, where possible, their skills and the storm role needs are aligned. The process owner/branch lead will identify those tools, processes, steps, checklists that their team members require training.

Training for the storm role should begin prior to the storm drill / exercise each year (see Anatomy of a Storm Annual Preparedness Timeline – Link); as resource assessments are completed, branch leads will meet with team members to review role description, checklists, annual readiness actions, and processes/tools to be utilized in storm role. For more specific storm role training information, see the specific storm organization (Operations, Planning, Logistics, etc.) training portion of TSSOP document.

All Storm Resources should have a means to be trained for their role, including Storm Leadership. Leadership training will occur prior to Storm Drill; typically in the Spring season (February – May). Storm Drill will occur just prior to Storm Season, typically April – May of each year. Additional tool training and field/role training needed as a result of lessons learned during the drill will occur throughout Storm Season, typically June through December.

4.0 Environmental Stewardship

Duke Energy Florida has established itself as a good steward of the environment. Environmental concerns such as transformer oil and fuel spills must be reported immediately to the Environmental Lead or Coordinator. Spills should be contained as quickly as possible to mitigate damage to the environment, especially when waterways are at risk. In addition to above mentioned concerns during restoration, the environment where works sites, base camps, op centers are rapidly working to prepare to restore, restore, and then close out fall under Transmission standard EHS standards and compliance expectations. All personnel are expected to follow all EHS protocols / measures to be a good steward of the environment and conduct safe performance/human behavior practices.

5.0 Major Storm / Event & Emergency Response Levels

Damage to facilities may be caused by hurricanes, tornadoes, ice, and other natural causes or disaster, or the damage may be caused by civil disturbances. The use of the term "Major Storm", as defined by IEEE Std 85901987; section 6.3.2 (page 10), indicates that weather has exceeded design limits of the facilities and results in all of the following:

1. Extensive damage to facilities
2. More than a percentage of customers out of service (10% or above)
3. Service restoration time is longer than a specified time (24 hours or above)

Note: Typical industry criteria are 10% of customers out of service and 24 hours or more restoration time. Percentage of customers out of service may be related to a company operating area rather than to an entire company.

There are no specific measures for 'extensive mechanical' damage. However, the term does *not* include electrical damage such as internal failures of transformers or conductors. *'Extensive' refers to the magnitude of damage and the distance over which the damage extends.* Therefore, it would be expected that the storm was of sufficient severity to cause damage of an unusual magnitude at multiple locations on the system.

Transmission-FL uses the following Emergency Response Levels to describe the means / actions the System Storm Center will use to activate resources for storm / emergency response. *The Emergency Response levels are established based on criteria related to projecting number of resources to be activated and estimating time to restore.*

5.1 Level 1 – Maintenance Area Event

Storm or event effects one (1) Transmission Maintenance Area (TMA) with low to moderate damage. Restoration is accomplished with the existing Maintenance Area resources; without assistance from other Maintenance Areas. Typically ETR within 0-12 hours.

5.2 Level 2 – Regional Event

Storm or event effects one (1+) or more Transmission Maintenance Areas (TMA) with moderate. Restoration is accomplished with the Maintenance Area resources AND may require assistance from other Maintenance Areas &/or C&M Traveling Crews/On-System Contract Crews . Typically ETR within 12-48 hours.

5.3 Level 3 – System Event

Storm or event effects one (1+) or more Transmission Maintenance Areas (TMA) with moderate to extensive damage requiring assistance of Transmission System Storm Center (TSSC). Restoration is accomplished with the Maintenance Area resources AND with assistance from other Maintenance Areas & C&M Traveling Crews/On-System Contract Crews AND may need off-system contract crews (Duke Energy TMA's, other utilities and/or 'foreign/non-native' contractors). Logistical support is required; fuel, materials, lodging/meals, and engineering support expected. Typically ETR min. 24 hours and may take over 48+ hours.

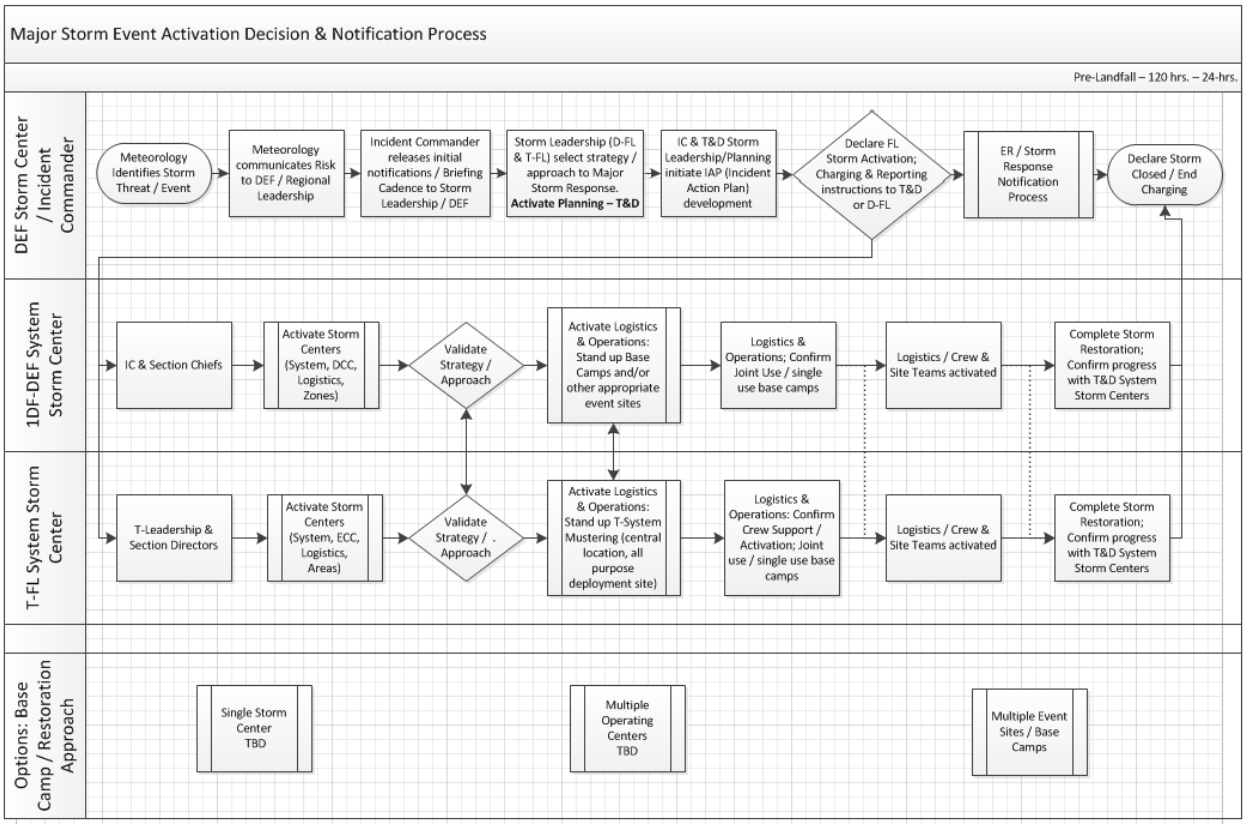
5.4 Level 4 – Major Event

Storm or event effects multi-regions (and possibly jurisdictions) or extensive damage to system infrastructure within a region. Restoration requires management of large compliments of all available on-system (native) crews AND off-system (non-native) crews (>100 off-system personnel), as well as extensive Logistics required; fuel, materials, lodging/meals, and engineering support is necessary. Restoration requires the use of on-system contractors, and off-system contractors, other utilities and personnel from other TMAs / Mutual Assistance is required. (Repairs / restoration will take multiple days.)

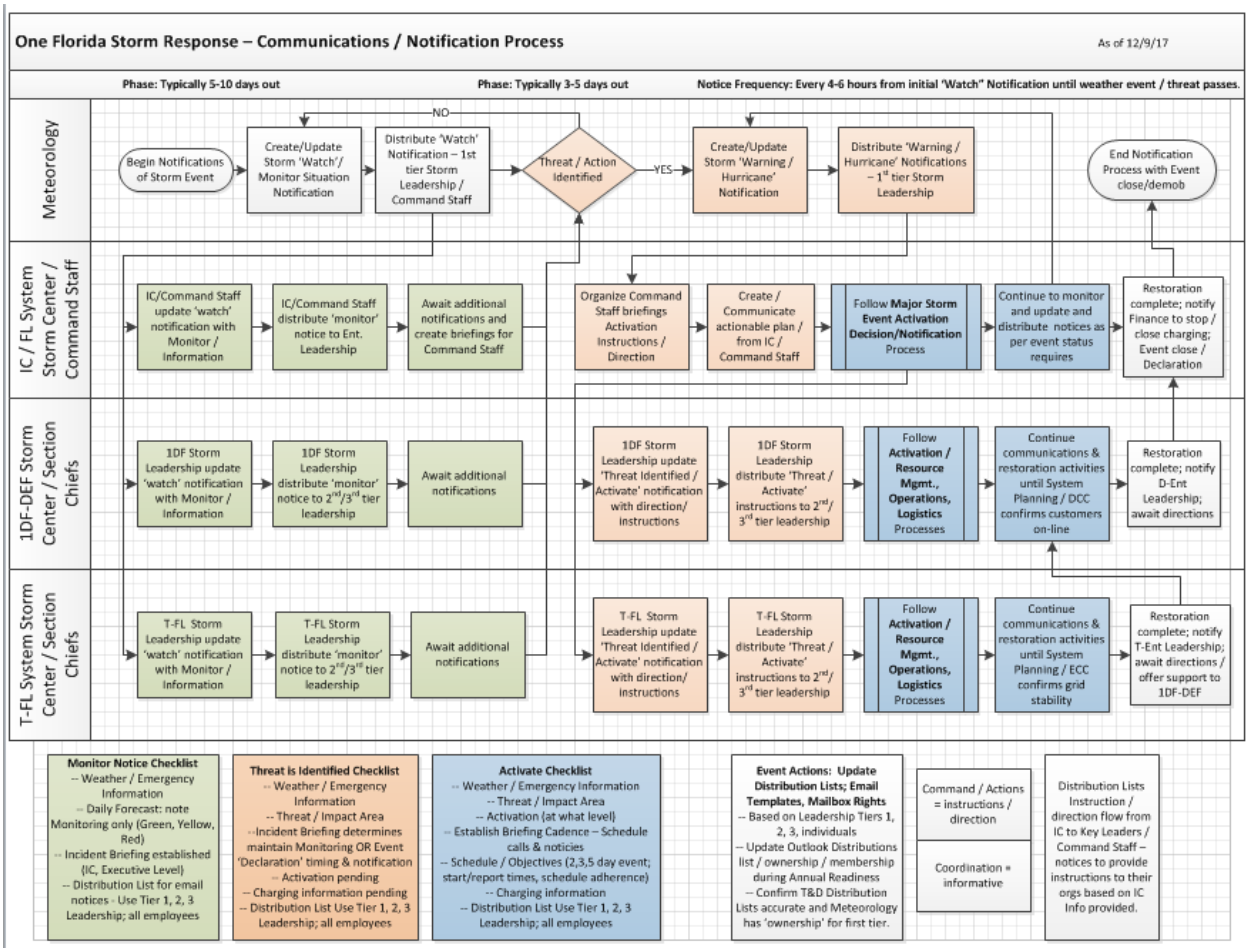
	Storm / Event	Normal-'Blue Sky'	**Level 1**	**Level 2**	**Level 3**	**Level 4**
Storm Level Definitions	Transmission	On Duty C&M Resources	TMA (1) Resources	TMA (1+) Resources	TMA (1+) Resources / DE Mutual Asst	DE System & Mutual Assistance
	Distribution	On Duty Resources	Op Center Resources	Zone Resources	Multiple Zones	System & Mutual Assistance

Diagram – 1DF-DEF & T-FL Event Levels

While Transmission is monitoring the event and identifying the emergency response level T&D Storm / Event leadership (Incident Commanders and Planning Section) will be utilizing the Storm Center Activation Process flow defined in GDLP-EMR-TRM-00025. [TSSOP-Introduction & Overview - GDLP-EMG-TRM-00025 – Link])



The Activation and Notification process provides a means to communicate internally to all Sections/Branches/Teams the time of activation and expectations within each team roles. The following diagram provides a notification process flow based on escalation of an event. This Notification Process flow is located on the Transmission System Storm Center site: [Storm-Center-Activation]



6.0 Minor Storm / Event

Minor Storm / Events are typically monitored daily. Daily thunderstorm monitoring and coordination of resources for level 1, level 2 and most level 3 storms are generally controlled by the Energy Control Center (ECC) & the Distribution Control Center (DCC). The DCC facilitates the coordination and management of the Distribution Zone Mid-level Storm Plans; the ECC interacts and validates Transmission system impacts and in turn facilitates the notification of Transmission System Storm Center. Transmission hence, monitors the Minor Storm / Event for escalation or transmission system impacts or Distribution requests for transmission resource support.

7.0 Make it Safe

Make It Safe / Road Clearing (EOC and DEF) support will occur during the first 24-48 hours following the Major Storm "all clear". Initially, Distribution will provide the County / EOC with support as defined in the Duke Energy Make It Safe / Road Clearing Process; Transmission will support the effort only when needed. Typically that would be due to downed Transmission assets or if Transmission has not activated for the storm and has resources available to fill in and support the Distribution effort/need.

8.0 Contacting Customers – Wholesale

Transmission Customers are the Duke Energy Florida Wholesale Customer base. Transmission-FL has Major Storm Event duties and responsibilities to perform as soon as a major event is declared. The Wholesale Customers Duties and Responsibilities are as follows:

- The Wholesale Customer Emergency Center (WCEC) is activated when the Transmission System Storm Center is activated.
- WCEC staff notifies wholesale customers, System Storm Center, Transmission Storm Center, and ECC of its activation.
- It is staffed by Wholesale Point of Delivery Managers during the time the Transmission System Storm Center is active.
- In the event that the WCEC receives customer damage calls, damage information is relayed to the appropriate Transmission Restoration Coordinator/ T-FL Storm Director and appropriate Transmission C&M Area Coordinator.
- WCEC staff obtains information on the status of damage from the various Transmission C&M Area Storm Centers and/or Area staff to provide appropriate information to wholesale customers and/or obtain information from wholesale customers for the Company's restoration operations.
- See the DEF Wholesale Customer Notification and Communication Process flow: DEF Wholesale Customer Notification & Communication Process-Link

Typically, Customer (Revenue Customers and/or Care Customers – non-Wholesale Customers) calls are handled by Distribution Call Center. Wholesale Customer Storm Center and supporting staff roles are defined within the Planning Section of the TSSOP. See TSSOP – GDLP-EMG-TRM-00028 - Planning Section - Link.

9.0 Weather Information

Duke Energy Florida is supported by the Duke Meteorology Team. The Duke Meteorology Team provides daily weather updates and forecasts for major weather events. During approaching tropical events, the Duke Meteorology Team provides daily graphical tracking maps and projections on wind and rain. The Distribution System Storm Center forwards this information to supporting storm organizations, including Transmission System Storm Center & ECC. In addition, these projections will be posted in the Current Storm Information folder located on the Duke Energy Florida Storm Center web page. Finally, the Duke Meteorology Team supports the Transmission Operations System Storm conference calls with updated forecasts and projections for the approaching storm.

10.0 Storm Room Standards

Storm rooms or storm centers are the command and control authority while the emergency response plan is in effect. For a system level response, the command and control hierarchy is as follows:

I. DEF System Storm Center – Incident Commander
II. Transmission System Storm Center (incl. Logistics Storm Center)
III. Local Area Storm Center - North (2); Central (1); Coastal (1)

Effective operation of a storm center or storm room is critical to efficient and speedy responses to emergency situations. The following guidelines should be utilized:
System Storm Center Activation Checklist
Storm Room Standards
Master Checklist (120-96-72-48-24-0 hour Checklist)

11.0 Activation, Set Up, Scheduling, and Staffing

The Transmission System Storm Center is activated when the Transmission Storm Director authorizes based on Incident Command and Meteorology notifications and activation decisions. Typically, the Transmission System Storm Center will activate when any Transmission Resources are needed for Major Storm Event planning, responding, deploying to restore Transmission assets into service. The Logistics Section/Admin/Corp Services Branch is responsible for coordinating with the Storm Director on Activation and Set Up of each Storm Center. The following Storm Centers are to be prepared (annual readiness compliance) to activate (staff, set up, mobilize) within 24-48 hours of initial notification.

Storm Center	Location (s)	Staffing # per shift	Notification lead time
T-FL System Storm Ctr.	Northpoint Rm #	4-6	24 hours
T-FL Logistics Ctr.	Northpoint Rm #	10-15	48 hours
T-FL Lodging		2-4	48 hours
North Storm Ctr.	MO-T-Ops Rm #	10-15	48 hours
C&M Storm Ctr.	WW-T-Ops Rm #	4-6	24 hours
Central Storm Ctr.	BV-T-Ops Rm #	10-15	48 hours
Coastal Storm Ctr.	TS-T-Ops Rm #	10-15	48 hours

Storm Center set up includes the physical location of the storm rooms according to safe, production oriented layouts. Phone lines, computers, printers, are all predesignated and checked / validated prior to the start of storm season as part of Annual Readiness and storm event preparedness. Complete Logistical and Operational staffing and support begins after the storm centers have been activated and staffed; *Leadership of each section may choose to activate / minimally staff prior to declaration of the event. The Set Up team will be expected to provide necessary actions for leadership.* Each storm organization has their scheduling/shifts, staffing, and work processes identified and all resources are expected to be trained for their roles prior to the start of storm season.

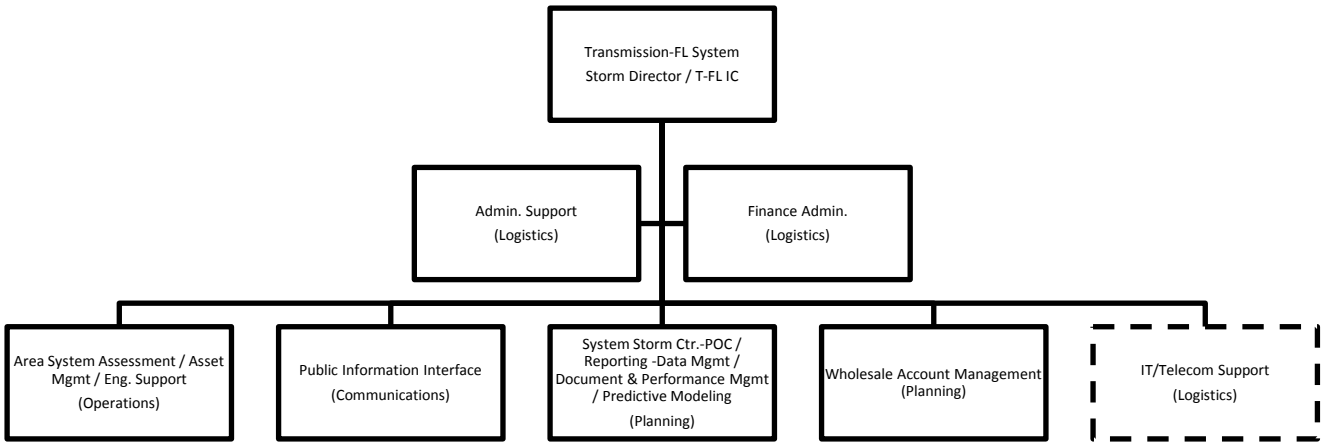
Standard work hours in response to an Event will consist of two (2) shifts (Day-time-5am to 9pm and Night-time- 5pm to 9am). Exceptions/Adjustments will be managed by each Storm Process Owner (i.e. Logistics Storm Center may choose to report from 7:00 am to 7:00 pm and not have Logistics' Center fully staffed for the Night Time Shift) to establish work shifts for those resources and Storm Role assigned to them. Deviation from 24/7 shifts must be approved by Storm Director.

In the initial stages of the restoration effort, it is accepted practice to work up to 16 hours, including travel time, without an extended rest period. As the 16 hour threshold approaches, each Process Owner will evaluate the extended response time needed and implement rotational shift assignments for all personnel, as needed. Operations / Area Center Storm Coordinators should make assignments to utilize a minimum of 80% of their assigned work force during daylight and early evening hours and establish an eight (8) hour rest period, where practical, before beginning a new shift.

11.1 Transmission-FL System Storm Center - Seating Chart

The following diagram is to illustrate those Storm Roles/Resources that will be sitting in the T-FL System Storm Center. Other storm leadership will be sitting with their organizations and will be accessible by telephone, internet, satellite phone, and / or radio. Floor diagrams / plans are designed and established so that efficiency, safety, and effectiveness in directing the event is accomplished. Northpoint (Lake Mary, FL) is the primary location for T-FL Incident Command; Wildwood Transmission Bldg. (Wildwood, FL) is T-FL Incident Command back up location.

Roles and Responsibilities of the Storm Director, T-FL Liaison to 1DF-DEF IC, and POC follow; all other role descriptions are within the appropriate Section / Branch org chart.



11.2 Transmission-FL System Storm Director / T-FL Incident Commander – Role Description

See most current org chart for staffing/resource assignments: T-FL Storm Org Chart
Job Title: Storm Director, Transmission-FL System Storm Center

Job Function:

This is the event lead position; it is the storm organizations directing leader for annual readiness, season and event preparedness, and storm plan/event implementation. T-FL Storm Director is the Restoration Coordinator and Incident Commander for Transmission's event within Florida. This position provides managerial oversight and leadership direction over the entire organization and specific event (planning, operational implementation, logistical support, communications, financial, and post-event close-out). T-FL Storm Director is responsible for assuring smooth, safe activation of storm centers, storm resources, and restoration activities.

Job Description:

The Storm Director (and Storm Director Alternates) is responsible for ensuring & assuring:

- That the organizational structure and foundational processes are current. Specifically, that the Storm Directors One Florida Storm Response Guiding Principles are current and reviewed with 1DF-DEF Incident Commander & Alternates; the storm organization is current and Sections are properly staffed by Section Leads.
- Annual readiness process has been activated at the beginning of each year.
- All storm personnel are trained (or at minimum training made available within each Section and direction for training to occur annually has occurred.
- All storm personnel are prepared to respond to direction to activate during a major event.
- Conducts / Directs T-FL System Storm Center (T-FL-SSC) as T-FL command center; assures information, data collection and sharing of data, grid stability prioritizations, resource needs, resource deployment, activation, approach and strategy decisions are made and communicated effectively toward safe, successful restoration.
- Determines location of the T-FL-SSC, ensures set up and reports to T-FL-SSC location with Storm Leadership/staff as illustrated on the reporting/communications tabs of the T-FL Storm Org Chart.

Key Interface Points:

- 1DF-DEF Incident Commander
- Incident Meteorology
- 1DF-DEF Planning Section Chief
- T-FL Liaison to 1DF-DEF Incident Command Center
- Operations Section Chiefs: Operations Area Storm Directors / C&M Management
  - Operations Asset Mgmt / Work Planning / Eng. Support Director
- Planning Section Chief
  - Planning – Reporting Analyst / Data Mgmt / Event modeling
- Logistics Section Chief
  - Logistics Resource Management Director
  - Logistics Admin Corp Services Director
    - Set Up Team
    - Admin Support Team
    - Admin Finance Team
    - IT / Telecom – IT Liaison
- Communications Liaison – External / Public Information
- Transmission System Storm Coordinator/Project Manager

Checklist of Actions:
This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Logistics Request Tool Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: Storm Director Checklist tab (scroll bottom of excel spreadsheet for Storm Directors tab)

###

Job Title: Storm Director – Alternate, Transmission System Storm Center

Job Function:
This is the event lead position's back up. Transmission-FL will have Storm Director and Alternate activated for each shift designated. The Alternate role is to serve in the same capacity as the Director, yielding decisions to the director, yet providing SME input during activation, deployment, prioritization decisions. The Alternate is to fill gaps in communicating, documenting, reporting as requested by the Director. This role provides appropriate redundancy within the decision making, directing aspects of this key and critical event management. This role is the storm organizations directing leader for annual readiness, season and event preparedness, and storm plan/event implementation. T-FL Storm Director is the Restoration Coordinator and Incident Commander for Transmission's event within Florida. This position provides managerial oversight and leadership direction over the entire organization and specific event (planning, operational implementation, logistical support, communications, financial, and post-event close-out).

Job Description: See above Storm Director's description

Key Interface Points: See above Storm Director's interface points

Checklist of Actions: See above Storm Director's checklist

11.3 Transmission –FL System Storm Liaison to 1DF-DEF ICC – Role Description

See most current org chart for staffing/resource assignments: T-FL Storm Org Chart
Transmission-FL System Storm Center, located at St. Pete-1DF-DEF STP DCC

Job Function:

This is a critical position, especially in the pre-storm planning and storm deployment and re-deployment of restoration teams. It is the Transmission - Florida storm organizations' liaison to 1DF-DEF Storm Center and Incident Commander. The Liaison is to assure communication, decision making, actions that Distribution Storm Organization makes are validated with Transmission and vice versus. The Liaison role is an interfacing role between Transmission and Distribution to reduce gaps and replication of efforts; striving toward efficiencies and excellence in separate but cooperative restoration efforts.

Job Description:

The T-FL Liaison is responsible for:

- Reporting to and fulfilling storm role in the DEF System storm room in STP DCC.
- Serves as Interface between Transmission Restoration Coord and the 1DF-DEF Storm Director / Incident Commander.
- Participates on Transmission Operations System Storm calls.
- Communicates Transmission restoration activities from a grid stability and restoration priority to 1DF-DEF SD / IC and reports out on 1DF-DEF System Operations Storm Calls
  - Safety stats
  - Contractor numbers and work assignments
  - Status / Production / ETR of all Transmission restoration activities
- Works with T&D to ensure restoration priorities are in sync
- Communicates emergent / emergency issues and situations to Transmission Regional Director (RD).
- Actively seeks ways to collaborate with 1DF-DEF for more efficient use of resources
  - Contractor use
  - Quick hit restoration activities, etc.
- Communicates with DCC on emergent issues
- Assists 1DF-DEF with outage reporting and overall manning of the system storm room.

Key Interface Points:

- T-FL Storm Director
- 1DF-DEF Incident Commander
- 1DF-DEF Planning Section Chief
- Operations Section Chiefs: Operations Area Storm Directors / C&M Management
  - Operations Asset Mgmt / Work Planning / Eng. Support Director
- Planning Section Chief
  - Planning – Reporting Analyst / Data Mgmt / Event modeling
- Logistics Section Chief
  - Logistics Resource Management Director
- Communications Liaison – External / Public Information
- Transmission System Storm Coordinator/Project Manager

Checklist of Actions:

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Logistics Request Tool Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: T-FL Liaison Checklist tab

11.4 T-FL System Storm Center – Reporting Analyst / Point of Contact (POC) Role Description

See most current org chart for staffing/resource assignments: T-FL Storm Org Chart

Job Function:

This is a PoC role; a critical position, especially in the pre-storm planning and storm deployment and re-deployment of restoration teams. It is the Transmission - Florida storm organizations' Point of Contact for anyone calling into Transmission System Storm Command. This role reports to the NP Storm Center for Transmission Storm Direction. It is a Planning Section Position that sits in the System Storm Center. It is responsible for collecting data from ECC/System modeling and other Sections of the Organization. It reports potential storm /event impacts, assessments of modeling and data collected, and confirming with ECC/Planning initial priorities for restoration of system and maintaining grid stability. This role gathers and compiles data necessary for creation of IAP (Incident Action Plan) for Transmission storm event; provides TOMS data management, reports outages on lines, substations, provides validation of ETRs. The PoC role is an interfacing role within Transmission System Storm Center Leadership (Operations, Planning, Logistics, & Communications) to gain alignment and plan for the event restoration priorities. See also TSSOP – GDLP-EMG-TRM-00028-Planning Section.

Job Description:

The T-FL System Storm Center PoC is responsible for:

- Is the Planning Section – Data Mgmt / Event Modeling team member
- Gathering and compiling potential and actual event impact to T-FL system, using modeling and actual data
- Compiles and documents IAP for goal of maintaining T-FL grid stability and providing synced restoration daily plan
- Participates on Transmission Operations System Storm calls.
- Provides/Confirms Transmission system impact and restoration activity data to Storm Leadership by reporting:
  - Lines out / down
  - Substation impacts
  - Status / Production / ETR of all Transmission restoration activities
- Must be familiar with and skilled in utilizing, reading, reporting from the:
  - T-FL System Map board,
  - System 1-line,
  - Modeling tools
  - TOMs data management tool so that reports are regularly run and provided to Storm Leadership
- Answers the telephone with in the T-FL System Storm Center; direct/prioritizes call request, need
- Based on modeling data and impact data, provides reports, insight, pro-active view of possible emergent / emergency issues and situations

Key Interface Points:

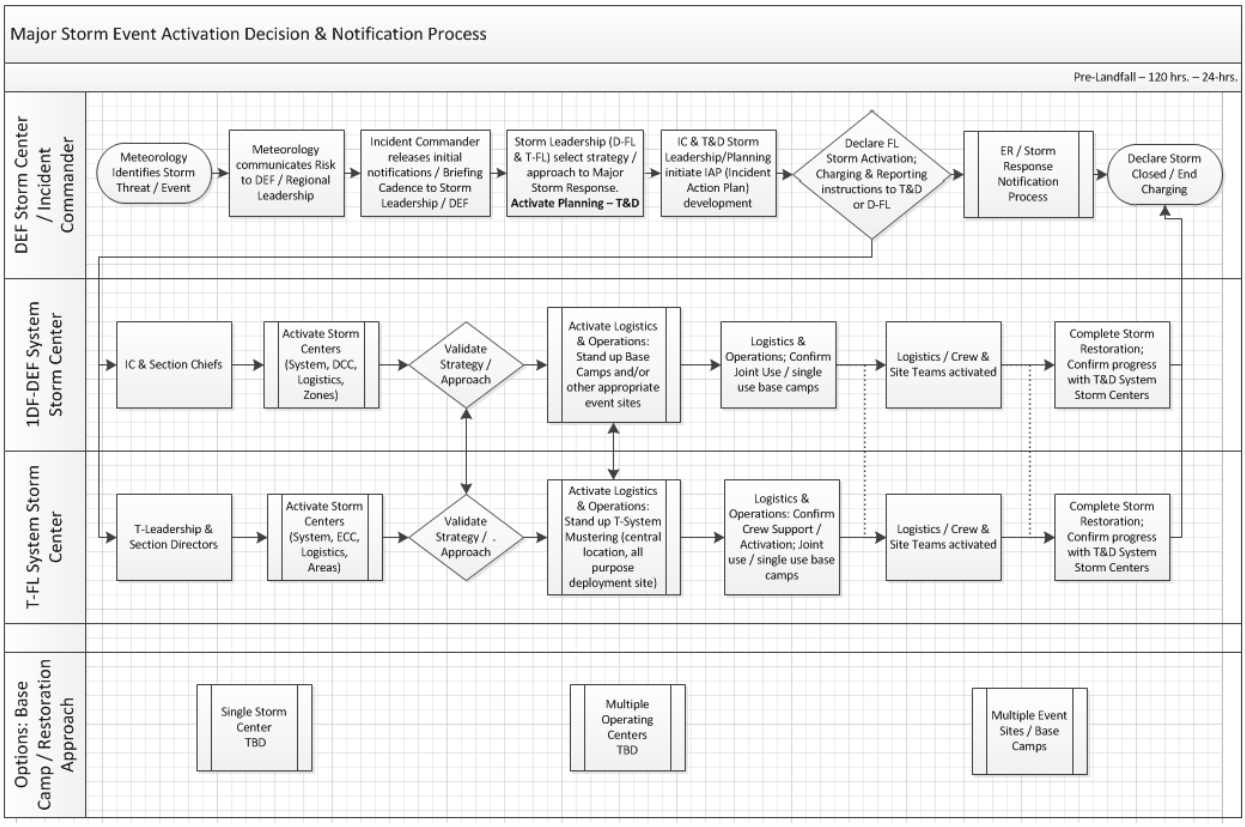
- T-FL Storm Director
- Operations Section Chiefs: Operations Area Storm Directors / C&M Management
  - Operations Asset Mgmt / Work Planning / Eng. Support Director
- Planning Section Chief
  - Planning – Reporting Analyst / Data Mgmt / Event modeling
- Logistics Section Chief
  - Logistics Resource Management Director
- Communications Liaison – External / Public Information

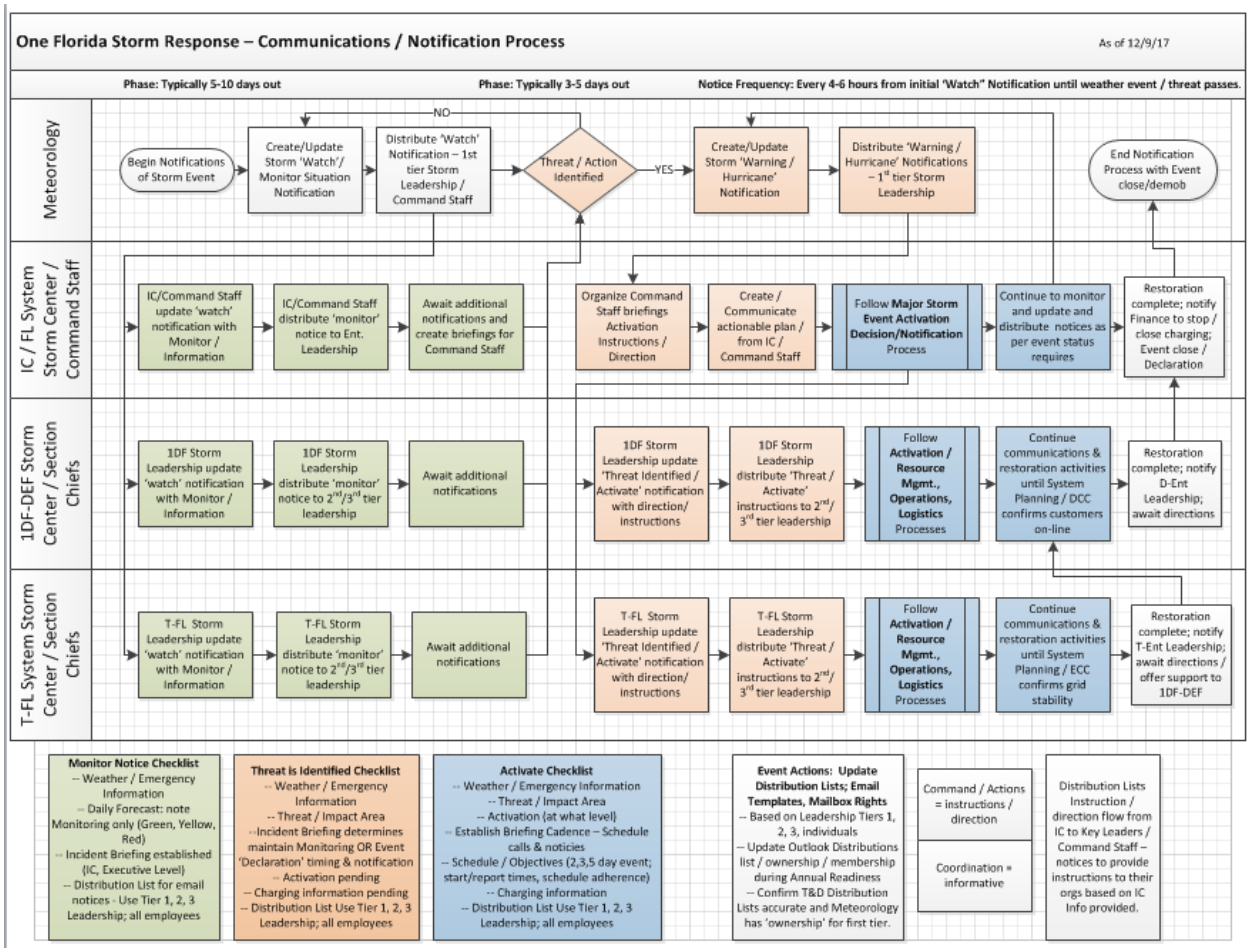
Checklist of Actions:
This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Logistics Request Tool Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: **T-FL System Storm Ctr-POC** tab – TBD (scroll bottom of excel spreadsheet for Storm Directors tab)

12.0 Briefings Schedule / Notifications Protocols

Incident Command establishes the event call / briefings schedule and notification protocols; through the Annual Readiness process these schedules and protocols are updated prior to each storm season.

The IC and Storm Directors are to follow the Activation Decision/Notification process (Link):
See diagram pictured below.





The Storm Call Schedule (Briefing Cadence) includes all critical storm organizations sections/branches on a daily call schedule; non-critical will schedule their team calls after the associated section / branch call has occurred. A link to the storm call schedule can be found within the T-FL System-Storm-Ops-Call folder on the T-FL Storm Center SharePoint site, within the Storm Documentation Library. The Storm Call / Briefing Cadence is for leadership to utilize as a planning and communications tool. Transmission Storm Leadership will participate in these FL Storm Organizational and Planning calls and will establish strategic approach to the event with 1DF-DEF Incident Command and with ONETransmission Systems reporting needs.

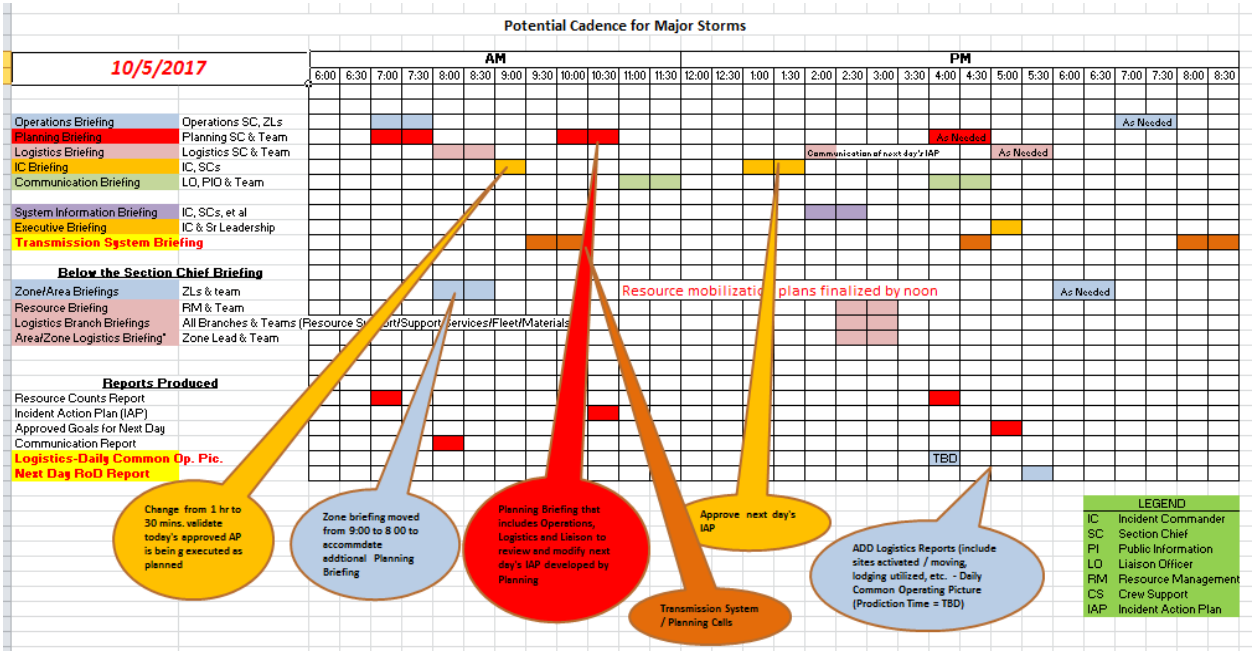
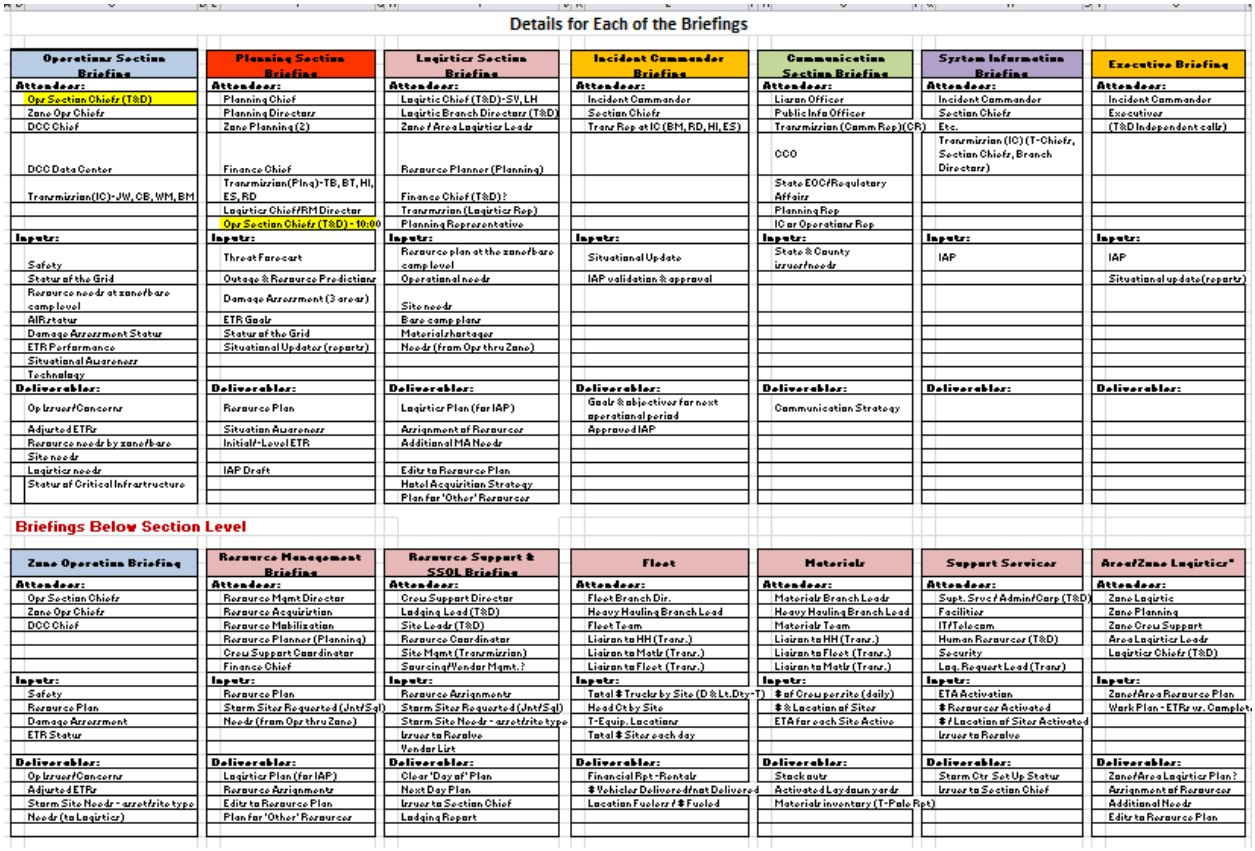


Diagram of Call Schedule / Briefing Cadence (DRAFT 10/5/17)

Briefing / Call details (agenda, inputs, outputs, attendees) are provided for facilitator and briefing role call; sample is illustrated below:



13.0 Post Emergency Response / Recovery Plan – Event Close Out

The close out of an event is decidedly as important as the initiation and declaration of the event. The number of resources activated and utilized, the miles and volume of restoration completed, the locations and volume of outages restored (especially critical infrastructure and grid stability impacts), down to the number of meals served and beds provided must be documented and reported. Upon Event being declared complete and 'System Restored' the Organization must complete data collection and assure all aspects of event are 'closed'. The following section of this document is under development to be completed during the first revision in 2018.

