TAMPA ELECTRIC COMPANY DOCKET NO. 980007-EI SUBMITTED FOR FILING 01/14/98

1		BEFORE THE PUBLIC SERVICE COMMISSION
2	ris v	PREPARED DIRECT TESTIMONY
3	\$ - PA	07
4		KAREN O. ZWOLAK
5	1	
6	Q.	Please state your name, address, occupation and employer.
7	- 82.	
8	A.	My name is Karen O. Zwolak. My business address is 702
9	100	North Franklin Street, Tampa, Florida 33602. I am employed
10		by Tampa Electric Company in the position of Manager,
11		Energy Issues in the Electric Regulatory Affairs
12		Department.
13		
14	Q.	Please provide a brief outline of your educational
15		background and business experience.
16		
17	A.	I received a Bachelor of Arts Degree in Microbiology in
18		1977 and a Bachelor of Science degree in Chemical
19		Engineering in 1985 from the University of South Florida.
20		I began my engineering career in 1986 at the Florida
21	TEN Y	Department of Environmental Regulation and was employed as
22		a Permitting Engineer in the Industrial Wastewater Program.
23		In 1990, I joined Tampa Electric Company as an engineer in
24		the Environmental Planning Department and was responsible
25	1	for permitting and compliance issues relating to wastewater

Electric's Energy Supply Department and assumed the duties of the plant chemical engineer at the F. J. Gannon Station. In this position, I was responsible for boiler chemistry, water management, and maintenance of environmental equipment and general engineering support. In 1997, I was promoted to Manager, Energy Issues in the Electric Regulatory Affairs Department. My present responsibilities include the areas of fuel adjustment, capacity cost recovery, environmental filings and rate design.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to present, for Commission review and approval, both the calculation of the revenue requirements and the development of the environmental cost recovery factors for the billing period April 1998 through September 1998. My testimony also addresses the recovery of costs associated with the environmental compliance activities for this period as well as the actual/estimated costs for the October 1997 through March 1998 period. Finally, my testimony provides an explanation of significant project variances.

Q. Do you wish to sponsor exhibits in support of your

testimony?

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Yes. My Exhibit No. (KOZ-1) consisting of 38 documents, was prepared under my direction and supervision. Form 42-1P summarizes the costs being presented for recovery at this time; Form 42-2P reflects the total jurisdictional recoverable costs for 0 & M activities; Form 42-3P reflects the total jurisdictional recoverable costs for capital investment projects; Form 42-4P, pages 1 through 8, consists of the calculation of depreciation expense and return on capital investment for each project; Form 42-5P gives the description and progress of environmental compliance activities and projects to be recovered through the clause for the projected period; Form 42-6P reflects the calculation of the energy and demand allocation percentages by rate class and Form 42-7P reflects the calculation of the ECRC factors. In addition, Forms 42-1E through 42-8E reflect the true-up and variance calculation for the prior period.

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Q. What is the source of the data which you will present by way of testimony or exhibits in this proceeding?

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A. Unless otherwise indicated, the actual data is taken from the books and records of Tampa Electric Company. The books

and records are kept in the regular course of our business in accordance with generally accepted accounting principles and practices, and provisions of the Uniform System of Accounts as prescribed by this Commission.

Q. What has Tampa Electric calculated as the total true-up to be applied in the period April 1998 through September 1998?

recovery of \$135,026. This true-up consists of a final true-up over / (under) recovery of \$613,889 as revised on December 16, 1997 and a two month actual/four month estimated true-up over / (under) recovery of (\$478,863) for the October 1997 through March 1998 period. A detailed calculation supporting the estimated true-up is shown on Schedules 42-1E through 42-8E of my Exhibit.

Q. How do the actual/estimated project expenditures for October 1997 through March 1998 period compare with the original projection?

A. As shown on Form 42-4E, total 0 & M activities were \$549,855 greater than projected. Significant 0 & M project variances are explained below.

1. Big Bend Units 1 and 2 Flue Gas Conditioning Project Project expenditures were \$3,643 less than projected, a variance of -14.2%, as a result of the removal of payroll expense recovery from the ECRC (Commission Order No. PSC-97-1047-FOF-EI, Docket No. 970007-EI).

- 2. SO2 Emission Allowance Project Project expenditures were \$568,378 greater than projected, a variance of 40.2%. This variance is due to allowance purchases in the month of August, 1997 that were not included in the original projection; an increased SO2 allowance consumption for the period October 1997 to March 1998 and expenses incurred from reimbursing Qualifying Facilities for avoided SO2 allowance costs.
- Q. What environmental compliance costs is Tampa Electric requesting for recovery through the Environmental Cost Recovery Clause for the period April 1998 through September 1998?
- A. Tampa Electric is requesting recovery for a total of nine environmental compliance projects. Projected costs for theses projects are shown on Forms 42-1P through 42-7P.
 - Four of the nine projects were previously approved for cost

recovery through the ECRC and are on-going compliance activities. The newly included five environmental compliance projects are the Gannon Ignition Oil Tank Upgrade, Big Bend Fuel Oil Tank Number 1 Upgrade, Big Bend Fuel Oil Tank Number 2 Upgrade, Phillips Tank Number 1 Upgrade and Phillips Tank Number 4 Upgrade for FDEP.

The costs associated with the tank upgrade projects occur as a result of compliance standards imposed by the Department of Environmental Protection (DEP) Rule 62-762, Aboveground Storage Tank Systems (AST) enacted on March 12, 1991, with a compliance deadline of December 31, 1999. The rule requires various modifications to affected storage tanks which include installation of spill and secondary containment, cathodic protection and completion of tank integrity inspections by December 31, 1999. A detailed list of modifications are provided in Form 42-5P, Project Descriptions, of my Exhibit.

Q. Are the costs associated with the five new environmental compliance activities appropriate for recovery through the Environmental Cost Recovery Clause?

A. Yes, they are. As per the requirements established in Order No. PSC-94-0044-FOF-EI, these costs were incurred

after April 13, 1993, were incurred on the basis of a legal requirement of the FDEP and are not currently being recovered through base rates or any other cost recovery mechanism.

A project entitled Gannon 1 - 5A Tank Underground Piping was included in Tampa Electric's last rate proceeding and was originally estimated to cost \$266,000. The project scope called for the existing piping system to be replaced with an above ground system. In order to eliminate the possibility of double recovery of the \$266,000 Tampa Electric will not include this amount in its current request for recovery.

Q. Please describe Form 42-1P.

A. Form 42-1P provides a summary of the costs being requested for recovery through the ECRC. Total recoverable revenue requirements associated with environmental activities, adjusted for taxes, are projected to be \$2,750,922 for the period April 1998 through September 1998.

Q. Please describe Forms 42-2P and 42-3P.

A. Form 42-2P presents the O & M activities to be recovered in

the projected period along with the calculation of total jurisdictional recoverable costs for these activities, classified as energy or demand.

Form 42-3P presents the capital investment projects to be recovered in the projected period along with the calculation of total jurisdictional recoverable costs for these projects, classified as energy or demand.

Q. Please describe Form 42-6P.

A. Form 42-6P calculates the allocation factors for demand and energy at generation. The demand allocation factors are calculated by determining the percentage each rate class contributes to the monthly system peaks. The energy allocators are calculated by determining the percentage each rate class contributes to total kWh sales, as adjusted for losses, for each rate class.

Q. Please describe Form 42-7P.

A. Form 42-7P presents the calculation of the proposed ECRC factors by rate class.

25 Q. What is the total amount of projected recoverable costs

related	to	the	period	April	1998	through	September	1998?
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A.	The total projected jurisdictional recoverable costs for
	the period April 1998 through September 1998 are \$2,928,058
	as shown on line 1c of Schedule 42-1P. This includes cost
16	related to 0 € M activities of \$1,987,966 and costs related
	to capital projects of \$940,092 as shown on lines 1a and
	1b of Schedule 42-1P.

Q. What are the ECRC billing factor rates for which Tampa Electric is seeking approval?

A. The computation of the billing factors is shown on Form 42-7P of my Exhibit. In summary, the billing factors are:

16	Rate Class	Factor (¢/kWh)
17	RS, RST	0.033
18	GS, GST, TS	0.033
19	GSD, GSDT	0.033
20	GSLD, GSLDT, SBF	0.032
21	IS1, IST1, SBI1,	
22	SBIT1, IS3, IST3,	
23	SBI3, SBIT3	0.031
24	SL, OL	0.032
25		

When should the new environmental charges go into effect? They should go into effect commensurate with the first billing cycle in April 1998. Does this conclude your testimony? Yes, it does.

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TAMPA ELECTRIC COMPANY
(KOZ-1)
FILED: JANUARY 14, 1998

ENVIRONMENTAL COST RECOVERY COMMISSION FORMS

42-1P THROUGH 42-7P APRIL 1998 THROUGH SEPTEMBER 1998

42-1E THROUGH 42-8E OCTOBER 1997 THROUGH MARCH 1998

ENVIRONMENTAL COST RECOVERY COMMISSION FORMS

42-1P THROUGH 42-7P APRIL 1998 THROUGH SEPTEMBER 1998

42-1E THROUGH 42-8E OCTOBER 1997 THROUGH MARCH 1998

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FORM 42-1P

Tampa Electric Gompany
Environmental Cost Recovery Clause (ECR
Total Jurisdictional / mount to Be i-acovers

Form 42 - 1P

For the Projected Period April 1998 to September 1998

N. P.	Energy (5)	ě.	Demand (\$)	Total (\$)
Total Jurisdictional Revenue Requirements for the projected period a. Projected O&M Activities (Form 42-2P, Linas 7, 8 & 9) b. Decided Castel Projects Form 43-39 Linas 7, 8 & 9)		\$1,943,566	\$0	\$1,987,968
		2,815,422	68,236	2,928,058
True-up for Estimated OveriUnder) Recovery for the current period October 1997 to March 1998 (Form 42-2E, Line 5 + 6 + 10)	•	(477,643)	(1,220)	(478,863)
3. Final True-up for the period April 1997 to September 1997 (Form 42-1A, Line 3)	19	613,669	0	613,889
Total Jurisdictional Amount to Be Recovered/(Refunded) in the projection period April 1998 to September 1998 (Line 1 - Line 2 - Line 3)	2,67	2,679,176	69,456	69,456 2,793,032
 Total Projected Jurisdictional Amount Adjusted for Taxes (Line 4 x Revenue Tax Multiplier) 	\$2,60	181,408	\$2,661,408 \$68,514 \$2,750,922	\$2,750,92

Notes:

Allocation to energy and demand in each period are in proportion to the respective period split of costs indicated on Lines 7 and 8 of Forms 42-5 and 42-7 of the estimates and actuals.

