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February 18, 1998

HAND DELIVERED

Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
101 East Gaines Street
Tallahassee, Florida 32399-0850

Re: Environmental Cost Recovery Clause
FPSC Docket No. 980007-EI

Dear Ms. Bayo:

On November 17, 1997 Tampa Electric Company submitted the Prepared Direct Testimony and Exhibit of Karen O. Zwolak regarding the Environmental Cost Recovery final true-ups for the period April through September 1997. On January 14, 1998 the company submitted the Prepared Direct Testimony and Exhibit of Karen O. Zwolak regarding Environmental Cost Recovery projections. Subsequently, revisions were made to both the November filing and the January filing. At Staff's suggestion and to facilitate reference to Ms. Zwolak's testimonies and exhibits, the company has prepared consolidated versions of both the true-up and projection testimonies and exhibits which include all of the previously made revisions.

- ACK
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Enclosed for filing in the above docket are the original and fifteen (15) copies each of Ms. Zwolak's true-up testimony and exhibit and projection testimony and exhibit, both marked "Revised February 18, 1998." We request that these testimonies and exhibits be substituted in place of those previously filed.

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning same to this writer.

Thank you for your assistance in connection with this matter.

Sincerely,

[Signature]
James D. Beasley

JDB/pp
Enclosures

cc: All Parties of Record (w/encls.)

DOCUMENT NUMBER-DATE

02363 FEB 18 98

FPSC-RECORDS/REPORTING

DOCUMENT NUMBER-DATE

02364 FEB 18 98

FPSC-RECORDS/REPORTING

ORIGINAL

TAMPA ELECTRIC COMPANY
DOCKET NO. 970007-EI
FILED: NOVEMBER 17, 1997
REVISED: FEBRUARY 18, 1998

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION
TAMPA ELECTRIC COMPANY
DOCKET NO. 970007-EI
ENVIRONMENTAL COST RECOVERY
FINAL TRUE-UPS
APRIL 1997 - SEPTEMBER 1997
TESTIMONY AND EXHIBIT OF
KAREN O. ZWOLAK

1 treatment and disposal. In 1995, I transferred to Tampa
2 Electric's Energy Supply Department and assumed the duties
3 of the plant chemical engineer at the F. J. Gannon Station.
4 In this position, I was responsible for boiler chemistry,
5 water management, and maintenance of environmental
6 equipment and general engineering support. In 1997, I was
7 promoted to Manager, Energy Issues in the Electric
8 Regulatory Affairs Department. My present responsibilities
9 include the areas of fuel adjustment, capacity cost
10 recovery, environmental filings and rate design.

11
12 Q. What is the purpose of your testimony in this proceeding?

13
14 A. The purpose of my testimony is to present, for Commission
15 review and approval, the actual true-up amount and the
16 calculations thereof associated with the environmental
17 compliance activities for the period April 1997 through
18 September 1997.

19
20 Q. Do you wish to sponsor exhibits in support of your
21 testimony?

22
23 A. Yes. My Exhibit No. ___ (KOZ-1) consists of 8 forms which
24 were prepared under my direction and supervision. Form 42-
25 1A reflects the final true-up for the April 1997 -

1 September 1997 period; Form 42-2A consists of the final
2 true-up calculation for the period; Form 42-3A consists of
3 the calculation of the Interest Provision for the period;
4 Form 42-4A reflects the calculation of variances between
5 actual and projected costs for O & M Activities; Form 42-5A
6 presents a summary of actual monthly costs for the period
7 for O & M Activities; Form 42-6A reflects the calculation
8 of variances between actual and projected costs for Capital
9 Investment Projects; Form 42-7A presents a summary of
10 actual monthly costs for the period for Capital Investment
11 Projects and Form 42-8A consists of the calculation of
12 depreciation expense and return on capital investment.

13

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

16

17 **A.** Unless otherwise indicated, the actual data is taken from
18 the books and records of Tampa Electric Company. The books
19 and records are kept in the regular course of our business
20 in accordance with generally accepted accounting principles
21 and practices, and provisions of the Uniform System of
22 Accounts as prescribed by this Commission.

