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March 1, 2019

**VIA: ELECTRONIC FILING**

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

Re: Fuel and Purchased Power Cost Recovery Clause with Generating Performance  
Incentive Factor; FPSC Docket No. 20190001-EI


Dear Mr. Teitzman:

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

1. Tampa Electric Company's Petition for Approval of Fuel Cost Recovery and Capacity Cost Recovery Net True-Ups for the Twelve Month Period Ending December 2018.
2. Tampa Electric Company's Prepared Direct Testimony and Exhibit (PAR-1) of Penelope A. Rusk regarding Fuel and Purchased Power Cost Recovery and Capacity Cost Recovery Final True-Up for the period January 2018 through December 2018.
3. Tampa Electric Company's Prepared Direct Testimony and Exhibit (JCH-1) of John C. Heisey regarding the 2018 results of Tampa Electric's activities under the company's Commission approved Asset Optimization Mechanism.

Thank you for your assistance in connection with this matter.

Sincerely,

  
James D. Beasley

Mr. Adam J. Teitzman  
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JDB/pp  
Attachments

cc: All Parties of Record (w/attachments)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Fuel and Purchased Power )  
Cost Recovery Clause and Generating )  
Performance Incentive Factor. )  
\_\_\_\_\_ )

DOCKET NO. 20190001-EI  
FILED: March 1, 2019

**TAMPA ELECTRIC COMPANY'S PETITION FOR APPROVAL OF FUEL AND CAPACITY COST RECOVERY NET TRUE-UPS AND OPTIMIZATION MECHANISM RESULTS FOR THE TWELVE-MONTH PERIOD ENDING DECEMBER 2018**

Tampa Electric Company ("Tampa Electric" or "the company") hereby petitions this Commission for approval of the company's net fuel and purchased power cost recovery true-up amount of \$43,986,397 under-recovery, net capacity cost recovery true-up amount of \$0, and Tampa Electric's Optimization Mechanism incentive in the amount of \$1,120,353, for the twelve-month period ending December 2018. In support of this Petition, Tampa Electric states as follows:

1. The \$43,986,397 net fuel and purchased power true-up under-recovery for the period January 2018 through December 2018 was calculated in accordance with the methodology set forth in Schedule 1, page 2 of 2, attached to Order No. 10093, dated June 19, 1981. This calculation and the supporting documentation are contained in the prepared testimony and exhibit of Tampa Electric witness Penelope A. Rusk, which are being filed together with this Petition and are incorporated herein by reference.

2. By Order No. PSC-2018-0610-FOF-EI, the Commission approved fuel factors for the period commencing January 2019. These factors reflected an actual/estimated true-up over-recovery, including interest, for the period January 2018 through December 2018 of \$7,015,485 which was also approved in Order No. PSC-2018-0610-FOF-EI. The actual under-recovery, including interest, for the period January 2018 through December 2018 is \$36,970,912. The

\$36,970,912 actual under-recovery, less the estimated over-recovery of \$7,015,485 which is currently reflected in charges for the period beginning January 2019, results in a net fuel true-up under-recovery of \$43,986,397 that is to be included in the calculation of the fuel factors for the period beginning January 2020.

3. The \$0 net capacity true-up amount for the period January 2018 through December 2018 was calculated in accordance with the methodology set forth in Order No. 25773, dated February 24, 1992. This calculation and the supporting documentation are contained in the prepared direct testimony and exhibit of Tampa Electric witness Penelope A. Rusk.

4. On January 15, 2019, Tampa Electric submitted a petition for mid-course adjustment of its capacity factors in Docket No. 20190001-EI. If the Commission approves the company's request, the net capacity true-up amount for the period January 2018 through December 2018 will be \$0. The actual under-recovery, including interest, for the period January 2018 through December 2018 is \$5,458,886. The \$5,458,886 actual under-recovery, less the actual under-recovery of \$5,458,886 which was included in the request for mid-course adjustment and if approved, will be reflected in charges for the period beginning April 2019, results in a net capacity true-up of \$0 that is to be included in the calculation of the capacity factors for the period beginning January 2020.

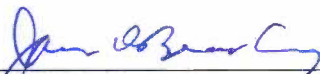
5. By Order No. PSC-2017-0456-S-EI, issued November 27, 2017, in Docket No. 20160160-EI, the Commission approved the company's Optimization Mechanism for a four year term beginning January 1, 2018 with the following sharing thresholds: (a) up to \$4.5 million per year, 100% of the gain is allocated to customers; (b) greater than \$4.5 million per year and less than \$8 million per year, 60% is allocated to shareholders and 40% is allocated to customers; and (c) greater than \$8.0 million per year, 50% allocated to shareholders and 50% allocated to

customers. The calculation and supporting documentation for the Optimization Mechanism results are contained in the prepared testimony and exhibit of Tampa Electric witness John C. Heisey, which are being filed together with this Petition and are incorporated herein by reference. Tampa Electric's share of the incremental gains is \$1,120,353, which is to be included in the calculation of the Fuel Cost Recovery Factors for the period beginning January 2020.

WHEREFORE, Tampa Electric Company respectfully requests the Commission to approve the company's net fuel true-up amount of \$43,986,397 under-recovery and Optimization Mechanism incentive sharing amount of \$1,120,353 and authorize the inclusion of these amounts in the calculation of the fuel factors for the period beginning January 2020; and to approve Tampa Electric's net capacity true-up amount of \$0 and authorize the inclusion of this amount in the calculation of the capacity factors for the period beginning January 2020.

DATED this 1<sup>st</sup> day of March 2019.

Respectfully submitted,

  
\_\_\_\_\_  
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## 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 1st day of March 2019 to the following:

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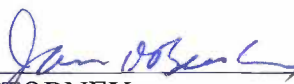
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\_\_\_\_\_  
ATTORNEY



**BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION**

**DOCKET NO. 20190001-EI  
FUEL & PURCHASED POWER COST RECOVERY  
AND  
CAPACITY COST RECOVERY**

**2018 FINAL TRUE-UP  
TESTIMONY AND EXHIBITS**

**PENELOPE A. RUSK**

**FILED: MARCH 1, 2019**



1                                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2                                   **PREPARED DIRECT TESTIMONY**

3                                   **OF**

4                                   **PENELOPE A. RUSK**

5  
6   **Q.**   Please state your name, address, occupation and employer.

7  
8   **A.**   My name is Penelope A. Rusk. My business address is 702  
9           North Franklin Street, Tampa, Florida 33602. I am employed  
10          by Tampa Electric Company ("Tampa Electric" or "company")  
11          in the position of Manager, Rates in the Regulatory  
12          Affairs Department.

13  
14   **Q.**   Please provide a brief outline of your educational  
15          background and business experience.

16  
17   **A.**   I hold a Bachelor of Arts degree in Economics from the  
18          University of New Orleans and a Master of Arts degree in  
19          Economics from the University of South Florida. I joined  
20          Tampa Electric in 1997, as an Economist in the Load  
21          Forecasting Department. In 2000, I joined the Regulatory  
22          Affairs Department, and during my tenure there I assumed  
23          positions of increasing responsibility. I have over 20  
24          years of electric utility experience, including load  
25          forecasting, managing cost recovery clauses, project

1 management, and rate setting activities for wholesale and  
2 retail rate cases. My current position is Manager, Rates,  
3 and my responsibilities include managing cost recovery  
4 for fuel and purchased power, interchange sales, capacity  
5 payments, and approved environmental projects.

6  
7 **Q.** What is the purpose of your testimony?

8  
9 **A.** The purpose of my testimony is to present, for the  
10 Commission's review and approval, the final true-up  
11 amounts for the period January 2018 through December 2018  
12 for the Fuel and Purchased Power Cost Recovery Clause  
13 ("Fuel Clause") and the Capacity Cost Recovery Clause  
14 ("Capacity Clause"), as well as the Optimization  
15 Mechanism gain sharing allocation for the period.

16  
17 **Q.** What is the source of the data which you will present by  
18 way of testimony or exhibit in this process?

19  
20 **A.** Unless otherwise indicated, the actual data is taken from  
21 the books and records of Tampa Electric. The books and  
22 records are kept in the regular course of business in  
23 accordance with generally accepted accounting principles  
24 and practices and provisions of the Uniform System of  
25 Accounts as prescribed by the Florida Public Service

1 Commission ("Commission").

2

3 **Q.** Have you prepared an exhibit in this proceeding?

4

5 **A.** Yes. Exhibit No. PAR-1, consisting of five documents which  
6 are described later in my testimony, was prepared under  
7 my direction and supervision.

8

9 **Capacity Cost Recovery Clause**

10 **Q.** What is the final true-up amount for the Capacity Clause  
11 for the period January 2018 through December 2018?

12

13 **A.** The final true-up amount for the Capacity Clause for the  
14 period January 2018 through December 2018 is an under-  
15 recovery of \$0, if the Commission approves the company's  
16 petition for mid-course correction for capacity factors  
17 submitted in Docket No. 20190001-EI on January 15, 2019.  
18 Tampa Electric proposed to include the actual 2018 end of  
19 period under-recovery amount of \$5,458,886 in its 2019  
20 mid-course factors.

21

22 **Q.** Please describe Document No. 1 of your exhibit.