13.1 Operations Section: Close - S&T Confirmation and System Restored Reporting

- 13.1.1 S&T Protocols & Actions
- 13.1.2 S&T / TOMS / ETRs Reporting

13.2 Operations Section: Close - Post Restoration Teams (C&M/Veg Clean Up Crews)

- 13.2.1 Vegetation Management - Tree removal
- 13.2.2 C&M Debris & Restoration equipment impact

13.2 Planning Section: Close - Wholesale / Customer Call-back & follow up

13.3 Planning Section: Close - Grid Mod Updates/ Transmission impacts

13.4 Logistics Section: Close - Resource Management Reporting Close

- 13.4.1 Resource Mgmt Protocols for Releasing all Support Staff & Crews Actions
- 13.4.2 Resource Mgmt Data Reports Complete

13.5 Logistics Section: Close - Finance / Administrative Close

- 13.5.1 Finance Event Invoicing / Close Actions
- 13.5.2 Finance Event Close

13.6 Communications: Close - Internal & Eternal (Public Information)

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00026

Revision no.: 000

Document title: TSSOP - Transmission System Storm Operational Plan: Storm Annual Planning, Restoration Strategy & Direction

Type of action:

- ☑ New
- ☐ Revision
- ☐ Renumber
- ☐ Cancellation
- ☑ Ownership Change
- ☐ Periodic review completed, as required
- ☐ Suspension

For Document Management staff use only:

- ☐ Editorial Change
- ☐ Migration
- ☐ Control element revision _____ (does not require approval authority signature)

Applies to: (Select all that apply)

- ☐ Duke Energy
- ☐ Duke Energy Carolinas, LLC
- ☐ Duke Energy Progress, LLC
- ☑ Duke Energy Florida, LLC
- ☐ Duke Energy Indiana, Inc.
- ☐ Duke Energy Kentucky, Inc.
- ☐ Duke Energy Ohio, Inc.
- ☑ Group Transmission
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☑ None
- ☐ NERC
- ☐ State Codes/Standards
- ☐ FERC Standards of Conduct
- ☐ HIPAA
- ☐ Patriot Act
- ☐ Sarbanes-Oxley
- ☐ Other _____
- ☐ OSHA _____

Complete if submitting a form: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☐ Yes (Procedure No: _____)

How is the form to be completed or used? ☐ Hard Copy (completed by hand) ☐ Online Data Entry (fillable PDF)

- ☑ Communication plan established
- ☑ Impact Reviews completed

Description of document action or summary of changes:

Publication of TSSOP - Transmission System Storm Operational Plan for Transmission Florida. Moving Document from Draft form created and proven during 2016 & 2017 seasons; draft document was housed on Transmission System Storm Center -Share Point site: TSSOP-Transmission System Storm Operational Plan.

GDLP-EMG-TRM-00026 is the second of seven documents that make up the TSSOP-Transmission System Storm Operational Plan for DEF-Transmission. This document is the Annual Planning, Restoration Strategy & Direction of the plan. It contains direction and guidance for activating and executing the plan.

Section B: Approval

Who should sign? see instructions on page 2

Preparer(s)/Author(s)/Writer(s) (*signature not required*):

Deb Banister-Hazama

Approval recommended (*print name*): Ray Desouza	*(signature)*	Date:
Approval recommended *(print name)*: R-B Matthews	*(signature)*	Date:
Approval recommended *(print name)*:	*(signature)*	Date:
Final Approval *(print name)*: Jason Williams	*(signature)* Jason S Williams	Date: 12-11-17

RETURN SIGNED FORM AS SCANNED PDF VIA E-MAIL OR FAX TO (919) 235-3165

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00026 | Revision no.: 000

Document title: TSSOP - Transmission System Storm Operational Plan: Storm Annual Planning, Restoration Strategy & Direction

Type of action:

- ☑ New
- ☐ Revision
- ☐ Renumber
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- ☐ Other _____

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- ☑ None
- ☐ NERC
- ☐ State Codes/Standards
- ☐ FERC Standards of Conduct
- ☐ HIPAA
- ☐ Patriot Act
- ☐ Sarbanes-Oxley
- ☐ Other _____
- ☐ OSHA _____

Complete if submitting a form: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☑ Yes (Procedure No: _____)

How is the form to be completed or used? ☐ Hard Copy (completed by hand) ☑ Online Data Entry (fillable PDF)

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Section B: Approval

Who should sign? see instructions on page 2

Preparer(s)/Author(s)/Writer(s) (*signature not required*):
Deb Banister-Hazama

Approval recommended (*print name*): Ray Desouza	(signature)	Date: 02/15/17
Approval recommended (*print name*): R-B Matthews	(signature)	Date:
Approval recommended (*print name*):	(signature)	Date:
Final Approval (*print name*): Jason Williams	(signature)	Date:

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Keywords: procedures and forms, procedures program; daf; ADMP-PRO-ADS-00002; document management program
Applies to: Duke Energy - Transmission

Document title:	Document number:
TSSOP-Transmission System Storm Operational Plan: Operations–Crew Management, Area Assessment & Area Logistics	GDLP-EMG-TRM-00027
	Revision No.: 000
Keywords: Transmission System Storm Center Operational Plan (TSSOP), Transmission Storm Plan, emergency, restoration plan,	Applies to: Transmission - DEF

This document is the Operations Section of the Transmission System Storm Operational Plan referenced in the Table of Contents in GDLP-EMG-TRM-00025 - TSSOP - Introduction and Overview.

Table of Contents

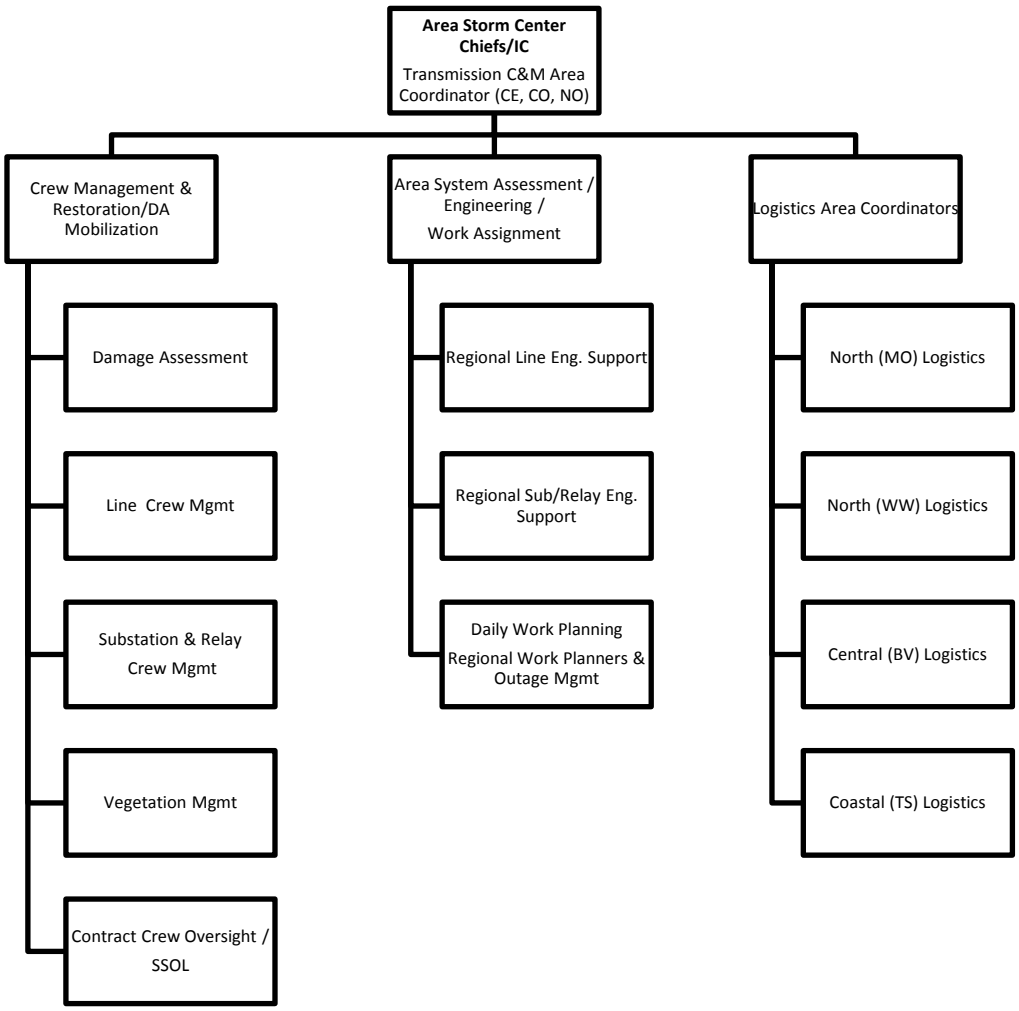
1.0 Operations Section

As the Construction and Maintenance Organization during 'blue-skies', the Operations Section during a Major Storm Event is initially and primarily responsible for the physical restoration of the DEF Transmission assets. The Operations Section will follow the ICS structure and process of awaiting direction from T-FL System Storm Center for activation, strategic planning, and deployment. The Operations Section will interact with Planning Section, Logistics Section, and Communications Section leadership prior to deploying and releasing crews; communication and cooperation throughout Major Storm Response is crucial to safe and effective restoration. In addition, the Operations Section will comply with Annual Readiness actions to assure readiness of the organization to respond to an event.

2.0 Mission and Purpose

It is the mission of each Duke Energy Transmission-FL Operations (Construction & Maintenance) to ensure that personnel (restoration/C&M), training, materials, and equipment are current for the specific purpose of efficiently executing this plan; execution is to be according to company expectations around safety, cost, restoration times, and other key performance indicators ensuring success for the company, its employees, and its customers. The safety of employees and the public will, at all times, be primary consideration of this plan.

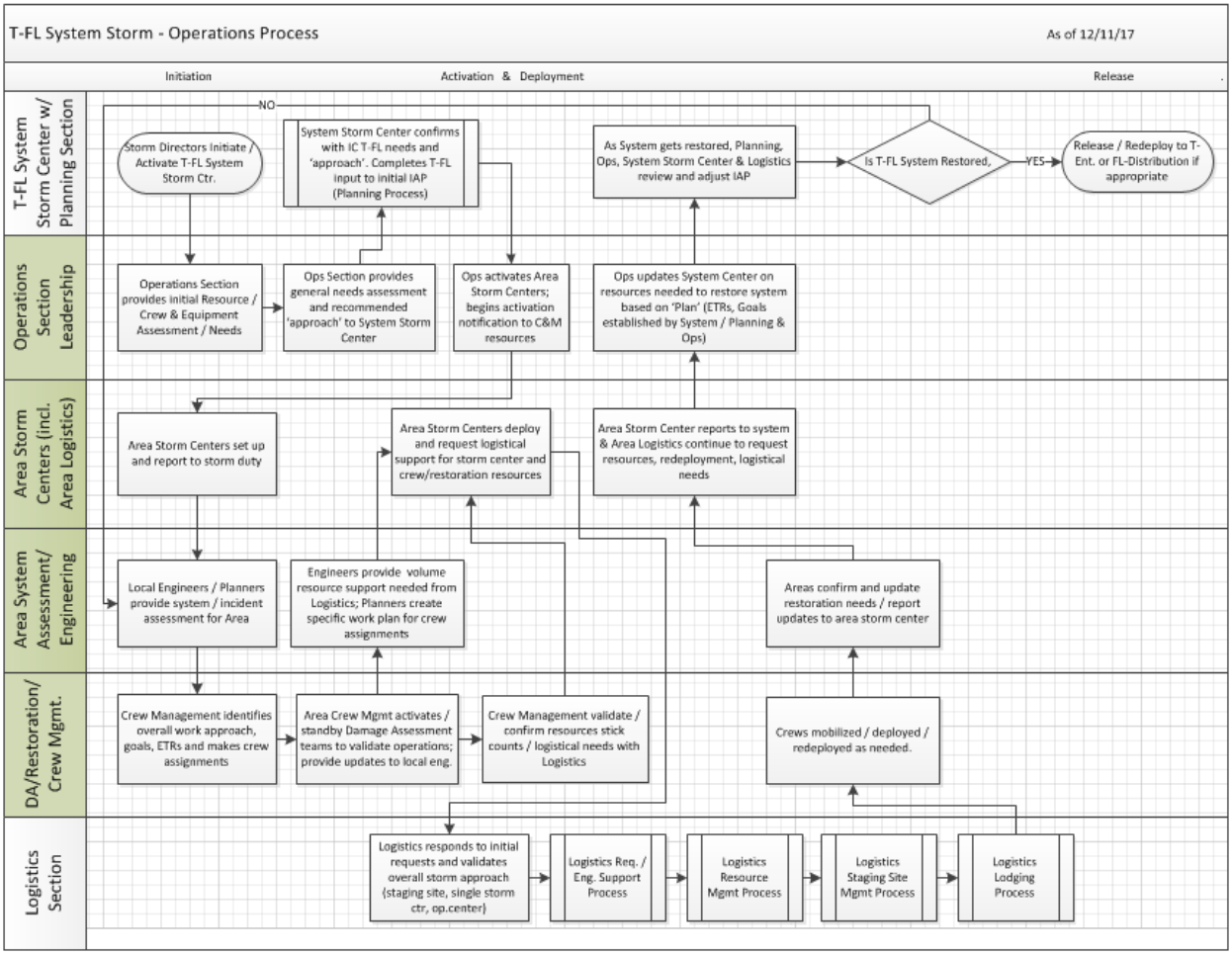
3.0 Org Chart – Operations / Local Area Storm Centers



Details and current assignments to the storm roles illustrated above can be found in the Transmission-FL Storm Org Chart.

4.0 Operations Process to Storm Activation/Restoration

The following process flow (T-FL System Storm – Operations Process) illustrates the interaction between System Storm Center, Operations Section, Planning Section, and Logistics Section. System Storm Center and Planning initiate and prioritize the initial approach to restoration. Each Area Storm Center is then responsible for assessing damage and area assets creating tactical restoration effort. Each Area Storm Center will report and thus confirm with System and Planning on action plan so that the system approach is continuously updated. The Area Logistics Centers will interact with System Logistics Center in order to assure Area Storm Center's restoration logistical needs are met.



In the event of severe damage to transmission facilities, due to storm or other cause, the repair of which is beyond the capability of local Transmission Construction & Maintenance personnel, the resources of the Company will be activated to the extent deemed necessary by the System Storm Center, Planning Section and the Transmission C&M Area Coordinator/Area Storm Chief, in accordance with the following outline and process:

- In the Transmission Department, each Area will have appropriate personnel, facilities, and equipment under the direction of the Transmission C&M Area Coordinator/Area Storm Chief. The Area Transmission Coordinators will report to the System Storm Center Director/Chief, Transmission-FL.
- All staff assignments and other necessary information must be kept up to date and reviewed annually.

- Transmission C&M Area Coordinators / Area Storm Center Chiefs must be ready to affect the transfer of help to other areas with a minimum of confusion and delay, as well as to direct the work of numerous crews with efficiency and safety in case of trouble in their own areas.
- The decision on which Storm Center(s) activate will depend on the location of the storm/emergency. The Incident Commander and T-FL System Storm Directors, with Planning Section, will provide direction for activation. (See GDLP-EMG-TRM-00025 - TSSOP - Introduction and Overview and entire TSSOP document.)

The Operations Section of Transmission-FL Storm Organization is made up of three significant Branches: 1) Crew Management / Restoration Mobilization, 2) Area System Assessment/Engineering/Work Assignment, and 3) Area Logistics Coordinator/Centers.

Each Branch within the Operations Section will activate according the event level needs and skills / storm role assignment as determined by System Storm Center. Storm role tools (Pre-Storm Checklists, T-Outage Mgmt/TOMS, Resource Mgmt/RoD, RSVP, Site Management / Site Master List & Processes, etc.) will be reviewed, trained, drilled as part of Annual Readiness, prior to storm season; therefore preparing each T-FL C&M Area Storm Center for activation and restoration. Access to tools and role descriptions are provided / updated annually during previous storm season's Lessons Learned and Annual Readiness training, workshops and drill exercises.

The Operations Section Leadership consists of the C&M Area Managers as directors / incident commanders of the Area Storm Centers; the C&M Area Managers report to and take direction from T-FL System Storm Center Director / T-FL System IC. Each Branch of the Operations Section takes into account this cooperative leadership. Each Branch is structured to support the four (4) Area Storm Centers and will work through the System Storm Center and System Logistics Center. The T-FL System Storm – Operations Process diagram above illustrates the Operations Section storm activation process. (T-FL System Storm – Operations Process)

4.1 Area Storm Center Chief/IC / C&M Area Coordinator - Roles and Responsibilities

See Transmission Storm Org Chart – Operations/Area Storm Centers tab

Job Function:

This is the event lead position in each TMA; it is the local storm organization's directing leader for annual readiness, season and event preparedness, and storm plan/event implementation. Area Storm Center Chief/IC / C&M Area Coordinator is the local crew mobilization coordinator of all restoration resources. This role is the Local Transmission Maintenance Area Incident Commander, under the authority of the T-FL System Storm Director/T-FL IC. This position provides managerial oversight and leadership direction over the local organization and local specific event (planning, operational implementation, logistical support, communications, financial, and post-event close-out). Area Storm Center Chief/IC / C&M Area Coordinator is responsible for assuring smooth, safe activation of the local storm center, that center's storm resources, and all restoration and mobilization activities. The Area Storm Center Chief/IC / C&M Area Coordinator will activate, coordinate and mobilize all the construction and maintenance transmission resources in the respective Area during a severe storm or other disaster in an effort to maintain or restore service. As the Transmission-FL System Storm Director / T-FL IC authorizes the activation & restoration plan over the Florida Transmission System, the Area Storm Center Chief/IC / C&M Area Coordinator has similar authority over the Local Transmission Area.

Job Description:

The Area Storm Center Chief/IC / C&M Area Coordinator is responsible for:

- Activating and staffing the Area Storm Center, assuring all personnel are appropriately trained and prepared for reporting for storm duty
- Following the TSSOP for activating, deploying, deactivating, closing the local area storm center
- Participating in T-FL System Operations Storm calls; reporting and validating storm/event impact as per local damage assessment, resource allocation/needs
- Provides status/reporting of restoration effort in area; tracks line outages, switching operations, progress on damage assessment, restoration complete
- Assures tracking of all crew movement (DA crews, substation, relay, line, tree crews); provides input for utilization of base camps, laydown yards, that are conducive to efficient crew movement
- Accountable for ensuring the Area Storm Center Organizational Staffing and area checklists, contact lists for storm/emergency restoration are maintained current
- Assures that all crew are activated and tracked via roster submission to Logistics, Resource Management; that 'stick counts' are validated prior to event and crews rosters are kept current in case of movement outside of local area (to support restoration efforts elsewhere and provide logistical data necessary).

Key Interface Points:

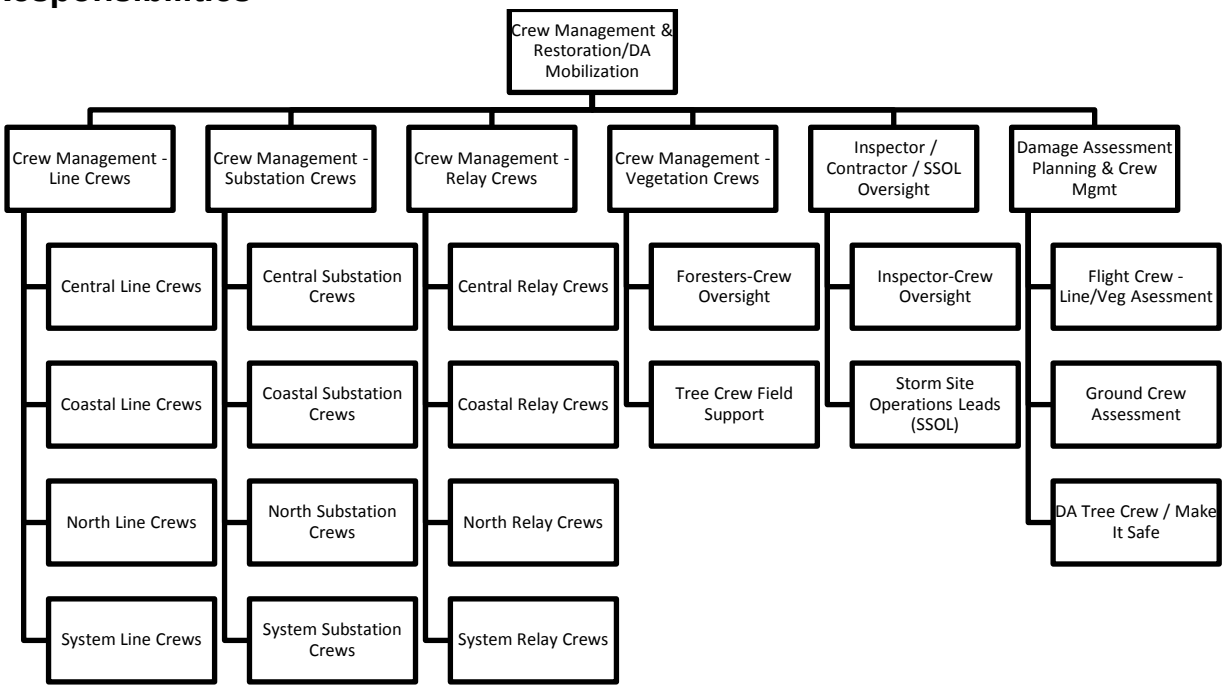
- Transmission-FL System Storm Director / T-FL Incident Commander (IC)
- Transmission –FL System Storm Liaison to 1DF-DEF ICC
- Operations Section Chiefs: Area Storm Center Chief/IC / C&M Area Coordinator-Peers
  - Operations Asset Mgmt / Work Planning / Eng. Support Director
- Planning Section Chief
  - Planning – Reporting Analyst / Data Mgmt / Event modeling
- Logistics Section Chief
  - Logistics Resource Management Director
  - Logistics Admin Corp Services Director
    - Set Up Team
    - Admin Support Team
    - Admin Finance Team
    - IT / Telecom – IT Liaison
- Transmission System Storm Coordinator/Project Manager

Checklist of Actions:

This timeline is designed for a major hurricane entering T-FL service area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: **C&M Area Storm Ctr Chief** tab

5.0 Crew Management – Restoration/DA Mobilization – Organization, Process, Roles & Responsibilities



Crew Management & Restoration/DA Mobilization current storm organizational chart with role assignments can be found on the T-FL System Storm Center SharePoint site or by following this link: T-FL Storm Org. Chart

Resource Assessments and staffing of the storm organization is to be completed in the first quarter of each year; so that when storm season approaches, training, communications, planning can occur in a timely fashion. Crew Management Branch has the largest organization to staff and make documentation ready for communication/expectations clear to leadership, supervisors, and crew members.

As storm season approaches, branch leadership is to assure all staff are prepared to activate into their storm role. In the event that a storm impacts the T-FL System, restoration efforts are expected to start almost immediately. "Restoration" begins as soon as System Storm Center has declared 'all clear' and after the Planning Section and System Storm Center have confirmed/announced system restoration prioritization based on grid integrity and event impact. Area storm centers will mobilize the crews first for area damage assessment and second for asset restoration/repair. The DA Crews are expected to assess damage, report to Area Storm Center, and repair where safe, plausible, and in accord with System/Restoration Priorities. Therefore, DA Crews should be staffed and equipped accordingly.

Area Storm Centers will mobilize maintenance area crews first, T-FL-traveling crews second, on-system contract crews third. If additional resources are required, T-FL will request support thorough Mutual Assistance process which states to request 'non-native' resources from other Duke Energy jurisdictions first (Carolinas East, Carolinas West, Midwest) and then acquire off-system / non-native contract crews and/or other utilities, second. This crew deployment protocol is recommended by both Duke Energy and its utility partners. (Strike Team Process / Mutual Assistance ONETransmission process is under development to be completed as per Annual Readiness Action Plan.)

All crews will be placed in a roster for uploading into the resource management system/database, whether the crew is typically a traveling crew or not. Each crew should be prepared to travel to respond to service area impacted. Work area may not be typical show up location; therefore, crew members are registered via roster and then activated to assigned location. Roster will be updated at activation to designate if logistical support is required (i.e. lodging, meals, fueling, etc.). Crew supervisor, RM-Mobilization, and Area Logistics Crew Support will manage roster updates as required (pre-storm season, daily during event, etc.). In addition, rosters should include equipment / vehicles going with crew (assigned to crew) so that work site and base camp are prepared to receive crews and equipment.

5.1 Crew Management & Restoration/DA Mobilization Director – Roles & Responsibilities

Job Function:

The Crew Mgmt & Restoration/DA Mobilization Director is the lead over mobilization of all crews; it is the Operations organization's directing leader for internal and contract crew. This role is the crew mobilization coordinator of all restoration resources. This role is to be aware of total resource availability for the entire system and be able to confirm that Local Area impacted has the resources required to deploy and restore. They are responsible for recommending which resources to mobilize and to add additional resources from other area or from System / Contract resources pool. This position reports data and crew / resource availability to the three (CE, CO, NO) Area Storm Center Chiefs/IC / C&M Area Coordinators and to T-FL System Storm Director/IC

Job Description:

The Crew Management & Restoration /DA Mobilization Director is responsible for:

- Crew pre-storm restoration activities – assuring that normal / blue sky activities are completed so that the system is restored to normal configuration in the anticipated impact area
- Ensure that all normal work activities have stopped and preparation for storm impact has taken place from field personnel's perspective.
- Ensure applicable equipment is staged and staging location is communicated and ready for event. Communicate any 'special equipment' staging to Logistics-Materials, Heavy Hauling, & Fleet
- Following the TSSOP for activating, mobilizing, deploying, deactivating, crew resources (all crew resources needing logistics support-lodging, meals, fueling, etc.- will be in a Roster submitted to Logistics-Resource Management).
- Participating in T-FL System Operations Storm calls; reporting and validating crew / resource availability and needs / gaps to the required resources
- Provides and assures tracking of all crew movement (DA crews, substation, relay, line, tree crews); provides input for utilization of base camps (staging sites), laydown yards, that are conducive to efficient crew movement. Crew Management and Logistics-Resource Management must communicate/validate resource needs and movement as per Planning / Incident Action Plan and Next Day Planning processes define. (See Planning Process within GDLP-EMG-TRM-00028.)
- Provides and assures that all crew are tracked via roster submission to Logistics, Resource Management; that 'stick counts are validated prior to event and crews rosters are kept current in case of movement outside of local area (to support restoration efforts elsewhere and provide logistical data necessary).
- Participates in Pre-storm System Storm Center calls to provide Crew Resource projections/needs/availability based on Planning Section & Incident Command event/storm modeling and projections

Key Interface Points:

- Transmission-FL System Storm Director / T-FL Incident Commander (IC)
- Operations Section Chiefs: Area Storm Center Chief/IC / C&M Area Coordinator-Peers
  - Operations - Asset Mgmt / Work Planning / Eng. Support Director
  - Operations – Crew Supervisors – Line, Substation, Relay, Vegetation
  - Operations – Damage Assessment Planning & Crew Mgmt
  - Operations – Inspectors & SSOL Crew Oversight
- Planning Section Chief
  - Planning – Reporting Analyst / Data Mgmt / Event modeling
- Logistics Section Chief
  - Logistics Resource Management Director
- Transmission System Storm Coordinator/Project Manager

Checklist of Actions:

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Logistics Request Tool Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Crew Management & Restoration/Da Mobilization Director

5.2 Crew Mgmt Supervisor – Roles & Responsibilities

See Transmission Storm Org Chart **–** Operations/Area Storm Centers tab

Job Function

Crew Mgmt – Supervisor (previously known as “Maintenance Supervisor”) will coordinate C&M personnel for all restoration activities. The Supervisor is to deploy and assign work according to Damage Assessment and Incident Action Plan (IAP) goals and objectives. (See Planning Section – GDLP-EMG-TRM-00028.) The assignment of work and oversight of the crews, reporting of work complete and ETRs back to Storm Center are to be assured complete by the Supervisor daily according to the expected schedule. Reporting of status or ETRs is critical to Operations & Planning securing a ‘Next Day’ Plan. The Supervisor of each discipline (line crews, substation crews, relay crews) is to follow all DE and utility safety, resource management, human resource, craft personnel guidelines as per ‘blue sky’ moving to ‘storm/emergency’ response. The additional functions/responsibilities described within are for the Area Storm Center Director to confirm and assign to the appropriate Supervisor / Manager.

Job Description .

The Crew Mgmt – Supervisor (Line, Sub, Relay) will coordinate personnel restoration activities as directed by the Transmission Florida Storm Director / IC, Operations Section Chiefs/Area Storm Center IC and Planning Section Chief (with ECC Operations Director & Dispatcher) through the daily Incident Action Plan (IAP).

- Interface & coordinate with the Area Storm Center IC & Crew Management & Restoration/DA Mobilization, providing relief for rest and meals and otherwise assisting as needed.
- Can be designated as a SSOL-Storm Site Operational Lead in the field / at storm sites (Base Camps, Mustering Sites, etc.).
- Serve as Liaison between Transmission C&M and other DE or contract personnel.
- Assure generator located at the Area Storm Center or Op Center working out of is tested periodically in anticipation of a storm/emergency, the tank level is checked and filled as necessary in anticipation of a storm/emergency (Substation Supervisor).
- Assure that all vehicles are fueled and prepared for storm emergency response
- Assure that all portable radio batteries are tested and charged; test and fuel all portable generators, emphasize the importance of minimizing radio traffic on primary channels, and check the operation of all pagers, satellite and cellular phones.

- Coordinate and request Logistics and / or Fleet /Fueling for all onsite and field fueling needs; See T-FL Logistics – Fueling Sub Process.
- Assist with Company/Contractor expense documentation and the implementation of all special accounting practices.
- Maintain a complete log of events.
- Assign a member of crew (normally the Senior Lineman) to work with Asset Mgmt / Area Engineer SSOL / Materials Coordinator stationed at the Area Storm Center in the determining and dispatching of materials. See T-FL Materials Storm Process.
- Assign member of crew (normally the Senior Lineman) to work with Asset Mgmt / Area Engineer /Logistics & SSOL / Heavy Hauling-Equipment Rental Coordinator stationed at the Area Storm Center in the determining and dispatching of equipment/heavy hauling needs. See T-FL Heavy Hauling/Equipment Rental Process

Key Interface Points

- Crew Mgmt & Restoration/DA Mobilization Director
- Area System Assessment / Engineering / Work Assignment
- Area Logistics Ctr: Logistics Request Taker
- Area Logistics: Lodging Support
- Area Logistics: Crew Support
- Logistics: RM Resource Acquisition (RoD Rosters)
- Logistics: Resource Mobilization (RoD Mobilization/Crew Tracking)
- Logistics: Materials Management
- Logistics: Heavy Hauling
- Logistics: Eng/Major Equipment Support
- Logistics: Site Management/SSLL
- Operations: SSOL/Inspector

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: Crew Mgmt-Supervisor tab (Under development)

5.3 Vegetation Management - Roles & Responsibilities

See Transmission Storm Org Chart **–** Operations/Area Storm Centers tab

Job Function

Crew Mgmt – Supervisor/Vegetation will coordinate C&M personnel for all damage assessment and vegetation clearing restoration activities. The Supervisor is to deploy and assign work according to Damage Assessment and Incident Action Plan (IAP) goals and objectives. (See Planning Section – GDLP-EMG-TRM-00028.) The assignment of work and oversight of the crews, reporting of work complete and ETRs back to Storm Center are to be assured complete by the Supervisor daily. The Supervisor of each Vegetation Crew is to follow all DE and utility safety, resource management, human resource, craft personnel guidelines as per 'blue sky' moving to 'storm/emergency' response. The additional functions/responsibilities described within are for the Area Storm Center Director to confirm and assign to the appropriate Supervisor / Manager.

Job Description .

The Crew Mgmt - Supervisor (Veg Crews) will coordinate personnel restoration activities as directed by the Transmission Florida Storm Director / IC, Operations Section Chiefs/Area Storm Center IC and Planning Section Chief (with ECC Operations Director & Dispatcher) through the daily Incident Action Plan (IAP).

- Interface and coordinate with the Area Transmission Coordinator/Area Storm Center Director, providing relief for rest and meals and otherwise assisting as needed.
- Complete and submit Rosters for all crews that may be utilizing Logistics Support (Lodging, Meals, Fueling, Materials, etc.) and return to Area Logistics and/or Resource Mgmt-Acquisition according to process and timeline requirements
- Assess and report ROW damage and clearing needs.
- Organize support from local contractors, coordinating all ROW and clearing activities.
- Maintain Transmission Area maps to be copied and distributed to out-of-town crews.
- Maintain a current Contractor directory.
- Gather and provide information on road access from state and local agencies with the help of the Support Staff.
- Arrange for aerial patrol of lines. When appropriate, will notify contract helicopter in advance and route to a location on the system where the storm is not expected to hit.
  - DA and flight plans will be coordinated through Logistics Section and Operations-Asset Mgmt/Daily Work Planning branch.
- Distribute crew registration forms, voucher forms, and will be responsible for notification of charge numbers.
- Assist with Company/Contractor expense documentation and the implementation of all special accounting practices.
- Coordinate with Logistics and / or Fleet /Fueling for all onsite and field fueling needs; See T-FL Logistics – Fueling Sub Process.
- Support / Assist with Company/Contractor expense documentation and the implementation of all special accounting practices.
- Maintain a complete log of events.
- Assign member of crew (normally the Senior Veg. Mgmt) to work with Asset Mgmt / Area Engineer / Area Logistics-SSOL / Heavy Hauling-Equipment Rental Coordinator stationed at the Area Storm Center in the determining and dispatching of equipment/heavy hauling needs. See T-FL Heavy Hauling/Equipment Rental Process

Key Interface Points

- Crew Mgmt & Restoration/DA Mobilization Director
- Area System Assessment / Engineering / Work Assignment
- Area Logistics Ctr: Logistics Request Taker
- Area Logistics: Lodging Support
- Area Logistics: Crew Support
- Logistics: RM Resource Acquisition (RoD Rosters)
- Logistics: Resource Mobilization (RoD Mobilization/Crew Tracking)
- Logistics: Materials Management
- Logistics: Heavy Hauling
- Logistics: Eng/Major Equipment Support
- Logistics: Site Management/SSLL
- Operations: SSOL/Inspector

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Area Logistics Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Crew Mgmt-Supv-Vegetation tab (Under development)

5.4 Inspector, SSOL, Crew Oversight - Roles & Responsibilities

See Transmission Storm Org Chart **–** Operations/Area Storm Centers tab

Job Function

Crew Mgmt – Inspector, , Crew Oversight , SSOL (Site Operations Lead) role will have oversight of the crews (contract or internal) to assure work assignments are accurate, safe, and worked according to DE safe work practices. In addition this role is responsible for assuring / maintaining crews work schedules. Storm work hours, unless otherwise noted are to be no more than 16 hours on with 8 full hours rest each day. So, generally, the crews have a 2 hour wake/eat/travel window, 12 MAX work window, 2 hour travel/eat/lodging window to make up the 16 total hours on, thus assuring 8 hours rest. The Inspector / SSOL / Crew Oversight role is to manage the deployed Damage Assessment, Restoration crews according to Incident Action Plan Goals and Objectives. The role is to provide oversight of the crews, reporting of work complete and ETRs back to Storm Center are to be assured complete to the Supervisor daily.

Job Description .

The Crew Mgmt – Inspector/SSOL/Crew Oversight role will coordinate personnel restoration activities as directed by the Supervisor and Area Storm Center/Area Logistics Center.

- Coordinate and work with 1-3 crews; as assigned by Supervisor; If stationed as a Storm Site, this role will act as SSOL assisting deployment of ALL Transmission crews to appropriate work site – Oversight is of Crews on the Storm Site directing them to work site, providing work package. **(Refer to: Site Operations Lead (SSOL) Role Description – Logistics Site Mgmt)**
- Confirm accuracy of all Rosters for all crews that may be utilizing Logistics Support (Lodging, Meals, Fueling, Materials, etc.) and return to Area Logistics and/or Resource Mgmt-Acquisition OR Storm Site Crew Support/Lodging Support
- Can be designated as a SSOL-Storm Site Operational Lead in the field / at storm sites (Base Camps, Mustering Sites, etc.). **Refer to: Site Operations Lead (SSOL) Role Description – Logistics site Mgmt**
- Will, assure that all crew foremen/Inspectors know and follow the fueling process; and assure all vehicles are fueled and prepared for storm emergency response
- If Assigned to Site as SSOL – must understand and follow the Site Mgmt Operational Plan, as well as the Daily Operations Plan;
- Coordinate with Site Mgmt and AREA Logistics for the following:
    - Contact/Request from Area Logistics and / or Fleet /Fueling for all onsite and field fueling needs; See T-FL Logistics – Fueling Sub Process.
    - Assist with Company/Contractor expense documentation and the implementation of all special accounting practices.
    - Assign a member of crew (normally the Senior Lineman) to work with Asset Mgmt / Area Engineer, Area Logistics- SSOL / Materials Coordinator stationed at the Area Storm Center in the determining and dispatching of materials. See T-FL Materials Storm Process.
    - Assign a member of crew (normally the Senior Lineman) to work with Asset Mgmt / Area Engineer /Logistics & SSOL / Heavy Hauling-Equipment Rental Coordinator stationed at the Area Storm Center in the determining and dispatching of equipment/heavy hauling needs. See T-FL Heavy Hauling/Equipment Rental Process

Key Interface Points

- Crew Mgmt & Restoration/DA Mobilization Director
- Area System Assessment / Engineering / Work Assignment
- Area Logistics Ctr: Logistics Request Taker
- Area Logistics: Lodging Support
- Area Logistics: Crew Support
- Logistics: RM Resource Acquisition (RoD Rosters)
- Logistics: Resource Mobilization (RoD Mobilization/Crew Tracking)
- Logistics: Materials Management
- Logistics: Heavy Hauling
- Logistics: Eng/Major Equipment Support
- Logistics: Site Management/SSLL
- Operations: SSOL/Inspector

Checklist of Actions

This timeline is designed for an event impacting our area. A near miss could require timing adjustments on some activities and cancellation of others.

- The following link provides the Site Team Checklist of Actions for annual readiness as well as preparedness for an event impact

See Checklist: Crew Mgmt-Inspector tab -- Inspector and SSOL Tab/Checklist

5.5 Damage Assessment Crew Mgmt – Roles & Responsibilities

Job Function:

This role is primarily responsible for Planning and Deploying the Damage Assessment Crews – Flight and Ground crews. Damage Assessment and resource / work assignment includes:

- Air Ops / Flight Crew acquired, deployed to assess of lines in impacted, hard to access areas/outage reports and vegetation/debris in those lines. Team includes Pilot, Lineman, Forester, Data Mgmt/Scribe/Communications (4 Storm Resources X #Helicopters)
- C&M Crews acquired, deployed to conduct ground assessment of the more accessible lines, substations, line switches. Team includes Substation/Relay techs (2 Storm Resources X #Outage/Impact areas mapped)
- Tree Crews acquired to conduct ground assessment of accessibility (tree clearing) to sub sites, lines, switches. These teams may follow up on data shared from flight assessment crew. (2-4 Storm Resources X #Outage/Impact areas mapped)
- C&M/Line Crews acquired, deployed to conduct ground assessment & repair of hard to reach sites using marsh-master crew/equipment. These teams may follow up on data shared from flight assessment crew. (2-10 Storm Resources X #Outage/Impact areas mapped).

This role organizes, selects, deploys crews for flight and ground crew assessment on the direction of System Storm Center. It is understood that crews will assigned to DA roles that can also repair where possible the damage assessed; i.e. tree crews and linemen should be paired up when assessing for fallen trees/branches and line/switch operations. The DA Crew management role is as much a planning role as it is a crew deployment role.