23

24 **Q.** Have the incremental costs for SO₂ emission allowances
25 incurred by Tampa Electric's wholesale sales to the Florida

1 Municipal Power Agency (FMPA) and the City of Lakeland
2 (Lakeland) been identified and included in this true-up
3 filing?
4
5 A. Yes, they have. As per Commission Order No. PSC-97-1273-
6 FOF-EU, Docket No. 970171-EU, the incremental SO2
7 allowance costs incurred by the FMPA and Lakeland wholesale
8 sales have been identified and are included on line 10b of
9 Schedule 42-2A of this true-up filing.
10
11 Q. What are the incremental SO2 allowance costs of these two
12 wholesale sales and how are they being treated?
13
14 A. Tampa Electric has calculated the incremental SO2 allowance
15 costs incurred from making the FMPA and Lakeland wholesale
16 sales to be \$189,442 for the period December 1996 through
17 September 1997. This amount was then adjusted by \$29,013
18 to take into account the amount retail ratepayers were
19 being credited due to the FMPA and Lakeland wholesale sales
20 being included in the calculation of the jurisdictional
21 separation factor. A net amount of \$160,429 will be
22 credited to the retail ratepayers as shown on schedule 42-
23 2A, line 10b.
24
25 Q. How were the costs calculated?

- 1 A. As shown in my Exhibit No. ___ (KOZ-1), the tons of SO2
2 emissions caused by the additional generation from Tampa
3 Electric's system for the FMPA and Lakeland wholesale sales
4 for the period December 1996 through September 1997 were
5 calculated based on that percentage of generation which
6 served these sales. That percentage was applied to the
7 total tonnage of SO2 emitted by Tampa Electric's system.
8 The dollar per megawatt-hour (\$/Mwh) was determined by
9 applying the monthly incremental cost of an allowance to
10 that portion of emissions calculated for each sale.
11
- 12 Q. How was the adjusted amount of \$29,013 calculated?
13
- 14 A. The total monthly Mwh for the FMPA and Lakeland sales as a
15 percentage of total sales was determined. This percent was
16 applied to total monthly emission expense to determine the
17 amount of emission expense related to these sales.
18
- 19 Q. Is this method of calculation the same method that will be
20 used on a go-forward basis?
21
- 22 A. No, it is not. In the future, Tampa Electric will use the
23 actual data for the incremental SO2 allowance cost captured
24 on an hourly basis for these sales.
25

- 1 Q. Has Tampa Electric made the necessary adjustments to its'
2 Environmental Cost Recovery Clause (ECRC) in order to
3 comply with Audit Disclosure No. 3 of the Florida Public
4 Service Commission's (FPSC) Environmental Compliance Cost
5 Adjustment Audit Report for the period ending March 31,
6 1997?
7
- 8 A. Yes. As per Commission Order No. PSC-97-1047-FOF-EI,
9 Docket No. 970007-EI, Tampa Electric has agreed to remove
10 payroll charges associated with modifications and
11 expansions to employee workload due to the Big Bend Unit 3
12 Flue Gas Desulfurization Integration Project through the
13 ECRC. (See line 10a of Schedule 42-2A).
14
- 15 Q. What is the actual true-up amount which Tampa Electric is
16 requesting for the six-month period April 1997 through
17 September 1997?
18
- 19 A. Tampa Electric has calculated and is requesting approval of
20 an over/(under) - recovery of (\$227,193) as the actual
21 true-up amount for the six-month period.
22
- 23 Q. What is the adjusted net true-up amount which Tampa
24 Electric is requesting for the April 1997 through September
25 1997 period which is to be carried over and refunded/

- 1 recovered in the next projection period?
2
- 3 A. Tampa Electric has calculated and is requesting approval of
4 an over/(under) recovery of \$616,353 as the adjusted net
5 true-up amount for the six-month period. This adjusted net
6 true-up amount is the difference between the actual
7 over/(under) recovery of (\$227,193) for the period April
8 1997 through September 1997 and the actual/estimated true-
9 up for the same period of an over/(under) recovery of
10 (\$843,546) approved in FPSC Order No. PSC-97-1047-FOF-EI.
11 This is shown on form 42-1A.
12
- 13 Q. Is this true-up calculation consistent with the true-up
14 methodology used for other cost recovery clauses?
15
- 16 A. Yes, it is. The calculation of the true-up amount follows
17 the procedures established by this Commission as set forth
18 on Commission Schedule A-2 "Calculation of True-Up and
19 Interest Provisions" for the Fuel Cost Recovery Clause.
20
- 21 Q. Are all costs listed in Forms 42-4A through 42-8A
22 attributable to Environmental Compliance projects approved
23 by the Commission?
24
- 25 A. Yes, they are.