23

24 **A.** Document No. 1, page 1 of 4, entitled "Tampa Electric  
25 Company Capacity Cost Recovery Clause Calculation of

1 Final True-up Variances for the Period January 2018  
2 Through December 2018," provides the calculation for the  
3 final under-recovery of \$0. The actual capacity cost  
4 under-recovery, including interest, was \$5,458,886 for  
5 the period January 2018 through December 2018 as  
6 identified in Document No. 1, pages 1 and 2 of 4. This  
7 amount, less the \$5,458,886 under-recovery included in  
8 the company's January 15, 2019 petition for mid-course  
9 correction submitted in Docket No. 20190001-EI, results  
10 in a final under-recovery of \$0 for the period, as  
11 identified in Document No. 1, page 4 of 4.

12  
13 **Fuel and Purchased Power Cost Recovery Clause**

14 **Q.** What is the final true-up amount for the Fuel Clause for  
15 the period January 2018 through December 2018?

16  
17 **A.** The final Fuel Clause true-up for the period January 2018  
18 through December 2018 is an under-recovery of  
19 \$43,986,397. The actual fuel cost under-recovery,  
20 including interest, was \$36,970,912 for the period  
21 January 2018 through December 2018. This \$36,970,912  
22 amount, less the \$7,015,485 projected over-recovery  
23 amount approved in Order No. PSC-2018-0610-FOF-EI, issued  
24 December 26, 2018 in Docket No. 20180001-EI, results in  
25 a net under-recovery amount for the period of \$43,986,397.

1 **Q.** What is the estimated effect of the \$43,986,397 under-  
2 recovery for the January 2018 through December 2018 period  
3 on residential bills during the January 2020 through  
4 December 2020 period?

5  
6 **A.** The \$43,986,397 under-recovery will increase a 1,000 kWh  
7 residential bill by approximately \$2.26.

8  
9 **Q.** Please describe Document No. 2 of your exhibit.

10  
11 **A.** Document No. 2 is entitled "Tampa Electric Company Final  
12 Fuel and Purchased Power Over/(Under) Recovery for the  
13 Period January 2018 Through December 2018." It shows the  
14 calculation of the final fuel under-recovery of  
15 \$43,986,397.

16  
17 Line 1 shows the total company fuel costs of \$673,683,598  
18 for the period January 2018 through December 2018. The  
19 jurisdictional amount of total fuel costs is  
20 \$673,683,598, as shown on line 2. This amount is compared  
21 to the jurisdictional fuel revenues applicable to the  
22 period on line 3 to obtain the actual under-recovered fuel  
23 costs for the period, shown on line 4. The resulting  
24 \$43,839,292 under-recovered fuel costs for the period,  
25 adjustments, interest, true-up collected, and the prior

1 period true-up shown on lines 5 through 8 respectively,  
2 constitute the actual under-recovery amount of  
3 \$36,970,912 shown on line 9. The \$36,970,912 actual under-  
4 recovery amount less the \$7,015,485 projected over-  
5 recovery amount shown on line 10, results in a final  
6 under-recovery amount of \$43,986,397 for the period  
7 January 2018 through December 2018, as shown on line 11.

8  
9 **Q.** Please describe the adjustments in the amount of  
10 (\$144,678), as shown on line 5.

11  
12 **A.** There are three adjustments included. The first  
13 adjustment, in the amount of (\$190,412) is the January  
14 2018 true-up adjustment to the December 2017 adjustment  
15 for Big Bend Unit 2 outage replacement power cost. The  
16 initial amount was estimated, and Tampa Electric  
17 completed the detailed hourly analysis needed to  
18 calculate the final amount and booked the true-up, in  
19 January 2018. The second adjustment is for interest on  
20 this adjustment, in the amount of \$2,670, and was booked  
21 in February 2018. The third adjustment occurred in May  
22 2018 in the amount of \$43,064. It reflects the impact of  
23 tax reform on the company's capital projects recovered  
24 through the fuel clause for the period January 2018  
25 through April 2018.

1 Q. Please describe Document No. 3 of your exhibit.

2

3 A. Document No. 3 is entitled "Tampa Electric Company  
4 Calculation of True-up Amount Actual vs. Original  
5 Estimates for the Period January 2018 Through December  
6 2018." It shows the calculation of the actual under-  
7 recovery compared to the estimate for the same period.

8

9 Q. What was the total fuel and net power transaction cost  
10 variance for the period January 2018 through December  
11 2018?

12

13 A. As shown on line A7 of Document No. 3, the fuel and net  
14 power transaction cost is \$45,880,669 greater than the  
15 amount originally estimated.

16

17 Q. What was the variance in jurisdictional fuel revenues for  
18 the period January 2018 through December 2018?

19

20 A. As shown on line C3 of Document No. 3, the company  
21 collected \$2,596,083, or 0.4 percent greater  
22 jurisdictional fuel revenues than originally estimated.

23

24 Q. Please describe Document No. 4 of your exhibit.

25

1     **A.**    Document No. 4 contains Commission Schedules A1 and A2  
2            for the month of December and the year-end period-to-date  
3            summary of transactions for each of Commission Schedules  
4            A6, A7, A8, A9, as well as capacity information on  
5            Schedule A12.

6  
7     **Q.**    Please describe Document No. 5 of your exhibit.

8  
9     **A.**    Document No. 5 provides the capital costs and fuel savings  
10           for the Polk Unit 1 and the Big Bend Units 1-4 ignition  
11           conversion projects for the period January 2018 through  
12           December 2018. This document also contains the capital  
13           structure components and cost rates relied upon to  
14           calculate the revenue requirements rate of return on  
15           capital projects recovered through the fuel clause.

16  
17           The Polk Unit 1 ignition conversion project capital costs,  
18           including depreciation and return, for the period January  
19           2018 through December 2018 are less than the project's  
20           fuel savings and provide a net benefit to customers. This  
21           is shown on Document No. 5, page 1, line 33. Therefore,  
22           the Polk Unit 1 ignition conversion project capital costs  
23           should be recovered through the fuel clause in accordance  
24           with FPSC Order No. PSC-2012-0498-PAA-EI, issued in  
25           Docket No. 20120153-EI on September 27, 2012.



1 The Big Bend Units 1-4 ignition conversion project capital  
2 costs, including depreciation and return, for the period  
3 are less than the fuel savings resulting from the project,  
4 and provide a net benefit to customers, as shown on  
5 Document No. 5, page 2, line 33. Therefore, the Big Bend  
6 Units 1-4 ignition conversion project capital costs  
7 should be recovered through the fuel clause in accordance  
8 with FPSC Order No. PSC-2014-0309-PAA-EI, issued in  
9 Docket No. 20140032-EI on June 12, 2014.

10  
11 **Optimization Mechanism**

12 **Q.** Was Tampa Electric's sharing of Optimization Mechanism  
13 gains allocated in accordance with FPSC Order No. PSC-  
14 2017-0456-S-EI, issued in Docket No. 20160160-EI, on  
15 November 27, 2017?

16  
17 **A.** Yes. As shown in the testimony and exhibit of Tampa  
18 Electric witness John C. Heisey filed contemporaneously  
19 in this docket, the sharing of Optimization Mechanism  
20 gains was allocated in accordance with FPSC Order No. PSC-  
21 2017-0456-S-EI. Total gains were \$6,367,256. Under the  
22 sharing mechanism, Tampa Electric customers receive  
23 \$5,246,902, and the company earned an incentive of  
24 \$1,120,353 as a result of the company's Optimization  
25 Mechanism activities during 2018. Customers received the

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gains from these transactions during 2018, and Tampa Electric requests Commission approval to collect the company's \$1,120,353 incentive in its 2020 fuel factors.

**Q.** Does this conclude your testimony?

**A.** Yes.

TAMPA ELECTRIC COMPANY

FUEL AND PURCHASED POWER COST RECOVERY

AND

CAPACITY COST RECOVERY

FUEL AND PURCHASED POWER COST RECOVERY  
AND  
CAPACITY COST RECOVERY  
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EXHIBIT TO THE TESTIMONY OF  
PENELOPE A. RUSK

DOCUMENT NO. 1

FINAL CAPACITY OVER/(UNDER)RECOVERY FOR  
JANUARY 2018 - DECEMBER 2018

TAMPA ELECTRIC COMPANY  
CAPACITY COST RECOVERY CLAUSE  
CALCULATION OF FINAL TRUE-UP VARIANCES  
FOR THE PERIOD JANUARY 2018 THROUGH DECEMBER 2018

1. Actual End-of-Period True-up: Over/(Under) Recovery	(\$5,458,886)
2. Actual Under Recovery per Mid-Course filed 1/15/19 (Exhibit D, Page 5, Line 13)	<u>(5,458,886)</u>
3. Final True-up: Over/(Under) Recovery to Be Carried Forward to the January 2020 Through December 2020 Period	<u><u>\$0</u></u>

TAMPA ELECTRIC COMPANY  
CAPACITY COST RECOVERY CLAUSE  
CALCULATION OF FINAL TRUE-UP AMOUNT  
FOR THE PERIOD JANUARY 2018 THROUGH DECEMBER 2018