Method of Classification Demand Energy

End of Period Total

> Projected May 98

O & M Activities (in Dollars)

Tempa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Projected Period Amount
April 1998 to September 1998

nogasjon 0.	pus							
ke Gas Desulfurization fro and 2 Fare Gas Conditions	ontinuous Emissions Monitoria	Tank #1 Upgrade	Sank #2 Upgrade	ank #1 for FDEP	ank the FDEP	Seances		
ta Big Bend Unit 3 File Gas to Big Bend Units 1 and 2 Fa	ic Big Bend Unit 4 Co	1e Big Bend Fuel Oil	11 Big Bend Fuel Oll T	1g Phillips Upgrade T.	th Philips Upgrade Ti	11 SO2 Emissions Alto	1) SO2 Credit - FMPA	Total of ORMS Articilian

1. Description of O&M Activi

Energy
22
Alboated
Costs
erable
Recov
4 4

Retail Demand Jurisdictional Factor
 Retail Demand Jurisdictional Factor
 Jurisdictional Energy Recoverable Costs (A)
 Add back FMPA Excess Emissions Allocation

Potal Jurisdictional Recoverable Costs for OSM Adivibes (Lines 7 + 8)

(A) Line 3 x Line 5 (B) Line 4 x Line 6 EXHIBIT NO. DOCKET NO. 980007-EI
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FORM 42-2P

\$652,403	16,500	0						1,431,093	(20,000)	\$2,080,088								
			0	0	0	0	0			\$0								
\$652,493	16,500	0	0	0	0	0	0	1,431,093	(20,000)	2,080,088	2,060,085	0			1,943,568	44,400	0	E413 E40 81 007 048
\$175,848	2,750	0	0	0	0	0	0	253,512	•	432,110	432,110	0	0.9376315	200	405,160	7,400	0	243 250
\$137,637	2,750	0	0	0	0	0	٠	278,097	(7,000)	409,484	409,484	•	0.9333671	V.8 1 5000 5	382,199	7.400	0	6100 600
\$138,487	2,750	0	0	0	0	0	0	270,128	•	409,385	409,365	•	10890080	Zencala n	381,075	7,400	0	*****
\$121,689	2,750	•	0	0	0	•	0	246,721	•	371,160	371,160	•	0.9358334	0.8180508	347,344	7,400	0	77.77
\$80,832	2,750	•	•	0	0	0	0	248,199	(0000)	322,772	322,772	•	0.9304925	0.912/490	302,274	7,400	0	***************************************
2	2,780	0	0	0	0	0	0	138,445	(4,000)	135,195	135,195	•	0.9283895	0.9042212	125,514	7,400	0	
										ı							1	

Tampa Electric Compuny
Environmental Cost Recovery Clause (ECRC)
Calculation of the Projected Period Amount
April 15 18 to September 1998

Capital Investment Projects-Recoverable Costs

(in Dollars)

End of

Energy	\$555,373 335,436 42,692	\$603,701
Method of Classification Demand Energy	519,789 16,807 35,341 1,041	874,361
Period Total	\$556,373 336,436 42,862 18,789 18,807 35,341 1,383	1,000,002 623,701 74,361 671,858 88,236
Frojected September 98	\$4,006 85,570 7,103 3,202 4,006 7,670 388	150,053 154,775 15,878 0,9378315 0,9171904 14,604 14,604
Projected August 98 S	\$92,282 85,708 7,121 3,276 4,058 7,658 1,898	170,560 155,111 15,462 0,9190000 144,778 14,242
Projected July 98	\$50,000 55,040 7,140 3,281 3,884 7,477 128	170,420 155,449 14,871 0,9708931 0,9198952 14,707 13,768
Projected June 98	\$92,698 \$5,972 7,188 3,305 2,860 6,621 177	168,786 13,776 13,075 0,8258334 0,8162269 146,780
Projected May 98	\$82,842 \$4,104 7,178 3,320 1,328 4,288 124 138	168,122 9,227 0,227 0,927 0,927 148,307 8,421
Projected April 98	50,026 60,206 7,194 3,335 1,613 1,613 74	150,458 150,458 6,728 0,9283885 0,0042212 145,284 5,181
	estable So So So So So So So So So So So So So	

to Big Bend Unit 3 Fae Gas Desuffarization into the Big Bend Units 1 and 2 Fae Gas Conditions to Big Bend Units 4 Continuous Emissions Moral 4 Garmon spation Oil Tank.

14 Garmon spation Oil Tank #1 Upgrade.

1. Description of Investment Projects (A)

The

(A) Each project's Total System Recoverable Expenses on Form 42-4P, Line 9 (B) Line 3 x Line 5 (C) Line 4 x Line 6

EXHIBIT NO.

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FORM 42-3P

5. Retail Energy Jurisdictional Factor 6. Retail Domand Jurisdictional Factor

Recoverable Costs Allocated to Energy
 Recoverable Costs Allocated to Demand

If Big Bend Fuel Oil Tenk #2 Upgrade 1g Philips Upgrade Tenk in for FDEP in Philips Upgrade Tank #4 for FDEP Total Investment Projects - Recoverable

7. Jurisdictional Energy Recoverable Costs (B) 8. Jurisdictional Demand Recoverable Costs (C)

9. Total Autedictional Recoverable Costs for

Investment Projects (Lines 7 + 5)

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Projected Period Amount April 1998 to September 1998 Return on Capital Investments, Depreciation and Taxes For Project: Big Bend Unit 3 Flue Gas Desulfurization Integration (in Dollars)

Desc	Description	Beginning of Period Amount	Projected April 96	Projected May 98	Projected June 98	Projected July 98	Projected August 98	Projected September 98	Projected End of September 98 Period Amount
1. Investments			\$	8	S	S	20	8	
Expenditures/Additions Clearings to Plant			30	0	0	•	0	0	
			0	0	0	0	0	0	
			0	0	0	0	0	•	
9 Dissel in Canadra Danson inflore Benn	Bean	SA 230 ASS	8 239.858	8.239.658	8,239,658	8,239,658	8,239,658	8,239,658	
3. Less: Accumulated Depreciation	Bon	(624,015)	(643,241)	(662,467)	(681,693)	(700,919)	(720,145)	(739,371)	at Development
4. CMIP - Non-Interest Bearing 5. Net Investment (Lines 2 + 3 + 4)	q	\$7,615,643	7,596,417	7,577,191	7,557,985	7,538,739	7,519,513	7,500,287	
6. Average Net Investment			7,608,030	7,586,804	7,567,578	7,548,352	7,529,126	7,509,900	
7. Return on Average Net Investment	Imeni			-	*****	200	55.367	68 222	6313 450
 Equity Component Groused Up For Taxes (A) Debt Component (Line 6 x 2.82% x1/12) 	d Up For Taxes (A)		17,874	17,829	17,784	17,739	17,683	17,648	
8. Investment Expenses									
a. Depreciation			19,226	19,726	19,228	18,228	19,226	19,226	115,356
b. Amer@zation			0	0	0	0	0	0	0
c Diamontlement			0	0	0	0	0	0	0
			0	0	0	0	0	0	0
e. Other		1	0	0	0	0	0	0	0
0 Total Sulam Recoverable Fonemes (I bess 7 +	mentes (Lines 7 + 8)		93.028	92,842	92,656	92,469	82,282	92,096	
a Racmershie Court Allocated to Energy	and to Energy		93,028	92,842	92,658	92,469	92,282	82,096	555,373
b. Receverable Costs Allocated to Demand	ted to Demand		0	0	0	0	0	0	0
10. Energy Jurisdictional Factor			0.9283895	0.9354025	0.9358334	0.9308931	0.9333671	0.750	222
11. Demand Jurisdictional Factor			0.9042212	0.91274:38	0.9193269	0.9195852	0.9198689	0.9171904	
12. Petall Energy-Related Recoverable Costs (B)	verable Costs (B)		86,388	86,948	111,711	86,079	86,133	86,352	
13. Retail Demand-Related Recoverable Costs (C)	owwrable Costs (C)		0	0	0	0	0		
14. Total Jurisdictional Rucoverable Costs (Lines 12 + 13)	uble Costs (Lines 12 + 13)	•	\$86,366	\$38,946	\$86,711	\$56,079	\$86,133	\$86,352	\$518,587 2

⁽A) Lines 6 x 8.8238% x 1/12. Based on ROE of 11.75% and weighted income tax rate of 38.5;5% (expansion factor of 1.628002) (B) Line 8a x Line 10 (C) Line 8b x Line 11

Form 42 -4P Page 2 of 8

Environmental Cost Recovery Clause (ECRC) Calculation of the Projected Period Amount April 1998 to September 1998 Tampa Electric Company

Return on Capital Investments, Depreciation and Taxes For Project: Big Bend Units 1 and 2 Flue Gas Conditioning (in Dotars)

				(e manage ta)						
Ę		Description	Beginning of Period Amount	Projected April 98	Projected May 98	Projected June 98	Projected July 98	Projected August 98	Projected September 98	Projected End of September 98 Period Amount
1			BUT AND THE							W 124 12
	1. Investments a Evnendis	estments Exnandiheras/Additions		05	8	8	80	\$0	00	
	b. Clearings to Plant	to Plant		0	0	0	0	0	0	
		4		0	0	0	0	0	0	
	d. Other			0	0	0	0	0	0	
	2. Plant-In-Servi	2. Plant-In-Service/Depreciation Base	\$5,017,734	5,017,734	5,017,734	5,017,734	5,017,734	5,017,734	20	
	3. Less: Accum	3. Less: Accumulated Depreciation	(\$617,258)	(630,862)	(544,466)	(658,070)	(671,674)	(685,278)	(698,682)	
	5. Net Investme	5. Net Investment (Lines 2 + 3 + 4)	\$4,400,476	4,386,872	4,373,268	4,359,664	4,346,060	4,332,456	4,318,852	
	6. Average Net Investment	Investment		4,393,674	4,380,070	4,368,468	4,352,862	4,339,258	4,325,654	
5	7. Return on As a. Equity Co	7. Return on Average Net Investment a. Equity Component Grossed Up For Taxes (A)		32,307	32,207	32,107	32,007	31,807		-
	b. Debt Com	b. Debt Component (Line 6 x 2.82% x1/12)		10,325	10,283	10,281	10,229	10,197	10,185	61,470
	8. Investment Expenses	Coperates		13.604	13.604	13.604	13,604	13,604	13,604	81,624
		igu		0	0	0	0	٥	•	0
		ament		0	0	0	0	0	0	0
	d. Property Taxes	Taxes		0	0	0	0	0	0	0
	e. Other			0	0	0	0	0	0	0
	9. Total Sytem	9. Total Sytem Recoverable Expenses (Lines 7 + 6)		58,236	56,104	55,972	55,840	55,708	55,576	
	a. Recovera	a. Recoverable Costs Allocated to Energy		56,236	38,104	55,972	55,840	55,708	55,576	335,436
	b. Recovera	Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0
	10. Energy Jurisdictional Factor	dictional Factor		0.9283895	0.9364925	0.8358334	0.9308931	0.9333671		
	11. Demand Jur.	11. Demand Jurisdictional Factor		0.9042212	0.9127498	0.9193269	0.9195852	0.8199699	0.9171904	
	12. Retni Energ	y-Related Recoverable Costs (B)		52,209	52,541	52,380	51,981	51,996	52,110	
	13. Retail Dema	13. Retail Demand-Related Recoverable Costs (C)		0	0	0	0	0		
	14. Total Jurisdi	14. Total Jurisdictional Recoverable Costs (Lines 12 + 13)		\$52,209	\$52,541	\$52,380	\$51,981	\$51,996	\$52,110	\$313,217

(A) Lines 6 x 8.8230% x 1/12. Basod on ROE of 11.75% and weighted income tax rate of 38.575% (expansion factor of 1.628002) (B) Line 8a x Line 10 (C) Line 8b x Line 11

\$40.052 40,052

6,660 \$8,660

6,647 \$8.847

6,847 \$6,647

0.9376315

0.9333671 0.9198699

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0.9364925

0.9127498

0.9042212

0.9283895

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0.9171904

42,892 42,892

7,103

7,121 7,121

7,158

7.184

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11,262

1,877

Form 42 -4P Page 3 of 8 Period Amount

September 98

Projected

Projected August 98

Projected July 98

Projected June 98

Projected May 98

Line

End of

Environmental Cost Recovery Clause (ECRC) Calculation of the Projected Period Amount April 1998 to September 1998 Tampa Electric Company