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Q. How did actual expenditures for April 1997 through September 1997 compare with Tampa Electric's actual/estimated projections as presented in previous testimony and exhibits?

A. Overall costs were \$102,790 lower than actual/estimated projections. The variance created by the removal of payroll expenses from the ECRC for the Big Bend 3 FGD system was offset by increased O & M expenses due to unplanned outages and additional maintenance expense for the Big Bend 3 FGD system.

Q. Does this conclude your testimony?

A. Yes, it does.

**TAMPA ELECTRIC COMPANY
DOCKET NO. 970007-EI
FILED: NOVEMBER 17, 1997
REVISED: FEBRUARY 18, 1998**

FINAL TRUE - UP

ENVIRONMENTAL COST RECOVERY

COMMISSION FORMS 42-1A THROUGH 42-8A

APRIL 1997 - SEPTEMBER 1997

TAMPA ELECTRIC COMPANY
DOCKET NO. 970007-EI
FILED: NOVEMBER 17, 1997
REVISED: FEBRUARY 18, 1998

FINAL TRUE UP
ENVIRONMENTAL COST RECOVERY
COMMISSION FORMS 42-1A THROUGH 42-8A
APRIL 1997 - SEPTEMBER 1997
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Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Final True-Up Amount for the Period
April 1987 to September 1987

<u>Line</u>	<u>Period Amount</u>
1 End of Period Actual True-Up for the Period April 1987 to September 1987 (Form 42-2A, Lines 5 + 6 + 10a + 10b)	<u>(\$227,193)</u>
2 Estimated/Actual True-Up Amount approved for the Period April 1987 to September 1987 (Order No. PSC-87-1047-FOF-EI)	<u>(943,546)</u>
3 Final True-Up Amount to be refunded/(recovered) in the projection period April 1988 to September 1988 (Lines 1 - 2)	<u>\$616,353</u>

() Reflects Underrecovery

Tampa Electric Company
 Environmental Cost Recovery Clause (ECRC)
 Calculation of the Final True-Up Amount for the Period
 April 1997 to September 1997

End-of-Period True-Up Amount
 (in Dollars)

Line	April 1997	May 1997	June 1997	July 1997	August 1997	September 1997	End of Period Total
1	\$372,541	\$387,363	\$456,888	\$478,249	\$459,168	\$483,733	\$2,637,942
2	(39,882)	(39,882)	(39,882)	(39,882)	(39,882)	(39,884)	(239,294)
3	332,659	347,481	417,006	438,367	419,286	443,849	2,398,648
4							
a.	218,647	268,164	373,317	311,933	478,117	534,110	2,202,288
b.	149,596	149,528	148,746	145,424	145,945	147,990	887,230
c.	368,243	435,692	522,063	457,357	624,062	682,100	3,089,518
5	(35,594)	(68,212)	(105,057)	(18,990)	(204,776)	(238,251)	(690,870)
6	1,355	1,298	1,139	1,132	891	131	5,946
7	(239,294)	133,545	98,028	55,546	97,576	(46,080)	(239,294)
8	156,449	156,449	156,449	156,449	156,449	156,449	156,449
9	39,882	39,882	39,882	39,882	39,882	39,884	239,294
10	(77,192)	242,892	190,441	234,019	90,024	(67,867)	(528,475)
11	297,302	0	0	0	0	0	297,302
	69,884	11,515	21,554	20,008	20,345	17,123	160,429
	\$289,994	\$254,477	\$211,995	\$254,027	\$110,369	\$370,744	(\$70,744)

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Tampa Electric Company
 Environmental Cost Recovery Clause (ECRC)
 Calculation of the Final True-Up Amount for the Period
 April 1997 to September 1997

Interest Provision
 (in Dollars)

Line	April 1997	May 1997	June 1997	July 1997	August 1997	September 1997	End of Period Total
1	\$284,341	\$301,508	\$276,031	\$232,003	\$274,372	\$127,482	\$127,482
2	288,639	253,179	210,858	252,885	109,476	(70,875)	(70,875)
3	572,980	554,688	486,887	484,888	383,850	56,617	56,617
4	288,460	277,344	243,444	242,449	191,825	28,309	28,309
5	5.74%	5.62%	5.60%	5.62%	5.58%	5.56%	5.56%
6	5.62%	5.60%	5.62%	5.58%	5.56%	5.53%	5.53%
7	11.36%	11.22%	11.22%	11.20%	11.14%	11.09%	11.09%
8	5.680%	5.610%	5.610%	5.600%	5.570%	5.545%	5.545%
9	0.473%	0.468%	0.468%	0.467%	0.464%	0.462%	0.462%
10	\$1,355	\$1,298	\$1,139	\$1,132	\$991	\$131	\$5,946