	Actual Jan-18	Actual Feb-18	Actual Mar-18	Actual Apr-18	Actual May-18	Actual Jun-18	Actual Jul-18	Actual Aug-18	Actual Sep-18	Actual Oct-18	Actual Nov-18	Actual Dec-18	Total
1 UNIT POWER CAPACITY CHARGES	0	0	0	0	0	0	0	0	0	0	0	0	0
2 CAPACITY PAYMENTS TO COGENERATORS	0	0	0	0	0	0	0	0	0	0	0	0	0
3 SCHEDULE J,D, & EMERG CAPACITY CHARGES	1,033,633	927,808	842,124	905,476	1,224,568	1,276,897	1,274,398	1,358,180	1,338,480	1,301,772	897,269	847,079	13,227,684
4 INCREMENTAL SECURITY O&M COSTS	0	0	0	0	0	0	0	0	0	0	0	0	0
5 (CAPACITY REVENUES)	(449,731)	(54,848)	(174,015)	(265,506)	(150,282)	(134,875)	(90,928)	(106,910)	(89,496)	(96,920)	(41,393)	(101,012)	(1,755,916)
6 TOTAL CAPACITY DOLLARS	583,902	872,960	668,109	639,970	1,074,286	1,142,022	1,183,470	1,251,270	1,248,984	1,204,852	855,876	746,067	11,471,768
7 JURISDICTIONAL PERCENTAGE	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	
8 JURISDICTIONAL CAPACITY DOLLARS	583,902	872,960	668,109	639,970	1,074,286	1,142,022	1,183,470	1,251,270	1,248,984	1,204,852	855,876	746,067	11,471,768
9 CAPACITY COST RECOVERY REVENUES (Net of Revenue Taxes)	869,605	795,335	768,043	763,069	812,583	940,249	1,044,781	1,027,112	1,108,445	1,021,640	886,813	786,156	10,823,831
10 PRIOR PERIOD TRUE-UP PROVISION	(230,245)	(230,245)	(230,245)	(230,245)	(230,245)	(230,245)	(230,245)	(230,245)	(230,245)	(230,245)	(230,245)	(230,243)	(2,762,938)
11 CAPACITY COST RECOVERY REVENUES APPLICABLE TO CURRENT PERIOD (Net of Revenue Taxes)	639,360	565,090	537,798	532,824	582,338	710,004	814,536	796,867	878,200	791,395	656,568	555,913	8,060,893
12 TRUE-UP PROVISION FOR PERIOD OVER/(UNDER) RECOVERY (Line 11 - Line 8)	55,458	(307,870)	(130,311)	(107,146)	(491,948)	(432,018)	(368,934)	(454,403)	(370,784)	(413,457)	(199,308)	(190,154)	(3,410,875)
13 INTEREST PROVISION FOR PERIOD	(5,807)	(5,727)	(6,479)	(6,763)	(6,881)	(7,485)	(8,012)	(8,325)	(9,163)	(10,111)	(10,437)	(10,772)	(95,962)
14 OTHER ADJUSTMENT	0	0	0	0	0	0	0	0	0	0	0	0	0
15 TRUE-UP AND INT. PROVISION BEGINNING OF PERIOD - OVER/(UNDER) RECOVERY	(4,714,987)	(4,435,091)	(4,518,443)	(4,424,988)	(4,308,652)	(4,577,236)	(4,786,494)	(4,933,195)	(5,165,678)	(5,315,380)	(5,508,703)	(5,488,203)	(4,714,987)
16 PRIOR PERIOD TRUE-UP PROVISION COLLECTED/(REFUNDED) THIS PERIOD	230,245	230,245	230,245	230,245	230,245	230,245	230,245	230,245	230,245	230,245	230,245	230,243	2,762,938
17 END OF PERIOD TRUE-UP - OVER/(UNDER) RECOVERY ( SUM OF LINES 12 - 16)	(4,435,091)	(4,518,443)	(4,424,988)	(4,308,652)	(4,577,236)	(4,786,494)	(4,933,195)	(5,165,678)	(5,315,380)	(5,508,703)	(5,488,203)	(5,458,886)	<b>(5,458,886)</b>

15

TAMPA ELECTRIC COMPANY  
CAPACITY COST RECOVERY CLAUSE  
CALCULATION OF FINAL TRUE-UP AMOUNT  
FOR THE PERIOD JANUARY 2018 THROUGH DECEMBER 2018

	Actual Jan-18	Actual Feb-18	Actual Mar-18	Actual Apr-18	Actual May-18	Actual Jun-18	Actual Jul-18	Actual Aug-18	Actual Sep-18	Actual Oct-18	Actual Nov-18	Actual Dec-18	Total
1 BEGINNING TRUE-UP AMOUNT	(4,714,987)	(4,435,091)	(4,518,443)	(4,424,988)	(4,308,652)	(4,577,236)	(4,786,494)	(4,933,195)	(5,165,678)	(5,315,380)	(5,508,703)	(5,488,203)	(4,714,987)
2 ENDING TRUE-UP AMOUNT BEFORE INTEREST	(4,429,284)	(4,512,716)	(4,418,509)	(4,301,889)	(4,570,355)	(4,779,009)	(4,925,183)	(5,157,353)	(5,306,217)	(5,498,592)	(5,477,766)	(5,448,114)	(5,362,924)
3 TOTAL BEGINNING & ENDING TRUE-UP AMT. (LINE 1 + LINE 2)	(9,144,271)	(8,947,807)	(8,936,952)	(8,726,877)	(8,879,007)	(9,356,245)	(9,711,677)	(10,090,548)	(10,471,895)	(10,813,972)	(10,986,469)	(10,936,317)	(10,077,911)
4 AVERAGE TRUE-UP AMOUNT ( 50% OF LINE 3 )	(4,572,136)	(4,473,904)	(4,468,476)	(4,363,439)	(4,439,504)	(4,678,123)	(4,855,839)	(5,045,274)	(5,235,948)	(5,406,986)	(5,493,235)	(5,468,159)	(5,038,956)
5 INTEREST RATE % - 1ST DAY OF MONTH	1.580	1.460	1.620	1.860	1.850	1.860	1.980	1.980	1.980	2.210	2.270	2.300	NA
6 INTEREST RATE % - 1ST DAY OF NEXT MONTH	1.460	1.620	1.860	1.850	1.860	1.980	1.980	1.980	2.210	2.270	2.300	2.420	NA
7 TOTAL ( LINE 5 + LINE 6 )	3.040	3.080	3.480	3.710	3.710	3.840	3.960	3.960	4.190	4.480	4.570	4.720	NA
8 AVERAGE INTEREST RATE % ( 50% OF LINE 7 )	1.520	1.540	1.740	1.855	1.855	1.920	1.980	1.980	2.095	2.240	2.285	2.360	NA
9 MONTHLY AVERAGE INTEREST RATE % ( LINE 8/12 )	0.127	0.128	0.145	0.155	0.155	0.160	0.165	0.165	0.175	0.187	0.190	0.197	NA
10 INTEREST PROVISION ( LINE 4 X LINE 9 )	(5,807)	(5,727)	(6,479)	(6,763)	(6,881)	(7,485)	(8,012)	(8,325)	(9,163)	(10,111)	(10,437)	(10,772)	(95,962)



TAMPA ELECTRIC COMPANY  
CAPACITY COST RECOVERY CLAUSE  
CALCULATION OF FINAL TRUE-UP VARIANCES  
FOR THE PERIOD JANUARY 2018 THROUGH DECEMBER 2018

	(1)	(2)	(3)	(4)
	ACTUAL	ACTUAL PER MID-COURSE	VARIANCE (1) - (2)	% CHANGE (3)/(2)
1 UNIT POWER CAPACITY CHARGES	\$0	\$0	\$0	0.00%
2 CAPACITY PAYMENTS TO COGENERATORS	0	0	0	0.00%
3 SCHEDULE J & D CAPACITY CHARGES	13,227,684	13,227,684	0	0.00%
4 INCREMENTAL SECURITY O&M COSTS	0	0	0	0.00%
5 (CAPACITY REVENUES)	(1,755,916)	(1,755,916)	0	0.00%
6 TOTAL CAPACITY DOLLARS	\$11,471,768	\$11,471,768	\$0	0.00%
7 JURISDICTIONAL PERCENTAGE	100.00%	100.00%	0	0.00%
8 JURISDICTIONAL CAPACITY DOLLARS	\$11,471,768	11,471,768	\$0	0.00%
9 CAPACITY COST RECOVERY REVENUES (Net of Revenue Taxes)	10,823,831	10,823,831	0	0.00%
10 PRIOR PERIOD TRUE-UP PROVISION	(2,762,938)	(2,762,938)	0	0.00%
11 CAPACITY COST RECOVERY REVENUES APPLICABLE TO CURRENT PERIOD (Net of Revenue Taxes)	\$8,060,893	\$8,060,893	\$0	0.00%
12 TRUE-UP PROVISION FOR PERIOD OVER/(UNDER) RECOVERY (Line 11 - Line 8)	(\$3,410,875)	(\$3,410,875)	\$0	0.00%
13 INTEREST PROVISION FOR PERIOD	(95,962)	(95,962)	0	0.00%
14 OTHER ADJUSTMENT	0	0	0	0.00%
15 TRUE-UP AND INT. PROVISION BEGINNING OF PERIOD - OVER/(UNDER) RECOVERY	(4,714,987)	(4,714,987)	0	0.00%
16 PRIOR PERIOD TRUE-UP PROVISION COLLECTED/(REFUNDED) THIS PERIOD	2,762,938	2,762,938	0	0.00%
17 END OF PERIOD TRUE-UP - OVER/(UNDER) RECOVERY ( SUM OF LINES 12 - 16)	(\$5,458,886)	(\$5,458,886)	\$0	0.00%

