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August 26, 2022

VIA: ELECTRONIC FILING

Mr. Adam J. Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Environmental Cost Recovery Clause
FPSC Docket No. 20220007-EI

Dear Mr. Teitzman:

Attached for filing in the above docket, on behalf of Tampa Electric Company, are the following:

1. Petition of Tampa Electric Company.

2. Prepared Direct Testimony and Exhibit (MAS-3) of M. Ashley Sizemore regarding Environmental Cost Recovery Clause 2023 Projections.

3. Prepared Direct Testimony of Byron T. Burrows regarding Environmental Cost Recovery Clause 2023 Projections.

Thank you for your assistance in connection with this matter.

Sincerely,

Malcolm N. Means

Malcolm N. Means

MNM/bmp
Attachments
cc: All Parties of Record (w/attachment)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Environmental Cost) Recovery Clause.) ________________________)	DOCKET NO. 20220007-EI FILED: August 26, 2022

PETITION OF TAMPA ELECTRIC COMPANY

Tampa Electric Company ("Tampa Electric" or "the company"), hereby petitions the Commission for approval of the company's environmental cost recovery true-up and the cost recovery factors proposed for use during the period January 2023 through December 2023, and in support thereof, says:

Environmental Cost Recovery

1. Tampa Electric's final true-up amount for the period January 2021 through December 2021 is an over-recovery of $1,187,656. [See Exhibit No. MAS-1, Document No. 1 (Form 42-1A).]

2. Tampa Electric projects an actual/estimated true-up amount for the January 2022 through December 2022 period, which is based on actual data for the period January 1, 2022 through June 30, 2022 and revised estimates for the period July 1, 2022 through December 31, 2022, to be an over-recovery of $5,382,902. [See Exhibit No. MAS-2, Document No. 1 (Form 42-1E).]

3. The company's projected environmental cost recovery amount for the period January 1, 2023 through December 31, 2023, including true-up amounts and adjusted for taxes, is $17,417,925. When spread over projected kilowatt hour sales for the period January 1, 2023 through December 31, 2023, the average environmental cost recovery factor for the new period is 0.087 cents per kWh after application of factors which adjust for variations in line losses. [See Exhibit No. MAS-3, Document No. 7 (Form 42-7P).]

4. The accompanying Prepared Direct Testimony and Exhibits of Byron T. Burrows and M. Ashley Sizemore present:

(a) A description of each of Tampa Electric's environmental compliance actions for which cost recovery is sought; and

(b) The costs associated with each environmental compliance action.

5. For reasons more fully detailed in the Prepared Direct Testimony of witness M. Ashley Sizemore, the environmental compliance costs sought to be approved for cost recovery proposed in this petition are consistent with the provisions of Section 366.8255, Florida Statutes, and with prior rulings by the Commission with respect to environmental compliance cost recovery for Tampa Electric and other investor-owned utilities.

WHEREFORE, Tampa Electric Company requests this Commission's approval of the company's prior period environmental cost recovery true-up calculations and projected environmental cost recovery charges to be collected during the period January 2023 through December 2023.

DATED this 26th day of August 2022.

Respectfully submitted,

Malcolm N. Means

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ATTORNEYS FOR TAMPA ELECTRIC COMPANY

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing Petition, filed on behalf of Tampa Electric Company, has been furnished by electronic mail on this 26th day of August 2022 to the following:

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Malcolm R. Mears

ATTORNEY

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20220007-EI

IN RE: TAMPA ELECTRIC'S ENVIRONMENTAL COST RECOVERY

PROJECTION

JANUARY 2023 THROUGH DECEMBER 2023

TESTIMONY AND EXHIBIT

OF

M. ASHLEY SIZEMORE

FILED: AUGUST 26, 2022

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

M. ASHLEY SIZEMORE

Q. Please state your name, address, occupation, and employer.

A. My name is M. Ashley Sizemore. My business address is 702 North Franklin Street, Tampa, Florida 33602. I am employed by Tampa Electric Company ("Tampa Electric" or "company") in the position of Manager, Rates in the Regulatory Affairs Department.

Q. Have you previously filed testimony in Docket No. 20220007-EI?

A. Yes, I submitted direct testimony on April 1, 2022, and July 29, 2022.

Q. Has your job description, education, or professional experience changed since you last filed testimony?

A. No, it has not.

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, the calculation of the revenue requirements and the projected Environmental Cost Recovery Clause ("ECRC") factors for the period of January 2023 through December 2023. The projected ECRC factors have been calculated based on the current allocation methodology. In support of the projected ECRC factors, my testimony identifies the capital and operating & maintenance ("O&M") costs associated with environmental compliance activities for the year 2023.

Q. Have you prepared an exhibit that shows the determination of recoverable environmental costs for the period of January 2023 through December 2023?

A. Yes. Exhibit No. MAS-3, containing eight documents, was prepared under my direction and supervision. Document Nos. 1 through 8 contain Forms 42-1P through 42-8P, which show the calculation and summary of the O&M and capital expenditures that support the development of the environmental cost recovery factors for 2023.

Q. Are you requesting Commission approval of the projected environmental cost recovery factors for the company's various rate schedules?

A. Yes. The company requests approval of the ECRC factors provided in Exhibit No. MAS-3, Document No. 7, on Form 42-7P. The factors were prepared under my direction and supervision. These annualized factors will apply for the period January 2023 through December 2023.

Q. How were the environmental cost recovery clause factors calculated?

A. The environmental cost recovery factors were calculated based on the current approved cost allocation methodology and equity ratio as set out in the 2021 Stipulation and Settlement Agreement ("2021 Agreement"), approved in Order No. PSC-2021-0423-S-EI and issued on November 10, 2021, in Docket No. 2021-0034-E.

On August 16, 2022, the Commission approved the company's petition to increase its mid-point return on equity from 9.95 percent to 10.20 percent based on provisions in its 2021 Agreement. As a result, the cost recovery factors were calculated using the revised authorized return on equity.

Q. What is the 2021 baseline amount that Tampa Electric is using to compare its 2023 total revenue requirement?

A. Tampa Electric's baseline, as filed in its October 1, 2021 filing for the proposed 2022 ECRC cost recovery factors, is $27,891,196.

Q. What did Tampa Electric calculate as its 2023 revenue requirement and how does that compare against the 2021 baseline amount?

A. Tampa Electric 2023 revenue requirement is $17,417,925. This amount was compared to the 2021 baseline amount of $27,891,196, resulting in an incremental amount of ($10,473,271). In accordance with the 2021 Agreement, since the increment is negative, no changes to the allocation methodology need to be made in allocating revenues by class for the 2023 projected period.

Q. What has Tampa Electric calculated as the net true-up to be applied in the period January 2023 to December 2023?

A. The net true-up applicable for this period is an over-recovery of $6,570,558. This consists of a final true-up over-recovery of $1,187,656 for the period of January 2021 through December 2021 and an estimated true-up over-recovery of $5,382,902 for the current period of January 2022 through December 2022. The detailed calculation supporting the estimated net true-up was provided on Forms 42-1E through 42-9E of Exhibit No. MAS-2 filed with the Commission on July 29, 2022.

Q. Did Tampa Electric include any new environmental compliance projects for ECRC cost recovery for the period from January 2023 through December 2023?

A. No, Tampa Electric did not include costs for any new environmental projects in the factors presented in this testimony.

Q. What are the capital projects included in the calculation of the ECRC factors for 2023?

A. Tampa Electric proposes to include for ECRC recovery, costs for 19 previously approved capital projects in the calculation of the 2023 ECRC factors. These projects are listed below.

1) Big Bend Unit 3 Flue Gas Desulfurization (“FGD”) Integration
2) Big Bend Unit 4 Continuous Emissions Monitors

3) Big Bend Section 114 Mercury Testing Platform
4) Big Bend Units 1 and 2 FGD
5) Big Bend FGD Optimization and Utilization
6) Big Bend Particulate Matter (“PM”) Minimization and Monitoring
7) Polk NO_x Emissions Reduction
8) Big Bend Unit 4 SOFA
9) Big Bend Unit 4 SCR
10) Big Bend FGD System Reliability
11) Mercury Air Toxics Standards (“MATS”)
12) SO_2 Emission Allowances
13) Big Bend Gypsum Storage Facility
14) Big Bend Coal Combustion Residuals (“CCR”) Rule – Phase I
15) Big Bend CCR Rule - Phase II
16) Big Bend Unit 1 Section 316(b)Impingement Mortality
17) Big Bend Effluent Limitations Guidelines (“ELG”) Rule Compliance
18) Bayside 316(b) Compliance
19) Big Bend NESHAP Subpart YYYY Compliance

Q. Have you prepared schedules showing the calculation of the recoverable capital project costs for 2023?

A. Yes. Form 42-3P contained in Exhibit No. MAS-3 summarizes the cost estimates for these projects. Form 42-4P, pages 1 through 19, provides the calculations resulting in recoverable jurisdictional capital costs of $20,404,771.

Q. What O&M projects are included in the calculation of the ECRC factors for 2023?

A. Tampa Electric proposes to include for ECRC recovery O&M costs for 22 approved O&M projects in the calculation of the ECRC factors for 2023. These projects are listed below.

1) Big Bend Unit 3 FGD Integration
2) SO_2 Emission Allowances
3) Big Bend Units 1 and 2 FGD
4) Big Bend PM Minimization and Monitoring
5) National Pollutant Discharge Elimination System ("NPDES") Annual Surveillance Fees
6) Gannon Thermal Discharge Study
7) Polk NO_x Emissions Reduction
8) Bayside SCR Consumables
9) Big Bend Unit 4 Separated Overfired Air ("SOFA")
10) Clean Water Act Section 316(b) Phase II Study
11) Arsenic Groundwater Standard Program
12) Big Bend Unit 3 SCR
13) Big Bend Unit 4 SCR

14) Mercury Air Toxics Standards
15) Greenhouse Gas Reduction Program
16) Big Bend Gypsum Storage Facility
17) Big Bend CCR Rule - Phase I
18) Big Bend CCR Rule - Phase II
19) Big Bend Unit 1 Section 316(b) Impingement Mortality
20) Big Bend ELG Rule Compliance
21) Bayside 316(b) Compliance
22) Big Bend NESHAP Subpart YYYY Compliance

Q. Have you prepared a schedule showing the calculation of the recoverable O&M project costs for 2023?

A. Yes. Form 42-2P contained in Exhibit No. MAS-3 presents the recoverable jurisdictional O&M costs for these projects, which total $3,571,180 for 2023.

Q. Did you prepare a schedule providing the description and progress reports for all environmental compliance activities and projects?

A. Yes. Project descriptions and progress reports are provided in Form 42-5P, pages 1 through 25.

Q. What are the total projected jurisdictional costs for environmental compliance in the year 2023?

A. The total jurisdictional O&M and capital expenditures to be recovered through the ECRC are calculated on Form 42-1P of Exhibit No. MAS-3. These expenditures total $17,417,925.

Q. How were environmental cost recovery factors calculated?

A. The environmental cost recovery factors were calculated as shown on Schedules 42-6P and 42-7P. The demand and energy allocation factors were determined by calculating the percentage that each rate class contributes to the total demand or energy and then adjusted for line losses for each rate class. This information was calculated by applying historical rate class load research to 2023 projected system demand and energy. Form 42-7P presents the calculation of the proposed ECRC factors by rate class.

Q. What are the ECRC billing factors for the period January 2023 through December 2023 for which Tampa Electric is seeking approval?

A. The computation of the billing factors is shown in Exhibit

No. MAS-3, Document No. 7, Form 42-7P. The proposed ECRC billing factors are summarized below.

Rate Class	**Factors by Voltage Level (₵/kWh)**
RS Secondary	0.092
GS, CS Secondary	0.090
GSD, SBD	
Secondary	0.084
Primary	0.083
Transmission	0.082
GSLDPR	0.076
GSLDSU	0.075
LS1, LS2	0.066
Average Factor	0.087

Q. When does Tampa Electric propose to begin applying these environmental cost recovery factors?

A. The environmental cost recovery factors will be effective concurrent with the first billing cycle for January 2023.

Q. What capital structure components and cost rates did Tampa Electric rely on to calculate the revenue requirement rate of return for January 2023 through December 2023?

A. To calculate the revenue requirement rate of return found on Form 42-8P, Tampa Electric used the weighted average cost of capital ("WACC") methodology approved by the Commission in Order No. PSC-2020-0165-PAA-EU, approving Amended Joint Motion Modifying Weighted Average Costs of Capital Methodology, issued on May 20, 2020.

Q. Are the costs Tampa Electric is requesting for recovery through the ECRC for the period beginning in January 2023 consistent with the criteria established for ECRC recovery in Order No. PSC-1994-0044-FOF-EI?

A. Yes. The costs for which ECRC recovery is requested meet the following criteria:

1) Such costs were prudently incurred after April 13, 1993;
2) The activities are legally required to comply with a governmentally imposed environmental regulation enacted, became effective or whose effect was triggered after the company's last test year upon which rates were based; and,
3) Such costs are not recovered through some other cost recovery mechanism or through base rates.

Q. Please summarize your direct testimony.

A. My testimony supports the approval of an average ECRC billing factor of 0.087 cents per kWh. This includes the projected capital and O&M revenue requirements of $17,417,925 associated with the company’s 25 ECRC projects and a net true-up over-recovery provision of $6,570,558. My testimony also explains that the projected environmental expenditure for 2023 are appropriate for recovery through the ECRC.

Q. Does this conclude your testimony?

A. Yes, it does.

EXHIBIT MAS-3 TO THE TESTIMONY OF M. ASHLEY SIZEMORE

TAMPA ELECTRIC'S ENVIRONMENTAL COST RECOVERY

PROJECTION

JANUARY 2023 THROUGH DECEMBER 2023

INDEX

ENVIRONMENTAL COST RECOVERY

COMMISSION FORMS

JANUARY 2023 THROUGH DECEMBER 2023

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Total Jurisdictional Amount to Be Recovered

Form 42 - 1P

For the Projected Period
January 2023 to December 2023

Line	Energy ($)	Demand ($)	Total ($)
1. Total Jurisdictional Revenue Requirements for the projected period			
a. Projected O&M Activities (Form 42-2P, Lines 7, 8 & 9)	$3,526,530	$44,650	$3,571,180
b. Projected Capital Projects (Form 42-3P, Lines 7, 8 & 9)	14,510,496	5,894,275	20,404,771
c. Total Jurisdictional Revenue Requirements for the projected period (Lines 1a + 1b)	18,037,026	5,938,925	23,975,951
2. True-up for Estimated Over/(Under) Recovery for the current period January 2022 to December 2022 (Form 42-2E, Line 5 + 6 + 10)	4,648,572	734,330	5,382,902
3. Final True-up for the period January 2021 to December 2021 (Form 42-1A, Line 3)	1,154,331	33,325	1,187,656
4. Total Jurisdictional Amount to Be Recovered/(Refunded) in the projection period January 2023 to December 2023 (Line 1 - Line 2- Line 3)	12,234,123	5,171,270	17,405,393
5. Total Projected Jurisdictional Amount Adjusted for Taxes (Line 4 x Revenue Tax Multiplier)	$12,242,932	$5,174,993	$17,417,925
6. 2021 Settlement Baseline for ECRC	**$26,322,255**	**$1,568,941**	**$27,891,196**
7. Incremental Amount	**(14,079,323)**	**3,606,052**	**(10,473,271)**

Form 42 - 2P

Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

O&M Activities
(in Dollars)

