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FPSC-Records/Reporting

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#### MEMORANDUM

JUNE 12, 1997

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FPSC - Records/Reporting

TO:

DIRECTOR, DIVISION OF RECORDS AND REPORTING (BAYO)

FROM:

DIVISION OF ELECTRIC & GAS (GOAD, BREMAN) ACCEPTED TO THE PROPERTY OF LEGAL SERVICES (KEATING) WOR RUE

JDJ

RE:

DOCKET NO. 970517-EI - PETITIONS FOR APPROVAL OF REVISION TO ANNUAL UNDERGROUND RESIDENTIAL DISTRIBUTION TARIFF BY FLORIDA POWER & LIGHT COMPANY, FLORIDA POWER CORPORATION,

TAMPA ELECTRIC COMPANY, AND GULF POWER COMPANY.

AGENDA:

JUNE 24, 1997 - REGULAR AGENDA - TARIFF FILING - INTERESTED PERSONS MAY PARTICIPATE

CRITICAL DATES:

60-DAY SUSPENSION DATE: JUNE 29, 1997

SPECIAL INSTRUCTIONS: S:\PSC\EAG\WP\970517EI.RCM - The attachments included with the recommendation are not in the electronically filed version.

#### CASE BACKGROUND

Florida Power Corporation (FPC), Florida Power & Light Company (FPL), Gulf Power Company (Gulf), and Tampa Electric Company (TECO) have filed updated tariffs and charges which are applicable to the installation of underground residential distribution service. Rule 25-6.078, Florida Administrative Code, requires that these charges be updated annually. The charges represent the additional costs to provide underground service in place of standard overhead service. The proposed changes were accompanied by work papers explaining their derivation.

DOCUMENT NUMBER-DATE

05935 JUN 125

ISSUE 1: Should the Commission approve Florida Power & Light Company's, Tampa Electric Company's, Florida Power Corporation's, and Gulf Power Company's updated tariff sheets and charges associated with the installation of underground electric distribution facilities?

RECOMMENDATION: Yes. The changes are appropriate and should be approved.

STAFF ANALYSIS: The underground residential distribution (URD) tariffs provide customers with standard charges for certain types of underground service. Each utility develops the basic charges based on the same three model subdivisions: a 210-lot low-density single-family home subdivision, a 176-lot high density subdivision served by individual meters, and a 176-lot high density mobile home subdivision served by ganged meters.

The differential rates for these situations are developed by estimating the cost per unit of both underground service and overhead service. The difference between these numbers is the per unit charge that customers must pay when they request underground service in lieu of standard overhead service. The estimates are based on each company's standard engineering and design practices, and incorporate company-wide material costs and labor rates. Table 1 below shows the proposed 1997 differentials.

TABLE 1
1997 UNDERGROUND PER LOT DIFFERENTIAL COSTS

RESIDENTIAL SUBDIVISIONS	FPC	FPL	TECO	GULF
Low Density	\$243	\$309	\$273	\$404
High Density Individual Meters	\$128	\$224	\$190	\$394
High Density Ganged Meters	\$6	\$22	N/A	N/A

Because TECO and Gulf do not install a large number of ganged meter high density subdivisions, they have not developed a differential for this type of installation.

Tables 2, 3, and 4 show comparisons between the existing and proposed underground differentials for each subdivision type.

TABLE 2

1997 OVERHEAD VS. UNDERGROUND PER LOT COST DIFFERENTIALS

210-Lot Low- Density Subdivision	1996 Existing	1997 Proposed	Percent (%) Change
FPC	\$288	\$243	-15.63%
FPL	\$277	\$309	11.55%
TECO	\$251	\$273	8.76%
GULF	\$411	\$404	-1.70%

TABLE 3

1997 OVERHEAD VS. UNDERGROUND PER LOT COST DIFFERENTIALS

176-Lot High-Density Individual Meters	1996 Existing	1997 Proposed	Percent (%) Change
FPC	\$151	\$128	-15.23%
FPL	\$193	\$224	16.06%
TECO	\$195	\$190	-2.56%
GULF	\$429	\$394	-8.16%

#### TABLE 4

1997 OVERHEAD VS. UNDERGROUND PER LOT COST DIFFERENTIALS

176-Lot High-Density Ganged Meters	1996 Existing	1997 Proposed	Percent (%) Change
FPC	\$31	\$6	-80.65%
FPL	\$0	\$22	-

Florida Power's differentials are decreasing from the prior year due to a change in the transformer arrestor used for underground service. The new arrestor resulted in an approximate \$22 decrease. Florida Power's cost for the primary lines it is using has decreased due to a decrease in price from the vendor.