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Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Final True-Up Amount for the Period
April 1997 to September 1997

Variance Report of O&M Activities
 (in Dollars)

Line	Description of O&M Activities	(1)		(2)	(3)		(4)
		Actual	Estimated		Actual	Estimated	
1	Big Bend Unit 3 Flue Gas Desulfurization Integration	\$694,588	\$771,778	\$771,778	\$77,190		-10.0%
2	Big Bend Units 1 & 2 Flue Gas Conditioning	11,664	26,808	26,808	(15,144)		-56.5%
3	Big Bend Unit 4 Continuous Emissions Monitors	0	0	0	0		0.0%
4	SO ₂ Emissions Allowances	1,672,663	1,683,119	1,683,119	(10,456)		-0.6%
	2 Total O&M Activities	\$2,378,915	\$2,481,705	\$2,481,705	(\$102,790)		-4.1%
3	Recoverable Costs Allocated to Energy	\$2,378,915					
4	Recoverable Costs Allocated to Demand	\$0					

4

Notes:

- Column(1) is the End of Period Totals on Form 42-5A.
- Column(2) is the approved Estimated/Actual amount in accordance with FPSC Order No. PSC-87-1047-FOF-EI
- Column(3) = Column(1) - Column(2)
- Column(4) = Column(3) / Column(2)

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Actual Period Amount
April 1997 to September 1997

O&M Activities
(in Dollars)

Line	April 1997	May 1997	June 1997	July 1997	August 1997	September 1997	End of Period Total
1 Description of O&M Activities							
1a Big Bend Unit 3 Flue Gas Desulfurization Integration	\$132,541	\$95,598	\$133,071	\$31,911	\$109,150	\$192,317	\$694,588
1b Big Bend Units 1 and 2 Flue Gas Conditioning	3,407	2,907	43	2,663	2,812	32	11,664
1c Big Bend Unit 4 Continuous Emissions Monitors	0	0	0	0	0	0	0
1d SO2 Allowances	88,637	208,011	268,014	307,533	409,629	360,839	1,672,663
2 Total Investment Projects - Recoverable Costs	234,585	306,516	401,128	342,107	521,391	573,188	2,378,915
3 Recoverable Costs Allocated to Energy	234,585	306,516	401,128	342,107	521,391	573,188	2,378,915
4 Recoverable Costs Allocated to Demand	0	0	0	0	0	0	0
5 Retail Energy Jurisdictional Factor	0.8320594	0.8336034	0.8306675	0.9117989	0.9170034	0.9318235	
6 Retail Demand Jurisdictional Factor	N/A	N/A	N/A	N/A	N/A	N/A	
7 Jurisdictional Energy Recoverable Costs (A)	218,647	286,164	373,317	311,933	478,117	534,110	2,202,288
8 Jurisdictional Demand Recoverable Costs (B)	0	0	0	0	0	0	0
9 Total Jurisdictional Recoverable Costs for O&M Activities (Lines 7 + 8)	\$218,647	\$286,164	\$373,317	\$311,933	\$478,117	\$534,110	\$2,202,288

Notes:

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

Tampa Electric Company
 Environmental Cost Recovery Clause
 Calculation of the Final True-Up Amount for the Period
 April 1987 to September 1987

Variance Report of Capital Investment Projects - Recoverable Costs
 (in Dollars)

Line	(1) Actual	(2) Actual Estimated	(3) Variance		(4) Percent
			Amount	Amount	
1 Description of Investment Projects					
1. Big Bend Unit 3 Flue Gas Desulfurization Integration	\$588,804	\$588,804	\$0	\$0	0.0%
2. Big Bend Units 1 & 2 Flue Gas Conditioning	344,946	344,946	0	0	0.0%
3. Big Bend Unit 4 Continuous Emissions Monitors	44,203	44,203	0	0	0.0%
2 Total Investment Projects - Recoverable Costs	\$977,953	\$977,953	\$0	\$0	0.0%
3 Recoverable Costs Allocated to Energy	\$977,953				
4 Recoverable Costs Allocated to Demand	\$0				