Line		Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total	Method of Classification Demand	Method of Classification Energy
1.	Description of O&M Activities															
	a. Big Bend Unit 3 Flue Gas Desulfurization Integration	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		$0
	b. SO_2 Emissions Allowances	(6)	2	2	(6)	2	2	(6)	2	2	(6)	2	2	(10)		(10)
	c. Big Bend Units 1 & 2 FGD	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	d. Big Bend PM Minimization and Monitoring	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	240,000		240,000
	e. NPDES Annual Surveillance Fees	34,500	0	0	0	0	0	0	0	0	0	0	0	34,500	$34,500	
	f. Gannon Thermal Discharge Study	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	g. Polk NO_x Emissions Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	h. Bayside SCR Consumables	24,550	24,550	24,550	24,550	24,550	24,550	24,550	24,550	24,550	24,550	24,550	24,550	294,600		294,600
	i. Big Bend Unit 4 SOFA	0	0	0	0	0	25,000	25,000	0	0	0	0	0	50,000		50,000
	j. Clean Water Act Section 316(b) Phase II Study	0	0	5,075	5,075	0	0	0	0	0	0	0	0	10,150	10,150	
	k. Arsenic Groundwater Standard Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	l. Big Bend 3 SCR	1,643	10,994	43,640	9,136	35,926	25,553	26,808	30,500	33,748	64,667	43,844	28,637	355,095		355,095
	m. Big Bend 4 SCR	126,564	138,356	103,851	138,356	122,963	121,939	120,683	116,991	113,744	82,825	103,647	118,855	1,408,774		1,408,774
	n. Mercury Air Toxics Standards	0	0	0	0	0	0	1,000	0	0	0	0	0	1,000		1,000
	o. Greenhouse Gas Reduction Program	4,000	0	0	0	0	0	0	15,140	0	0	0	0	19,140		19,140
	p. Big Bend Gypsum Storage Facility	11,278	21,649	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	282,927		282,927
	q. Coal Combustion Residuals (CCR) Rule	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	r. Big Bend ELG Compliance	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	300,000		300,000
	s. CCR Rule - Phase II	16,667	16,667	16,667	16,667	16,667	16,667	16,667	16,667	16,667	16,667	16,667	16,667	200,004		200,004
	t. Big Bend Unit 1 Sec. 316(b) Impingement Mortality	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	300,000		300,000
	u. Bayside 316(b) Compliance	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	v. Big Bend NESHAP Subpart YYYY Compliance	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	75,000		75,000
2.	Total of O&M Activities	295,446	288,467	295,035	295,028	301,358	314,960	315,953	305,100	289,960	289,953	289,960	289,960	3,571,180	$44,650	$3,526,530
3.	Recoverable Costs Allocated to Energy	260,946	288,467	289,960	289,953	301,358	314,960	315,953	305,100	289,960	289,953	289,960	289,960	3,526,530		
4.	Recoverable Costs Allocated to Demand	34,500	0	5,075	5,075	0	0	0	0	0	0	0	0	44,650		
5.	Retail Energy Jurisdictional Factor	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000			
6.	Retail Demand Jurisdictional Factor	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000			
7.	Jurisdictional Energy Recoverable Costs (A)	260,946	288,467	289,960	289,953	301,358	314,960	315,953	305,100	289,960	289,953	289,960	289,960	3,526,530		
8.	Jurisdictional Demand Recoverable Costs (B)	34,500	0	5,075	5,075	0	0	0	0	0	0	0	0	44,650		
9.	Total Jurisdictional Recoverable Costs for O&M Activities (Lines 7 + 8)	$295,446	$288,467	$295,035	$295,028	$301,358	$314,960	$315,953	$305,100	289,960	289,953	$289,960	$289,960	$3,571,180		

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

DOCKET NO. 20220007-EI
ECRC 2023 PROJECTION, FORM 42-2P
EXHIBIT NO. MAS-3, DOCUMENT NO. 2

Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Form 42-3P

Capital Investment Projects-Recoverable Costs
(in Dollars)

Line		Description (A)		Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total	Method of Classification Demand	Energy
1.	a.	Big Bend Unit 3 Flue Gas Desulfurization Integration	1	$79,661	$79,420	$79,179	$78,937	$78,696	$78,456	$78,215	$77,973	$77,732	$77,491	$77,250	$77,009	$940,019		$940,019
	b.	Big Bend Unit 4 Continuous Emissions Monitors	2	3,368	3,354	3,339	3,325	3,311	3,297	3,282	3,268	3,254	3,239	3,225	3,211	39,473		39,473
	c.	Big Bend Section 114 Mercury Testing Platform	3	668	666	664	662	659	658	655	653	650	649	646	644	7,874		7,874
	d.	Big Bend Units 1 & 2 FGD	4	149,537	148,842	148,147	147,452	146,757	146,062	145,368	144,673	143,977	143,282	142,588	141,893	1,748,578		1,748,578
	e.	Big Bend FGD Optimization and Utilization	5	132,333	131,936	131,539	131,141	130,744	130,347	129,950	129,553	129,156	128,758	128,361	127,963	1,561,781		1,561,781
	f.	Big Bend PM Minimization and Monitoring	6	2,062	2,056	2,049	2,044	2,038	2,033	2,026	2,021	2,015	2,009	2,004	1,997	24,354		24,354
	g.	Polk NO_x Emissions Reduction	7	9,058	9,022	8,985	8,949	8,912	8,876	8,840	8,803	8,767	8,730	8,694	8,658	106,294		106,294
	h.	Big Bend Unit 4 SOFA	8	15,589	15,541	15,493	15,445	15,397	15,349	15,301	15,253	15,205	15,157	15,110	15,061	183,901		183,901
	i	Big Bend Unit 4 SCR	9	416,275	417,300	418,327	419,353	420,379	421,405	429,968	431,857	433,738	435,615	437,483	439,347	5,121,047		5,121,047
	j.	Big Bend FGD System Reliability	10	176,647	176,214	175,782	175,350	174,916	174,484	174,052	173,619	173,186	172,754	172,321	171,888	2,091,213		2,091,213
	k.	Mercury Air Toxics Standards	11	53,831	53,698	53,905	54,494	54,357	54,221	54,085	53,949	53,812	53,675	53,539	53,403	646,969		646,969
	l.	SO_2 Emissions Allowances	12	(233)	(233)	(233)	(233)	(233)	(233)	(233)	(233)	(233)	(233)	(233)	(233)	(2,796)		(2,796)
	m.	Big Bend Gypsum Storage Facility	13	168,737	168,346	167,956	167,566	167,175	166,785	166,395	166,005	165,614	165,224	164,834	164,443	1,999,080		1,999,080
	n.	Big Bend Coal Combustion Residual Rule (CCR Rule)	14	43,994	43,902	43,809	43,717	43,624	43,532	43,439	43,347	43,254	43,161	43,070	42,977	521,826	521,826	
	o.	Coal Combustion Residuals (CCR-Phase II)	15	12,481	12,456	12,431	12,406	12,382	12,357	12,333	12,307	12,283	12,258	12,234	12,208	148,136	148,136	
	p.	Big Bend ELG Compliance	16	155,934	162,024	171,249	176,659	275,904	275,225	274,547	273,869	273,192	272,514	271,836	271,159	2,854,112	2,854,112	
	q.	Big Bend Unit 1 Sec. 316(b) Impingement Mortality	17	128,038	127,723	127,408	127,093	126,779	126,464	126,150	125,836	125,521	125,206	124,891	124,577	1,515,686	1,515,686	
	r.	Bayside 316(b) Compliance	18	48,345	52,095	55,845	59,595	63,376	67,408	71,409	75,728	80,047	86,234	93,171	101,262	854,515	854,515	
	s.	Big Bend NESHAP Subpart YYYY Compliance	19	3,608	3,599	3,590	3,581	3,572	3,564	3,555	3,546	3,537	3,528	3,519	3,510	42,709		42,709
2.		Total Investment Projects - Recoverable Costs		1,599,933	1,607,961	1,619,464	1,627,536	1,728,745	1,730,290	1,739,337	1,742,027	1,744,707	1,749,251	1,754,543	1,760,977	20,404,771	$5,894,275	$14,510,496
3.		Recoverable Costs Allocated to Energy		1,211,141	1,209,761	1,208,722	1,208,066	1,206,680	1,205,304	1,211,459	1,210,940	1,210,410	1,209,878	1,209,341	1,208,794	14,510,496		14,510,496
4.		Recoverable Costs Allocated to Demand		388,792	398,200	410,742	419,470	522,065	524,986	527,878	531,087	534,297	539,373	545,202	552,183	5,894,275	5,894,275	
5.		Retail Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000			
6.		Retail Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000			
7.		Jurisdictional Energy Recoverable Costs (C)		1,211,141	1,209,761	1,208,722	1,208,066	1,206,680	1,205,304	1,211,459	1,210,940	1,210,410	1,209,878	1,209,341	1,208,794	14,510,496		
8.		Jurisdictional Demand Recoverable Costs (D)		388,792	398,200	410,742	419,470	522,065	524,986	527,878	531,087	534,297	539,373	545,202	552,183	5,894,275		
9.		Total Jurisdictional Recoverable Costs for Investment Projects (Lines 7 + 8)		$1,599,933	$1,607,961	$1,619,464	$1,627,536	$1,728,745	$1,730,290	$1,739,337	$1,742,027	$1,744,707	$1,749,251	$1,754,543	$1,760,977	$20,404,771		

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

DOCKET NO. 20210007-EI
ECRC 2023 PROJECTION, FORM 42-3P
EXHIBIT NO. MAS-3 , DOCUMENT NO. 3

Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

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	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other - AFUDC (excl from CWIP)		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$13,763,263	$13,763,263	$13,763,263	$13,763,263	$13,763,263	$13,763,263	$13,763,263	$13,763,263	$13,763,263	$13,763,263	$13,763,263	$13,763,263	$13,763,263	
3.	Less: Accumulated Depreciation	(7,248,885)	(7,284,250)	(7,319,615)	(7,354,980)	(7,390,345)	(7,425,710)	(7,461,075)	(7,496,440)	(7,531,805)	(7,567,170)	(7,602,535)	(7,637,900)	(7,673,265)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$6,514,378	6,479,013	6,443,648	6,408,283	6,372,918	6,337,553	6,302,188	6,266,823	6,231,458	6,196,093	6,160,728	6,125,363	6,089,998	
6.	Average Net Investment		6,496,696	6,461,331	6,425,966	6,390,601	6,355,236	6,319,871	6,284,506	6,249,141	6,213,776	6,178,411	6,143,046	6,107,681	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$34,942	$34,752	$34,562	$34,371	$34,181	$33,991	$33,801	$33,610	$33,420	$33,230	$33,040	$32,850	$406,750
	b. Debt Component Grossed Up For Taxes (C)		9,354	9,303	9,252	9,201	9,150	9,100	9,049	8,998	8,947	8,896	8,845	8,794	108,889
8.	Investment Expenses														
	a. Depreciation (D)		35,365	35,365	35,365	35,365	35,365	35,365	35,365	35,365	35,365	35,365	35,365	35,365	424,380
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		79,661	79,420	79,179	78,937	78,696	78,456	78,215	77,973	77,732	77,491	77,250	77,009	940,019
	a. Recoverable Costs Allocated to Energy		79,661	79,420	79,179	78,937	78,696	78,456	78,215	77,973	77,732	77,491	77,250	77,009	940,019
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		79,661	79,420	79,179	78,937	78,696	78,456	78,215	77,973	77,732	77,491	77,250	77,009	940,019
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$79,661	$79,420	$79,179	$78,937	$78,696	$78,456	$78,215	$77,973	$77,732	$77,491	$77,250	$77,009	$940,019

Notes:
(A) Applicable depreciable base for Big Bend; accounts 312.45 ($13,435,775), 315.45 ($327,307), and 312.40 ($182).
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 3.1%, 2.4%, and 4.6%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

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

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$866,211	$866,211	$866,211	$866,211	$866,211	$866,211	$866,211	$866,211	$866,211	$866,211	$866,211	$866,211	$866,211	
3.	Less: Accumulated Depreciation	(678,161)	(680,254)	(682,347)	(684,440)	(686,533)	(688,626)	(690,719)	(692,812)	(694,905)	(696,998)	(699,091)	(701,184)	(703,277)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$188,050	185,957	183,864	181,771	179,678	177,585	175,492	173,399	171,306	169,213	167,120	165,027	162,934	
6.	Average Net Investment		187,004	184,911	182,818	180,725	178,632	176,539	174,446	172,353	170,260	168,167	166,074	163,981	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$1,006	$995	$983	$972	$961	$950	$938	$927	$916	$904	$893	$882	$11,327
	b. Debt Component Grossed Up For Taxes (C)		269	266	263	260	257	254	251	248	245	242	239	236	3,030
8.	Investment Expenses														
	a. Depreciation (D)		2,093	2,093	2,093	2,093	2,093	2,093	2,093	2,093	2,093	2,093	2,093	2,093	25,116
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		3,368	3,354	3,339	3,325	3,311	3,297	3,282	3,268	3,254	3,239	3,225	3,211	39,473
	a. Recoverable Costs Allocated to Energy		3,368	3,354	3,339	3,325	3,311	3,297	3,282	3,268	3,254	3,239	3,225	3,211	39,473
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		3,368	3,354	3,339	3,325	3,311	3,297	3,282	3,268	3,254	3,239	3,225	3,211	39,473
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$3,368	$3,354	$3,339	$3,325	$3,311	$3,297	$3,282	$3,268	$3,254	$3,239	$3,225	$3,211	$39,473

Notes:
(A) Applicable depreciable base for Big Bend; account 315.44
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 2.9%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Big Bend Section 114 Mercury Testing Platform
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$120,737	$120,737	$120,737	$120,737	$120,737	$120,737	$120,737	$120,737	$120,737	$120,737	$120,737	$120,737	$120,737	
3.	Less: Accumulated Depreciation	(69,787)	(70,109)	(70,431)	(70,753)	(71,075)	(71,397)	(71,719)	(72,041)	(72,363)	(72,685)	(73,007)	(73,329)	(73,651)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$50,950	50,628	50,306	49,984	49,662	49,340	49,018	48,696	48,374	48,052	47,730	47,408	47,086	
6.	Average Net Investment		50,789	50,467	50,145	49,823	49,501	49,179	48,857	48,535	48,213	47,891	47,569	47,247	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$273	$271	$270	$268	$266	$265	$263	$261	$259	$258	$256	$254	$3,164
	b. Debt Component Grossed Up For Taxes (C)		73	73	72	72	71	71	70	70	69	69	68	68	846
8.	Investment Expenses														
	a. Depreciation (D)		322	322	322	322	322	322	322	322	322	322	322	322	3,864
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		668	666	664	662	659	658	655	653	650	649	646	644	7,874
	a. Recoverable Costs Allocated to Energy		668	666	664	662	659	658	655	653	650	649	646	644	7,874
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		668	666	664	662	659	658	655	653	650	649	646	644	7,874
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$668	$666	$664	$662	$659	$658	$655	$653	$650	$649	$646	$644	$7,874

Notes:
(A) Applicable depreciable base for Big Bend; account 311.40
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 3.2%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

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Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

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

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other - AFUDC (excl from CWIP)		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$28,490,542	$28,490,542	$28,490,542	$28,490,542	$28,490,542	$28,490,542	$28,490,542	$28,490,542	$28,490,542	$28,490,542	$28,490,542	$28,490,542	$28,490,542	
3.	Less: Accumulated Depreciation	(21,455,978)	(21,557,899)	(21,659,820)	(21,761,741)	(21,863,662)	(21,965,583)	(22,067,504)	(22,169,425)	(22,271,346)	(22,373,267)	(22,475,188)	(22,577,109)	(22,679,030)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$7,034,565	6,932,644	6,830,723	6,728,802	6,626,881	6,524,960	6,423,039	6,321,118	6,219,197	6,117,276	6,015,355	5,913,434	5,811,513	
6.	Average Net Investment		6,983,604	6,881,683	6,779,762	6,677,841	6,575,920	6,473,999	6,372,078	6,270,157	6,168,236	6,066,315	5,964,394	5,862,473	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$37,561	$37,013	$36,464	$35,916	$35,368	$34,820	$34,272	$33,724	$33,175	$32,627	$32,079	$31,531	$414,550
	b. Debt Component Grossed Up For Taxes (C)		10,055	9,908	9,762	9,615	9,468	9,321	9,175	9,028	8,881	8,734	8,588	8,441	110,976
8.	Investment Expenses														
	a. Depreciation (D)		101,921	101,921	101,921	101,921	101,921	101,921	101,921	101,921	101,921	101,921	101,921	101,921	1,223,052
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		149,537	148,842	148,147	147,452	146,757	146,062	145,368	144,673	143,977	143,282	142,588	141,893	1,748,578
	a. Recoverable Costs Allocated to Energy		149,537	148,842	148,147	147,452	146,757	146,062	145,368	144,673	143,977	143,282	142,588	141,893	1,748,578
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		149,537	148,842	148,147	147,452	146,757	146,062	145,368	144,673	143,977	143,282	142,588	141,893	1,748,578
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$149,537	$148,842	$148,147	$147,452	$146,757	$146,062	$145,368	$144,673	$143,977	$143,282	$142,588	$141,893	$1,748,578

