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May 10, 2016

-VIA ELECTRONIC DELIVERY-

Carlotta Stauffer, Director
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Re: Docket 160071 Staff's First Data Request #1; Florida Power & Light Company's Petition for Approval of 2016 Revisions to Underground Residential and Commercial Differential Tariffs

Dear Ms. Stauffer:

Attached is Florida Power & Light Company's response to Staff's First Data Request relating to Florida Power & Light Company's Petition for Approval of 2016 Revisions to Underground Residential and Commercial Differential Tariffs.

If there are any questions regarding this transmittal, please contact me at (561) 304-5633

Sincerely,

s/ Scott Goorland
Scott Goorland

Attachment

FPL Responses – Staff’s 1st Set of Data Requests – Docket No. 160071-EI

1. Please refer to paragraph 6 of the petition and thirty-sixth revised tariff sheet No. 6.100, new Section 10.3.2(a)(4) for the following questions:

a. When did FPL identify the need for the proposed tariff change?

The need for the tariff change was identified during the summer of 2015, after a developer approached FPL about providing service to a potential underground subdivision with 100% of the homes constructed and sold with installed solar panels. The developer estimated that the solar panels could offset approximately 70% of the electric usage – a reduction large enough to create a revenue shortfall and the potential for cross-subsidization. While the project did not materialize, the developer informed FPL that it planned to continue to search for such opportunities within Florida in the future, making it more likely that a similar project (by this or another developer) could eventually create a revenue shortfall and the potential for cross-subsidization. Once FPL knew of its requirement to update its URD tariff (due to exceeding the 10% threshold established in Rule 25-6.078, F.A.C.), FPL decided to include the proposed modification in its April 1, 2016 filing.

b. What is FPL’s estimated shortfall (please specify the time period)?

Since the project did not materialize, no revenue shortfall occurred. At this time, FPL is not aware of any other similar project that has or will result in such a revenue shortfall.

c. The proposed underground residential distribution (URD) charges (Section 10.3.2, Contribution by Applicant) and calculations are based on standard model subdivision designs and actual construction costs may differ. Will FPL use overhead costs proposed in this filing (to calculate URD charges) or use actual work order job costs to estimate overhead costs for purposes of comparing revenues to costs pursuant to new Section 10.3.2(a)(4)?

FPL plans to use actual work order job costs to estimate overhead costs for purposes of comparing revenues to costs pursuant to new Section 10.3.2(a)(4).

d. Please confirm that the four years are based on Rule 25-6.064, Florida Administrative Code.

Confirmed.

e. Please describe the circumstances that led FPL to propose the change and provide examples of when revenue did not fully offset the cost of overhead facilities for the applicant’s development.

See FPL’s responses to 1(a.) and (b.) above.

f. Please explain how FPL keeps track of revenue and cost during and until the four-year period ends, including whether this is on a per-lot or total development basis.

As it does today for other 25-6.064 CIAC-related jobs, FPL will utilize its Work Management System (costs) and Customer Information System (revenues) to track actual costs and revenues. This can be done on a per lot basis or a total development basis.

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- g. Under FPL’s proposed change, assuming the developer of a subdivision or development is the applicant and it is the developer who sells the house, would a homeowner in the subdivision or development ever be required to pay the difference between the expected revenues and the estimated overhead cost? If yes, please explain.

No.

2. Please provide a copy of the section “Cost Changes,” updated from 2014 to the current filing.

See attached “Cost Changes” document.

3. Referring to thirty-second revised tariff sheet No. 6.130, please provide a detailed explanation for the price increases in Section 10.5.4 (a) and (b).

The increases in the four charges contained in Section 10.5.4 (a) and (b) result primarily from an increase in one of the components that is a part of each charge - the remaining value of the existing facilities being replaced. Consistent with previous tariff updates, the remaining net value of existing service amounts reflect the current actual average historical plant and depreciation reserve balances for both overhead and underground services. Changes in plant and depreciation reserve balances result from actual additions, retirements and changes in FPSC-approved depreciation rates.

4. Please explain why the Non-storm and the Storm operational costs remain unchanged from 2014 to the current docket (Appendix 3, URD, page 2).

Consistent with its approach and methodology for calculating the net present value analyses for non-storm and storm costs, first approved by the Commission in Order No. PSC-08-0774-TRF-EI (Docket No. 070231-EI) and in subsequent orders and dockets (e.g., Order No. PSC-10-0247-FOF-EI, Docket Nos. 070231-EI and 080244-EI and most recently Order No. PSC-14-0467-TRF-EI, in Docket No. 140066-EI), FPL updates these analyses no more frequently than every three years. By design, FPL’s use of a five-year average mitigates any significant future volatility and strikes a balance between ensuring customers’ charges remain reasonable without creating unnecessary regulatory filing requirements. FPL notes that the average changes in the non-storm and storm operational cost per lot from 2007-2014 were approximately 2% and 1% per year, respectively.