Notes:
 Column(1) is the End of Period Totals on Form 42-7A.
 Column(2) is the approved Estimated/Actual amount in accordance with
 FPSC Order No. PSC-87-1047-FOF-EI
 Column(3) = Column(1) - Column(2)
 Column(4) = Column(3) / Column(2)

Tampa Electric Company
 Environmental Cost Recovery Clause (ECRC)
 Calculation of the Actual Period Amount
 April 1997 to September 1997

Capital Investment Projects-Recoverable Costs
 (in Dollars)

Line	April 1997	May 1997	June 1997	July 1997	August 1997	September 1997	End of Period Total
1 Description of Investment Projects (A)							
1a Big Bend Unit 3 Flue Gas Desulfurization Integration	\$95,267	\$95,060	\$94,894	\$94,706	\$94,521	\$94,334	\$598,804
1b Big Bend Units 1 and 2 Flue Gas Conditioning	57,821	57,689	57,557	57,425	57,293	57,161	344,946
1c Big Bend Unit 4 Continuous Emissions Monitors	7,413	7,394	7,376	7,358	7,340	7,322	44,203
2 Total Investment Projects - Recoverable Costs	160,501	160,163	159,827	159,491	159,154	158,817	957,953
3 Recoverable Costs Allocated to Energy	160,501	160,163	159,827	159,491	159,154	158,817	957,953
4 Recoverable Costs Allocated to Demand	0	0	0	0	0	0	0
5 Retail Energy Jurisdictional Factor	0.8320584	0.8336034	0.8306675	0.8117989	0.8170034	0.8318236	
6 Retail Demand Jurisdictional Factor	N/A	N/A	N/A	N/A	N/A	N/A	
7 Jurisdictional Energy Recoverable Costs (B)	149,596	149,529	148,746	145,424	145,945	147,980	867,230
8 Jurisdictional Demand Recoverable Costs (C)	0	0	0	0	0	0	0
9 Total Jurisdictional Recoverable Costs for Investment Projects (Lines 7 + 8)	\$149,596	\$149,529	\$148,746	\$145,424	\$145,945	\$147,980	\$867,230

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

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Actual Period Amount
April 1997 to September 1997

Form 42-BA
Page 1 of 3

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

Line	Description	Beginning of Period Amount	April 1997	May 1997	June 1997	July 1997	August 1997	September 1997	End of Period Total
1	Investments								
a.	Expenditures/Additions		\$0	\$0	\$0	\$0	\$0	\$0	
b.	Clearings to Plant		0	0	0	0	0	0	
c.	Retirements		0	0	0	0	0	0	
d.	Other		0	0	0	0	0	0	
2	Plant-in-Service/Depreciation Base	\$8,239,658	8,239,658	8,239,658	8,239,658	8,239,658	8,239,658	8,239,658	
3	Less: Accumulated Depreciation	(393,303)	(412,529)	(431,755)	(450,981)	(470,207)	(489,433)	(508,659)	
4	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	
5	Net Investment (Lines 2 + 3 + 4)	<u>\$7,846,355</u>	<u>7,827,129</u>	<u>7,807,903</u>	<u>7,788,677</u>	<u>7,769,451</u>	<u>7,750,225</u>	<u>7,730,999</u>	
6	Average Net Investment		7,836,742	7,817,516	7,798,290	7,779,064	7,759,838	7,740,612	
7	Return on Average Net Investment								
a.	Equity Component Grossed Up For Taxes (A)		57,625	57,483	57,342	57,201	57,059	56,918	\$343,628
b.	Debt Component (Line 6 x 2.82% x 1/12)		18,416	18,371	18,326	18,281	18,236	18,190	109,820
8	Investment Expenses								
a.	Depreciation		19,226	19,226	19,226	19,226	19,226	19,226	115,356
b.	Amortization		0	0	0	0	0	0	0
c.	Dismantlement		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 System Recoverable Expenses (Lines 7 + 8)		95,267	95,080	94,894	94,708	94,521	94,334	568,804
a.	Recoverable Costs Allocated to Energy		95,267	95,080	94,894	94,708	94,521	94,334	568,804
b.	Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0
10	Energy Jurisdictional Factor		0.9320584	0.9336034	0.9306675	0.9117989	0.9170034	0.9318235	
11	Demand Jurisdictional Factor		N/A	N/A	N/A	N/A	N/A	N/A	
12	Retail Energy-Related Recoverable Costs (B)		88,794	88,767	88,315	88,305	86,676	87,903	526,810
13	Retail Demand-Related Recoverable Costs (C)		0	0	0	0	0	0	0
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		<u>\$88,794</u>	<u>\$88,767</u>	<u>\$88,315</u>	<u>\$88,305</u>	<u>\$86,676</u>	<u>\$87,903</u>	<u>\$526,810</u>