Job Description:

The Damage Assessment Crew Mgmt role is responsible for:

- Assuring training, knowledge and use of tool, processes, checklists for Damage Assessment teams are up-to-date (including, but not limited to, Crew Mgmt, RM Acquisition-Roster submission, Area/Zone Lodging, SSM-Lodging Support)
- Gathering and providing all DA crew storm role and logistical needs: lodging data-potential locations and number of beds, Heliport locations, anticipated fueling locations, tools for data collection on flight and ground,
- Participates on Transmission Operations System Storm calls as able
- Monitor and direct/redirect DA teams based on priorities, Outages, ETRs, System Storm Center updates.
- This role must also anticipate INITIAL Heliport / Landing needs for flight crew and develop plan so that System Storm Center can be made aware of progress
- Assure flight and ground crews have gps monitoring devices for safety and location of all assessment crews
- Must be familiar with reading, reporting:
    - RM Reports/crew tracker rosters
    - TOMS Outage / ETR reports
    - System topographical / geographical maps (sub site locations, line locations, storm site locations, etc.) for use in mapping assessment team flight and ground plan

Key Interface Points:

- Crew Mgmt & Restoration/DA Mobilization Director
- Area System Assessment / Engineering / Work Assignment
- Area Logistics Ctr: Logistics Request Taker
- Area Logistics: Lodging Support
- Area Logistics: Crew Support
- Logistics: RM Resource Acquisition (RoD Rosters)
- Logistics: Resource Mobilization (RoD Mobilization/Crew Tracking)
- Logistics: Materials Management
- Logistics: Fleet / Fuel
- Logistics: Heavy Hauling
- Logistics: Eng/Major Equipment Support
- Logistics: Site Management/SSLL
- Operations: SSOL/Inspector

Checklist of Actions:

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Logistics Request Tool Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: **Crew Mgmt-Damage Assessment Crew** tab

5.5.1 Flight Assessment Work Plan

DEF / Transmission-FL has a helicopter / hangar in Florida for aerial patrols and emergency event/ major storm event aerial assessments. DE has two other helicopters on the system and available for use in Flight Assessment after an emergency event/major storm event. T-FL System Storm Center takes the lead in planning flight patrols/damage assessments for One Florida Storm Response.

Timing of Flight Assessments are highly reliant on 'all clear' and storm conditions; wind, cloud coverage, rain/precipitation will all impact the helicopters ability to begin flight. The Helicopter pilot and assessment team is required to follow all DE Aviation Policy, AFA, Utility, Emergency Management flight rules and guidelines. All restoration activities MUST follow all SAFETY guidelines to assure SAFE working conditions.

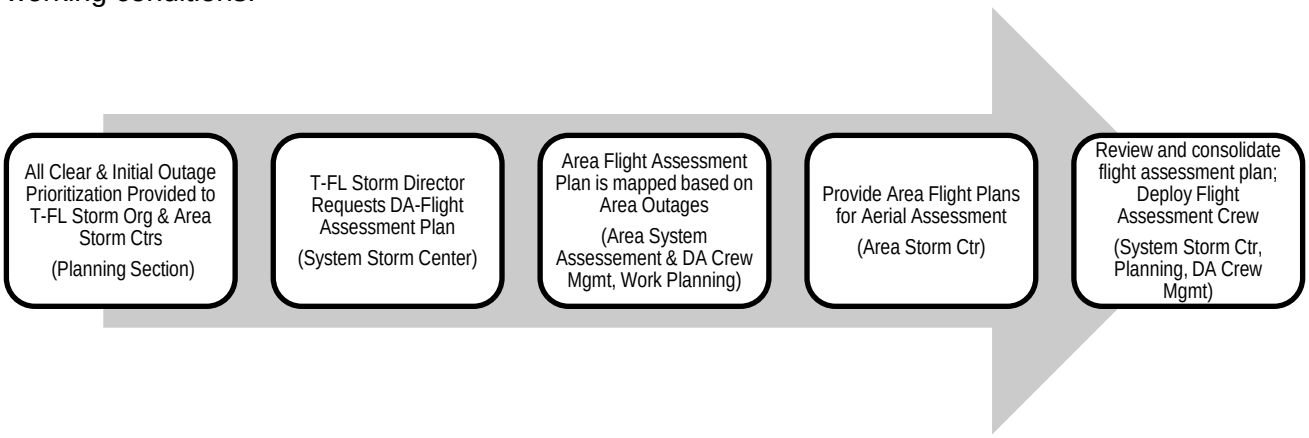


Diagram above: DA-Flight Assessment Process Flow

The role of the System Storm Center and Operations – Area System Assessment and Work Planning Branches is to gather and document the outages, line names, codes, locations. System Storm Center and Planning Section are to provide System wide priorities for restoration of overall system/grid stability. The Area Storm Centers and Work Planning teams are to map and prioritize the flight pattern for areas impacted / assessed for the Flight Assessment team; recommended flight plan will be provided to System Storm Center to use in deployment of Flight Assessment Crew. When an initial work/flight plan is available, the flight assessment crew is deployed.

Flight crew follows the same mobilization requirements of completing rosters and requesting logistical support. System Logistics Center is responsible for requesting logistical needs (lodging, meals, etc.) for flight crew. The System Logistics Center is to keep the Flight Crew aware of lodging, airport/landing logistics (i.e. if landing in an area that without power, then do not book lodging, report to Crew that landing and lodging should be relocated).

5.5.2 Ground Assessment Work Plan

Ground assessments, ideally, would follow Flight Assessments so that validation and repairs could safely and efficiently begin. Lessons Learned and restoration planning efforts show that System Storm Ctr. , Area Storm Ctrs. & Planning Section are often able to initially identify and prioritize outages / impacts in areas that ground crews can easily access AND do so before weather conditions allow aerial patrols/assessments to commence or complete. So, ground assessments often occur as flight assessments begin or in many cases BEFORE flight assessments begin.

Typically, ground assessments follow initial prioritization from System Storm Center and then consider local Area knowledge of Area System Assessment, Work Planning and C&M knowledge of existing assets. Each Area is expected to map where feasible, ground assessment plan and provide initial plan to System Storm Center. DA Crew Mgmt , Regional Eng, and Work Planning are to utilize the Storm Outage Tracker and system mapping tools to provide a means to effectively deploy and track DA Teams.

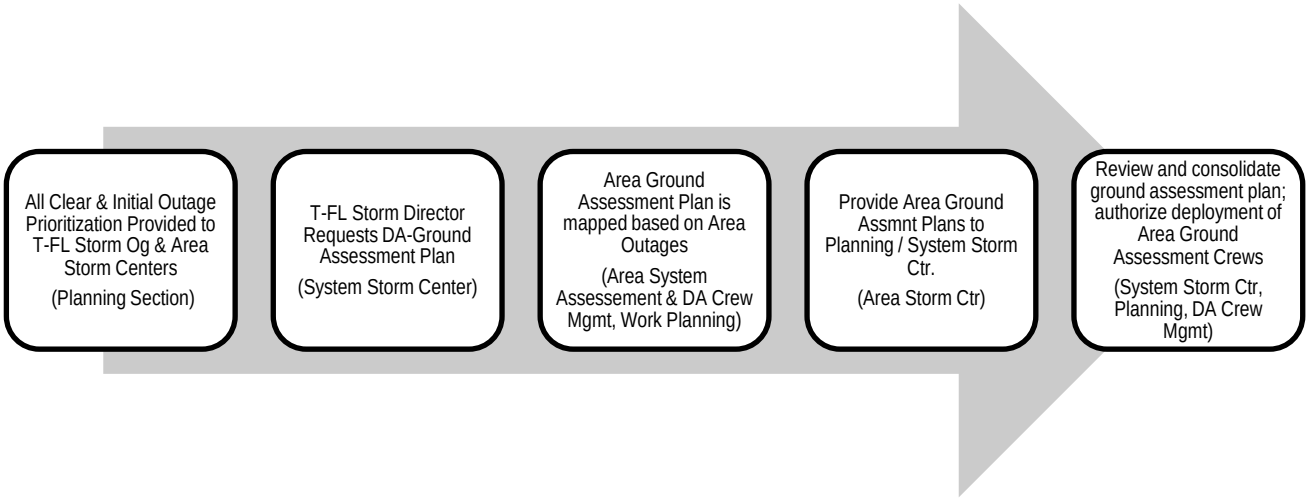


Diagram above: DA-Ground Assessment Process Flow

Typically, ground assessment teams work close to normal work 'show-up' therefore may not need logistical lodging support; however, the DA Ground crews need to be 'acquired' and tracked via rosters submitted to Logistics: RM Acquisition so that IF Logistical/Lodging support is required, data on each crew is within storm system and process. These rosters should be completed as part of Annual Readiness and updated at time of storm activation.

5.6 Managing Crew Resources

5.6.1 Receiving Crews

Upon reporting for duty, the local Area Storm Ctr. / Crew Management should evaluate each person's work history to determine how many hours of work are available before rest should be scheduled. All prior hours worked, including travel time that have not been preceded by an eight hour rest period, should be counted.

5.6.2 Crew Utilization

The Area Storm Center / Crew Management (Crew Trackers and Area Logistics resources can assist) is responsible for making sure the location of each crew compliment is tracked during the storm restoration effort. Each DEF Crew or On-System contract crew should already be assigned to their supervisor/inspector. Each off-system crew will need to be assigned an Inspector / Field Coordinator to monitor their work progress. Each crew lead/foreman should be supplied with the following:

- Local maps
- Safety information and instructions
- Emergency contact list
- Local emergency facilities locations
- Staging area maps/directions
- Assigned system one-lines

Crew deployment packages will be created/printed and stored at each Area Storm Center. Additional information regarding laundry services, food services and lodging should be included, when applicable. (Area Storm Center/Logistics Lead should provide logistical support information.)

Crew work packages will be created at Area Storm Centers by the Area System Assessment / Engineering & Work Assignment team. The Regional Engineers will identify need for work package and create package based on Work Package process; Crews should look to their supervisors and inspectors/SSOLs for distribution of work packages.

5.6.3 Crew Safe Work Practices / Working in Windy Conditions

Crews will follow all the safe work methods especially 'working in windy conditions'. Crews will follow at a minimum this guidance:

- Employees are prohibited from operating bucket trucks in the elevated work position when the wind speed (steady or gusts) exceeds 30 MPH.
- Any manufacturer's recommended wind speed guideline for bucket trucks operating in the elevated position, if less than 30 MPH. (Example: Condor (Transmission) recommends a maximum wind speed of 25 MPH.)
- Employees should cease traveling (in all vehicles) or working, including climbing, when winds reach tropical storm velocity of 39 MPH.

During an emergency event and in long work days, and uncomfortable conditions (heat, wind, rain, etc.) pre-job and post-job briefings are critical means of communicating hazards (weather, hydration, heat, snakes/insects/critters, PPE, any condition/concern) and preparedness for action/job. Job/Safety Briefings are required safe work practice for every crew/work team (work site, base camp, laydown yard, even lodging parking lots). Anyone and everyone should conduct a pre-action brief during and emergency event; Briefing Templates for Base Camps, Materials Yards, etc. are under development.

5.6.4 Transferring Crews

When crews from other areas are in route, the Crew Mgmt-Substation & Area Logistics will be given the name of the person in charge, the number of personnel, and the ETA by the Area Logistics and Crew Management. The Crew Mgmt-Substation and Work Planner can then organize them into a work unit and assign an Inspector/SSOL/Oversight to receive them. The person in charge of the crew will give a Roster / List of Crew to Area Logistics and Work Planner. Area Logistics & Work Planner will Log Time in / out. Crews will not be released until work / ETRs are complete or System Storm Ctr directs otherwise. When crews are released, the Work Planner will log their departure time. No crews can be released to go off system or travel to another area/region/jurisdiction without the approval and direction from the System Resource Management and Area Storm Center Director.

In addition, Transmission Crews may get asked to support Distribution system work. If and when Transmission system is restored, Transmission will provide an assessment of crews and equipment trained and able to work on distribution assets. The T2D transfer of crews and equipment is in development. This process will be included within T&D Emergency Management plans and connect to the Operations, Planning, and Logistics Sections of those plans.

5.6.5 Working hours

Standard work hours in response to a Major Event will consist of two (2) shifts (Day-time-5am to 9pm and Night-time- 5pm to 9am).CREW STAFF will work one daytime shift (unless otherwise directed by Incident Commander / Storm Director). Logistics and Storm Centers will have a light shift working to assure materials, meals, lodging, etc. are prepared for morning start time.

NOTE: C&M Crew Storm work hours, unless otherwise noted are to be no more than 16 hours on, with 8 full hours rest each day. So, generally, the crews have a 2 hour wake/eat/travel window, 12 MAX work window, 2 hour travel/eat/lodging window to make up the 16 total hours on, thus assuring 8 hours rest. Exceptions/Adjustments will be managed by each Storm Process Owner (i.e. Logistics Storm Center may choose to report from 7:00 am to 7:00 pm and not have Logistics' Center fully staffed for the Night Time Shift) to establish work shifts for those resources / Storm Role assigned to them.

In the initial stages of the restoration effort, it is accepted practice to work up to 16 hours, including travel time, without an extended rest period. As the 16 hour threshold approaches, each Process Owner will evaluate the extended response time needed and implement rotational shift assignments for all personnel, as needed. Operations / Area Center Storm Coordinators should make assignments to utilize a minimum of 80% of their assigned work force during daylight and early evening hours and establish an eight (8) hour rest period, where practical, before beginning a new shift.

5.6.6 Accommodations and Care

Lodging/Alternative Housing, Meals, drinks, laundry service, and other logistical needs, will be coordinated through the Logistics Organization by the Process Owners of each storm/Branch organization. Crews and mobilized support's logistical needs are the responsibility of that particular storm organization managing those storm resources. Any crew / storm support that needs logistical support must be identified and included on a Resource Management provided roster. The Storm Sites Crew Support & Lodging Support and the Area Logistics Centers Crew & Lodging Support roles will work with Supervisors and Work Assignment to assure lodging, meals, and logistical needs are satisfied within approved processes and work scheduling.

5.6.7 Managing Vehicles & Equipment

Due to the sheer size of Transmission vehicles/equipment required to restore assets, when a crew is mobilizing from their "home" reporting area (or if off-system contract crews services are being acquired), the vehicle /equipment compliment must be identified and listed/provided on the RM Roster. If crew personnel are to be lodged for the evening, the Vehicle / Equipment compliment information is crucial so that Logistics personnel are able to work with Lodging and Area Storm Center to identify an area near the lodging establishment for the parking of line vehicles and equipment.

A standard 10-man crew vehicle / equipment compliment will typically, need 1.0-2.5 acres of parking space. If the lodging establishment cannot accommodate them, Local Area Storm Center personnel will work with Logistics personnel to find appropriate parking acreage. Vehicles and equipment should be safely secured and where possible, security personnel or local police should be asked to patrol the area from time to time to reduce exposure to vandalism or theft.

Because of the sheer size of Transmission equipment, Rosters need to include vehicle and equipment compliment. The following section is under development and is intended to provide information, templates for specs, and expectations when managing/mobilizing transmission crews (and their equipment) from one Area to another:

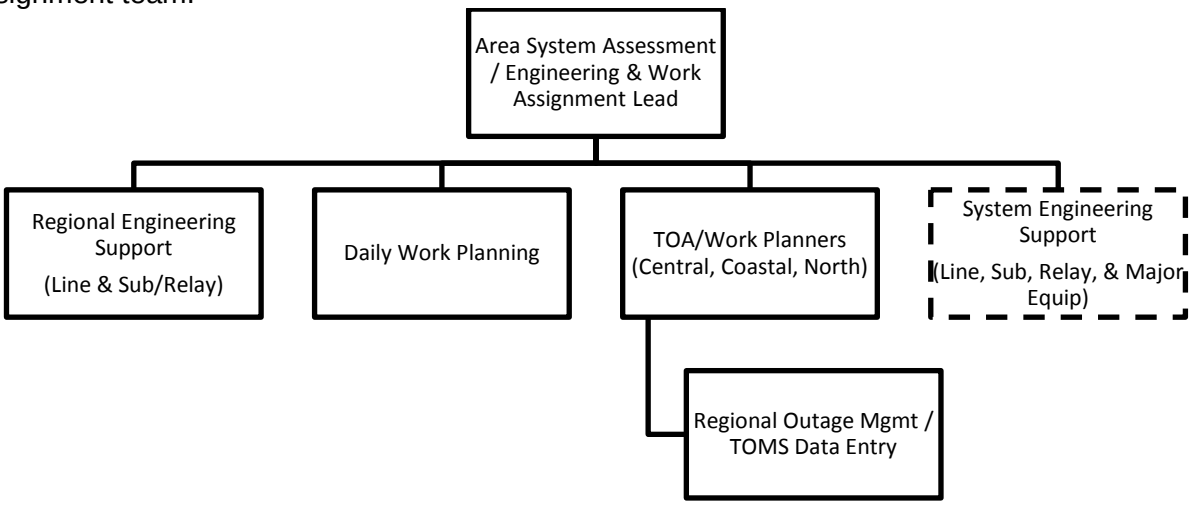
5.6.7.1 Truck & Vehicle convoys
5.6.7.2 Equipment – Standard, Specialty
5.6.7.3 In-State – from Area to Area / T&D and from one utility to another
5.6.7.4 Out of State – DE Carolinas/Midwest; other utilities

6.0 Area System Assessment / Engineering & Work Assignment - Organization, Roles & Responsibilities

See Transmission Storm Org Chart **–** Operations/Area Storm Centers tab

The Area System Assessment / Engineering & Work Assignment Branch of Operations Section is the team that ultimately develops the work packages for the restoration crews. This team is responsible for Daily Work Planning, Assessing outages/damage within the Area, and providing the approach to restore. This team updates the outage management system with estimate-to-restore (ETRs) that Crew Management provides. This team creates the work packages, print, provide to SSOL/Inspectors/Supervisors for distribution to crew/restoration resources.

The diagram below provides the structure of the Area System Assessment / Engineering & Work Assignment team.



6.1 Area System Assessment / Engineering & Work Assignment Lead

Job Function

Area System Assessment / Engineering & Work Assignment Lead reports to the T-FL System Storm Director/IC and Area Storm Center Chief/IC-C&M Area Coordinator and acts as a manager / director over the Regional Engineers, Daily Work Planners, TOA/ Work Planners, and Regional Data Mgmt Techs. The Area System Assessment Lead is to work directly with System Storm Center, Planning Section, and Area Storm Center Chiefs to assist in establishing appropriate prioritization of bringing each Area System back on-line so as to support total System Grid integrity and stability. The primary responsibility of this role is to assure that the Area/Regional Engineers have information, resource support, training, and means to provide each impacted T-FL Area/Region with work plans to effectively restore. This role sits at System Storm Center (NP/WW); participates in all Operations Storm Calls and Planning Section / IAP discussions.

Job Description

The Area System Assessment / Engineering & Work Assignment Lead provides direction for the regional engineers, system engineering, Crew / DA work management, data management, and support.

- Assure team members gain training and use on Transmission Outage Management (TOMS) Tool / TOA regularly so that tool usage is fluid and able to effectively support restoration reporting
- Staff the organization with regional engineers, area work planners, staff that knows the area / equipment they are assessing and developing work plans. Staffing this role with highly skilled employees who already know what it is like to work in a state of emergency is crucial to the Storm Organization and plan.

Based on storm impact to each particular area, the Area System Assessment Lead is responsible for identifying with ECC, assessing with DA team, designing work plan to restore the system outage by outage.

- Participate in all Operations and Planning Section Storm Calls
- Activate and support staff deployment to the area/regions of impact
- Provide training and role familiarity to all storm team members
- Complete roster for any staff that will be deployed /activated and in need of logistical support (Lodging, Meals, Fueling, etc..)
- Report to Storm Director/Chief updates of regional work plan/system ETRs, etc.
- Request / direct system engineering to support regional engineering.
- Provide direction to regional engineering as required to accommodate system priorities

- Provide data to Planning – Reporting Analyst as per agreed upon schedule for Next Day Planning/IAP development

Key Interface Points

- Transmission-FL System Storm Director / T-FL Incident Commander (IC)
- Operations Section Chiefs: Area Storm Center Chief/IC / C&M Area Coordinator-Peers
  - Operations Asset Mgmt / Work Planning / Eng. Support Director
  - Operations: Regional Engineering Lead / Support
  - Operations: Crew Mgmt-Inspector
- Planning Section Chief
  - Planning – Reporting Analyst / Data Mgmt / Event modeling
- Logistics Section Chief
  - Logistics Resource Management Director
  - Logistics: Resource Acquisition
  - Logistics: Resource Mobilization
  - Logistics: Materials Management
  - Logistics: Heavy Hauling
  - Logistics: Eng-Major Equipment Support
  - Logistics: Storm Site Management/SSLL
  - Logistics: Logistics Request Taker

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: Area System Assessment –Eng-Work Assign Lead tab

6.2 Asset Mgmt / Regional Engineering Support – Roles & Responsibilities

See Transmission Storm Org Chart – Operations-Area Storm Center tabs

Job Function

Area System Assessment –Regional Engineer support the Area Storm Center in a fast paced environment assessing and then designing / providing the instructions / work plan for the Restoration Crews. Also known as, the asset management engineer, this role will normally work with the Area Storm Center Director and Crew Management , to provide assessment and prioritization for restoration.

Job Description

The Regional Asset Mgmt engineers take direction from the Area System Assessment / Engineering & Work Assignment Lead. The Regional/Asset Mgmt Eng. provides direction to system engineering, Crew / DA work management, data management, and support.

- Will be available to assess outages to Area substations and lines to assist with prioritizing the work.
- Provides local design for storm restoration and repair and will request assistance for design engineering as needed.
- Will develop work packages for the crews to include directions to specific work location
- Assure team members gain training and use on Transmission Outage Management Tool / TOA regularly so that tool usage is fluid and able to effectively support restoration reporting
- Stays current on Tools and system procedures. (Staffing this role with highly skilled employees who already know what it is like to work in a state of emergency is crucial to the Storm Organization and plan.)
- Participate in Operations and Logistics Storm Calls as requested
- Complete all training for storm role

- Report to Area System Assessment Lead updates of regional work plan/system ETRs, etc.
- Request / direct system engineering as needed to fulfill capacity and capability needs / gaps

Key Interface Points

- Operations-Crew Management
  - Operations Asset Mgmt / Work Planning / Eng. Support Director
  - Operations: Daily Work Planner
  - Operations: Regional Engineering Lead / Support
  - Operations: Crew Mgmt-Inspector
  - Planning – Reporting Analyst / Data Mgmt / Event modeling
  - Logistics: Materials Management
  - Logistics: Heavy Hauling
  - Logistics: Eng-Major Equipment Support
  - Logistics: Storm Site Management/SSLL
  - Logistics: Logistics Request Taker

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: Area System Assessment –Eng-Work Assign Lead tab

6.3 Daily Work Planning & Work Mgmt

This is a new position based on continuous improvement and defining Planning efforts for Next Day work planning. The role will interface with this team and the Planning and Logistics Sections to strategically and expeditiously improve assignment of work, completion of ETRs, and planning for the next day goals and objectives based on work outstanding and work completed. Role Description is under development.

6.4 TOA & Work Planning (Outage Management) – Roles & Responsibilities

See Transmission Storm Org Chart – Operations-Area Storm Center tabs

Job Function

Area System Assessment –Regional Work Planners support the Area Storm Center in a fast paced environment / providing the work assignment and instructions / work plan for the Restoration Crews. This role will normally work in the Area Storm Center and provides data updates within the outage management system. (TOMS)

Job Description

The Regional Work Planners and Outage Mgmt team take direction from the Regional Engineer and The Area Storm Director as work assignments are getting assigned and completed. The Regional Work Planners and Data Mgmt team update the ETRs with actual work completed and update TOMS so that the System Planning can confirm and document outages complete.

- Will be available to assess outages to Area substations and lines to assist with prioritizing the work.
- Provides work packages and plan for storm restoration and repair and will request assistance for design engineering as needed.
- Assure training is completed; uses Transmission Outage Management Tool / TOA regularly so that tool usage/data entry is fluid and able to effectively support restoration reporting
- Stays current on Tools and system procedures. (Staffing this role with highly skilled employees who already know what it is like to work in a state of emergency is crucial to the Storm Organization and plan.)

- Utilize the T-FL Operations-Storm-Outage-Tracker-Template in documenting outages and planning work assignments
- Participate in Operations and Logistics Storm Calls as requested

The Work Planner supports the Regional Outage Mgmt (TOMS) role.

- The Regional Outage Mgmt (TOMS) role will work within the Area Storm Center to provide data entry of outages, clearances, work in progress, and restored lines/subs.
- The Outage Mgmt (TOMS) role must be trained in Storm/ECC tool and system data / 1-lines.

Key Interface Points

- Operations: Area System Assessment / Eng. Work Assignment Lead
- Operations: Crew Management (all)
- Planning: Dispatch / TOMS Data Entry
- Area Logistics: Logistics Request Entry

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: Area System Assessment –Regional Work Planner-TOMS tab

6.5 Regional Outage Mgmt (TOMs Data Mgmt.) – Roles & Responsibilities

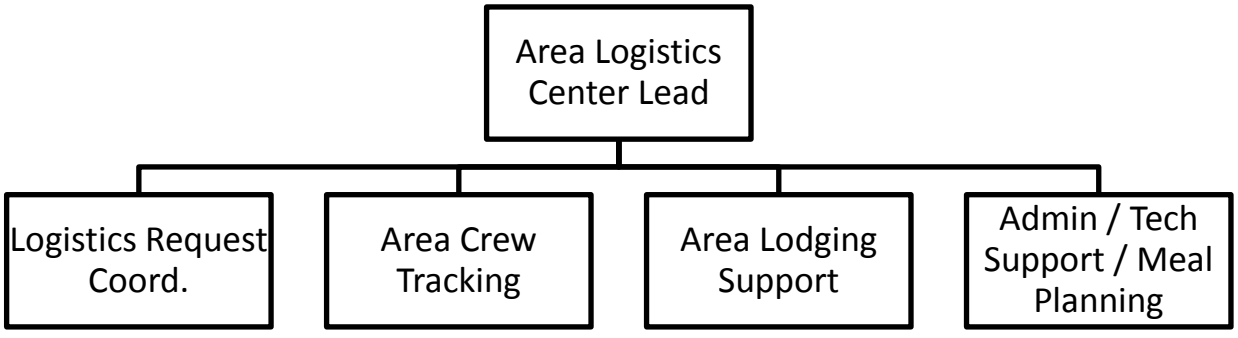
This role is included in the Regional Work Management and Outage Management role above. These positions must work very closely together in order for the work assignments and ETRS to gain updating and Outages restored updated in TOMS. This role description and training for this role is Under Development.

6.6 Engineering Support-System – Roles & Responsibilities

See Logistics-Logistics Requests/Engineering Support roles

7.0 Area Logistical Support - Organization, Roles & Responsibilities

The Area Logistic Center is the Area Storm Center's Logistics hub. The Area Logistics Center is to assure Logistics are provided for all aspects of the Area Storm Center: Set Up and activation of the storm center, logistical support for the crews deployed from the area, liaison to System Logistics via Resource Management, Site Management, Lodging, Admin/Corp Services, and any crew logistical need. The Area Logistical Center is to develop the logistical plan as part of Annual Readiness with the Area Storm Center IC and Crew Management leadership. Working with System Logistics Leadership, the Area Logistics Lead implements the predetermined plan based deploying crews through Sites/Base Camps/Laydown yards within in the Area and utilizing lodging / alternative housing, meal planning, etc. acquired through System Logistics.



7.1 Area Logistics Coordinator

See Transmission Storm Org Chart – Operations: Area Logistics Center tab

Job Function

Area Logistics Coordinator reports to the Area Storm Center Chief/IC- C&M Area Coordinator and acts as a liaison and requester for all Area logistics needs. The Logistics Area Coord. Team members provide the communication link to Logistics Storm Center providing Logistics with the details and updating Initial crew needs, lodging needs. Crew movement notifications to reallocate or demobilize. Validate through communication and coordination with Resource Mgmt., Lodging, and Site Mgmt.

Job Description

The Area Logistics Coordinator is responsible for the identification, requesting, and processing of logistical needs to/through Logistics Organization:

- Team members will be trained in Site Operations; HB-Lodging Process; RoD/Resource Mgmt. Process so they can validate and provide changes to appropriate storm resources.
- Gain training and use on Transmission Logistics Request at least annually.
- Annual readiness to request logistical needs by initiating and participating in planning with C&M Area Coordinators and Staging & Logistics storm planning and training.

Based on storm impact to particular area, the Area Log. Coordinators are responsible for requesting and then tracking / monitoring the receipt of all requests:

- Crew / Restoration resources requested and tracked through RoD, RSVP, Staging Site Daily Site Management
- Works with Resource Mobilization to track and monitors within RoD all crew assignment and movement
- Interface with Resource Mobilization
- With RM, ensure the timely flow of crew movement information
- Monitor crew counts and locations
- Provide current crew information on Logistics storm calls
- Provide Lodging Lead with actual and forecasted crew counts by locations at times designated in the Resource Management RoD Process and Timeline
- Monitors and tracks lodging after initial requests for beds completed. Works with Lodging Lead and Staging Site Mgmt.
- Lodging and meals through daily site management as well as Area /zone Lodging lead
- Represents Transmission Area and collaborates between Distribution & Transmission regarding Area/Zone hotel concerns
- Liaison role between: Lodging Lead 3rd Party Acquisition Vendor, and Staging Site Hotel Coordinator
- Communicates with staging sites for issues and resolution
- Track, confirm, and submit bed counts thru the Hotel Tool
- Identify requests by Staging Site/Operation Centers/Cities
- Cancellations to include pertinent information including Hotel Name and Bed Count
- Manage any issues that develop with acquired rooms
- Communicate and oversee the booking/cancellation of rooms by 3rd Party Acquisition Vendor
- Provide daily report out to Lodging Lead including # beds reserved and used by Area and Staging Site

Key Interface Points

- Transmission-FL System Storm Director / T-FL Incident Commander (IC)
- Operations Section Chiefs: Area Storm Center Chief/IC / C&M Area Coordinator-Peers
  - Operations Asset Mgmt / Work Planning / Eng. Support Director
  - Operations: Regional Engineering Lead / Support
  - Operations: Crew Mgmt-Inspector
- Planning Section Chief
  - Planning – Reporting Analyst / Data Mgmt / Event modeling
- Logistics Section Chief
  - Logistics Resource Management Director
  - Logistics: Resource Acquisition
  - Logistics: Resource Mobilization
  - Logistics: Materials Management
  - Logistics: Heavy Hauling
  - Logistics: Eng-Major Equipment Support
  - Logistics: Storm Site Management/SSLL
  - Logistics: Logistics Request Taker

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: Area Logistics Coordinator tab

7.2 Area Logistics Request Support-Tool

Job Function:

This role is primarily responsible for collecting instructions, data, information from Area Logistics Coordinator and Area Storm Center Staff; organizing the requests with Area Logistics Crew Support and Area Logistics Lodging Support and submitting requests to System Logistics Center. The requests are to be submitted via the Logistics Request Tool/Ap; requests are to be submitted in the tool, utilizing the process, job aid and triage checklist. In addition to submitting the request, this role is expected to validate accuracy of request, follow up with System Logistics Center Request Takers, and close the request when completed (request delivered/provided and validated received). This role reports to the Area Logistics Center Lead; the Request Support role takes direction from and is to report status and progress to the Area Logistics Center Lead at a cadence provided based on storm impact/restoration ETRs and event performance goals.

Job Description:

The Logistics Request Support role is responsible for:

- Assuring training, knowledge and use of tool, processes, checklists for the Area Logistics Storm Center are up-to-date
- Gathering and compiling all logistical requests for the Area Storm Center assigned to
- Compiles and documents the requests submitted, tracks and validates the receipt / completion of each and every request
- Participates on Transmission Operations System Storm calls as directed; may be asked to serve as Area Logistics Co-Lead on calls, to provide breaks, etc. for the Lead

- Must be familiar with and skilled in utilizing, reading, reporting from the:
  - Logistics Request Tool/Ap
  - RM Reports/crew tracker rosters
  - Lodging Tool Reports/screenshots
  - Storm Site Master List/Tool – Storm site Request form
- Answers the telephone with in the Area Logistics Center; direct/prioritizes call requests, needs

Key Interface Points:

- Area Logistics Center Lead
- Area Log. Ctr-Crew Support
- Area Log. Ctr.-Lodging Support
- Area Log. Ctr – Admin/Support
- Area Storm Ctr – Regional Eng.
- Area Storm Ctr. – Regional/TOMS data Mgmt
- Logistics Lodging Lead
- Logistics RM-Acquisition
- Logistics RM-Mobilization
- Logistics Heavy Hauling
- Logistics-Fleet / Fueling
- Logistics-SSM-Crew Trackers
- Logistics-SSM-Lodging Support
- Logistics-Materials Planners
- Operations-Crew Mgmt-SSOL/Inspector

Checklist of Actions:

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: **Area Logistic Ctr-Request Support** tab

7.3 Area Logistics Crew Support (RoD)

Job Function:

This role is primarily responsible for collecting instructions, data, information from Area Logistics Coordinator and Work Planners to create, update, validate crew assignments and rosters. This role works with Area Logistics Lead to create Crew specific requests to be submitted thru the Area Logistics Requestor. This role's primary responsibility is updating and validating details on the crew rosters and submitting that information to Logistics Requestor and Area Lodging Support. Once accurate, the crew rosters are to be given to the SSLL , the SSOL/ Inspector and Lodging Support (AREA & SYSTEM). The rosters provide housing/lodging data, equipment data, show up/work assignment data, that Area Logistics is to work, create, submit all requests from. In the event that Rosters are not available this role is responsible for creating or providing a means to organize and track crews mobilized, deployed and redeployed (track crews and their movement from work site/logistical support to work site/logistical support.

Job Description:

The Area Logistics Crew Support role is responsible for:

- Assuring training, knowledge and use of tool, processes, checklists for the Area Logistics Storm Center are up-to-date (including, but not limited to, Area Work Planner, Crew Mgmt, RM Acquisition, RM Mobilization, SSM-Crew Tracker)
- Gathering and compiling all crew data from Ops-Crew Mgmt, RM Acquisition, Area Work Planners, RM Mobilization, within crew rosters for submission to Lodging, SSM, System Logistics via Logistics Request Support (Request Tool/Ap process).
- Participates on Transmission Operations System Storm calls as directed; may be asked to serve as Area Logistics Co-Lead on calls, to provide breaks, etc. for the Lead
- Deliver rosters to appropriate crew oversight and tracking personnel (SSOL, Inspector, Crew Foreman, SSM Crew Tracker, etc.) Delivery is by any means that the recipient is certain to have list / roster available to work from (if using tablet, email; if system is off-line, hard copy delivered to storm site/work site can be expected/prepared for.)
- Must support Area Admin, Lodging, and SSM-Crew Tracker/Meals with Meal Planning / disbursement / delivery; Meal Planning may be from SSM and boxed lunches, Hot meals may be made available to pick up and deliver (SSM Crew Tracker will typically provide this support, however, AREA Crew Support must be prepared to back up/support if meals planning falls on Area Storm Center.
- Area Crew Support must be familiar with SSM-T-FL Fueling Sub Process and be prepared to provide Fueling Requests to Area Log. Requestor; Area Crew Support will work with SSM Crew Support and T-SSLL to assure fueling equipment, drivers, etc. are aware of Crew locations for refueling according to process.
- This role must also anticipate parking for Crews equipment , vehicles, and cab trucks; Role must be familiar with SSM-processes, locating and relocating crews (Mobilizing & Demobilizing Processes). Crews will either park equipment at work site or at parking sites arranged by Area Logistics and System Logistics.
- Must be familiar with and skilled in utilizing, reading, reporting from the:
    - RM Reports/crew tracker rosters
    - Lodging Tool Reports/screenshots
    - Storm Site Master List/Tool – Storm site Request form
    - Logistics Request Tool/Ap
- Answers the telephone with in the Area Logistics Center; direct/prioritizes call requests, needs
- This role is similar to Crew Runner role, yet is designated to work from Area Storm Center and assists in deploying crews to Storm Sites/Work Sites and SSM Crew Support / Crew Trackers.

Key Interface Points:

- Area Logistics Center Lead
- Area Log. Ctr-Request Support
- Area Log. Ctr.-Lodging Support
- Area Log. Ctr – Admin/Support
- Area Storm Ctr – Regional Eng.
- Area Storm Ctr. – Regional/TOMS data Mgmt
- Logistics Lodging Lead
- Logistics RM-Acquisition
- Logistics RM-Mobilization
- Logistics Heavy Hauling
- Logistics- Fleet / Fueling
- Logistics-SSM-Crew Trackers
- Logistics-SSM-Lodging Support
- Logistics- Materials Planners
- Operations-Crew Mgmt-SSOL/Inspector

Checklist of Actions:
This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Logistics Request Tool Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: **Area Logistic Ctr-Crew Support** tab

7.4 Area Logistics Lodging Support

Job Function:
This role is primarily responsible for validating Crew lodging needs and submitting to Area Logistics Requestors for submission to System Logistics-Lodging . In addition, this role serves as the AREA Lodging lead, so that all data/requests submitted to System Logistics – Lodging Leads will be 'acquired' for the AREA Storm Center and all Crews deployed from that Area. Area Lodging Support is responsible for all cancellations of lodging for the Area as well. Area lodging roles may also be responsible for Meal Planning for the Crews (from the Hotel or restaurants near the hotel.

Job Description:
The Area Logistics Lodging Support role is responsible for:

- Assuring training, knowledge and use of tool, processes, checklists for the Area Logistics Storm Center are up-to-date (including, but not limited to, Crew Mgmt, RM Acquisition, RM Mobilization, System-Lodging , Area/Zone Lodging, SSM-Lodging Support)
- Gathering and compiling all crew *lodging* data from Ops-Crew Mgmt, RM Acquisition, RM Mobilization, within crew rosters for submission to Lodging, SSM, System Logistics via Logistics Request Support (Request Tool/Ap process).
- Participates on Transmission Operations System Storm calls as directed; may be asked to serve as Area Logistics Co-Lead on calls, to provide breaks, etc. for the Lead
- Deliver Lodging Packets (Hotel Name, Location, Room Assignments, SSM-Crew Tracker-contact & SSM-Lodging Support-contact) to appropriate crew oversight and tracking personnel (SSOL, Inspector, Crew Foreman, SSM Crew Tracker, etc.) Delivery is by any means that the recipient is certain to have list / roster available to work from (if using tablet, email; if system is off-line, hard copy delivered to storm site/work site can be expected/prepared for.)
- Area Lodging Support must be prepared to go to Hotels and pick up Keys if SSM-Lodging Support is not activated, or not able.
- Must support Area Admin, Area Crew Support, and SSM-Crew Tracker/Meals with Meal Planning IF Hotels have restaurant capabilities. (Meal Planning may be from SSM and boxed lunches, Hot meals may be made available to pick up and deliver. SSM Crew Tracker will typically provide this support, however, AREA Crew Support will be prepared to back up/support if meals planning/delivery falls on Area Storm Center.) Area Lodging will only support meal planning /coordination IF Hotels have restaurant / catering capabilities or catering relationships with nearby/adjoining restaurants.
- This role must also anticipate INITIAL parking needs for Crews equipment , vehicles, and cab trucks; Role must be familiar with SSM-processes, locating and relocating crews (Mobilizing & Demobilizing Processes). Crews will either park equipment at work site or at parking sites arranged by Area Logistics and System Logistics. (There MAY be an need to request lodging that has ample parking acreage or access to parking nearby lodging.
- Must be familiar with and skilled in utilizing, reading, reporting from the:
    - RM Reports/crew tracker rosters
    - Lodging Tool Reports/screenshots
    - Storm Site Master List/Tool – Storm site Request form
    - Logistics Request Tool/Ap
- Answers the telephone with in the Area Logistics Center; direct/prioritizes call requests, needs

Key Interface Points:

- Area Logistics Center Lead
- Area Log. Ctr-Request Support
- Area Log. Ctr.-Crew Support
- Area Log. Ctr – Admin/Support
- Logistics Lodging Lead
- Logistics RM-Acquisition
- Logistics RM-Mobilization
- Logistics Heavy Hauling
- Logistics- Fleet / Fueling
- Logistics-SSM-Crew Trackers
- Logistics-SSM-Lodging Support
- Logistics- Materials Planners
- Operations-Crew Mgmt-SSOL/Inspector

Checklist of Actions:

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Area Logistic Ctr-Lodging Support tab

8.0 Training and Activation of Operations Resources

Training for Operational roles within the TSSOP is expected to be primarily managed through normal / Blue Sky roles and transmission, electrical standards, safety, human performance as defined by Transmission C&M organization. There are some emergency management/storm roles within Operations Section that may require additional training; for example, Area Assessment / Engineering & Work Planning, Area Logistics Center, and other Event Specific roles.

8.1 Training Expectations / Objectives

Training will be provided in various media; 'table-top' training sessions, classroom sessions, drills, and Computer-based- training (CBT) modules will be developed and updated as a part of Annual Readiness. If a role is invited to a training the expectation is that employee will attend and actively participate in the session. CBT's provided within My Training will be sent to storm roles and required to tom complete training by date attached to module.

8.2 Training matrix / schedule

Under Development

8.3 Activation notification / responding

Under Development

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00027 | Revision no.: 000

Document title: TSSOP-Transmission System Storm Operational Plan: Operations–Crew Management , Area Assessment & Area Logistics

Type of action:

- ☑ New
- ☐ Revision
- ☐ Renumber
- ☐ Cancellation
- ☑ Ownership Change
- ☐ Periodic review completed, as required
- ☐ Suspension

For Document Management staff use only:

- ☐ Editorial Change
- ☐ Migration
- ☐ Control element revision _____ (does not require approval authority signature)

Applies to: (Select all that apply)

- ☐ Duke Energy
- ☐ Duke Energy Carolinas, LLC
- ☑ Duke Energy Progress, LLC
- ☑ Duke Energy Florida, LLC
- ☐ Duke Energy Indiana, Inc.
- ☐ Duke Energy Kentucky, Inc.
- ☐ Duke Energy Ohio, Inc.
- ☑ Group Transmission
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☑ None
- ☐ NERC
- ☐ State Codes/Standards
- ☐ FERC Standards of Conduct
- ☐ HIPAA
- ☐ Patriot Act
- ☐ Sarbanes-Oxley
- ☐ Other _____
- ☐ OSHA _____

Complete if submitting a form: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☑ Yes (Procedure No: _____)

How is the form to be completed or used? ☐ Hard Copy (completed by hand) ☑ Online Data Entry (fillable PDF)

- ☑ Communication plan established
- ☑ Impact Reviews completed

Description of document action or summary of changes:

Publication of TSSOP-Transmission System Storm Operational Plan for Transmission Florida. Moving Document from Draft form created and proven during 2016 & 2017 seasons; draft document was housed within the Transmission Florida System Storm Center Share Point site: Transmission System Storm Operational Plan link.