Notes:
(A) Applicable depreciable base for Big Bend; accounts 311.46 ($141,968), 312.46 ($28,341,531), and 315.46 ($7,043).
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rates is 2.9%, 4.3%, and 3.5%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Big Bend FGD Optimization and Utilization
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$22,652,292	$22,652,292	$22,652,292	$22,652,292	$22,652,292	$22,652,292	$22,652,292	$22,652,292	$22,652,292	$22,652,292	$22,652,292	$22,652,292	$22,652,292	
3.	Less: Accumulated Depreciation	(11,759,488)	(11,817,750)	(11,876,012)	(11,934,274)	(11,992,536)	(12,050,798)	(12,109,060)	(12,167,322)	(12,225,584)	(12,283,846)	(12,342,108)	(12,400,370)	(12,458,632)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$10,892,804	10,834,542	10,776,280	10,718,018	10,659,756	10,601,494	10,543,232	10,484,970	10,426,708	10,368,446	10,310,184	10,251,922	10,193,660	
6.	Average Net Investment		10,863,673	10,805,411	10,747,149	10,688,887	10,630,625	10,572,363	10,514,101	10,455,839	10,397,577	10,339,315	10,281,053	10,222,791	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$58,429	$58,116	$57,803	$57,489	$57,176	$56,863	$56,549	$56,236	$55,923	$55,609	$55,296	$54,982	$680,471
	b. Debt Component Grossed Up For Taxes (C)		15,642	15,558	15,474	15,390	15,306	15,222	15,139	15,055	14,971	14,887	14,803	14,719	182,166
8.	Investment Expenses														
	a. Depreciation (D)		58,262	58,262	58,262	58,262	58,262	58,262	58,262	58,262	58,262	58,262	58,262	58,262	699,144
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		132,333	131,936	131,539	131,141	130,744	130,347	129,950	129,553	129,156	128,758	128,361	127,963	1,561,781
	a. Recoverable Costs Allocated to Energy		132,333	131,936	131,539	131,141	130,744	130,347	129,950	129,553	129,156	128,758	128,361	127,963	1,561,781
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		132,333	131,936	131,539	131,141	130,744	130,347	129,950	129,553	129,156	128,758	128,361	127,963	1,561,781
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$132,333	$131,936	$131,539	$131,141	$130,744	$130,347	$129,950	$129,553	$129,156	$128,758	$128,361	$127,963	$1,561,781

Notes:
(A) Applicable depreciable base for Big Bend; accounts 312.45 ($21,855,886), 311.45 ($40,016), 316.40 ($71,401), 315.45 ($594,901), 312.42 ($0), and 312.40 ($90,088).
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 3.1%, 2.1%, 3.3%, 2.4%, 4.3%, and 4.6%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

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Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: PM Minimization and Monitoring
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$351,594	$351,594	$351,594	$351,594	$351,594	$351,594	$351,594	$351,594	$351,594	$351,594	$351,594	$351,594	$351,594	
3.	Less: Accumulated Depreciation	(173,503)	(174,353)	(175,203)	(176,053)	(176,903)	(177,753)	(178,603)	(179,453)	(180,303)	(181,153)	(182,003)	(182,853)	(183,703)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$178,091	177,241	176,391	175,541	174,691	173,841	172,991	172,141	171,291	170,441	169,591	168,741	167,891	
6.	Average Net Investment		177,666	176,816	175,966	175,116	174,266	173,416	172,566	171,716	170,866	170,016	169,166	168,316	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$956	$951	$946	$942	$937	$933	$928	$924	$919	$914	$910	$905	$11,165
	b. Debt Component Grossed Up For Taxes (C)		256	255	253	252	251	250	248	247	246	245	244	242	2,989
8.	Investment Expenses														
	a. Depreciation (D)		850	850	850	850	850	850	850	850	850	850	850	850	10,200
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		2,062	2,056	2,049	2,044	2,038	2,033	2,026	2,021	2,015	2,009	2,004	1,997	24,354
	a. Recoverable Costs Allocated to Energy		2,062	2,056	2,049	2,044	2,038	2,033	2,026	2,021	2,015	2,009	2,004	1,997	24,354
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		2,062	2,056	2,049	2,044	2,038	2,033	2,026	2,021	2,015	2,009	2,004	1,997	24,354
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$2,062	$2,056	$2,049	$2,044	$2,038	$2,033	$2,026	$2,021	$2,015	$2,009	$2,004	$1,997	$24,354

Notes:
(A) Applicable depreciable base for Big Bend; accounts 312.41 ($0), 312.42 ($0), 312.43 ($0), 315.41 ($0), 315.44 ($351,594), and 315.43 ($0)
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rates are 5.2%, 4.3%, 3.6%, 4.4%, 2.9%, and 3.3%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

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Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Polk NO_x Emissions Reduction
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$1,561,473	$1,561,473	$1,561,473	$1,561,473	$1,561,473	$1,561,473	$1,561,473	$1,561,473	$1,561,473	$1,561,473	$1,561,473	$1,561,473	$1,561,473	
3.	Less: Accumulated Depreciation	(1,012,782)	(1,018,117)	(1,023,452)	(1,028,787)	(1,034,122)	(1,039,457)	(1,044,792)	(1,050,127)	(1,055,462)	(1,060,797)	(1,066,132)	(1,071,467)	(1,076,802)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$548,691	543,356	538,021	532,686	527,351	522,016	516,681	511,346	506,011	500,676	495,341	490,006	484,671	
6.	Average Net Investment		546,024	540,689	535,354	530,019	524,684	519,349	514,014	508,679	503,344	498,009	492,674	487,339	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$2,937	$2,908	$2,879	$2,851	$2,822	$2,793	$2,765	$2,736	$2,707	$2,678	$2,650	$2,621	$33,347
	b. Debt Component Grossed Up For Taxes (C)		786	779	771	763	755	748	740	732	725	717	709	702	8,927
8.	Investment Expenses														
	a. Depreciation (D)		5,335	5,335	5,335	5,335	5,335	5,335	5,335	5,335	5,335	5,335	5,335	5,335	64,020
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		9,058	9,022	8,985	8,949	8,912	8,876	8,840	8,803	8,767	8,730	8,694	8,658	106,294
	a. Recoverable Costs Allocated to Energy		9,058	9,022	8,985	8,949	8,912	8,876	8,840	8,803	8,767	8,730	8,694	8,658	106,294
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		9,058	9,022	8,985	8,949	8,912	8,876	8,840	8,803	8,767	8,730	8,694	8,658	106,294
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$9,058	$9,022	$8,985	$8,949	$8,912	$8,876	$8,840	$8,803	$8,767	$8,730	$8,694	$8,658	$106,294

Notes:
(A) Applicable depreciable base for Polk; account 342.81
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 4.1%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

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

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$2,558,730	$2,558,730	$2,558,730	$2,558,730	$2,558,730	$2,558,730	$2,558,730	$2,558,730	$2,558,730	$2,558,730	$2,558,730	$2,558,730	$2,558,730	
3.	Less: Accumulated Depreciation	(1,300,934)	(1,307,971)	(1,315,008)	(1,322,045)	(1,329,082)	(1,336,119)	(1,343,156)	(1,350,193)	(1,357,230)	(1,364,267)	(1,371,304)	(1,378,341)	(1,385,378)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$1,257,796	1,250,759	1,243,722	1,236,685	1,229,648	1,222,611	1,215,574	1,208,537	1,201,500	1,194,463	1,187,426	1,180,389	1,173,352	
6.	Average Net Investment		1,254,278	1,247,241	1,240,204	1,233,167	1,226,130	1,219,093	1,212,056	1,205,019	1,197,982	1,190,945	1,183,908	1,176,871	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$6,746	$6,708	$6,670	$6,632	$6,595	$6,557	$6,519	$6,481	$6,443	$6,405	$6,368	$6,330	$78,454
	b. Debt Component Grossed Up For Taxes (C)		1,806	1,796	1,786	1,776	1,765	1,755	1,745	1,735	1,725	1,715	1,705	1,694	21,003
8.	Investment Expenses														
	a. Depreciation (D)		7,037	7,037	7,037	7,037	7,037	7,037	7,037	7,037	7,037	7,037	7,037	7,037	84,444
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		15,589	15,541	15,493	15,445	15,397	15,349	15,301	15,253	15,205	15,157	15,110	15,061	183,901
	a. Recoverable Costs Allocated to Energy		15,589	15,541	15,493	15,445	15,397	15,349	15,301	15,253	15,205	15,157	15,110	15,061	183,901
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		15,589	15,541	15,493	15,445	15,397	15,349	15,301	15,253	15,205	15,157	15,110	15,061	183,901
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$15,589	$15,541	$15,493	$15,445	$15,397	$15,349	$15,301	$15,253	$15,205	$15,157	$15,110	$15,061	$183,901

Notes:
(A) Applicable depreciable base for Big Bend; account 312.44
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 3.3%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

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Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

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

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$333,333	$333,333	$333,333	$333,333	$333,333	$333,333	$333,333	$333,333	$333,333	$333,333	$333,333	$333,333	$4,000,000
	b. Clearings to Plant		0	0	0	0	0	2,750,000	333,333	333,333	333,333	333,333	333,333	333,333	4,750,000
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$67,299,834	$67,299,834	$67,299,834	$67,299,834	$67,299,834	$67,299,834	$70,049,835	$70,383,168	$70,716,501	$71,049,835	$71,383,168	$71,716,501	$72,049,834	
3.	Less: Accumulated Depreciation	(33,887,311)	(34,070,144)	(34,252,977)	(34,435,810)	(34,618,643)	(34,801,476)	(34,984,309)	(35,174,705)	(35,366,017)	(35,558,246)	(35,751,392)	(35,945,454)	(36,140,433)	
4.	CWIP - Non-Interest Bearing	750,000	1,083,333	1,416,667	1,750,000	2,083,333	2,416,667	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$34,162,523	34,313,024	34,463,524	34,614,025	34,764,525	34,915,025	35,065,526	35,208,463	35,350,484	35,491,589	35,631,776	35,771,047	35,909,401	
6.	Average Net Investment		34,237,774	34,388,274	34,538,774	34,689,275	34,839,775	34,990,275	35,136,994	35,279,474	35,421,036	35,561,682	35,701,411	35,840,224	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$184,145	$184,954	$185,764	$186,573	$187,383	$188,192	$188,981	$189,748	$190,509	$191,266	$192,017	$192,764	$2,262,296
	b. Debt Component Grossed Up For Taxes (C)		49,297	49,513	49,730	49,947	50,163	50,380	50,591	50,797	51,000	51,203	51,404	51,604	605,629
8.	Investment Expenses														
	a. Depreciation (D)		182,833	182,833	182,833	182,833	182,833	182,833	190,396	191,312	192,229	193,146	194,062	194,979	2,253,122
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		416,275	417,300	418,327	419,353	420,379	421,405	429,968	431,857	433,738	435,615	437,483	439,347	5,121,047
	a. Recoverable Costs Allocated to Energy		416,275	417,300	418,327	419,353	420,379	421,405	429,968	431,857	433,738	435,615	437,483	439,347	5,121,047
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		416,275	417,300	418,327	419,353	420,379	421,405	429,968	431,857	433,738	435,615	437,483	439,347	5,121,047
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$416,275	$417,300	$418,327	$419,353	$420,379	$421,405	$429,968	$431,857	$433,738	$435,615	$437,483	$439,347	$5,121,047

Notes:
(A) Applicable depreciable base for Big Bend; accounts 311.54 ($16,857,250), 312.54 ($38,554,520), 315.54 ($10,642,027), 316.54 ($687,934), 315.40 ($558,103), and 312.44 ($4,750,000)
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 2.8%, 3.6%, 2.8%, 2.4%, 3.5%, and 3.3%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Big Bend FGD System Reliability
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$24,467,806	$24,467,806	$24,467,806	$24,467,806	$24,467,806	$24,467,806	$24,467,806	$24,467,806	$24,467,806	$24,467,806	$24,467,806	$24,467,806	$24,467,806	
3.	Less: Accumulated Depreciation	(7,834,273)	(7,897,725)	(7,961,177)	(8,024,629)	(8,088,081)	(8,151,533)	(8,214,985)	(8,278,437)	(8,341,889)	(8,405,341)	(8,468,793)	(8,532,245)	(8,595,697)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$16,633,533	16,570,081	16,506,629	16,443,177	16,379,725	16,316,273	16,252,821	16,189,369	16,125,917	16,062,465	15,999,013	15,935,561	15,872,109	
6.	Average Net Investment		16,601,807	16,538,355	16,474,903	16,411,451	16,347,999	16,284,547	16,221,095	16,157,643	16,094,191	16,030,739	15,967,287	15,903,835	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$89,291	$88,950	$88,609	$88,268	$87,926	$87,585	$87,244	$86,903	$86,561	$86,220	$85,879	$85,537	$1,048,973
	b. Debt Component Grossed Up For Taxes (C)		23,904	23,812	23,721	23,630	23,538	23,447	23,356	23,264	23,173	23,082	22,990	22,899	280,816
8.	Investment Expenses														
	a. Depreciation (D)		63,452	63,452	63,452	63,452	63,452	63,452	63,452	63,452	63,452	63,452	63,452	63,452	761,424
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		176,647	176,214	175,782	175,350	174,916	174,484	174,052	173,619	173,186	172,754	172,321	171,888	2,091,213
	a. Recoverable Costs Allocated to Energy		176,647	176,214	175,782	175,350	174,916	174,484	174,052	173,619	173,186	172,754	172,321	171,888	2,091,213
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		176,647	176,214	175,782	175,350	174,916	174,484	174,052	173,619	173,186	172,754	172,321	171,888	2,091,213
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$176,647	$176,214	$175,782	$175,350	$174,916	$174,484	$174,052	$173,619	$173,186	$172,754	$172,321	$171,888	$2,091,213

Notes:
(A) Applicable depreciable base for Big Bend; accounts 312.45 ($23,011,597) and 312.44 ($1,456,209).
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 3.1% and 3.3%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Mercury Air Toxics Standards (MATS)
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$100,000
	b. Clearings to Plant		0	0	100,000	0	0	0	0	0	0	0	0	0	100,000
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other - AFUDC (excl from CWIP)		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$7,064,224	$7,064,224	$7,064,224	$7,164,224	$7,164,224	$7,164,224	$7,164,224	$7,164,224	$7,164,224	$7,164,224	$7,164,224	$7,164,224	$7,164,224	
3.	Less: Accumulated Depreciation	(2,035,769)	(2,055,382)	(2,074,995)	(2,094,608)	(2,114,604)	(2,134,600)	(2,154,596)	(2,174,592)	(2,194,588)	(2,214,584)	(2,234,580)	(2,254,576)	(2,274,572)	
4.	CWIP - Non-Interest Bearing	0	-	-	-	-	-	-	-	-	-	-	-	-	
5.	Net Investment (Lines 2 + 3 + 4)	$5,028,455	5,008,842	4,989,229	5,069,616	5,049,620	5,029,624	5,009,628	4,989,632	4,969,636	4,949,640	4,929,644	4,909,648	4,889,652	
6.	Average Net Investment		5,018,648	4,999,035	5,029,422	5,059,618	5,039,622	5,019,626	4,999,630	4,979,634	4,959,638	4,939,642	4,919,646	4,899,650	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$26,992	$26,887	$27,050	$27,213	$27,105	$26,998	$26,890	$26,783	$26,675	$26,567	$26,460	$26,352	$321,972
	b. Debt Component Grossed Up For Taxes (C)		7,226	7,198	7,242	7,285	7,256	7,227	7,199	7,170	7,141	7,112	7,083	7,055	86,194
8.	Investment Expenses														
	a. Depreciation (D)		19,613	19,613	19,613	19,996	19,996	19,996	19,996	19,996	19,996	19,996	19,996	19,996	238,803
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		53,831	53,698	53,905	54,494	54,357	54,221	54,085	53,949	53,812	53,675	53,539	53,403	646,969
	a. Recoverable Costs Allocated to Energy		53,831	53,698	53,905	54,494	54,357	54,221	54,085	53,949	53,812	53,675	53,539	53,403	646,969
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		53,831	53,698	53,905	54,494	54,357	54,221	54,085	53,949	53,812	53,675	53,539	53,403	646,969
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$53,831	$53,698	$53,905	$54,494	$54,357	$54,221	$54,085	$53,949	$53,812	$53,675	$53,539	$53,403	$646,969