Notes:

- (A) Lines 6 x 8.8236% x 1/12. Based on ROE of 11.75% and weighted income tax rate of 36.575% (expansion factor of 1.628002)
(B) Line 9a x Line 10
(C) Line 9b x Line 11

EXHIBIT NO _____
DOCKET NO 970007-F1
TAMPA ELECTRIC COMPANY
(KOZ-1)
DOCUMENT NO 8
PAGE 1 OF 3
FILED NOVEMBER 17, 1997
REVISED FEBRUARY 18, 1998

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Actual Period Amount
April 1997 to September 1997

Form 42-8A
Page 2 of 3

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

Line	Description	Beginning of Period Amount	April 1997	May 1997	June 1997	July 1997	August 1997	September 1997	End of Period Total
1	Investments								
a.	Expenditures/Additions		\$0	\$0	\$0	\$0	\$0	\$0	
b.	Clearings to Plant		0	0	0	0	0	0	
c.	Retirements		0	0	0	0	0	0	
d.	Other		0	0	0	0	0	0	
2	Plant-In-Service/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	(454,010)	(467,614)	(481,218)	(494,822)	(508,426)	(522,030)	(535,634)	
4	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	
5	Net Investment (Lines 2 + 3 + 4)	<u>\$4,563,724</u>	<u>4,550,120</u>	<u>4,536,516</u>	<u>4,522,912</u>	<u>4,509,308</u>	<u>4,495,704</u>	<u>4,482,100</u>	
6	Average Net Investment		4,556,922	4,543,318	4,529,714	4,516,110	4,502,508	4,488,902	
7	Return on Average Net Investment								
a.	Equity Component Grossed Up For Taxes (A)		33,508	33,408	33,308	33,208	33,108	33,008	\$189,548
b.	Debt Component (Line 6 x 2.82% x 1/12)		10,708	10,677	10,645	10,613	10,581	10,549	63,774
8	Investment Expenses								
a.	Depreciation		13,604	13,604	13,604	13,604	13,604	13,604	81,624
b.	Amortization		0	0	0	0	0	0	0
c.	Dismantlement		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 System Recoverable Expenses (Lines 7 + 8)		57,821	57,689	57,557	57,425	57,293	57,161	344,946
a.	Recoverable Costs Allocated to Energy		57,821	57,689	57,557	57,425	57,293	57,161	344,946
b.	Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0
10	Energy Jurisdictional Factor		0.9320584	0.9336034	0.9306675	0.9117989	0.9170034	0.9318235	
11	Demand Jurisdictional Factor		N/A	N/A	N/A	N/A	N/A	N/A	
12	Retail Energy-Related Recoverable Costs (B)		53,893	53,859	53,586	52,360	52,538	53,264	319,480
13	Retail Demand-Related Recoverable Costs (C)		0	0	0	0	0	0	0
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		<u>\$53,893</u>	<u>\$53,859</u>	<u>\$53,586</u>	<u>\$52,360</u>	<u>\$52,538</u>	<u>\$53,264</u>	<u>\$319,480</u>

Notes:

- (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 9a x Line 10
(C) Line 9b x Line 11

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Docket No. 970007-EI
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Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Actual Period Amount
April 1997 to September 1997

Form 42-8A
Page 3 of 3

Return on Capital Investments, Depreciation and Taxes
For Project: Big Bend Four Continuous Emissions Monitor
(in Dollars)