GDLP-EMG-TRM-00027 is the third of seven documents that comprise the TSSOP for Transmission Florida (DEF). This document is the Operations Section and includes crew management, deployment, work practices, work plans, and logistics support.

Section B: Approval

Who should sign? see instructions on page 2

Preparer(s)/Author(s)/Writer(s) (*signature not required*):
Deb Banister-Hazama

Approval recommended (*print name*): Chap Bellenger	(*signature*)	Date:
Approval recommended (*print name*): Alpha Truesdale	(*signature*)	Date:
Approval recommended (*print name*):	(*signature*)	Date:
Final Approval (*print name*): William McGhin	(*signature*)	Date: 12-19-17

RETURN SIGNED FORM AS SCANNED PDF VIA E-MAIL OR FAX TO (919) 235-3165

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00027

Revision no.: 000

Document title: TSSOP-Transmission System Storm Operational Plan: Operations–Crew Management , Area Assessment & Area Logistics

Type of action:

- ☑ New
- ☐ Revision
- ☐ Renumber
- ☐ Cancellation
- ☑ Ownership Change
- ☐ Periodic review completed, as required
- ☐ Suspension

For Document Management staff use only:

- ☐ Editorial Change
- ☐ Migration
- ☐ Control element revision _____ (does not require approval authority signature)

Applies to: (Select all that apply)

- ☐ Duke Energy
- ☐ Duke Energy Carolinas, LLC
- ☐ Duke Energy Progress, LLC
- ☑ Duke Energy Florida, LLC
- ☐ Duke Energy Indiana, Inc.
- ☐ Duke Energy Kentucky, Inc.
- ☐ Duke Energy Ohio, Inc.
- ☑ Group Transmission
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☑ None
- ☐ NERC
- ☐ State Codes/Standards
- ☐ FERC Standards of Conduct
- ☐ HIPAA
- ☐ Patriot Act
- ☐ Sarbanes-Oxley
- ☐ Other _____
- ☐ OSHA _____

Complete if submitting a form: (see instructions on page 2)

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Deb Banister-Hazama

Approval recommended (*print name*): Chap Bellenger	*(signature)* Chap Bellenger	Date: 12/18/2017
Approval recommended *(print name)*: Alpha Truesdale	*(signature)*	Date:
Approval recommended *(print name)*:	*(signature)*	Date:
Final Approval *(print name)*: William McGhin	*(signature)*	Date:

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Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00027

Revision no.: 000

Document title: TSSOP-Transmission System Storm Operational Plan: Operations–Crew Management , Area Assessment & Area Logistics

Type of action:

- ☑ New
- ☐ Revision
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Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

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- ☐ FERC Standards of Conduct
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- ☐ Sarbanes-Oxley
- ☐ Other _____
- ☐ OSHA _____

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Does the form have a parent, governing or instructional procedure? ☐ No ☐ Yes (Procedure No: _____)

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Approval recommended *(print name)*: Alpha Truesdale	*(signature)* Alpha R. Truesdale	Date: 12/18/17
Approval recommended *(print name)*:	*(signature)*	Date:
Final Approval *(print name)*: William McGhin	*(signature)*	Date:

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Keywords: procedures and forms; procedures program; daf; ADMP-PRO-ADS-00002; document management program
Applies to: Duke Energy - Transmission

Document title:	Document number:
TSSOP - Transmission System Storm Operational Plan: Planning – System Priorities, Assessment, Restoration Approach	GDLP-EMG-TRM-00028
	Revision No.: 000
Keywords: Transmission System Storm Center Operational Plan (TSSOP), Transmission Storm Plan, emergency	Applies to: Transmission - DEF

This document is the Planning Section of the Transmission System Storm Operational Plan referenced in the Table of Contents in TSSOP – GLDP-EMG-TRM-00025-Introduction and Overview.

Table of Contents

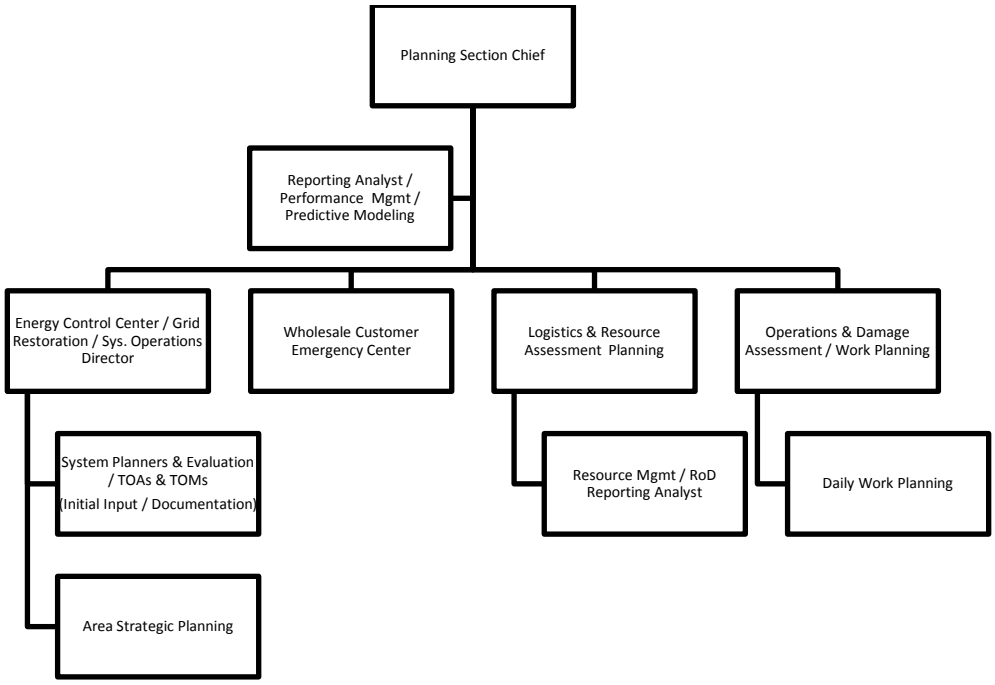
1.0 Planning Section

The Planning Section of the Florida TSSOP is a vital entity; it is comprised of system planning, energy control, and resource and work planning experts. During 'blue-skies', the Planning Section is monitoring the system and creating strategy and plans for normal operations. During a Major Storm Event this Section is initially and primarily responsible for the identification of prioritization of system restoration; the Planning Section is the creator of the Incident Action Plan (IAP). The Planning section will follow the ICS structure and process of awaiting direction from T-FL System Storm Center for activation, strategic planning, and deployment. The Planning Section will interact with Meteorology, System Storm Center, Operations Section (Damage Assessment), Logistics Section (Resource Management), and Communications Section leadership as the IAP is created and then executed. This kind of planning, communication and cooperation throughout Major Storm Response is crucial to safe and effective restoration.

2.0 Mission and Purpose

It is the mission of Duke Energy Transmission-FL Planning Section to ensure that the storm incident action plan is created with System Storm Center, Operations, & Logistics in order to provide the initial strategy / approach to restoring the transmission system safely, efficiently, with operational excellence. Planning personnel (ECC, System Planning, etc.) will identify and assure training, tools, and TSSOP Planning Section is current for the specific purpose of efficiently executing storm plans according to expectations pertaining to safety, cost, restoration times and other key performance indicators.

3.0 Organization Chart – Planning Section

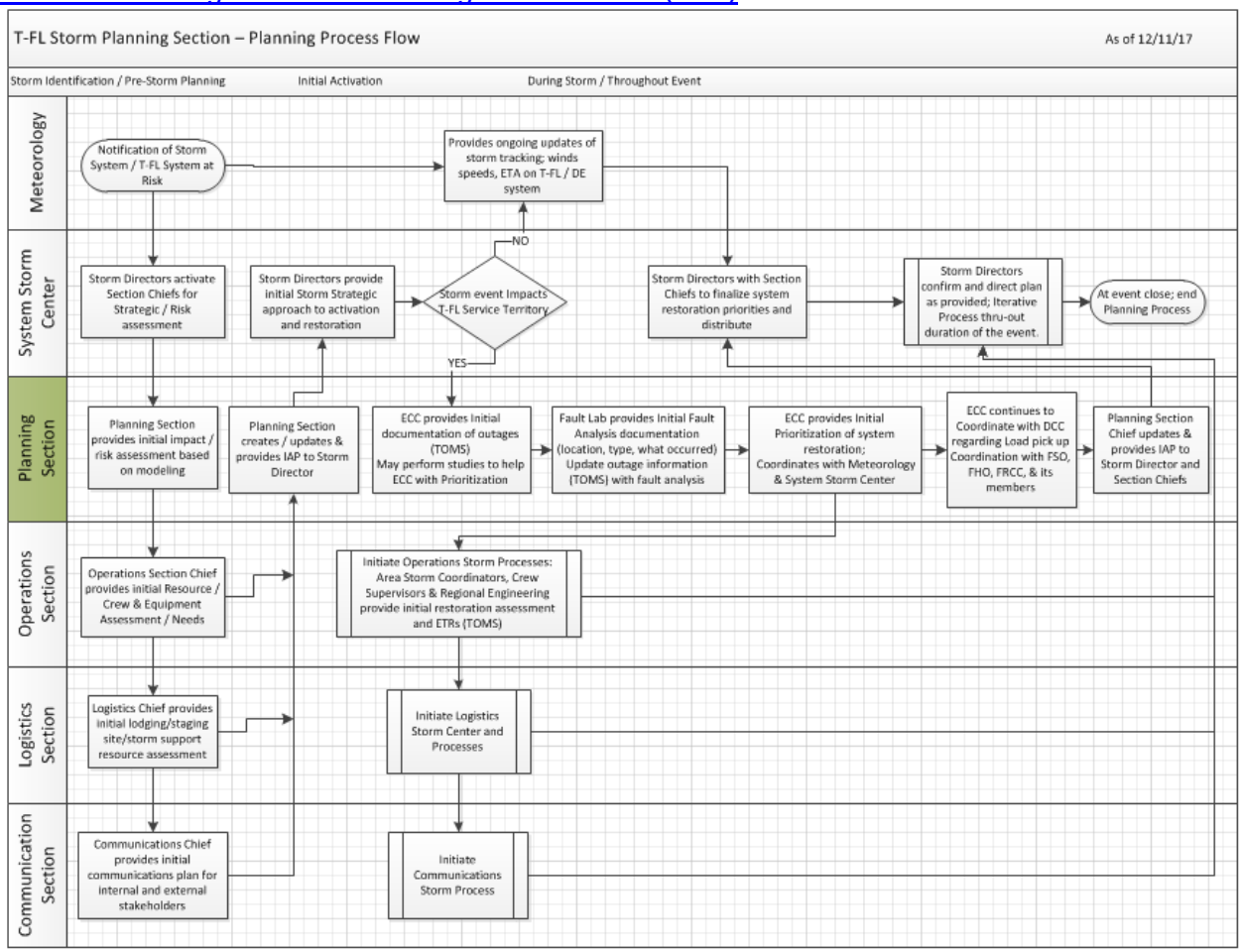


Details and current assignments to the storm roles illustrated above can be found in the T-FL System-Storm-Ctr-Org-Charts – folder (Link is to folder on Transmission – FL System Storm Share Point site housing Viso and PDF files of org chart.

4.0 Planning Process for Storm Activation & Restoration – IAP Development

The Major Storm Event Planning Process within Incident Command System provides time and means for leadership to review the situation (Situation Analysis), apply resource assessment data, grid stability / restoration priorities and create an Incident Action Plan (IAP) that is clear, direct, while utilizes the existing storm plan and protocols. This IAP includes information pertaining to all sections of the storm organization (TSSC, Operations, Planning, Logistics, & Communications). The IAP form and function (template) can be found in the System Storm Center current storm documentation (IAP samples-link)

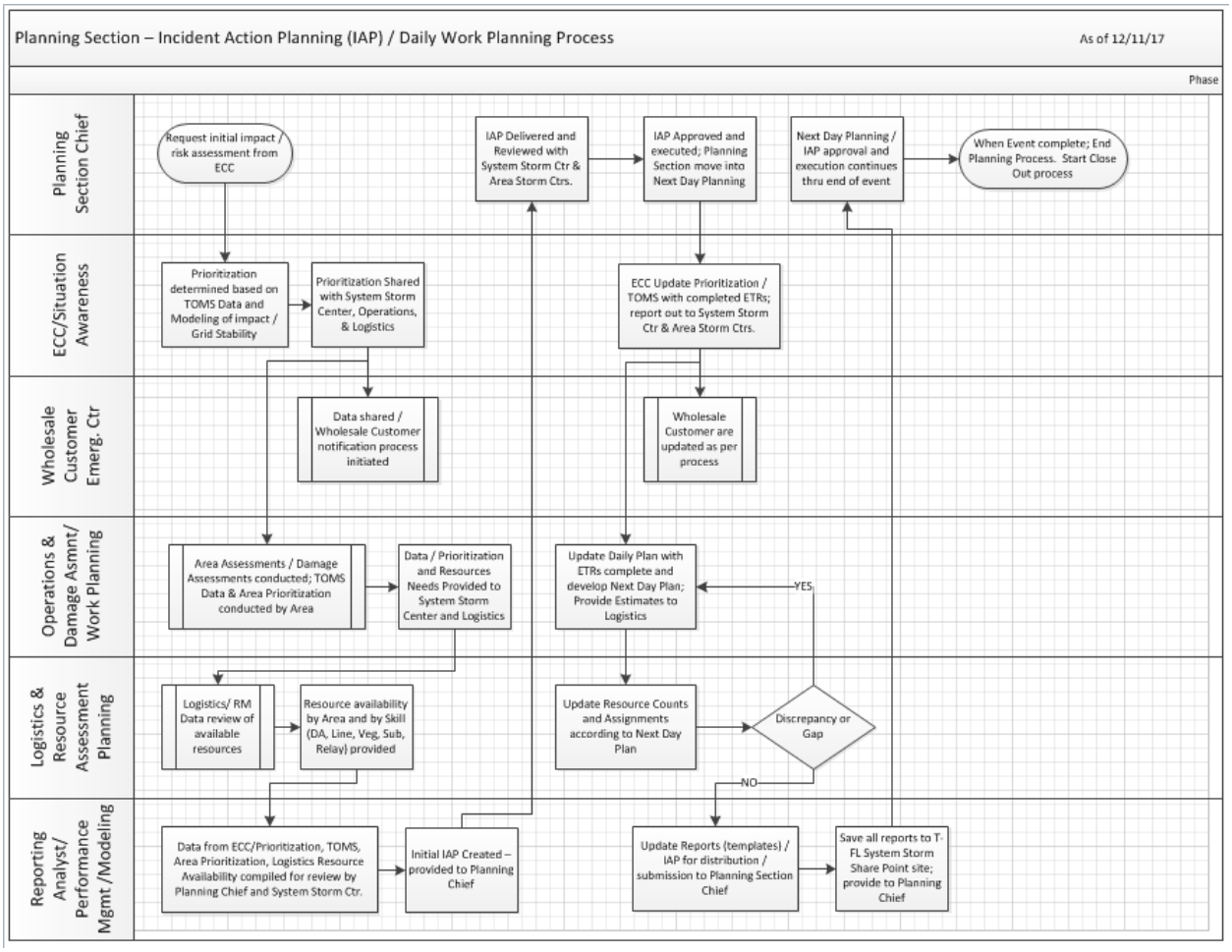
T-FL Storm Planning Section – Planning Process Flow (Link)



(Diagram – Planning Section Process – High Level / Cross Functional)

The primary responsibility of the Planning Section (as illustrated above) is to provide an initial priority of restoration of the T-FL electrical system to the System Storm Center that upholds the integrity of the overall system and provides effective means to completely restore all customers safely. Once a resource assessment is done by the System Storm Center, Operations Section leads, and Resource Management/ Logistics leads, the Planning Section Chief is responsible for developing, maintaining and issuing the Incident Action Plan (IAP) to the Transmission System Storm Center.

The Planning Section Team drives the development of an initial plan, that is updated and refreshed daily based on status of restoration, stability of system, resource availability & safety, schedule adherence, risk assessment, etc. The following diagram illustrates the daily planning process and the criteria for cross functional communications and reporting.



(Diagram – Planning Section – IAP/Work Planning Process – Cross Functional)

5.0 System Impact Assessment and Planning

When a major storm / event threatens the integrity of the transmission grid, the Planning Section activates and begins situational awareness and storm monitoring with Meteorology and IC, DCC and System Storm Center leadership. Key factors in storm assessment are the predicted storm path and path uncertainty, forward speed and uncertainty, wind speed predictions and coastal storm surge expectations. If necessary, system posture and configuration changes will be made prior to storm impact. Depending on the severity of the storm, these preparations may include curtailing maintenance and construction activities or shutting down generation that is expected to be in the path of the storm.

There are three discrete impact scenarios that are driven by the predicted geographical storm path:

5.1 Peninsular Florida Impact outside of the DEF service area:

In this scenario the primary impact of the storm is expected to be on neighboring utility systems. This may impact the ability of those utilities to serve load and may affect generation and tie-lines. In this scenario DEF's role will be to coordinate and support restoration activities with neighboring utilities and the FRCC Reliability Coordinator (RC).

5.2 Storm Impact directly to the DEF service area:

In this scenario the storm is expected to directly impact the DEF system and customer load. This may impact the DEF's ability to serve load and may also affect generation and tie-lines. In this scenario DEF's role will be to coordinate and support restoration activities within the DEF system as well as with affected neighboring utilities and the FRCC Reliability Coordinator (RC).

5.3 Storm Impact to Pinellas County/St. Petersburg:
In this scenario the storm is expected to directly impact St. Petersburg and potentially affect the continuity of operations at the primary DEF ECC location. This may require the activation of the Backup Control Center BCC at Wildwood and the transfer of control of the system from the primary control center to the BCC for the duration of the storm.

Transmission System Storm Hardening is an on-going preventative maintenance program that addresses aged assets and systematically upgrades to increase the overall strength of the transmission grid. When a major weather system threatens the T-FL system, the state of the storm hardening program, system maintenance, and new construction are considered along with the storm track and strength.

6.0 Resource Assessment & Planning

Identifying the resource volume (level of effort) and estimated restoration time that will be required to restore the system is the fundamental objective of Resource Assessment & Planning. The estimated restoration time and resource assessment are initially based upon *predicted* impact pre-landfall. It is a high level, volume and initial assessment to make an estimate of resources needed so that the IC and System Storm Directors can begin to define restoration approach / strategy. One part of this assessment is to determine if T-FL can meet restoration expectations with resources on hand or if off-system resources from other jurisdictions (Mutual Assistance) will be needed.

Resource Management Lead from the Logistics Section and/or the Logistics Chief/Coordinator are the assigned resource management planning subject matter experts to participate in this planning action. Additionally, Asset Management/ Regional Engineering and Work Planning experts are part of the team. At the onset of the Major Storm Event, representatives from ECC/Grid Restoration, Wholesale Storm Center, Resource Management, Work Management, and Damage Assessment will jointly participate in the ongoing assessment process. The assessment is updated and refined after land-fall based on the number of outages and physical assessment of impacted facilities. A Daily (twice daily) review and update occurs as input to the IAP and establishing, validating, adjusting estimated restoration times.

7.0 Restoration / System Priorities

It is a primary function for the Planning Section to provide restoration priorities to guide the Transmission System Storm Center in directing the Operations and Logistics Sections in activation and deployment decisions.

The following guidelines should be utilized by the Storm Process Owners (Incident Commander, T-System Storm Center, Operations, Planning, Logistics, and Communications Section leaders) in coordination with Transmission Wholesale Account Manager, Distribution Large Account Managers, and External Relations to determine restoration priorities. With input from the ECC, the Transmission System Storm Center determines the overall priority restoration. In addition, the Transmission System Storm Center authorizes the assignment of transmission resources, equipment, and materials for system restoration activities among multiple maintenance areas:

- **Priority 1** – Restore off-site power to nuclear sites, restore power to ECC (fed from Kenneth City Substation),restore power to the Backup ECC (fed from Wildwood Substation), restore power to electric powered natural gas pipeline compressor stations, restore start-up power to all available generation units, restore Eastern Interconnection tie lines. Identify and restore power wherever public may be endangered; prioritization of restoration considers “public endangerment” as well as grid stability.
- **Priority 2** – Restore critical customer load in coordination with the DCC, T-Lines critical to BES reliability, equipment needed to maintain system voltage within FRCC voltage limits.

- **Priority 3** – All other T-lines, switches connecting to all other feeders, D-lines, service drops and equipment, providing black-start services to neighboring utilities, energizing tie-lines with neighboring utilities.

Paralleling these priorities are requirements for restoring communications links that facilitate the restoration of electric service. The Energy Delivery Group will assist IT&T by giving reasonable priority to electric facilities serving two-way radio sites, PBX sites, fiber optics and microwave sites, etc. In addition, the Delivery Operations Group will make resources available on a priority basis to support restoring fiber optic cables which carry communications traffic for the Company. The Transmission System Storm Center is responsible for communicating these restoration priorities to Logistics and Operations (Maintenance Area Storm Centers).

8.0 Operational Restoration Performance / Goals / Expectations

8.1 Operational Performance Guiding Principles

The general approach to restoration scope assessment will be based on the initial assessment of the overall geographical scope and severity of the damage to the system. Initial restoration scope and time frame assessments will be based on collaboration between the ECC and DCC System Storm Center, FDO & Trans storm centers. These considerations define the overall estimated restoration time, (i.e., a 2-day, 3-day event or a 5-day event) and then all strategy and plans work toward that goal.

8.2 Operational Performance Goals & Timeline

Restoration times for transmission system outages will be based on damage assessments and materials, staging and labor estimates for each outaged facility in combination with an overall plan for the priority and staging of the restoration plan for all outaged facilities. As goals and objectives are defined and related to estimated restoration, they are included within the IAP and general reporting to System Storm Center/IC.

8.3 Operational Performance Assessment

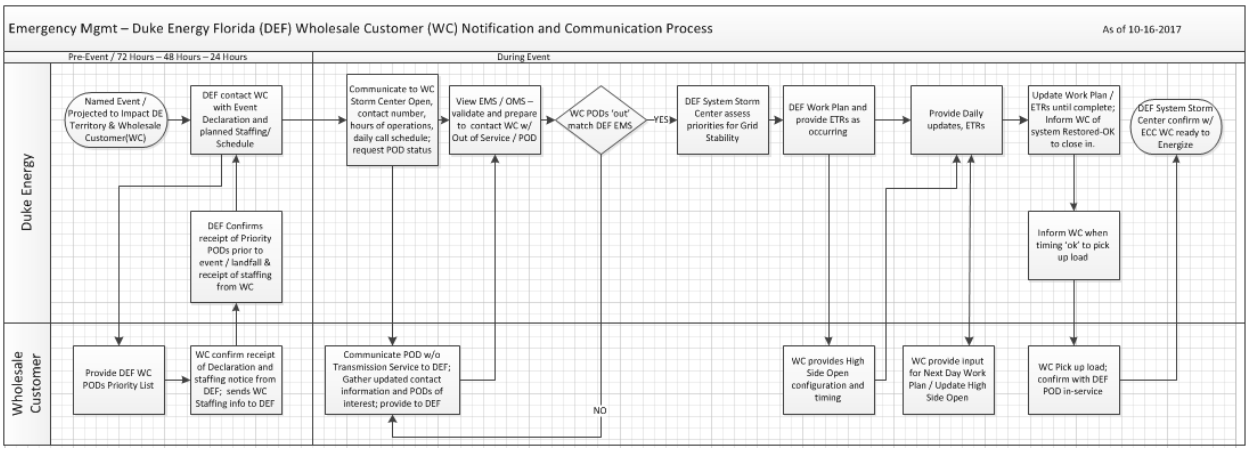
The operational performance assessment will be performed and updated on a daily basis as restoration efforts progress throughout the duration of the overall restoration process, followed by an overall post-restoration operational performance assessment. As each Area Storm Center reports status of ETRs and additional damage assessments, the overall performance of restoration efforts will be documented through daily reporting.

9.0 System Assessments and ETRs

The transmission system is required to maintain stability as feasible during any emergency event. The grid relies on each utility maintaining the stability of their transmission assets. The system is assessed continuously. When a tracked weather system becomes a threat, the system is assessed for those vulnerable areas due to construction projects or on-going maintenance, like storm hardening of structures. If the system is impacted by the event, the initial restoration priorities are set based on damage/direct impact. The outage management system is uploaded with initial impacts / outages. Outages are identified; however estimates to restore are not available until the local area completes the assessment.

The transmission service and maintenance areas are also assessed; each of the three areas in Florida are individually and systematically assessed by local crews. The local maintenance resources are most familiar with the area system; the area confirms the priorities and sequence in which the area can be restored. From this area assessment estimated restoration times (ETRs) are assigned to each outage/work assignment. This data gets updated in TOMS and then Planning / ECC and System Storm Center reviews and reassesses next set of System priorities. This process repeats until the system is methodically and effectively restored.

Transmission Wholesale Customers are included in this assessment and prioritization process. Transmission provides transmission to these utilities, see the Wholesale Customer Notification Process within TSSOP – GDLP-EMG-TRM-00026 - Storm Annual Planning, Restoration Strategy & Direction



(Diagram - DEF Wholesale Customer Notification Process)

10.0 Engineering Records & Data Integrity

Maintaining the engineering records and data integrity of our transmission information systems is important for day to day operational process excellence. Construction changes that occur during restoration efforts that are not properly documented can negatively impact these information systems and the future system operational excellence. Every effort is to be made during restoration planning to set expectations and guiding principles for the restoration efforts. A guiding principle Transmission follows is to restore our electric grid system back to original status (prior to the event).

Functioning within operational excellence and safe restoration protocols, these changes/repairs are more economically and efficiently documented at the time the construction change occurred. In isolated cases, decisions may be made to manually document in order to support restoration efforts. In these cases, the need for a re-verification or final sweep of an area after the restoration effort has been completed will be performed and lead by the Damage Assessment team within the Operations Section. A confirmation of correction and update of all data sources (GIS, Cascade/Maximo, Aspen, 3-lines, 1-lines, P&P, general layouts, any and all official engineering records) back through the Planning Section is required. At the point during a major event, where the determination is made by the Person in Charge at the Area Storm Center or at System level as to whether the operations will revert to paper during restoration must be documented within IAP and storm restoration records.

Post-event 'as-built' data collection and accurate depiction of engineering records of field / restoration effort/changes is necessary to assure the post-event system meets minimum standards. Each engineering and construction unit should utilize 'as-built' procedures to assure integrity and standards are met. (Underdevelopment – identify and incorporate links to applicable As-Built Standards/Procedures.)

11.0 Energy Control Center

The Energy Control Center (ECC) is fundamentally responsible for maintaining reliability on the Bulk Electric System (BES), monitoring the status of the transmission system, managing and reporting outages, and issuing switching orders for system level transmission lines, equipment and facility clearances during both blue-sky and storm situations.

The ECC conducts storm status calls with FSO (Fuels and System Optimization) & FHO (Fossil Hydro Operations to assess forecast, plant shutdown requirements, generation status and short-term and immediate fuel availability. The ECC coordinates on a regional level with all the Florida Reliability Coordinating Council (FRCC) entities to share and coordinate storm preparedness.

The ECC Section will enter all Transmission operations / outages into the Transmission Outage Management System (TOMS), contact the appropriate storm center(s), and notify the FRCC RC (Florida Reliability Coordinating Council – Reliability Coordinator). ECC will continue to update the FRCC RC on outages and system conditions periodically.

Prior to receiving field damage assessments, ECC will determine restoration priorities based upon reliability and restoration needs and provide them to the Planning Section Chief. Once Estimated Time to Restore (ETRs) are obtained from the field, the Planning Section Chief will coordinate with ECC to reevaluate and update the IAP. Changes to the IAP will be shared with the Transmission System Storm Center and with Operations. As work orders get assigned to the restoration efforts of each outage, the Area Storm Centers / Operations will continue to update TOMS with ETRs.

12.0 Planning Section Resources – Storm Roles and Responsibilities

The Planning Section team is responsible for planning the approach / actions for the storm event. The following role descriptions are to provide clarity around each role, responsibilities, and expectations during pre-event, the event, post event functions and activities.

12.1 Planning Section Chief, T-FL System Storm Center

Job Function:

This is a lead position; it is the storm organizations planning leader for the event. The Planning Section Chief is responsible for developing, maintaining and issuing the Incident Action Plan (IAP). It is expected that The Planning Section Chief will gather Planning Section Branch Leads to develop and strategize the best approach to respond to the event. This includes but is not limited to Wholesale Customer Emergency Center, Logistics & Resource Assessment Planning, Operations & Damage Assessment Planning (including Reporting Analyst & Performance Management/Predictive Modeling Role). The IAP includes the daily plan pertaining to all sections of the storm organization (TSSC, Operations, Planning, Logistics, & Communications).

Job Description:

The Planning Section Chief is responsible for ensuring:

- That the Planning Section's organizational structure and foundational processes are current. Specifically, that the Planning Section Process is current and the Planning Section organizational structure is sound, roles are filled with SME, and each is trained in process, tools, and communications protocols.
- Annual readiness activities for the Planning Section are completed by section branch leads.
- All Planning Section personnel are trained annually; that role descriptions are up to date and checklists for each role are accurate and available for use.
- All Planning Section personnel are prepared to respond to direction to activate during a major event.
- Creates and distributes the Incident Action Plan for the event.
  - Once the plan is created for initial application, the IAP is modified daily and updated as the event occurs.
  - The IAP is distributed and executed daily; adjustments occurring as per system leadership, event changes, grid stability/restoration dictate.
  - The IAP form and function (template) can be found in the System Storm Center current storm documentation (IAP samples-link) .

Key Interface Points:

- T-FL Storm Director / Incident Commander
- T-FL System Storm Liaison to 1DF-DEF IC
- Planning – Reporting Analyst & Performance Mgmt
- Planning - ECC / Grid Restoration Director
- Planning - Wholesale Customer Emergency Center
- Planning – Logistics & Resource Assessment Planning
- Planning – Operations & Damage Assessment/Work Planning
- Operations Section Leads: Operations Section Chiefs / Area Storm Ctr IC
- Logistics Chief
- Logistics: Admin/Corp Services – IT/Telecom Support
- Communications – External / Public Information Liaison
- Transmission System Storm Coordinator/Project Manager

Checklist of Actions:

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Planning Section Chief tab (Under development)

12.2 Energy Control Center/Grid Restoration – Roles and Responsibilities

The primary function of the ECC during a major storm event is to stabilize the system, continue to service customer load to the extent possible, and restore facilities and customer load that were affected and interrupted by the passage of the storm. The ECC is also responsible for coordination with the FRCC Reliability Coordinator (RC) and neighboring interconnected Transmission Operators (TOPs) to support safe and effective system restoration. ECC restoration priorities ensure that the reliability of the Bulk Electric System (BES) is maintained during restoration and priority is placed on restoring connection to the Eastern Interconnection.

12.2.1 ECC/Grid Restoration-System Operations Director - Storm Role Description

Job Function:

The ECC-System Operations Director is responsible for leading and coordinating all ECC organization activities during a major storm event, including ultimate decision making authority for actions taken, ECC staffing and resource deployment, and activation of the Backup Control Center in Wildwood.

The ECC Director will initiate and host storm conference calls with the Fossil Hydro Organization (FHO), Fuels & System Optimization (FSO) and key Florida stakeholders (State Regulatory Affairs, Corporate Communication, etc.), and will participate in storm calls hosted by TSSC (Transmission System Storm Center), the FRCC Reliability Coordinator and the 1DF-DEFStorm Organization. TSSC calls will focus on the operational status of the bulk power system, logistics and staging of repair crews, assessment and prioritization of storm damage, and coordination of restoration activities. ECC calls with FHO and FSO will focus on storm related generation issues, fuel inventory levels, generation profiles and plant shutdowns and startups.

Job Description:

The ECC/Grid Restoration –System Operations Director is responsible for ensuring:

- That the organizational structure and processes are current. Specifically, assuring and directing those processes that pertain to identifying, prioritizing, and activating storm roles to manage the ECC critical role and functionality.
- Annual readiness activities for the ECC/Grid Restoration Branch are completed by branch/team.

- ECC/Grid Restoration Branch personnel are trained annually; that role descriptions are up to date and checklists for each role are accurate and available for use.
- All ECC/Grid Restoration personnel are prepared to respond to direction to activate during a major event.
- Provides input to the Incident Action Plan for the event , specifically the data and information required to provide initial prioritization to the TSSC. Additionally provide ongoing updates to the IAP/Restoration Priorities that assure grid stability.
- Assures data management / documentation of outages and event impact to the transmission system occurs as expected / required by DEF, and all other appropriate regulators.
- Initiates all necessary Storm Event calls with external interface points
- Participates on all TSSC Calls and T-FL Planning Calls as required/scheduled.

Key Interface Points:

- T-FL Storm Director / Incident Commander
- T-FL System Storm Liaison to 1DF-DEF IC
- Planning Section Chief
  - Planning – Reporting Analyst & Performance Mgmt
  - Planning - Wholesale Customer Emergency Center
  - Planning – Logistics & Resource Assessment Planning
  - Planning – Operations & Damage Assessment/Work Planning
- Operations Section Leads: Operations Section Chiefs / Area Storm Ctr IC

Checklist of Actions:

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Logistics Request Tool Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: ECC/Grid Restoration-System Operations Director tab (Under development)

12.2.2 Reporting Analyst & Performance Mgmt / Predictive Modeling (TSSC POC)– Storm Role Description

Job Function:

This role is responsible for being the TSSC Point of Contact, to pull data together across the T-FL System Storm Operational Organization (Operations, Logistics. Planning, & Communications) to provide a consistent means of reporting to:

1. Incident Command / Executives / Incident Support Team
2. Transmission-FL System Storm Organization (Internal)
3. Public Utilities / Corporate Communications External Stakeholders

This Reporting Analyst / PoC role is a critical position, especially in the pre-storm planning; event / incident planning, and storm deployment/re-deployment of restoration teams. It is the Transmission - Florida storm organizations' Point of Contact for anyone calling into Transmission System Storm Command. This role reports to the NP Storm Center for Transmission Storm Direction. It is responsible for: utilizing and updating reporting templates, guarding the accuracy & consistency of the data to be shared; modeling potential storm /event impacts; for assessing and confirming with ECC/Planning initial priorities for restoration of system and maintaining grid stability. This role gathers and compiles data necessary for creation of IAP (Incident Action Plan) for Transmission storm event; provides TOMS data management, reports outages on lines, substations, provides validation of ETRs. The PoC role is an interfacing role within Transmission System Storm Center Leadership (Operations, Planning, Logistics, & Communications) to gain alignment and plan for the event restoration priorities.

Job Description:

The Planning Section Reporting Analyst / PoC is responsible for:

- Reporting Analyst / Data Mgmt / Event Modeling team member
- Gathering and compiling potential and actual event impact to T-FL system, using modeling and actual data
- Compiles and documents IAP for goal of maintaining T-FL grid stability and providing synced restoration daily plan
- Participates on Transmission Operations System Storm calls.
- Provides/Confirms Transmission system impact and restoration activity data to Storm Leadership by reporting:
  - Lines out / down
  - Substation impacts
  - Status / Production / ETR of all Transmission restoration activities
- Must be familiar with and skilled in utilizing, reading, reporting from the:
  - T-FL System Map board,
  - WebFG
  - System 1-line,
  - Modeling tools (current T-FL / System)
  - TOMs data management tool so that reports are regularly run and provided to Storm Leadership
  - Resource on Demand or other Resource Mgmt data
- Answers the telephone with in the T-FL System Storm Center; direct/prioritizes call request, need
- Based on modeling data and impact data, provides reports, insight, pro-active view of possible emergent / emergency issues and situations

Key Interface Points:

- T-FL Storm Director / Incident Commander
- T-FL System Storm Liaison to 1DF-DEF IC
- Operations Section: Operations Section Chiefs / Area Storm Ctr IC
- Operations: Area System Assessment /Engineering / Work Assignment Director
- Planning Section Chief
  - Planning – Reporting Analyst & Performance Mgmt
  - Planning - Wholesale Customer Emergency Center
  - Planning – Logistics & Resource Assessment Planning
  - Planning – Operations & Damage Assessment/Work Planning
- Logistics Chief
- Communications – External / Public Information Liaison

Checklist of Actions:

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Planning-Reporting Analyst/POC tab (under development)

12.2.3 System Planner & Evaluation (TOA & TOMS) - Storm Role Description

Job Function:

Engineering support staff in Operations Engineering and Transmission Planning will support the ECC control room in identifying storm related outages, assessing system conditions and entering outage data into the Transmission Outage Management System (TOMS). This information is crucial to developing the ECC restoration priorities that are later used in development and execution of the IAP.

Job Description:

The System Planners & Evaluation role is responsible for ensuring:

- All outage data is efficiently and accurately entered into TOMS
- Prior to storm season, that all annual readiness activities for the System Planners role are completed.
- Participates and completes TOMS training and refresher information are available in the TOMS computer-based training Plantview course COT102
- Participates in any and all Storm Drill activities that allows each individual to test TOMS system and to promote familiarity with the tool.
- Assures knowledge and ability to respond to storm role each year during resource assessment.
- Provides input to the Incident Action Plan for the event , specifically the data and information required to provide initial prioritization to the TSSC.

Key Interface Points:

- Planning Section Chief
- Planning: ECC/Grid Restoration – System Ops Director
- Planning: Wholesale Customer Emergency Center
- Operations: Crew Management
- Operations: TOA/Work Planners

Checklist of Actions:

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: System Planner & Evaluation tab (Under development)

12.3 Wholesale Customer Emergency Center - Roles and Responsibilities

Job Function:

The Wholesale Customer Emergency Center (WCEC) is a liaison between Duke Energy and Florida's Wholesale Customers during a storm/emergency event. This role reports to the Transmission System Storm Center (TSSC) for Transmission Storm Direction. It is responsible for maintaining clear and direct communication to and from DEF's Wholesale customers regarding DEF's strategy and approach to restoration, as it impacts wholesale/transmission interconnections. Additionally, this role discusses and maintains awareness of the wholesale customers restoration efforts and provided support as necessary.

Job Description:

The T-FL Wholesale Customer Emergency Center is responsible for:

- Manning and responding to the Transmission System Storm Center-Wholesale Customer Emergency Center's dedicated telephone line and email in-box.
- Maintaining communication with the wholesale customers as storm / event dictates.
- Notifies the wholesale customers when the Duke Energy Transmission; System Storm Center and Area Storm Centers are activated.
- Participating in T-FL System Operations Storm calls; and reporting appropriate impacts and findings from Wholesale Customers
- Documents necessary actions and/or provides input to the IAP, as deemed appropriate.
- Participates on Transmission Operations System Storm calls.

- Updates and maintains the Wholesale Utility Partner contact list; assures accuracy and provides hard copies to post within T-FL System Storm Center.
- It is anticipated that this role typically does not need Logistical support (rooms/lodging, fuel, transportation, etc.), therefore, if TSSC location changes or other redirection occurs, Wholesale Customer Emergency Center should confirm inclusion on TSSC roster count for relocation, logistical support.

Key Interface Points:

- T-FL Storm Director / Incident Commander
- T-FL System Storm Liaison to 1DF-DEF IC
- Operations Section: Operations Section Chiefs / Area Storm Ctr IC
- Operations: Area System Assessment /Engineering / Work Assignment Director
- Planning Section Chief
  - Planning – Reporting Analyst & Performance Mgmt
  - Planning – ECC/Grid Stability Director
  - Planning – Logistics & Resource Assessment Planning
  - Planning – Operations & Damage Assessment/Work Planning
- Logistics Chief
- Communications – External / Public Information Liaison

Checklist of Actions:

This timeline is designed for a storm/emergency event entering our service area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: **T-FL Wholesale Customer Emergency Ctr** tab (Under development)

12.4 Logistics & Resource Assessment Planning –

12.4.1 Description of function/expectations- input to IAP, reporting, updating

The expectations of this role is to understand and the availability and accessibility of restoration resources on the system and off-system (Native & Non-Native resources). This role must understands the processes for acquiring resources within FL, through Mutual Assistance protocols, and across DE Jurisdictions. This role is to provide initial 'stick counts' and timing of arrival of those resources for the purposes of assigning resources to T-FL Areas and to be prepared to provide reporting to Logistics Chief for deployment of logistical support to those resources.

12.4.2 Logistics & Resource Assessment Planning - Storm Role Description – Reference: RM-Branch Director Role

- This Planning Role – Under Development

12.5 Operations & Damage Assessment Planning Role & Responsibilities

12.5.1 Description of function/expectations- input to IAP, reporting, updating

The role within Operations & Damage Assessment Planning – is filled by the Crew Management & Restoration / DA Mobilization Director. This position is responsible for providing overall assessment of *volume of crew resources anticipated* & equipment needed based on modeling and projections from Planning Section. This role also identifies perceived gaps in resource availability / mobilization so that the Planning Section can project length of restoration.

12.5.2 Operations & Damage Assessment Planning - Storm Role Description – Reference:

TSSOP-Operations Section - GDLP-EMG-TRM-00027 – 5.0 Crew Management – Restoration/DA Mobilization - Crew Mgmt & Restoration/DA Mobilization Director Role

- This Planning Role – Under development

13.0 Training and Activation of Planning Resources

13.1 Training Expectations / Objectives

Each year the System Operations and Transmission Planning staff supporting outage data entry into the Transmission Outage Management System (TOMS) will train in the process of entering outages, generally in support of the annual storm drill. As part of the development of the drill scenario, a list of facility outages will be developed. TOMS outage support staff will be selected prior to the drill and assigned a portion of the facility outage list for entry during the drill. At the appropriate point during the storm drill timeline, the TOMS data entry support staff will enter outage data into the TOMS development system (not production). The objective of the TOMS data entry training is to ensure that all TOMS data entry support staff are able to access the TOMS system, are familiar with the data entry process, and are able to successfully and accurately enter their assigned outage data. TOMS training and refresher information are available in the TOMS computer-based training Plantview course COT102.