Florida Power & Light's total cost for both overhead and underground service decreased. However, overhead costs decreased more than underground costs causing the cost differential to increase slightly. The underground costs did not decrease as much as overhead costs because the conduit used to install underground facilities increased in cost due to general fluctuations in market prices. The use of conduit is only necessary in the installation of underground service and therefore is not a cost component of overhead service.

Gulf's analysis represents a discounted cash value. The analysis is a present worth cash flow over a 10 year build-out period using a 3% escalation rate and a discount rate of 8.82%. The discount rate is Gulf's after-tax weighted average cost of capital. Approximately 30% construction is assumed in the first year with lower construction rates in the remaining years. Consequently, Gulf's proposed per lot tariff differentials are lower than they would be if 100 % build-out in the first year was assumed. This accounts for the difference between the projected differential as shown in the attached schedules and the differential Gulf is proposing to charge. By Order No. PSC-96-1516-FOF-EI, the Commission authorized Gulf to use this methodology.

	1 Year Build-Out	10 Year Build-Out
Proposed Low Density	\$ 608	\$ 404
Proposed High Density	\$ 567	\$ 394

In Order No. PSC-96-1516-FOF-EI, the Commission also required an audit of Gulf's residential subdivisions. The audit was to include a review of the "as-built" drawings and work orders. The audit has not been completed because of the November 26, 1996, effective date of Gulf's present URD rates. Staff believes at least a full year of experience is required for the audit to provide meaningful results. If there is a material and substantive finding in the final audit report, staff will bring the matter to the Commission for disposition.

Staff has reviewed all the proposed changes and recommends that they be approved. The attached Schedules 1 through 4 are for informational purposes. Schedule 1 contains a comparison of present and proposed underground and overhead per unit costs segregated into labor and material costs. Schedule 2 contains a series of graphs which show the total underground and overhead costs for each subdivision type for years 1975 through 1997. Schedule 3 provides a detailed breakdown of the overhead and underground per lot costs which were used to arrive at the differential charges. Schedule 4 shows for each company the total numbers and percentages of customers at year end which were served from underground and overhead lines for the years 1988 through 1996.

ISSUE 2: What are the appropriate effective dates for the revised tariffs?

RECOMMENDATION: The effective dates for the revised tariffs should be:

FPL: 30 days from date of order approving

tariffs.

FPC: June 24, 1997. TECO: June 24, 1997. Gulf: June 24, 1997.

STAPF ANALYSIS: If the Commission approves the revised tariffs, they should become effective immediately, with the exception of FPL's tariffs. FPL requested that its tariffs become effective no sooner than 30 days from the date of the Commission order approving the tariffs.

ISSUE 3: Should these dockets be closed?

RECOMMENDATION: Yes. With the adoption of staff's recommendation, the tariffs should become effective as stated in Issue 2. If a protest is filed within 21 days from the issuance date of the order, the tariff should remain in effect with any increase held subject to refund, pending resolution of the protest. If no timely protest is filed, this docket should be closed.

STAFF ANALYSIS: At the conclusion of the protest period, if no protest is filed, these dockets should be closed.