5. What overhead and underground activities are performed by in-house vs. contract employees? If this is a change from 2014 please describe what changed and provide the financial impact on the costs for the low and high density differentials.

There are no overhead or underground activities that are exclusively performed by FPL or its contractors. As a result, FPL utilizes a “blended” labor rate (i.e., reflects both FPL and contractor labor rates) for all overhead and underground activities. This methodology is consistent with methodology utilized in 2014.

6. Please explain the decrease in stores handling from 9.3% in 2014 to 5.44% of all material.

The stores loading rate is a system-generated calculation (divides year-to-date stores expenses by the year-to-date total cost of inventory issued) that is applied to all open construction work orders. The mathematical relationship between stores expense and cost of inventory issues fluctuates, as it reflects actual changes in the level of stores expenses and inventory issues. The decrease in the

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stores loading rate (2016 vs. 2014) is mainly due to an increased level of inventory issued resulting from a higher level of construction activity.

7. Please explain the increase in engineering overhead from 19.46% in 2014 to 26.9% applied to material and labor.

The 2016 vs. 2014 engineering overhead rate (EO) actually decreased by 3.2%. Prior to 2016, FPL split its EO rate into two components – 70% EO and 30% corporate overhead (CO). To simplify its calculations, FPL eliminated this split and consolidated its EO rate. This does not affect the overall calculation of URD charges. Combining the 2014 EO and CO rates (19.46% and 8.34%, respectively) results in a consolidated 2014 EO rate of 27.8%.

8. In the 2014 filing, Appendix 4, URD, “2014 OH Low Density Layout with 3.5 ton A/C,” certain material and labor columns include CO (corporate overhead), while others do not. The version of that page in this docket does not differentiate between material and labor costs with and without corporate overhead. Please explain why and provide the current corporate overhead percentage.

See FPL’s response to Question 7, above.

9. Referring to Appendix 4, URD Summary Sheet for low density and high density subdivisions, please explain why the overhead labor costs for both high density and low density subdivisions increased at approximately double the rate of increase for underground labor costs compared to the 2014 filing.

Labor rates are a function of contractual agreements, both for FPL employees as well FPL’s contractors. For 2016, the overall overhead labor cost increase is primarily the result of increased overhead contractor labor rates, which have increased more than contractor underground labor rates.

10. Referring to Appendix 4, URD Summary Sheet, please explain why the overhead material costs increased for the low density subdivision but decreased for the high density subdivision when compared to the 2014 filing.

FPL’s 2016 overhead URD designs (low/high density and meter pedestal) incorporated (for the first time) the installation of automated lateral switches (ALS) or reclosers (in place of lateral fuse switches). ALS/recloser devices automatically mitigate the effects of a lateral interruption, including clearing temporary faults, isolating the impact of an outage and avoiding field visits to replace blown fuses. For the low density design, five ALS/recloser devices are utilized. For the high density and meter pedestal designs, two ALS/recloser devices are utilized. If the costs of ALS/recloser devices are excluded, the 2016 total material costs for all three designs would have been lower than those in 2014. Adding the five ALS/recloser devices to the low density design caused the 2016 material costs (\$1,057) to exceed the 2014 low density material costs (\$985). However, adding the two ALS/recloser devices to the high density design left the 2016 high density material costs (\$793) just under the 2014 high density material costs (\$801).

11. Referring to Appendix 4, URD Summary Sheet, please explain why the underground material costs decreased for both the low and high density subdivisions when compared to the 2014 filing.

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The decrease in underground material costs is primarily due to favorable prices obtained through competitive bidding and favorable automatic price adjustments resulting from commodity price changes (e.g., resin in PVC conduit).

COST CHANGES

Low Density Major Changes (Base rate)