Line	Description	Beginning of							End of
		Period Amount	April 1997	May 1997	June 1997	July 1997	August 1997	September 1997	Period Total
1	Investments								
a.	Expenditures/Additions		\$0	\$0	\$0	\$0	\$0	\$0	
b.	Clearings to Plant		0	0	0	0	0	0	
c.	Retirements		0	0	0	0	0	0	
d.	Other		0	0	0	0	0	0	
2	Plant-In-Service/Depreciation Base	\$866,211	866,211	866,211	866,211	866,211	866,211	866,211	
3	Less: Accumulated Depreciation	(58,364)	(60,241)	(62,118)	(63,995)	(65,872)	(67,749)	(69,626)	
4	Other (A)	(236,408)	(236,408)	(236,408)	(236,408)	(236,408)	(236,408)	(236,408)	
5	Net Investment (Lines 2 + 3 + 4)	\$571,439	569,562	567,685	565,808	563,931	562,054	560,177	
6	Average Net Investment		570,501	568,624	566,747	564,870	562,993	561,116	
7	Return on Average Net Investment								
a.	Equity Component Grossed Up For Taxes (B)		4,195	4,181	4,167	4,154	4,140	4,126	\$24,963
b.	Debt Component (Line 6 x 2.82% x 1/12)		1,341	1,336	1,332	1,327	1,323	1,319	7,978
8	Investment Expenses								
a.	Depreciation		1,877	1,877	1,877	1,877	1,877	1,877	11,262
b.	Amortization		0	0	0	0	0	0	0
c.	Dismantlement		0	0	0	0	0	0	0
d.	Property Taxes		0	0	0	0	0	0	0
e.	Other (D)		0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		7,413	7,394	7,376	7,358	7,340	7,322	44,203
a.	Recoverable Costs Allocated to Energy		7,413	7,394	7,376	7,358	7,340	7,322	44,203
b.	Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0
10	Energy Jurisdictional Factor		0.9320584	0.9336034	0.9306675	0.9117989	0.9170034	0.9318235	
11	Demand Jurisdictional Factor		N/A	N/A	N/A	N/A	N/A	N/A	
12	Retail Energy-Related Recoverable Costs (C)		6,908	6,903	6,865	6,709	6,731	6,823	40,940
13	Retail Demand-Related Recoverable Costs (D)		0	0	0	0	0	0	0
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		\$6,908	\$6,903	\$6,865	\$6,709	\$6,731	\$6,823	\$40,940

Notes:

- (A) Represents the Net Book Value of the replaced Big B and Unit 4 CEMs which is currently recovered through base rates.
(B) 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 1.628002)
(C) Line 9a x Line 10
(D) Line 9b x Line 11

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SO2 ALLOWANCE COST FOR FMPA

(DECEMBER 1996 THROUGH SEPTEMBER 1997)

	A	B	C	D	E	F	G
MONTH	BB1/BB2 EMISSION AVERAGES * TONS	EMISSION ALLOCATION FOR BB2 TONS <small>(BB2 % GEN x A)</small>	EMISSION ALLOCATION FOR BB3 TONS	EMISSION ALLOCATION FOR FMPA (BB2) <small>(BB2% GEN x B)</small>	EMISSION ALLOCATION FOR FMPA (BB3) <small>(BB3% GEN x C)</small>	ALLOWANCE COST (\$/TON)	ALLOWANCE COST FOR FMPA TOTAL COST (D + E) x F
Dec-96	5,912	1,791	369	56	6	\$91.50	\$5,654.82
Jan-97	6,233	3,519	1,389	147	53	\$90.50	\$18,114.51
Feb-97	5,971	3,102	1,770	123	87	\$97.00	\$20,405.31
Mar-97	6,676	4,175	936	101	27	\$104.00	\$13,276.22
Apr-97	4,221	4,221	890	102	20	\$112.50	\$13,773.16
May-97	5,232	3,925	1,474	100	37	\$114.00	\$15,655.76
Jun-97	7,680	3,629	843	219	47	\$96.00	\$25,497.90
Jul-97	8,704	4,212	139	227	43	\$89.50	\$24,129.64
Aug-97	7,766	3,946	1,073	213	85	\$89.75	\$26,725.14
Sep-97	7,572	3,697	603	219	33	\$90.31	\$22,732.21
TOTAL	65,967	36,215	9,486	1,507	437		\$185,964.66

* NUMBER OF ALLOWANCES CONSUMED

SO2 ALLOWANCE COST FOR LAKELAND
(DECEMBER, 1996 THROUGH SEPTEMBER, 1997)