Notes:
(A) Applicable depreciable base for Big Bend and Polk; accounts 312.44 ($3,427,481), 341.80 ($26,150), 315.40 ($1,226,949), 315.41 ($0), 315.42 ($0), 312.45 ($2,053,017), 312.46 ($0), 315.44 ($16,035), 315.45 ($53,832), 315.46 ($0), 311.40 ($13,216), 345.81 ($2,232), 312.54 ($210,295), 395.00 ($35,018), 315.43 ($0), and 312.40 ($100,000)
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 3.3%, 3.1%, 3.5%, 4.4%, 5.0%, 3.1%, 4.3%, 2.9%, 2.4%, 3.5%, 3.2%, 3.3%, 3.6%, 14.3%, 3.3%, and 4.6%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

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Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

For Project: SO_2 Emissions Allowances
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Purchases/Transfers		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Sales/Transfers		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Auction Proceeds/Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Working Capital Balance														
	a. FERC 158.1 Allowance Inventory	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
	b. FERC 158.2 Allowances Withheld	0	0	0	0	0	0	0	0	0	0	0	0	0	
	c. FERC 182.3 Other Regl. Assets - Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	
	d. FERC 254.01 Regulatory Liabilities - Gains	(34,164)	(34,157)	(34,157)	(34,157)	(34,150)	(34,150)	(34,150)	(34,142)	(34,142)	(34,142)	(34,134)	(34,134)	(34,134)	
3.	Total Working Capital Balance	($34,164)	(34,157)	(34,157)	(34,157)	(34,150)	(34,150)	(34,150)	(34,142)	(34,142)	(34,142)	(34,134)	(34,134)	(34,134)	
4.	Average Net Working Capital Balance		($34,160)	($34,157)	($34,157)	($34,153)	($34,150)	($34,150)	($34,146)	($34,142)	($34,142)	($34,138)	($34,134)	($34,134)	
5.	Return on Average Net Working Capital Balance														
	a. Equity Component Grossed Up For Taxes (A)		($184)	($184)	($184)	($184)	($184)	($184)	($184)	($184)	($184)	($184)	($184)	($184)	($2,208)
	b. Debt Component Grossed Up For Taxes (B)		(49)	(49)	(49)	(49)	(49)	(49)	(49)	(49)	(49)	(49)	(49)	(49)	(588)
6.	Total Return Component		(233)	(233)	(233)	(233)	(233)	(233)	(233)	(233)	(233)	(233)	(233)	(233)	(2,796)
7.	Expenses:														
	a. Gains		0	0	0	0	0	0	0	0	0	0	0	0	0
	b. Losses		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. SO_2 Allowance Expense		(6)	2	2	(6)	2	2	(6)	2	2	(6)	2	2	(10)
8.	Net Expenses (D)		(6)	2	2	(6)	2	2	(6)	2	2	(6)	2	2	(10)
9.	Total System Recoverable Expenses (Lines 6 + 8)		(239)	(231)	(231)	(239)	(231)	(231)	(239)	(231)	(231)	(239)	(231)	(231)	(2,806)
	a. Recoverable Costs Allocated to Energy		(239)	(231)	(231)	(239)	(231)	(231)	(239)	(231)	(231)	(239)	(231)	(231)	(2,806)
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		(239)	(231)	(231)	(239)	(231)	(231)	(239)	(231)	(231)	(239)	(231)	(231)	(2,804)
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Juris. Recoverable Costs (Lines 12 + 13)		($239)	($231)	($231)	($239)	($231)	($231)	($239)	($231)	($231)	($239)	($231)	($231)	($2,804)

Notes:
(A) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(B) Line 6 x 1.7278% x 1/12
(C) Line 6 is reported on Schedule 7E.
(D) Line 8 is reported on Schedule 5E.
(E) Line 9a x Line 10
(F) Line 9b x Line 11

Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Big Bend Gypsum Storage Facility
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other - AFUDC (excl from CWIP)		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$21,467,359	$21,467,359	$21,467,359	$21,467,359	$21,467,359	$21,467,359	$21,467,359	$21,467,359	$21,467,359	$21,467,359	$21,467,359	$21,467,359	$21,467,359	
3.	Less: Accumulated Depreciation	(5,086,923)	(5,144,169)	(5,201,415)	(5,258,661)	(5,315,907)	(5,373,153)	(5,430,399)	(5,487,645)	(5,544,891)	(5,602,137)	(5,659,383)	(5,716,629)	(5,773,875)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$16,380,436	16,323,190	16,265,944	16,208,698	16,151,452	16,094,206	16,036,960	15,979,714	15,922,468	15,865,222	15,807,976	15,750,730	15,693,484	
6.	Average Net Investment		16,351,813	16,294,567	16,237,321	16,180,075	16,122,829	16,065,583	16,008,337	15,951,091	15,893,845	15,836,599	15,779,353	15,722,107	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$87,947	$87,639	$87,331	$87,023	$86,715	$86,407	$86,100	$85,792	$85,484	$85,176	$84,868	$84,560	$1,035,042
	b. Debt Component Grossed Up For Taxes (C)		23,544	23,461	23,379	23,297	23,214	23,132	23,049	22,967	22,884	22,802	22,720	22,637	277,086
8.	Investment Expenses														
	a. Depreciation (D)		57,246	57,246	57,246	57,246	57,246	57,246	57,246	57,246	57,246	57,246	57,246	57,246	686,952
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		168,737	168,346	167,956	167,566	167,175	166,785	166,395	166,005	165,614	165,224	164,834	164,443	1,999,080
	a. Recoverable Costs Allocated to Energy		168,737	168,346	167,956	167,566	167,175	166,785	166,395	166,005	165,614	165,224	164,834	164,443	1,999,080
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		168,737	168,346	167,956	167,566	167,175	166,785	166,395	166,005	165,614	165,224	164,834	164,443	1,999,080
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$168,737	$168,346	$167,956	$167,566	$167,175	$166,785	$166,395	$166,005	$165,614	$165,224	$164,834	$164,443	$1,999,080

Notes:
(A) Applicable depreciable base for Big Bend; accounts 311.40
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 3.2%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

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Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Big Bend Coal Combustion Residual Rule (CCR Rule)
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other - AFUDC (excl from CWIP)		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$4,730,931	$4,730,931	$4,730,931	$4,730,931	$4,730,931	$4,730,931	$4,730,931	$4,730,931	$4,730,931	$4,730,931	$4,730,931	$4,730,931	$4,730,931	
3.	Less: Accumulated Depreciation	(261,634)	(275,202)	(288,770)	(302,338)	(315,906)	(329,474)	(343,042)	(356,610)	(370,178)	(383,746)	(397,314)	(410,882)	(424,450)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$4,469,297	4,455,729	4,442,161	4,428,593	4,415,025	4,401,457	4,387,889	4,374,321	4,360,753	4,347,185	4,333,617	4,320,049	4,306,481	
6.	Average Net Investment		4,462,513	4,448,945	4,435,377	4,421,809	4,408,241	4,394,673	4,381,105	4,367,537	4,353,969	4,340,401	4,326,833	4,313,265	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$24,001	$23,928	$23,855	$23,782	$23,709	$23,636	$23,563	$23,490	$23,417	$23,344	$23,272	$23,199	$283,196
	b. Debt Component Grossed Up For Taxes (C)		6,425	6,406	6,386	6,367	6,347	6,328	6,308	6,289	6,269	6,249	6,230	6,210	75,814
8.	Investment Expenses														
	a. Depreciation (D)		13,568	13,568	13,568	13,568	13,568	13,568	13,568	13,568	13,568	13,568	13,568	13,568	162,816
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		43,994	43,902	43,809	43,717	43,624	43,532	43,439	43,347	43,254	43,161	43,070	42,977	521,826
	a. Recoverable Costs Allocated to Energy		0	0	0	0	0	0	0	0	0	0	0	0	0
	b. Recoverable Costs Allocated to Demand		43,994	43,902	43,809	43,717	43,624	43,532	43,439	43,347	43,254	43,161	43,070	42,977	521,826
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
13.	Retail Demand-Related Recoverable Costs (F)		43,994	43,902	43,809	43,717	43,624	43,532	43,439	43,347	43,254	43,161	43,070	42,977	521,826
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$43,994	$43,902	$43,809	$43,717	$43,624	$43,532	$43,439	$43,347	$43,254	$43,161	$43,070	$42,977	$521,826

Notes:
(A) Applicable depreciable base for Big Bend; accounts 311.40 ($2,464,676), 312.44 ($668,735), 312.40 ($824,727), and 312.45 ($772,794)
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 3.2%, 3.3%, 4.6%, and 3.1%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

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Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Coal Combustion Residuals (CCR Rule - Phase II)
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other - AFUDC (excl from CWIP)		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$1,318,605	$1,318,605	$1,318,605	$1,318,605	$1,318,605	$1,318,605	$1,318,605	$1,318,605	$1,318,605	$1,318,605	$1,318,605	$1,318,605	$1,318,605	
3.	Less: Accumulated Depreciation	(18,130)	(21,756)	(25,382)	(29,008)	(32,634)	(36,260)	(39,886)	(43,512)	(47,138)	(50,764)	(54,390)	(58,016)	(61,642)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$1,300,475	1,296,849	1,293,223	1,289,597	1,285,971	1,282,345	1,278,719	1,275,093	1,271,467	1,267,841	1,264,215	1,260,589	1,256,963	
6.	Average Net Investment		1,298,662	1,295,036	1,291,410	1,287,784	1,284,158	1,280,532	1,276,906	1,273,280	1,269,654	1,266,028	1,262,402	1,258,776	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$6,985	$6,965	$6,946	$6,926	$6,907	$6,887	$6,868	$6,848	$6,829	$6,809	$6,790	$6,770	$82,530
	b. Debt Component Grossed Up For Taxes (C)		1,870	1,865	1,859	1,854	1,849	1,844	1,839	1,833	1,828	1,823	1,818	1,812	22,094
8.	Investment Expenses														
	a. Depreciation (D)		3,626	3,626	3,626	3,626	3,626	3,626	3,626	3,626	3,626	3,626	3,626	3,626	43,512
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		12,481	12,456	12,431	12,406	12,382	12,357	12,333	12,307	12,283	12,258	12,234	12,208	148,136
	a. Recoverable Costs Allocated to Energy		0	0	0	0	0	0	0	0	0	0	0	0	0
	b. Recoverable Costs Allocated to Demand		12,481	12,456	12,431	12,406	12,382	12,357	12,333	12,307	12,283	12,258	12,234	12,208	148,136
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
13.	Retail Demand-Related Recoverable Costs (F)		12,481	12,456	12,431	12,406	12,382	12,357	12,333	12,307	12,283	12,258	12,234	12,208	148,136
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$12,481	$12,456	$12,431	$12,406	$12,382	$12,357	$12,333	$12,307	$12,283	$12,258	$12,234	$12,208	$148,136

Notes:

(A) Applicable depreciable base for Big Bend; accounts 312.44
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 3.3%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

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DOCKET NO. 20220007-EI
ECRC 2023 PROJECTION, FORM 42-4P
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Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Big Bend ELG Compliance
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$618,200	$1,168,200	$1,537,608	$49,280	$0	$0	$0	$0	$0	$0	$0	$0	$3,373,288
	b. Clearings to Plant		0	0	0	25,934,381	0	0	0	0	0	0	0	0	25,934,381
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other - AFUDC (excl from CWIP)		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$0	$0	$0	$0	$25,934,381	$25,934,381	$25,934,381	$25,934,381	$25,934,381	$25,934,381	$25,934,381	$25,934,381	$25,934,381	
3.	Less: Accumulated Depreciation	0	0	0	0	0	(99,415)	(198,830)	(298,245)	(397,660)	(497,075)	(596,490)	(695,905)	(795,320)	
4.	CWIP - Non-Interest Bearing	22,561,093	23,179,293	24,347,493	25,885,101	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$22,561,093	23,179,293	24,347,493	25,885,101	25,934,381	25,834,966	25,735,551	25,636,136	25,536,721	25,437,306	25,337,891	25,238,476	25,139,061	
6.	Average Net Investment		22,870,193	23,763,393	25,116,297	25,909,741	25,884,674	25,785,259	25,685,844	25,586,429	25,487,014	25,387,599	25,288,184	25,188,769	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$123,005	$127,809	$135,086	$139,353	$139,219	$138,684	$138,149	$137,614	$137,080	$136,545	$136,010	$135,476	$1,624,030
	b. Debt Component Grossed Up For Taxes (C)		32,929	34,215	36,163	37,306	37,270	37,126	36,983	36,840	36,697	36,554	36,411	36,268	434,762
8.	Investment Expenses														
	a. Depreciation (D)		0	0	0	0	99,415	99,415	99,415	99,415	99,415	99,415	99,415	99,415	795,320
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		155,934	162,024	171,249	176,659	275,904	275,225	274,547	273,869	273,192	272,514	271,836	271,159	2,854,112
	a. Recoverable Costs Allocated to Energy		0	0	0	0	0	0	0	0	0	0	0	0	0
	b. Recoverable Costs Allocated to Demand		155,934	162,024	171,249	176,659	275,904	275,225	274,547	273,869	273,192	272,514	271,836	271,159	2,854,112
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
13.	Retail Demand-Related Recoverable Costs (F)		155,934	162,024	171,249	176,659	275,904	275,225	274,547	273,869	273,192	272,514	271,836	271,159	2,854,112
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$155,934	$162,024	$171,249	$176,659	$275,904	$275,225	$274,547	$273,869	$273,192	$272,514	$271,836	$271,159	$2,854,112

Notes:

(A) Applicable depreciable base for Big Bend; accounts 312.40
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 4.6%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Big Bend Unit 1 Section 316(b) Impingement Mortality
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other - AFUDC (excl from CWIP)		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$12,035,273	$12,035,273	$12,035,273	$12,035,273	$12,035,273	$12,035,273	$12,035,273	$12,035,273	$12,035,273	$12,035,273	$12,035,273	$12,035,273	$12,035,273	
3.	Less: Accumulated Depreciation	0	(46,135)	(92,270)	(138,405)	(184,540)	(230,675)	(276,810)	(322,945)	(369,080)	(415,215)	(461,350)	(507,485)	(553,620)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$12,035,273	11,989,138	11,943,003	11,896,868	11,850,733	11,804,598	11,758,463	11,712,328	11,666,193	11,620,058	11,573,923	11,527,788	11,481,653	
6.	Average Net Investment		12,012,205	11,966,070	11,919,935	11,873,800	11,827,665	11,781,530	11,735,395	11,689,260	11,643,125	11,596,990	11,550,855	11,504,720	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$64,607	$64,359	$64,110	$63,862	$63,614	$63,366	$63,118	$62,870	$62,622	$62,373	$62,125	$61,877	$758,903
	b. Debt Component Grossed Up For Taxes (C)		17,296	17,229	17,163	17,096	17,030	16,963	16,897	16,831	16,764	16,698	16,631	16,565	203,163
8.	Investment Expenses														
	a. Depreciation (D)		46,135	46,135	46,135	46,135	46,135	46,135	46,135	46,135	46,135	46,135	46,135	46,135	553,620
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		128,038	127,723	127,408	127,093	126,779	126,464	126,150	125,836	125,521	125,206	124,891	124,577	1,515,686
	a. Recoverable Costs Allocated to Energy		0	0	0	0	0	0	0	0	0	0	0	0	0
	b. Recoverable Costs Allocated to Demand		128,038	127,723	127,408	127,093	126,779	126,464	126,150	125,836	125,521	125,206	124,891	124,577	1,515,686
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
13.	Retail Demand-Related Recoverable Costs (F)		128,038	127,723	127,408	127,093	126,779	126,464	126,150	125,836	125,521	125,206	124,891	124,577	1,515,686
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$128,038	$127,723	$127,408	$127,093	$126,779	$126,464	$126,150	$125,836	$125,521	$125,206	$124,891	$124,577	$1,515,686