For Project: Big Bend Unit 4 Continuous Emissions Monitors Return on Capital Investments, Depreciation and Taxes (in Dollars)

(82,765) 1,288 2000 547,977 547.038 Projected April 98 Beginning of Period Amount (\$20,888) 548,915 \$866.21 Equity Component Grossed Up For Taxes (B) Description 2. Plant-in-Service/Depreciation Base 3. Less: Accumulated Depreciation Net Investment (Lines 2 + 3 + 4) Expenditures/Additions Average Net Investment Clearings to Plant 4. Other (A)

(92,150) 537,653

866,211 (90,273) 539,530

(88,395) 541,407

(86,519)

(84,642) 545,161

168,211

543,284

2000

8000

2000

8000

1,283 Debt Component (Line 6 x 2.82% x1/12) Return on Average Net Investment

7,661

3,960

3,974

3,988

1,279

538,592

540,469

642,346

544,223

546,100

Investment Expenses Property Taxes Amortization

Total S./tem Recoverable Expenses (Lines 7 + 8) oi

Recoverable Costs Allocated to Energy Recoverable Costs Allocated to Demand d

 Demand Jurisdictional Factor Energy Jurisdictional Factor g

Petali Energy-Related Recoverable Costs (C)
 Retail Demand-Related Recoverable Costs (D)
 Total Jurisdictional Recoverable Costs (Lines 12 + 15)

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8.575%	
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Ms whi incom	
R 4 CE	
and We	
Big Big 1.75%	
placed Big DE of 11.72	
as of the re used on RC	
A	
st Book Va	
36% x 36% x 10	
x 8.82 x Line	
Repres Lines 6 Line 92	
\$ 8 E E	

6

Return on Capital Investments, Depreciation and Taxes For Project: Gannon Ignition Oli Tank (in Dollars)

Line

14. Total Jurisdictional Recoverable Costs (Lines 12 + 13)	12. Retail Energy-Related Recoverable Costs (C) 13. Retail Demand-Balated Recoverable Costs (D)	Energy Jurisdictional Factor Demand Jurisdictional Factor	Decoverable Costs Allocated to Demand	Total Sylem Recoverable Expenses (Lines 7 + 5) Bacqueenbla Costs Silvested to Foreign	e. Other	d. Property Taxes	c. Dismantlement	b. Amortization	8. Investment Expenses a. Depreciation	b. Debt Component (Line 6 x 2.82% x1/12)	Return on Average Net Investment a. Equity Component Grossed Up For Taxes (B)	6. Average Net Investment	5. Net Investment (Lines 2 + 3 + 4)	d. Other (A)	2. Plant-in-Service/Depreciation Base	d. Other	c. Retrements	Investments A. Expenditures/Additions The Control of Plant	Description
OC.													\$190,328	(266,000)	\$460,000				Beginning of Period Amount
\$3,016	3018	0.9283895 0.9042212	3,335	3,335	0	0	0	0	1,495	448	1,394	189,581	188,833	(266,000)	450,000	0	0 (. 8	Projected April 98
\$3,030	3 020 0	0.9354925	3,320	3,320	0	0	0	0	1,495	442	1,383	188,086	187,338	(266,000)	460,000	0	0 0	. 8	Projected May 98
\$3,038	3038	0.9358334 0.9193269	3,305	3,305	0	0	0	0	1,495	438	1,372	185,591	185,843	(266,000)	460,000	0	0	. 8	Projected June 98
\$3,026	3.026	0.9308931	3,291	3,291	0	0	0	0	1,495	435	1,361	185,096	184,348	(266,000)	480,000	0	0	. 8	Projected July 98
\$3,013	3.013	0.9333671	3,276	3,276	0	0	0	0	1,495	431	1,350	183,801	182,653	(266,000)	480,000	0	0	. 8	Projected August 98
\$2,992	2.992	0.9376315	3,262	3,262	0	0	0	0	1,495	428	1,339	182,106	181,358	(266,000)	460,000	0	0	0 8	Projected September 98
\$10,115	101		19,789	19,786	0		0	0	8,970	2,620	\$8,199								End of Period Amount

2 7. Re

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EXHIBIT NO.

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(A) Represents the Capital Costs of the Gasnou Ignition Oil Tank currently recovered through base rates.

(B) Scrips 6 x 6.8238% x 1/12. Based on ROE of 11.75% and weighted income tax rate of 38.575% (expansion factor of 1.628002)

(C) Line 9a x Line 10

(D) Line 9b x Line 11

4. CWIP- Non-Interest Bearing Less: Accumulated Depreciation Plant-in-Service/Depreciation Base

5. Net Investment (Lines 2 + 3 + 4)

Average Net Investment

8

7. Return on Average Net Investment

Equity Component Grossed Up For Taxes (A) Debt Component (Line 6 x 2.62% x1/12)

Imeral Exper

Amortization

Depreciation

Property Taxes Dismantiemen

Total Sylem Recoverable Expenses (Lines 7 + 8) Recoverable Corts Allocated to Energy Recoverable Costs Allocated to Demand

0 599

1,329 1,329

2,860

4,059 4,059

4.066 4,066

16,807 16,807

00000

0

2,894 3,894

Energy Juris dictional Factor is Justidictional Factor

0.9042212 0.9283895

0.9183269 0.9358334

0.9195852 0.9306931

0.0198599 0.8333671

0.8171904 0.9376315

\$542

\$1,213

\$2,629

\$3,581

\$3,734 3,734

3,729

2,629

12. Retail Energy-Related Recoverable Costs (6)

Retail Demand-Related Recoverable Costs (C)
 Total Jurisdictional Recoverable Costs (Lines 12 + 13)

(A) Lines 6 x 8.8236% x 1/12. Besed on ROE of 11.75% and weighted income tax rate of 36.575% (expansion factor of 1.828002) (B) The Governor 10 (C) Line 95 x Line 11

Environmental Cost Recovery Clause (ECRC) Tampa Electric Company

Return on Capital Investments, Depreciation and Taxes For Project: Big Bend Fuel Oil Tank #1 Upgrade Calculation of the Projected Period Amount April 1998 to September 1998 (in Dollars)

	\$54,295	\$0 54,295					Beginning of Period Amount
	69,093	69,093		0	0	\$14,798	Projected & April 98
	204,789	204,789	0	0	0	\$135,696	Projected May 98
200	354,600	384,600		0	0	\$179,811	Projected June 98
200	417,917	417,917			0	\$33,317	Projected July 98
446 900	418,679	418.579	•		0	\$762	Projected August 98
A+R 081	1	419,282	0	. 0	0	\$803	Projected September 98
	•						End of Period Amount

							295	285	0	8				
00	0	0	0	145	\$	61,694	69,093	69,093	•	•		0	0	\$14,798
00		0	0	22	1,007	136,941	204,789	204,789	0	•	0	0	0	\$135,696
00		0	0	95	2,187	294,895	354,600	384,500	0		0	0	0	\$179,811
0 0	0	0	0	943	2,951	401,259	417,917	417,917	0	0	0	0	0	\$33,317
0 0		0	0	983	3,078	418,298	418,679	418.579		0	0	0	0	\$762
00		0	0	985	3,081	418,981	419,282	419,282	0	0	0	0	0	\$603

\$12,736

4,071

\$15,428 415,428 415,428 EXHIBIT NO. 980007-E1

DOCKET NO. 980007-E1

DOCKET NO. 980007-E1

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Tampa Electric Company Environmental Cost Recovery Clause (ECRC) Calculation of the Projected Period Amount April 1998 to September 1998

Return on Capital Investments, Depreciation and Taxes For Project: Big Bend Fuel Oil Tank #2 Upgrade (In Dollars)

3		Description	Beginning of Period Amount	Projected April 98	Projected May 95	Projected June 98	July 98	Projected August 98	Projected September 96	Projected End of September 98 Period Amount
T 4 4	Investments a. Expenditures/Additions	1		\$216,156	\$237,1223	\$141,799	\$34,705	\$2,155	\$2,013	
	Retirements. Other			00	00		00	00	00	
22	2. Plant-in-Service/Depreciation Base 1 Lean. Accommission Depreciation	reciation Base December	80	00	00		00	00	00	
4 4 2 3	4. CWIP- Non-Interest Bearing 5. Net Investment (Lines 2 + 3 + 4)	Bearing ss 2+3+4)	\$58,169	274,325	611,448	753,247	787,952	790,140	782,153	
6. Au	6. Average Net Investment			166,247	442,887	662,348	770,600	789,046	791,147	
9	7. Return on Average Net Investment a. Equity Component Gross of Up Ib. Debt Component (Line 6 x 2 82)	Return on Average Net Investment a. Equity Component Gross of Up For Taxes (A) b. Debt Component (Line 6 x 2.82% x1/12)		1,222	3,257	1,604,	5,666	5,802	5,817	\$26,781 8,560
. E (6. Investment Expenses			0	٥	0	0	0	٥	0
ام ا	b. Amortization			0	0 (0 (00	00	00	00
5 %	Dismantlement Property Taylor			00	0		0	0		0
1 6				0	0	0	0	0	0	0
E G	otal Sytem Recove	Fotal Sytem Recoverable Expenses (Lines 7 + 8) Bennesda Crate Allocated to France		1,613	4,298	6,621	7,477	7,658	7,678	
ئم ا	Recoverable Con	Recoverable Costs Allocated to Dermand		1,613	4,298	6,621	7,477	7,656	7,676	35,341
5 T	 Energy Jurisdictional Factor Demand Jurisdictional Factor 	al Factor nal Factor		0.9263695	0.9304925	0.9358334	0.9195852	0.9333671	0.9171904	
12. 8	etail Energy-Relat	12. Retail Energy-Related Recoverable Costs (B)		0 99	0 100 1	0 000	0 878.8	7.043	7.040	
14. 7	otal Jurisdictional	 Ketali Lerraing-re-med recoverable Costs (C) Total Jurisdictional Recoverable Costs (Lines 12 + 13) 	200	\$1,459	\$3,923	\$6,087	\$6,878	\$7,043		\$22,428

(A) Lines 6 x 8.622695 x 1/12. Based on ROE of 11.75% and velighted income tax rate of 38.575% (expansion accord 1.628002) (B) Line 9s x Line 10 (C) Line 9b x Line 11

Environmental Cost Recovery Clause (ECRC) Calculation of the Projected Period Amount April 1998 to September 1998 Tampa Electric Company

Return on Capital Investments, Depreciation and Taxes For Project. Phillips Upgrade Tank #1 for FDEP