#### 1996 AND 1997 PER LOST COSTS OVERHEAD, UNDERGROUND AND DIFFERENTIAL COSTS SINGLE FAMILY DWELLING (LOW DENSITY)

SCHEDULE 1 Page 1 OF 3

		FPC(a)				FPL			TECO(a)			GULF		
	OVERHEAD COST	1996	1997	% Increase	1996 (b)	1997 (c)	% Increase	1996	1997	% Increase	1996	1997	% Increase	
y	MATERIAL LABOR	\$344.75 \$188.76	\$317.82 \$191.19	-7.81% 1.29%	\$564.66 \$402.00	\$491.37 \$421.73	-12.98% 4.91%	\$395.86 \$264.32	\$402.91 \$267.68	1.78% 1.27%	\$403.76 \$375.71	\$393.08 \$370.03	-2.65% -1.51%	
	TOTAL	\$533.51	\$509.01	-4.59%	\$966.66	\$913.10	:5.54%	\$660.18	\$670.59	1.58%	\$779.47	\$763.11	-2.10%	
	UNDERGROUND	\$461.73	\$390.96	-15.33%	\$625.13	\$573.61	-8.24%	\$488.13	\$486.11	-0.41%	\$611.86	\$595.75	-2.63%	
	LABOR	\$359.79	\$361.44	0.46%	\$533.85	\$648.21	21.42%	\$422.72	\$457.80	8.30%	\$787.58	\$775.71	-1.51%	
	TOTAL	\$821.52	\$752.40	-8.41%	\$1,158.98	\$1,221.82	5.42%	\$910.85	\$943.91	3.63%	\$1,399.44	\$1,371,46	-2.00%	
	DIFFERENTIAL COST													
	MATERIAL LABOR	\$116.96 \$171.03	\$73.14 \$170.25	-37.48% -0.46%	\$60.47 \$131.85	\$82.24 \$225.48	36.00% 71.77%	\$92.27 \$158.40	\$83.20 \$190.12	-9.83% 20.03%	\$208.10 \$411.87	\$202.67 \$405.68	-2.61% -1.50%	
	NET	\$288.01	\$243.39	-15.49%	\$192.32	\$308.72	60.52%	\$250.67	\$273.32	9.04%	\$619.97	\$608.35	-1.87%	

#### Notes

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<sup>(</sup>a) To subdivisions with a density of 1.0 but less than 6 dwelling units per acre.

<sup>(</sup>b) To subdivisions with a density of 0.5 to 6 units per acre (excludes multiple occupancy buildings).

<sup>(</sup>c) To subdivisions with a density of 0.5 to 6 units per acre (excludes multiple occupancy buildings greater than 4 units per service lateral).

#### 1996 AND 1997 PER LOST COSTS OVERHEAD, UNDERGROUND AND DIFFERENTIAL COSTS HIGH DENSITY - INDIVIDUAL METERS

SCHEDULE 1 Page 2 OF 3

			FPC(a)			FPL(b)			TECO(a)			GULF	
		1996	1997	% Increase	1996	1997	% Increase	1996	1997	% Increase	1996	1997	% Increase
	OVERHEAD COST												
,	MATERIAL LABOR	\$271.99 \$151.01	\$247.13 \$153.03	-9.14% 1.34%	\$382.05 \$274.40	\$322.47 \$287.85	-15.59% 4.90%	\$308.75 \$241.60	\$334.71 \$244.75	8.41% 1.30%	\$317.17 \$288.57	\$307.94 \$281.92	-2.91% -2.30%
	TOTAL	\$423.00	\$400.15	-5.40%	\$656.45	\$610.32	-7.03%	\$550.35	\$579.46	5.29%	\$605.74	\$589.86	-2.62%
	UNDERGROUND												
	MATERIAL LABOR	\$313.65 \$260.81	\$263.97 \$263.68	-15.84% 1.10%	\$444.86 \$404.58	\$410.38 \$424.12	-7.75% 4.83%	\$378.28 \$366.87	\$386.07 \$383.83	2.06% 4.62%	\$551.04 \$628.86	\$529.65 \$627.11	-3.88% -0.28%
	TOTAL	\$574.46	\$527.65	-8.15%	\$849.44	\$834.50	:1.76%	\$745.15	\$769.90	3.22%	\$1,179.90	\$1,156.76	-1.96%
	DIFFERENTIAL COST												
)	MATERIAL LABOR	\$41.66 \$109.80	\$16.84 \$110.65	-59.58% 0.77%	\$62.81 \$130.18	\$87.91 \$136.27	39.96% 4.68%	\$69.53 \$125.27	\$51.36 \$139.08	-26.13% 11.02%	\$233.87 \$340.29	\$221.71 \$345.19	-5.20% 1.44%
	NET	\$151.46	\$127.49	-15.83%	\$192.99	\$224.18	16,16%	\$194.80	\$190.44	-2.24%	\$574.16	\$566.90	-1.26%

<sup>(</sup>a) To subdivisions with a density of 6 or more dwelling units per acre.

<sup>(</sup>b) To subdivisions with a density of 6 or more dwelling units per acre. (Excludes multiple occupancy buildings greater than 4 units per service lateral).