Notes:
(A) Applicable depreciable base for Big Bend; accounts 312.40
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 4.6%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

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Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Bayside 316(b) Compliance
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$550,000	$550,000	$550,000	$550,000	$559,142	$623,582	$550,000	$716,925	$550,000	$1,264,843	$770,000	$1,603,108	$8,837,600
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other - AFUDC (excl from CWIP)		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
3.	Less: Accumulated Depreciation	0	0	0	0	0	0	0	0	0	0	0	0	0	
4.	CWIP - Non-Interest Bearing	6,815,511	7,365,511	7,915,511	8,465,511	9,015,511	9,574,653	10,198,235	10,748,235	11,465,160	12,015,160	13,280,003	14,050,003	15,653,111	
5.	Net Investment (Lines 2 + 3 + 4)	$6,815,511	7,365,511	7,915,511	8,465,511	9,015,511	9,574,653	10,198,235	10,748,235	11,465,160	12,015,160	13,280,003	14,050,003	15,653,111	
6.	Average Net Investment		7,090,511	7,640,511	8,190,511	8,740,511	9,295,082	9,886,444	10,473,235	11,106,698	11,740,160	12,647,582	13,665,003	14,851,557	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$38,136	$41,094	$44,052	$47,010	$49,993	$53,173	$56,329	$59,736	$63,143	$68,024	$73,496	$79,878	$674,064
	b. Debt Component Grossed Up For Taxes (C)		10,209	11,001	11,793	12,585	13,383	14,235	15,080	15,992	16,904	18,210	19,675	21,384	180,451
8.	Investment Expenses														
	a. Depreciation (D)		0	0	0	0	0	0	0	0	0	0	0	0	0
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		48,345	52,095	55,845	59,595	63,376	67,408	71,409	75,728	80,047	86,234	93,171	101,262	854,515
	a. Recoverable Costs Allocated to Energy		0	0	0	0	0	0	0	0	0	0	0	0	0
	b. Recoverable Costs Allocated to Demand		48,345	52,095	55,845	59,595	63,376	67,408	71,409	75,728	80,047	86,234	93,171	101,262	854,515
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
13.	Retail Demand-Related Recoverable Costs (F)		48,345	52,095	55,845	59,595	63,376	67,408	71,409	75,728	80,047	86,234	93,171	101,262	854,515
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$48,345	$52,095	$55,845	$59,595	$63,376	$67,408	$71,409	$75,728	$80,047	$86,234	$93,171	$101,262	$854,515

Notes:
(A) Applicable depreciable base for Big Bend; accounts 343.30
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 5.5%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

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Tampa Electric Company
Environmental Cost Recovery Clause
Calculation of the Projected Period Amount
January 2023 to December 2023

Return on Capital Investments, Depreciation and Taxes
For Project: Big Bend NESHAP Subpart YYYY
(in Dollars)

Line	Description	Beginning of Period Amount	Projected January	Projected February	Projected March	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Projected October	Projected November	Projected December	End of Period Total
1.	Investments														
	a. Expenditures/Additions		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	b. Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Other - AFUDC (excl from CWIP)		0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Plant-in-Service/Depreciation Base (A)	$340,974	$340,974	$340,974	$340,974	$340,974	$340,974	$340,974	$340,974	$340,974	$340,974	$340,974	$340,974	$340,974	
3.	Less: Accumulated Depreciation	(2,815)	(4,122)	(5,429)	(6,736)	(8,043)	(9,350)	(10,657)	(11,964)	(13,271)	(14,578)	(15,885)	(17,192)	(18,499)	
4.	CWIP - Non-Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	
5.	Net Investment (Lines 2 + 3 + 4)	$338,159	336,852	335,545	334,238	332,931	331,624	330,317	329,010	327,703	326,396	325,089	323,782	322,475	
6.	Average Net Investment		337,506	336,199	334,892	333,585	332,278	330,971	329,664	328,357	327,050	325,743	324,436	323,129	
7.	Return on Average Net Investment														
	a. Equity Component Grossed Up For Taxes (B)		$1,815	$1,808	$1,801	$1,794	$1,787	$1,780	$1,773	$1,766	$1,759	$1,752	$1,745	$1,738	$21,318
	b. Debt Component Grossed Up For Taxes (C)		486	484	482	480	478	477	475	473	471	469	467	465	5,707
8.	Investment Expenses														
	a. Depreciation (D)		1,307	1,307	1,307	1,307	1,307	1,307	1,307	1,307	1,307	1,307	1,307	1,307	15,684
	b. Amortization		0	0	0	0	0	0	0	0	0	0	0	0	0
	c. Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d. Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e. Other		0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Total System Recoverable Expenses (Lines 7 + 8)		3,608	3,599	3,590	3,581	3,572	3,564	3,555	3,546	3,537	3,528	3,519	3,510	42,709
	a. Recoverable Costs Allocated to Energy		3,608	3,599	3,590	3,581	3,572	3,564	3,555	3,546	3,537	3,528	3,519	3,510	42,709
	b. Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Energy Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
11.	Demand Jurisdictional Factor		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
12.	Retail Energy-Related Recoverable Costs (E)		3,608	3,599	3,590	3,581	3,572	3,564	3,555	3,546	3,537	3,528	3,519	3,510	42,709
13.	Retail Demand-Related Recoverable Costs (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		$3,608	$3,599	$3,590	$3,581	$3,572	$3,564	$3,555	$3,546	$3,537	$3,528	$3,519	$3,510	$42,709

Notes:
(A) Applicable depreciable base for Big Bend; accounts 312.40
(B) Line 6 x 6.4541% x 1/12. Based on ROE of 10.20% and weighted income tax rate of 25.3450% (expansion factor of 1.34315)
(C) Line 6 x 1.7278% x 1/12
(D) Applicable depreciation rate is 4.6%
(E) Line 9a x Line 10
(F) Line 9b x Line 11

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend Unit 3 Flue Gas Desulfurization Integration

Project Description:

This project involved the integration of Big Bend Unit 3 flue gases into the Big Bend Unit 4 Flue Gas Desulfurization ("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:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022, is $957,537 compared to the original projection of $956,797.

The actual/estimated O&M expense for the period January 2022 through December 2022 is $0 and did not vary from the original projection.

Progress Summary: This project was approved by the Commission in Docket No. 19960688-EI, Order No. PSC-1996-1048-FOF-EI, issued August 14, 1996. The project is complete and in service.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $940,019.

There are not any projected O&M costs for the period January 2023 through December 2023.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
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 to monitor compliance with the CAAA requirements. The monitors are capable of measuring, recording and electronically reporting SO_2, NO_x 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:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $41,013 compared to the original projection of $40,993.

Progress Summary: This project was approved by the Commission in Docket No. 19960688-EI, Order No. PSC-1996-1048-FOF-EI, issued August 14, 1996. The project is complete and in service.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $39,473.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend Units 1 & 2 FGD

Project Description:

The Big Bend Units 1 & 2 FGD system consists of equipment capable of removing SO_2 from the flue gas generated by the combustion of coal. The FGD was installed in order to comply with Phase II of the CAAA. Compliance with Phase II was required by January 1, 2000. The CAAA impose SO_2 emission limits on existing steam electric units with an output capacity of greater than 25 megawatts and all new utility units. Tampa Electric conducted an exhaustive analysis of options to comply with Phase II of the CAAA that culminated in the selection of the FGD project to serve Big Bend Units 1 & 2.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $1,828,951 compared to the original projection of $1,828,248.

The actual/estimated O&M expense for the period January 2022 through December 2022 is $0 and did not vary from the original projection.

Progress Summary: This project was approved by the Commission in Docket No. 19980693-EI, Order No. PSC-1999-0075-FOF-EI, issued January 11, 1999. The project is complete and in service.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $1,748,578.

There are not any O&M costs projected for the period January 2023 through December 2023.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend Section 114 Mercury Testing Platform

Project Description:

The Mercury Emissions Information Collection Effort is mandated by the EPA. The EPA asserts that Section 114 of the CAAA grants EPA the authority to request the collection of information necessary for it to study whether it is appropriate and necessary to develop performance of emission standards for electric utility steam generating units.

In a letter dated November 25, 1998, Tampa Electric was notified by the EPA that, pursuant to Section 114 of the CAAA, the company was required to periodically sample and analyze coal shipments for mercury and chlorine content during the period January 1, 1999 through December 31, 1999.

In addition to coal sampling, stack testing and analyses are also required. Tampa Electric received a second letter from EPA, dated March 11, 1999, requiring Tampa Electric to perform specialized mercury testing of the inlet and outlet of the last emission control device installed for Big Bend Units 1, 2 or 3, and Polk Unit 1 as part of the mercury data collection. Part of the cost incurred to perform the stack testing is due to the need to construct special test facilities at the Big Bend stack testing location to meet EPA's testing requirements.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $8,056 compared to the original projection of $8,050.

Progress Summary: This project was approved by the Commission in Docket No. 19990976-EI, Order No. PSC-1999-2103-PAA-EI, issued October 25, 1999. The project was placed in service in December 1999 and completed in May 2000.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $7,874.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend FGD Optimization and Utilization

Project Description:

In order to meet the requirements of the FDEP Consent Final Judgment and the EPA Consent Decree, Tampa Electric was required to optimize the SO_2 removal efficiency and operations of the Big Bend Units 1, 2 and 3 FGD systems. Tampa Electric performed activities in three key areas to improve the performance and reliability of the Big Bend Units 1, 2 and 3 FGD systems. The majority of the improvements required on the Unit 3 tower module included the tower piping, nozzle and internal improvements, ductwork improvements, electrical system reliability improvements, tower control improvements, dibasic acid system improvements, booster fan reliability, absorber system improvements, quencher system improvements, and tower demister improvements. Big Bend Units 1 and 2 FGD system improvements included additional preventative maintenance, oxidation air control improvements, and tower water, air reagent and start-up piping upgrades. In order to ensure reliability of the FGD systems, improvements to the common limestone supply, gypsum de-watering stack reliability and wastewater treatment plant were also performed.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $1,590,237 compared to the original projection of $1,589,173. The variance is due to the removal of certain assets related to Big Bend Units 1, 2, and 3 from the ECRC and transferring them to the CETM in accordance with the 2021 Settlement Agreement, approved in Order No PSC-2021-0423-S-EI, issued on November 10, 2021 in Docket No. 20210034-EI.

Progress Summary: This project was approved by the Commission in Docket No. 20000685-EI, Order No. PSC-2000-1906-PAA-EI, issued October 18, 2000. The project is complete and in service.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $1,561,781.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend PM Minimization and Monitoring

Project Description:

In order to meet the requirements of the FDEP Consent Final Judgment and the EPA Consent Decree, Tampa Electric is required to develop a Best Operational Practices ("BOP") study to minimize emissions from each electrostatic precipitator ("ESP") at Big Bend, as well as perform a best available control technology ("BACT") analysis for the upgrade of each existing ESP. The company is also required to install and operate particulate matter continuous emission monitors on Big Bend Units 1, 2 and 3 FGD systems. Tampa Electric identified improvements that were necessary to optimize ESP performance such as modifications to the turning vanes and precipitator distribution plates, and upgrades to the controls and software system of the precipitators. Tampa Electric incurred costs associated with the recommendations of the BOP study and the BACT analysis in 2001 and continues to make O&M and capital expenditures.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $24,720 compared to the original projection of $1,733,829. The variance is due to the removal of certain assets related to Big Bend Units 1, 2, and 3 from the ECRC and transferring them to the CETM in accordance with the 2021 Settlement Agreement, approved in Order No PSC-2021-0423-S-EI, issued on November 10, 2021 in Docket No. 20210034-EI.

The actual/estimated O&M costs for the period January 2022 through December 2022 are $216,844 compared to the original projection of $259,560, resulting in a variance of 16.5 percent. This variance is due to a timing change since a maintenance contract was entered later than expected, resulting in less cost being incurred during the period.

Progress Summary: This project was approved by the Commission in Docket No. 20001186-EI, Order No. PSC-2000-2104-PAA-EI, issued November 6, 2000. The project is complete and in service.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $24,354.

The estimated O&M costs for the period January 2023 through December 2023 are $240,000.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: SO_2 Emission Allowances

Project Description:

The acid rain control title of the CAAA sets forth a comprehensive regulatory mechanism designed to control acid rain by limiting sulfur dioxide emissions by electric utilities. The CAAA requires reductions in SO_2 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 some 40 jurisdictional utility systems that are expected to reduce annual SO_2 emissions by as much as 4.5 million tons. Phase II began 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 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 SO_2) equal to the number of tons of SO_2 emissions authorized by the CAAA. EPA does not assess a charge for the allowances it awards.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated return on average net working capital for the period January 2022 through December 2022 is ($2,712) and did not vary from the original projection.

The actual/estimated O&M costs for the period January 2022 through December 2022 are ($69) compared to the original projection of $41. The variance is not material.

Progress Summary: SO_2 emission allowances are being used by Tampa Electric to meet compliance standards for Phase I of the CAAA.

Project Projections: The estimated return on average net working capital for the period January 2023 through December 2023 is ($2,796).

The estimated O&M costs for the period January 2023 through December 2023 are ($10).

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: National Pollutant Discharge Elimination System ("NPDES") Annual Surveillance Fees

Project Description:

Chapter 62-4.052, Florida Administrative Code ("F.A.C."), implements the annual regulatory program and surveillance fees for wastewater permits. These fees are in addition to the application fees described in Rule 62-4.050, F.A.C. Tampa Electric's Big Bend, Polk, and Bayside Stations are affected by this rule.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated O&M expense for the period January 2022 through December 2022 is $34,500 and did not vary from the original projection.

Progress Summary: NPDES Surveillance fees are paid annually for the prior year.

Projections: The estimated O&M costs for the period January 2023 through December 2023 are $34,500.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Gannon Thermal Discharge Study

Project Description:

This project was a direct requirement from the FDEP in conjunction with the renewal of Tampa Electric's Industrial Wastewater Facility Permit under the provisions of Chapter 403, Florida Statutes, and applicable rules of the Florida Administrative Code, which constitute authorization for the company's Gannon Station facility to discharge to waters of the State under the NPDES. The FDEP permit is Permit No. FL0000809. Specifically, Tampa Electric was required to perform a 316(a) determination for Gannon Station to ensure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife within the primary area of study. The project had two facets: 1) developing a plan of study and identified the thermal plume, and 2) implemented the plan of study through appropriate sampling to make the determination if any adverse impacts are occurring.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated O&M expense for the period January 2022 through December 2022 is $0 and did not vary from the original projection.

Progress Summary: This project was approved by the Commission in Docket No. 20010593-EI, Order No. PSC-2001-1847-PAA-EI on September 4, 2001. The project is complete and in service.

Projections: There are not any O&M costs projected for the period January 2023 through December 2023.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Polk NO_x Emissions Reduction

Project Description:

This project was designed to meet a lower NO_x emissions limit established by the FDEP for Polk Unit 1 by July 1, 2005. The lower limit of 15 parts per million by volume dry basis at 15 percent O_2 is specified in FDEP Permit No. PSD-FL-194F issued February 5, 2002. The project consisted of two phases: 1) the humidification of syngas through the installation of a syngas saturator; and 2) the modification of controls and the installation of additional guide vanes to the diluent nitrogen compressor.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $110,041 compared to the original projection of $109,983.