EXHIBIT TO THE TESTIMONY OF  
PENELOPE A. RUSK

DOCUMENT NO. 2

FINAL FUEL AND PURCHASED POWER OVER/(UNDER)RECOVERY  
FOR  
JANUARY 2018 - DECEMBER 2018

TAMPA ELECTRIC COMPANY  
 FINAL FUEL AND PURCHASED POWER OVER/(UNDER) RECOVERY  
 FOR THE PERIOD  
 JANUARY 2018 THROUGH DECEMBER 2018

1 TOTAL FUEL COSTS FOR THE PERIOD	\$673,683,598
2 JURISDICTIONAL FUEL COSTS (INCL. ALL ADJUSTMENTS)	673,683,598
3 JURISDICTIONAL FUEL REVENUES APPLICABLE TO THE PERIOD	<u>629,844,306</u>
4 ACTUAL OVER/(UNDER) RECOVERED FUEL COSTS FOR THE PERIOD (LINE 3 - LINE 2)	(\$43,839,292)
5 ADJUSTMENTS *	(144,678)
6 INTEREST	(186,849)
7 TRUE-UP COLLECTED	(17,081,137)
8 PRIOR PERIOD TRUE-UP (ACTUAL ENDING 12/17)	<u>24,281,044</u>
9 ACTUAL OVER/(UNDER) RECOVERY FOR THE PERIOD (LINE 4 + LINE 5 + LINE 6 + LINE 7 + LINE 8 )	(\$36,970,912)
10 PROJECTED OVER-RECOVERY PER PROJECTION FILED 8/24/18 (SCHEDULE E1-A LINE 3)	<u>7,015,485</u>
<b>11 FINAL FUEL OVER/(UNDER) RECOVERY (LINE 9 - LINE 10)</b>	<b><u>(\$43,986,397)</u></b>

\* Includes January adj of (\$190,412) for Big Bend Unit 2 outage replacement power cost true-up, February adj of \$2,670 for Dec 2017 interest on Big Bend Unit 2 outage replacement power cost, and May adj of \$43,064 related to Jan-Apr 2018 Big Bend and Polk assets for tax reform.

EXHIBIT TO THE TESTIMONY OF  
PENELOPE A. RUSK

DOCUMENT NO. 3

ACTUAL FUEL AND PURCHASED POWER TRUE-UP

VS.

ORIGINAL ESTIMATES

JANUARY 2018 - DECEMBER 2018

TAMPA ELECTRIC COMPANY  
CALCULATION OF TRUE-UP AMOUNT  
ACTUAL vs. ORIGINAL ESTIMATES  
FOR THE PERIOD  
JANUARY 2018 THROUGH DECEMBER 2018

	ACTUAL	ESTIMATED	VARIANCE AMOUNT	%
A 1. FUEL COST OF SYSTEM NET GENERATION	\$631,710,782	\$606,993,585	\$24,717,197	4.1
2. FUEL COST OF POWER SOLD	7,357,519	631,976	6,725,543	1,064.2
2a. GAINS FROM SALES	2,607,475	54,591	2,552,884	4,676.4
3. FUEL COST OF PURCHASED POWER	4,834,769	2,681,380	2,153,389	80.3
3a. DEMAND & NONFUEL COST OF PUR. PWR.	0	0	0	0.0
3b. PAYMENT TO QUALIFIED FACILITIES	4,835,472	2,579,410	2,256,062	87.5
4. ENERGY COST OF ECONOMY PURCHASES	35,800,487	9,706,470	26,094,017	268.8
6a. ADJ. - BIG BEND UNITS 1-4 IGNITERS CONVERSION PROJECT	4,816,753	4,877,765	(61,012)	(1.3)
6b. ADJ. - POLK 1 CONVERSION DEPRECIATION & ROI	1,650,329	1,650,886	(557)	0.0
6c. ADJ. - POLK WARM GAS CLEANUP	0	0	0	0.0
7. ADJUSTED TOTAL FUEL & NET PWR. TRANS. (SUM OF LINES A1 THRU 6c)	\$673,683,598	\$627,802,929	\$45,880,669	7.3
C 1. JURISDICTIONAL FUEL REVENUE	\$612,810,561	\$610,214,478	\$2,596,083	0.4
2. FUEL ADJUSTMENT NOT APPLICABLE	0	0	0	0.0
2a. TRUE-UP PROVISION	17,081,137	17,081,137	0	0.0
2b. INCENTIVE PROVISION	(47,392)	(47,392)	0	0.0
2c. ADJUSTMENT	0	0	0	0.0
3. JURIS. FUEL REVENUE APPL. TO PERIOD (Sum of Lines C1 through C2c)	\$629,844,306	\$627,248,223	\$2,596,083	0.4
6d. JURISD. TOTAL FUEL & NET PWR. TRANS.	673,683,598	627,802,929	45,880,669	7.3
7. TRUE-UP PROV.- THIS PER. (LINE C3-C6d)	(\$43,839,292)	(\$554,706)	(\$43,284,586)	7,803.2
7a. ADJUSTMENTS *	(144,678)	0	(144,678)	0.0
8. INTEREST PROVISION - THIS PERIOD	(186,849)	20,812	(207,661)	(997.8)
TOTAL TRUE-UP AMOUNT FOR PERIOD (LINE 7 through 8)	(\$44,170,819)	(\$533,894)	(\$43,636,925)	8,173.3
9. TRUE-UP & INT. PROV. BEG. OF PERIOD (Beginning January 2018)	24,281,044	17,081,137	7,199,907	42.2
10. TRUE-UP COLLECTED (REFUNDED)	(17,081,137)	(17,081,137)	0	0.0
11. END OF PERIOD TOTAL NET TRUE-UP (LINE C8 through C10)	(\$36,970,912)	(\$533,894)	(\$36,437,018)	6,824.8

\* Includes January adj of (\$190,412) for Big Bend Unit 2 outage replacement power cost true-up, February adj of \$2,670 for Dec 2017 interest on Big Bend Unit 2 outage replacement power cost, and May adj of \$43,064 related to Jan-Apr 2018 Big Bend and Polk assets for tax reform. Line numbers reference Schedule A-2 included in Document No. 4

EXHIBIT TO THE TESTIMONY OF  
PENELOPE A. RUSK

DOCUMENT NO. 4

FUEL AND PURCHASED POWER COST RECOVERY  
YTD DECEMBER 2018

SCHEDULES A1 AND A2

AND

SCHEDULES A6 THROUGH A9

AND

SCHEDULE A12

FUEL AND PURCHASED POWER COST RECOVERY  
SCHEDULES A1 AND A2

DECEMBER 2018

COMPARISON OF ESTIMATED AND ACTUAL  
FUEL AND PURCHASED POWER COST RECOVERY FACTOR  
TAMPA ELECTRIC COMPANY  
MONTH OF: December 2018