#### SCHEDULE 1 Page 3 OF 3

#### 1996 AND 1997 PER LOST COSTS OVERHEAD, UNDERGROUND AND DIFFERENTIAL COSTS HIGH DENSITY - GANGED METERS

		FPC			FPL	
OVERHEAD COST	1996 (a)	1997 (b)	% Increase	1996 (a)	1997 (c)	% Increase
MATERIAL LABOR	\$230.01 \$110.04	\$209.41 \$111.33	-8.96% 1.17%	\$330.96 \$224.86	\$279.70 \$235.88	-15.49% 4.90%
TOTAL	\$340.05	\$320.74	-5.68%	\$555.82	\$515.58	:7.24%
UNDERGROUND					Pag Serios	
MATERIAL LABOR	\$240.90 \$129.93	\$195.77 \$130.28	-18.73% 0.27%	\$341.25 \$217.73	\$308.91 \$228.27	-9.48% 4.84%
TOTAL	\$370.83	\$326.05	-12.08%	\$558.98	\$537.18	-3.90%
DIFFERENTIAL COST						
MATERIAL LABOR	\$10.89 \$19.89	(\$13.64) \$18.95	-225.29% -4.73%	\$10.29 (\$7.13)	\$29.21 (\$7.61)	183.87% 6.73%
NET	\$30.78	\$5.31	-82.75%	\$3.16 (d)	\$21.60 (e)	

<sup>(</sup>a) To subdivisions with a density of 6 or more dwelling units per acre taking service from a multi-unit meter center.

<sup>(</sup>b) To subdivisions with a density of 6 or more dwelling units per acre taking service at grouped meter pedestals on serving property line.

<sup>(</sup>c) To subdivisions with a density of 6 or more dwelling units per acre taking service from a multi-unit meter center installed adjacent to the primary trench route.

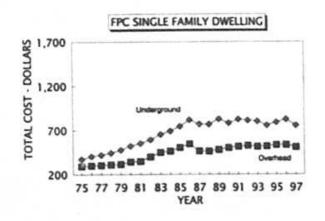
<sup>(</sup>d) Because differential was only \$8.46, differential was \$0.

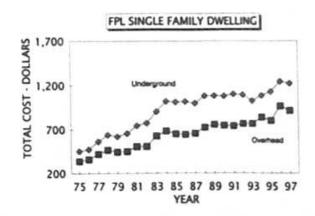
<sup>(</sup>e) Because differential is only \$3.16, FPL is proposing a tarif, differential of \$0.

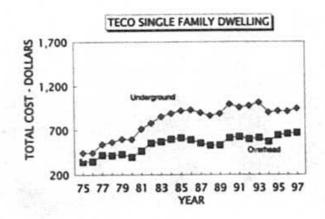
#### TOTAL OVERHEAD AND UNDERGROUND COST VS. TIME

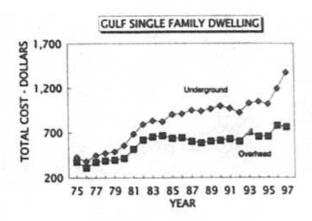
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Low Density Subdivision





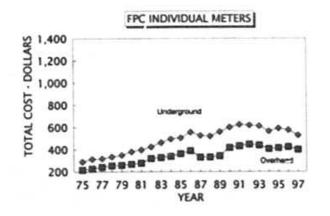


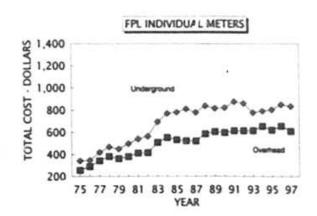


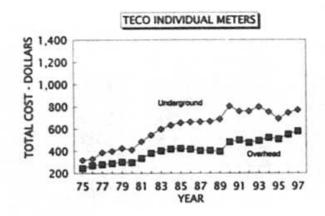
#### TOTAL OVERHEAD AND UNDERGROUND COST VS. TIME