8	Description	Beginning of Period Amount	Projected April 98	Projected May 98	Projected June 98	Projected July 98	Projected August 98	Projected End of September 98 Period Amount	End of Period Amount	
1. Investments a ExtenditusealAdditions			20.00	192	2013	\$313	\$13,807	\$24,837		
b. Clearings to Plant	D Plant		0	0	0	0	0	0		
c. Retirements			0	0	0	•	0	0		
d. Other	ár.		•	0	0	0	0	0		
		\$	•	•	•	c	c	0		
Z. Pumm-m-odny	Z. Puzin-din-General Company	8 9	•	•						
3. Less: Accumulated Lepreca	3. Less. Accumulated Capterstation	2 606	12 844	12 824	13 237	13 550	27.487	52.424		
5. Net Investmen	5. Not investment (Lines 2 + 3 + 4)	\$2,588	12,533	12,924	13,237	13,550	27,487	52,424		
6. Average Not Investment	Investment		7,561	12,729	13,081	13,384	20,519	39,856		
1. Return on Ave	7. Return on Average Net Investment		5	3	8	8	151	284	9228	
b. Debt Com	b. Debt Component (Line 8 x 2.82% x1/12)		2 2	8	5	8	\$	ä	252	
8. Investment Expenses	Change									
a. Depreciation			0	0	0	0	0	0	0	
b. Amortization			0	0	0	0	0	0	0	
c. Dismandement	ment		0	0	0	0	0	0	0	
d. Property Taxes	20105		0	0	0	0	0	0	0	
e. Other		•	0	0	0	0	0	0	0	
9. Total Sylem F	D. Total Sytem Recoverable Expenses (Lines 7 + 5)		74	124	127	129	199	366	1,041	
a. Rucoverah	a. Rucoverable Costs Allocated to Energy		0	0	0	0	0	0	0	
b. Recoverab	Recoverable Costs Allocated to Demand		74	124	127	129	199	368	1,041	
10. Energy Jurisdictional Factor	Sictional Factor		0.9283895	0.9364975	0.8358334	0.9306931	0.9333671	0.9376315		
11. Demand Jurisdictional Factor	adictional Factor		0.9042212	0.9127498	0.9193269	0.9195852	0.9198699	0.9171904		
12. Retail Energy	12. Retail Energy-Related Re coverable Costs (B)		0	0	0	0	0	0	0	
13. Retail Deman	13. Retail Demand-Related Recoverable Costs (C)		67	113	117	119	183	356	C: 558	
14. Total Jurisdic	14. Total Jurisdictional Recoverable Costs (Lines 12 + 13)		\$67	\$113	\$117	\$119	\$183	\$355	\$865 K	
Notes:									12-4P	

(A) Lines 6 x 8.8236% x 1/12. Based on ROE of 11.75% and velighted income tax rate of 38.575% (expansion factor of 1.628002) (S) Line 8a x Line 10 (C) Line 9b x Line 11

Return on

b. Debt C

<u>Yampa Electric Company</u> Environmental Cost Recovery Clause (ECRC) Calculation of the Projected Period Amount April 1998 to September 1998

Return on Capital investments, Depreciation and Taxes For Project: Phillips Upgrade Tank #4 for FDEP (in Dollars)

Line

Description	Beginning of Period Arriount	Projected April 98	Projected May 98	Projected June 98	Projected July 98	Projected August 98	Projected September 98	End of Period Amount
nts diteral/Additors ings to Plant		\$0,709	\$235	\$1,087	\$2,617	\$20,359	\$19,663	
		0 (0 (0 (0	0	0	
Jervica/Depreciation Base	8		0	0	0			
cumulated Depreciation		# 000 A	i.	17731	19.64	40.707		
direct (Lines 2 + 3 + 4)	\$6,120	15,909	16,144	17,231	19,848	40,207	59,870	
Net Investment		11,015	16,027	16,000	18,540	30,028	50,039	
n Average Net Investment y Component Grossed Up For Taxes (A)		12	ı ä	s ជី	t ii	12	388	\$1,047
ini								
ert Expenses sciation		0	0	0	0	0	0	0
Uzation		0	0	0	0	0	0	0
ardiornet				. 0				
same Au		0 0	0	0	0	0	0	0
tem Recoverable Expenses (Lines 7 + 6)		107	ŝ	162	150	292	408	
werable Costs Allocated to Energy wersble Costs Allocated to Demand		107	156 0	i o	180 0	292	486	1,363
Jurisdictional Factor Jurisdictional Factor		0.9283895	0.9364925	0.9358334	0.9308931	0.9333671	0.9376315	
nergy-Related Recoverable Costs (B)				0	0	0		0
emand-Related Recoverable Costs (C)	an	97	142	149	198	269	446	
risdictional Recoverable Costs (Unes 12 + 13)		\$97	\$142	\$149	\$166	\$209		\$1,269

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TAMPA ELECTRIC COMP.

TOCKET NO. 980007-EI

DOCKET NO.

(A) Lines 5 x 8.8238% x 1/12. Based on ROE of 11.75% and weighted income tax rate of 38.575% (expension factor of 1.628002) (B) Line 5 x Line 10 (C) Line 5b x Line 11

14. Total Juri 12. Ratali En 11. Demand

13. Retail De

10. Energy Ju

Total Syn

a. Recey

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EXHIBIT NO. DOCKET NO. 980007-EI TAMPA ELECTRIC COMPANY (KOZ-1) FILED: JANUARY 14, 1998 DOCUMENT NO.3 PAGE 1 OF 10

FORM 42-5P

Tampa Electric Company Environmental Cost Recovery Clause (ECRC) April 1998 Through September 1998 Description and Progress Report for Environmental Compliance Activities and Projects

Project Title: Big Bend Unit 3 Flue Gas Desulfurization Integration

Project Description:

The existing FGD system on Big Bend Unit 4 was tested and found to be capable of cleaning the five gases from Unit 3 at a fraction of the cost of adding a new FGD system for this purpose.

This project involved the integration of Big Bend Unit 3 flue gases into the Big Bend Unit 4 FGD system. The integration was accomplished by installing interconnecting ductwork between Unit 3 precipitator outlet ducts and the Unit 4 FGD inlet duct. The Unit 4 FGD outlet duct was interconnected with the Unit 3 chimney via new ductwork and a new stack breaching. New ductwork, linings, isolation dampers, support steel, and stack annulus pressurization fans were procured and installed. Modifications to the materials handling systems and controls were also necessary.

Project Accomplishments:

The system is complete and in compliance.

The system is complete and in compliance

Project Fiscal Expenditures: The actual/estimated depreciation plus return for the period October 1997 through March 1998 was \$562,090 compared to the original projection of

\$562,090.

The actual/estimated O&M expense for the period October 1997 through

March 1998 was \$915,690 compared to the original projection of

\$862,380.

Project Progress Summary: The project is in service.

Project Projections: Estimated project expenditures for depreciation plus return for the period

April 1998 through September 1998 are expected to be \$555,373. Estimated O&M costs are \$652,493 for the period April 1998 to

September 1998.

FORM 42-5P

Tampa Electric Company Environmental Cost Recovery Clause (ECRC) April 1998 Through September 1998 Description and Progress Report for Environmental Compliance Activities and Projects

Project Title: Big Bend Unit 4 Continuous Emissions Monitors

Project Description:

Continuous emissions monitors (CEMs) were installed on the flue gas inlet and outlet of Big Bend Unit 4 monitor compliance with the CAAA requirements. The monitors are capable of measuring, recording and electronically reporting SO2, Nox and volumetric gas flow out of the stack. The project consisted of monitors, a CEM building, the CEMs control and power cables to supply a complete system.

40 CFR Part 75 includes the general requirements for the installation, certification, operation and maintenance of CEMs and specific requirements for the monitoring of pollutants, opacity and volumetric flow. These regulations are very comprehensive and specific as to the requirements for CEMs, and in essence, they define the components needed and their configuration.

Project Accomplishment:

The system is complete and in compliance.

Project Fiscal Expenditures:

The actual/estimated depreciation plus return for the period October 1997 through March 1998 was \$43,547 compared to the original

projection of \$43,547.

The actual/estimated O&M for the period October 1997 through March

1998 was \$0 compared to the original projection of \$0.

Project Progress Summary:

The project is in service

Project Projections:

Estimated project expenditures for depreciation plus return for the period April 1998 through September 1998 are expected to be \$42,892. There

are no estimated O&M costs for the period April 1998 through

September 1998.

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(KOZ-1)
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FORM 42-5P

Tampa Electric Company Environmental Cost Recovery Clause (ECRC) April 1998 through September 1998 Description and Progress Report for Environmental Compliance Activities and Projects

Project Title: SO2 Emission Allowances

Project Description:

The acid rain control title of the Clean Air Act Amendments (CAAA) of 1990 sets forth a comprehensive regulatory mechanism designed to control acid rain by limiting sulfur dioxide emissions by electric utilities. The CAAA require reductions in sulfur dioxide emissions in two phases. Phase I began on January 1, 1995, and applies to 110 mostly coal-fired utility plants containing about 260 generating units. These plants are owned by about 40 jurisdictional utility systems that are expected to reduce annual sulfur dioxide emissions by as much as 4.5 million tons. Phase II begins on January 1, 2000, and applies to virtually all existing steam-electric generating utility units with capacity exceeding 25 megawatts and to new generating utility units of any size. The Environmentally Protecton Agency (EPA) issues to the owners of generating units allowances (defined as an authorization to emit, during or after a specified calendar year, one ton of sulfur dioxide) equal to the number of tons of sulfur dioxide emissions authorized by the CAAA. EPA does not assess a charge for the allowances it awards.

Project Accomplishments:

SO2 Emission Allowances are being used by Tampa Electric to meet compliance standards for Phase I of the CAAA.

Project Fiscal Expenditures: The actual/estimated depreciation plus return for the period October

1997 through March 1998 is \$0, compared to the original projection of

\$0.

The actual/estimated O&M for the period October 1997 through March 1998 is \$1,980,956 compared to the original projection of \$1,412,578, a 40.2% variance due to increased SO2 allowance consumption.

40.270 Validated Gad to allocate

Progress Summary: The project is in service.

Project Projections: Estimated O&M costs for the period April 1998 through September 1998

are \$1,431,093.

FORM 42-5P

Tampa Electric Company Environmental Cost Recovery Clause (ECRC) April 1998 through September 1998 Description and Progress Report for Environmental Compliance Activities and Projects

Project Title: Big Bend Units 1 and 2 Flue Gas Conditioning

Project Description:

The existing electrostatic precipitators were not designed for the range of fuels needed for compliance with the CAAA. Flue gas conditioning was required to assure operation of the generating units in accordance with applicable permits and regulations.

The project involved the addition of liquid sulfur unloading, storage and conveying to sulfur burners and catalytic converters where SO2 is converted to SO3. The control and injection system then injects this into the ductwork ahead of the electrostatic precipitators.

Project Accomplishments:

Project Fiscal Expenditures:

The system is complete and in compliance.

The system is complete and in complete

The actual/estimated depreciation plus return for the period October 1997 through March 1998 was \$340,192 compared to the original

projection of \$340,192.

The actual/estimated O&M for the period October 1997 through March 1998 was \$21,956 compared to the original projection of \$25,599.

Project Progress Summary: The project is in service

Project Projections: Estimated project expenditures for depreciation plus return for the period

April 1998 through September 1998 are expected to be \$335,436. Estimated project expenditures for O&M for the period April 1998

through September 1998 are expected to be \$16,500.

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FORM 42-5P

Tampa Electric Company Environmental Cost Recovery Clause (ECRC) April 1998 through September 1998 Description and Progress Report for Environmental Compliance Activities and Projects

Project Title: Gannon Ignition Oil Tank Upgrade

Project Description:

The Gannon Ignition Oil Storage Tank is a 300,000 gallon field erected fuel storage tank that is required to meet the requirements of DEP Rule 62-762 as an existing field erected above ground storage tank containing a regulated pollutant (diesel fuel). The rule requires various modifications and a complete internal inspection by the end of 1999.