Item	2014 Approved	2016 Current	Difference	Total \$	Change per Lot (differential)	% of total change
CIAC/Lot	\$373.99	\$141.35	\$ (232.64)		\$ (232.64)	100.00%
OH Labor Rate	\$ 125.28	\$ 160.13	\$ 34.85	\$42,220.91	\$ (201.05)	
UG Labor Rate	\$ 108.39	\$ 119.99	\$ 11.60	\$28,304.05	\$ 134.78	
Labor Impact					\$ (66.27)	28.49%
Stores Loading cost/Lot - OH	\$70.13	\$42.98	\$ (27.15)	\$ (5,701.50)	\$ 27.15	
Stores Loading cost/Lot - UG	\$74.43	\$39.49	\$ (34.94)	\$ (7,337.40)	\$ (34.94)	
Store Loading Impact					\$ (7.79)	3.35%
EO/Lot - OH	\$419.97	\$481.73	\$ 61.75		\$ (61.75)	
EO/Lot - UG	\$501.03	\$511.68	\$ 10.65		\$ 10.65	
EO Impact					\$ (51.10)	21.97%
Major material - OH						
Transformer cost - OH	\$32,444.80	\$52,225.33	\$ 19,780.53		\$ (94.19)	
Poles cost	\$46,345.05	\$42,813.79	\$ (3,531.26)		\$ 16.82	
Primary Conductor cost	\$5,627.07	\$27,765.44	\$ 22,138.37		\$ (105.42)	
Secondary Conductor cost	\$27,179.36	\$7,747.34	\$ (19,432.02)		\$ 92.53	
Service Conductor & Meter cost	\$36,428.47	\$35,370.48	\$ (1,057.99)		\$ 5.04	
Major material - UG						
Transformer cost - UG	\$38,647.09	\$42,366.97	\$ 3,719.88		\$ 17.71	
Primary Cable cost	\$31,813.61	\$30,473.63	\$ (1,339.98)		\$ (6.38)	
Conduit cost (164-33100-6)	\$17,056.72	\$15,159.49	\$ (1,897.23)		\$ (9.03)	
Secondary Cable cost	\$22,532.91	\$21,137.14	\$ (1,395.77)		\$ (6.65)	
Service Cable & Meter cost	\$43,606.32	\$41,816.33	\$ (1,789.99)		\$ (8.52)	
Other Material					\$ (9.38)	
Material Impact					\$ (107.48)	46.20%
						100.00%

	Size	2014	2016	\$ Change per	% Change per
		Cost per	Cost per		
Overhead Transformers					
441-12500-5	25	\$680.52	\$672.46	(\$8.06)	-1%
441-15000-0	50	\$908.42	\$1,011.82	\$103.40	11%
441-17500-2	75	\$1,653.60	#N/A	#N/A	#N/A

	Size	2014	2016	\$ Change per	% Change per
		Cost per	Cost per		
Underground Transformers					
459-42005-9	50	\$1,411.36	\$1,417.75	\$6.39	0%
459-42105-5	75	\$1,867.00	\$1,792.71	(\$74.29)	-4%

	Size	2014	2016	\$ Change per	% Change per
		Cost per	Cost per		
Poles					
151-18000-0	35/4	\$180.65	\$167.76	(\$12.89)	-7%
151-18900-1	40/3	\$293.11	\$256.35	(\$36.76)	-13%
151-19400-5	45/2	\$431.69	\$362.40	(\$69.29)	-16%

	Size	2014	2016	\$ Change per	% Change per
		Cost/Ft	Cost/Ft		
Conduit and Cable					
164-33100-6	2"	\$0.37	\$0.33	(\$0.04)	-11%
100-25000-5	1/0 TPX (UG)	\$0.84	\$0.83	(\$0.01)	-1%
100-25300-4	4/0 TPX (UG)	\$1.20	\$1.16	(\$0.04)	-3%

2016 URD TARIFF LABOR CHANGES

LOW DENSITY

\$141.35	-	\$373.99	=	(\$232.64)	=	-62.20%	
<u>LABOR</u>		<u>2014</u>		<u>2016</u>	<u>%INC</u>	<u>\$ Diff. Impact</u>	<u>% Diff. Impact</u>
1. Labor Rate (Per MH)	OH	\$125.28		\$160.13	27.82%	(\$210.57)	90.51%
	UG	\$108.39		\$119.99	10.70%	\$111.20	-47.80%
2. Manhours	OH	1268.87		1256.37	-0.99%	\$7.46	-3.21%
	UG	1897.01		1896.41	-0.03%	(\$0.30)	0.13%
3. EO Rate Base		27.80%		26.90%	-3.24%	(\$2.21)	0.95%
		\$245.40		\$179.13	-27.00%	(\$18.42)	7.92%
Labor Impact on Differential.....						(\$112.85)	48.51%

High Density Major Changes (Base rate)