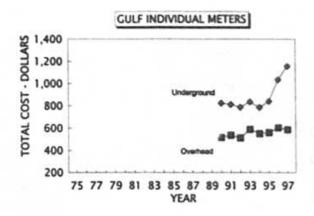
PAGE 2 OF 3 DOCKET 970577-EI

High Density - Individual Meters





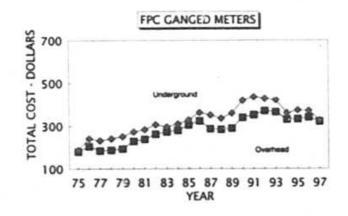


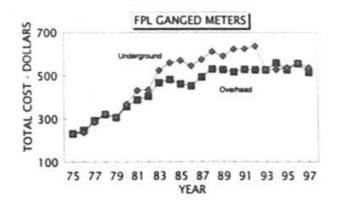


#### TOTAL OVERHEAD AND UNDERGROUND COST VS. TIME

High Density - Ganged Meters

SCHEDULE 2 PAGE 3 OF 3 DOCKET 970577-EI





# ELECTRIC UTILITIES OVERHEAD AND UNDERGROUND COSTS 1997 TOTAL COSTS

SCHEDULE 3 Page 1 OF 5 Docket 970517-EI

		1997				19	97		1997				
	SIN	(LOW D	Y DWELLI ENSITY)	NGS			DENSITY AL METER	ts	HIGH DENSITY GANGED METERS				
	FPC	FPL	TECO	GULF	FPC	FPL	TECO	GULF	FPC	FPL	TECO	GULF	
OVERHEAD		.5											
SERVICE (b)	\$115.40	\$144.10	\$159.16	\$98.52		\$125.28		\$77.87	\$71.03	\$57.48			
PRIMARY	44.45	88.00	25.99	34.84	29.77	56.79	23.29	21.96	28.08	55.42			
SECONDARY	54.20	122.81	85.51	13.03	38.05	88.37	65.89	14.50	28.14	85.84			
INITIAL TREE TRIM	16.24			34.39	16.10			20.52	15.48				
POLES	106.32	263.33	142.16	212.90	50.64	146.18	118.91	167.17	40.73	142.15			
TRANSFORMERS	93.86	123.59	161.50	243.79	87.92	79.98	138.62	190.72	93.48	78.25			
STORES HANDLING (c)	24.07	34.35	52.55	26.59	17.55	22.21	43.66	22.66	13.57	19.13			
ENGINEERING (e)	54.47	138.92	43.72	97.05	40.96	91.51	43.72	74.46	30.23	77.31			
OVERHEAD TOTAL	\$509.01	\$913.10	\$670.59	\$763.11	\$400.16	\$610.32	\$579.46	\$589.86	\$320.74	\$515.58			
UNDERGROUND													
SERVICE (b)	\$152.69	\$376.34	\$153.29	\$220.54	\$101.49	\$255.24	\$168.34	\$171.89	\$103.42	\$38.29			
PRIMARY	107.53	219.47	117.83	258.27	34.56	143.47	101.52	187.71	31.20	168.01			
SECONDARY	147.00	50.87	147.27	175.97	91.54	44.15	38.36	147.39		88.42			
TRANSFORMERS TRENCHING	100.77	111.57	135.99	251.97	101.38	84.98	148.93	263.70	101.38	73.77			
PRIMARY & SECONDARY	127.14	92.72	138.22	102.19	71.40	58.66	78.19	15.85	47.54	66.91			
SERVICES	147.14	147.37	144.18	132.01	51.71	94.33	142.48	132.01		40.01			
STORES HANDLING (c)	31.05	40.27	63.41	45.27	18.56	28.53	50.36	35.70	11.80	21.23			
ENGINEERING (e)	86.22	183.21	43.72	185.24	57.01	125.14	43.72	148.33	30.71	80.55			
UNDERGROUND TOTAL	\$752.40	\$1,221.82	\$943.91	\$1,371.46	\$527.65	\$834.50	\$769.90	\$1,102.58	\$326.05	\$537.18			
UNDERGROUND													
DIFFERENTIAL	\$243.39	\$308.72	\$273.32	\$608.35	\$127,49	\$224.18	\$190.44	\$512.72	\$5.31	\$21.60			