Present scope of work for this project includes:

- Cleaning and inspecting the tank in accordance with API 653 specifications
- Applying a coating to the internal floor and 30 inches up the tank wall. Installing an "El Segundo" bottom to the tank, including installing a leak detection system.
- Installing a spill containment for piping fittings and valves surrounding the tank.
- Installing a new truck unloading facility and spill containment for the truck unloading facility.
- Installing level instrumentation for overfill protection.
- Installing secondary containment for below ground piping or reroute to above ground.
- Conducting a tank closure assessment.

Project Accomplishments:

This project is in the construction stage.

Project Fiscal Expenditures: The actual/estimated depreciation plus return for the period October

1997 through March 1998 was \$9,390 compared to an original

projection of \$0.

There were no O & M costs for the October 1997 through March 1998

period.

Project Progress Summary: In service as of December 1997.

Project Projections: Estimated project expenditures for depreciation plus return for the period

April 1998 through September 1998 are expected to be \$19,789.

Estimated O & M expenditures are expected to be \$0 for the April 1998

FORM 42-5P

Tampa Electric Company Environmental Cost Recovery Clause (ECRC) April 1998 through September 1998 Description and Progress Report for Environmental Compliance Activities and Projects

Project Title: Big Bend Fuel Oil Tank No. 1 Upgrade

Project Description:

The Big Bend Oil Storage Tank No. 1 is a 500,000 gallon field erected fuel storage tank that is required to meet the requirements of DEP Rule 62-762 as an existing field erected above ground storage tank containing a regulated pollutant (diesel fuel). The rule requires various modifications and a complete internal inspection by the end of 1999.

Present scope of work for this project includes:

- Cleaning and inspecting the tank in accordance with API 653 specifications
- Applying a coating to the internal floor and 30 inches up 'he tank wall. Installing an "El Segundo" bottom to the tank, including installing a leak detection system.
- Installing a spill containment for piping fittings and valves surrounding the tank.
- Installing a new truck unloading facility and spill containment for the truck unloading facility.
- Installing level instrumentation for overfill protection.
- Installing secondary containment for below ground piping or reroute to above ground.
- Conducting a tank closure assessment.

Project Accomplishments:

This project is in the planning stage. The engineering work will begin in February of 1998.

Project Fiscal Expenditures:

The actual/estimated depreciation plus return for the period October 1997 through March 1998 was \$411 compared to an original projection

of \$0.

There were no O & M costs for the October 1997 through March 1998 period.

Project Progress Summary:

The project began in January 1998.

Project Projections:

Estimated project expenditures for depreciation plus return for the period April 1998 through September 1998 are expected to be \$16,807.

Estimated O & M expenditures are expected to be \$0 for the April 1998

FORM 42-5P

Tampa Electric Company Environmental Cost Recovery Clause (ECRC) April 1998 through September 1998 Description and Progress Report for Environmental Compliance Activities and Projects

Project Title: Big Bend Fuel Oil Tank No. 2 Upgrade

Project Description:

The Big Bend Oil Storage Tank No. 2 is a 4,200,000 gallon field erected fuel storage tank that is required to meet the requirements of DEP Rule 62-762 as an existing field erected above ground storage tank containing a regulated pollutant (diesel fuel). The rule requires various modifications and a complete internal inspection by the end of 1999.

Present scope of work for this project includes:

Cleaning and inspecting the tank in accordance with API 653 specifications

Applying a coating to the internal floor and 30 inches up the tank wall. Installing an "El Segundo" bottom to the tank, including installing a leak detection system.

Installing a spill containment for piping fittings and valves surrounding the tank.

Installing a new truck unloading facility and spill containment for the truck unloading facility.

Installing level instrumentation for overfill protection.

Installing secondary containment for below ground piping or reroute to above ground.

Conducting a tank closure assessment.

Project Accomplishments:

This project is in the planning stage. The engineering work will begin in February of 1998.

Project Fiscal Expenditures: The actual/estimated depreciation plus return for the period October

1997 through March 1998 was \$454 compared to an original projection

of \$0.

There were no O & M costs for the October 1997 through March 1993

period.

Project Progress Summary: The project began in January 1998.

Project Projections: Estimated project expenditures for depreciation plus return for the period

April 1998 through September 1998 are expected to be \$35,341.

Estimated O & M expenditures are expected to be \$0 for the April 1998

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(KOZ-1)
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FORM 42-5P

Tampa Electric Company Environmental Cost Recovery Clause (ECRC) April 1998 through September 1998 Description and Progress Report for Environmental Compliance Activities and Projects

Project Title: Phillips Oil Tank No. 4 Upgrade

Project Description:

The Phillips Oil Storage Tank No. 4 is a 57,000 gallon field erected fuel storage tank that is required to meet the requirements of DEP Rule 62-762 as an existing field erected above ground storage tank containing a regulated pollutant (diesel fuel). The rule requires various modifications and a complete internal inspection by the end of 1999.

Present scope of work for this project includes:

- Cleaning and inspecting the tank in accordance with API 653 specifications
- Applying a coating to the internal floor and 30 inches up the tank wall.
- Installing a spill containment for piping fittings and valves surrounding the tank.
- Installing level instrumentation for overfill protection.
- Installing secondary containment for below ground piping or reroute to above ground.
- Conducting a tank closure assessment.

Project Accomplishments:

This project is in the planning stage. The engineering work will begin in February of 1998.

Project Fiscal Expenditures: The actual/estimated depreciation plus return for the period October

1997 through March 1998 was \$60 compared to an original projection of

\$0.

There were no O & M costs for the October 1997 through March 1998

period.

Project Progress Summary: The project began in January 1998.

Project Projections: Estimated project expenditures for depreciation plus return for the period

April 1998 through September 1998 are expected to be \$1,383.

Estimated O & M expenditures are expected to be \$0 for the April 1998

FORM 42-5P

Tampa Electric Company Environmental Cost Recovery Clause (ECRC) April 1998 through September 1998 Description and Progress Report for Environmental Compliance Activities and Projects

Project Title: Phillips Oil Tank No. 1 Upgrade

Project Description:

The Phillips Oil Storage Tank No. 1 is a 1,300,000 gallon field erected fuel storage tank that is required to meet the requirements of DEP Rule 62-762 as an existing field erected above ground storage tank containing a regulated pollutant (diesel fuel). The rule requires various modifications and a complete internal inspection by the end of 1999.

Present scope of work for this project includes:

- Cleaning and inspecting the tank in accordance with API 653 specifications
- Applying a coating to the internal floor and 30 inches up the tank wall.
- Installing a spill containment for piping fittings and valves surrounding the tank.
- Installing level instrumentation for overfill protection.
- Installing secondary containment for below ground piping or reroute to above ground.
- Conducting a tank closure assessment.

Project Accomplishments:

This project is in the planning stage. The engineering work will begin in February of 1998.

Project Fiscal Expenditures: The actual/estimated depreciation plus return for the period October

1997 through March 1998 was \$28 compared to an original projection of

\$0.

There were no O & M costs for the October 1997 through March 1998

period.

Project Progress Summary: The project began in January 1998.

Project Projections: Estimated project expenditures for depreciation plus return for the period

April 1998 through September 1998 are expected to be \$1,041.

Estimated O & M expenditures are expected to be \$0 for the April 1998

TAMPA ELECTRIC TANK UPGRADE PROJECTS (April 1998 Through September 1998 Projection Period)

TARK	DANK SIZE (GADAC 99)	THE RESERVE AND DESCRIPTION OF THE PERSON OF	MAMETER (KEET)		ORIGINAL IN-SERVICE DATE	DPGRADE BYGAN	UPCRAM ENU	POST. UPGRADE IN SURVICE DAST	ESTIMATED COST
Gamon Ignition Oil Tank	300,930	32	40	No. 2 Fuel Oil	1968	October 1997	December 1997	December 1997	\$500,000
Big Bend Fuel Oil Tank #1	507,024	32	52	No. 2 Fuel Oil	1968	1958	1998	1998	\$450,000
Big Bend Fuel Oil Tank #2	4,188,324	30	160	No. 2 Fuel Off	1974	1998	1998	1998	\$850,006
Phillips Tank #1	1,300,000	48	68	Ne. 6 Fuel Oil	1983	1998	1998	1998	\$55,000
Phillips Tank #4	57,000	24	20	No. 2 Fuel Oil	1983	1998	1998	1998	\$100,000
Phillips Tank #6	10,000	15.75	10.50	No. 6 Fuel Oil	1983	1998	1998	1998	\$24,000
TOTAL									\$1,979,000

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Energy & Demand Allocation % By Rate Class April 1998 to September 19

	ω	8	63	(9)	(3)	(9)	6	(9)	(8)	(10)
Rate Cless	Average 12 CP Load Factor at Meter (%)	2.10	Projected Avg 12 CP at Meter (kW)	Demand Loss Expansion Factor	Energy Loss Expansion Factor	Projected Sales at Generation (RWM)	Projected Avg 12 CP at Generation (kW)	Percentage of KWN Sales at Generation (%)	Percentage of 12 CP Demand at Generation (%)	12 CP & 1/13 Allocation Factor (%)
RS, RST	63.57738%	53.57738% 3,818,779,000	813,226	1.086114	1.059519	4,043,949,869	866,992	45.54%	58.75%	67.74%
68, 681, 78	55.78012%	501,827,000	102,700	1.065889	1.059519	531,685,241	109,467	5.99%	7.42%	7.31%
GSD, GSDT	74.11021%	74.11021% 2,233,786,000	344,080	1.064600	1.058388	2,364,212,297	366,308	26.62%	4 24.82%	24.95%
GSLD, GSLDT, SBF, SBFT	62.89976%	912,618,000	125,670	1.048214	1.042045	950,989,024	131,729	10.71%	8.83%	9.07%
N 151, 1571, 5811, 153, 1537, 5813	97.33862%	890,945,000	0	1.022142	1.020002	908,785,682	0	10.23%	6 0.00%	0.79%
SVOL	819.04490%	76,560,000	1,067	1.055556	1,059521	81,116,928	1,126	0.91%	% 0.08%	0.14%
TOTAL		000 818 000	1.386.743			8,050,729,041	1,475,622	100.00%	K 100.00%	100.00%

(1) Average 12 CP load factor based on actual 1995 load research data (2) Projected kWh safes for the period April 1998 to September 1998 (3) Calcustated: (Column 2) / (8,780 hours X Column 1) (4) Based on projected 1998 demand losses (5) Based on projected 1998 demand losses (6) Column 2 X Column 5 (7) Column 6 (7) Column 6 (8) Column 8 (9) Column 8 (9) Column 8 (10) Column 8

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FORM 42-6P

Form 42-7P

	æ	8	6	•	6	(9)	6
Rate Class	Percentage of KWh Sales at Genuration (%)	12 CP & 1/13 Allocation Factor (%)	Energy- Related Costs (\$)	Demand- Related Costs (5)	Total Environmental Costs (\$)	Projected Sales at Meter (XVMt)	Environmental Cost Recovery Factors (¢AWM)
RS, RST	45.54%	57.74%	1,221,113	40,138	1,261,251	1,261,251 3,816,779,000	0.033
08, 651, 18	5.99%	7.31%	160,616	5,081	165,697	501,827,000	0.033
GSD, GSDT	26.62%	24.95%	713,791	17,344	731,135	2,233,786,000	0.033
GSLD, GSLDT, SBF, SBFT	10.71%	9.07%	287,179	6,305	293,484	912,618,000	0.032
IS1, IST1, SB11, IS3, IS3T, SBI3	10.23%	0.79%	274,308	549	274,857	690,845,000	0.031
SLOL	0.91%	0.14%	24,401	87	24.498	76,560,000	0.032
TOTAL	100.00%	100.00%	2,681,408	68,514		2,750,922 8,432,515,000	-1