Item	2014	2016	Difference	Total \$	Change per Lot (differential)	% of total change
	Approved	Current				
CIAC/Lot	\$79.71	(\$51.03)	\$ (130.74)		\$ (130.74)	100.00%
OH Labor Rate	\$ 125.28	\$ 160.13	\$ 34.85	\$26,936.95	\$ (128.27)	
UG Labor Rate	\$ 108.39	\$ 119.99	\$ 11.60	\$14,930.18	\$ 71.10	
Labor Impact					\$ (57.18)	43.73%
Stores Loading cost/Lot - OH	\$57.09	\$32.23	\$ (24.86)	\$ (5,220.60)	\$ 24.86	
Stores Loading cost/Lot - UG	\$49.73	\$26.29	\$ (23.44)	\$ (4,922.40)	\$ (23.44)	
Store Loading Impact					\$ 1.42	-1.09%
EO/Lot - OH	\$507.72	\$569.15	\$ 61.43		\$ (61.43)	
EO/Lot - UG	\$536.74	\$552.78	\$ 16.04		\$ 16.04	
EO Impact					\$ (45.40)	34.72%
Major material - OH						
Transformer cost - OH	\$27,605.98	\$28,118.79	\$ 512.81		\$ (2.44)	
Poles cost	\$27,657.37	\$25,292.64	\$ (2,364.73)		\$ 11.26	
Primary Conductor cost	\$2,008.11	\$11,545.30	\$ 9,537.19		\$ (45.42)	
Secondary Conductor cost	\$15,938.38	\$12,467.77	\$ (3,470.61)		\$ 16.53	
Service Conductor & Meter cost	\$27,773.75	\$26,859.70	\$ (914.05)		\$ 4.35	
Major material - UG						
Transformer cost - UG	\$20,812.54	\$22,410.74	\$ 1,598.20		\$ 7.61	
Primary Cable cost	\$22,357.39	\$19,842.43	\$ (2,514.96)		\$ (11.98)	
Conduit cost (164-33100-6)	\$ 8,986.10	\$7,986.57	\$ (999.53)		\$ (4.76)	
Secondary Cable cost	\$6,544.52	\$5,998.54	\$ (545.98)		\$ (2.60)	
Service Cable & Meter cost	\$38,250.66	\$36,800.45	\$ (1,450.21)		\$ (6.91)	
Other Material					\$ 4.76	
Material Impact					\$ (29.59)	22.63%
						100.00%

Overhead Transformers	Size	2014	2016	\$ Change per	% Change per
		Cost per	Cost per		
441-12500-5	25	\$680.52	\$672.46	(\$8.06)	-1%
441-15000-0	50	\$908.42	\$1,011.82	\$103.40	11%
441-17500-2	75	\$1,653.60	\$1,383.30	(\$270.30)	-16%

Underground Transformers	Size	2014	2016	\$ Change per	% Change per
		Cost per	Cost per		
459-42005-9	50	\$1,411.36	\$1,417.75	\$6.39	0%
459-42105-5	75	\$1,867.00	\$1,792.71	(\$74.29)	-4%

Poles	Size	2014	2016	\$ Change per	% Change per
		Cost per	Cost per		
151-18000-0	35/4	\$180.65	\$167.76	(\$12.89)	-7%
151-18900-1	40/3	\$293.11	\$256.35	(\$36.76)	-13%
151-19400-5	45/2	\$431.69	\$362.40	(\$69.29)	-16%

Conduit and Cable	Size	2014	2016	\$ Change per	% Change per
		Cost/Ft	Cost/Ft		
164-33100-6	2"	\$0.37	\$0.33	(\$0.04)	-11%
100-25000-5	1/0 TPX (UG)	\$0.84	\$0.83	(\$0.01)	-1%
100-25300-4	4/0 TPX (UG)	\$1.20	\$1.16	(\$0.04)	-3%

Meter Pedestal Major Changes (Base rate)

Item	2014	2016	Difference	Total \$	Change per Lot (differential)	% of total change
	Approved	Current				
CIAC/Lot	(\$161.27)	(\$292.35)	\$ (131.08)		\$ (131.08)	100.00%
OH Labor Rate	\$ 125.28	\$ 160.13	\$ 34.85	\$18,709.53	\$ (89.09)	
UG Labor Rate	\$ 108.39	\$ 119.99	\$ 11.60	\$6,536.39	\$ 31.13	
Labor Impact					\$ (57.97)	44.22%
Stores Loading cost/Lot - OH	\$48.52	\$27.66	\$ (20.86)	\$ (4,380.60)	\$ 20.86	
Stores Loading cost/Lot - UG	\$41.56	\$21.91	\$ (19.65)	\$ (4,126.50)	\$ (19.65)	
Store Loading Impact					\$ 1.21	-0.92%
EO/Lot - OH	\$407.27	\$451.94	\$ 44.67		\$ (44.67)	
EO/Lot - UG	\$353.28	\$353.61	\$ 0.32		\$ 0.32	
EO Impact					\$ (44.34)	33.83%
Major material - OH						
Transformer cost - OH	\$27,605.98	\$28,019.59	\$ 413.61		\$ (1.97)	
Poles cost	\$20,947.58	\$19,088.05	\$ (1,859.53)		\$ 8.85	
Primary Conductor cost	\$2,071.05	\$11,276.55	\$ 9,205.50		\$ (43.84)	
Secondary Conductor cost	\$12,267.78	\$9,083.52	\$ (3,184.26)		\$ 15.16	
Service Conductor & Meter cost	\$22,934.07	\$22,033.87	\$ (900.20)		\$ 4.29	
Major material - OH						
Transformer cost - UG	\$18,962.74	\$20,084.51	\$ 1,121.77		\$ 5.34	
Primary Cable cost	\$22,389.69	\$20,359.46	\$ (2,030.23)		\$ (9.67)	
Conduit cost (164-33100-6)	\$ 5,031.68	\$4,472.00	\$ (559.68)		\$ (2.67)	
Secondary Cable cost	\$13,356.71	\$12,543.84	\$ (812.87)		\$ (3.87)	
Meter cost	\$18,807.36	\$17,908.00	\$ (899.36)		\$ (4.28)	
Other Material					\$ 2.67	
Material Impact					\$ (29.98)	22.87%
						100.00%