	\$		DIFFERENCE		MWH		DIFFERENCE		CENTS/KWH		DIFFERENCE	
	ACTUAL	ESTIMATED	AMOUNT	%	ACTUAL	ESTIMATED	AMOUNT	%	ACTUAL	ESTIMATED	AMOUNT	%
1. Fuel Cost of System Net Generation (A3)	58,547,213	45,007,983	13,539,230	30.1%	1,455,938	1,500,700	(44,762)	-3.0%	4.02127	2.99913	1.02214	34.1%
2. Spent Nuclear Fuel Disposal Cost	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
3. Coal Car Investment	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
4a. Adjustments - Big Bend Units 1-4 Igniters Conversion Project	386,031	392,424	(6,393)	-1.6%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
4b. Adjustments - Polk 1 Conversion Depreciation & ROI	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
4c. Adjustments	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
<b>5. TOTAL COST OF GENERATED POWER (Lines 1 through 4c)</b>	<b>58,933,244</b>	<b>45,400,407</b>	<b>13,532,837</b>	<b>29.8%</b>	<b>1,455,938</b>	<b>1,500,700</b>	<b>(44,762)</b>	<b>-3.0%</b>	<b>4.04779</b>	<b>3.02528</b>	<b>1.02250</b>	<b>33.8%</b>
6. Fuel Cost of Purchased Power - Firm (A7)	154,188	137,590	16,598	12.1%	2,866	3,190	(324)	-10.2%	5.37990	4.31317	1.06674	24.7%
7. Energy Cost of Sch C,X Econ. Purch. (Broker) (A9)	113,100	710,560	(597,460)	-84.1%	2,180	27,380	(25,200)	-92.0%	5.18807	2.59518	2.59289	99.9%
8. Energy Cost of Other Econ. Purch. (Non-Broker) (A9)	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
9. Energy Cost of Sch. E Economy Purchases (A9)	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
10. Capacity Cost of Sch. E Economy Purchases	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
11. Payments to Qualifying Facilities & Net Metering (A8)	791,694	189,800	601,894	317.1%	27,850	7570	20,280	267.9%	2.84271	2.50727	0.33544	13.4%
<b>12. TOTAL COST OF PURCHASED POWER (Lines 6 through 11)</b>	<b>1,058,982</b>	<b>1,037,950</b>	<b>21,032</b>	<b>2.0%</b>	<b>32,896</b>	<b>38,140</b>	<b>(5,244)</b>	<b>-13.7%</b>	<b>3.21918</b>	<b>2.72142</b>	<b>0.49776</b>	<b>18.3%</b>
<b>13. TOTAL AVAILABLE KWH (LINE 5 + LINE 12)</b>					<b>1,488,834</b>	<b>1,538,840</b>	<b>(50,006)</b>	<b>-3.2%</b>				
14. Fuel Cost of Sch. D Jurisd. Sales (A6)	104,178	14,820	89,358	603.0%	3,970	590	3,380	572.9%	2.62413	2.51186	0.11227	4.5%
15. Fuel Cost of Sch. C/CB Sales (A6)	11,616	0	11,616	0.0%	468	0	468	0.0%	2.48205	0.00000	2.48205	0.0%
16. Fuel Cost of OATT Sales (A6)	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
17. Fuel Cost of Market Base Sales (A6)	223,282	29,261	194,021	663.1%	7,734	1170	6,564	561.0%	2.88702	2.50094	0.38608	15.4%
18. Gains on Sales	83,341	3,937	79,404	2016.9%								
<b>19. TOTAL FUEL COST AND GAINS OF POWER SALES</b>	<b>422,417</b>	<b>48,018</b>	<b>374,399</b>	<b>779.7%</b>	<b>12,172</b>	<b>1,760</b>	<b>10,412</b>	<b>591.6%</b>	<b>3.47040</b>	<b>2.72830</b>	<b>0.74210</b>	<b>27.2%</b>
(LINE 14 + 15 + 16 + 17 + 18)												
20. Net Inadvertant Interchange					137	0	137	0.0%				
21. Wheeling Rec'd. less Wheeling Del'v'd.					952	0	952	0.0%				
22. Interchange and Wheeling Losses					1,235	-43,005	1,278	-2971.8%				
<b>23. TOTAL FUEL AND NET POWER TRANSACTIONS</b>	<b>59,569,809</b>	<b>46,390,339</b>	<b>13,179,470</b>	<b>28.4%</b>	<b>1,476,516</b>	<b>1,537,123</b>	<b>(60,607)</b>	<b>-3.9%</b>	<b>4.03448</b>	<b>3.01800</b>	<b>1.01649</b>	<b>33.7%</b>
(LINE 5 + 12 - 19 + 20 + 21 - 22)												
24. Net Unbilled	680,618 (a)	1,779,623 (a)	(1,099,005)	-61.8%	16,870	58,967	(42,097)	-71.4%	4.03449	3.01800	1.01649	33.7%
25. Company Use	117,605 (a)	87,522 (a)	30,083	34.4%	2,915	2,900	15	0.5%	4.03448	3.01800	1.01648	33.7%
26. T & D Losses	1,637,073 (a)	1,202,582 (a)	434,491	36.1%	40,577	39,847	730	1.8%	4.03449	3.01800	1.01649	33.7%
27. System KWH Sales	59,569,809	46,390,339	13,179,470	28.4%	1,416,154	1,435,409	(19,255)	-1.3%	4.20645	3.23186	0.97459	30.2%
28. Wholesale KWH Sales	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
29. Jurisdictional KWH Sales	59,569,809	46,390,339	13,179,470	28.4%	1,416,154	1,435,409	(19,255)	-1.3%	4.20645	3.23186	0.97459	30.2%
30. Jurisdictional Loss Multiplier									1.00000	1.00000	0.00000	0.0%
31. Jurisdictional KWH Sales Adjusted for Line Losses	59,569,809	46,390,339	13,179,470	28.4%	1,416,154	1,435,409	(19,255)	-1.3%	4.20645	3.23186	0.97459	30.2%
32. Adjustment - Jan thru Apr 2018 Adj for Big Bend and Polk Assets Due to Tax Reform Including Interest	0	0	0	0.0%	1,416,154	1,435,409	(19,255)	-1.3%	0.00000	0.00000	0.00000	0.0%
33. True-up *	(1,423,429)	(1,423,429)	0	0.0%	1,416,154	1,435,409	(19,255)	-1.3%	(0.10051)	(0.09917)	(0.00135)	1.4%
34. Total Jurisdictional Fuel Cost (Excl. GPIF)	58,146,380	44,966,910	13,179,470	29.3%	1,416,154	1,435,409	(19,255)	-1.3%	4.10594	3.13269	0.97325	31.1%
35. Revenue Tax Factor									1.00072	1.00072	0.00000	0.0%
36. Fuel Cost Adjusted for Taxes (Excl. GPIF)	58,188,245	44,999,286	13,188,959	29.3%	1,416,154	1,435,409	(19,255)	-1.3%	4.10889	3.13495	0.97394	31.1%
37. GPIF * (Already Adjusted for Taxes)	3,953	3,953	0	0.0%	1,416,154	1,435,409	(19,255)	-1.3%	0.00028	0.00028	0.00000	1.4%
<b>38. Fuel Cost Adjusted for Taxes (Incl. GPIF)</b>	<b>58,192,198</b>	<b>45,003,239</b>	<b>13,188,959</b>	<b>29.3%</b>	<b>1,416,154</b>	<b>1,435,409</b>	<b>(19,255)</b>	<b>-1.3%</b>	<b>4.10917</b>	<b>3.13523</b>	<b>0.97394</b>	<b>31.1%</b>
<b>39. Fuel FAC Rounded to the Nearest .001 cents per KWH</b>									<b>4.109</b>	<b>3.135</b>	<b>0.974</b>	<b>31.1%</b>

\* Based on Jurisdictional Sales (a) included for informational purposes only



COMPARISON OF ESTIMATED AND ACTUAL  
FUEL AND PURCHASED POWER COST RECOVERY FACTOR  
TAMPA ELECTRIC COMPANY  
PERIOD TO DATE THROUGH: December 2018