	A	B	C	D	E	F	G
MONTH	TOTAL SYSTEM GENERATION (MWH)	LAKELAND MONTHLY GENERATION (MWH)	LAKELAND % OF TOTAL SYSTEM GENERATION	TOTAL EMISSIONS BB STATION (TONS)	TOTAL EMISSIONS FROM LAKELAND (TONS) (C x D)	ALLOWANCE COST (\$/TON)	ALLOWANCE COST FOR LAKELAND (\$/TON) (E x F)
Dec-96	1,389,062	500	0.04%	6,938	2.50	\$91.50	\$228.51
Jan-97	1,615,185	540	0.03%	8,430	2.82	\$90.50	\$255.06
Feb-97	1,313,551	240	0.02%	8,254	1.51	\$97.00	\$146.29
Mar-97	1,362,250	0	0.00%	8,400	0.00	\$104.00	\$0.00
Apr-97	1,364,202	0	0.00%	5,684	0.00	\$112.50	\$0.00
May-97	1,556,151	0	0.00%	7,287	0.00	\$114.00	\$0.00
Jun-97	1,522,350	1,020	0.07%	9,380	6.28	\$96.00	\$603.34
Jul-97	1,538,501	2,000	0.13%	9,485	12.33	\$89.50	\$1,103.55
Aug-97	1,589,249	1,290	0.08%	9,361	7.60	\$89.75	\$681.95
Sep-97	1,423,578	830	0.06%	8,704	5.07	\$90.31	\$458.30
TOTAL	14,674,079	6,420		81,923	38.11		\$3,477.00

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EXHIBIT NO. _____
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 TAMPAL ELECTRIC COMPANY
 (NOZ-1)
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**SO2 ALLOWANCE COST FOR FMPA / LAKELAND
(DECEMBER, 1996 THROUGH SEPTEMBER, 1997)**

MONTH	FMPA	LAKELAND	TOTAL
Dec-96	\$5,654.82	\$228.51	
Jan-97	\$18,114.51	\$255.06	
Feb-97	\$20,405.31	\$146.29	
Mar-97	\$13,276.22	\$0.00	
Apr-97	\$13,773.16	\$0.00	
May-97	\$15,655.76	\$0.00	
Jun-97	\$25,497.90	\$603.34	
Jul-97	\$24,129.64	\$1,103.55	
Aug-97	\$26,725.14	\$681.95	
Sep-97	\$22,732.21	\$458.30	
SUBTOTAL	\$185,964.66	\$3,477.00	\$189,441.66
Adjusted to account for separation factor			(\$29,013.00)
TOTAL			\$160,428.66

DERIVATION OF FMPA / LAK SO2 ADJUSTMENT FACTOR

Line:		Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	TOTAL
1	FMPA / LAK MWH	(1) 25,165	26,040	26,220	28,040	27,170	26,030	
2	Loss Expansion Factor for Wholesale Sales	1.0158795	1.0158795	1.0158795	1.0158795	1.0158795	1.0158795	
3	Adjusted MWH for FMPA / LAK	(2) 25,565	26,454	26,636	28,485	27,601	26,443	
4	Total Retail Sales (MWH)	(3) 1,133,913	1,179,102	1,388,824	1,453,055	1,395,479	1,469,990	
5	Energy Loss Expansion Factor	(4) 1.0520752	1.0520752	1.0520752	1.0520752	1.0520752	1.0520752	
6	Adjusted MWH for Retail Sales	(5) 1,192,962	1,240,504	1,461,147	1,528,723	1,468,149	1,546,540	
7	Wholesale Sales w/o BB4/HPP	72,351	72,565	83,368	94,626	92,929	85,966	
8	Wholesale Loss Expansion Factor	(4) 1.0158795	1.0158795	1.0158795	1.0158795	1.0158795	1.0158795	
9	Adjusted MWH for Wholesale sales	(6) 73,500	73,717	84,692	96,129	94,405	87,331	
10	BB4/HPP Sales*	13,460	14,506	24,160	51,719	38,475	25,821	
11	Wholesale Sales Plus BB4/HPP Sales	(7) 86,960	88,223	108,852	147,848	132,880	113,152	
12	Total Sales	(8) 1,279,922	1,328,727	1,569,999	1,676,571	1,601,028	1,659,692	
13	FMPA / LAK % of Line 13	0.0199736	0.0199089	0.0169658	0.0169902	0.0172398	0.0159327	
14	Total Emission Costs	(9) \$98,637	\$208,011	\$268,014	\$307,533	\$409,629	\$380,839	
15	Adjustment Factor	(10) 51,970	54,141	54,500	55,225	57,062	56,068	\$29,013