13.2 Training matrix / schedule

Training schedule will be created and published annually as Planning Section prepares for according to emergency management best practices. Typically, computer based trainings are available year round and the expectation is that each employee assigned to Planning Section storm role will be responsible to keep annual training current. In addition, any emergency management / storm-event exercises and drills will be planned and scheduled as directed from T-FL System Storm Center and 1DF-DEF Incident Command.

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00028 | Revision no.: 000

Document title: TSSOP-Transmission System Storm Operational Plan: Planning – System Priorities, Assessment, Restoration Approach

Type of action:

- ☑ New
- ☐ Revision
- ☐ Renumber
- ☐ Cancellation
- ☑ Ownership Change
- ☐ Periodic review completed, as required
- ☐ Suspension

For Document Management staff use only:

- ☐ Editorial Change
- ☐ Migration
- ☐ Control element revision _____ (does not require approval authority signature)

Applies to: (Select all that apply)

- ☐ Duke Energy
- ☐ Duke Energy Carolinas, LLC
- ☐ Duke Energy Progress, LLC
- ☑ Duke Energy Florida, LLC
- ☐ Duke Energy Indiana, Inc.
- ☐ Duke Energy Kentucky, Inc.
- ☐ Duke Energy Ohio, Inc.
- ☑ Group Transmission
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☑ None
- ☐ NERC
- ☐ State Codes/Standards
- ☐ FERC Standards of Conduct
- ☐ HIPAA
- ☐ Patriot Act
- ☐ Sarbanes-Oxley
- ☐ Other _____
- ☐ OSHA _____

Complete if submitting a form: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☑ Yes (Procedure No: _____)

How is the form to be completed or used? ☐ Hard Copy (completed by hand) ☑ Online Data Entry (fillable PDF)

- ☑ Communication plan established
- ☑ Impact Reviews completed

Description of document action or summary of changes:

Publication of TSSOP-Transmission System Storm Operational Plan for Transmission Florida. Moving Document from Draft form created and proven during 2016 & 2017 seasons; draft document was housed within the Transmission Florida System Storm Center Share Point site: Transmission System Storm Operational Plan link.

GDLP-EMG-TRM-00028 is the third of seven documents that comprise the TSSOP for Transmission Florida (DEF). This document is the Planning Section and includes planning, prioritizing, assessment of restoration and development of the incident action plan (IAP).

Section B: Approval **Who should sign? see instructions on page 2**

Preparer(s)/Author(s)/Writer(s) (*signature not required*):
Deb Banister-Hazama

Approval recommended (*print name*): Glenn Dooley	(*signature*)	Date:
Approval recommended (*print name*)	(*signature*)	Date:
Approval recommended (*print name*)	(*signature*)	Date:
Final Approval (*print name*): Troy Buis	(*signature*)	Date: 12-19-17

RETURN SIGNED FORM AS SCANNED PDF VIA E-MAIL OR FAX TO (919) 235-3165

Keywords: procedures and forms; procedures program; daf: ADMP-PRO-ADS-00002 document management program
Applies to: Duke Energy - Transmission

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00028 | Revision no.: 000

Document title: TSSOP-Transmission System Storm Operational Plan: Planning – System Priorities, Assessment, Restoration Approach

Type of action:

- ☑ New
- ☐ Revision
- ☐ Renumber
- ☐ Cancellation
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- ☐ Periodic review completed, as required
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- ☐ Editorial Change
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- ☐ Duke Energy Kentucky, Inc.
- ☐ Duke Energy Ohio, Inc.
- ☑ Group Transmission
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☑ None
- ☐ State Codes/Standards
- ☐ HIPAA
- ☐ Sarbanes-Oxley
- ☐ OSHA _____
- ☐ NERC
- ☐ FERC Standards of Conduct
- ☐ Patriot Act
- ☐ Other _____

Complete if submitting a form: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☑ Yes (Procedure No: _____)

How is the form to be completed or used? ☐ Hard Copy (completed by hand) ☑ Online Data Entry (fillable PDF)

- ☑ Communication plan established
- ☑ Impact Reviews completed

Description of document action or summary of changes:

Publication of TSSOP-Transmission System Storm Operational Plan for Transmission Florida. Moving Document from Draft form created and proven during 2016 & 2017 seasons; draft document was housed within the Transmission Florida System Storm Center Share Point site: Transmission System Storm Operational Plan link.

GDLP-EMG-TRM-00028 is the third of seven documents that comprise the TSSOP for Transmission Florida (DEF). This document is the Planning Section and includes planning, prioritizing, assessment of restoration and development of the incident action plan (IAP).

Section B: Approval

Who should sign? see instructions on page 2

Preparer(s)/Author(s)/Writer(s) (*signature not required*):
Deb Banister-Hazama

Approval recommended (*print name*): Glenn Dooley	Glenn A. Dooley (*signature*)	Date: 12/19/17
Approval recommended (*print name*):	(*signature*)	Date:
Approval recommended (*print name*):	(*signature*)	Date:
Final Approval (*print name*): Troy Buis	(*signature*)	Date:

RETURN SIGNED FORM AS SCANNED PDF VIA E-MAIL OR FAX TO (919) 235-3165

Document title:	Document number:
TSSOP - Transmission System Storm Operational Plan: Logistics – Administration, Resources, Staging & Mustering, Crew Support	GDLP-EMG-TRM-00029
	Revision No.: 000
Keywords: Transmission System Storm Center Operational Plan (TSSOP), Transmission Storm Plan, emergency	Applies to: Transmission - DEF

This document is the Logistics Section of the Transmission System Storm Operational Plan referenced in the Table of Contents in TSSOP – GLDP-EMG-TRM-00025-Introduction and Overview.

Table of Contents

1.0 Mission and Purpose

The mission of the T-FL Logistics Storm Organization is to provide logistical services and support to the company, employees, contractors, and vendors during major storm restoration events to support the achievement of the restoration objectives.

The Logistics Storm Organization includes the following functional areas:

- **Site Management / Resource Support** manages Site Acquisition & Maintenance; Site Logistics and Operations, establishing and staffing Base Camps, Mustering, Laydown, Materials, Parking sites; site logistics support, asset procurement, meals, work management)
- **Logistics Support Services** serves to organize and fulfill all the administrative, processes of the logistics organization. It is comprised of
    - **Logistics Request Team** managing the mechanics of receiving, tracking and fulfilling all logistical requests; utilizing the Logistics Request Ap
    - **System Engineering Support** provides system engineering requests in support of the Area Assessment Reginal Engineering and System and assignment of engineering resources)
    - **Shared Resources & Logistical Services** supports and coordinates with shared restoration related services like Transportation (Fleet, Fuel, Heavy Hauling), Materials, Sourcing-Vendor Relations
    - **Administrative & Corporate Services** manages the detailed, crucial administrate support for System Storm Center and Logistics Center, HR, Corp. Security, IT/Telecom, Facilities & Finance
- **Lodging** manages the housing/lodging for all event resources: crews, logistics, leadership, all T-Support resources.
- **Resource Management** acquires, receives, activates, mobilizes, re-deploys, and releases all event resources; including storm center & logistics staff, crew acquisition & mobilization, and all supporting resources like Fleet/fuel, Air Ops, Materials, Heavy Hauling & Sourcing.

Each of these four functional areas are referred to as ‘branches’ within the Logistics Section of the storm organization. Together, with the Operations-Area Logistics centers, they make up the logistics function and roles of Logistics Section of T-FL Storm Organization.

1.1 Logistics Guiding Principles

To achieve this mission, T-FL Logistics operates under T&D Logistics Guiding Principles.

In addition, T-FL Logistics will regularly review, improve and execute Annual Readiness for Storm Planning and Preparedness; the review cycle and process will follow the FL-System Storm Center where possible and applicable.

1.2 Logistics Center Duties

The Logistics Center is the Logistics Organization’s command center; it is both structure (organization, processes) and location (building, share point site) from where logistics duties flow. The duties of the Logistics Center are to:

- Provide logistical support for event/incident resources, such as: leadership (Storm Directors, Incident Command, cross-jurisdictional leaders, and Section Chiefs); native (FL) and non-native (out-of-state) crews (employees and contract); support staff (logistical support, field support, leadership); engineering (regional & system); materials, sourcing, accounting, administrative, and scheduling / work planning.

- Support restoration activities as requested by Transmission Area Storm Centers and prioritized by the T-FL System Storm Center/IC.

- Logistical support includes, but is not limited to: site acquisition / maintenance, site mobilization/demob (mustering, parking, base camps, lay down yards, etc.), site management, lodging acquisition and assignment, meals for all personnel, fueling for restoration efforts, fleet (rental of light duty, equipment, specialty equipment), materials (restoration related), heavy hauling (materials, equipment, delivery, internal fuel, operators/drivers), sourcing and vendor relations, crew tracking & support

- Stand up / activate the Logistics Center (Logistics Command Center) at Lake Mary, FL (Northpoint) as primary storm center or the back-up storm center in Wildwood, FL (Transmission Bldg).

- Serve as liaison to System Storm Center / Incident Command when Transmission System Storm Center is not activated.

- Track all resources and location/work sites/event assignments of Transmission Employees and contractors.

- Follow Annual Readiness processes and assure all storm organizations (System Storm Center, Operations, Planning, Communications sections) and roles are doing the same.

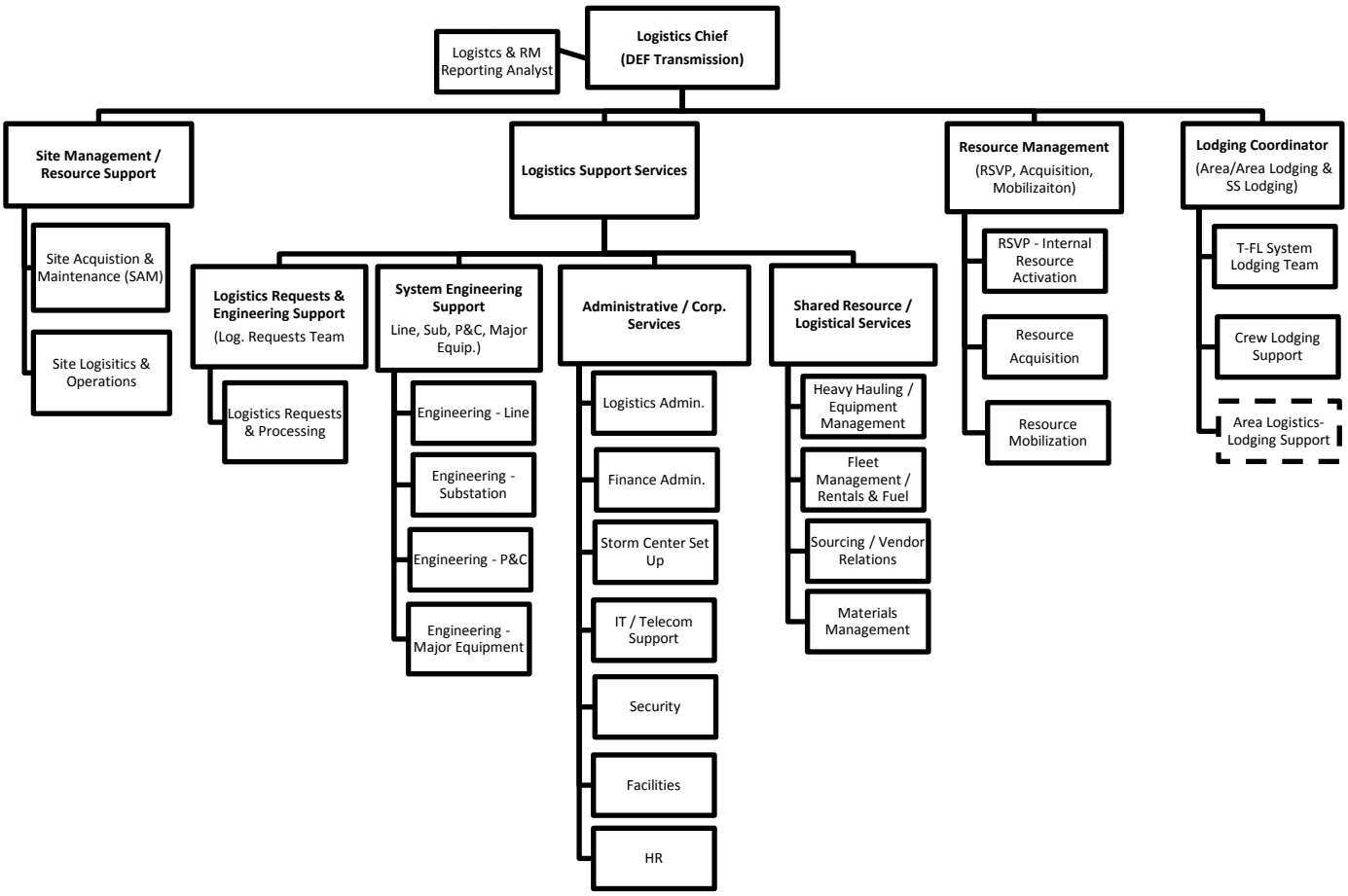
- Provide Logistics Plan that includes:
  - Guiding Principles for applying Logistics to Florida event response activation/deployment
  - Roles/Responsibilities descriptions, including org chart and role assignment
  - Training Plan that includes:
    - Training in the form of 'reading for understanding' at the minimum to computer based training, table top workshops, classroom training, formal drills
    - Appropriate Tools for assigned Logistics roles (software tools, PPE, equipment, etc.)

2.0 Logistics Organization, Roles & Responsibilities

The Logistics Organization is structured to effectively and efficiently meet the needs of the System Storm Center direction at the time of activation. It is staffed to be able to expand as the event needs increase and contract as event restoration becomes complete. It is also aligned with 1DF-DEF Logistics organization so that Duke Energy Florida can most effectively activate, deploy, and utilize resources to affect One Florida Event Response. All of the roles and processes within the TSSOP Logistics Section have been developed, aligned, and reviewed by T&D Logistics organizations. In the spirit of One Florida Response, structure, processes, roles are aligned where economies of scale can benefit both organizations; structure, processes, roles are then kept separate but cooperative where the organization's specific work standards, safety, efficiencies suggest and/or require.

The Logistics Chiefs and Branch Directors are aligned and cooperative as appropriate to each organization's needs during an event. Each branch has joint calls during an event as well as during Annual Readiness time, allowing for the logistics organizations to work together throughout the year.

Below is the Transmission FL Logistics organizational structure; the link provided supplies the most current version and is used as a staffing diagram.



Details and current assignments to the storm roles listed and illustrated above can be found in the Transmission-FL Storm Org Chart folder.

2.1 Logistics Processes – Overview

Process links are provided below by branch/function are for reference and convenience; all the processes, tools, diagrams within this document are housed on the T-FL System Storm Center / Logistics Center share point site.

Site Management /Resource Support Branch Processes:

- Site Management Org Chart –Site Mgmt. Team tab
- Site Mobilization & Demobilization Process
- Daily Site Management Process
  - T-Fueling Sub-process
- Annual Site Acquisition & Maintenance (SAM) Process
- Alternative Housing Planning
- Site Communication Plan
- Crew On-Boarding Materials
- Crew On-Boarding Safety Video

Logistics Support Branch Services:

Logistics Requests & Engineering Support Processes (quick ref. links)

- Logistics Request Org Chart – Log. Req. Team tab
- T-Logistics Request Tool Process
- T-Logistics Request Tool Job Aid

System Engineering

- System Engineering Org Chart – Engineering Team tab
- Engineering Support Process / Materials Process

Shared Resource / Logistical Services

- Transportation - Fleet Process
  - Rental Vehicle Process
  - Fuel Process – Daily Site Management
    - T-Fueling – Sub Process
- Heavy Hauling / Equipment Process – Under Development-DRAFT
  - Heavy Hauling Storm Org Guiding Principles – for T&D Storm Orgs.
- Sourcing/Vendor Mgmt Process
- Materials Process / Engineering Support Process – Transmission Draft
  - Materials Management-System Storm Site

Admin. /Corp. Services Processes

- Administrative / Corp. Services Org Chart – Admin-Corp Services Team tab
- IT & Telecom
- Facilities Management
- Human Resources
- Corp. Security Storm Processes -
  - Providing Security Resources
  - Termination of Security Resources
  - Storm Site Demobilization

Lodging Management Branch Processes

- Lodging Org Chart – Lodging Team tab
- Major Storm Lodging Process

Resource Management Branch Processes

- Resource Management Org Chart – Resource Mgmt. Team tab
- Resource Acquisition Process – Under Development
- Resource Mobilization Process – Under Development
- RSVP Process

3.0 Logistics Chief

Logistics Chief – Roles & Responsibility

Job Function

The Logistics Chief creates, staffs, directs and oversees the Transmission Florida (DEF) Logistics Organization which is comprised of the following branches:

- Site Management / Resource Support
- Logistics Support Services
- Lodging Management
- Resource Management

This role is ultimately responsible for ensuring the Annual Readiness of each branch of the Logistics Storm Organization. During storm events, the Logistics Chief is responsible for managing the entire T-Logistics Organization and representing Logistics on T-System Briefings as well as on T&D Logistics Briefings . The Logistics Chief is to assure accurate and clear reporting on the management of logistics needs to all restoration resources. This reporting will allow successful daily goal and task direction to the Logistics Branch Leads. The Logistics Chief will participate in all Planning Section briefings as well as assist in development of the Incident Action Plan (IAP).

Job Description

- Oversee execution of Annual Logistics Readiness Plan by Logistics Branch Leads
- Participate in all Operations Storm Briefings and System Storm Briefings
- Facilitate or Participate in T&D Logistics Storm Briefings / Serve as back up to 1DF-DEF Logistics Chief for all Logistics Storm Briefings
- Negotiate number and selection of Sites to be opened with 1DF-DEF Storm Director/IC, Transmission System Storm Director/IC and Area Storm Center Chiefs on Operations Storm Briefing
- Notify Logistics Branch Leads of which sites are requested for activation and expected activation date/time based on storm path
- Direct Logistics Branch Leads to complete site requests tasks for identified Sites to be opened after all-clear
- Manage Logistics checklist of actions included in all job descriptions of the Logistics section within the Transmission System Storm Operational Plan (TSSOP)
- Monitor weather and company storm notices to keep Logistics organization up to date on storm planning activities
- Collaborate with jurisdictional peers; Transmission jurisdictions and Distribution jurisdictions
- Participate in SEE Mutual Assistance Logistics Sub-Committee (serve as back-up to 1DF-DEF Logistics Chief)
- Participate in Wholesale Customer Support discussions / Storm / Event Briefings.
- Oversee storm event and annual storm drill lessons learned activities and best practice implementations; assure Lessons Learned conducted and branch leads update approved actions into branch documentation

Key Interface Points

- Transmission-FL System Storm Director / T-FL Incident Commander (IC)
- Transmission –FL System Storm Liaison to 1DF-DEF ICC
- Operations Section Chiefs: Area Storm Center Chief/IC / C&M Area Coordinator-Peers
- Operations Asset Mgmt / Work Planning / Eng. Support Director
- Planning Section Chief
- Planning – Reporting Analyst / Data Mgmt / Event modeling
- Logistics – Reporting Analyst-RM/Lodging/Site Data Mgmt
- Logistics - Resource Management Branch Director
- Logistics - Site Management / Resource Support Branch Director
- Logistics- Lodging Management Branch Director
- Logistics - Support Services Branch Director
- Transmission System Storm Coordinator/Project Manager-Consultant

Checklist of Actions

The following link provides the Logistics Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event**).**
See Checklist: T-FL Logistics Chief checklist tab

3.1 Logistics & Resource Management Reporting Analyst

Logistics & Resource Management Reporting Analyst – Role & Responsibility
Job Function
Based on One Florida Response efforts, Incident Command System, and DEF system storm center planning expectations, concise, consistent, and accurate reporting is required for effective plan execution. The logistics organization typically manage the acquisition and deployment / release of restoration resources and support. Data on the logistical support efforts is an important, if not critical, need to monitoring, tracking, and effective utilization of resources. This reporting analyst / data management role is a recent addition to the storm organization / logistics organization.

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Logistics Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event**).**
See Checklist: Logistics & Resource Mgmt Reporting Analyst checklist tab – Under Development

4.0 Site Management / Resource Support – Organization, Role & Responsibility

Storm Site Management - Storm Organization

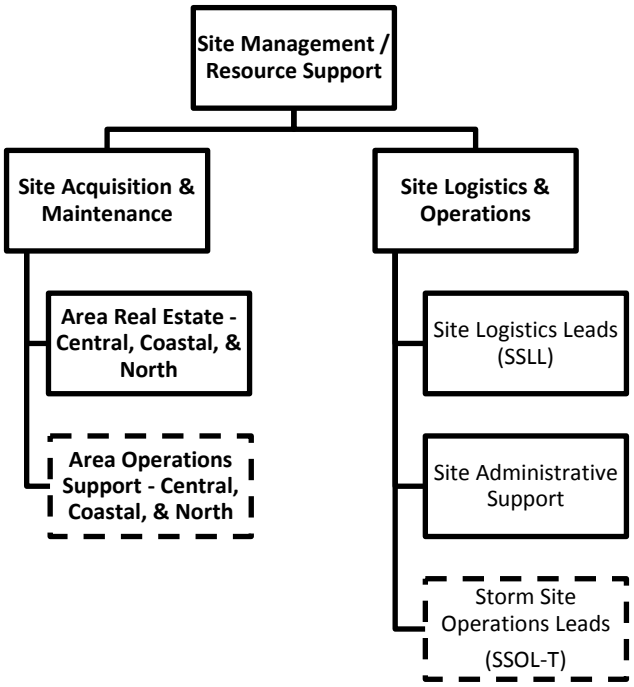


Diagram: Transmission Storm Org Chart – Site Mgmt./Resource Support Team tab

4.1 Site Management / Resource Support Branch Director

See Transmission Storm Org Chart – Site Mgmt / Resource Support tab

Site Management / Resource Support Branch Director – Role & Responsibility

Job Function

The Site Mgmt/Resource Support Branch Director directs and oversees the Site Acquisition & Maintenance (SAM) Team and the Site Logistics & Operations Team. The Sam Team is primarily responsible for the annual readiness actions of planning, acquiring, and maintaining sites for T&D use, and where applicable for T-Only sites. The Site Logistics & Operations Team is primarily responsible for assuring the sites (staff and assets/vendor or internally supplied) are ready to be stood up / mobilized upon declaration of an event/storm. The Site Mgmt/Resource Support Branch Director will act as Transmission Logistics –Site Management Branch Leads and as liaisons to Distribution. The Site Mgmt/Resource Support Branch Director, under the direction of T-FL Logistics Chief, first, then the1DF-DEF Resource Support and 1DF-DEF Storm Site Management, manages all transmission site related storm roles in support of crews logistical needs through site management, ensuring all site logistical needs are met during major storm restoration events. (Specifically, SM/RS role as liaison to Distribution, Site Acquisition and Maintenance roles, Site Admin/RM support roles, Site Lodging/Crew support and Crew tracker roles. See Logistics Org Chart.) The Site Mgmt./Resource Support Branch Director manages all Storm site operations, ensuring all Site needs are met while implementing best practices at sites throughout the system during event restoration activities. The Site Mgmt/Resource Support Branch Director is the primary contact for the T-FL Logistics Chief, T-FL Area Logistics Coordinators, and 1DF-DEF Logistics-Resource Support Lead (Crew Support/Site Mgmt Leads). If Transmission work is complete, the SM/RS's role is to determine whether or not to release T-FL Site Staff; no resources should be released until T-FL SSLL, T-FL SSOL and T-FL Site Logistics & Operations authorizes and communicates to Site Mgmt/Resource Support Director.

Job Description

The Site Management / Resource Support Branch Director will report to North Point T-Logistics Organization and interface with 1DF-DEF-Site Mgmt via telephone, Logistics Tool and email. Site Mgmt./Resource Support Branch Director will Lead and Site Logistics & Operations Lead will Co-Lead all Transmission sites and joint use sites during an event. T-FL Site leadership will follow 1DF-DEF Storm Site Guiding Principles for T&D Storm organizations and will assure their team members are trained and prepared for storm planning, prep and restoration activities.

- Participate in all Transmission System Briefings and S&L / Logistics Briefings
- Receive Site activation request from 1DF-DEF Logistics Chief/Coordinator & Transmission Logistics Coordinator and notify Transmission Storm Site team which sites will be activated and request completion of site activation request tasks
- Manage checklist of actions included in all job descriptions of the applicable Logistics – Crew Support DSSOP section & adapted Transmission Roles within TSSOP.
- Monitor weather and company storm notices to keep Resource Support section up to date on storm planning activities
- Collaborate with jurisdictional peers (T-CA, T-MW)
- Oversee execution of Site Management processes; identify and address any gaps
- Collaborate with 1DF-DEF Logistics to determine Joint site use opportunities
- Collaborate with T- C&M Operations, 1DF-DEF Site Acquisition and Maintenance team, and 1DF-DEF C&M Operations to update Master Storm Site List with C&M validated site capacities for maximum personnel and equipment at activated sites
- Oversee Site Management Team readiness task completion annually

- Track lessons learned to identify process improvement opportunities
- Participate in annual Joint Storm Drill, training and exercises
- Direct Site Management team during storm events
- Activate, deploy, release, SSM resources/staff.
- Assure training of SM Staff/organization

Key Interface Points

- Logistics – Reporting Analyst-RM/Lodging/Site Data Mgmt
- Logistics - Resource Management Branch Director
- Logistics – RM Mobilization
- Logistics – RM Acquisition
- Logistics – Crew Trackers
- Logistics - Site Logistics & Operations Lead
- Logistics – Site Acquisition & Maintenance Lead
- Logistics- Lodging Management Branch Director
- Logistics – Lodging Crew Support
- Logistics - Support Services Branch Director
- Logistics – Materials
- Logistics – Transportation (Fleet, Fuel, Heavy Hauling)
- Operations - Area Storm Center Chiefs/IC
- Operations Asset Mgmt / Work Planning / Eng. Support Director
- Operations - Area Logistics Coordinators
- Operations – Crew Mgmt/Inspector Crew Oversight / SSOL
- 1DF-DEF System Storm Site Lead
- T-FL SSLLs
- T-FL SSOLs

Checklist of Actions

The following link provides the Site Management Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Site Management/Resource Support Branch Director tab

4.2 Site Acquisition & Maintenance Team Lead

See Transmission Storm Org Chart – Logistics-Storm Site Mgmt tab

Site Acquisition & Maintenance Lead (SAM Lead) – Role & Responsibility

Job Function

This is an annual readiness role as well as an Event Mobilization role. The purpose is to assure throughout the year that all Storm Sites have been 'acquired' and the relationships as well as the sites are maintained for use during any storm season. The documentation is maintained within the Storm Site Master List on the storm share point. At the beginning of a Major Storm Event, this role is to participate in the initial activation of the Storm Sites selected.

Job Description

- Interface with 1DF-DEF Site Acquisition & Maintenance team; attend regularly occurring meetings and complete assigned tasks.
- Acquire & update via Hold Harmless Agreements / Storm Site Agreements;

- Share and communicate to C&M and ensure that C&M has participated within the site rating and site map development so that C&M needs are met;
- Assure the site maps are GIS mapped and included within MyWorld mapping tool;
- Confirm that Storm Sites are designated within Areas and Areas for simultaneous use by T&D C&M and storm roles
- Assist with identification of new Storm Sites
- Provide assessment / gap analysis for existing Storm Sites across transmission system

Key Interface Points

- Logistics - Site Logistics & Operations Lead
  - Logistics – SAM - Area RE/C&M Reps (North, Central, Coastal)
  - Logistics – SAM - Area Ops Support (North, Central, Coastal)
- Logistics- Lodging Management Branch Director
- Logistics – Materials
- Logistics – Transportation (Fleet, Fuel, Heavy Hauling)
- Logistics – Share Resource / Logistical Services Lead
- Operations - Area Storm Center Chiefs/IC
- Operations - Area Logistics Coordinators
- Operations – Crew Mgmt/Inspector Crew Oversight / SSOL
- 1DF-DEF System Storm Site Lead
- T-FL SSLLs
- T-FL SSOLs

Checklist of Actions –

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Area Logistics Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See SAM Process and Logistics-Site-Mgmt-Checklist tab

4.3 Site Logistics & Operations Lead

See Transmission Storm Org Chart – Logistics-Storm Site Mgmt tab

Site Logistics & Operations Lead – Role & Responsibility

Job Function

The Site Logistics & Operations Lead is primarily responsible for staffing and deployment of sites and their teams. This role leads the Site Logistics Leads and the Site Operational Leads in assuring all site teams are trained, prepared, and able to work with vendor to mobilize and set up site; work with 1DF-DEF Site team counterparts. This role must have a working knowledge of Daily Site Operating Picture and assure their site leads manage the site according to daily schedule adherence and reporting.

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Logistics-Site-Mgmt-Checklist tab – Under Development

4.3.1 Site Administration Support & Reporting

See Transmission Storm Org Chart – Logistics- Site Mgmt tab

Site Administration Support & Reporting – Role & Responsibility
(Support to Site Mgmt Leads / tool support)

Job Function

The Site Administration Support & Reporting storm role is Logistics' point of contact between Site Mgmt., Logistics Support Services, and Resource Management. This role is key to site data management. The role assures staff and crew assignment to Storm Sites for logistical support (lodging, meals, work assignments, etc.; assists Site Logistics & Operations Mgmt and / or SSLL in set up and smooth operation of site (or Storm Center) as well as updates and manages crew rosters and assignments at the Storm Site/Storm Center (wherever deployed). This role may utilize IT Storm Kit (mobile office) when activated (if individual does not have a company issued laptop, etc.)

Job Description

This position will:

- Assist Site Mgmt in 'acquiring' T-FL and/or Joint Use Storm Sites (Base Camps, Mustering sites, etc.) within Site Master List and Site Activation process
- Interface with Resource Management (Resource Mobilization primarily)
- Ensure the timely flow of crew movement information
- Monitor crew counts and locations
- Provide current crew information on Logistics storm calls
- Provide Lodging Lead with actual and forecasted crew counts by locations at times designated in the Resource Management RoD Process and Timeline
- Assure communication and coordination between Storm Site SSLL, Area Logistics Center, and System Logistics (Lodging & Resource Management)
- Knows and utilizes RoD (Resources on Demand)-Rosters updating/reading
- Can access and read Lodging Tool / field tools-spreadsheets

Key Interface Points

- Logistics – Site Logistics & Operations Lead
- Logistics - Site Logistics Leads (SSLL)
- Operations – Site Operations Leads (SSOL)
- Logistics - Resource Management
    - Resource Mobilization
    - Crew Trackers
- Logistics - Lodging Mgmt
    - Lodging Crew Support
- Sourcing / Vendor Relations
- Logistics - Liaison to Sourcing
- Transportation / Fleet-Fuel
- Logistics - Liaison to Transportation
- Operations - Area Logistics Coordinator
- Logistics – RM-RSVP Coordinator
- Logistics - Administration/Corp Services

Checklist of Actions

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others.

The following link provides the Storm Site Management Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Storm Site Management

4.4 Storm Site Logistics Lead (SSLL)

See Transmission Storm Org Chart **–** Logistics-Storm Site Mgmt tab

Storm Site Logistics Lead (SSLL) for Transmission – Role & Responsibility

Job Function

Site Management Leads assigns this role to a specific Site (Mustering Site, Base Camp, Lay Down Yard, etc.). The Site Logistics Lead (SSLL) role is Logistics' point of contact between Storm Site Mgmt., Area Coordinator / Area Storm Center / Operations , Resource Management, and Lodging. The role assures staff and crew assigned to Sites for logistical support (lodging, meals, fueling, etc.) get the support requested. For example: SSLL assures all crew members are assigned to lodging; have meals plan and schedule; have crew lodging support to get them to and from hotel; have Crew Tracker support for worksite/work plan as needed. The SSLL assists 1DF-DEF SSLL in set up and smooth operation of site (or storm center) as well as serves as backup for updates and manages crew rosters and assignments at the assigned Storm Site. If the Site is a T-Only site, The SSLL gains additional T-FL Site support staffing to set up and maintain the Storm Site. If Transmission-FL Event Restoration work is complete, the SSLL is responsible to reporting to Site Mgmt and SSOL which resources can be released or redeployed. No Logistics or storm field roles are released until SSLL, SSOL and Site Management authorizes.

Job Description

System Site Management assigns to a specific Site. This position reports to assigned Site and reports to 1DF-DEF SSLL and 1DF-DEF SSOL,IF working at a JOINT-USE site; this role is the Transmission contact for site management and leadership. This role may step into LEAD role in the event that it is a Transmission-Only site or the 1DF-DEF does not have the resources to fill this role at the site.

- Interface and coordinate all activities with SSOL
- Interface with SSM and Area Logistics for Crew needs and assignment
- Interface with Resource Management (Resource Mobilization primarily)
- Ensure the timely flow of crew movement information
- Monitor crew counts and locations
- Provide current crew information on Logistics storm calls
- Provide Lodging Lead with actual and forecasted crew counts by locations at times designated in the Resource Management RoD Process and Timeline

Key Interface Points

- Logistics Chief
- Operations - Area Logistics Lead
- Operations - Area System Assessment & Work Planners
- Logistics - Site Logistics & Operations Lead
- Operations – SSOL (Site Operations Lead)
- 1DF-DEF-Logistics - System Resource Support Lead
- 1DF-DEF – Logistics – SSLL (Joint Use Site-Logistics Lead)
- Logistics - Lodging Management
    - Lodging Crew Support

- Logistics - Resource Management
    - Resource Mobilization - Crews
    - Crew Trackers
- Liaison to Transportation/Fleet fuel
- Liaison to Materials
- Heavy Hauling
- Liaison to Sourcing/Vendor Relations
- Logistics - Administration/Corp Services Lead
    - Admin/Corp Srvs. IT Liaison

Checklist of Actions

This timeline is designed for an event impacting our area. A near miss could require timing adjustments on some activities and cancellation of others.

- The following link provides the Site Team Checklist of Actions for annual readiness as well as preparedness for an event impact

See Checklist: Logistics-SM-SSLL tab

4.4.1 Crew-Lodging Support - Site

The Crew Lodging Support Team Role is critical to the running of and logistical support to the crews and at the site. This role is assigned and managed through Lodging Management. The Crew Lodging Support role works directly with the SSLL; and provides daily crew Lodging reports to Site Admin & Reporting. For more information in this role and responsibilities see Lodging Management.

4.4.2 Site Support

Site Support – Role & Responsibility

Job Function

The Site Logistics & Operations Lead is responsible for staffing and deployment of sites and their teams. The Site Logistics Leads (SSLL) and the Site Operational Leads (SSOL) are to assure all site teams are trained, prepared, and able to work with vendor to mobilize and set up site; work with 1DF-DEF Site team counterparts. The Site Support role will fulfill the Site staffing needs for set up, materials coordination, safety proctoring, meal support, detailed site tasks. This role must have a working knowledge of Daily Site Operating Picture and assure they receive clear communication direction from their site leads to manage the site according to daily schedule adherence and reporting.

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Logistics-Site-Mgmt-Checklist tab – Under Development

4.5 Storm Site Operations Lead (SSOL)

See Transmission Storm Org Chart – Logistics-Site Mgmt tab

Storm Site Operations Lead (SSOL) for Transmission – Role & Responsibility

(See also Operations C&M Inspector/Oversight role)

Job Function

The Storm Site Operations Lead (SSOL) role is Logistics' AND Crew Mgmt. point of contact between Site Mgmt., Area Coordinator / Area Storm Center / Operations , Work Mgmt/Work Assignment. The SSOL (Site Operation Lead) position will typically be a member of leadership from the C&M organization. The SSOL will drive operational efficiency through work flow planning (packaged by Area Storm Centers-Work Assessment & Assignment teams OR Logistics Center-Engineering Support) and with direction of the Site Logistics Lead (SSLL). The SSOL drives the crew work assignments AND schedule adherence to the work plan as directed by System Storm Center / T-FL Storm Directors. The SSOL operates in a role of oversight of all crews deployed from a particular work site/Storm Site/Base Camp. The SSOL conducts / assures that on-boarding / safety briefings AND pre-job/post-job briefings occur for all deployed crews. The SSOL is expected to act as safety proctor at the Storm Site if no other Safety Proctor is assigned (via 1DF-DEF or T-FL RM). The SSOL is expected to meet with all Inspectors, Crew Trackers, Crew Foremen, to brief and direct schedule adherence – work hours, time for meals, time for rest/lodging (including travel time). If Transmission-FL Event Restoration work is complete, the SSOL is responsible to reporting to Site Mgmt and SSLL which resources can be released or redeployed. No Logistics or storm field roles are released until SSLL, SSOL and Site Management authorizes.

Job Description

Site Operation Lead (SSOL) Accountabilities:

- Site Operations
  - Oversee all Site operations to ensure Site logistical and operational efficiency
  - Ensure all internal crew support and alignment to the restoration work plan, daily site operational plan and schedule adherence plan
  - Ensure on-system contract crew support & Off-system crew support and alignment to the restoration work plan, Site Daily operational plan, and schedule adherence plan
- Safety
  - On-boarding safety orientation
  - Ensure safe operations at Site
  - Ensure daily safety briefings are communicated to resources assigned to Storm Site
- Work Flow Management
  - Schedule Adherence - Start/Stop times (verify)
  - Communication lead for off-system crew direction - Daily briefings
  - Support work flow process from the Area Storm Centers / Ops Centers to the Storm Sites restoration resources
  - Liaison with Area Storm Centers / Ops Centers and System Storm Center

Key Interface Points

- T-FL Operations - Area Logistics Lead
- T-FL Operations - Area System Assessment & Work Planners
- Logistics - Site Logistics & Operations Lead
- Logistics - SSLL (Site Logistics Lead)
- 1DF-DEF-Logistics - System Resource Support Lead
- 1DF-DEF – Logistics – SSLL (Joint Use Site-Logistics Lead)
- Logistics - Lodging Management
  - Crew Lodging Support
- Logistics Resource Management
  - Resource Mobilization – crews
  - Crew Tracker

- Liaison to Transportation/Fleet fuel
- Liaison to Materials
- Heavy Hauling
- Liaison to Sourcing/Vendor Relations

Checklist of Actions

This timeline is designed for an event impacting our area. A near miss could require timing adjustments on some activities and cancellation of others.

- The following link provides the Site Team Checklist of Actions for annual readiness as well as preparedness for an event impact

See Checklist: Logistics-SSM-SSOL tab – SSOL Tab/List TBD

4.5.1 Crew Tracker

The Crew Tracking Team / Crew Tracker Role is critical to the running of and smooth operations of the site. This role is assigned and managed through Resource Management. The Crew Tracker works directly with the SSOL; and provides daily crew reports to Site Admin & Reporting. For more information in this role and responsibilities see Resource Management.

5.0 Lodging Management Branch – Organization, Roles & Responsibility

The Lodging Management Branch organization is structured and staffed to support Transmission Florida for lodging/temporary housing during an emergency incident/major storm event. This organization utilizes the corporate third-party vendor for acquisition of hotels rooms, collaborates with 1DF-DEF Lodging Team, and supports the need as it arises to fulfill alternative housing plan. It is comprised of an internal system level Lodging Team which report to the Logistics Center / Lodging and utilize the third-party vendor lodging tool, update internal tracking tools, dispense lodging assignments, and trouble shoot as required to fulfill bed needs. The team also has field members that report to sites (base camps, hotel locations, camp grounds, fixed buildings serving as alternative housing), to assure all bed assignments are completed. And Operations - Area Storm Centers support this process by assigning the Area Logistics – Crew Lodging Support staff to Lodging Team delivery of lodging assignments to Site –Crew Lodging Support; The Area Logistics-Crew Lodging Support role is to coordinate all the sites in the Area of their lodging needs; this role is the interface between System Lodging & Field Lodging.

Lodging Team - Storm Organization

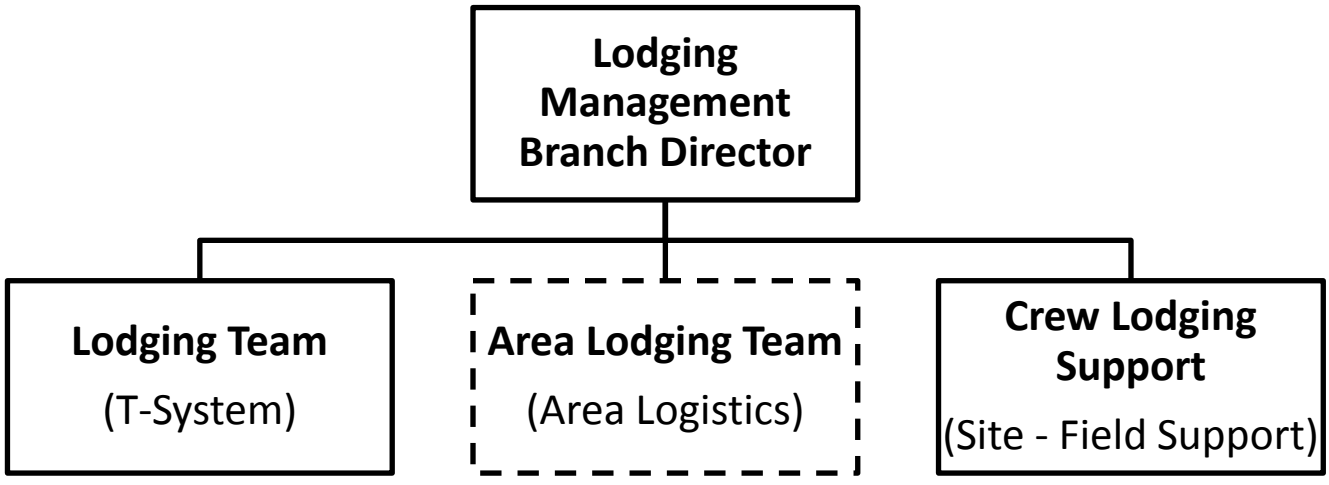


Diagram - Transmission Storm Org Chart – Lodging Management Branch tab

5.1 Lodging Management Branch Director

See Transmission Storm Org Chart – Logistics-Lodging tab

Lodging Management Branch Director – Role & Responsibility

Job Function

The T-FL Lodging Management Branch Director manages and oversees all activity for the Area Operations / Area Logistics Lodging Support, Site – Crew Lodging Support through/with the 3rd Party Lodging Acquisition Vendor (Helms Briscoe). The primary responsibility of the Lodging Mgmt. Branch Director is to meet bed needs and inform/report to the T-FL Logistics Chief, Resource Mgmt Branch Director, Area Logistics Lodging Support, Site-Crew-Lodging Support and 1DF-DEF Logistics –Lodging Lead of capacity identified by vendor, lodging needs identified by Resource Management, availability/ability to meet the needs, and bedding issues during an event. In addition the Lodging Management Branch Director is to monitor the incident situation toward anticipating / identifying before we are at capacity of lodging inventory so decisions can be made around alternative housing solutions.