Overhead Transformers	Size	2014	2016	\$ Change per	% Change per
		Cost per	Cost per		
441-12500-5	25	\$680.52	\$672.46	(\$8.06)	-1%
441-15000-0	50	\$908.42	\$1,011.82	\$103.40	11%
441-17500-2	75	\$1,653.60	\$1,383.30	(\$270.30)	-16%

Underground Transformers	Size	2014	2016	\$ Change per	% Change per
		Cost per	Cost per		
459-42005-9	50	\$1,411.36	\$1,417.75	\$6.39	0%
459-42105-5	75	\$1,867.00	\$1,792.71	(\$74.29)	-4%

Poles	Size	2014	2016	\$ Change per	% Change per
		Cost per	Cost per		
151-18000-0	35/4	\$180.65	\$167.76	(\$12.89)	-7%
151-18900-1	40/3	\$293.11	\$256.35	(\$36.76)	-13%
151-19400-5	45/2	\$431.69	\$362.40	(\$69.29)	-16%

Conduit and Cable	Size	2014	2016	\$ Change per	% Change per
		Cost/Ft	Cost/Ft		
164-33100-6	2"	\$0.37	\$0.33	(\$0.04)	-11%
100-25000-5	1/0 TPX (UG)	\$0.84	\$0.83	(\$0.01)	-1%
100-25300-4	4/0 TPX (UG)	\$1.20	\$1.16	(\$0.04)	-3%

2016 URD TARIFF LABOR CHANGES

METER PEDESTAL

(\$292.35) - (\$161.27) = (\$131.08) = 81.28%

<u>LABOR</u>		<u>2014</u>	<u>2016</u>	<u>%INC</u>	<u>\$ Diff.</u> <u>Impact</u>	<u>% Diff.</u> <u>Impact</u>
1. Labor Rate	OH	\$125.28	\$160.13	27.82%	(\$115.95)	88.46%
(Per MH)	UG	\$108.39	\$119.99	10.70%	\$43.98	-33.55%
2. Manhours	OH	585.58	574.64	-1.87%	\$7.79	-5.94%
	UG	579.43	579.51	0.01%	(\$0.14)	0.11%
3. EO Rate		27.80%	26.90%	-3.24%	\$0.45	-0.34%
Base		(\$49.75)	(\$118.93)	139.07%	(\$19.23)	14.67%
Labor Impact on Differential.....					(\$83.11)	63.40%

2016 OVERHEAD LABOR COSTS

	<u>LOW DENSITY</u>			<u>HIGH DENSITY</u>			<u>METER PEDESTAL</u>			
	<u>2014</u>	<u>2016</u>	<u>%INC.</u>	<u>2014</u>	<u>2016</u>	<u>%INC.</u>	<u>2014</u>	<u>2016</u>	<u>%INC.</u>	
1. SERVICE	\$150.05	\$178.33	18.85%	\$135.36	\$161.73	19.48%	\$79.94	\$95.51	19.48%	1. SERVICE
2. PRIMARY	\$112.31	\$122.71	9.26%	\$56.85	\$60.71	6.79%	\$58.89	\$59.97	1.83%	2. PRIMARY
3. SECONDARY	\$184.14	\$112.80	-38.74%	\$139.10	\$143.08	2.86%	\$117.81	\$114.14	-3.12%	3. SECONDARY
4. POLES	\$317.61	\$369.73	16.41%	\$229.16	\$273.21	19.22%	\$155.80	\$185.90	19.32%	4. POLES
5. TRANSFORMER	\$45.35	\$174.11	283.93%	\$33.40	\$69.43	107.87%	\$33.40	\$67.54	102.22%	5. TRANSFORMER
6. EO	<u>\$157.52</u>	<u>\$257.62</u>	<u>63.55%</u>	<u>\$115.57</u>	<u>\$190.50</u>	<u>64.84%</u>	<u>\$86.76</u>	<u>\$140.70</u>	<u>62.17%</u>	6. EO
7. TOTAL	\$966.98	\$1,215.30	25.68%	709.44	898.66	26.67%	\$532.60	\$663.76	24.63%	7. TOTAL