(1) From Form 42-6P, Column 8
(2) From Form 42-6P, Column 10
(3) Column 1 x Total Jurisdictional Energy Dollars from Form 42-1P, line 5
(4) Column 2 x Total Jurisdictional Demand Dollars from Form 42-1P, line 5
(5) Column 3 + Column 4
(6) Projected KWH sales for the period April 1998 to September 1998
(7) Column 5 / Column 6 x 100

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FORM 42-1E

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Current (Actual/Estimated) Period True-Up
October 1997 to March 1998

1

Line

Period

OveriUnder) Recovery for the current period (Form 42-2E, Line 5)	2. Interest Provision (Form 42-2E, Line 6)	3. Sum of Current Period Adjustments (Form 42-2E, Line 10)	4. Current Period True-Up Amount to be refunded/proovered in the projection period April 1998 to September 1998 (Lines 1 + 2 + 3)

=		ol	6
478,901)	"		98,070
ž			2

FORM 42-2E

Form 42 - 2E

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Actual/Estimated Period True-Up Amount.
October 1997 to March 1998

Current Period True-Up Amount (in Dollars)

			,					End of
틧	1	Actual October 97	Actual Actual October 97 November 97	Estimated December 97	Estimated January 98	Estimated February 98	Estimated March 98	Period
	ECRC Revenues (net of Revenue Taxes) True-Lb Provision	\$710,245	\$593,828	\$613,326	\$600,908	\$614,448	\$582,301	\$3,785,054
	3. ECRC Revenues Applicable to Period (Lines 1 + 2)	595,729	479,310	498,610	546,392	489,932	477,784	3,097,957
	4. Jurisdictional ECRC Costs a. O & M Activities (Form 42-5E, Line 9) b. Carallal Lossetmand Profesion (Form 42-75 1 to 0)	535,786	475,529	457,125	365,288	473,350	383,166	2,690,253
	c. Total Arrisdictional ECRC Costs	683,124	622,195	604.915	513,291	622,529	530,864	3,576,658
2	5. Over/Under Recovery (Line 3 - Line 4c)	(87,395)	(142,885)	(108,105)	33,101	(122,597)	(53,020)	(478,901)
25	6. Interest Provision (Form 42-3E, Line 10)	(275)	(281)	(342)	26	383	519	38
	7. Beginning Balance True-Up & Interest Provision	(687,097)	(660,251)	(668,901)	(680,832)	(533,181)	(540,679)	(587,097)
	a. Deferred Trae-Up from October 1955 to Merch 1997 (Order No. PSC-97-xxxx-FOF-Et)	613,889	613,889	613,880	613,889	613,689	613,669	613,889
	8. True-Up Collected/(Refunded) (see Line 2)	114,516	114,516	114,516	114,518	114,516	114,517	687,097
	9. End of Period Total True-Up (Lines 5 + 6 + 7 +7a + 8)	(46,362)	(75,012)	(66,943)	80,708	73,010	135,026	135,026
	10. Adjustment to Period True-Up Including Interest	0	0	0	0	0	0	0
	11. End of Period Total Net True-Up (Lines 9 + 10)	(\$48,362)	(\$75,012)	(\$66,943)	\$80,708	\$73,010	\$135,026	\$135,026

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Actual/Estimated Period True-Up
October 1997 to March 1998

	Interest Provision (in Dollars)	w				V.	
	Actual October 97	Actual November 97	Estimated December 97	Estimated January 98	Estimated February 88	Essimated March 98	525
1. Beginning Balance True-Up Amount (Form 42-2E, Line 7 +7a + 10)	(\$73,208)	(\$46,362)	(\$75,012)	(\$66,943)	\$60,708	\$73,010	
2. Ending True-Up Amount Before Interest	(46,087)	(74,731)	(109,801)	80,674	72,627	134,507	
3. Total of Beginning & Ending True-Up (Lines 1 & 2)	(119,285)	(121,083)	(141,613)	13,731	153,335	207,517	
4. Average True-Up Amount (Line 3 x 1/2)	(59,648)	(60,547)	(70,807)	0.866	76,668	103,759	
5. Interest Rate (First Day of Reporting Business Month)	5.53%	8.63%	8.60%	8.00%	6.00%	8,00%	
6. Interest Rate (First Day of Subsequent Business Month)	8.53%	5.80%	8.00%	6.00%	6.00%	6.00%	
7. Total of Beginning & Ending Interest Rates (Lines 5 & 6)	11.06%	11.13%	11.60%	12.00%	12.00%	12.00%	
8. Average Interest Rate (Line 7 x 1/2)	5.53%	5.57%	5.80%	8,00%	6.00%	6.00%	
9. Morahly Average Interest Rate (Line 8 x 1/12)	0.461%	0.464%	0.483%	0.500%	0.500%	0.500%	
10. Interest Provision for the Month (Line 4 x Line 9)	(\$275)	(\$281)	(\$342)	\$34	\$383	\$519	-

FORM 42-3E

Environmental Cost Recovery Clause (ECRC)
Calculation of the Current Period Actual/Estimated Amount
October 1997 to March 1998 Tampa Electric Company

Variance Report of O & 18 Activities (In Dollars)

	(1) Actual/	(Z) Original	(3) Varia	(4)
	Estimated	Projection	Amount	Percent
1. De ucaption of Investment Prujects				
1a Big Bend Unit 3 Flue Gas Desutfurization Integration	\$915,690	\$562,380	\$53,310	6.2%
1b Big Bend Units 1 and 2 Flue Gas Conditioning	21,956	25,599	(3,643)	-14.2%
1c Big Bend Unit 4 Confiner a Embalona Monitors	0	0	0	0.0%
1d Garrion lentiton Oil Tank	0	0	0	0.0%
1e Big Bend Fuel Oil Tank #1 Upgrade	0	0	0	0.0%
11 Bio Bend Fuel Oil Tank #2 Upgrade	0	0	0	0.0%
to Phillips Upgrade Tank #1 for FDEP	0	0	0	0.0%
th Phillips Upgrade Tank \$4 for FDEP	0	0	0	20.0%
11 SO2 Emissions Allowances	1,980,958	1,412,578	568,378	40.2%
1) SO2 Credit - FMPALIdd	(68,190)	0	(68,190)	0.0%
2. Total Investment Projects - Recoverable Costs	2,850,412	2,300,557	549,855	23.9%
3. Recoverable Costs Allocated to Energy	2,850,412	2,300,557	549,855	23.9%
4. Recoverable Costs Allocated to Demand	20	9	ş	960.0

Notes.
Column (1) is the End of Period Totals on Form 42-5E
Column (2) is the approved Projected amount in accordance with FPSC Order No. PSC 97 1047-FOF-EI
Column (3) = Column (1) - Column (2)
Column (4) = Column (3) / Column (2)

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FORM 42-4"

Method of Classification

End of Period Total

Environmental Cost Recovery Clause (ECRC)
Calculation of the Current Period Actual/Estimated Amount Tampa Electric Company

October 1997 to March 1998

O&M Activities (in Dollars)

November 97 Actual

5

	October 97	November 97	December 97	January 98	February 98	March 98	Total	Demand	Energy
1. Description of O&M Activities									
1s. Rin Band Link 3 Fine Cas. Desulfarization integration	\$155.614	\$108.778	\$106.795	\$121.037	\$260.864	\$164,604	\$915,690		\$915,690
1b Blo Bend Units 1 and 2 Fare Gas Conditioning	8.431	2,525	2,750	2,750	2,750	2,750	21,955		21,956
1c. Bio Bend Unit 4 Continuous Emissions Monitors	0	0	0	0	•	0	0		0
14 Gannen Invittor Oll Tunk	0	0	0	0	0	0	•	0\$	
to Bin Rend Fuel Oil Tank #1 Unorade	0	0	0	0	0	0	0	0	
1f Bio Band Fuel Oll Tank #2 Uporada	0	0	0	0	0	0	0	0	
to Phillips Uperade Tank \$1 for FDEP	0	0	0	0	0	0	0	0	
th Philling Unernels Tank \$4 for FDEP	0	0	0	0	0	0	0	0	
11 SO2 Folesland Allowances	416.043	410.351	379.459		249,397	251,548	1,980,958		1,980,958
1 SO2 Couds - PAPAA ker	(11.568)				(12,000)	(10,000)	(68,190)		(88,190)
2. Total of O&M Activities.	\$68,522	504,028	482,004	385,945	501,011	408,902	2,850,412	\$0	\$2,850,412
3 Recoverable Costs Allocated to Feerov	568.522		482,004	365,945	501,011	408,902	2,850,412		
4. Recoverable Costs Allocated to Demand	0	•	0	0	0	0	0		
5. Batall Francy, taitedictional Factor	0.9296935			0.9273021	0.9300383	0.9189633			
6. Retail Demand Jurisdictional Factor	0.9015009	0.8875445	0.8794068	0.8841603	0.8874502	0.8736430			
7. Jurisdictional Energy Recoverable Costs (A)	528,551			357,888		375,788	2,645,337		
7a. Add back FMPALkld Excess Emissions Allocation	7,235	8,081	7,400	7,400	7,400	7,400	44,916		
8. Jurisdictional Demand Recoverable Costs (B)	0			0		0	0		

FORM 47-5E

\$2,690,253

\$383,168

\$473,359

\$365,288

\$457,125

\$475,529

\$535,786

Total Justedictional Recoverable Costs for O&M 8. Jurisdictional Demand Recoverable Costs (B)

Activities (Lines 7 + 8)

(A) Line 3 x Line 5 (B) Line 4 x Line 6

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Current Period Actual/Estimated Amount October 1997 to March 1998 Variance Report of Capital Investment Projects - Recoverable Costs

(In Dollars)

	(1) Actual	(Z) Original	(3) Varia	(4)
	Estimated	Projection	Amount	Percent
Description of Investment Projects 1s Bio Bard Linit 3 Plus Gas Desutifulzation Instorration	\$562,090	\$562,090	2	%00
1b Blia Bend Units 1 and 2 Flue Gas Conditioning	340,192	340,192	0	20.0%
1c Bis Bend Unit 4 Continuous Emissions Monitors	43,547	43,547	0	%0.0
1d Gannon Ionition Oil Tank	9,390	0	9,390	9,00
1e Blo Bend Fuel Oil Tank #1 Uporade	411	0	411	9,00
11 Rie Band Fael Oil Tack #2 Upgrade	154	0	454	0.0%
to Phillips Uperade Tank #1 for FDEP	28	0	28	0.0%
th Phillips Upgrade Tank #4 for FDEP	99	0	09	0.0%

Notes.
Column (1) is the End of Period Totals on Form 42-7E
Column (2) is the approved Projected amount in accordance with FPSC Order No. PSC 97-1047-FOF-EI
Column (2) = Column (1) - Column (2)
Column (4) = Column (3) / Column (2)

FORM 42-6E

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Recoverable Costs Allocated to Energy
 Recoverable Costs Allocated to Demand

2. Total Investment Projects - Recoverable Costs

20.0%

\$10,343

\$10,343

10,343

945,829 945,829

956,172

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Current Period Actual/Estimated Amount
October 1997 to March 1998

Capital Investment Projects-Recoverable Costs

(in Dollars)