## ELECTRIC UTILITIES OVERHEAD AND UNDERGROUND COSTS SINGLE FAMILY DWELLINGS (LOW DENSITY)

SCHEDULE 3 Page 2 OF 5 Docket 970517-EI

#### 1997 TOTAL COSTS

		MATER	RIAL (a)			LABO	OR (d)		TOTAL				
	FPC	FPL	TECO	GULF	FPC	FPL	TECO	GULF	FPC	FPL	TECO	GULF	
OVERHEAD													
SERVICE (b)	\$68.71	\$70.50	\$90.69	\$61.58	\$46.69	\$73.60	\$68.47	\$36.94	\$115.40	\$144.10	\$159.16	\$98.52	
PRIMARY	19.41	44.13	9.11	16.96	25.04	43.87	16.88	17.88	44.45	88.00	25.99	34.84	
SECONDARY	39.96	56.46	57.72	7.50	14.24	66.35	27.79	5.53	54.20	122.81	85.51	13.03	
INITIAL TREE TRIM					16.24			34.39	16.24			34.39	
POLES	81.23	110.30	70.87	98.12	25.09	153.03	71.29	114.78	106.32	263.33	142.16	212.90	
TRANSFORMERS	84.44	101.95	121.97	180.33	9.42	21.64	39.53	63.46	93.86	123 59	161.50	243.79	
STORES HANDLING (c)	24.07	34.35	52.55	28.59	000000				24.07	34.35	52.55	28.59	
ENGINEERING (e)		73.68	35,000		54.47	63.24	43.72	97.05	54.47	136.92	43.72	97.05	
OVERHEAD TOTAL	\$317.82	\$491.37	\$402.91	\$393.08	\$191.19	\$421.73	\$267.68	\$370.03	\$509.01	\$913.10	\$670.59	\$763.11	
UNDERGROUND													
SERVICE (b)	\$60.85	\$177.59	\$104.95	\$98.51	\$91.84	\$198.75	\$48.34	\$122.03	\$152.69	\$376.34	\$153.29	\$220.54	
PRIMARY	88.93	131.72	94.95	136.10	18.60	87.75	22.88	122.17	107.53	219.47	117.83	258.27	
SECONDARY	119.24	33.60	103.27	82.07	27.76	17.27	44.00	93.90	147.00	50.87	147.27	175.97	
TRANSFORMERS	90.89	104.42	119.53	233.80	9.88	7.15	16.45	18.17	100.77	111.57	135.99	251.97	
TRENCHING													
PRIMARY & SECONDARY					127.14	92.72	138.22	102.19	127.14	92.72	138.22	102.19	
SERVICES						147.37	144.18	132.01		147.37	144.18	132.01	
STORES HANDLING (c)	31.05	40.27	63.41	45.27					31.05	40.27	63.41	45.27	
ENGINEERING (e)		86.01	-		86.22	97.20	43.72	185.24	86.22	183.21	43.72	185.24	
UNDERGROUND TOTAL	\$390.96	\$573.61	\$486.11	\$595.75	\$361.44	\$648.21	\$457.80	\$775.71	\$752.40	\$1,221.82	\$943.91	\$1,371.46	
UNDERGROUND DIFFERENTIAL	\$73.14	\$82.24	283.20	\$202.67	\$170.25	\$226.48	\$190.12	\$405.68	\$243.39	\$308.72	\$273.32	\$608.35	

Notes

ALL NOTES ARE INDICATED ON PAGE 5 OF 5

#### OVERHEAD AND UNDERGROUND COSTS HIGH DENSITY INDIVIDUAL METERS

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#### 1997 TOTAL COSTS

		MATE	RIAL (a)			LABO	OR (d)		TOTAL			
	FPC	FPL	TECO	GULF	FPC	FPL	TECO	GULF	EPC	FPL	TECO	GULF
OVERHEAD												
SERVICE (b)	\$65.59	\$58.94	\$81.36	\$49.70	\$53.38	\$66.34	\$84.01	\$28.17	\$118.97	-		\$77.87
PRIMARY	16.54	22.87	6.90	9.95	13.23	33.92	16.39	12.01	29.77	56.79	23.29	21.96
SECONDARY	29.97	44.71	37.62	8.34	8.08	43.55	28.27	6.16	38.05	88.37	65.89	14.50
INITIAL TREE TRIM					16.10			20.52	16.10			20.52
POLES	38.82	59.99	63.30	81.15	12.02	86.19	55.61	86.02	50.84	148.18	118.91	167.17
TRANSFORMERS	78.66	65.40	101.87	135.14	9.26	14.58	36.75	54.58	87.92	79.98	138.62	190.72
STORES HANDLING (c)	17.55	22.21	43.66	22.66					17.55	22.21	43.66	22.68
ENGINEERING (e)	112.22	48.35			40.96	43.16	43.72	74.46	40.96	91.51	43.72	74.46
OVERHEAD TOTAL	\$247.13	\$322.47	\$334.71	\$307.94	\$153.03	\$287.85	\$244.75	\$281.92	\$400.16	\$610.32	\$579.46	\$589.86
UNDERGROUND												
SERVICE (b)	\$57.31	\$133.28	\$113.62	\$78.56	\$44.18	\$121.96	\$54.72	\$93.33	\$101.49		\$168.34	\$171.89
PRIMARY	29.28	77.51	68.52	100.81	5.28	65.98	33.00	86.90	34.56	143.47	101.52	187.71
SECONDARY	67.79	30.23	25.27	69.81	23.75	13.92	13.09	77.58	91.54	44.15	38.36	147.39
TRANSFORMERS TRENCHING	91.03	79.29	128.30	244.77	10.35	5.69	18.63	18.93	101.38	84.98	146.93	263.70
PRIMARY & SECONDARY					71.40	58.66	78.19	70.03	71.40	58.66	78.19	70.03
SERVICES					51.71	94.33	142.48	132.01	51.71	94.33	142.48	132.01
STORES HANDLING (c)	18.58	28.53	50.36	35.70					18.56	28.53	50.38	35.70
ENGINEERING (e)		01.54			57.01	63.60	43.72	148.33	57.01	125.14	43.72	148.33
UNDERGROUND TOTAL	\$263.97	\$410.38	\$386.07	\$529.65	\$263.68	\$424.12	\$383.83	\$827.11	\$527.65	\$834.50	\$769.90	\$1,156.76
UNDERGROUND DIFFERENTIAL	\$16.84	\$87.91	\$51,36	\$221.71	\$110.65	\$136.27	\$139.08	8345.19	\$127.49	\$224.18	\$190.44	\$500.90