<u>LOW DENSITY</u>	<u>HIGH DENSITY</u>	<u>METER PEDESTAL</u>
DESIGN CHANGE: REDUCED SEC WIRE, INCREASED TX		
1. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	1. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	1. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)
2. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW) REMOVED HARDWARE BONDING UNITS REDUCED DUPLICATE SPLICES REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)	2. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW) REMOVED HARDWARE BONDING UNITS REDUCED DUPLICATE SPLICES REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)	2. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW) REMOVED HARDWARE BONDING UNITS REDUCED DUPLICATE SPLICES REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)
3. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW) DECREASED SECONDARY FOOTAGE REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)	3. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW) REMOVED DUPLICATE SPLICES REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)	3. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW) REMOVED DUPLICATE SPLICES REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)
4. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	4. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	4. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)
5. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) ADDED 28 TX, FUSE SW, GND RODS, CONNECTIONS	5. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)	5. INCREASED LABOR RATE OF 27.82% (\$160.13 VS. \$125.28) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)
6. HIGHER BASE \$809.46 VS. \$957.68 INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED	6. HIGHER BASE \$593.87 VS. \$708.16 INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED	6. HIGHER BASE \$445.84 VS. \$523.06 INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED

NOTE Current costs include additional items associated with transformer installation (fuse switch, etc.) that were charged to other accounts in the past

2016 OVERHEAD MATERIAL COSTS

	<u>LOW DENSITY</u>			<u>HIGH DENSITY</u>			<u>METER PEDESTAL</u>			
	<u>2014</u>	<u>2016</u>	<u>%INC.</u>	<u>2014</u>	<u>2016</u>	<u>%INC.</u>	<u>2014</u>	<u>2016</u>	<u>%INC.</u>	
1. SERVICE	\$185.58	\$168.43	-9.24%	\$168.82	\$152.61	-9.60%	\$139.40	\$125.19	-10.19%	1. SERVICE
2. PRIMARY	\$28.67	\$132.22	361.18%	\$12.21	\$65.60	437.26%	\$12.59	\$64.07	408.90%	2. PRIMARY
3. SECONDARY	\$138.46	\$36.89	-73.36%	\$96.88	\$70.84	-26.88%	\$74.57	\$51.61	-30.79%	3. SECONDARY
4. POLES	\$236.10	\$203.88	-13.65%	\$168.12	\$143.71	-14.52%	\$127.33	\$108.45	-14.83%	4. POLES
5. TRANSFORMER	\$165.29	\$248.69	50.46%	\$167.80	\$159.77	-4.79%	\$167.80	\$159.20	-5.13%	5. TRANSFORMER
6. STORES LD	\$70.13	\$42.98	-38.71%	\$57.09	\$32.23	-43.55%	\$48.52	\$27.66	-42.99%	6. STORES LD
7. EO	<u>\$160.40</u>	<u>\$224.10</u>	<u>39.71%</u>	<u>\$130.56</u>	<u>\$168.06</u>	<u>28.72%</u>	<u>\$110.96</u>	<u>\$144.23</u>	<u>29.98%</u>	7. EO
8. TOTAL	\$984.63	\$1,057.19	7.37%	\$801.48	\$792.82	-1.08%	\$681.17	\$680.41	-0.11%	8. TOTAL