The actual/estimated O&M expense for the period January 2022 through December 2022 is $0 and did not vary from the original projection.

Progress Summary: This project was approved by the Commission in Docket No. 20020726-EI, Order No. PSC-2002-1445-PAA-EI on October 21, 2002. The project is complete and in service.

Project Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $106,294.

There are not any O&M costs projected for the period of January 2023 through December 2023.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Bayside SCR Consumables

Project Description:

This project is necessary to achieve the NO_x emissions limit of 3.5 parts per million established by the FDEP Consent Final Judgment and the EPA Consent Decree for the natural gas-fired Bayside Power Station. To achieve this NO_x limit, the installation of selective catalytic reduction (SCR) systems is required. An SCR system requires consumable goods – primarily anhydrous ammonia – to be injected into the catalyst bed in order to achieve the required NO_x emissions limit. Principally, the project was designed to capture the cost of consumable goods necessary to operate the SCR systems.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated O&M costs for the period January 2022 through December 2022 are $298,559 compared to the original projection of $151,000. The variance is 97.7 percent and is due to Bayside Station generation being greater than originally projected, leading to the need for more consumables.

Progress Summary: This project was approved by the Commission in Docket No. 20021255-EI, Order No. PSC-2003-0469-PAA-EI, issued April 4, 2003. Annual O&M expenses will continue to be incurred.

Projections: The estimated O&M costs for the period January 2023 through December 2023 are projected to be $294,600.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend Unit 4 Separated Overfire Air ("SOFA")

Project Description:

This project is necessary to assist in achieving the NO_x emissions limit established by the FDEP Consent Final Judgment and the EPA Consent Decree for Big Bend Unit 4. A SOFA system stages secondary combustion air to prevent NO_x formation that would otherwise require removal by post-combustion technology. In-furnace combustion control through a SOFA system is the most cost-effective means to reduce NO_x emissions prior to the application of these technologies. Costs associated with the SOFA system entailed capital expenditures for equipment installation and subsequent annual maintenance.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $187,485 compared to the original projection of $187,341.

The actual/estimated O&M expense for the period January 2022 through December 2022 is $0 and did not vary from the original projection.

Progress Summary: This project was approved by the Commission in Docket No. 20030226-EI, Order No. PSC-2003-0684-PAA-EI, issued June 6, 2003. The project is complete and in service.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $183,901.

The estimated O&M costs for the period January 2023 through December 2023 are $50,000.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Clean Water Act Section 316(b) Phase II Study

Project Description:

This project was a direct requirement from the EPA to reduce impingement and entrainment of aquatic organisms related to the withdrawal of waters for cooling purposes through cooling water intake structures. The Phase II Rule requires that power plants meet certain criteria to comply with national performance standards for impingement and entrainment. Accordingly, Tampa Electric must develop its compliance strategies for its Bayside and Big Bend Stations and then submit these strategies for approval through a Comprehensive Demonstration Study to the FDEP.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated O&M costs for the period January 2022 through December 2022 are $0 compared to the original projection of $10,150. This variance is due to the delay in receiving the NPDES permit. Once the permit is received, and a determination is made regarding the requirement for entrainment reductions, the costs will be incurred.

Progress Summary: This project was approved by the Commission in Docket No. 20041300-EI, Order No. PSC-2005-0164-PAA-EI, issued February 10, 2005.

Projections: The estimated O&M costs for the period January 2023 through December 2023 are $10,150.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend Unit 3 SCR

Project Description:

In order to meet the requirements of the FDEP Consent Final Judgment and the EPA Consent Decree, Tampa Electric was required to make additional reductions of NO_x emissions at Big Bend Station on a per unit basis at prescribed times. The installation of cost-effective SCR technology on the generating units was necessary to meet NO_x emissions requirements.

Project Accomplishments:

Fiscal Expenditures: The Big Bend Unit 3 SCR asset was moved to the company's Clean Energy Transition Mechanism ("CETM"), effective January 1, 2022, in accordance with Tampa Electric's 2021 base rate settlement agreement approved in Order No. PSC-2021-0423-S-EI and issued on November 10, 2021, in Docket No. 2021-0034-EI ("2021 Agreement"). Therefore, there was no depreciation or return for the asset in 2022, nor will there be for any future period.

Until the asset is retired, in 2023, O&M costs will be incurred to ensure compliance with existing emission reduction requirements. The actual/estimated O&M costs for the period January 2022 through December 2022 are $346,520 compared to the original projection of $372,522, resulting in a variance of 7.0 percent. Less maintenance is required for Big Bend Unit 3 as it is running on natural gas and operating less than originally projected.

Progress Summary: This project was approved by the Commission in Docket No. 20041376-EI, Order No. PSC-2005-0502-CO-EI, issued May 9, 2005. The project is complete and in service.

Projections: The estimated O&M costs for the period January 2023 through December 2023 are $355,095.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend Unit 4 SCR

Project Description:

In order to meet the requirements of the FDEP Consent Final Judgment and the EPA Consent Decree, Tampa Electric was required to make additional reductions of NO_x emissions at Big Bend Station on a per unit basis at prescribed times. The installation of cost-effective SCR technology on the generating units was necessary to meet NO_x emissions requirements.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $4,927,272 compared to the original projection of $4,955,963.

The actual/estimated O&M costs for the period January 2022 through December 2022 are $1,308,179 compared to the original projection of $1,397,376 resulting in a variance of 6.4 percent. Less maintenance is required for Big Bend Unit 4 as it is running on natural gas and operating less than originally projected.

Progress Summary: This project was approved by the Commission in Docket No. 20040750-EI, Order No. PSC-2004-0986-PAA-EI, issued October 11, 2004. The project is complete and in service.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $4,838,020.

The estimated O&M costs for the period January 2023 through December 2023 are $1,408,774.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Arsenic Groundwater Standard Program

Project Description:

The Arsenic Groundwater Standard Program that is required by the Environmental Protection Agency and the Department of Environmental Protection became effective January 1, 2005. It requires regulated entities of the State of Florida to monitor the drinking water and groundwater Maximum Contaminant Level ("MCL") for arsenic under the federal rule known as the Safe Drinking Water Act.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated O&M costs for the period January 2022 through December 2022 are $0 compared to the original projection of $37,080.This variance is due to the costs associated with actions required for Florida Department of Environmental Protection ("FDEP") approval of the company's plan being less than expected.

Progress Summary: This project was approved by the Commission in Docket No. 20050683-EI, Order No. PSC-2006-0138-PAA-EI, issued February 23, 2006. The project is complete and in service.

Projections: There are not any O&M costs projected for the period of January 2023 through December 2023.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend Flue Gas Desulfurization ("FGD") System Reliability

Project Description:

The Big Bend FGD Reliability project is necessary to maintain the FGD system operations that are required by the Consent Decree. Tampa Electric is required to operate the FGD systems at Big Bend Station whenever coal is combusted in the units with few exceptions. The compliance dates for the strictest operational characteristics were January 1, 2011 for Big Bend Unit 3 and January 1, 2014 for Big Bend Units 1 and 2.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $2,110,057 compared to the original projection of $2,108,118.

Progress Summary: This project was approved by the Commission in Docket No. 20050598-EI, Order No. PSC-2006-0602-PAA-EI, issued July 10, 2006. The project is complete and in service.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $2,091,213.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Mercury Air Toxics Standards ("MATS")

Project Description:

In March 2005, the Environmental Protection Agency ("EPA") promulgated the Clean Air Mercury Rule ("CAMR") and was later challenged in court. On February 8, 2008, the Circuit Court of Appeals for the District of Columbia vacated CAMR and ordered a new rule by March 2011. On December 11, 2011, the EPA issued a final version of the rule that applies to all coal and oil-fired electric generating units with a capacity of 25 MW or more and with a compliance deadline is April 16, 2015. The rule sets forth hazardous air pollutant standards ("HAP") for mercury, non-mercury metal HAPs and acid gasses.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $643,263 compared to the original projection of $799,392. The variance is due to the removal of certain assets related to Big Bend Units 1, 2, and 3 from the ECRC and transferring them to the CETM in accordance with the 2021 Settlement Agreement, approved in Order No PSC-2021-0423-S-EI, issued on November 10, 2021 in Docket No. 20210034-EI.

The actual/estimated O&M costs for the period January 2022 through December 2022 are $0 compared to the original projection of $2,000, resulting in a variance of 100 percent. The sorbent trap replenishment associated with mercury stack testing on Big Bend Unit 4 has not yet occurred. Once stack testing is complete, the costs will be incurred.

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Progress Summary: This project was approved by the Commission in Docket No. 20120302-EI, Order No. PSC-2013-0191-PAA-EI, issued May 6, 2013. The project is in service.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is projected to be $646,969.

The estimated O&M costs for the period January 2023 through December 2023 are projected to be $1,000.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Greenhouse Gas Reduction Program

Project Description:

On September 22, 2009, the EPA enacted a new rule for reporting Greenhouse Gas ("GHG") emissions from large sources and suppliers effective January 1, 2010 in preparation for the first annual GHG report, due March 31, 2011. The new rule is intended to collect accurate and timely emissions data to inform future policy decisions as set forth in the final rule for GHG emission reporting pursuant to the Florida Climate Protection Act, Chapter 403.44 of the Florida Statutes and the docket EPA-HQ-OAR2008-0508-054. The nationwide GHG emissions reduction rule will impact Tampa Electric's generation fleet, components of its transmission and distribution system as well as company service vehicles. According to the rule, the company began collecting greenhouse gas emissions data effective January 1, 2010 to establish a baseline inventory to report to the EPA.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated O&M expense for the period January 2022 through December 2022 is $0 and did not vary from the original projection.

Progress Summary: This project was approved by the Commission in Docket No. 20090508-EI, Order No. PSC-2010-0157-PAA-EI, issued March 22, 2010. The project is complete and in service.

Projections: The estimated O&M costs for the period January 2023 through December 2023 are projected to be $19,140.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend Gypsum Storage Facility

Project Description:

The Big Bend New Gypsum Storage Facility is necessary to maintain the FGD system operations that are required by the Consent Decree. Tampa Electric is required to operate the FGD systems in order to comply with the CAAA. Gypsum is a by-product of the FGD operations and Tampa Electric had been managing its gypsum inventory through marketing efforts to sell gypsum an existing storage facility. However, the existing storage facility was no longer sufficient to hold the entire gypsum inventory, and Tampa Electric needed an additional storage facility. The new storage facility covers approximately 27 acres and holds approximately 870,000 tons of gypsum.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $2,012,584 compared to the original projection of $2,010,667.

The actual/estimated O&M costs for the period January 2022 through December 2022 are $1,134,314 compared to the original projection of $1,213,236, resulting in a variance of 6.5 percent. The variance is due to a reduction in coal generation, compared to the original projection, so the amount of gypsum storage processing is reduced.

Progress Summary: This project was approved by the Commission in Docket No. 20110262-EI, Order No. PSC-2012-0493-PAA-EI, issued September 26, 2012. The project was placed in service in November 2014.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $1,999,080.

The estimated O&M costs for the period January 2023 through December 2023 are $282,927.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend Coal Combustion Residuals (“CCR”) Rule - Phase I & II

Project Description:

On April 17, 2015, the EPA published the CCR Rule with an effective date of October 19, 2015. The new rule requires the safe disposal of CCR in landfills and surface impoundments. Compliance activities include placing fugitive emissions dust control plans, increasing inspections, installing new groundwater monitoring wells, and closure of certain impoundments at CCR regulated management units.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 for Phase I and Phase II are $448,511 and $232,812 compared to the original projections of $604,420 and $221,899, respectively. The variance for Phase I is due to a lower cost capital alternative, to avoid groundwater seepage issues, being identified and applied. The variance for Phase II is due to capital activities related to finalizing the project that have come in slightly higher than originally anticipated.

The actual/estimated O&M costs for the period January 2022 through December 2022 for Phase I is $797,143 compared to the original projection of $930,000 resulting in a variance of 14.3%. The variances due to timing differences in project schedules when compared to original projections. For Phase II, The actual/estimated O&M expense for the period January 2022 through December 2022 is $0 and did not vary from the original projection.

Progress Summary: Phase I was approved by the Commission in Docket No. 20150223-EI, Order No. PSC-2016-0068-PAA-EI, issued February 9, 2016. Phase II was approved by the Commission in Docket No. 20170168-EI, Order No. 2017-0483-PAA-EI, issued December 22, 2017.

Projections: Estimated depreciation plus return for the period January 2023 through December 2023 for Phase I and Phase II is $521,826 and $148,136, respectively.

The projected O&M costs for the period January 2023 through December 2023 for Phase I and Phase II are $0 and $200,004, respectively.

<u>Tampa Electric Company</u>
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend ELG Compliance

Project Description:

On November 3, 2015, the EPA published the ELG Rule with an effective date of January 4, 2016. The ELG Rule establish limits for wastewater discharges from flue gas desulfurization (“FGD”) processes, fly ash and bottom ash transport water, leachate from ponds and landfills containing coal combustion residuals (“CCR”), gasification processes, and flue gas mercury controls. The final rule requires compliance as soon as possible after November 1, 2020, and no later than December 31, 2023. Tampa Electric hired an engineering consulting firm to perform the Big Bend ELG Compliance Study, completed in 2018, that concluded with a determination of the most appropriate ELG compliance measures identified.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 for Big Bend ELG Compliance is $983,735 compared to the original projection of $2,279,885. This variance is due to timing differences in the project schedule when compared to the original projection. While drilling the first injection well, the underground rock formation was more dense than anticipated and caused the drilling effort to move more slowly than expected. The project expenditures are still needed and will be incurred in the future.

The actual/estimated O&M costs for the period January 2022 through December 2022 for Big Bend ELG Compliance are $4,238 compared to $4,944 in the original projection. This variance is due to timing differences in the project schedule when compared to the original projection. The costs will be incurred in the future.

Progress Summary: The Study program was approved by the Commission in Docket No. 20160027-EI, Order No. PSC-2016-0248-PAA-EI, issued June 28, 2016, and it is now complete. The Compliance Project was approved by the Commission in Docket No. 2018007-EI, Order No. PSC-2018-0594-FOF-EI, issued December 20, 2018.

Projections: The \ estimated depreciation plus return for the period January 2023 through December 2023 is $2,854,112.

The estimated O&M costs projected for the period of January 2023 through December 2023 are $300,000.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Big Bend Unit 1 Section 316(b) Impingement Mortality

Project Description:

In August 2014, the Environmental Protection Agency ("EPA") published their final rule regarding Section 316(b) of the Clean Water Act. The rule became effective in October 2014. The rule establishes requirements for cooling water intake structures ("CWIS") at existing facilities. Section 316(b) requires that the location, design, construction, and capacity of CWIS reflect the best technology available ("BTA") for minimizing adverse environmental impacts. For this project, compliance activities include modifying the existing Big Bend Unit 1 CWIS to reduce impingement mortality of affected living organisms.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $942,175, compared to the original projection of $1,129,762. Substantially all of the work is complete, and the project is expected to go into service shortly. The cost to finalize installation were less than expected.

The actual/estimated O&M expense for the period January 2022 through December 2022 is $0 and did not vary from the original projection.

Progress Summary: This project was approved by the Commission in Docket No. 2018007-EI, Order No. PSC-2018-0594-FOF-EI, issued December 20, 2018.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $1,515,686.

The estimated O&M costs projected for the period of January 2023 through December 2023 are $300,000.

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Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Bayside 316(b) Compliance

Project Description:

In August 2014, the Environmental Protection Agency ("EPA") published their final rule regarding Section 316(b) of the Clean Water Act. The rule became effective in October 2014. The rule establishes requirements for cooling water intake structures ("CWIS") at existing facilities. Section 316(b) requires that the location, design, construction, and capacity of CWIS reflect the best technology available ("BTA") for minimizing adverse environmental impacts. For this project, compliance activities include modifying the existing Bayside Power Station CWIS to reduce impingement mortality of affected living organisms.