Job Description

- Direct all activity for the T-FL Lodging Team, Crew Lodging Support, Area Logistics Lodging Support and 3rd Party Acquisition Vendor
- Direct and monitor hotel procurement and cancellation numbers daily; provide reporting on procurement, open inventory, beds assigned, and cancellations.
- Work closely with Resource Mobilization to establish daily bed needs for crews; provide status reporting
- Maintain daily buffer of needed beds; translate for team from bed count to room count (single vs. double, gender requirement, supervisor/foreman/lead requirement)
- Participate in Logistics and Lodging storm briefings
- Coordinate room/bed needs between T-FL and 1DF-DEF as requested by IC / Storm Directors / Logistics Chiefs
- Collaborate and maintain communication with T-FL Logistics Chief, Site Management and Resource Management to ensure daily needs are met
- Represent Transmission and collaborate with Distribution regarding T-FL Area hotel concerns at a system level
- Provide Area account management by geographic / Area by assigning Lodging Team members to focus / service each T-FL TMA.

Key Interface Points

- Logistics Chief
- 1DF-DEF Lodging Lead
- Logistics-Resource Mobilization
- Logistics-Site Management / Resource Support Branch Director
- Logistics-Site Logistics & Operations Lead
- Logistics-Lodging Crew Lodging Support
- Operations-Area Logistics Lead
- Operations-Area Logistics – Crew Lodging Support
- Logistics-Admin/Corp Services Lead
- 3rd Party Acquisition Vendor (Helms Briscoe)

Checklist of Actions

This timeline is designed for an event impacting our area. A near miss could require timing adjustments on some activities and cancellation of others.

- The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact

See Checklist: Lodging Team tab

5.2 Lodging Team (System)

See Transmission Storm Org Chart – Logistics-Lodging tab

Lodging Team Member (System) – Role & Responsibility

Job Function

The Lodging Team member will work with Lodging Management Branch Director and field personnel to accurately acquire and assign lodging/hotel/alternative housing needs for restoration personnel. Team members will receive direction and data from the Lodging Mgmt. Branch Director which may include bed count, location, and other housing requests needed to accommodate crews, contractors, Logistics teams, and support personnel. Team members will utilize 3rd Party Acquisition Hotel Tool to assign beds to crews, etc. within lodging tracking spreadsheet (Hotel Key Mgmt Template). Lodging Team member will be assigned to at least one Transmission Maintenance Area (TMA) to gain knowledge and awareness of lodging available (hotels, campgrounds, fixed buildings for alt. housing) and to provide focused service to the Area Storm Center.

Job Description

- Liaison role between: Lodging Lead, 3rd Party Acquisition Vendor, and Site Crew Lodging Support
- Represents Transmission Area needs and collaborates with Distribution Zones regarding Area hotel concerns at a System level; focuses on specific geographic assignment from Lodging Lead
- Communicates with sites within geographical area for issues and resolution
- Communicate and oversee the booking of rooms/beds with 3rd Party Acquisition Vendor
- Track, confirm, and submit bed counts thru the 3rd Party Acquisition Hotel Tool
- Identify requests by Site/Area Storm Centers/System Storm Centers
- May coordinate the transfer of rooms/beds to 1DF-DEF lodging or process cancellation of beds within the 3rd party acquisition tool/process
- Manage any issues that develop with acquired rooms/beds
- Provide daily report out to Lodging Lead including # beds reserved and used by Area and Site
- Fill out lodging tracking spreadsheet with room assignments, location of lodging, name of supervisor / foreman of crew

Key Interface Points

- Lodging Management Branch Director
- 3rd Party Acquisition Vendor
- Operations-Area Logistics Lead
- Operations-Area Logistics – Crew Lodging Support
- Logistics- Site Logistics Lead (SSLL)
- Logistics - Crew Lodging Support

Tools & Information Needed

- HB / Vendor Hotel Tool
- Laptop/Desktop
- Printer

Training Requirements

- Complete Annual Lodging Training provided by Lodging leadership (T&D)
- Participate in any table tops, drills, workshops provided by storm organization

Checklist of Actions

This timeline is designed for an event impacting our area. A near miss could require timing adjustments on some activities and cancellation of others.

- The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact

See Checklist: Lodging Team tab

5.2.1 Area Logistics – Crew Lodging Support

The Area Logistics - Crew Lodging Support Role is critical to the running of and logistical support to the crews and at the site. This role is assigned and managed through Area Logistics Center & Lodging Team (System). The Area Crew Lodging Support role works directly with the assigned Lodging Team Member, the Area Logisitics Coordinator, the SSLL AND the Site Crew Lodging Support roles; and provides daily crew Lodging reports to Area Logistics and Lodging. Site-Crew Lodging Support assures same reports are provided to Site Admin & Reporting. For more information in this role and responsibilities see Operations - Area Logistics Center roles.

5.3 Crew Lodging Support

See Transmission Storm Org Chart – Logistics- Lodging Team tab

Crew Lodging Support (Site) – Role & Responsibility
Job Function

This position shows up / reports to the Storm Site Logistics Lead (SSLL) and to the assigned Site (Base Camp, Mustering, On-boarding, Operations Center, Area Storm Site, etc.) This role is to interface with the Crew Tracker. This position is responsible for validating arrival date and times for all crew resources. This position ensures that all on-system contractors, internal crew resources AND off system resources receive assignment and delivery to lodging / housing for crews. This position will also verify and update the lodging tracking spreadsheet and verify with Crew Tracker all on-boarded crew. This position ensures that crew and supervisors have lodging / housing verified, keys delivered, and communicating and assuring the crews meet their bed-down schedules/check out timeline. Lodging Support should be part of the Crew briefing for schedule adherence instructions. Lodging Support should be equipped with / made accessible 15 passenger vans or multi-passenger vehicle so resource may support movement of crews to and from lodging /storm site. If the Site is a T-Only site, Lodging Support will serve as additional T-FL Site support staffing to set up and maintain the Storm Site. If Transmission-FL Event Restoration work is complete, the SSLL is responsible to reporting to Site Mgmt and SSOL which resources can be released or redeployed. No Logistics or storm field roles are released until SSLL, SSOL and Site Management authorizes.

Job Description

This position will report to the Storm Site Logistics Lead and assist the efforts by:

- Assuring Site Lodging Tracking tool is up- to-date and lodging is assigned;
- Checking in and providing keys to Crew Forman/Crew members.
    - Role may be responsible for gathering keys from lodging site/hotel
- Verify with Crew Trackers, crew rosters and mobilization changes (movement for one site to next).
- Tracking and accurately verifying assigned resources and equipment at the Storm Site
- Alternative Housing Coordinator / Support if Hotel/lodging not utilized and storm site is an Alt. Housing Site
- Interface with SSOL, SSLL and Crew Trackers

Training Requirements Before Major Storm/Event

- Participate in Field Role Training
- Complete understanding of TSSOP-Logistics Site Mgmt Operational Plan, Daily Site Operations Plan, roles and responsibilities
- Review requirements for crew makeup and equipment standards (especially if Equipment will be parked – even momentarily at Lodging Site).
- Successful participation in Annual Storm Drill and any related table tops / exercises, training/CBTs

Key Interface Points

- Logistics – SSOL (Site Operational Lead)
- Logistics –SSLL (Site Logistics Lead)
- Logistics – Site Mgmt Admin Support
- Logistics – Lodging Lead
- Logistics – Lodging Team Members
- Operations - Area Logistics Lead
- Operations – Area Logistics – Area Crew Tracker/RoD support (Area Storm Ctr)
- Logistics - Crew Tracker – on site
- Operations - Area Logistics – Crew Lodging Support (Area Storm Ctr)

Checklist of Actions

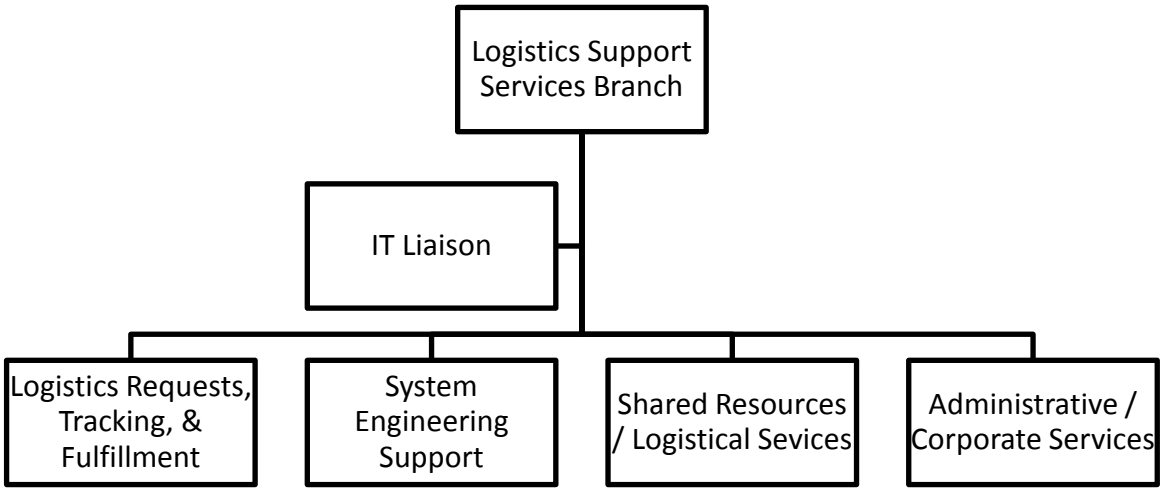
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact

See Checklist: Logistics-Lodging Team tab

6.0 Logistics Support Services Branch – Organization, Role & Responsibility

The Logistics Support Services Branch is the engine of the logistics machine; it provides structure and process for the internal administrative functions, the system engineering support for Area/Regional engineering and work process, the logistics request / ordering process and all corporate services shared between Transmission and Distribution during an event. This Branch provides the support and resources to assure smooth running, tracking, fulfillment, and closing of logistics aspects of an event.

The following org chart provides an over view of the Logistics Support Branch:



(Diagram: Transmission Storm Organization Chart - Logistics Support Services Branch – tab)

6.1 Logistics Services Support Branch Director

Logistics Services Support Branch Director – Role & Responsibility
Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: Logistics Support Services Team tab – Under Development

6.1.1 Logistics Services – IT Liaison – Role & Responsibility

Job Function – Under Development

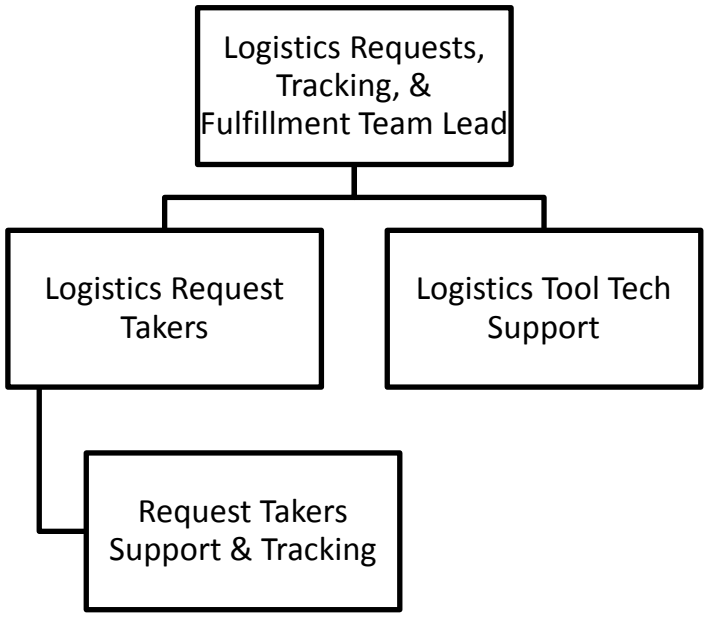
Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: Logistics Support Services Team tab – Under Development

6.2 Logistics Requests, Tracking & Fulfillment – Organization, Roles & Responsibility

The Logistics Request Team is structured as a call center and 'fulfillment center'. Lead assures all Request Takers have telephone and internet access to the Logistics Request Application/Tool. Operations-Area Logistics Requestors, Storm Center-Admin Support, Planning Section-Logistics & Resource Assessment Planning role, ALL Logistics Staff, and Site Logistics Leads (SSLL) submit 'tickets' / requests into the Logistics Request Ap or by phone call; the Request Takers receive the request, triage the request, accept / assign the request, then track it through to fulfillment. A request process system and structure is a key method to support and assure logistical support is provided completely.



(Diagram: Transmission Storm Org Chart – Log. Req., Tracking, Fulfillment Team tab)

Logistics Requests, Tracking, & Fulfillment Team - Storm Organization

Job Function

Logistics Chief directs the activation of the Logistics Request section of Logistics. This begins the request process for restoration and storm response. The Logistics Request, Tracking & Fulfillment (LRTF) Team are to receive, triage, assign, and assure complete processing of all logistical requests from Operations-Area Storm Centers, Planning, Communications, within Logistics, and from System Storm Center. The Lead of the LRTF Team is to activate and assure team is trained, prepared, and effective in processing storm requests and developing work packages for storm restoration. Maintenance of the Logistics Request Process, the Logistics Request Application/Tool, training on the process and tool, are the responsibility of the LRFT Team Lead. The Logistics Chief AND the Logistics Support Services Branch Director will support the resource requirements to maintain this critical organization and it's tools.

Job Description

The team is responsible for the functioning and processing of logistical requests through:

- Transmission Logistics Request tool set up and use including training at least annually.
- Annual readiness to process logistical needs by reviewing the tool and making updates necessary to stay current with storm organization and logistical support.
    - Area Storm Centers – Area Logistics Coordinators & Teams
    - System Storm Center – Logistics Storm Center, Log. Request Takers

  - Storm Site Management – Site Admin Support
  - All logistical support branches like: Resource Management, Engineering, Admin / Corp Services, Lodging, and 1DF-DEF Logistics (if 1DF-DEF decides to become a tool user).
- Utilization of the Logistics Request process, tracking of all requests and assuring fulfillment and completion of each request.
- Provide a means to close out the event based on completed logistics requests.

Key Interface Points

- Logistics Chief
- Logistics – Logistics Support Services Branch Director
- Operations - Area Logistics Coordinator
- Logistics - Engineering Lead / Support
- Logistics - Logistics Request Taker
- Logistics - Materials Management
- Logistics - Heavy Hauling
- Logistics - Major Equipment Support
- Logistics - Site Management - SSLL/SSOL
- Logistics – Admin/Corp Services (Storm Center-Admin Support)
- Planning - Logistics & Resource Assessment Planning (if not Logistics Chief)
- 1DF-DEF – Logistics Requestors

Checklist of Actions

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others.

The following link provides the Logistics Request Tool Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Log. Req, Tracking, Fulfillment Team tab

6.2.1 Logistics Request Taker

Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions

The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact

See Checklist: Logistics Support Services Team tab – Under Development

6.2.2 Logistics Request Taker Support

Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: Logistics Support Services Team tab – Under Development

6.2.3 Logistics Req. Tool Tech Support

Job Function – Under Development

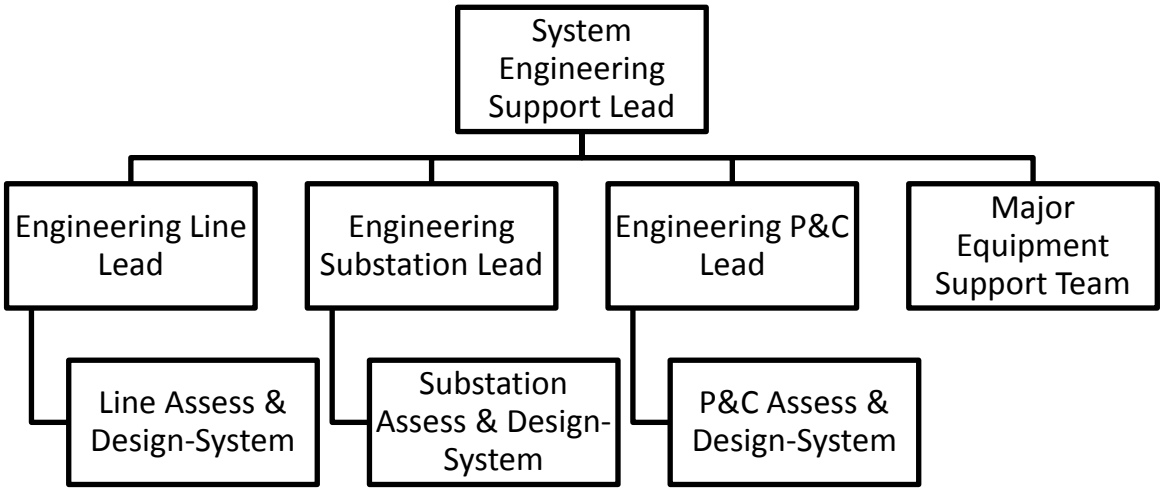
Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: Logistics Support Services Team tab – Under Development

6.3 System Engineering Support – Organization Roles & Responsibilities

System Engineering Support structure and responsibilities is to support the Area-System Assessment Engineering & Work Planning Team. Regional Engineers and Area Work Planners are to manage all work in the area during an event as through the existing Emergency / Emergent Work Process. As the Area/Regional teams become over capacity (too many) or capability (system design solution required) , the Area will request System Engineering Support by directly contacting System Engineering. System Engineering will provide Logistics notice so that Materials, Site information, Crew assignment can be validated. System Engineering will communicate to Logistics Request, Tracking and Fulfillment Lead so all work is supported appropriately.



(Diagram: Transmission Storm Org Chart – System Eng. Support Team tab)

System Engineering Support Team Lead (individual role descriptions are under development)

Job Function

This team is responsible for supporting Regional Engineering which is the Area Assessment /Work Planning for Operations. The Area Storm Centers will utilize the Emergency/Emergent Work Processes during an Event. System Engineering provides the back up and review to the Area's work packages as requested.

Job Description

System Engineering is to assign and process design support, work package development, processing of Materials requests related to the work packages, (typically through Engineering first, then Engineering is to process work request and process through to Materials). Whereas the request may come directly from the Area to Engineering, Engineering is to notify Logistics Request Takers, and Logistics Requests Support role will provide delivery of requests, physical hand off of drawings and materials orders as needed.

- Engineering and Design roles report to the functional Engineering Support Lead.
- Engineering resources are to validate any safety, equipment, engineering changes or adjustments to damaged assets. Ideally, Engineering receives work from LRTF Lead and provides engineering package to the Requestor / Area Logistics Coordinator/Regional area.
- Engineering provides estimated completion of storm request to the LRTF Lead
- Engineering provides materials request to Material coordinators.
- Engineering communicates work / storm request complete to the Request Taker, who enters "complete date"
- Major Equipment Support supports engineering / materials requests by coordinating with Engineering resources.

Key Interface Points

- Operations - Area Storm Center – Regional Engineering Support
- Logistics - System Engineering Lead
- Logistics - Functional Engineering Lead
- Logistics – Logistics Request, Tracking, & Fulfillment Lead
    - Logistics Request Taker
- Operations - Area Logistics Coordinator
- Logistics - Materials Management/Liaison
- Logistics - Heavy Hauling
- Logistics - Major Equipment Support
- Logistics - Site Management/SSLL/SSOL

Checklist of Actions

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others.

The following link provides the Logistics Request Tool Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: System Eng.Support Team tab

6.3.1 Engineering Line Lead

Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: System Engineering Team tab – Under Development

6.3.2 Engineering Substation Lead

Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: System Engineering Team tab – Under Development

6.3.3 Engineering P&C Lead

Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: System Engineering Team tab – Under Development

6.3.4 Major Equipment Support Team Lead

Job Function – Under Development

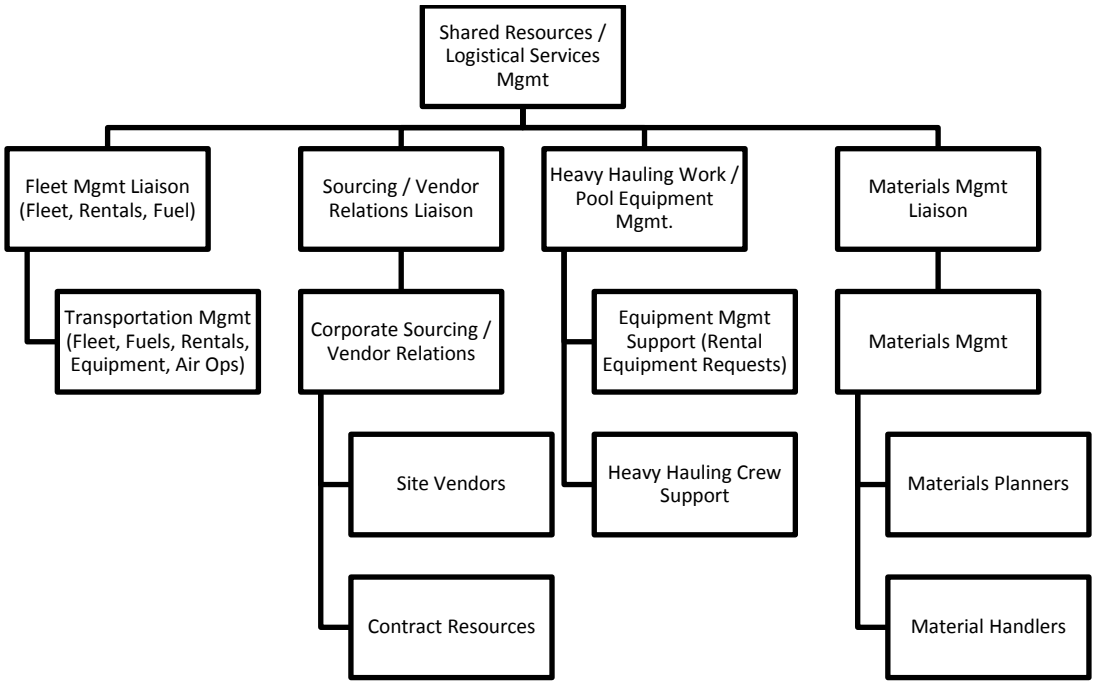
Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: System Engineering Team tab – Under Development

6.4 Shared Resources & Logistics Services - Organization, Role & Responsibility

The Logistics Organizations within Florida are supported significantly through use of shares resources that provide logistical services to Transmission, Distribution, Generation, Corporate Services – all resources needing support. Transmission's Shared Resources / Logistical Services Team is structured and staffed to create and maintain clear lines of communications and provide additional support when activated for a major event. The SR/LS Team is primarily responsible for assuring logistical requests to the Shared Resource organizations are vetted, clear, follow the correct process, tracked, and fulfilled with the support of the Logistics Request, Tracking, & Fulfillment Team. The SR/LS Team are liaisons with the charge to be the Logistics Center SME for the Shared Resource organization.



(Diagram: Transmission Storm Org Chart – Logistics-Shared Resource/Logistics Serv Mgmt tab)

Shared Resources & Logistics Services Lead – Role & Responsibilities
Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: Shared Resources-Logistical ServTeam tab – Under Development

6.4.1 Liaison to Transportation-Fleet / Rentals & Fuel Lead

See Transmission Storm Org Chart – Logistics-Shared Resource/Logistics Serv Mgmt tab

Liaison to Transportation Support Services - Role & Responsibilities (Formerly known as Fleet/Fuel/Rentals)

Job Function

Logistics-Resource Mgmt Branch manages acquisition and mobilization of resources for the event; personnel, .materials. transportation, heavy-hauling / specialized equipment rentals needs are some of the resources required during an event. The Liaison to Transportation Support Mgmt (Fleet/Fuel/Rentals) function is to know the processes and communications requirement for acquiring and managing the logistics of the particular resource to the requestor (work site, storm site, storm center, etc.). The liaison is to await direction from Logistics: RM Branch Lead to contact or place request during event/activation activities. Annual readiness activities include familiarization with any tools, emergency mgmt. sites, processes, task lists of the particular resource team assigned.

Job Description .

The Liaison to Transportation (Fleet/Fuel/Rentals) Mgmt. role will coordinate/respond to all requests from Transmission -FL Area Logistics/System Storm Center through System Logistics Center to Transportation Mgmt. (See Fleet Storm Contacts)

The liaison role will:

- Activate according to T-FL activation / direction from System Storm Center and Logistics Center.
- Assure able to utilize the Transportation Request Tool and be able to access and utilize the Logistics Request Tool. (Logistics Requests App)
- Assure Training is current and familiar with the plan tool, process of Transportation – Fleet organization: Fleet Storm Plan
- Process and support requests from T-FL Logistics Centers; will respond and validate requests, providing communication loop back through Logistics for documentation and training purposes.
- Assist with Company/Contractor expense documentation and the implementation of all special accounting practices.
- Keep a complete log of all Transportation-Fleet/Fuel/Rental requests and actions provided; utilize the Logistics Request Tool when appropriate. Logistics Requests App
- Be familiar and follow the Transportation – Fleet/Fuel/Rental processes:
  - Storm Rental Pre-Order process for light duty
  - Storm Rental Tracking Process Overview for light duty
  - T-FL Fueling Sub Process
  - Heavy Hauling Work/Pool Equip/Rental Equip Process
- Participate in Event / Storm Briefings as invited and expected/directed
- Provide reports according to Event Schedule Adherence; according to event schedule and goals. Reports should provide summary of inventory/availability, requests , requests outstanding , requests delivered, other pertinent data (delivery time table, etc.)

Key Interface Points

- Logistics: Resource Mgmt Branch Lead
- Transportation-Fleet/Fuel/Rental Lead/Director
- Logistics: Heavy Hauling / Equipment Mgmt Liaison
- Logistics: SR/LS-Materials Management Liaison
- Logistics: SR/LS-Corp. Sourcing / Vendor Relations Liaison

- Logistics: Eng./Major Equipment Support
- Logistics: Staging Site Management/SSLL
- Crew Management – Supervisor
- Crew Management –Inspector/SSOL
- Area Logistics Ctr.: Logistics Request Taker

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Area Logistics Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Logistics-Transport-Fleet-Fuel tab

6.4.2 Liaison to Sourcing / Vendor Relations Lead

See Transmission Storm Org Chart **–** Logistics-Shared Resource/Logistics Serv Mgmt tab

Liaison to Sourcing/Vendor Relations Support- Role & Responsibilities

Job Function

Logistics-Resource Mgmt Branch manages acquisition and mobilization of resources for the event; personnel, .materials. transportation, heavy-hauling / specialized equipment rentals needs are some of the resources required during an event. The RM-Liaison to Sourcing / Vendor Relations Mgmt function is to know the processes and communications requirement for acquiring and managing the logistics of the particular resource to the requestor (work site, storm site, storm center, etc.). The liaison is to await direction from Logistics: RM Branch Lead to contact or place request during event/activation activities. Annual readiness activities include familiarization with any tools, emergency mgmt. sites, processes, task lists of the particular resource team assigned.

Job Description .

The RM-Liaison to Sourcing/Vendor Relations Support role will coordinate/respond to all requests from Transmission -FL Area Logistics/System Storm Center through System Logistics Center to Sourcing/Vendor Relations Management. Sourcing Management

The liaison role will:

- Activate according to T-FL activation / direction from System Storm Center and Logistics Center.
- Assure able to utilize the sourcing/Vendor Relations Request Tool/Processes and be able to access and utilize the Logistics Request Tool. See: Logistics Requests App
- Assure Training is current and familiar with tool, process of Sourcing/Vendor Relations organization
- Process and support requests from T-FL Logistics Centers; will respond and validate requests, providing communication loop back through Logistics for documentation and training purposes.
- Assist with Company/Contractor expense documentation and the implementation of all special accounting practices.
- Keep a complete log of all Sourcing/Vendor Relations requests and actions provided; utilize the Logistics Request Tool when appropriate - Logistics Requests App

- Be familiar and follow the Sourcing/Vendor Relations processes; Sourcing Management
- Participate in Event / Storm Briefings as invited and expected/directed
- Provide reports according to Event Schedule Adherence; according to event schedule and goals. Reports should provide summary of inventory/availability, requests , requests outstanding , requests delivered, other pertinent data (delivery time table, etc.)

Key Interface Points

- Logistics: Resource Mgmt Branch Lead
- Sourcing/Vendor Relations Management Lead/Director
- Logistics: Heavy Hauling / Equipment Mgmt Liaison
- Logistics: SR/LS-Materials Management Liaison
- Logistics: SR/LS-Transportation-Fleet/Fuel/Rentals Mgmt Liaison
- Logistics: Eng./Major Equipment Support
- Logistics: Staging Site Management/SSLL
- Crew Management – Supervisor
- Crew Management –Inspector/SSOL
- Area Logistics Ctr.: Logistics Request Taker

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Area Logistics Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Logistics-SR-LS-Sourcing tab

6.4.3 Heavy Hauling / Equipment Lead

See Transmission Storm Org Chart **–** Logistics-Shared Resource/Logistics Serv Mgmt tab

Heavy Hauling & Pool / Specialized Equipment Mgmt Support- Role & Responsibilities

Job Function

Logistics-Resource Mgmt Branch manages acquisition and mobilization of resources for the event; personnel, .materials. transportation, heavy-hauling / specialized equipment rentals needs are some of the resources required during an event. The RM-Liaison to Heavy Hauling/Poole Equip & Specialized Equipment Rentals Management function is to know the processes and communications requirement for acquiring and managing the logistics of the particular resource to the requestor (work site, storm site, storm center, etc.). The liaison is to await direction from Logistics: RM Branch Lead to contact or place request during event/activation activities. Annual readiness activities include familiarization with any tools, emergency mgmt. sites, processes, task lists of the particular resource team assigned.

Job Description .

Heavy Hauling / Equipment Mgmt Support role will coordinate/respond to all requests from Transmission -FL Area Logistics/System Storm Center through System Logistics Center to Heavy Hauling / Equipment Management. The HH/Equip Mgmt role will:

- Activate according to T-FL activation / direction from System Storm Center and Logistics Center.
- Assure able to utilize the Heavy Hauling Request Tool (Link to HH-Pool Equip Request Tool) and be able to access and utilize the Logistics Request Tool (Logistics Requests App)
- Assure Training is current and familiar with tool, processes of Heavy Hauling/Pool Equipment/Specialized Equipment Management organization. Heavy Hauling Work & Pool Equipment Mgmt Folder
- Process and support requests from T-FL Logistics Centers; will respond and validate requests, providing communication loop back through Logistics for documentation and training purposes.
- Assist with Company/Contractor expense documentation and the implementation of all special accounting practices.
- Keep a complete log of all Heavy Hauling / Equipment requests and actions provided; utilize the Logistics Request Tool when appropriate: Logistics Requests App
- Be familiar with and follow the Heavy Hauling Work / Equipment request processes; Heavy Hauling Work & Pool Equipment Mgmt Folder
- Participate in Event / Storm Briefings as invited and expected/directed
- Provide reports according to Event Schedule Adherence; according to event schedule and goals. Reports should provide summary of inventory/availability, requests , requests outstanding , requests delivered, other pertinent data (delivery time table, etc.)

Key Interface Points

- Logistics: Resource Mgmt Branch Lead
- Heavy Hauling Work & Pool Equipment / Specialized Equip Lead/Director
- Logistics: RM-Materials Management Liaison
- Logistics: RM-Transportation/Fleet/Fuel Management Liaison
- Logistics: RM-Corp. Sourcing / Vendor Relations Liaison
- Logistics: Eng./Major Equipment Support
- Logistics: Staging Site Management/SSLL
- Crew Management – Supervisor
- Crew Management –Inspector/SSOL
- Area Logistics Ctr.: Logistics Request Taker

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Area Logistics Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Logistics-Heavy Hauling tab

6.4.4 Liaison to Materials Lead

See Transmission Storm Org Chart **–** Logistics-Shared Resource/Logistics Serv Mgmt tab

Liaison to Materials Management Support– Role & Responsibilities

Job Function

Logistics-Resource Mgmt Branch manages acquisition and mobilization of resources for the event; personnel, .materials. transportation, heavy-hauling / specialized equipment rentals needs are some of the resources required during an event. The RM-Liaison to Materials Support function is to know the processes and communications requirement for acquiring and managing the logistics of the particular resource to the requestor (work site, storm site, storm center, etc.). The liaison is to await direction from Logistics: RM Branch Lead to contact or place request during event/activation activities. Annual readiness activities include familiarization with any tools, emergency mgmt. sites, processes, task lists of the particular resource team assigned.

Job Description .

The Liaison to Materials Management Support role will coordinate/respond to all requests from Transmission -FL Area Logistics/System Storm Center through System Logistics Center to Materials Management. The liaison role will:

- Activate according to T-FL activation / direction from System Storm Center and Logistics Center.
- Assure able to utilize the Materials request process / tools (Materials Mgmt Storm Site Link) and be able to access and utilize the Logistics Request Tool. Link: Logistics Requests App
- Assure Training is current and familiar with tool, process of Materials storm organization
- Process and support requests from T-FL Logistics Centers; will respond and validate requests, providing communication loop back through Logistics for documentation and training purposes.
- Assist with Company/Contractor expense documentation and the implementation of all special accounting practices.
- Keep a complete log of all Materials requests and actions provided; utilize the Logistics Request Tool when appropriate. Link: Logistics Requests App
- Be familiar and follow the Materials processes; Materials Management Storm Site Link
- Be familiar with Materials Laydown yards, / storeroom locations and Area Storm Center Locations in order to aid in facilitation of material pickup/ delivery locations: Materials Laydown Yards by Area Storm Center
- Participate in Event / Storm Briefings as invited and expected/directed
- Provide reports according to Event Schedule Adherence; according to event schedule and goals. Reports should provide summary of inventory/availability, requests , requests outstanding , requests delivered, other pertinent data (delivery time table, etc.)

Key Interface Points

- Logistics: Resource Mgmt Branch Lead
- Materials Management Branch Lead/Director
- Logistics: Heavy Hauling / Equipment Mgmt Liaison
- Logistics: RM-Corp. Sourcing / Vendor Relations Liaison
- Logistics: Eng./Major Equipment Support

- Logistics: Staging Site Management/SSLL
- Crew Management – Supervisor
- Crew Management –Inspector/SSOL
- Area Logistics Ctr.: Logistics Request Taker

Checklist of Actions

This timeline is designed for a major hurricane entering the T-FL System area. A near miss could require timing adjustments on some activities and cancellation of others. The following link provides the Area Logistics Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Logistics- Materials tab

6.4.4.1 Materials Planners – Role & Responsibilities

Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions

The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact

See Checklist: Shared Resources-Logistical ServTeam tab – Under Development

6.4.4.2 Materials Handlers - Site – Role & Responsibilities

Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

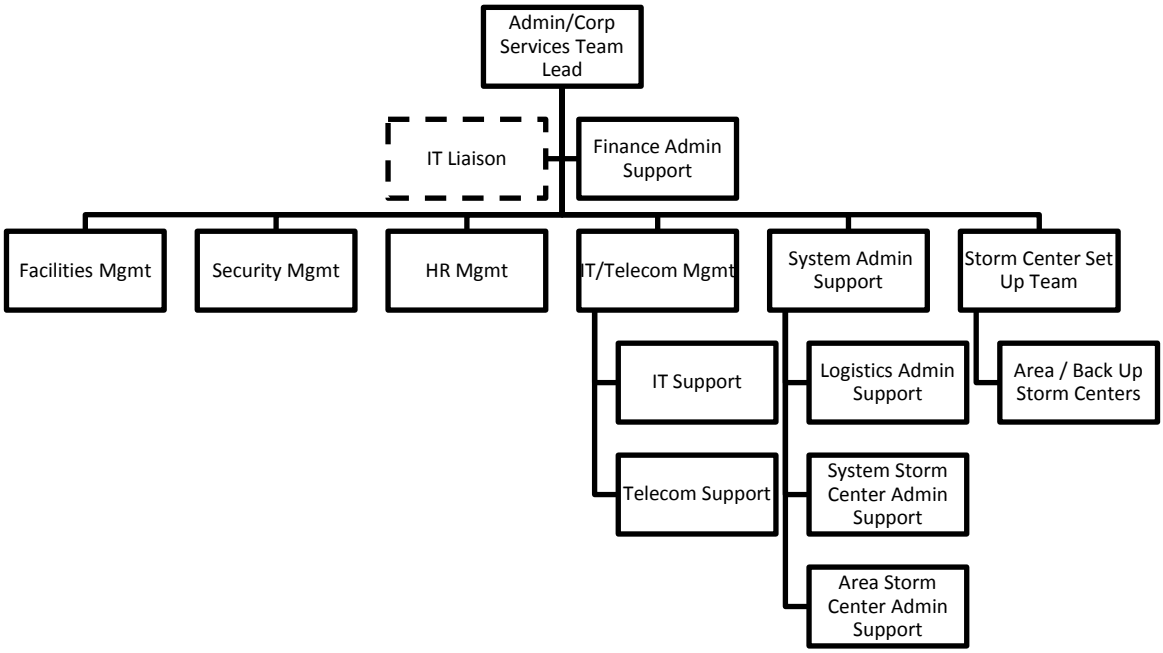
Checklist of Actions

The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact

See Checklist: Shared Resources-Logistical ServTeam tab – Under Development

6.5 Administrative / Corporate Services – Organization, Role & Responsibility

The Admin/Corp Services Team manages all the administrative and corporate support needs for Transmission Florida when a major event impacts the system. This team assures that the facilities where the resources will be directing the execution and deployment of Transmission System Storm Operational Plan – including Operations, Planning, Logistics, Finance, & Communications centers are set up, connected, secure, staffed, and cared for (tools, supplies, food/meals, team lists/email/distribution lists, etc.) are current, accurate, and ready for use.



(Diagram: Transmission Storm Org Chart – Logistics-Admin-Corp-Serv Mgmt tab)

Administrative Corporate Services Lead – Role & Responsibilities

See Transmission Storm Org Chart – Logistics-Admin/Corp Srvc. tab

Job Function

The Admin/Corp Services role is the liaison between the System Storm Center, Transmission Storm Center, Logistics Center, and IT, HR, Facilities, and Corporate Security to facilitate storm support report outs and issue resolution. This is a lead role for all the administrative workings for the T-FL System Storm Center through Logistics Center function and responsibilities. The Admin/Corp Srvc. Lead is largely an Annual Readiness role in that the systems, processes, documentation, tools, utilized during an event are put in place and updated year round via this Logistics storm organization branch. The Lead is to direct and manage each team within the Admin/Corp Services Branch; assuring the IT support for creating and maintaining the systems is staffed and prioritized. During an event, the Admin/Corp Services Lead is to staff and activate those Teams necessary to set up and assure communications, notifications, storm calls / briefings, etc.

Job Description

- Facilitate Admin/Corp. Srvs. team storm conference calls for restoration support updates from IT, HR, Facilities, and Corporate Security
- Compile information from Administrative roles, IT, HR, Facilities, and Corporate Security to create Admin/Corp Services Update for daily Logistics or T-System calls

- Represent IT, HR, Facilities, and Corporate Security on daily T-System calls
- Ensure storm season readiness with Admin / Corp. Services organization and alignment with Logistics / Transmission System Storm plan
- Participate in all Logistics storm conference calls; publish meeting notes and follow up items
- Assure distribution of Storm Charging Guidance and Accounting Information to Logistics distribution lists
- Schedule Logistics Daily Calls (am/pm) according to the Major Storm Daily Call Schedule/Briefing Cadence
- Assist Logistics Coordinator, RM - RSVP Lead, Storm Site Mgmt. Lead, & Mobilization Lead as needed to support Logistics storm processes
- Receive Annual Logistics Readiness Plan start date from Logistics Coordinator and schedule Kick Off Meeting with Logistics Directors and Leads
- Schedule re-occurring bi-weekly Logistics Readiness Meetings following Annual Logistics Readiness Plan Kick Off Meeting
- Track Annual Logistics Readiness Plan task completion reported on bi-weekly Logistics Readiness Meetings
- Assure Setup Team activated and sets up the System Storm Center, Logistics System Storm Rooms, and any other rooms designated / activated for an event.
- Provide Admin. Financial Liaison with Logistics cost information as requested
- Assure Admin Support is managing all storm and corporate communications notifications process and protocols
- Collect Logistics Lessons Learned throughout storm restoration efforts, compile and submit to Logistics Coordinator
    - Schedule review meeting to identify improvement opportunities, best practices, and resulting action items for implementation with Logistics Coordinator and Logistics Directors and Leads
    - Track status updates as reported on bi-weekly calls
- Assure Admin Support Team establishes catering support for Storm Centers feeding greater than 50 people or whose local caterers are unable to respond
    - Admin Support - Provide standardized tracking catering form to Area Storm Centers / Op Center Contacts and consolidate feedback to update Catering List
        - Contact Information
        - Ranking of vendor/caterer preference and history of previous storm support
            - Are they equipped to provide service if power is unavailable?
            - Are they able to provide breakfast, lunch, and dinner?
            - Distance and/or travel time to Operation Centers
            - Food quality and cleanliness of equipment and staff
    - Collaborate with Sourcing to ensure contact has been established with new vendors, sample menus are acquired, negotiations are started and contracts are secured for Storm Centers.
    - Once catering services have been established for Area Storm Centers, the Area Storm Center Contact will take over coordination with the assigned caterer

Key Interface Points

- T-FL System Storm Ctr: Storm Director / Transmission Restoration Coordinator
- T-FL System Storm Ctr: Transmission Storm Liaison (SP)
- Planning Section Chief
- Logistics Section Chief

- Logistics Request & Engineering Support
- Logistics: Storm Site Management
- Logistics: Resource Management
- Admin/Corp Services Team Leads
    - Corp. Services point of contacts assigned from functional areas for IT, HR, Facilities, and Corporate Security
    - Logistics IT Liaison
    - Admin Support
    - Admin/Finance
- Operations: Area Logistics Coordinators
- Operations: Area Storm Center Chiefs
- Communications: Internal Communications & Logistics: Administration Support

Checklist of Actions

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others.