<u>LOW DENSITY</u>	<u>HIGH DENSITY</u>	<u>METER PEDESTAL</u>
<i>DESIGN CHANGE: REDUCED SEC WIRE, INCREASED TX</i>		
1. DECREASED AVE METER COST OF -4.78% (\$102 VS. \$107) DECREASED PER FOOT COST OF 1/0 TPX (\$0.70 VS. \$0.71) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	1. DECREASED AVE METER COST OF -4.78% (\$102 VS. \$107) DECREASED PER FOOT COST OF 1/0 TPX (\$0.70 VS. \$0.71) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	1. DECREASED AVE METER COST OF -4.78% (\$102 VS. \$107) DECREASED PER FOOT COST OF 1/0 TPX (\$0.70 VS. \$0.71) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)
2. REPLACED 5 FS w/ TRIPSAVER (EA: \$58 VS. \$3217) INCR. COST of 1/0A PRI by \$.005, REDUCE FT b/c DUPLI. SPL. REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) ADDED 26 TX, FS, AND ASSOCIATED MATERIAL DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	2. REPLACED 2 FS w/ TRIPSAVER (EA: \$58 VS. \$3217) INCR. COST of 1/0A PRI by \$.005, REDUCE FT b/c DUPLI. SPL. REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	2. REPLACED 2 FS w/ TRIPSAVER (EA: \$58 VS. \$3217) INCR. COST of 1/0A PRI by \$.005, REDUCE FT b/c DUPLI. SPL. REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)
3. INCREASED PER FOOT COST OF 3/0 TPX (\$1.01 VS. \$0.98) REDUCE TOT SECONDARY BY 8,419 FEET (\$5,001 VS. \$13,162) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	3. INCREASED PER FOOT COST OF 3/0 TPX (\$1.01 VS. \$0.98) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	3. INCREASED PER FOOT COST OF 3/0 TPX (\$1.01 VS. \$0.98) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)
4. DECREASED AVE COST OF POLES BY 11% (\$227 VS. \$255) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	4. DECREASED AVE COST OF POLES BY 11% (\$221 VS. \$248) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	4. DECREASED AVE COST OF POLES BY 13% (\$259 VS. \$297) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)
5. DECREASED AVE COST OF TX (\$700 VS. \$925) INCREASED TOTAL COST OF TX (\$42,717 VS. \$32,373) ELIM. 75KVA TX, REPLACED w/ SMALLER 25KVA & 50KVA REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	5. DECREASED AVE COST OF TX (\$1192 VS. \$1313) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	5. DECREASED AVE COST OF TX (\$1192 VS. \$1313) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)
6. DECREASED STORES RATE OF -41.51% (5.44% VS. 9.30%) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	6. DECREASED STORES RATE OF -41.51% (5.44% VS. 9.30%) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	6. DECREASED STORES RATE OF -41.51% (5.44% VS. 9.30%) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)
7. HIGHER BASE (\$824.23 VS. \$833.09) INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED	7. LOWER BASE (\$670.92 VS. \$624.76) INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED	7. LOWER BASE (\$570.21 VS. \$536.18) INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED

NOTE Current costs include additional items associated with transformer installation (fuse switch, etc.) that were charged to other accounts in the past

2016 UNDERGROUND LABOR COSTS

	<u>LOW DENSITY</u>			<u>HIGH DENSITY</u>			<u>METER PEDESTAL</u>			
	<u>2014</u>	<u>2016</u>	<u>%INC.</u>	<u>2014</u>	<u>2016</u>	<u>%INC.</u>	<u>2014</u>	<u>2016</u>	<u>%INC.</u>	
1. SERVICE	\$299.78	\$336.04	12.10%	\$259.37	\$295.47	13.92%	\$62.99	\$75.26	19.48%	1. SERVICE
2. PRIMARY	\$201.15	\$185.59	-7.74%	\$125.18	\$121.60	-2.86%	\$109.85	\$108.82	-0.94%	2. PRIMARY
3. SECONDARY	\$80.62	\$83.95	4.13%	\$43.58	\$43.33	-0.57%	\$80.72	\$82.22	1.86%	3. SECONDARY
4. TRANSFORMER	\$39.83	\$64.95	63.07%	\$23.49	\$17.03	-27.50%	\$19.85	\$14.48	-27.05%	4. TRANSFORMER
5. P/S TRENCH	\$238.76	\$247.06	3.48%	\$144.15	\$149.16	3.48%	\$119.21	\$123.35	3.47%	5. P/S TRENCH
6. SVC TRENCH	\$211.85	\$219.22	3.48%	\$151.32	\$156.59	3.48%	\$0.00	\$0.00	N.A.	6. SVC TRENCH
7. EO	<u>\$208.61</u>	<u>\$305.80</u>	<u>46.59%</u>	<u>\$145.38</u>	<u>\$210.68</u>	<u>44.92%</u>	<u>\$76.40</u>	<u>\$108.71</u>	<u>42.29%</u>	7. EO
8. TOTAL	\$1,280.60	\$1,442.61	12.65%	\$892.47	\$993.86	11.36%	\$469.02	\$512.84	9.34%	8. TOTAL

<u>LOW DENSITY</u>	<u>HIGH DENSITY</u>	<u>METER PEDESTAL</u>
1. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	1. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	1. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)
2. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)	2. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)	2. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)
3. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	3. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	3. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)
4. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)	4. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)	4. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE)
5. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	5. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	5. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)
6. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	6. INCREASED LABOR RATE OF 10.70% (\$119.99 VS. \$108.39) DECREASED CO RATE - COMBINED WITH EO (SEE 7 BELOW)	6. N.A.
7. HIGHER BASE (\$1,071.99 VS. \$1,136.81) INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED	7. HIGHER BASE (\$747.09 VS. \$783.18) INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED	7. HIGHER BASE (\$392.62 VS. \$404.13) INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED

NOTE Current costs include additional items associated with transformer installation (ground rod, etc.) that were charged to other accounts in the past

2016 UNDERGROUND MATERIAL COSTS

1. SERVICE
2. PRIMARY
3. SECONDARY
4. TRANSFORMER
5. STORES LDG
6. EO

7. TOTAL

<u>LOW DENSITY</u>			<u>HIGH DENSITY</u>			<u>METER PEDESTAL</u>		
<u>2014</u>	<u>2016</u>	<u>%INC.</u>	<u>2014</u>	<u>2016</u>	<u>%INC.</u>	<u>2014</u>	<u>2016</u>	<u>%INC.</u>
\$222.15	\$199.13	-10.36%	\$232.51	\$209.09	-10.07%	\$114.32	\$101.75	-11.00%
\$266.52	\$224.33	-15.83%	\$135.90	\$112.74	-17.04%	\$136.10	\$115.68	-15.00%
\$114.79	\$100.65	-12.32%	\$39.78	\$34.08	-14.33%	\$81.19	\$71.27	-12.22%
\$196.88	\$201.75	2.47%	\$126.51	\$127.33	0.65%	\$115.26	\$114.12	-0.99%
\$74.43	\$39.49	-46.94%	\$49.73	\$26.29	-47.13%	\$41.56	\$21.91	-47.28%
<u>\$170.23</u>	<u>\$205.88</u>	<u>20.94%</u>	<u>\$113.73</u>	<u>\$137.06</u>	<u>20.51%</u>	<u>\$95.05</u>	<u>\$114.25</u>	<u>20.20%</u>
\$1,045.00	\$971.23	-7.06%	\$698.16	\$646.59	-7.39%	\$583.48	\$538.98	-7.63%

1. SERVICE
2. PRIMARY
3. SECONDARY
4. TRANSFORMER
5. STORES LDG
6. EO

7. TOTAL

<u>LOW DENSITY</u>	<u>HIGH DENSITY</u>	<u>METER PEDESTAL</u>
1. DECREASED AVERAGE METER COST OF -4.78% (\$102 VS. \$107) LOWER COST PER FOOT OF 1/0 TPX (\$0.83 VS. \$0.84) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	1. DECREASED AVERAGE METER COST OF -4.78% (\$102 VS. \$107) LOWER COST PER FOOT OF 1/0 TPX (\$0.83 VS. \$0.84) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	1. DECREASED AVERAGE METER COST OF -4.78% (\$102 VS. \$107) LOWER COST PER FOOT OF 1/0 TPX (\$0.83 VS. \$0.84) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)
2. LOWER COST PER FOOT OF PRIMARY CABLE (\$1.80 VS. \$1.84) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	2. LOWER COST PER FOOT OF PRIMARY CABLE (\$1.80 VS. \$1.84) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	2. LOWER COST PER FOOT OF PRIMARY CABLE (\$1.80 VS. \$1.84) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)
3. LOWER COST PER FOOT OF 4/0 TPX (\$1.16 VS. \$1.20) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	3. LOWER COST PER FOOT OF 4/0 TPX (\$1.16 VS. \$1.20) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	3. LOWER COST PER FOOT OF 4/0 TPX (\$1.16 VS. \$1.20) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)
4. NO CHANGE IN AVE COST OF TXS (\$1449 VS. \$1449) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	4. LOWER AVE COST OF TXS (\$1543 VS. \$1563) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	4. LOWER AVE COST OF TXS (\$1643 VS. \$1685) REALLOCATED COSTS TO TX ACCOUNT (SEE NOTE) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)
5. LOWER TOTAL MATERIAL COST DECREASED STORES RATE OF -41.51% (5.44% VS. 9.30%) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	5. LOWER TOTAL MATERIAL COST DECREASED STORES RATE OF -41.51% (5.44% VS. 9.30%) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)	5. LOWER TOTAL MATERIAL COST DECREASED STORES RATE OF -41.51% (5.44% VS. 9.30%) DECREASED CO RATE - COMBINED WITH EO (SEE 6 BELOW)
6. LOWER BASE (\$874.77 VS. \$765.35) INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED	6. LOWER BASE (\$584.43 VS. \$509.53) INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED	6. LOWER BASE (\$488.43 VS. \$424.73) INCREASED EO RATE OF 38.23% (26.90% VS. 19.46%) EO & CO ARE NOW COMBINED

NOTE Current costs include additional items associated with transformer installation (ground rod, etc.) that were charged to other accounts in the past