									-		
			Actual	Actual	Estimated	Estimated	Estimated	Estimated	Parlod	Method of C	lassification
	.1		October 97	November 97	December 97	January 98	February 98	March 98	Total	Demand Energy	Energy
	1. Description of Investment Projects (A)										
	1a Big Bond Unit 3 Flue Gas Desuffurty	gration	\$94,148	\$93,961	\$83,775	\$83,589	\$93,402	\$93,216	\$562,090		\$562,090
	th Big Bend Units 1 and 2 Flue Gas	OUT.	57,029	56,897	58,765	56,633	56,500	56,368	340,192		340,192
	-	. Monitors	7,303	7,285	7,267	7,249	7,231	7,212	43,547		43,547
	1d Gannon Ignilion Oil Tank		0	0	626	2,214	3,233	3,317	9,390	\$9,390	
	te Big Bend Fuel Oil Tank \$1 Upgrade		0	0	0	=	74	328	411	411	
	1f Big Bend Fuel Oil Tanh #2 Upgrade		0	0	•	12	88	356	454	454	
	1g Phillips Upgrade Tank #1 for FDEP		0	0	0			19	28	28	
	1h Philips Upgrade Tank 84 for FDEP		0	0	0		15	4	9	80	
	Total Investment Projects - Recoverable Costs	#	158,480	158,143	158,433	159,710	160,549	160,857	956,172	\$10,343	\$945,829
3	3. Recoverable Costs Allocated to Energy		158,480	158,143	157,807	157,471	157,133	156,795	945,829		
0	4. Recoverable Costs Allocated to Demand		0	0	628	2,239	3,416	4,062	10,343		
	5. Retail Energy Jurisdictional Factor 6. Retail Demand Jurisdictional Factor		0.9296935	0.9274252	0.8330315	0.8273021	0.9300363	0.9189633			
	7. Aurisdictional Energy Recoverable Costs (B) 8. Jurisdictional Demand Recoverable Costs (C)	e	147,338	146,666	147,238	1,960	146,139	144,089	9,111		
	Potal Jurisdictional Recoverable Costs for Investment Projects (Lines 7 + 8)		\$147 318	\$140 ABB	\$147 790	\$148 003	\$140 170	\$147 638	\$147 638 \$886 605		

(A) Each project's Total System Recoverable Expenses on Form 42-8E, Line 9 (B) Line 3 x Line 5 (C) Line 4 x Line 6 (C) Line 4 x Line 6

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FORM 42-7E

FORM 42-8E

Environmental Cost Recovery Clause (ECRC)
Calculation of the Actual/Estimated Amount for the Period
October 1997 to March 1998 Tampa Electric Company

Form 42 - 8E Page 1 of 8

Return on Capital Investments, Depreciation and Taxes For Project: Big Bend Unit 3 Flue Gas Desulfurization Integration (in Dollars)

Une	Description	Beginning of Period Amount	Actual October 97	Actual November 97	Estimated December 97	Estimated January 98	Estimated February 98	Estimated March 98	End of Period Amount
7 4 4	Expenditures/Additions Expenditures/Additions Cassions to Plans		80	30	80	80	80	80	
i ປ	c. Retireutents			0		0	0	•	
9	d. Other		0	•	0	0	0	•	
3.5	 Plant-In-Service/Depreciation Brise Less: Accumulated Depreciation 	\$8,239,658 (508,659)	8,239,658 (527,885)	8,239,658 (547,111)	8,239,668 (568,337)	6,239,658 (565,563)	6,239,658 (604,789)	8,230,858 (624,015)	
Q 2	4. CMIP - Non-Interest Bearing 5. Net Investment (Lines 2 + 3 + 4)	\$7,730,999	7,711,773	7,692,547	7,673,321	7,654,095	7,634,869	7,615,643	
8.4	6. Average Net Investment		7,721,386	7,702,160	7,682,934	7,663,708	7,644,482	7,625,256	
E d d	7. Return on Average Not Investment a. Equity Component Grossed Up For Taxes (A) b. Debt Component (Line 6 x 2.82% x1/12)		18,145	56,635	50,494	18,010	56,211	56,070	\$338,540 108,194
60	8. Investment Expenses a Demodation		19.226	19,228	19,226	19,226	19,226	19,226	115,356
م ا	b. Amortization		0	٥		0	0	0	0
ď	. Dismandement		0	0	0	0	0	0	
15 6	. Property Taxes . Other		00	00	00	00	00	00	0 0
0 1	6 Total Sutem Recoverable Foremain (Lines 7 +8)		94.148	93.961	83,775	83,589	83.402	93,215	562,090
. 4	Recoverable Costs Aflocated to Energy		94,148			93,589	93,402	93,215	562,06
۵	. Recoverable Costs Alecated to Demand		0	0	0	0	0	0	0
10.E	 Energy Jurisdictional Factor Demand Jurisdictional Factor 		0.8296935	0.8274252	0.9330315	0.9273021	0.9300383	0.9189633	
12. R	12. Retail Energy-Related Recoverable Costs (B) 11. Batest Demand-Related Recoverable Costs (C)		87,529	87,142	87,495	86,785	86,367	85,661	
14. T	14. Total Jurisdictional Recoverable Costs (Lines 12 + 13)	+ 13)	\$87,529	\$87,142	\$87,495	\$86,785	\$83,867	\$85,661	\$521,479

⁽A) Lines 6 x 8.8238% x 1/12. Based on ROE of 11.75% and weighted income tax rate of 38.575% (expansion factor of 1.628002) (B) Line 8a x Line 10 (C) Line 9b x Line 11

Form 42 - 8E Page 2 of 8

> Calculation of the Actual/Estimated Amount for the Period Environmental Cost Recovery Clause (ECRC) October 1997 to March 1998 Tampa Electric Company

Return on Capital Investments, Depreciation and Taxes For Project: Big Bend Units 1 and 2 Flue Gas Conditioning (in Dollars)

Description	Beginning of Period Amount	Actual October 97	Actual November 97	Estimated Ducember 97	Estimated January 98	Estimated February 98	Estimated March 98	End of Period Amount
1. Investments a. Expensitures/Additions		8	8,	8	2 9	8.5	20	
b. Clearings to Plant		0 (9 6	•				
c. Retirements d. Other		00	00			0	0	
2 Plant In-Sarvice/Depreciation Base	\$5,017,734	5,017,734	5,017,734	5,017,734	5,017,734	5,017,734	5,017,734	
3. Less: Accumulated Depreciation	(535,634)	(549,238)	(562,842)	(576,446)	(590,050)	(603,654)	(617,258)	
5. Net Investment (Lines 2 + 3 + 4)	\$4,482,100	4,468,496	4,454,892	4,441,288	4,427,684	4,414,080	4,400,476	
6. Average Net Investment		4,475,298	4,461,694	4,448,090	4,434,486	4,420,882	4,407,278	
Return on Average Net Investment Euslin Component Grossed Up For Taxes (A)		32,908	32,608	32,708	32,608	32,507	32,407	\$195,946
 b. Debt Component (Line 3 x 2.82% x1.12) 		10,517		10,453	10,421	10,389	10,357	62,622
8. Investment Expenses		13.604	13.604	13,604	13,604	13,604	13,604	81,624
a. Depreciation		0		0	0	0	0	0
		0	0	0	0	0	0	0
d December Taylor		0	0	0	0	0	0	0
e. Other		0	0	0	0	0	0	0
6 Total S. term Bacoussable Functores (I less 7+8)		57,029	56.897	58.765	56,633	56,500	56,368	340,192
a. Dannasable Costs Allocated to Frence		57.029		58,765	56,633	56,500	56,368	340,182
b. Recoverable Costs Allocated to Demand		0		0	0	0	0	0
10. Energy Arrisdictional Factor		0.9296835	0.9274252	0.9330315	0.9273021	0.9300383	0.9189633	
11. Demand Ju. tadictional Factor		0.9015009	0.8875445	0.8794068	0.8841608	0.8874502	0.8736430	
12. Retail Energy-Reluded Re-coverable Costs (B)		53,019	62,768	52,964	52,516	52,547	51,800	315,614
13. Retail Demand-Related Rezoverable Costs (C)		0			0	0	٥	1
14. Total Juri., Sictional Recovyrable Costs (Lines 12 + 13)	13)	\$53,019	\$52,768	\$52,964	\$52,516	\$52,547	\$51,800	\$315,614

(A) Lines 6 x 8.6238% x 1/12. Based on PIOE of 11.75% and weighted income tax rate of 38.575% (expansion factor of 1.628002) (B) Line 8a x Line 10 (C) Line 9b x Line 11

File

Form 42 - 8E Page 3 of 8

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Actual/Estimated Amount for the Period October 1997 to March 1998

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Line Description		Beginning of Period Amount	Actual October 97	Actual November 97	Estimated December 97	Estimated Jenuary 98	Estimated February 98	Estimated March 98	End of Period Amount
1. Investments				•	\$	\$	S	\$	
a. Expenditures/Additions b. Charloos to Plant			9 0		. •	0	0	0	
c. Retirements			0	•	0	0	0	0	
d. Other			•	0	•	0	•	0	
9 Diant in Candral December Sees		EBSR 211	BAR 211	866 211	686.211	868.211	886.211	868.211	
3. Less: Accumulated Depreciation		(89,628)	(71,503)		(75,257)	(77,134)	(78,011)	(80,888)	
4. Other (A) 5. Net Investment (Lines 2 + 3 + 4)		\$560,177	(236,408)	(236,408)	(236,408)	(238,408)	(236,408)	(236,408)	
6. Average Net Investment			559,239	567,362	555,485	563,608	157,731	549,854	
7. Return on Average Net Investment a. Equity Component Grossed Up For Taxes (B)	For Taxtes (B)		4,112		4,085	4,071	4,057	4,043	\$24,466
Debt Component (Line 6 x 2.82% x1/12)	16 x1/12)		1,314	1,310	1,305	1,301	1,297	1,282	
8. Investment Expenses a. Decreciation			1.877	1,877	1,877	1,877	1,877	1,877	11,262
b. Americation			0		0	0	0	0	0
c. Dismanilement			0	0	0	0	0	0	0
d. Property Taxes			0	0	0	0	0	0	0
e. Other			0	0	0	0	0	0	0
9. Total Sytem Recoverable Expenses (Lines 7 +8)	s (Lines 7 +8)		7,303	7,285	7,267	7,249	7,231	7,212	43,547
a. Recoverable Coats Allocated to	to Finergy		7,303		7,267	7,249	7,231	7,212	43,547
	to Demend		0	0	0	0	0	0	0
10. Energy Jurisdictional Factor			0.9296935	100	0.9330315	0.9273021	0.9300383	0.9189633	
11. Demand Jurisdictional Factor			0.9015009	0.8875445	0.8794068	0.8941608	0.8874502	0.8736/30	
12. Retail Energy-Retailed Recoverable Costs (C)	Costs (C)		6,790	6,756	6,780	6,722	6,725	6,628	40,401
 Retail Demand-Related Recoverable Costs (D) 	ole Costs (D)		0		0	0	0	0	
14. Total Jurisdictional Recoverable Co	Costs (Lines 12 + 13)	13)	\$6,790	\$6,756	\$8,780	\$6,722	\$6,725	\$6,628	\$40,401

⁽A) Represents the Net Book Value of the replaced Big Bend 15.3 4 CEMs which is currently recovered inrough base rates.
(B) Lives 6 x 8.6238% x 1/12. Based on ROE of 11.75% and weighted income tax rate of 38.575% (expansion factor of 1.628002) (C) Line 9a x Line 10
(D) Line 9b x Line 11