The following link provides the Admin / Corp. Services Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Logistics- Admin-Corp Srvs tab

Logistics Services – IT Liaison – Role & Responsibility (See 6.1.1 Role)

This position reports directly to Logistics Shared Service Branch Director and it to be key member to the Admin / Corp Services Team. (See Job Function / Description under 6.1.1. Role)

Checklist of Actions

The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact

See Checklist: Logistics Support Services Team tab – Under Development

6.5.1 Admin/Finance Support

See Transmission Storm Org Chart **–** Logistics-Admin/Corp Srvc. tab

Admin. Finance Support Team – Role & Responsibilities

Job Function

The Admin/Corp Services – Admin Finance Support role is a key role in assuring all storm roles are notified and provided accurate charging instructions, timing, & coding. Upon Declaration of an Event, the Admin Finance Support role is to create, gain approval, communicate, and distribute charging instructions and charge-to codes to the entire T-FL System Storm organization. These instructions should be distributed as per IC/Storm Directors instructions AND the established plan and protocols. See the following Guiding Principles for One Florida Storm Response AND One Florida Storm Response – Activation-Notification Process

Job Description

The Admin. Finance Support role is to assure the following is completed accurately and timely:

- Know, follow the TSSOP as it pertains to finance administration, accounting of event; be able to direct or redirect leadership and employees as to financial guidance and corporate guidelines for charging during an emergency event.
- Create current event charge codes; gain approval as per Finance / Treasury guidelines
- If the first event of the year, assure ease of access and clear communications to organization
    - If multiple events, assure previous event charge codes are closed or locked down so charges to the proper event are accurate
- Distribute to all T-FL storm organizations, all activated employees and contract workers, all 'stand-by' employees & contract workers (all remaining employees / not activated) the charging instructions / charge-to codes.
- Update all communications templates and instructions prior to events so that Finance Notices are ready for use prior to start of storm season (June 1)
- Review Finance / Charging process with storm organization during annual readiness or storm training workshops. Assure all responders are able to correctly charge time and expenses in an effort to eliminate duplicate / charging errors.
- Participate on System Storm Center Calls as invited/requested
- Collect and support collection of charges as requested (especially, where systems are new or individuals were not able to be trained due to event / unexpected timing).
- Answer questions and provide instruction to event responders as appropriate

Key Interface Points

- T-FL System Storm Ctr: Storm Director / Transmission Restoration Coordinator
- T-FL System Storm Ctr: Transmission Storm Liaison (SP)
- Planning Section Chief
- Logistics Section Chief
- Logistics Request & Engineering Support
- Logistics: Storm Site Management
- Logistics: Resource Management
- Logistics: Admin/Corp Services Branch Directors
    - Logistics: Admin/Corp Services Team Leads
        - Corp. Services point of contacts assigned from functional areas for IT, HR, Facilities, and Corporate Security
        - Logistics IT Liaison
        - Admin/Finance
- Operations: Area Logistics Coordinators/
- Operations: Area Coordinators / Area Storm Center Chiefs
- Communications: Internal Communications & Logistics: Administration Support

Checklist of Actions

This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others.

The following link provides the Admin / Corp. Services Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Admin-Corp Srvs tab

6.5.2 Facilities Management

Job Function – Under Development
Facilities Management Supports T&D in Events; all processes and job role & responsibilities are to be utilized as per Facilities' Major Event Mgmt Plan – Facilities Plan Link.

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: Facilities Plan Link

6.5.3 Security Management

Job Function – Under Development
Facilities Management Supports T&D in Events; all processes and job role & responsibilities are to be utilized as per Security's Major Event Mgmt Plan – Security Plan Link.

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: Security Plan Link

6.5.4 Human Resource Management

Job Function – Under Development
Facilities Management Supports T&D in Events; all processes and job role & responsibilities are to be utilized as per Human Resource's Major Event Mgmt Plan – HR Plan Link.

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: HR Plan Link

6.5.5. IT/Telecom Management

Job Function – Under Development
Facilities Management Supports T&D in Events; all processes and job role & responsibilities are to be utilized as per IT/Telecom Major Event Mgmt Plan – IT/Telecom Plan Link.

Job Description – Under Development

Key Interface Points – Under Development

Checklist of Actions
The following link provides the Lodging Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: IT/Telecom Plan Link

6.5.6. Administrative Support

See Transmission Storm Org Chart **–** Logistics-Admin/Corp Srvc. tab

Administrative Support Team /Admin Support – Role & Responsibility

Job Function

The Admin/Corp Services – Admin Support role is a key role in assuring all storm roles are documented and accounted for, able to be communicated with, on-boarded & activated as needed, contacted by team members / customers, etc. This role supports T-FL System Storm Center, T-FL Logistics Center and Area Storm Centers in designing, maintaining, and monitoring distribution lists, mailboxes, contact lists, phone lists, email lists, for notifications, communications, activation, of all T-FL storm organizations/teams. Administrative skill sets are critical to this role and the Admin knowledge of each of their organizations is critical in the annual readiness and ongoing maintenance of these systems. In addition, this role is responsible for drafting and sending all communications/notifications during an event as directed by the IC/Storm Director and/or Section Chiefs for Logistics, Planning, and Operations. This role also supports the internal communications of the event, and serves as a liaison to the Communications Section Chief (Public Information Officer), providing necessary support.

Job Description

T-FL System Storm Center Support:

- Schedule T-System Storm Center Calls, Operational/Area Calls, Logistics Calls, Planning Calls as requested/directed by Storm Directors and Section Chiefs
- Participate on above calls as scheduled, take notes, create minutes and distribute as per Event Call Guide
- Order, receive, and distribute Storm Personal Kit items (i.e. Duke vehicle magnets) to system storm center personnel
- Support administration of and documentation of System Storm Center and Logistics Lessons Learned throughout storm restoration efforts, compile and submit to Logistics Coordinator
  - Schedule review meeting to identify improvement opportunities, best practices, and resulting action items for implementation with Logistics Coordinator and Logistics Directors and Leads
  - Track status updates as reported on bi-weekly calls
- Establish catering support for all T-FL Storm Centers feeding greater than 50 people or whose local caterers are unable to respond. Be sure to coordinate with Distribution AND Site Mgmt-Meal Planning at any co-located sites (op centers or storm centers – St. Pete, Buena Vista, etc.)
  - Use / Provide standardized tracking catering form to System/Logistics & Area Storm Centers / Op Center Contacts and consolidate feedback to update Catering List
    - Contact Information
    - Ranking of vendor/caterer preference and history of previous storm support
      - Are they equipped to provide service if power is unavailable?

- Are they able to provide breakfast, lunch, and dinner?
- Distance and/or travel time to Operation Centers
- Food quality and cleanliness of equipment and staff

o Collaborate with Liaison to Sourcing to ensure contact has been established with new vendors, sample menus are acquired, negotiations are started and contracts are secured for Storm Centers.

o Once catering services have been established for System and/or Area Storm Centers, the Storm Center Admin Support / Contact will take over coordination with the assigned caterer

T-FL Logistics Center Support:

- Schedule Logistics Daily Calls (am/pm) according to the Major Storm Daily Call Schedule/Briefing Cadence
- Participate on all Logistics Center and Admin/Corp Srvc calls as scheduled, take notes, create minutes and distribute as per Event Call Guide
- Order, receive, and distribute Storm Personal Kit items (i.e. Rain Gear, Packing List, Duffle Bag, Duke vehicle magnets) to Logistics Center personnel and all Field Roles
- Assist Logistics Chief/Coordinator, RM - RSVP Lead, Storm Site Mgmt. Lead, & RM-Mobilization Lead as needed to support Logistics storm processes
- Manage as directed by Storm Chiefs/Section Chiefs, all storm and corporate communications notifications process and protocols

Key Interface Points

- T-FL System Storm Ctr: Storm Director / Transmission Restoration Coordinator
- T-FL System Storm Ctr: Transmission Storm Liaison (SP)
- Planning Section Chief
- Logistics Section Chief
- Logistics: Admin/Corp Services Team Lead
  - Logistics: Admin/Corp Services Teams members
  - Logistics IT Liaison
  - Admin/Finance
- Operations: Area Logistics Coordinators
- Operations: Area Coordinators / Area Storm Center Chiefs
- Communications: Internal Communications & Logistics: Administration Support

Checklist of Actions

The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Admin-Corp Srvs tab

6.5.7 Storm Set Up Team

See Transmission Storm Org Chart **–** Logistics-Admin/Corp Srvc. tab

Set Up Team– Role & Responsibilities

Job Function

The Admin/Corp Services – Set Up role is a key role in assuring all storm centers are set up, connected (internet, telecom, wifi, electricity, generator, printer system, etc.), stocked (office supplies, printing supplies, pens, paper, markers, etc.), supplied (maps, charts, projectors, laptops/hardware, software, telephones, etc.) for communication, notifications, decisions, data gathering, sharing within the storm organization to occur systematically and smoothly. The storm centers that the Set Up team are responsible for are: Northpoint, Lake Mary, FL (System Storm Center-4A1; Logistics Center-4C4, 4C5; IT Storm Lab-4th floor; Staff Gathering Center-NP140; extra storm room-3A1); St. Pete ECC Storm Room-as needed; Buena Vista Storm Room-as needed; Tarpon Springs Storm Room-as needed; Wildwood Storm Rooms-as needed (Wildwood Back Up System Storm Center & Logistics Center as directed).

Job Description

The Set Up role is to assure the following is completed accurately and timely:

- Activate Set Up team as per System Storm Center – Storm Directors direction; Storm Centers may be set up as early as 5-7 days prior to the event.
- Track time and be prepared to charge time correctly upon Declaration of an Event and Charge-to codes provided
- Follow the Set Up Team check list for setting up storm rooms accurately. See checklist link at bottom of description
- Assure all phone lines are tied to accurate storm number assigned and test phone lines for accuracy and functionality
- Assure all charts and maps are most current and accurate prior to posting; use the Admin/Corp Services / Set Up team folder for housing most current charts, maps, floor plans, etc. Update folder prior to storm Season and as needed during season.
- Participate in Logistics training, table tops, exercises to assure training and knowledge of role and responsibilities
- Participate on System Storm Center Calls as invited/requested
- Conduct annual readiness activities to assure Set Up occurs seamlessly; work with facilities, security, IT / Telecom support services to assure all rooms are tied to generator, have accessibility to printers, computers, emergency protocols, security, etc. as per TSSOP and System Storm Center direction and activation at the time of an event.
- Participate and collect all lessons learned / edits and process updates during and event and at the close of storm season.

Key Interface Points

- T-FL System Storm Ctr: Storm Director / Transmission Restoration Coordinator
- T-FL System Storm Ctr: Transmission Storm Liaison (SP)
- Planning Section Chief
- Logistics Section Chief
- Logistics: Admin/Corp Services Branch Directors
  - Logistics: Admin/Corp Services Team Leads
    - Corp. Services point of contacts assigned from functional areas for IT, HR, Facilities, and Corporate Security
    - Logistics IT Liaison
    - Admin/Finance

- Operations: Area Logistics Coordinators

Checklist of Actions

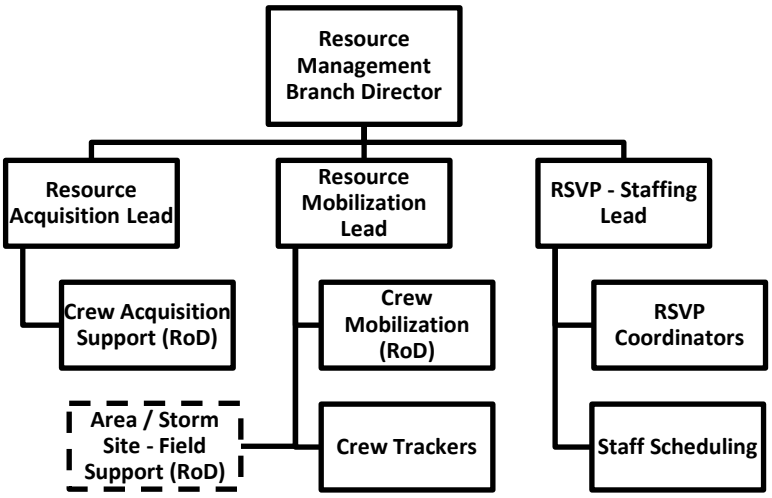
The following link provides the Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).

See Checklist: Admin-Corp Srvs tab

7.0 Resource Management Team - Organization, Role & Responsibility

The Resource Management organization is structured and staffed to acquire, mobilize, track, and release all event resources. All human resources that are utilized in some aspect of restoration or support are considered event resources. The Resource Management team works with enterprise tools and processes to identify all available resources that are in Florida, employees or contingent workers (CW) to be 'workers' on the system. Workers are construction and maintenance crews, contract resources/crews (native and non-native), and support resources.

Resource Management - Storm Organization



(Diagram: Transmission Storm Org Chart – Resource Mgmt. Team tab)

7.1 Resource Management Branch Director

Resource Management Branch Director – Role & Responsibilities

Job Function

The Resource Management Branch Director oversees the Transmission Resource Management Storm Organization (as a branch of Logistics) which is comprised of the following teams:

- Resource Acquisition (Job Description follows)
- Resource Mobilization (Job Description follows)
- RSVP / Staffing Lead (Job Description follows)

This leadership role is ultimately responsible for ensuring the annual readiness of each team of the Resource Management Branch. During an event, the Resource Management Branch Director is responsible for activating the organization, staffing, assuring the tools and processes are accurate and ready to use. The primary responsibility of this branch is to acquire, mobilize, track, and release all human resources activated in an event. This position is responsible for ensuring that identified resource needs for support of the restoration effort are met. RM participate on all System and Logistics on Briefings. They also provide updates to the daily goals directed by Logistics. Resource reports on crew deployment and movement are expected at least twice daily; the resource data is crucial piece in the Planning actions completed within the IAP Process. The Logistics Chief or the Resource Management Branch Director is a member of the Planning Section – IAP team.

Job Description

The Resource Manager manages the RM storm organization and functions during major restoration efforts. This position will ensure that off-system line and tree resources are acquired, mobilized, tracked, assigned, and demobilized before and during major storm events. This position will ensure that additional support resources are acquired, mobilized, assigned and tracked utilizing the RSVP process.

- Direct and manage storm preparedness and restoration activities of the Resource Management storm organization.
- Coordinate storm preparedness and restoration activities with 1DF-DEF Resource Manager , SEE Mutual Assistance, and T-Wholesale Customer Manager
  - SEE and EEI company representative
  - Team lead, or designee, participates and collaborates with national and Area mutual assistance contacts
- Provide & post daily update of Site rosters to the current storm website, utilize Mobilization Lead and Area Logistics Coordinators for validation and posting of rosters.
- Coordinate storm preparedness activities with Line and Tree Contractors to establish resource availability.
- Support the Transmission FL Operations-Crew Management by identifying, acquiring and mobilizing pre-storm landfall resources needs based on predictive model.
- Support the Transmission FL Operations-Crew Management by identifying, acquiring and mobilizing post-storm landfall resources needs based on predictive model and damage asses
- Support the Transmission FL Operations-Crew Management, Logistics Chief and Area Storm Center Chiefs by activation and continuous maintenance of RSVP / Storm Resource Tool to track resource mobilization.
- Direct and manage the development and communication of the resource deployment, re-allocation and release plans.
- Develop release plan that identifies value added contract line and/or tree resources for retention during draw down of resources.
- Partner with Logistics Chief and Site Management to determine resources needed to manage Sites
- Acquire/track/assess need for all Logistics resources prior to and during storm restoration
- Centralize recruiting for Logistics storm roles / branch team members from current DEF personnel, i.e. Plants, as well as company retirees
- Identify any available transmission resources to assist in opening requested Sites as requested by the 1DF-DEF Crew Support Director
- Assure the maintenance and monitoring, staffing and recruiting of Logistics Organization
  - Administer process to recruit and deploy resources by matching skill sets to Logistics roles and responsibilities
  - Review the Logistics-Branches within the organization chart annually to identify resource gaps and make assignment recommendations to each branch lead
  - Maintain Logistics Org chart

- Utilize Assurance System; engage Admin/Corp Service to manage.
- Support the updating / monitoring of internal resource management by:
- Update RSVP based on annual Logistics organization chart process output
- Monitor RSVP tool for additional resource availability; use RSVP Lead
- Provide current personnel list for specific job training to Administration/Corp Services Leads (Training planning)

Key Interface Points

- Operations – Crew Management
- T-FL Storm Director / IC
- Logistics Chief
- Operations-Area Storm Center Chiefs/IC
- Logistics-Admin/Corp Services / Finance Admin.
- Logistics- Site Management
- Logistics-Resource Mgmt-Acquisition Lead
- Logistics-Resource Mgmt -Mobilization Lead
- Logistics-Resource Mgmt -RSVP Lead
- T-FL / 1DF-DEF Mutual Assistance Coordinator
- Planning-Wholesale Customer Emergency Center Lead
- 1DF-DEF Resource Management Director

Checklist of Actions.
The following link provides the Resource Management Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: Resource Mgmt tab

7.2 Resource Acquisition Lead

Resource Acquisition Lead – Role & Responsibility
Job Function

The Resource Acquisition Lead is responsible for assuring contract crew resources are identified, acquired and brought on-to the Transmission system as storm restoration resources. In addition, the Resource Acquisition Lead is to contact all on-system contractors and internal crews to establish on-system resources available for restoration activities prior to acquiring off-system resources. RA Lead is to follow the corporate contracting protocols for utilizing / acquiring Duke resources then external/foreign resources. This role is key in assuring all transmission contract, internal and external, storm resource teams are accounted for within the resource management tool so that equipment, work, lodging, meals, logistical support, effective monitoring, and management can occur safely and effectively throughout the duration of the storm/event.

Job Description - This position will:

- Primary contract manager – Confirm with Distribution, that 1DF-DEF has created and activated storm in resource tracking tool. Confirm Transmission naming convention and Crew ID numbers for loading rosters.
- Collaborate with Resource Management Lead or designee, to determine
  - Resource requirements
  - Timing for mobilization
  - Financial constraints
  - Pricing limitations

  - Location to stage resources (in state, out of state)
  - Radius to acquire resources
- Communicate the result of above to the acquisition team to begin Resource Acquisition process
- Ensure resources are acquired and appropriate terms and conditions are negotiated. Acquire and secure resources from utilities, private companies, muni's and coops that meets the criteria established by the Acquisition team lead. Negotiate terms and conditions as prescribed by team lead.
  - How many needed?
  - What is the timing?
  - When to make financial commitment.
  - Pricing limitations
  - Location to stage resources (in state, out of state)
- Responsible for reporting on goal achievement as defined by the system Sample goals:
  - Number of incremental line resources acquired
  - Number of incremental tree resources acquired
  - Number of line resources demobilized
  - Number of tree resources demobilized
- Acquire / capture all contract and internal crew / storm resources within rosters and upload into RoD (Resource on Demand) storm tool. Assure for Transmission Crews that Vehicle/Equipment Compliment is captured within the Roster. See RoD Process
- Assure training and regular use of resource management tools (RoD, Reports for storm centers, etc.) for Self and Acquisition Team. Assure annual readiness for Resource Acquisition Team and collaborate with Resource Mobilization Team on use of resource management tools.
  - Radius to acquire resources
  - Participate and collaborate with national and Area mutual assistance associations
- Resource outlook and forecast
  - Provide high level information on resources to be made available (example: Southern Company to release 200 people in 2 days to Duke Energy). Provide to Resource Management Director.
- Major issue resolution
  - Handle unique issues as requested by the Resource Mobilization team leads or the Resource Management Leads
- Develops crew demobilization Plan
  - Determine means to populate information regarding crew price and designate team member to update file
  - Solicit feedback from the Areas on crew performance via the line and tree crew lead
  - Provide timeline to make crew decisions on who to release which will be discussed on the daily resource call
  - Acquisition team notifies home office first of release and the Area will notify the local crews
- Implement Crew Demobilization Plan
  - Notify home office first of release as directed by Crew Mobilization team leads

Key Interface Points

- Resource Management Lead
- Area Logistics Coordinators
- Area RoD Support
- Resource Mobilization Lead / Team
- Crew Acquisition Team / Line, Tree, DA RoD Support
- 1DF-DEF Resource/Crew Acquisition Manager (Line, Tree Account Team Leads)

Checklist of Actions
This timeline is designed for a major hurricane entering our area. A near miss could require timing adjustments on some activities and cancellation of others.
The following link provides the Resource Management Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: RM-Acquisition Lead tab

7.2.1 Crew Acquisition-RoD Support

Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

7.3 Resource Mobilization Lead

Resource Mobilization Lead– Role & Responsibility

Job Function
Responsible for mobilizing all required / acquired resources; which mean assigning crews to Areas and then Storm Sites. For collaborating with the Area Restoration Coordinators and Logistics to assure crews have information necessary to report to work.

Job Description - This position will:
- Participate in daily Transmission System Call and T&D Logistics Calls
- Manage crew assignment to Areas/Area
- Be decision maker with RM Leads and Area Coordinators for which crews are assigned to which Area and then to Storm Site
- The lead will factor in, crew equipment and capability.
  - In order to make these decisions, the lead will refer to the comments section in the tool where that crew acquisition will use to identify specifics on crews and they will also list equipment being brought.
  - The lead will also receive verbal feedback on the system call with the Area resource managers on their needs.
  - The lead will oversee the tool input personnel to ensure this information is updated in the Tool and the Area is notified (will ensure the input personnel include such pertinent information as climbing vs non climbing tree personnel, special equipment, etc.)
- Break down crews into 10-15 person teams and assign in that manner to the Areas
  - Mobilization notifies crew leader of team ID number
- Communicate special needs related to outside resources. (Example: if a crew insists on using a mobile kitchen, the lead would provide that info on the system call to the Area Coordinator and to Storm Site Management and LOGISTICS Coordinators who will also be on the call.)
- Elevated issue resolution with the C&M Areas / Area Storm Centers Crew Coordinator
- Serve as the single point of contact when unique conflicts and situations arise
- Responsible for manual GPS on crews
  - Ensure the calls are being made to incoming crews, and that the tool is being updated with the latest ETA's
  - Once on system, initiate a daily call to ensure there are no issues

- Responsible to ensure updated rosters are received from Crew Foreman
  - Ensure rosters are acquired from incoming crews and populate a shared drive with that information
  - Ensure vehicle/equipment information is correctly reported and the Lodging, Area Logistic Coordinator, & Storm Site crew trackers are aware of acreage/space requirements for each crew
- Ensure smooth transition from system to Area for incoming crews
  - If mustering site is used, after arriving there, turn them over to the Area for future communication
  - If mustering site not used, turn the crew over to the receiving Area within 2-3 hours of arrival
- To facilitate the transition, the system will call the crew and notify them that the Area will now take over communication. Give the crew the Area phone number and contact name but have the Area initiate the call.
- Track internal line resources moved to another area
- Resource forecast – ensure a resource forecast is available to the Areas to provide a picture of resources to come through the upcoming week
- Developing a contingency plan if tool is inoperable or phone lines are down
- Ensuring the crew mobilization storm kit and pre storm checklists are prepared/completed as outlined
- Ensuring direction books are available to provide appropriate information to incoming crews
- Provide the needed system reports at designated times

Key Interfaces:

- Area Logistics Coordinators / RoD Support
- C&M Supervisor / Inspectors
- Resource Management Lead
- Logistics Coordinators
- Heavy Hauling / Fleet services
- Storm Site Management / SSOL
- Materials Management
- Resource Acquisition Lead / Team

Checklist of Actions

The following link provides the Resource Management Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: RM-Mobilization Lead tab

7.3.1 Crew Mobilization – RoD Support

Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

7.3.2. Crew Tracking Team / Crew Tracker Role

See Transmission Storm Org Chart **–** Logistics- Resource Mgmt tab

Job Function

This position is part of Resource Management yet during an event, reports to the Storm Site Logistics Lead (SSLL) and reports to the assigned Storm Site. This role is responsible for documenting and updating Area Storm Center and System Storm Center of arrival date and times for off system storm resources. This position will update the Crew Tracker Spreadsheet with actual resource counts, roster names and type of equipment AND provide updated Spreadsheet/Roster to Area Logistics-Crew/RoD Support and/or SSM Admin Support. This position ensures that all on-system contractors, internal crew resources AND off system resources receive their operational schedules, understand expectations and participate in the designated safety orientation. The Crew Trackers may also be assigned as Crew Support to 'run' logistical needs (meals, materials, etc.) from storm site to work site. Crew Trackers should be equipped with pick- up truck or SUV sort of vehicle so resource may access work site. If the Site is a T-Only site, Crew Trackers will serve as additional T-FL Site support staffing to set up and maintain the Storm Site. (Releasing the Crew Trackers: If Transmission-FL Event Restoration work is complete, the SSLL is responsible to reporting to Site Mgmt and SSOL which resources can be released or redeployed. No Logistics or storm field roles are released until SSLL, SSOL and Site Management authorizes.

Job Description

This position will report to the Storm Site Logistics Lead and assist the efforts by:

- Primary Role: Track and account for Crews and Work assignment, assure all crew on roster are accurate, assigned to inspector/foreman.
- Secondary role AFTER crews are on-boarded and accounted for Crew Trackers are to Support the crew / foreman by:
  - Traveling to and from the site to the work site, providing access to or delivering crew needs (lunches, materials, etc.)
  - Tracking and supporting Schedule adherence with the foreman/inspector (assuring crews get to breakfast and dinner and back to lodging so all have 8 hours rest.)
- Utilizing crew tracking tool/spreadsheet – a report from Resource on Demand (ROD) – viewing spreadsheet / updating spreadsheet and sending to RM-Mob Team (Area Logistics RoD Field Support role)
  - Verify with Crew Lodging Support the crew rosters and mobilization changes (movement for one site to next).
- Tracking and accurately verifying assigned resources and equipment at the Storm Site
- Interface with SSOL (Site Operational Lead), and SSLL (Site Logistics Lead)
- Required to have:
  - Complete PPE (See Field Role Packing List)
  - Cell Phone / Smart Device (company issued or personal-number must be on RSVP/Outlook Contact system)
  - Company Credit Card
  - May be required to drive SUV or 15 Passenger Van available to utilize on site
  - Utilize housing / lodging as arranged for the site assigned to (i.e. if alternative housing is lodging for site assigned, then Crew Tracker will bed down via alternative housing. See Alternative Housing definition/plan).

Training Requirements Before Major Storm

- Participate in Field Role Training
- Complete understanding of TSSOP-Logistics Site Mgmt Operational Plan, Daily Site Operations Plan, roles and responsibilities
- Review requirements for crew makeup and equipment standards
- Successful participation in Annual Storm Drill and any related table tops / exercises, training/CBTs

Key Interface Points

- Logistics – SSOL (Site Operational Lead)
- Logistics –SSLL (Site Logistics Lead)
- Logistics – Site Mgmt Admin & Reporting Support
- Logistics – RM-Resource Mobilization
- Operations - Area Logistics Lead
- Operations – Area Logistics – Area Crew Tracker/RoD support (Area Storm Ctr)
- Logistics - Crew Lodging Support – on site
- Operations - Area Logistics – Crew Lodging Support (Area Storm Ctr)

Checklist of Actions

The following link provides the Site Team Checklist of Actions for annual readiness as well as preparedness for an event impact
See Checklist: Logistics-RM-Crew Tracker tab

7.4 RSVP - Staffing Management Lead

RSVP - Staffing Management Lead – Role & Responsibility

Job Function

This position is responsible for keeping their assigned area portion of the RSVP tool current. In addition, this position will support the storm response by updating the RSVP tool to accurately reflect the resource mobilization plan.

Job Description - This position will:

- Participate in daily system call with Transmission System Briefings and T&D Logistics calls as needed.
- Manage the process of receiving requests, and staffing, non-craft and technical storm resources requests on behalf of Florida Transmission System
- When internal resources are not available, contact DE RSVP/Retiree resource availability. In addition, contact RM-Acquisition Lead and inquire about contractor availability
- Employee point of contact – Serve as a central point of contact for those resources recruited or secured to fill gaps
- Interface with Carolina RSVP system coordinators to share resources between transmission organizations
- Serve as Lead to RSVP Coordinators within Transmission –FL; assure the RSVP coordinators are:
    - Keeping the RSVP tool updated as employees transfer in and out of the storm organization
    - Being the first point of contact for the organizations employees regarding RSVP questions or concerns
    - Able to perform their duties as outlined in the process document.
    - Assisting employees when signing up for their storm role
- Participating in pre-storm season planning
- Work with RM/Acquisition to Maintain a tracking tool for assignments and personnel:
    - Utilize the Storm Resource On Demand to input the damage assessment resources;
    - Create rosters for resources needing logistical support (lodging, meals, etc.);
    - Where appropriate utilize separate RSVP tool for balance of support personnel

Key Interface Points:

- Logistics Chief
- Resource Management Branch Director
- 1DF-DEF - System RSVP Coordinator
- Area RSVP/Resource Coordinators

- RM-Acquisition-Damage assessment system team
- RM-Acquisition-Outside contract companies

Checklist of Actions

The following link provides the Resource Management Team Checklist of Actions for annual readiness prior to storm season and during storm events (before landfall, during restoration, and after the storm event).
See Checklist: RM-RSVP Lead tab

7.4.1 RSVP Coordinators

Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

7.4.2 Staff Scheduling

Job Function – Under Development

Job Description – Under Development

Key Interface Points – Under Development

8.0 Logistics Section / Storm Center Training Plan

NOTE: outlined according to Sections GDLP-EMG-TRM-00025 & 00026 of the TSSOP – specifically to the Logistics roles and utilizing the Joint Drill, Storm Site mgmt. CBTs and Classroom/table top training methods.

Initially, Logistics organization is responsible for major event/storm Training Plan; under the direction of Logistics Chief & System Storm Directors / IC the Training Plan will be reviewed as part of Lessons Learned from the previous season and updates will be applied as deemed appropriate, striving always toward continuous improvement.

8.1 Training and Activation of Storm Resources

Under development / Annual Readiness

8.2 Training Expectations / Objectives

Under development / Annual Readiness

8.3 Training matrix / schedule

Under development / Annual Readiness

8.4 Activation notification / responding

Under development / Annual Readiness

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00029

Revision no.: 000

Document title: TSSOP-Transmission System Storm Operational Plan: Logistics – Administration, Resources, Staging & Mustering, Crew Support

Type of action:

- ☐ New
- ☐ Cancellation
- ☐ Suspension
- ☒ Revision
- ☒ Ownership Change
- ☐ Renumber
- ☐ Periodic review completed, as required

For Document Management staff use only:

- ☐ Editorial Change
- ☐ Migration
- ☐ Control element revision _____ (does not require approval authority signature)

Applies to: (Select all that apply)

- ☐ Duke Energy
- ☐ Duke Energy Carolinas, LLC
- ☐ Duke Energy Progress, LLC
- ☒ Duke Energy Florida, LLC
- ☐ Duke Energy Indiana, Inc.
- ☐ Duke Energy Kentucky, Inc.
- ☐ Duke Energy Ohio, Inc.
- ☒ Group Transmission
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☒ None
- ☐ State Codes/Standards
- ☐ HIPAA
- ☐ Sarbanes-Oxley
- ☐ OSHA _____
- ☐ NERC
- ☐ FERC Standards of Conduct
- ☐ Patriot Act
- ☐ Other _____

Complete if submitting a form: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☐ Yes (Procedure No: _____)

How is the form to be completed or used? ☐ Hard Copy (completed by hand) ☐ Online Data Entry (fillable PDF)

- ☒ Communication plan established
- ☒ Impact Reviews completed

Description of document action or summary of changes:

Publication of TSSOP-Transmission System Storm Operational Plan for Transmission Florida. Moving Document from Draft form created and proven during 2016 & 2017 seasons; draft document was housed within the Transmission Florida System Storm Center Share Point site: Transmission System Storm Operational Plan link.

GDLP-EMG-TRM-00029 is the third of seven documents that comprise the TSSOP for Transmission Florida (DEF). This document is the Logistics Section and includes processes and delivery of logistical support: resource management/movement, site management, lodging/housing, meals, administrative support, tracking/delivery of logistical requests, etc.

Section B: Approval

Who should sign? see instructions on page 2

Preparer(s)/Author(s)/Writer(s) (*signature not required*):

Deb Banister-Hazama

Approval recommended (*print name*):	*(signature)*	Date:
Approval recommended *(print name)*:	*(signature)*	Date:
Approval recommended *(print name)*:	*(signature)*	Date:
Final Approval *(print name)*: Saurabh Vyas	*(signature)* Saurabh Vyas	Date: 12/19/2017

RETURN SIGNED FORM AS SCANNED PDF VIA E-MAIL OR FAX TO (919) 235-3165

Keywords: procedures and forms; procedures program; daf; ADMP-PRO-ADS-00002; document management program
Applies to: Duke Energy - Transmission

Document title:	Document number:
TSSOP - Transmission System Storm Operational Plan: Communications – Internal & External	GDLP-EMG-TRM-00030
	Revision No.: 000
Keywords: Transmission System Storm Center Operational Plan (TSSOP), Transmission Storm Plan, emergency	Applies to: Transmission - DEF

This document is the Communications Section of the Transmission System Storm Operational Plan referenced in the Table of Contents in GLDP-EMG-TRM-00025 - TSSOP - Introduction and Overview.

Table of Contents

1.0 Communications Section

The Communications Section will follow the ICS structure and process of awaiting direction from T-FL System Storm Center for activation, strategic planning, and deployment. The Communications Section will interact with Operations Section, Planning Section, and Logistics Section leadership prior to deploying and releasing staff; communication and cooperation throughout Major Event / Storm Response is crucial to safe and effective restoration.

2.0 Mission and Purpose

Within DEF Transmission, the Communications Section is to create, maintain, implement a communications plan that manages both Internal Storm Notifications / Communications and External Relations needs during planning, preparedness and incident / event response. The Transmission storm organization must be apprised of event / emergency preparedness (Annual Readiness) and activation (Current Storm / Incident Response) in a clear, concise, and expedient manner.

The purpose of the plan is to create clear lines of communications and protocols for distributing appropriate information to the appropriate recipient, and for managing the communications and public information flow to / through external relations as required.

2.1 T-FL Internal Communications Mission

Includes but is not limited to:

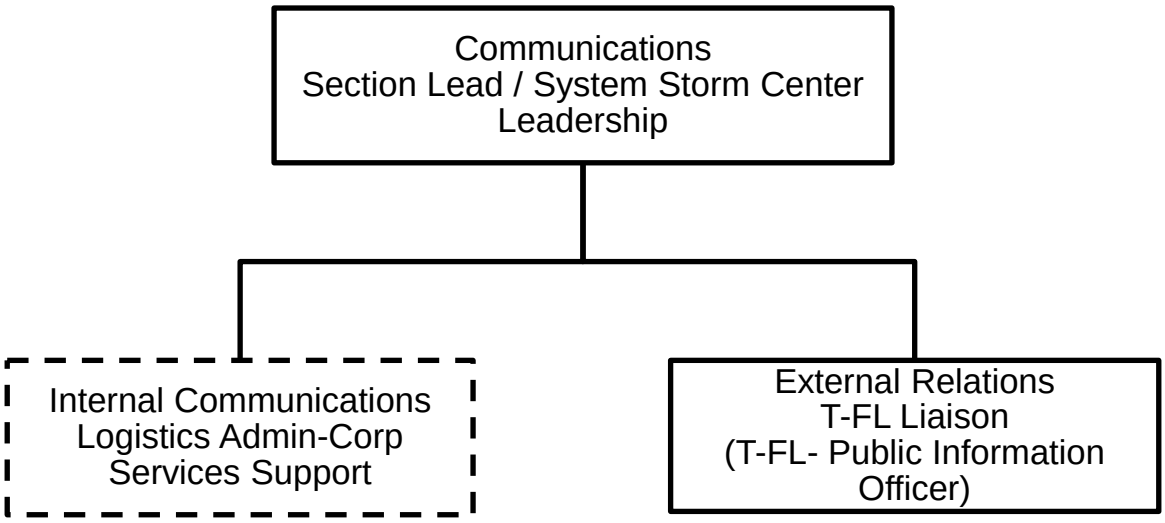
- Creation of consistent messaging for T-FL employees, contingent workers, contractors regarding storm event/incident
    - Initial Storm Watch / Storm Warning / Emergency Response Notifications
    - System Storm Center / IC Alert / Major Storm Response Activation Notices
    - System Storm Center / IC Alert / Major Storm Response Release Notices
    - System Storm Center / IC Alert / Major Storm Response Status Communiques
    - System Storm Center / IC Storm Drill / Training Notifications
    - System Storm Center / IC Annual Readiness Notifications
    - System Storm Center / IC General Emergency Preparedness Communiques
- Alignment with 1DF and T-FL of protocols and guidelines for dissemination of emergency / major storm notifications
- Creation of distribution system for all T-FL System Notifications in support of above communications for the Storm Director and Section Leads (storm leadership) by working with Admins/Corp Services Branch within Logistics

2.2 T-FL External Relations Communications Mission

Includes but is not limited to:

- Understanding and following the External Relations - GDLP-EMG-DOS-00009 storm process and plan
- Representation of Transmission-FL on System Storm Briefings for reporting status of Transmission System status
- Participation in T-FL System Storm Center Leadership team
- Serves as Public Information Officer for Transmission-FL, reporting pertinent information to the appropriate corporate entity serving in the IC-Public Information Officer role

3.0 Org Chart – Communications



4.0 Internal Communications

Within the T-FL System Storm Organization - Logistics Section there is an administrative branch that supports the T-FL System Storm Center at times of drills and events and throughout annual readiness and preparedness activities. Administrative roles supporting Storm Directors will provide the means to maintain and implement the communications needs. Working together T&D will initiate activation decisions and notifications to facilitate One Florida Storm Response.

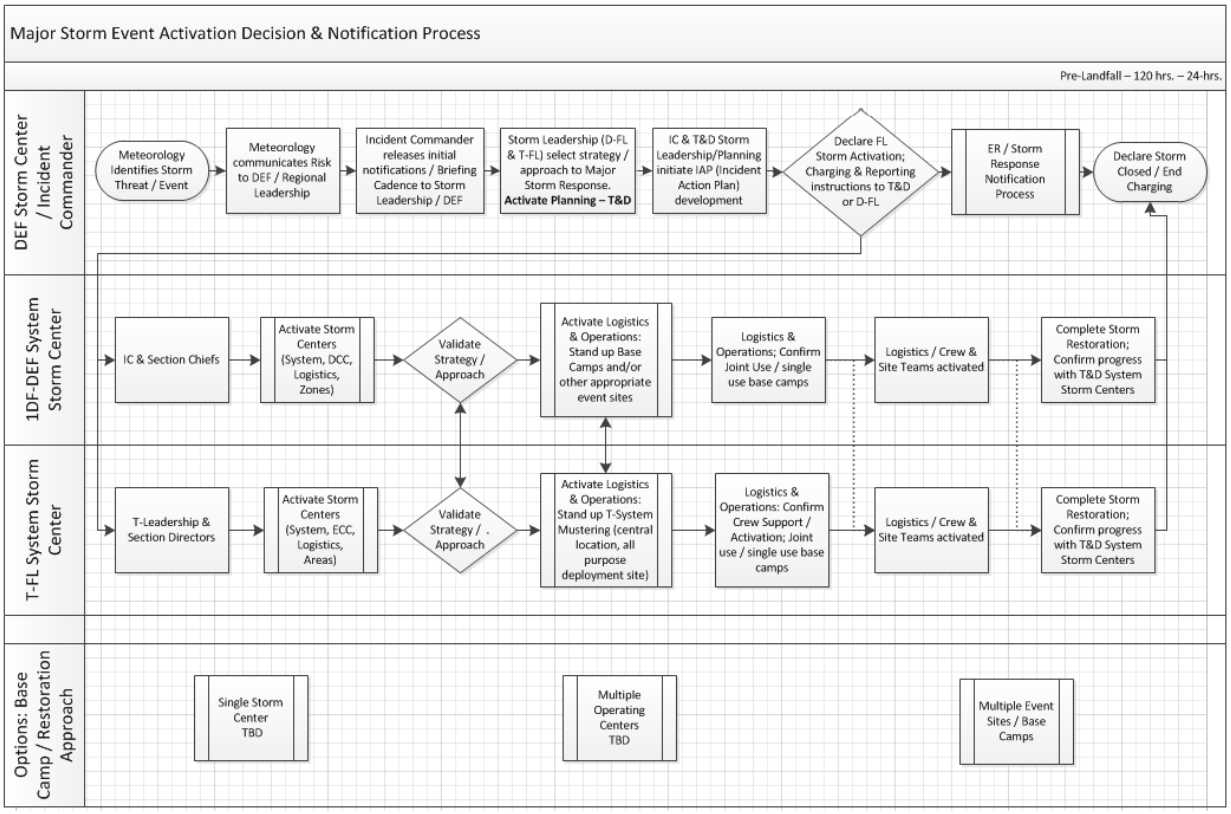
Admin/Corp Services Team is responsible for assuring all storm email boxes, distribution lists, and email templates are prepared, updated, and current at the beginning of season (May 31). Section Chiefs, Branch Directors, and Team Leads working with Resource Management – RSVP-Staffing are to provide updates to organizations when resource assessments are completed in first quarter or each year.