	\$		DIFFERENCE		MWH		DIFFERENCE		CENTS/KWH		DIFFERENCE	
	ACTUAL	ESTIMATED	AMOUNT	%	ACTUAL	ESTIMATED	AMOUNT	%	ACTUAL	ESTIMATED	AMOUNT	%
1. Fuel Cost of System Net Generation (A3)	631,710,782	606,993,585	24,717,197	4.1%	19,748,460	20,067,160	(318,700)	-1.6%	3.19879	3.02481	0.17397	5.8%
2. Spent Nuclear Fuel Disposal Cost	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
3. Coal Car Investment	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
4a. Adjustments - Big Bend Units 1-4 Igniters Conversion Project	4,816,753	4,877,765	(61,012)	-1.3%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
4b. Adjustments - Polk 1 Conversion Depreciation & ROI	1,650,329	1,650,886	(557)	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
4c. Adjustments	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
<b>5. TOTAL COST OF GENERATED POWER (Lines 1 through 4c)</b>	<b>638,177,864</b>	<b>613,522,236</b>	<b>24,655,628</b>	<b>4.0%</b>	<b>19,748,460</b>	<b>20,067,160</b>	<b>(318,700)</b>	<b>-1.6%</b>	<b>3.23153</b>	<b>3.05734</b>	<b>0.17419</b>	<b>5.7%</b>
6. Fuel Cost of Purchased Power - Firm (A7)	4,834,769	2,681,380	2,153,389	80.3%	96,543	67,450	29,093	43.1%	5.00789	3.97536	1.03253	26.0%
7. Energy Cost of Sch C,X Econ. Purch. (Broker) (A9)	35,800,487	9,706,470	26,094,017	268.8%	931,538	313,280	618,258	197.3%	3.84316	3.09834	0.74482	24.0%
8. Energy Cost of Other Econ. Purch. (Non-Broker) (A9)	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
9. Energy Cost of Sch. E Economy Purchases (A9)	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
10. Capacity Cost of Sch. E Economy Purchases	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
11. Payments to Qualifying Facilities & Net Metering (A8)	4,835,472	2,579,410	2,256,062	87.5%	194,359	90,110	104,249	115.7%	2.48791	2.86251	(0.37461)	-13.1%
<b>12. TOTAL COST OF PURCHASED POWER (Lines 6 through 11)</b>	<b>45,470,728</b>	<b>14,967,260</b>	<b>30,503,468</b>	<b>203.8%</b>	<b>1,222,440</b>	<b>470,840</b>	<b>751,600</b>	<b>159.6%</b>	<b>3.71967</b>	<b>3.17884</b>	<b>0.54083</b>	<b>17.0%</b>
<b>13. TOTAL AVAILABLE KWH (LINE 5 + LINE 12)</b>					<b>20,970,900</b>	<b>20,538,000</b>	<b>432,900</b>	<b>2.1%</b>				
14. Fuel Cost of Sch. D Jurisd. Sales (A6)	655,905	270,150	385,755	142.8%	28,413	10,340	18,073	174.8%	2.30847	2.61267	(0.30420)	-11.6%
15. Fuel Cost of Sch. C/CB Sales (A6)	118,326	0	118,326	0.0%	6,384	0	6,384	0.0%	1.85348	0.00000	1.85348	0.0%
16. Fuel Cost of OATT Sales (A6)	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
17. Fuel Cost of Market Base Sales (A6)	6,583,288	361,826	6,221,462	1719.5%	251,357	11,990	239,367	1996.4%	2.61910	3.01773	(0.39863)	-13.2%
18. Gains on Sales	2,607,475	54,591	2,552,884	4676.4%								
<b>19. TOTAL FUEL COST AND GAINS OF POWER SALES</b>	<b>9,964,994</b>	<b>686,567</b>	<b>9,278,427</b>	<b>1351.4%</b>	<b>286,154</b>	<b>22,330</b>	<b>263,824</b>	<b>1181.5%</b>	<b>3.48239</b>	<b>3.07464</b>	<b>0.40775</b>	<b>13.3%</b>
(LINE 14 + 15 + 16 + 17 + 18)												
20. Net Inadvertant Interchange					(16)	0	(16)	0.0%				
21. Wheeling Rec'd. less Wheeling Del'v'd.					44,331	0	44,331	0.0%				
22. Interchange and Wheeling Losses					50,357	(598)	50,955	-8522.9%				
<b>23. TOTAL FUEL AND NET POWER TRANSACTIONS</b>	<b>673,683,598</b>	<b>627,802,929</b>	<b>45,880,669</b>	<b>7.3%</b>	<b>20,678,704</b>	<b>20,516,268</b>	<b>162,436</b>	<b>0.8%</b>	<b>3.25786</b>	<b>3.06003</b>	<b>0.19784</b>	<b>6.5%</b>
(LINE 5 + 12 - 19 + 20 + 21 - 22)												
24. Net Unbilled	(767,327) (a)	139,715 (a)	(907,042)	-649.2%	(17,446)	13,963	(31,409)	-224.9%	4.39830	1.00061	3.39769	339.6%
25. Company Use	1,270,723 (a)	1,070,539 (a)	200,184	18.7%	38,863	34,800	4,063	11.7%	3.26975	3.07626	0.19349	6.3%
26. T & D Losses	33,158,832 (a)	28,151,540 (a)	5,007,292	17.8%	1,025,823	923,386	102,437	11.1%	3.23241	3.04873	0.18368	6.0%
27. System KWH Sales	673,683,598	627,802,929	45,880,669	7.3%	19,631,464	19,544,119	87,345	0.4%	3.43165	3.21223	0.21942	6.8%
28. Wholesale KWH Sales	0	0	0	0.0%	0	0	0	0.0%	0.00000	0.00000	0.00000	0.0%
29. Jurisdictional KWH Sales	673,683,598	627,802,929	45,880,669	7.3%	19,631,464	19,544,119	87,345	0.4%	3.43165	3.21223	0.21942	6.8%
30. Jurisdictional Loss Multiplier									1.00000	1.00000	0.00000	0.0%
31. Jurisdictional KWH Sales Adjusted for Line Losses	673,683,598	627,802,929	45,880,669	7.3%	19,631,464	19,544,119	87,345	0.4%	3.43165	3.21223	0.21942	6.8%
32. Adjustments - Schedule A2, page 2, lines 6c, 7a and 8b	147,348	0	147,348	0.0%	19,631,464	19,544,119	87,345	0.4%	0.00075	0.00000	0.00075	0.0%
33. True-up *	(17,081,137)	(17,081,137)	0	0.0%	19,631,464	19,544,119	87,345	0.4%	(0.08701)	(0.08740)	0.00039	-0.4%
34. Total Jurisdictional Fuel Cost (Excl. GPIF)	656,749,809	610,721,792	46,028,017	7.5%	19,631,464	19,544,119	87,345	0.4%	3.34539	3.12484	0.22056	7.1%
35. Revenue Tax Factor									1.00072	1.00072	0.00000	0.0%
36. Fuel Cost Adjusted for Taxes (Excl. GPIF)	657,222,668	611,161,511	46,061,157	7.5%	19,631,464	19,544,119	87,345	0.4%	3.34780	3.12709	0.22071	7.1%
37. GPIF * (Already Adjusted for Taxes)	47,392	47,392	0	0.0%	19,631,464	19,544,119	87,345	0.4%	0.00024	0.00024	(0.00000)	-0.4%
<b>38. Fuel Cost Adjusted for Taxes (Incl. GPIF)</b>	<b>657,270,060</b>	<b>611,208,903</b>	<b>46,061,157</b>	<b>7.5%</b>	<b>19,631,464</b>	<b>19,544,119</b>	<b>87,345</b>	<b>0.4%</b>	<b>3.34804</b>	<b>3.12733</b>	<b>0.22071</b>	<b>7.1%</b>
<b>39. Fuel FAC Rounded to the Nearest .001 cents per KWH</b>									<b>3.348</b>	<b>3.127</b>	<b>0.221</b>	<b>7.1%</b>

\* Based on Jurisdictional Sales (a) included for informational purposes only

CALCULATION OF TRUE-UP AND INTEREST PROVISION  
TAMPA ELECTRIC COMPANY  
MONTH OF: December 2018

	CURRENT MONTH				PERIOD TO DATE				
	ACTUAL	ESTIMATED	DIFFERENCE AMOUNT	%	ACTUAL	ESTIMATED	DIFFERENCE AMOUNT	%	
<b>A. FUEL COST &amp; NET POWER TRANSACTION</b>									
1. FUEL COST OF SYSTEM NET GENERATION	58,547,213	45,007,983	13,539,230	30.1%	631,710,782	606,993,585	24,717,197	4.1%	
1a. FUEL REL. R & D AND DEMO. COST	0	0	0	0.0%	0	0	0	0.0%	
2. FUEL COST OF POWER SOLD	339,076	44,081	294,995	669.2%	7,357,519	631,976	6,725,543	1064.2%	
2a. GAINS FROM SALES	83,341	3,937	79,404	2016.9%	2,607,475	54,591	2,552,884	4676.4%	
3. FUEL COST OF PURCHASED POWER	154,188	137,590	16,598	12.1%	4,834,769	2,681,380	2,153,389	80.3%	
3a. DEMAND & NONFUEL COST OF PUR. PWR.	0	0	0	0.0%	0	0	0	0.0%	
3b. PAYMENT TO QUALIFIED FACILITIES	791,694	189,800	601,894	317.1%	4,835,472	2,579,410	2,256,062	87.5%	
4. ENERGY COST OF ECONOMY PURCHASES	113,100	710,560	(597,460)	-84.1%	35,800,487	9,706,470	26,094,017	268.8%	
5. TOTAL FUEL & NET POWER TRANSACTION	59,183,778	45,997,915	13,185,863	28.7%	667,216,516	621,274,278	45,942,238	7.4%	
6a. ADJ. - BIG BEND UNITS 1-4 IGNITERS CONVERSION PROJECT	386,031	392,424	(6,393)	-1.6%	4,816,753	4,877,765	(61,012)	-1.3%	
6b. ADJ. - POLK 1 CONVERSION DEPRECIATION & ROI	0	0	0	0.0%	1,650,329	1,650,886	(557)	0.0%	
6c. ADJUSTMENT	0	0	0	0.0%	0	0	0	0.0%	
7. ADJUSTED TOTAL FUEL & NET PWR. TRANS.	59,569,809	46,390,339	13,179,470	28.4%	673,683,598	627,802,929	45,880,669	7.3%	
<b>B. MWH SALES</b>									
1. JURISDICTIONAL SALES	1,416,154	1,435,409	(19,255)	-1.3%	19,631,464	19,544,119	87,345	0.4%	
2. NONJURISDICTIONAL SALES	0	0	0	0.0%	0	0	0	0.0%	
3. TOTAL SALES	1,416,154	1,435,409	(19,255)	-1.3%	19,631,464	19,544,119	87,345	0.4%	
4. JURISDIC. SALES-% TOTAL MWH SALES	1.0000000	1.0000000	0.0000000	0.0%	1.0000000	1.0000000	0.0000000	0.0%	