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $290,920, compared to the original projection of $173,822. This variance is due to engineering and material sourcing activities are ahead of schedule.

The actual/estimated O&M expense for the period January 2022 through December 2022 is $0 and did not vary from the original projection.

Progress Summary: This project was approved by the Commission in Docket No. 20210087-EI, Order No. PSC-2021-0356-PAA-EI, issued September 15, 2021.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $854,515.

There are not any O&M costs projected for the period of January 2023 through December 2023.

Tampa Electric Company
Environmental Cost Recovery Clause
January 2023 through December 2023
Description and Progress Report for
Environmental Compliance Activities and Projects

Project Title: Bayside NESHAP Subpart YYYY Compliance

Project Description:

On March 9, 2022, the EPA published a Final Rule that requires lean premix and diffusion flame gas-fired turbines located at major sources of HAP emissions that were constructed or reconstructed after January 14, 2003, to comply with the formaldehyde standard beginning March 9, 2022. The Final Rule will also apply to the startup of any future affected units. The Final Rule outlines national emission and operating limitations, and lays out the requirements to demonstrate initial and continuous compliance with those set limitations. The emission concentration of formaldehyde for a stationary combustion turbine is limited to a set threshold, except during turbine startup. If the emissions are above the threshold level, an oxidation catalyst is utilized to bring emissions to an acceptable level. If an oxidation catalyst is not required, operating limitations must be maintained as approved by the Florida Department of Environmental Protection (FDEP).

Project Accomplishments:

Fiscal Expenditures: The actual/estimated depreciation plus return for the period January 2022 through December 2022 is $18,673 compared to the original projection of $0. This variance is due to the expenditures not being anticipated at the time of the original projection.

The actual/estimated O&M expense for the period January 2022 through December 2022 is $0 and did not vary from the original projection.

Progress Summary: This project was approved by the Commission in Docket No. 20220055-EI, Order No. PSC-2022-0286-PAA-EI, issued July 22, 2022.

Projections: The estimated depreciation plus return for the period January 2023 through December 2023 is $325,738.

There are not any O&M costs projected for the period of January 2023 through December 2023.

Form 42 - 6P

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Energy & Demand Allocation % By Rate Class
January 2023 to December 2023

Rate Class	(1) Average 12 CP Load Factor at Meter (%)	(2) Projected Sales at Meter (MWh)	(3) Effective Sales at Secondary Level (MWh)	(4) Projected Avg 12 CP at Meter (MW)	(5) Demand Loss Expansion Factor	(6) Energy Loss Expansion Factor	(7) Projected Sales at Generation (MWh)	(8) Projected Avg 12 CP at Generation (MW)	(9) Percentage of MWh Sales at Generation (%)	(10) Percentage of 12 CP Demand at Generation (%)	(11) 12 CP & 1/13 Allocation Factor (%)
RS	53.95%	9,986,591	9,986,591	2,113	1.07443	1.05243	10,510,207	2,271	50.16%	59.19%	58.49%
GS, CS	57.87%	912,160	912,160	180	1.07443	1.05241	959,970	193	4.58%	5.03%	5.00%
GSD, SBD	74.89%	7,011,711	7,008,603	1,069	1.07347	1.05132	7,371,567	1,148	35.18%	29.92%	30.32%
GSLDPR, SBLDPR	104.98%	1,256,480	1,256,480	137	1.04490	1.02631	1,289,536	143	6.15%	3.73%	3.92%
GSLDSU/SBLDSU	102.86%	700,733	700,733	78	1.02670	1.01426	710,728	80	3.39%	2.08%	2.18%
LS1, LS2	879.82%	107,962	107,962	1	1.07443	1.05243	113,622	2	0.54%	0.05%	0.09%
TOTAL *		19,975,636	19,972,528	3,578			20,955,630	3,837	100%	100%	100%

Notes:
(1) Average 12 CP load factor based on 2023 Projected calendar data
(2) Projected MWh sales for the period January 2023 to December 2023
(3) Effective sales at secondary level for the period January 2023 to December 2023.
(4) Column 2 / (Column 1 x 8760)
(5) Based on 2023 projected demand losses.
(6) Based on 2023 projected energy losses.
(7) Column 2 x Column 6
(8) Column 4 x Column 5
(9) Column 7 / Total Column 7
(10) Column 8 / Total Column 8
(11) Column 9 x1/13 + Column 10 x 12/13

* Totals on this schedule may not foot due to rounding

Form 42 - 7P

Tampa Electric Company
Environmental Cost Recovery Clause (ECRC)
Calculation of the Energy & Demand Allocation % By Rate Class
January 2023 to December 2023

Rate Class	(1) Percentage of MWh Sales at Generation (%)	(2) 12 CP & 1/13 Allocation Factor (%)	(3) Energy-Related Costs ($)	(4) Demand-Related Costs ($)	(5) Total Environmental Costs ($)	(6) Projected Sales at Meter (MWh)	(7) Effective Sales at Secondary Level (MWh)	**(8) Environmental Cost Recovery Factors (¢/kWh)**
RS	50.16%	58.49%	6,141,054	3,026,853	9,167,907	9,986,591	9,986,591	0.092
GS, CS	4.58%	5.00%	560,726	258,750	819,476	912,160	912,160	0.090
GSD, SBD	35.18%	30.32%	4,307,063	1,569,058	5,876,121	7,011,711	7,008,603	
Secondary								0.084
Primary								0.083
Transmission								0.082
GSLDPR	6.15%	3.92%	752,940	202,860	955,800	1,256,480	1,256,480	0.076
GSLDSU	3.39%	2.18%	415,035	112,815	527,850	700,733	700,733	0.075
LS1, LS2	0.54%	0.09%	66,112	4,657	70,769	107,962	107,962	0.066
TOTAL *	100.00%	100.00%	12,242,932	5,174,993	17,417,925	19,975,636	19,972,528	0.087

* Totals on this schedule may not foot due to rounding

Notes:
(1) From Form 42-6P, Column 9
(2) From Form 42-6P, Column 11
(3) Column 1 x Total Energy Jurisdictional Dollars from Form 42-1P, line 5
(4) Column 2 x Total Demand Jurisdictional Dollars from Form 42-1P, line 5
(5) Column 3 + Column 4
(6) From Form 42-6P, Column 2
(7) From Form 42-6P, Column 3
(8) Column 5 / Column 7 x 10

Tampa Electric Company
Cost Recovery Clauses
Calculation of the Projected Period Amount
Projected Period: January through December 2023

Form 42 - 8P

Calculation of Revenue Requirement Rate of Return
(in Dollars)

	(1) Jurisdictional Rate Base 2023 Adj. FESR *with Normalization* ($000)	(2) Ratio %	(3) Cost Rate %	(4) Weighted Cost Rate %
Long Term Debt	$ 3,053,938	35.57%	4.27%	1.5204%
Short Term Debt	221,363	2.58%	2.10%	0.0542%
Preferred Stock	0	0.00%	0.00%	0.0000%
Customer Deposits	90,780	1.06%	2.46%	0.0260%
Common Equity	3,918,574	45.65%	10.20%	4.6559%
Accum. Deferred Inc. Taxes & Zero Cost ITC's	980,790	11.42%	0.00%	0.0000%
Deferred ITC - Weighted Cost	319,255	3.72%	7.44%	0.2765%
Total	$ 8,584,700	100.00%		6.53%

ITC split between Debt and Equity:

Long Term Debt	$ 3,053,938	Long Term Debt	46.00%
Equity - Preferred	0	Equity - Preferred	0.00%
Equity - Common	3,918,574	Equity - Common	54.00%
Total	$ 6,972,513	Total	100.00%

Deferred ITC - Weighted Cost:

Debt = 0.2765% * 46.00%	0.1272%
Equity = 0.2765% * 54.00%	0.1493%
Weighted Cost	0.2765%

Total Equity Cost Rate:

Preferred Stock	0.0000%
Common Equity	4.6559%
Deferred ITC - Weighted Cost	0.1493%
	4.8052%
Times Tax Multiplier	1.34315
Total Equity Component	6.4541%

Total Debt Cost Rate:

Long Term Debt	1.5204%
Short Term Debt	0.0542%
Customer Deposits	0.0260%
Deferred ITC - Weighted Cost	0.1272%
Total Debt Component	1.7278%
	8.1819%

Notes:
Column (1) - Per Order No. PSC-2020-0165-PAA-EU, issued May 20, 2020, approving amended joint motion modifying WACC methodology.
Column (2) - Column (1) / Total Column (1)
Column (3) - Per Order No. PSC-2020-0165-PAA-EU, issued May 20, 2020, approving amended joint motion modifying WACC methodology..
Column (4) - Column (2) x Column (3)

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20220007-EI

ENVIRONMENTAL COST RECOVERY FACTORS

PROJECTIONS

JANUARY 2023 THROUGH DECEMBER 2023

TESTIMONY
OF
BYRON T. BURROWS

FILED: AUGUST 26, 2022

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

BYRON T. BURROWS

Q. Please state your name, address, occupation, and employer.

A. My name is Byron T. Burrows. My business address is 702 North Franklin Street, Tampa, Florida 33602. I am employed by Tampa Electric Company ("Tampa Electric" or "company") as Director, Environmental Services Department.

Q. Please provide a brief outline of your educational background and business experience.

A. I received a Bachelor of Science degree in Civil Engineering from the University of South Florida in 1995. I have been a Registered Professional Engineer in the state of Florida since 1999. Prior to joining Tampa Electric, I worked in environmental consulting for sixteen years. In January 2001, I joined TECO Power Services as Manager-Environmental with primary responsibility for all power plant environmental permitting, and I have primarily worked in the areas of environmental, health and safety. In 2005, I became Manager of Air Programs. My responsibilities included air permitting and compliance related matters. In 2020, I was promoted to my current position, Director of Environmental Services. My responsibilities include the development and administration of the company's environmental policies and goals. I am also responsible for ensuring resources, procedures, and programs comply with applicable environmental requirements, and that rules and polices are in place, function properly, and are consistently applied throughout the company.

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

A. The purpose of my testimony is to demonstrate that the activities for which Tampa Electric seeks cost recovery through the Environmental Cost Recovery Clause ("ECRC") for the January 2023 through December 2023 projection period are activities related to programs previously approved by the Commission for recovery through the ECRC and also consistent with Tampa Electric's 2021 base rate settlement agreement approved in Order No. PSC-2021-0423-S-EI and issued on November 10, 2021, in Docket No. 2021-0034-EI ("2021 Agreement").

Q. Please provide an overview of the environmental compliance requirements of the Clean Air Act, Title V Operating Permit for the Big Bend Station that are recoverable through the ECRC.

A. The Big Bend plant is required to obtain and operate in accordance with a comprehensive air permit that incorporates all applicable air quality requirements including federal, state, and local regulations. This permit is known as a "Title V Operating Permit." Environmental Compliance Requirements of the Clean Air Act, Title V Operating permit (0570039-132-AV) for the Big Bend Station provide for reductions of sulfur dioxide ("SO_2"), particulate matter ("PM") and nitrogen oxides ("NO_x") emissions at the Station. The projects that are required under the current operating permit and are currently being recovered through the ECRC are listed below.

- Big Bend Particulate Matter ("PM") Minimization Program
- Big Bend Unit 3 SCR Project (O&M only)
- Big Bend Unit 4 SCR Project

In accordance with the 2021 Agreement, Tampa Electric removed certain assets related to Big Bend Units 1, 2, and 3 from the ECRC and transferred to the company's Clean

Energy Transition Mechanism ("CETM"), effective January 1, 2022. The Title V projects associated with those assets include the following: Big Bend Units 1-3 Pre-SCRs, Big Bend 1-3 SCRs, Big Bend NO_x Emission Reduction, and a portion of Big Bend PM Minimization Program. O&M expenditures for Big Bend SCR Unit 3 will continue to be incurred to ensure compliance with emission reduction standards until the unit's retirement in 2023.

Q. Please describe the Big Bend PM Minimization and Monitoring program activities and provide the estimated capital and O&M expenditures for the period of January 2023 through December 2023.

A. The Big Bend PM Minimization and Monitoring Program was approved by the Commission in Docket No. 20001186-EI, Order No. PSC-2000-2104-PAA-EI, issued November 6, 2000. In the order, the Commission found that the program met the requirements for recovery through the ECRC. Tampa Electric had previously identified various projects to improve precipitator performance and reduce PM emissions as required by the Orders. Tampa Electric does not anticipate any capital expenditures for this program during 2023; however, the O&M expenditures associated with Best Operating Practice ("BOP") and Best Available

Control Technology ("BACT") equipment and BOP procedures are expected to be $240,000.

Q. Please describe the Big Bend Unit 3 SCR project and provide estimated O&M expenditures for the period of January 2023 through December 2023.

A. The Big Bend Unit 3 SCR project was approved by the Commission in Docket No. 20041376-EI, Order No. PSC-2005-0502-PAA-EI, issued May 9, 2005. The SCR for Big Bend Unit 3 was placed in service in July 2008.

For the period of January 2023 through December 2023, the O&M expenditures are projected to be $355,095 for Big Bend Unit 3 SCR. These expenses are primarily associated with ammonia purchases and maintenance.

Q. Please describe the Big Bend Unit 4 SCR project and provide estimated capital and O&M expenditures for the period of January 2023 through December 2023.

A. The Big Bend Unit 4 SCR project was approved by the Commission in Docket No. 20040750-EI, Order No. PSC-2004-0986-PAA-EI, issued October 11, 2004. The SCR project at Big Bend Unit 4 encompasses the design, procurement, installation, and annual O&M expenditures associated with an SCR system for the generating unit. The SCR for Big Bend Unit 4 was placed in service in May 2007.

For the period of January 2023 through December 2023, capital expenditures are expected to be $4,000,000 and the O&M expenditures are projected to be $1,408,774 for Big Bend Unit 4 SCR. These expenses are primarily associated with ammonia purchases and maintenance.

Q. Are there other retiring Big Bend projects that will no longer be recovered through the ECRC; but through the CETM (consistent with the 2021 Settlement Agreement), and have they been removed from consideration in this filing?

A. Yes. In accordance with the 2021 Settlement, the retiring Big Bend Units 1-3 assets have been removed and recovery of expenditures related thereto have not been included in this ECRC filing, nor will they be included in any future ECRC filing. Other retiring Big Bend 1-3 assets include the following projects: Big Bend Units 1 and 2 Flue Gas Conditioning, Big Bend Units 1 and 2 Classifier Replacements, and certain assets of both Big Bend FGD Optimization and Utilization and Mercury Air Toxics Standards.

Q. Please identify and describe the other Commission-approved programs that you will discuss.

A. The programs previously approved by the Commission and included for expenditure recovery in this filing, that I will discuss, include the following projects:

1) Big Bend Unit 3 Flue Gas Desulfurization ("FGD") Integration
2) Big Bend Units 1 and 2 FGD
3) Gannon Thermal Discharge Study
4) Bayside SCR Consumables
5) Clean Water Act Section 316(b) Phase II Study
6) Big Bend FGD System Reliability
7) Arsenic Groundwater Standard
8) Mercury and Air Toxics Standards ("MATS")
9) Greenhouse Gas ("GHG") Reduction Program
10) Big Bend Gypsum Storage Facility
11) Coal Combustion Residuals ("CCR") Rule
12) Big Bend Unit 1 Section 316(b) Impingement Mortality
13) Big Bend Effluent Limitations Guidelines ("ELG") Rule Compliance
14) Bayside Section 316(b) Compliance
15) Big Bend NESHAP Subpart YYYY Compliance

Q. Please describe the Big Bend Unit 3 FGD Integration and the Big Bend Units 1 and 2 FGD activities and provide the estimated capital and O&M expenditures for the period of January 2023 through December 2023.