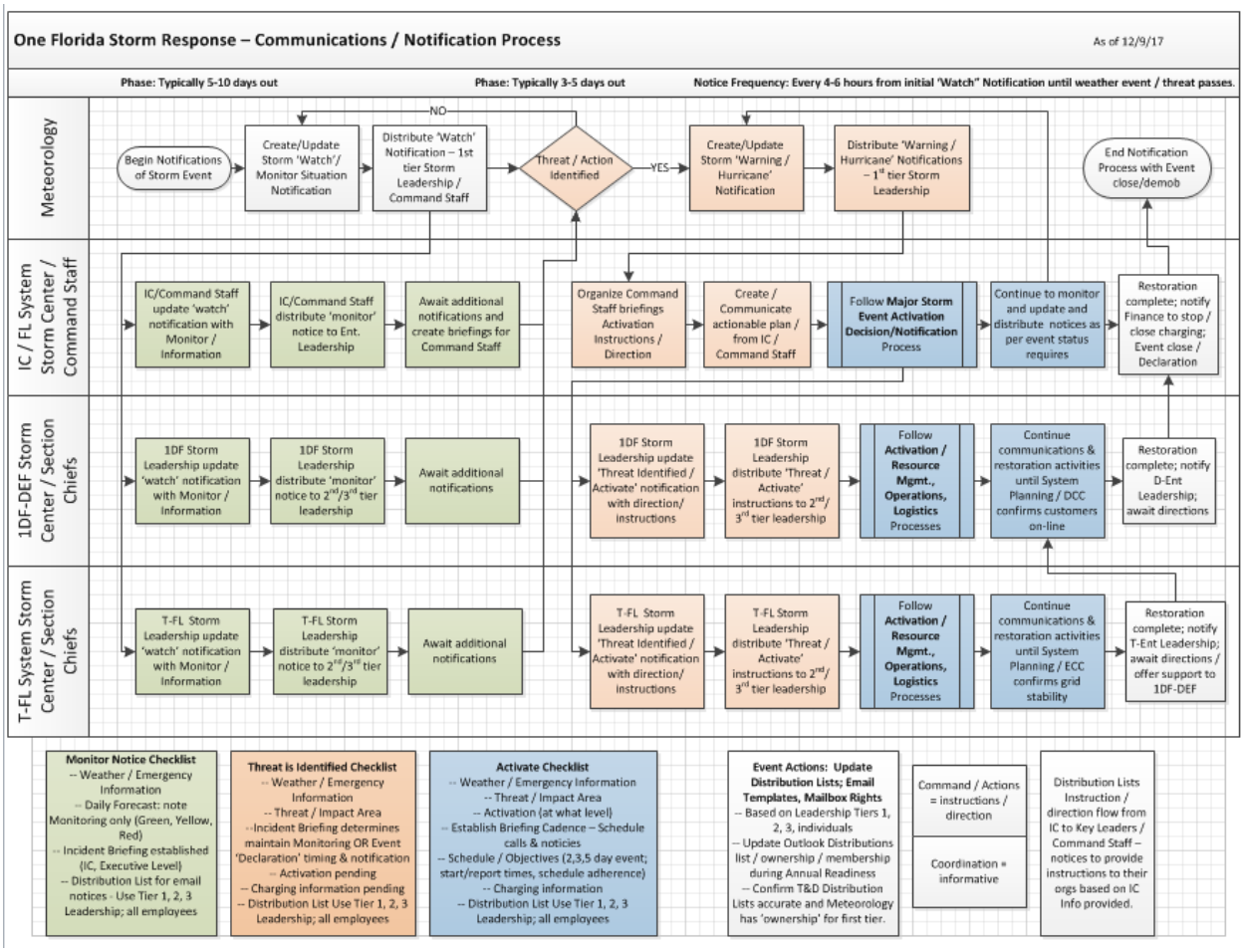
Templates topics suggested, but not limited to, for general communication to staff are as follows:

- Initial Storm Watch / Storm Warning / Emergency Response Notifications
- System Storm Center / IC Alert / Major Storm Response *Activation* Notices
- System Storm Center / IC Alert / Major Storm Response *Release* Notices
- System Storm Center / IC Alert / Major Storm Response *Status Communiques*
- System Storm Center / IC Storm Drill / Training Notifications
- System Storm Center / IC Annual Readiness Notifications
- System Storm Center / IC General Emergency Preparedness Communiques

4.1 Major Storm Event Activation Decision & Notification Process

The Activation Decision & Notification Process is provided so that



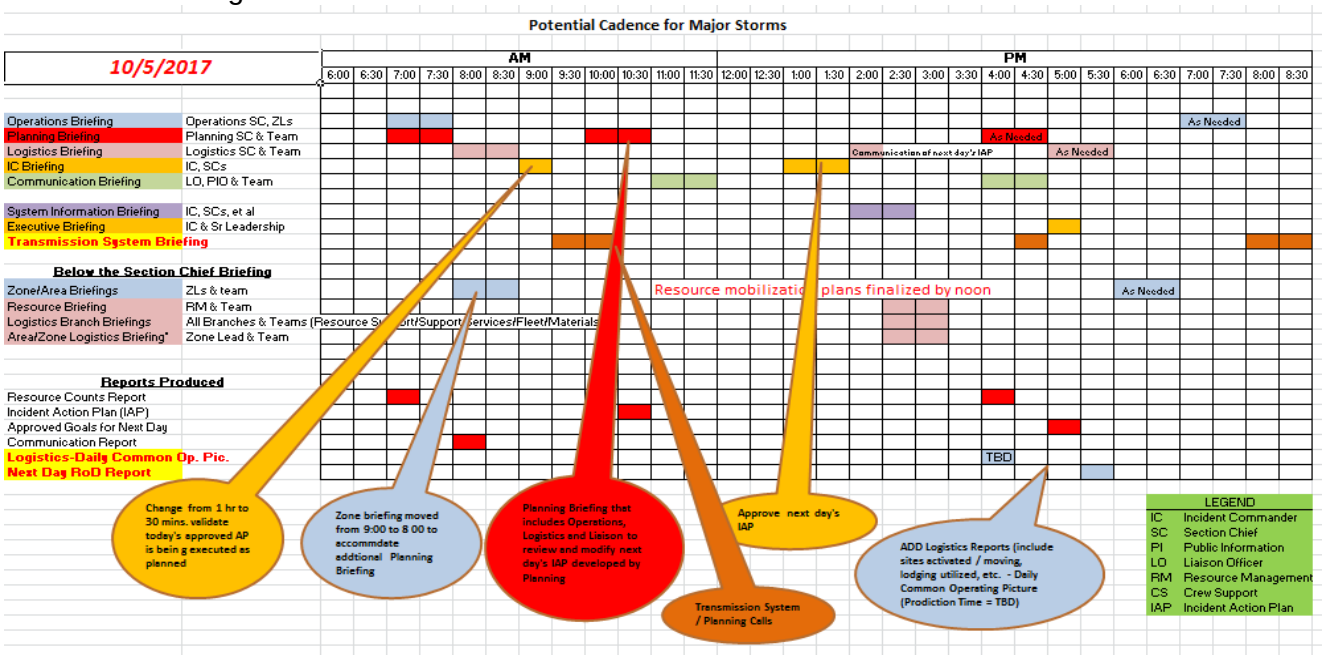


The Internal Communication plan is to flow from the Major Storm Event Activation Decision and Notification Process flow (pictured above). All internal communication is initiated from Meteorology and System Storm Center / IC at the first mention of a tropical / weather disturbance. The process flow identifies this initiation point. Both Transmission – FL (T-FL) and Distribution Florida (1DF-DEF) are to communicate and determine approach to storm. Once the initial decision to activate is made, the communication / notification protocols defined in the internal communications plan are to be followed.

The internal communications plan should include identification of communications/notifications needed (direction, timing, action, reports, minutes, etc.), distribution lists (audience) for notifications, message of notifications (email templates/messaging, conference call, meetings, etc.). Logistics-Admin Support manages the creation and distribution of notifications within the role of Internal Communications Liaison.

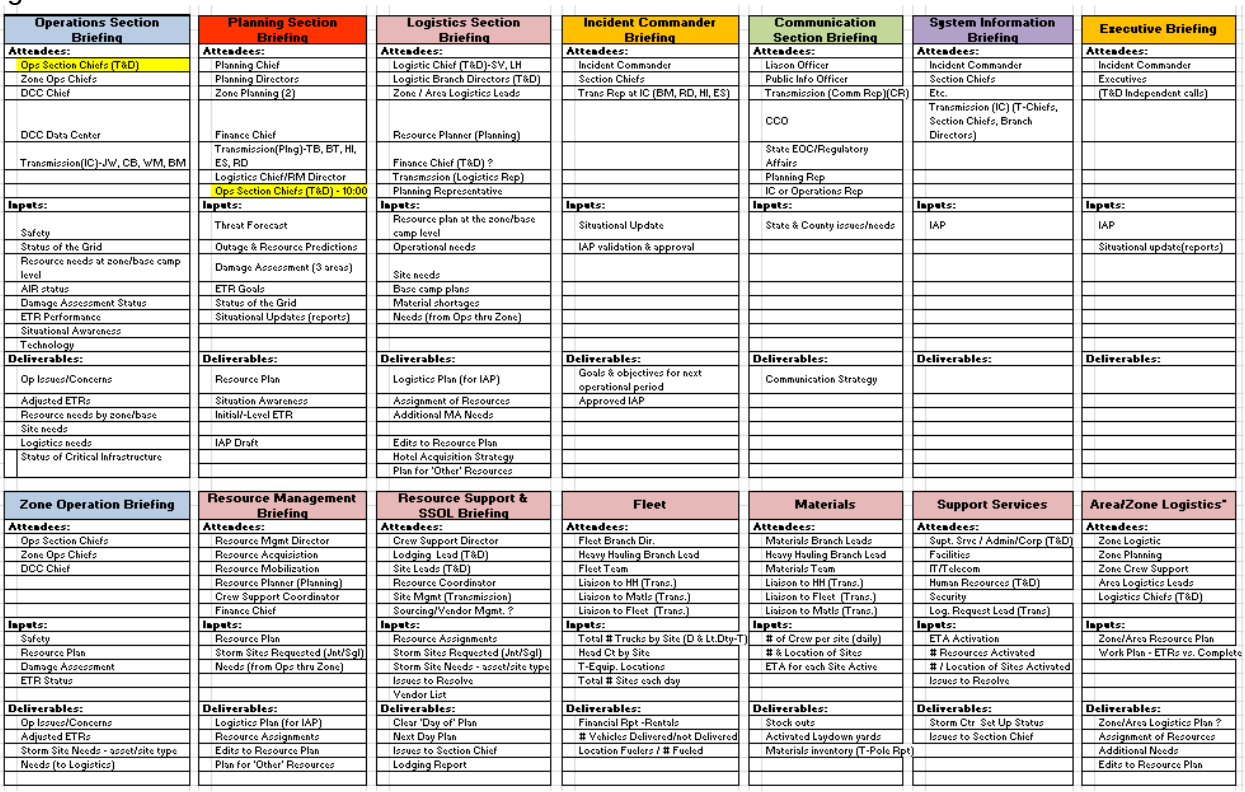
4.2 Storm Calls/Event Briefing Cadence

The Planning Section provides the Event Briefing Cadence (Storm Call Schedule) to System Storm Center. This schedule is used to guide internal conversations and decision making for the event. Communications Section – External Liaison (Public Information Officer/Liaison) provides T-FL representation on the calls scheduled for Communications. Internal Communications Liaisons/Admin Support role is to be present on all storm calls and take minutes, prepare communications and distribute to the appropriate audience. The Briefing Cadence provides the time blocks to set for T-FL representation/attendance or scheduling. Below is the current Briefing Cadence:



The Briefing Cadence is reviewed annually and updated based on Lessons Learned from each season. Adjustments are to be made so that all the correct discussions occur to facilitate effective restoration and maintain grid stability. In addition to the Incident Command and Section Briefings, each branch is expected to communicate effectively regarding daily goals and report data around outages, restoration efforts, safety, resources and logistics support. The Briefing Details chart below provide information to be shared, reported, or updated at each Section / Branch Briefing.

Briefing Details:



Operations Section Briefing	Planning Section Briefing	Logistics Section Briefing	Incident Commander Briefing	Communication Section Briefing	System Information Briefing	Executive Briefing
Attendees:	**Attendees:**	**Attendees:**	**Attendees:**	**Attendees:**	**Attendees:**	**Attendees:**
Ops Section Chiefs (T&D)	Planning Chief	Logistic Chief (T&D)-SV, LH	Incident Commander	Liason Officer	Incident Commander	Incident Commander
Zone Ops Chiefs	Planning Directors	Logistic Branch Directors (T&D)	Section Chiefs	Public Info Officer	Section Chiefs	Executives
DCC Chief	Zone Planning (2)	Zone / Area Logistics Leads	Trans Rep at IC (BM, RD, HI, ES)	Transmission (Comm Rep)(CR)	Etc.	(T&D Independent calls)
DCC Data Center	Finance Chief	Resource Planner (Planning)		CCO	Transmission (IC) (T-Chiefs, Section Chiefs, Branch Directors)	
Transmission(IC)-JW, CB, WM, BM	Transmission(Plng)-TB, BT, HI, ES, RD	Finance Chief (T&D) ?		State EOC/Regulatory Affairs		
	Logistics Chief/RM Director	Transmission (Logistics Rep)		Planning Rep		
	Ops Section Chiefs (T&D) - 10:00	Planning Representative		IC or Operations Rep		
Inputs:	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**
Safety	Threat Forecast	Resource plan at the zone/base camp level	Situational Update	State & County issues/needs	IAP	IAP
Status of the Grid	Outage & Resource Predictions	Operational needs	IAP validation & approval			Situational update(reports)
Resource needs at zone/base camp level	Damage Assessment (3 areas)	Site needs				
AIR status	ETR Goals	Base camp plans				
Damage Assessment Status	Status of the Grid	Material shortages				
ETR Performance	Situational Updates (reports)	Needs (from Ops thru Zone)				
Situational Awareness						
Technology						
Deliverables:	**Deliverables:**	**Deliverables:**	**Deliverables:**	**Deliverables:**	**Deliverables:**	**Deliverables:**
Op Issues/Concerns	Resource Plan	Logistics Plan (for IAP)	Goals & objectives for next operational period	Communication Strategy		
Adjusted ETRs	Situation Awareness	Assignment of Resources	Approved IAP			
Resource needs by zone/base	Initial/-Level ETR	Additional MA Needs				
Site needs						
Logistics needs	IAP Draft	Edits to Resource Plan				
Status of Critical Infrastructure		Hotel Acquisition Strategy				
		Plan for 'Other' Resources				

Zone Operation Briefing	Resource Management Briefing	Resource Support & SSOL Briefing	Fleet	Materials	Support Services	Area/Zone Logistics*
Attendees:	**Attendees:**	**Attendees:**	**Attendees:**	**Attendees:**	**Attendees:**	**Attendees:**
Ops Section Chiefs	Resource Mgmt Director	Crew Support Director	Fleet Branch Dir.	Materials Branch Leads	Supt. Srvc / Admin/Corp (T&D)	Zone Logistic
Zone Ops Chiefs	Resource Acquisition	Lodging Lead (T&D)	Heavy Hauling Branch Lead	Heavy Hauling Branch Lead	Facilities	Zone Planning
DCC Chief	Resource Mobilization	Site Leads (T&D)	Fleet Team	Materials Team	IT/Telecom	Zone Crew Support
	Resource Planner (Planning)	Resource Coordinator	Liaison to HH (Trans.)	Liaison to HH (Trans.)	Human Resources (T&D)	Area Logistics Leads
	Crew Support Coordinator	Site Mgmt (Transmission)	Liaison to Matls (Trans.)	Liaison to Fleet (Trans.)	Security	Logistics Chiefs (T&D)
	Finance Chief	Sourcing/Vendor Mgmt. ?	Liaison to Fleet (Trans.)	Liaison to Matls (Trans.)	Log. Request Lead (Trans)	
Inputs:	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**
Safety	Resource Plan	Resource Assignments	Total # Trucks by Site (D & Lt.Dty-T)	# of Crew per site (daily)	ETA Activation	Zone/Area Resource Plan
Resource Plan	Storm Sites Requested (Jnt/Sgl)	Storm Sites Requested (Jnt/Sgl)	Head Ct by Site	# & Location of Sites	# Resources Activated	Work Plan - ETRs vs. Complete
Damage Assessment	Needs (from Ops thru Zone)	Storm Site Needs - asset/site type	T-Equip. Locations	ETA for each Site Active	# / Location of Sites Activated	
ETR Status		Issues to Resolve	Total # Sites each day		Issues to Resolve	
		Vendor List				
Deliverables:	**Deliverables:**	**Deliverables:**	**Deliverables:**	**Deliverables:**	**Deliverables:**	**Deliverables:**
Op Issues/Concerns	Logistics Plan (for IAP)	Clear 'Day of' Plan	Financial Rpt -Rentals	Stock outs	Storm Ctr Set Up Status	Zone/Area Logistics Plan ?
Adjusted ETRs	Resource Assignments	Next Day Plan	# Vehicles Delivered/not Delivered	Activated Laydown yards	Issues to Section Chief	Assignment of Resources
Storm Site Needs - asset/site type	Edits to Resource Plan	Issues to Section Chief	Location Fuelers / # Fueled	Materials inventory (T-Pole Rpt)		Additional Needs
Needs (to Logistics)	Plan for 'Other' Resources	Lodging Report				Edits to Resource Plan

The Transmission-FL Storm Org Chart and Incident Command System will provide the hierarchical framework for the protocol and dissemination of information. Each Storm Center / Storm Org will have the means to create and maintain distribution lists and communication messaging to utilize or forward as directed by System Storm Center.

4.3 Internal Communications Lead

Internal Communications Lead – Roles and Responsibility

Job Function

The Internal Communications role is to compile and communicate to the Transmission-FL the status of weather/storm warning/storm watch/ activation and storm response preparation and restoration from Transmission FL System Storm Center. The Internal Communications role works with T-FL System Storm Center (Operations, Planning, Logistics) to understand and communicate to appropriate audience any and all appropriate information that may be necessary when communicating system / grid restoration status, successes, hindrances, restoration , activation, demobilization, and completion information. The Internal Communications primary contacts are the T-FL System Storm Director, C&M Restoration/Operation Leads, Planning Leads, Staging & Logistics Coordinator, and Finance Lead for creating messaging and notifications requirements.

Job Description

- Assure all processes are understood and in place prior, during and after the storm, and assure all performance expectations are met.
- Provide general oversight for all transmission related communications for external relations.
- Assign and work with Logistics-Admin. Support to craft, distribute, and support System Storm Center notifications and communications.
- Report to System Storm Center during event

- Participate in Annual Readiness activities and Event Preparedness Training (including pertinent ICS Training/CBTs)
- Participate on all appropriate Storm / Event Briefing calls (T-FL Operations, System Communications Calls, Executive Briefing Calls as requested).

Key Interface Points

- T-FL Storm Director/IC
- External Relations/Public Information Officer –T-FL Liaison
- Logistics-Admin / Corp Services Lead
- Logistics- Admin Support
- Logistics-Resource Management-RSVP-Staffing

Checklist of Actions for Internal Relations

Before Major Storm

- Assure process flow for all work types is understood and in place prior to the storm.
- General communications to all Transmission-FL storm leadership team members on assignments and responsibilities.
- Review all communications process flow documents, job descriptions, staffing plans and other process flows related to communications and storm restoration for use in creating messages
- Review and ensure the External Relations Major Storm SharePoint & Transmission-FL System Storm Center SharePoint is accessible.
  - Link to the Florida Storm External Relations Storm SharePoint Site
  - Link to Transmission-FL System Storm Center SharePoint Site
- Participate in annual storm drill activities
- Participate in the daily T-FL system Storm Calls & External Relations storm conference calls.
- Assure all pre-storm activities are completed by using the Storm Checklist:
  - Link to T-FL Communications Storm Checklist – Under Development

During Major Storm

- Participate in all T-FL System Storm Calls and take / provide means for notes to be taken
- Schedule and facilitate meetings/calls for coordination among T-FL System Storm Center.
- Participate in the daily External Relations storm conference calls when Eternal Relations-T-FL Liaison is not able.
- Provide updates for system storm calls; Update messaging and provide to admin support to distribute for section and branch leads

After Major Storm

- Participate in the completion of Lessons Learned process following each event and implementation of results.

Tools and Information Needed

- Company laptop computer
- Cellular phone (in some cases a company radio will also be required)

Training Requirements

- General communications & writing skills
- Storm organizational knowledge and training – TSSOP working knowledge
- Working knowledge of DE transmission facilities and operational procedures

5.0 External Relations – Communications

The following is taken from DSSOP document "External Relations - GDLP-EMG-DOS-00009"

Mission:
"The External Relations (ER) Storm Team mission is to provide excellent customer service and collaboration with local government, key leaders, commercial/industrial customers and local communities during emergencies through organization, commitment, strong relationships, the provision of resources and feedback mechanisms.

"Our mission is to:

- To provide local government with the support needed to facilitate the coordination of outage restoration in a safe and efficient manner and to assist in the resolution of local governmental issues and concerns related to storm and emergency situations.
- To provide local government with ongoing information and updates in advance of, during and after storm events to assist them with their local storm preparation and restoration efforts including informing the public.
- To provide accurate and timely information to key leaders, commercial/industrial customers and local communities before, during and after storms.
- To educate the public on proper storm preparation and restoration actions.

"The function of the External Relations Storm Team is to be the point of contact between Duke Energy and the state and county Emergency Operation Centers to ensure accurate communication and messaging to accomplish a timely and orderly restoration of electrical power in impacted sections of the DEF service territory. The Duke Energy EOC representatives will coordinate with EOC leadership, Government/Community Relations, Operation Center Liaisons, Corporate Communications and Storm Central in key focus areas to include, but not limited to:

- Downed poles and lines
- Arcing wires
- Area disconnects
- Restoration of power
- Critical Customers
- Make It Safe Road Clearing activities
- Flood protocol disconnect and restoration"

Transmission – FL communications role is to provide appropriate insight to restoration status, impacts, public safety as it pertains to the transmission system.

5.1 External Relations / Public Information Officer

External Relations / Public Information Officer – T-FL Liaison Roles and Responsibility
Job Function
The External Relations T-FL Liaison role is to compile and communicate to the External Relations Storm Coordinator the status of storm response preparation and restoration from Transmission FL System Storm Center.
The External Relations T-FL Liaison works with T-FL System Storm Center (Operations, Planning, Logistics) to understand and communicate to ER any and all appropriate information that may be necessary when communicating system / grid restoration status, successes, hindrances, and completion.
The External Relations T-FL Liaison's primary contacts are the T-FL System Storm Director, C&M Restoration Lead, Damage Assessment, Staging & Logistics Coordinator, and Wholesale Account Management Lead for status of restoration activities.

Job Description

- Assure all processes are understood and in place prior, during and after the storm, and assure all performance expectations are met.
- Provide general oversight for all transmission related communications for external relations.
- Report to System Storm Center during event
- Participate in Annual Readiness activities and Event Preparedness Training (including pertinent ICS Training/CBTs)
- Participate on all appropriate Storm / Event Briefing calls (T-FL Operations, System Communications Calls, Executive Briefing Calls as requested).

Key Interface Points

- T-FL Storm Director / IC
- External Relations Storm Coordinator
- Planning Section Chief
- Operations Section Chief
- Logistics Section Chief

Checklist of Actions for External Relations-T-FL Liaison

Before Major Storm

- Assure process flow for all work types is understood and in place prior to the storm.
- General communications to all Transmission-FL storm leadership team members on assignments and responsibilities.
- Review all communications process flow documents, job descriptions, staffing plans and other process information to ensure they are updated as needed.
- Review and ensure the External Relations Major Storm SharePoint is accessible.
  - Link to the Florida Storm External Relations Storm SharePoint Site
- Participate in the annual training for External Relations.
- Participate in annual storm drill activities
- Participate in the daily External Relations storm conference calls.
- Assure all pre-storm activities are completed by using the Storm Checklist:
  - External Relations Storm Checklist

During Major Storm/Event

- Provide general oversight for communications team staffing and assure all performance expectations are met.
- As needed, schedule and facilitate meetings/calls for coordination among communications section team members and management.
- Participate in the daily External Relations storm conference calls.
- Provide updates for system storm calls.

After Major Storm

- Facilitate the completion of Communications Section Lessons Learned process following each event and implementation of results.

Tools and Information Needed

- Company laptop computer
- Cellular phone (in some cases a company radio will also be required)
- Reliable vehicle appropriate to storm impacted areas

Training Requirements

- General leadership experience
- Company Storm organizational knowledge and training
- Working knowledge of DEF transmission facilities and operational procedures
- Experience dealing with external relations

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00030 | Revision no.: 000

Document title: TSSOP - Transmission System Storm Operational Plan: Communications – Internal & External

Type of action:

- ☑ New
- ☐ Revision
- ☐ Renumber
- ☐ Cancellation
- ☑ Ownership Change
- ☐ Periodic review completed, as required
- ☐ Suspension

For Document Management staff use only:

- ☐ Editorial Change
- ☐ Migration
- ☐ Control element revision _____ (does not require approval authority signature)

Applies to: (Select all that apply)

- ☐ Duke Energy
- ☐ Duke Energy Carolinas, LLC
- ☐ Duke Energy Progress, LLC
- ☑ Duke Energy Florida, LLC
- ☐ Duke Energy Indiana, Inc.
- ☐ Duke Energy Kentucky, Inc.
- ☐ Duke Energy Ohio, Inc.
- ☑ Group Transmission
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☑ None
- ☐ State Codes/Standards
- ☐ HIPAA
- ☐ Sarbanes-Oxley
- ☐ OSHA _____
- ☐ NERC
- ☐ FERC Standards of Conduct
- ☐ Patriot Act
- ☐ Other _____

Complete if submitting a form: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☐ Yes (Procedure No: _____)

How is the form to be completed or used? ☐ Hard Copy (completed by hand) ☐ Online Data Entry (fillable PDF)

- ☑ Communication plan established
- ☑ Impact Reviews completed

Description of document action or summary of changes:

Publication of TSSOP-Transmission System Storm Operational Plan for Transmission Florida. Moving Document from Draft form created and proven during 2016 & 2017 seasons; draft document was housed within the Transmission Florida System Storm Center Share Point site: Transmission System Storm Operational Plan link.

GDLP-EMG-TRM-00030 is the sixth of seven documents that comprise the TSSOP for Transmission Florida (DEF). This document is the Communications Section and includes corporate and general communications guidelines for major storm events.

Section B: Approval

Who should sign? see instructions on page 2

Preparer(s)/Author(s)/Writer(s) (*signature not required*):

Deb Banister-Hazama

Approval recommended (*print name*): Sophia O'Keefe	(*signature*): Sophia O'Keefe	Date: 12/18/17
Approval recommended (*print name*): Charlene Rubano	(*signature*): Charlene Rubano	Date: 12-18-17
Approval recommended (*print name*):	(*signature*)	Date:
Final Approval (*print name*): Charlene Rubano (signature above)	(*signature*)	Date: 12/18/17

RETURN SIGNED FORM AS SCANNED PDF VIA E-MAIL OR FAX TO (919) 235-3165

Document title:	Document number:
TSSOP - Transmission System Storm Operational Plan: Finance Procedures – Pre, During, & Post Event	GDLP-EMG-TRM-00031
	Revision No.: 000
Keywords: Transmission System Storm Center Operational Plan (TSSOP), Transmission Storm Plan, emergency	Applies to: Transmission - DEF

This document is the Finance Procedures section of the Transmission System Storm Operational Plan referenced in the Table of Contents in TSSOP – GLDP-EMG-TRM-00025-Introduction and Overview.

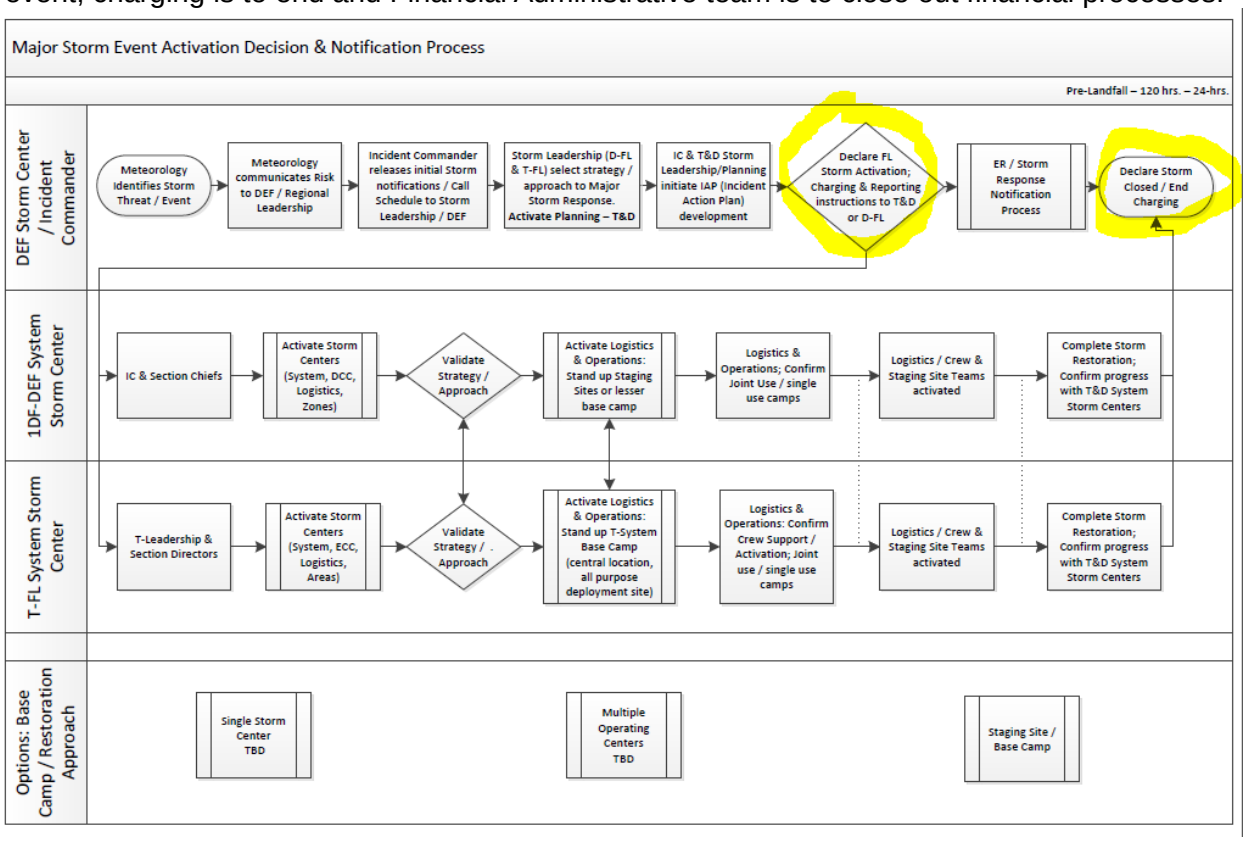
Table of Contents

1.0 Storm Finance, Accounting, Compensation Procedures

Duke Energy - Florida Storm Guiding Principles for Directing One Florida Storm Response states that the Florida Incident Commander will initiate activation and mobilization for safe & successful system restoration. At that declaration, storm finance and accounting procedures are activated. As per the Storm Accounting Procedures – GDLP-EMG-DOS-00007 (Link to T&D Storm Finance) mission statement:

"The Accounting Storm Team, which is led by Regulatory accounting, is comprised of employees from Finance, Accounting, and Rates and Regulatory strategy, and other appropriate stakeholders as determined by the Florida Regulatory Accounting Manager. The Regulatory accounting lead oversees appropriate accounting and reporting of storm costs and consolidates and communicates financial information about the event. The finance support representative of each business unit is responsible for charging guidance, capturing costs, and estimates for accruals for their business unit. The representative will provide an accurate report of total storm cost estimates, updated daily, and a detailed reconciliation of actual storm costs versus estimates as invoices are processed."

Major Storm Event Activation Decision & Notification Process provides a declaration and finance activation step from the Incident Commander. It is at this time that the Storm Accounting Procedures – GDLP-EMG-DOS-00007 begin and Transmission estimator and financial support is activated. In addition, at the close of the event, charging is to end and Financial Administrative team is to close out financial processes.



2.0 Storm Activation - Charging – Setup and Communications

Through the Internal Communications process and T-FL System Storm Center decisions to activate, communications with storm charging instructions and transmission specific charging codes will be provided within 24 hours. All activated employees and contingent work resources are to immediately utilize and follow these instructions.

2.1 Storm Roles – Corp Card Storm Limits

Corp Card Storm Limits: Corporate credit cards are to be used for purchases associated with the restoration of the transmission system. Credit cards can be used for cash advances. Credit cards should not be used for the following:

1) Fuel: Fuel for a company vehicle; use fleet cards. Fuel for personal vehicle (utilized in restoration efforts) or rental vehicles or work vehicles and equipment should be parked and fueled as part of the Storm Site Fueling Process. See SSO Daily Site Process: T-FL Fuel Process
2) Lodging: For those working in the field in support of restoration, all lodging is provided through the Logistics Lodging Team and Storm Site Crew Support. Corp Cards should not be utilized for Lodging room fee, taxes, or room incidentals.
3) Meals. For those working in the field for restoration activities, all meals are provided by the Logistics group. For those working in storm centers, local caterers will provide all necessary meals.
4) Personal items
5) Gifts, tobacco of any kind in any form, alcohol, prescriptions and/or co-pays, cologne, or for any excessive spending (bedding, pillows, socks, clothes)
6) Bonuses, Exceptional Contribution Awards (ECA's) or comp time

If storm role requires use of corporate credit line/card, in support of crew or other restoration resources, contact the Transmission Finance Accounting Support. This request will be made to the Supervisor of Work Flow Management for credit line increases for specific time periods. (In order to submit the request for field support / crew support roles, all those needing credit card limits lifted should be identified on RM-Mobilization Roster and list submitted to Finance Accounting Support.)

2.2 Lodging Storm Cards – Lodging Lead ONLY

As part of the Lodging Lead Role designation and training/preparation, Finance / Accounting provides Lodging Storm Cards with limits available to reserve and pay for the organizations lodging needs. Within the staging site management training modules on storm charging, it clearly defines that lodging charges should not be on most storm resources personal / corporate cards. There are some exceptions, however, the enterprise lodging process allows for simplified invoicing and payment when lodging and charging processes are followed. Please see the Enterprise Lodging Process and Guidelines.

2.3 Transmission Accounting Task Numbers - FL

The following are Transmission DEF Storm Tasks to be utilized only when associated with storm charging codes provided by Finance:

- T7202: Transmission storm support – internal labor only
- TREE: ROW/Tree – storm
- TTREE: Transmission tree trimming – contractors only
- TROTH: Other Transmission costs that do not fit in the above three categories

3.0 Storm Staffing & Compensation

Typically, storm hours for reporting are based on most effective and safe hours to provide a minimum of 8 hours rest for all storm workers. All Branch leads are expected to staff their organization for support as directed by System Storm Center and according to dual shifts. See the TSSOP – Storm Planning-Restoration-Strategy document - GDLP-EMG-TRM-00026 for more about shifts and scheduling storm resources. When resources are scheduled accordingly the organization can project estimated resource hours / cost for compensation of storm duty. It is important that all resources strive to work within the allotted schedule as directed.

3.1 Supplemental Exempt Compensation Procedures

The Supplemental Exempt Compensation pay policy can be applied to major storm and other system level emergency work. If applicable, these procedures will be initiated and implemented by the Human Resources.

4.0 Finance Frequently Asked Questions (FAQs)

Q: Typically, when is the event / storm coding (storm project charging code) made available?
A: Typically, a storm event with warning, provides charging codes once the event is declared by System Storm Center / Incident command. This is often 2-4 days prior to event impact/landfall. For other events that have no warning, the event charge codes are provided as soon as event is declared by Incident Command.

Q: How will I learn that the charge code is available to charge my time?
A: Event Communications via email and portal messaging will be provided through the event chain of command, i.e. T-FL System Storm Center email. If you have not personally received and email with charge codes, go to your Storm Org Section or Branch leader.

Q: How do hourly employees code their time if told not to come to work because of a storm?
A: There is an inclement weather code that should be used. Field crews should charge “standby” time. Time should not be charged to the storm coding unless the employee is actually working on storm restoration.

Q: How should employees code their time if working overtime required to catch up on normal work?
A: This overtime may be charged to the storm project.

Q: Are the storm projects active after the storm has passed our territory?
A: The storm projects are typically open approximately three to six months after the storm has passed to ensure all appropriate invoices from contractors have been received and paid.

Q: Do all employees working storm restoration automatically receive Event-based Supplemental Compensation (ESC)?
A: No. All ESC must be approved by Management, i.e. Dhiaa Jamil, EVP and Chief Operations Officer, Executive Vice President, and/or President of Florida.

Q: Should employees normally charging the indirect pool use the storm project number during storm restoration?
A: Employees normally charging the indirect pool should continue charging the indirect pool.

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00031 | Revision no.: 000

Document title: TSSOP - Transmission System Storm Operational Plan: Finance Procedures – Pre, During, & Post Event

Type of action:

- ☑ New
- ☐ Revision
- ☐ Renumber
- ☐ Cancellation
- ☑ Ownership Change
- ☐ Periodic review completed, as required
- ☐ Suspension

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- ☐ Duke Energy Progress, LLC
- ☑ Duke Energy Florida, LLC
- ☐ Duke Energy Indiana, Inc.
- ☐ Duke Energy Kentucky, Inc.
- ☐ Duke Energy Ohio, Inc.
- ☑ Group Transmission
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☑ None
- ☐ NERC
- ☐ State Codes/Standards
- ☐ FERC Standards of Conduct
- ☐ HIPAA
- ☐ Patriot Act
- ☐ Sarbanes-Oxley
- ☐ Other _____
- ☐ OSHA _____

Complete if submitting a form: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☐ Yes (Procedure No: _____)

How is the form to be completed or used? ☐ Hard Copy (completed by hand) ☐ Online Data Entry (fillable PDF)

- ☑ Communication plan established
- ☑ Impact Reviews completed

Description of document action or summary of changes:

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GDLP-EMG-TRM-00031 is the seventh of seven documents that comprise the TSSOP for Transmission Florida (DEF). This document is the Finance Procedure and includes corporate and general financial guidelines for major storm events.

Section B: Approval

Who should sign? see instructions on page 2

Preparer(s)/Author(s)/Writer(s) (*signature not required*):

Deb Banister-Hazama

Approval recommended (*print name*): Ray Desouza	*(signature)*	Date:
Approval recommended *(print name)*: Bob Matthews	*(signature)*	Date:
Approval recommended *(print name)*:	*(signature)*	Date:
Final Approval *(print name)*: Jason Williams	*(signature)* Jason S Williams	Date: 12-13-17

RETURN SIGNED FORM AS SCANNED PDF VIA E-MAIL OR FAX TO (919) 235-3165

Keywords: procedures and forms; procedures program; daf; ADMP-PRO-ADS-00002; document management program
Applies to: Duke Energy - Transmission

Transmission Document Approval Form

issued 1/4/18

Section A: Document identification and type of action

Document no.: GDLP-EMG-TRM-00031 | Revision no.: 000

Document title: TSSOP - Transmission System Storm Operational Plan: Finance Procedures – Pre, During, & Post Event

Type of action:

- ☑ New
- ☐ Revision
- ☐ Renumber
- ☐ Cancellation
- ☑ Ownership Change
- ☐ Periodic review completed, as required
- ☐ Suspension

For Document Management staff use only:

- ☐ Editorial Change
- ☐ Migration
- ☐ Control element revision _____ (does not require approval authority signature)

Applies to: (Select all that apply)

- ☐ Duke Energy
- ☐ Duke Energy Carolinas, LLC
- ☐ Duke Energy Progress, LLC
- ☑ Duke Energy Florida, LLC
- ☐ Duke Energy Indiana, Inc.
- ☐ Duke Energy Kentucky, Inc.
- ☐ Duke Energy Ohio, Inc.
- ☑ Group Transmission
- ☐ Department _____
- ☐ Other _____

Security Restrictions Required: ☐ Yes ☐ No

If yes, explain (see instructions on page 2) _____

Compliance Applicability: (required field)

- ☑ None
- ☐ State Codes/Standards
- ☐ HIPAA
- ☐ Sarbanes-Oxley
- ☐ OSHA _____
- ☐ NERC
- ☐ FERC Standards of Conduct
- ☐ Patriot Act
- ☐ Other _____

Complete if submitting a form: (see instructions on page 2)

Does the form have a parent, governing or instructional procedure? ☐ No ☑ Yes (Procedure No: _____)

How is the form to be completed or used? ☐ Hard Copy (completed by hand) ☑ Online Data Entry (fillable PDF)

☑ Communication plan established ☑ Impact Reviews completed

Description of document action or summary of changes:

Publication of TSSOP-Transmission System Storm Operational Plan for Transmission Florida. Moving Document from Draft form created and proven during 2016 & 2017 seasons; draft document was housed within the Transmission Florida System Storm Center Share Point site: Transmission System Storm Operational Plan link.

GDLP-EMG-TRM-00031 is the seventh of seven documents that comprise the TSSOP for Transmission Florida (DEF). This document is the Finance Procedure and includes corporate and general financial guidelines for major storm events.

Section B: Approval

Who should sign? see instructions on page 2

Preparer(s)/Author(s)/Writer(s) (*signature not required*):
Deb Banister-Hazama

Approval recommended (*print name*): Ray Desouza	(*signature*)	Date: 10/11/17
Approval recommended (*print name*): Bob Matthews	(*signature*)	Date:
Approval recommended (*print name*):	(*signature*)	Date:
Final Approval (*print name*): Jason Williams	(*signature*)	Date:

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