Notes

ALL NOTES ARE INDICATED ON PAGE 5 OF 5

# ELECTRIC UTILITIES OVERHEAD AND UNDERGROUND COSTS HIGH DENSITY GANGED METERS

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#### 1997 TOTAL COSTS

		MATER	RIAL (a)			LABO	OR (d)		TOTAL			
	EPC	EPL.	TECO	GULF	FPC	EPL.	TECO	GULF	FPC	FPL	TECO	GULF
OVERHEAD												
SERVICE (b)	\$45.31	\$30.23			\$25.72	\$27.25			\$71.03	\$57.48		
PRIMARY	14.65	22.41			13.43	33.01			28.08	55.42		
SECONDARY	21.89	44.38			6.25	41.45			28.14	85.84		
INITIAL TREE TRIM	-	2000			15.48				15.48			
POLES	30.52	57.94			10.21	84.21			40.73	142.15		
TRANSFORMERS	83.47	63.67			10.01	14.58			93.48	78.25		
STORES HANDLING (c)	13.57	19.13			(25520)				13.57	19 13		
ENGINEERING (e)		41.94			30.23	35.37			30.23	77.31		
OVERHEAD TOTAL	\$209.41	\$279.70			\$111.33	\$235.88			\$320.74	\$515.58		
UNDERGROUND												
SERVICE (b)	\$66.69	\$25.13			\$36.73	\$13.16			\$103.42	\$38.29		
PRIMARY	26.25	90.50			4.95	77.51			31.20	168.01		
SECONDARY		56.70				31.72				88.42		
TRANSFORMERS TRENCHING	91.03	69.03			10.35	4.74			101.38	73.77		
PRIMARY & SECONDARY SERVICES					47.54	66.91			47.54	66.91		
STORES HANDLING (c)	11.80	21.23							11.80	21.23		
ENGINEERING (e)		46.32			30.71	34.23			30.71	80.55		
UNDERGROUND TOTAL	\$195.77	\$308.91			\$130.28	\$228.27			\$326.05	\$537.18		
UNDERGROUND		***			*****				\$5.31	\$21.60		
DIFFERENTIAL	(a13.64)	\$29.21	•		\$18.95	(\$7.61	1.		80.31	(1)		

Notes

ALL NOTES ARE INDICATED ON PAGE 5 OF 5

## ELECTRIC UTILITIES OVERHEAD AND UNDERGROUND COSTS

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#### **1996 NOTES**

- (a) "MATERIAL" INCLUDES SALES TAX.
- (b) "SERVICE" FPL GPC, & TECO- INCLUDES METER
  - FPC INCLUDES METER AND METER SOCKET
- (c) STORES HANDLING"-FPC - 11% (1997), 10% (1995), 11% (1994), 13% (1993, 1992) OF ALL MATERIAL EXCEPT TRANSFORMERS AND METERS.
  - FPL 9.24% (1997), 10.9% (1995), 9.33% (1994), 7.50% (1993), AND 10.02% (1992) OF ALL MATERIAL EXCEPT METERS. 4.62% (1997), 4.67% (1994), 3.75% (1993), AND 5.01% (1992) OF METERS.
  - TECO 15% (1997), 10% OF ALL MATERIAL (1995, 1994, 1993, & 1992)
- (d) "LABOR" INCLUDES ADMINISTRATIVE EXPENSES, GENERAL EXPENSES AND TRANSPORTATION.
- (e) "ENGINEERING" -

FPC - 15% (1997, 1994, 1993, AND 1992) OF ALL MATERIAL AND LABOR EXCEPT TRANSFORMERS AND METERS.