CALCULATION OF TRUE-UP AND INTEREST PROVISION  
TAMPA ELECTRIC COMPANY  
MONTH OF: December 2018

	CURRENT MONTH				PERIOD TO DATE			
	ACTUAL	ESTIMATED	DIFFERENCE AMOUNT	%	ACTUAL	ESTIMATED	DIFFERENCE AMOUNT	%
<b>C. TRUE-UP CALCULATION</b>								
1. JURISDICTIONAL FUEL REVENUE	43,501,078	44,134,193	(633,115)	-1.4%	612,810,561	610,214,478	2,596,083	0.4%
2. FUEL ADJUSTMENT NOT APPLICABLE	0	0	0	0.0%	0	0	0	0.0%
2a. TRUE-UP PROVISION	1,423,429	1,423,429	0	0.0%	17,081,137	17,081,137	0	0.0%
2b. GPIF PROVISION	(3,953)	(3,953)	0	0.0%	(47,392)	(47,392)	0	0.0%
2c. ADJUSTMENT	0	0	0	0.0%	0	0	0	0.0%
3. JURIS. FUEL REVENUE APPL. TO PERIOD	<u>44,920,554</u>	<u>45,553,669</u>	<u>(633,115)</u>	<u>-1.4%</u>	<u>629,844,306</u>	<u>627,248,223</u>	<u>2,596,083</u>	<u>0.4%</u>
4. ADJ. TOTAL FUEL & NET PWR. TRANS. (LINE A7)	59,569,809	46,390,339	13,179,470	28.4%	673,683,598	627,802,929	45,880,669	7.3%
5. JURISDIC. SALES- % TOTAL MWH SALES (LINE B4)	<u>1.0000000</u>	<u>1.0000000</u>	<u>0.0000000</u>	<u>0.0%</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
6. JURISDIC. TOTAL FUEL & NET PWR.TRANS.	59,569,809	46,390,339	13,179,470	28.4%	673,683,598	627,802,929	45,880,669	7.3%
6a. JURISDIC. LOSS MULTIPLIER	<u>1.00000</u>	<u>1.00000</u>	<u>0.00000</u>	<u>0.0%</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
6b. (LINE C6 x LINE C6a)	59,569,809	46,390,339	13,179,470	28.4%	673,683,598	627,802,929	45,880,669	7.3%
6c. ADJUSTMENT	<u>0</u>	<u>0</u>	<u>0</u>	<u>0.0%</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0.0%</u>
6d. JURISDIC. TOTAL FUEL & NET PWR INCL. ALL ADJ.(LNS. C6b+C6c)	<u>59,569,809</u>	<u>46,390,339</u>	<u>13,179,470</u>	<u>28.4%</u>	<u>673,683,598</u>	<u>627,802,929</u>	<u>45,880,669</u>	<u>7.3%</u>
7. TRUE-UP PROV. FOR MO. +/- COLLECTED (LINE C3 - LINE C6d)	(14,649,255)	(836,670)	(13,812,585)	1650.9%	(43,839,292)	(554,706)	(43,284,586)	7803.2%
7a. ADJ-BB UNIT 2 OUTAGE REPLACEMENT POWER COST T-Up	0	0	0	0.0%	(190,412)	0	(190,412)	0.0%
8. INTEREST PROVISION FOR THE MONTH	(56,889)	1,089	(57,978)	-5324.0%	(186,849)	20,812	(207,661)	-997.8%
8a. ADJ-DEC 2017 INTEREST ADJUSTMENT FOR BB UNIT 2 OUTAGE REPLACEMENT POWER COST	0	0	0	0.0%	2,670	0	2,670	0.0%
8b. ADJ - JAN THRU APR 2018 ADJUSTMENT FOR BIG BEND AND POLK ASSETS DUE TO TAX REFORM INCLUDING INTEREST	0	0	0	0.0%	43,064	0	43,064	0.0%
9. TRUE-UP & INT. PROV. BEG. OF MONTH	(20,841,339)	1,725,116	(22,566,455)	-1308.1%	-----NOT APPLICABLE-----			
10. TRUE-UP COLLECTED (REFUNDED)	<u>(1,423,429)</u>	<u>(1,423,429)</u>	<u>0</u>	<u>0.0%</u>	-----NOT APPLICABLE-----			
11. END OF PERIOD TOTAL NET TRUE-UP (LINE C7 through C10)	<u>(36,970,912)</u>	<u>(533,894)</u>	<u>(36,437,018)</u>	<u>6824.8%</u>	-----NOT APPLICABLE-----			

CALCULATION OF TRUE-UP AND INTEREST PROVISION  
TAMPA ELECTRIC COMPANY  
MONTH OF: December 2018

	CURRENT MONTH				PERIOD TO DATE			
	ACTUAL	ESTIMATED	DIFFERENCE AMOUNT	%	ACTUAL	ESTIMATED	DIFFERENCE AMOUNT	%
<b>D. INTEREST PROVISION</b>								
1. BEGINNING TRUE-UP AMOUNT (LINE C9)	(20,841,339)	1,725,116	(22,566,455)	-1308.1%	NOT APPLICABLE			
2. ENDING TRUE-UP AMOUNT BEFORE INT. (LINES C7 + C9 + C10)	<u>(36,914,023)</u>	<u>(534,983)</u>	<u>(36,379,040)</u>	<u>6800.0%</u>	NOT APPLICABLE			
3. TOTAL BEG. & END. TRUE-UP AMOUNT	<u>(57,755,362)</u>	<u>1,190,133</u>	<u>(58,945,495)</u>	<u>-4952.8%</u>	NOT APPLICABLE			
4. AVG. TRUE-UP AMOUNT - (50% OF LINE D3)	(28,877,681)	595,067	(29,472,748)	-4952.8%	NOT APPLICABLE			
5. INT. RATE-FIRST DAY REP. BUS. MONTH	2.300	2.200	0.100	4.5%	NOT APPLICABLE			
6. INT. RATE-FIRST DAY SUBSEQUENT MONTH	<u>2.420</u>	<u>2.200</u>	<u>0.220</u>	<u>10.0%</u>	NOT APPLICABLE			
7. TOTAL (LINE D5 + LINE D6)	<u>4.720</u>	<u>4.400</u>	<u>0.320</u>	<u>7.3%</u>	NOT APPLICABLE			
8. AVERAGE INT. RATE (50% OF LINE D7)	2.360	2.200	0.160	7.3%	NOT APPLICABLE			
9. MONTHLY AVG. INT. RATE (LINE D8/12)	0.197	0.183	0.014	7.7%	NOT APPLICABLE			
10. INT. PROVISION (LINE D4 x LINE D9)	<u>(56,889)</u>	<u>1,089</u>	<u>(57,978)</u>	<u>-5324.0%</u>	NOT APPLICABLE			

FUEL AND PURCHASED POWER COST RECOVERY  
SCHEDULE A6

JANUARY 2018 - DECEMBER 2018

POWER SOLD  
TAMPA ELECTRIC COMPANY  
FOR THE PERIOD JANUARY 2018 THROUGH DECEMBER 2018

(1) SOLD TO	(2) TYPE & SCHEDULE		(3) TOTAL MWH SOLD	(4) MWH WHEELED OTHER SYSTEM	(5) MWH FROM OWN GENERATION	(6) CENTS/KWH		(7) TOTAL \$ FOR FUEL ADJUSTMENT (5)(6A)	(8) TOTAL \$ FOR TOTAL COST (5)(6B)	(9) GAINS ON MARKET BASED SALES
						(A) FUEL COST	(B) TOTAL COST			
<b>ESTIMATED:</b>										
SEMINOLE	JURISD.	SCH. - D	10,340.0	0.0	10,340.0	2.613	2.790	270,150.00	288,517.00	18,367.00
VARIOUS	JURISD.	MKT.BASE	11,990.0	0.0	11,990.0	3.018	3.320	361,827.45	398,050.00	36,222.55
<b>TOTAL</b>			<b>22,330.0</b>	<b>0.0</b>	<b>22,330.0</b>	<b>2.830</b>	<b>3.075</b>	<b>631,977.45</b>	<b>686,567.00</b>	<b>54,589.55</b>
<b>ACTUAL:</b>										
SEMINOLE ELEC. PRECO-1	JURISD.	SCH. - D	28,431.0	18.0	28,413.0	2.308	2.539	655,906.07	721,496.67	33,036.89
REEDY CREEK		SCH. - CB	6,384.0	0.0	6,384.0	1.853	2.139	118,324.68	136,526.87	13,546.36
EXGEN		SCH. - MA	21,175.0	0.0	21,175.0	2.856	4.602	604,698.57	974,491.76	320,625.32
FLORIDA POWER & LIGHT		SCH. - MA	6,470.0	0.0	6,470.0	2.788	4.070	180,410.00	263,352.85	71,681.40
DUKE ENERGY FLORIDA		SCH. - MA	37,660.0	0.0	37,660.0	2.332	3.263	878,101.60	1,229,009.54	310,022.94
CITY OF LAKELAND		SCH. - MA	72,600.0	0.0	72,600.0	2.473	3.096	1,795,722.00	2,247,868.40	338,668.40
NEW SMYRNA BEACH		SCH. - MA	182.0	0.0	182.0	2.996	4.538	5,452.29	8,259.19	2,565.55
ORLANDO UTILITIES		SCH. - MA	10,917.0	0.0	10,917.0	2.385	3.582	260,393.51	391,018.71	116,683.71
REEDY CREEK		SCH. - MA	1,530.0	0.0	1,530.0	1.612	2.227	24,665.80	34,067.00	8,821.40
SOUTHERN COMPANY		SCH. - MA	14,034.0	0.0	14,034.0	2.946	4.249	413,463.82	596,305.89	175,969.29
THE ENERGY AUTHORITY		SCH. - MA	58,681.0	0.0	58,681.0	2.579	3.940	1,513,238.63	2,312,133.36	715,960.17
EDF TRADING		SCH. - MA	7,489.0	0.0	7,489.0	3.495	5.454	261,753.80	408,438.53	130,663.12
MORGAN STANLEY		SCH. - MA	5,617.0	0.0	5,617.0	3.160	5.045	177,522.34	283,356.67	97,439.14
MACQUARIE ENERGY LLC		SCH. - MA	15,002.0	0.0	15,002.0	3.119	5.011	467,866.89	751,720.52	271,790.31
LESS 20% - THRESHOLD EXCESS		SCH. - D								0.00
LESS 20% - THRESHOLD EXCESS		SCH. - C								0.00
LESS 20% - THRESHOLD EXCESS		SCH. - CB								0.00
LESS 20% - THRESHOLD EXCESS		SCH. - MA								0.00
<b>SUB-TOTAL</b>			<b>286,172.0</b>	<b>18.0</b>	<b>286,154.0</b>	<b>2.571</b>	<b>3.620</b>	<b>7,357,520.00</b>	<b>10,358,045.96</b>	<b>2,607,474.00</b>
SUB-TOTAL SCHEDULE D POWER SALES-JURISD.			28,431.0	18.0	28,413.0	2.308	2.539	655,906.07	721,496.67	33,036.89
SUB-TOTAL SCHEDULE C POWER SALES			0.0	0.0	0.0	0.000	0.000	0.00	0.00	0.00
SUB-TOTAL SCHEDULE CB POWER SALES			6,384.0	0.0	6,384.0	1.853	2.139	118,324.68	136,526.87	13,546.36
SUB-TOTAL SCHEDULE MA POWER SALES-JURISD.			251,357.0	0.0	251,357.0	2.619	3.779	6,583,289.25	9,500,022.42	2,560,890.75
SUB-TOTAL OATT POWER SALES			0.0	0.0	0.0	0.000	0.000	0.00	0.00	0.00
<b>TOTAL</b>			<b>286,172.0</b>	<b>18.0</b>	<b>286,154.0</b>	<b>2.571</b>	<b>3.620</b>	<b>7,357,520.00</b>	<b>10,358,045.96</b>	<b>2,607,474.00</b>
DIFFERENCE			263,842.0	18.0	263,824.0	(0.259)	0.545	6,725,542.55	9,671,478.96	2,552,884.45
DIFFERENCE %			1181.6%	0.0%	1181.5%	-9.2%	17.7%	1064.2%	1408.7%	4676.5%