FORM 42-8E

	Tampa Electric Company Environmental Cost Recovery Clause (ECRC) Calculation of the Actual/Estimated Amount for the Period October 1997 to March 1998	Tampa Electric Company Environmental Cost Recovery Clause (ECRC) lation of the Actual/Estimated Amount for the F October 1997 to March 1998	DBETY Mause (ECRC) mount for the Pr h 1998	Po				Form 42 -8E Page 4 of 8
	Return on Capital Investments, Depreciation and Taxes For Project: Gernon Ignition Oil Tank (in Dollars)	n Capital Investments, Depreciation ar For Project: Gannon Ignition Oil Tank (in Dollars)	reciation and Tax in Oil Tank					
Beachplon	Beginning of Period Amount	Actual October 97	Actual November 97	Estimated December 97	Estimated January 86	Estimated February 96	Estimated March 98	End of Period Amount
Expenditures/Additions Expenditures/Additions Chanings to Plant C. Reliterments d. Other		2000	8000	000/5052	000'05\$	000,018	000,28	
Plant-in-Services/Dayreclation Base Leuis: Accumulated Depreciation CWIP - Non-Interest Bearing 4a. Other (A) Met Investment (Lines 2 + 3 + 4)	80008	00000	0000	0 395,000 (285,000) 129,000	445,000 (723) 0 (266,000) 178,277	455,000 (2,185) 0 (266,000) 186,815	480,000 (3,672) 0 (288,000) 190,328	
6. Average Net Investment		•	0	64,500	153,639	182,548	188,572	
7. Return on Average Net Investment a. Equity Component Grossed Up For Taxes (B) b. Debt Certiponent (Line 6 x 2.82% x 1/12)		00	00	123	1,130	1,342	1,367	\$4,333
8. Investment Expenses a. Depreciation b. Amortization c. Dismunitement d. Property Taxes e. Other		00000	00000	00000	627	1,482	1,487	3,672
Total System Recoverable Expenses (Lines 7 + 6) Recoverable Costs Allocated to Energy Recoverable Costs Allocated to Demand		000	000	929	2,214	3,233	3,317 0 5,8,8	9,380 080,8
10. Energy Jurisdictional Factor 11. Dermand Jurisdictional Factor		0.9015009	0.8875445	0.8794088	0.8841608	0.8874502	0.9189633	
 Retail Energy-Related Recoverable Costs (C) Retail Demand-Rulated Recoverable Costs (D) Total Jurisdictional Recoverable Costs (Lines 12 + 13) 	(5)	0 0 0	0 0 0	55 551 1558	1,958	2,869	2,698	0 8.276 \$8,276

Notes:
(A) Represents the Capital Costs of the Gannon Ignition Oil Tank currently recovered through base rates.
(B) Lines 6 x 9.8236% x 1/12. Based on ROE of 11.75% and verighted incorne tax rate of 38.575% (expan (C) Line 96 x Line 10
(D) Line 96 x Line 11

alon factor of 1.628002)

Line

Calculation of the Actual/Estimated Amount for the Period Tampa Electric Company Environmental Cost Receivery Clause (ECRC)

Return on Capital Investments, Depreciation and Taxes For Project: Big Bend Fuel Oil Tank #1 Upgrade October 1997 to March 1998

scription	
Beginning of Period Amount	
Actual October 97	(In Dollars)
Actual November 97	
Estimated December 97	
Estimated January 98	
Estimated February SS	
Estimated March 98	
End of Period Amount	

Line

-4	13	-											~		un			N				
14. Total Jurisdictional Recoverable Costs (Lines 12 + 13)	 Retail Demand-Related Recoverable Costs (C) 	12. Retail Energy-Related Recoverable Costs (B)	 Energy Jurisdictional Factor Demand Jurisdictional Factor 	 Recoverable Costs Allocated to Demand 	 Recoverable Costs Allocated to Energy). Total Sylem Recoverable Expenses (Lines 7 +5)	e. Other	d. Property Texes	c. Dismantlement	b. Amortization	Linvestment Expenses a. Depreciation	b. Debt Component (Line 6 x 2.82% x1/12)	 Return on Average Net Investment Equity Component Grossed Up For Taxes (A) 	Average Net Investment	Net Investment (Lines 2 + 3 + 4)	CWIP - Non-Interest Bearing	Lass: Accumulated Depreciation	Plant-b-Service/Depreciation Base	d. Other	c. Relirements	b. Clearings to Plant	a. Expenditures/Additions
															\$0	0	0	5				
50	0	0	0.9299835 0.9315009	0	0	0	0	0	0		0		0	۰	0	0	0	0			0	8
\$6		0	0.9274252	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0		8
00	0	0	0.8330315	0	0	0	0	0	0	0	o	0	0	•	0	0	0	0	0	0	0	8
\$10	1		0.8273021	=	0	=	0	0	0	0	0			1,191	2,262	1	0		0	0	0	\$2,262
\$66	66	0	0.8300383	74	0	74	0	0	0	0	0	100	8	7,581	12,900	12,900	0	0	0	0	0	\$10,638
\$285	285	0	0.9300303	328	0	326	0	0	0	0	0	79	247	33,568	54,295	54,295	0	0	0	0	0	\$41,385
\$360	380	0		411	0	411	0	0	0	0	0	100	\$311									

FORM 42-8E

EQUIBIT NO.

TAMPA ELECTRIC COMPANY
(MOZ-1)

TAMPA ELECTRIC COMPANY
(MOZ-1)

TOCUMENT NO.15

PAGE 5 OF 8

(A) Lines 6 x 8.8230% x 1/12. Based on ROE of 11.75% and weighted in: sine tax rate of 38.575% (expansion factor of 1.528002)
(B) Line 9a x Line 10
(C) Line 9b x Line 11

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October 1997 to March 1998	Calculation of the Actual/Estimated Amount	Environmental Cost Recovery Clause	Tampa Electric Company
866	ount for the Period	use (ECRC)	Xu

Return on Capital Investments, Depreciation and Taxes
For Project: Big Bend Fuel Oil Tank #2 Upgrade
(in Dollars)

Line

 Total Jurisdictional Recoverable Costs (Lines 12 + 13) 	 Retail Demand-Related Recoverable Costs (C) 	12. Retail Energy-Related Recoverable Costs (B)	 Energy Jurisdictional Factor Demand Jurisdictional Factor 	 Recoverable Costs Allocated to Demand 	 Recoverable Costs Allocated to Energy 	9. Total Sytem Recoverable Expensus (Lines 7 +5)	e. Other	d. Property Taxes	c. Dismantlement	b. Autoritization	a. Depreciation	8. Investment Expenses	b. Debt Component (Line 6 x 2.92% x1/12)	A. Return on Average yes streetment B. Equity Component Grossed Up For Taxes (A)	T BANK THE TANK THE T	6. Average Net Investment	5. Net Investment (Lines 2 + 3 + 4)	4. CWIP - Hon-Interest Bearing	3. Less: Accumulated Depreciation	2. Plant-in-Service/Depreciation Base	d. Other	c. Refirements	b. Clearings to Plant	Investments Expenditureal Additions	Description
_																	\$0	0	0	8					Beginning of Period Amount
80	0	0	0.9296935	0	0		0	0		0	0		0	0		0	0	0		0		0	0	8	Actual October 87
\$0			0.8875445	0	0	0	0	0					0	0		0	0	0	0	0	0	0	0	8	Actual November 97
\$0			0.8330315	0	0	0	0	0						0			0	0	0		0	0	0	8	Estimated December 97
\$11			0.8273021	12	0	12	0	0						9		1,268	2,535	2,535	0	0	0		0	\$2,535	Estimated January 98
		0	0.8374502	86			0						21	8.		8,841	15,147		0	0	0	0	0	\$12,612	Estimated February 98
\$31	31		0.8736430	356									8	270		36,658		58,169		0		0		\$43,022	mated Estimated End of sary 98 March 98 Period Amor
8398	398	0				454	0						110			74		100						44200	End of Period Amount

FORM 42-8E

EXHIBIT NO. 930007-E1
DOCKET NO. 930007-E1
(KOZ-1)
PLED: JANUARY 14, 1998
PAGE 6 OF 8

(A) Lines 6 x 8.8239% x 1/12. Based on ROE of 11.75% and weighted income tax rate of 38.575% (expansion factor of 1.828002)
 (B) Line 8a x Line 10
 (C) Line 8b x Line 11

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End of Period Amount 00000 202 \$21 00000 000 1,923 0.9189633 Estimated March 98 0.9300383 1,258 Estimated February 98 0.8941608 00000 313 157 Estimated January 98 0.8330315 00000 December 97 Estimated 00000 For Project. Phillips Upgrade Tank #1 for FDEP (in Dollars) 0.9274252 November 97 Actual 000 0.9296835 00 October 97 Actual Beginning of Period Amount 000 Equity Component Grossed Up For Taxes (A) Total Sytem Recoverable Expenses (Lines 7 +8) Recoverable Costs Allocated to Demand Debt Component (Line 6 x 2.82% x1/12) a. Recoverable Costs Allocated to Energy Plant-in-Servica/Depreciation Base
 Less: Accumulated Depreciation Return on Average Not Investment Not Investment (Lines 2 + 3 + 4) 4. CWIP - Non-Interest Bearing Energy Jurisdictional Factor Average Net Investment Expenditures/Addit Investment Expenses Charings to Plant Dismanibement Depreciation Amortization

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Calculation of the Actual/Estimated Amount for the Period

October 1997 to March 1998

Environmental Cost Recovery Clause (ECRC)

Tampa Electric Company

Return on Capital Investments, Depreciation and Taxes

EP9

(A) Lines 6 x 8.8236% x 1/12. Based on ROE of 11.75% and weighted income tax rate of 38.575% (expansion factor of 1.625002) (B) Line 9a x Line 10 (C) Line 9b x Line 11

Total Jurisdictional Recoverable Costs (Lines 12 + 13)

Retail Demand-Related Recoverable Costs (C) 12. Retail Energy-Related Recoverable Costs (B) 13. Retail Demand-Related Recoverable Costs (C 14. Total Jurisdictional Recoverable Costs (Lines

11. Demand Jurisdictional Factor

9

RM 42-8E

Environmental Cost Recovery Clause (ECRC)
Calculation of the Actual/Estimated Amount for the Period October 1997 to March 1998 Tampa Electric Company

Form 42 - 8E Page 8 of 8

Return on Capital Investments, Depreciation and Taxes For Project. Phillips Upgrade Tank #4 for FDEP (in Dollars)

Cho

December 8 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Actual Estimated Estimated November 97 January 98 5157 50 50 50 50 50 50 50 50 50 50 50 50 50
## Actual Estimated Estimated November 97 December 97 January 98 \$151 ### Actual State ### Actual St	### Actual Estimated Estimated Estimated November 97 January 98 Fethuary 98 Fe
Estimated Estimated December 97 January 98 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	So \$157 \$2,71 So \$157 \$2,71 So 0 0 0 0 0 0 0 0 0 0 0 0 0 157 2,8 0 0 157 2,8 0
	Eathmary 9 7 \$2,77 \$2,89 7 7 2,89 7 7 2,89 7 7 9,99 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
	### Eathmath ### ### ### ### ### ### ### #### ###
83,174 \$3,174 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$48 \$48 15

(A) Lines 6 x 8.8238% x 1/12. Based on ROE of 11,75% and weighted income tax rate of 38.575% (expansion factor of 1.628002) (B) Line 9b x Line 10 (C) Line 9b x Line 11