A. The Big Bend Unit 3 FGD Integration program was approved by the Commission in Docket No. 19960688-EI, Order No. PSC-1996-1048-FOF-EI, issued August 14, 1996. The Big Bend Units 1 and 2 FGD program was approved by the Commission in Docket No. 19980693-EI, Order No. PSC-1999-0075-FOF-EI, issued January 11, 1999. In these orders, the Commission found that the programs met the requirements for recovery through the ECRC. The programs were implemented to meet the SO_2 emission requirements of the Phase I and II Clean Air Act Amendments ("CAAA") of 1990.

The company does not anticipate any capital or O&M expenditures during the period of January 2023 through December 2023 for the Big Bend Unit 3 FGD Integration project or the Big Bend Units 1 & 2 FGD project remaining assets.

Q. Please describe the Gannon Thermal Discharge Study program activities and provide the estimated O&M

expenditures for the period of January 2023 through December 2023.

A. The Gannon Thermal Discharge Study program was approved by the Commission in Docket No. 20010593-EI, Order No. PSC-2001-1847-PAA-EI, issued September 14, 2001. In that order, the Commission found that the program met the requirements for recovery through the ECRC. For the period of January 2023 through December 2023, there are not any projected O&M expenditures for this program. In the intent to issue the permit renewal, dated August 9, 2013, FDEP indicated that the proposed NPDES permit authorizes a thermal variance under Section 316(a) of the Clean Water Act for the permit period. Bayside Power Station applied for renewal of the National Pollutant Discharge Elimination System (“NPDES”) Permit in February 2018, and the permit is still pending. If a thermal study is required, Tampa Electric will incur O&M expenditures and will include them in the true-up filing.

Q. Please describe the Bayside SCR Consumables program activities and provide the estimated O&M expenditures for the period of January 2023 through December 2023.

A. The Bayside SCR Consumables program was approved by the

Commission in Docket No. 20021255-EI, Order No. PSC-2003-0469-PAA-EI, issued April 4, 2003. For the period of January 2023 through December 2023, Tampa Electric projects O&M expenditures associated with the consumable goods, primarily anhydrous ammonia, to be approximately $294,600.

Q. Please describe the Clean Water Act Section 316(b) Phase II Study Program activities and provide the estimated O&M expenditures for the period of January 2023 through December 2023.

A. The Clean Water Act Section 316(b) ("Section 316(b)") Phase II Study program was approved by the Commission in Docket No. 20041300-EI, Order No. PSC-2005-0164-PAA-EI, issued February 10, 2005. The final rule adopted under Section 316(b), the Cooling Water Intake Structures ("CWIS") Rule, became effective October 14, 2014. The rule establishes requirements for CWIS at existing facilities. Section 316(b) requires that the location, design, construction, and capacity of CWIS reflect the best technology available ("BTA") for minimizing adverse environmental impacts. Tampa Electric has initiated the installation of measures that are necessary for compliance with the impingement mortality reduction part of the rule for Big Bend Unit 1 and Bayside

Units 1 & 2. Tampa Electric is working with the regulatory authority to determine if any entrainment reduction measures are required for Bayside Units 1 & 2. For Big Bend Units 1 & 4, Tampa Electric will complete the biological, financial, and technical study elements necessary to comply with the rule and submit with the next NPDES permit renewal. These elements will ultimately be used by the regulating authority to determine the necessity of cooling water system retrofits for Big Bend Unit 1 for entrainment reduction and Big Bend Unit 4 for impingement and entrainment reduction. Big Bend Unit 3 is anticipated to be retired prior to the determination of the final compliance measures.

The estimated Clean Water Act Section 316(b) Phase II Study related O&M expenditures for Big Bend Station and Bayside Power Station for the period January 2023 through December 2023 are $10,150.

For Big Bend Unit 1, which is in the final stages of being repowered to a clean, natural gas-fired combined cycle unit, Tampa Electric is in the process of installing the impingement mortality controls as required by the FDEP operating permit. The Commission approved cost recovery for the Big Bend Unit 1 Section 316(b) Impingement Mortality project in Order No. PSC-2018-0594-FOF-EI, issued on December 20, 2018.

Bayside Power Station will install traveling screens to reduce impingement mortality to comply with Section 316(b). Tampa Electric’s petition filed with the Commission in Docket No. 20210087-EI, was approved by Commission Order No. PSC-2021-0356-PAA-EI, issued on September 15, 2021.

The estimated O&M expenditures for NPDES Annual Surveillance Fees for Big Bend, Bayside, and Polk generating plants for the period January 2023 through December 2023 are $34,500.

Q. Please describe the Big Bend Unit 1 Section 316(b) Impingement Mortality project activities and provide the estimated capital and O&M expenditures for the period of January 2023 through December 2023.

A. The Big Bend Unit 1 Section 316(b) Impingement Mortality project was approved by the Commission in Docket No. 20180007-EI, Order No. PSC-2018-0594-FOF-EI, issued December 20, 2018. In that order, the Commission found that the program met the requirements for recovery through the ECRC and granted Tampa Electric cost recovery for prudently incurred costs. For the period of January 2023 through December 2023, Tampa Electric does not anticipate any capital expenditures for the Big Bend Unit 1 Section 316(b) Impingement Mortality Project and the O&M expenditures are estimated to be $300,000.

Q. Please describe the Bayside Section 316(b) Compliance project activities and provide the estimated capital and O&M expenditures for the period of January 2023 through December 2023.

A. The Bayside Section 316(b) Compliance project was approved by the Commission in Docket No. 20210087-EI, Order No. PSC-2018-0356-PAA-EI, issued September 15, 2021. In that order, the Commission found that the program met the requirements for recovery through the ECRC and granted Tampa Electric cost recovery for prudently incurred costs. For the period of January 2023 through December 2023, Tampa Electric does not anticipate any O&M expenditures for the Bayside Section 316(b)project. Tampa Electric anticipates the capital expenditures for the Bayside Section 316(b) Compliance Project to be $8,837,600. This increase is due to rising prices caused by inflation, additional costs due to delays associated with supply chain issues, and additional structural costs for the intake structure not anticipated in the original estimate.

Q. Please describe the Big Bend FGD System Reliability program activities and provide the estimated capital expenditures for the period of January 2023 through December 2023.

A. Tampa Electric's Big Bend FGD System Reliability program was approved by the Commission in Docket No. 20050958-EI, Order No. PSC-2006-0602-PAA-EI, issued July 10, 2006. The Commission granted approval for prudent costs associated with this project. For the period of January 2023 through December 2023, there are no anticipated capital expenditures for this project.

Q. Please describe the Arsenic Groundwater Standard program activities and provide the estimated O&M expenditures for the period of January 2023 through December 2023.

A. The Arsenic Groundwater Standard program was approved by the Commission in Docket No. 20050683-EI, Order No. PSC-2006-0138-PAA-EI, issued February 23, 2006. In that order, the Commission found that the program met the requirements for recovery through the ECRC and granted Tampa Electric cost recovery for prudently incurred costs. This groundwater standard applies to Tampa Electric's Bayside, Big Bend, and Polk Power Stations. A detailed plan of study was submitted to the FDEP, and after reviewing the study, FDEP requested a site wide groundwater evaluation. Tampa Electric submitted the results of this evaluation in 2020 and a proposal for modification of the site groundwater monitoring network to evaluate ongoing compliance. The proposal is under review by FDEP. Once FDEP completes its review, additional O&M expenditures may be incurred if additional monitoring and assessment are required. For the period of January 2023 through December 2023, there are no anticipated O&M expenditures associated with the program.

Q. Please describe the MATS program activities.

A. The MATS program was approved by the Commission in Docket No. 20120302-EI, Order No. PSC-2013-0191-PAA-EI, issued May 6, 2013. In that order, the Commission found that the program met the requirements for recovery through the ECRC and granted Tampa Electric approval for cost recovery of prudently incurred costs. Additionally, the Commission granted the subsumption of the previously approved CAMR program into the MATS program.

On February 8, 2008, the Washington D.C. Circuit Court vacated EPA's rule removing power plants from the Clean Air Act list of regulated sources of hazardous air pollutants under Section 112. At the same time, the court vacated the Clean Air Mercury Rule. On May 3, 2011, the EPA published a new proposed rule for mercury and other hazardous air pollutants according to the National Emissions Standards for Hazardous Air Pollutants section of the Clean Air Act. On February 16, 2012, the EPA published the final rule for MATS. The rule revised the mercury limits and provided more flexible monitoring and record keeping requirements. Additionally, monitoring of acid gases and particulate matter is required. Compliance with the rule began on April 16, 2015. Tampa Electric is currently meeting or exceeding the standards required by the MATS rule for mercury, particulate matter, and acid gases at Polk Power Station and Big Bend Power Station.

Q. Please provide MATS program estimated capital and O&M expenditures for the period of January 2023 through December 2023.

A. For the period January 2023 through December 2023, Tampa Electric anticipates $100,000 in capital expenditures under the MATS program. O&M expenditures are projected to be approximately $1,000 for testing requirements and equipment maintenance.

Q. Please describe the GHG Reduction program activities and provide the estimated O&M expenditures for the period of January 2023 through December 2023.

A. Tampa Electric's GHG Reduction program, which was approved by the Commission in Docket No. 20090508-EI, Order No. PSC-2010-0157-PAA-EI, issued March 22, 2010, is a result of the EPA's GHG Mandatory Reporting Rule requiring annual reporting of greenhouse gas emissions. Tampa Electric was required to report greenhouse gas emissions for the first time in 2011. Reporting for the EPA's GHG Mandatory Reporting Rule will continue in 2023. For the period January 2023 through December 2023, O&M expenditures are projected to be approximately $19,140.

Q. Please describe the Big Bend Gypsum Storage Facility activities and provide the estimated capital and O&M expenditures for the period of January 2023 through December 2023.

A. The Big Bend Gypsum Storage Facility program was approved by the Commission in Docket No. 20110262-EI, Order No.

PSC-2012-0493-PAA-EI, issued September 26, 2012. In that order, the Commission found that the program meets the requirements for recovery through the ECRC. For 2023, Tampa Electric does not anticipate capital expenditures; however, the projected O&M expenditures for this program are expected to be $282,927.

Q. Please describe the company’s EPA CCR Rule compliance activities and provide the estimated capital and O&M expenditures for the period of January 2023 through December 2023.

A. On April 17, 2015, the EPA issued a final rule to regulate CCR as non-hazardous waste under Subtitle D of the Resource Conservation and Recovery Act (“RCRA”). The rule, which became effective on October 19, 2015, covers all operational CCR disposal facilities, as well as inactive impoundments which contain CCR and liquids. The Big Bend Unit 4 Economizer Ash Ponds, the East Coalfield Stormwater Pond (converted former slag fines pond), and the North Gypsum Stackout Area are regulated under the rule.

The initial phase of the company’s CCR compliance was approved by the Commission in Docket No. 20150223-EI, Order No. PSC-2016-0068-PAA-EI, issued February 9, 2016. In that order, the Commission found that the CCR Rule – Phase I program met the requirements for recovery through the ECRC. Incremental ongoing O&M expenditures resulting from the groundwater monitoring program, berm inspections, and general maintenance of regulated units were approved under the Order. In order to determine the best option to remain in compliance with the new rule, the company evaluated whether to continue operation of the regulated CCR units or close them. Tampa Electric chose a combination of closure and retrofit projects to remain in compliance with the CCR Rule, as discussed later in this section.

Two CCR retrofit projects were also approved for Tampa Electric's CCR Rule – Phase I program under Order No. PSC-2016-0068-PAA-EI. These included: 1) removal of remaining residual slag from the East Coalfield Stormwater Runoff Pond and lining the pond to continue operating it as part of the station's stormwater system; and 2) installing secondary stormwater containment facilities and lining drainage ditches for the North Gypsum Stackout Area to make it fully compliant with the rule's requirements.

Phase II of Tampa Electric’s CCR Rule program was approved by the Commission in Docket No. 20170168-EI, Order No. 2017-0483-PAA-EI, issued December 22, 2017. In that Order, the Commission found that the Phase II program met the requirements for recovery through the ECRC. Expenses for the Economizer Ash Pond System Closure project, which includes removal and offsite disposal of all CCR and restoration of the area, were approved by the Commission’s Order.

The Economizer Ash Pond System Closure began in the fourth quarter of 2018 with initial dewatering and removal of CCR for disposal. Due to the large amount of CCR in the Economizer Ash Ponds that needed to be dewatered and shipped to the landfill, this project continued until completion in late 2021. The East Coalfield Stormwater Runoff Pond (slag pond) closure and retrofit project was originally scheduled to be completed in 2019 but was delayed due to unusually high rainfall amounts throughout that year. As a result, this project was initiated in 2020 and completed in early 2021, in accordance with state regulatory requirements. The North Gypsum Stackout Area Drainage Improvements Project was also delayed to allow for finalization of the engineering and construction scope details, but the final phase of the project is currently underway, with completion expected in 2022.

Tampa Electric does not expect to incur capital expenditures for CCR Rule Phase I or Phase II projects for the period January 2023 through December 2023. For the period January 2023 through December 2023, the company expects to incur O&M expenditures of $200,004 for the CCR Rule – Phase II project.

Q. Please describe Tampa Electric's ELG Rule activities, both study and compliance related and provide the estimated capital and O&M expenditures for the period of January 2023 through December 2023.

A. On November 3, 2015, the EPA published the final Steam Electric Power Generating ELG Rule, with an effective date of January 4, 2016. The ELG establish limits for wastewater discharges from FGD processes, fly ash, and bottom ash transport water, leachate from ponds and landfills containing CCR, gasification processes, and flue gas mercury controls. Big Bend Station's FGD system is affected by this rule. The blow-down stream from the FGD system is currently sent to a physical chemical treatment system to remove solids, some metals, and ammonia and adjust pH prior to discharge to Tampa Bay via the once through condenser cooling system water. This treatment system will need to be modified or replaced to achieve compliance with the new EPA regulations. The regulating authority requires compliance no later than December 31, 2023.

The Big Bend ELG Study Program (“ELG Study”) was approved by the Commission in Docket No. 20160027-EI, Order No. PSC-2016-0248-PAA-EI, issued June 28, 2016.

The ELG Study, which was completed in 2018, identified viable technologies to treat the Tampa Electric Big Bend Station combined effluent streams to bring the streams into compliance with the more stringent requirements under the ELG Rule and resulted in the selection of the deep well injection solution.

The Big Bend ELG Compliance project was approved by the Commission in Docket No. 20180007-EI, Order No. PSC-2018-0594-FOF-EI, issued December 20, 2018. In that order, the Commission found that the program met the requirements for recovery through the ECRC and granted Tampa Electric cost recovery for prudently incurred costs.

For the period January 2023 through December 2023, Tampa

Electric projects capital expenditures to be $3,373,288 and projects $300,000 in O&M expenditures.

Q. Please describe Tampa Electric's National Emission Standards Hazardous Air Pollutants ("NESHAP") Subpart YYYY Compliance Project activities and provide the estimated capital and O&M expenditures for the period of January 2023 through December 2023.

A. Tampa Electric's Clean Air Act, NESHAP Subpart YYYY Compliance Project was approved by the Commission in Order No. PSC-2022-0286-PAA-EI issued on July 22, 2022, in Docket No. 20220055-EI. The project is required to comply with the Environmental Protection Agency's ("EPA") formaldehyde emission standard set for stationary, gas-fired combustion turbines. For the period January 2023 through December 2023, Tampa Electric does not anticipate any capital expenditures and projects O&M expenditures to be $75,000.

Q. Please summarize your testimony.

A. I described ongoing environmental compliance requirements of the Clean Air Act, Title V Operating permit (0570039-132-AV) for the Big Bend Station. I described the progress

Tampa Electric has made to achieve the more stringent environmental standards. I have removed retiring Big Bend 1-3 Assets, the balances of which have been transferred to the company's CETM, from the company's cost recovery request, in accordance with the company's 2021 Settlement Agreement. For the other projects, I identified estimated costs, by project, which the company expects to incur in 2023. Additionally, my testimony identified additional projects that are required for Tampa Electric to meet environmental requirements, and I provided the associated 2023 activities and projected expenditures.

Q. Does this conclude your direct testimony?

A. Yes, it does.