FPL - 17.64%, (1997),21.81% (1995), 22.41 (1994), 19.75% (1993), AND 18.47% (1992) OF ALL MATERIAL AND LABOR.

TECO - LOW DENSITY

OVERHEAD: 16% (1997),14% (1995), 20% (1994), 17% (1993), AND 16% (1992) OF LABOR. UNDERGROUND: 10% (1997), 8% (1995), 11% (1994), 9% (1993), AND 8% (1992) OF LABOR.

- HIGH DENSITY

OVERHEAD: 18% (1997), 17% (1995), 21% (1994), 23% (1993) AND 21% (1992) OF LABOR. UNDERGROUND: 11% (1997,1995), 13% (1994), 12% (1993), 11% (1992) OF LABOR.

GPC - 22.8% OF ALL MATERIAL AND LABOR EXCEPT TRANSFORMERS AND METERS.

#### CUMULATIVE NUMBER OF UTILITY CUSTOMERS YEAR END 1990 - 1996

Schedule 4

	FPC	FPL	TECO	GULF	TOTAL
A. YEAR END 1990					
OVERHEAD	558,743	1,772,000	189,332	61,695	2,581,770
UNDERGROUND	1,126,977	3,372,316	453,455	285,326	5,238,074
TOTAL	1,685,720	5,144,316	642,787	347,021	7,819,844
% UNDERGROUND	66.9%	65.6%	70.5%	82.2%	67.0%
B. YEAR END 1991					
OVERHEAD	616,903	1,848,883	196,355	63,569	2,725,710
UNDERGROUND	1,193,192	3,471,389	461,497	290,449	5,416,527
TOTAL	1,810,095	5,320,272	657,852	354,018	8,142,237
% UNDERGROUND	65.9%	65.2%	70.2%	82.0%	66.5%
C. YEAR END 1992					
OVERHEAD	638,851	1,906,781	202,325	65,476	2,813,433
UNDERGROUND	1,216,875	3,539,765	467,007	296,231	5,519,878
TOTAL	1,855,726	5,446,546	669,332	361,707	8,522,311
% UNDERGROUND	65.6%	65.0%	69.6%	81.9%	66.2%
D. YEAR END 1993					
OVERHEAD	658,282	1,951,906	208,933	68,178	2,887,299
UNDERGROUND	1,238,211	3,592,778	474,693	305,040	5,610,722
TOTAL	1,896,493	5,544,684	683,626	373,218	8,498,021
% UNDERGROUND	65.3%	64.6%	69.4%	81.7%	66.0%
E. YEAR END 1994					
OVERHEAD	678,659	2,004,031	212,333	71,273	2,966,296
UNDERGROUND	1,274,174	3,657,922	482,417	313,807	5,728,320
TOTAL	1,952,833	5,661,953	694,750	385,080	8,694,616
% UNDERGROUND	65.2%	64.6%	69.4%	81.5%	65.9%
F. YEAR END 1995					
OVERHEAD	702,568	2,056,959	227,826	74,070	3,061,423
UNDERGROUND	1,299,115	3,721,199	491,136	321,646	5,833,096
TOTAL	2,001,683	5,778,158	718,962	395,716	8,894,519
% UNDERGROUND	64.9%	64.4%	68 3%	81.3%	65.6%
G. YEAR END 1996					
OVERHEAD	788,919	2,117,592	245,816	75,465	3,227,792
UNDERGROUND	1,364,844	3,792,023	501,938	325,114	5,983,919
TOTAL	2,153,763	5,909,615	747,754	400,579	9,211,711
% UNDERGROUND	63.4%	64.2%	67.1%	81.2%	65.0%
H. YEAR END 1990 TO 1996 -PERCENT INCREASE					
OVERHEAD	12.3%	2.9%	7.9%	1.9%	5.4%
UNDERGROUND	5.1%	1.9%	2.2%	1.1%	2.6%
	7.6%	2.3%	4.0%	1.2%	3.6%

Notes.

<sup>(</sup>a) FPL includes inactive meters and outdoor lighting. Many of the underground systems are supplied by overhead feeders and laterals.