FUEL AND PURCHASED POWER COST RECOVERY  
SCHEDULE A7

JANUARY 2018 - DECEMBER 2018

**PURCHASED POWER  
(EXCLUSIVE OF ECONOMY & COGENERATION)  
TAMPA ELECTRIC COMPANY  
FOR THE PERIOD JANUARY 2018 THROUGH DECEMBER 2018**

(1)	(2)	(3)	(4)	(5)	(6)	(7) CENTS/KWH		(8)
PURCHASED FROM	TYPE & SCHEDULE	TOTAL MWH PURCHASED	MWH FROM OTHER UTILITIES	MWH FOR INTER- RUPTIBLE	MWH FOR FIRM	(A) FUEL COST	(B) TOTAL COST	TOTAL \$ FOR FUEL ADJUSTMENT (6)X(7A)
<b>ESTIMATED:</b>								
PASCO COGEN	SCH. - D	67,450.0	0.0	0.0	67,450.0	3.975	3.975	2,681,380.00
<b>TOTAL</b>		<b>67,450.0</b>	<b>0.0</b>	<b>0.0</b>	<b>67,450.0</b>	<b>3.975</b>	<b>3.975</b>	<b>2,681,380.00</b>
<b>ACTUAL:</b>								
PASCO COGEN	SCH. - D	88,525.0	0.0	0.0	88,525.0	5.172	5.172	4,578,433.33
DUKE ENERGY FLORIDA	OATT	8,070.0	0.0	0.0	8,070.0	3.210	3.210	259,011.51
CITY OF LAKELAND	OATT	(52.0)	0.0	0.0	(52.0)	5.144	5.144	(2,674.85)
<b>SUB-TOTAL</b>		<b>96,543.0</b>	<b>0.0</b>	<b>0.0</b>	<b>96,543.0</b>	<b>5.008</b>	<b>5.008</b>	<b>4,834,769.99</b>
SUB-TOTAL SCHEDULE D PURCHASED POWER		88,525.0	0.0	0.0	88,525.0	5.172	5.172	4,578,433.33
SUB-TOTAL SCHEDULE OATT PURCHASED POWER		8,018.0	0.0	0.0	8,018.0	3.197	3.197	256,336.66
<b>TOTAL</b>		<b>96,543.0</b>	<b>0.0</b>	<b>0.0</b>	<b>96,543.0</b>	<b>5.008</b>	<b>5.008</b>	<b>4,834,769.99</b>
DIFFERENCE		29,093.0	0.0	0.0	29,093.0	1.033	1.033	2,153,389.99
DIFFERENCE %		43.1%	0.0%	0.0%	43.1%	26.0%	26.0%	80.3%



FUEL AND PURCHASED POWER COST RECOVERY  
SCHEDULE A8

JANUARY 2018 - DECEMBER 2018

ENERGY PAYMENT TO QUALIFYING FACILITIES  
TAMPA ELECTRIC COMPANY  
FOR THE PERIOD JANUARY 2018 THROUGH DECEMBER 2018

(1)	(2)	(3)	(4)	(5)	(6)	(7)		(8)
						CENTS/KWH		
	TYPE	TOTAL	MWH FROM	MWH FOR	MWH	(A)	(B)	TOTAL \$ FOR FUEL
<b>ESTIMATED:</b>								
<b>VARIOUS</b>								
	COGEN.							
	AS AVAIL.	90,110.0	0.0	0.0	90,110.0	2.863	2.863	2,579,410.00
<b>TOTAL</b>		<b>90,110.0</b>	<b>0.0</b>	<b>0.0</b>	<b>90,110.0</b>	<b>2.863</b>	<b>2.863</b>	<b>2,579,410.00</b>
<b>ACTUAL:</b>								
<b>AS AVAILABLE</b>								
McKAY BAY REFUSE	COGEN.	58.0	0.0	0.0	58.0	2.358	2.358	1,367.71
CARGILL RIDGEWOOD	COGEN.	16,291.0	0.0	0.0	16,291.0	2.610	2.610	425,206.63
CARGILL MILLPOINT	COGEN.	21,780.0	0.0	0.0	21,780.0	2.517	2.517	548,180.11
IMC-AGRICO-NEW WALES	COGEN.	6,801.0	0.0	0.0	6,801.0	2.715	2.715	184,644.65
IMC-AGRICO-S. PIERCE	COGEN.	147,078.0	0.0	0.0	147,078.0	2.464	2.464	3,624,243.48
HILLSBOROUGH COUNTY	COGEN.	1.0	0.0	0.0	1.0	2.262	2.262	22.62
<b>SUB-TOTAL COGEN</b>		<b>192,009.0</b>	<b>0.0</b>	<b>0.0</b>	<b>192,009.0</b>	<b>2.491</b>	<b>2.491</b>	<b>4,783,665.20</b>
<b>NET METERING</b>		<b>2,350.8</b>	<b>0.0</b>	<b>0.0</b>	<b>2,350.8</b>	<b>2.204</b>	<b>2.204</b>	<b>51,805.81</b>
<b>TOTAL INCL NET METERING</b>		<b>194,359.8</b>	<b>0.0</b>	<b>0.0</b>	<b>194,359.8</b>	<b>2.488</b>	<b>2.488</b>	<b>4,835,471.01</b>
DIFFERENCE		104,249.8	0.0	0.0	104,249.8	(0.375)	(0.375)	2,256,061.01
DIFFERENCE %		115.7%	0.0%	0.0%	115.7%	-13.1%	-13.1%	87.5%

FUEL AND PURCHASED POWER COST RECOVERY  
SCHEDULE A9

JANUARY 2018 - DECEMBER 2018

ECONOMY ENERGY PURCHASES  
TAMPA ELECTRIC COMPANY  
FOR THE PERIOD JANUARY 2018 THROUGH DECEMBER 2018

(1) PURCHASED FROM	(2) TYPE & SCHEDULE	(3) TOTAL MWH PURCHASED	(4) MWH FOR INTERRUP- TIBLE	(5) MWH FOR FIRM	(6) TRANSACTION COSTS CENTS/KWH	(7) TOTAL \$ FOR FUEL ADJUSTMENT (5) X (6)	(8) COST IF GENERATED		(9) FUEL SAVINGS (8B)-7
							(A) CENTS PER KWH	(B) TOTAL COST	
<b>ESTIMATED:</b>									
VARIOUS	Economy	313,280.0	0.0	313,280.0	3.098	9,706,470.00	4.921	15,417,030.00	5,710,560.00
<b>TOTAL</b>		<b>313,280.0</b>	<b>0.0</b>	<b>313,280.0</b>	<b>3.098</b>	<b>9,706,470.00</b>	<b>4.921</b>	<b>15,417,030.00</b>	<b>5,710,560.00</b>
<b>ACTUAL:</b>									
NEW HOPE/OKEELANTA	SCH. - REB	5.0	0.0	5.0	3.000	150.00	3.000	150.00	0.00
CITY OF LAKELAND	SCH. - J	2,000.0	0.0	2,000.0	7.290	145,800.00	7.290	145,800.00	0.00
CITY OF TALLAHASSEE	SCH. - J	80.0	0.0	80.0	1.000	800.00	1.921	1,536.80	736.80
DUKE ENERGY FLORIDA	SCH. - J	3,635.0	0.0	3,635.0	6.940	252,260.00	6.940	252,260.00	0.00
EDF TRADING	SCH. - J	2,720.0	0.0	2,720.0	2.883	78,415.00	3.176	86,381.45	7,966.45
EXGEN	SCH. - J	321,811.0	86.6	321,724.4	3.643	11,721,550.00	4.337	13,951,744.17	2,230,194.17
FLORIDA POWER & LIGHT	SCH. - J	538,375.0	255.6	538,119.4	3.677	19,786,975.35	4.118	22,158,149.55	2,371,174.20
FMPA	SCH. - J	528.0	0.0	528.0	45.000	237,600.00	45.000	237,600.00	0.00
MORGAN STANLEY	SCH. - J	4,765.0	0.0	4,765.0	5.258	250,521.00	5.499	262,021.00	11,500.00
ORLANDO UTIL. COMM.	SCH. - J	8,629.0	10.7	8,618.3	6.490	559,299.25	6.601	568,877.45	9,578.20
SOUTHERN COMPANY	SCH. - J	23,238.0	75.0	23,163.0	6.057	1,403,049.99	6.651	1,540,474.99	137,425.00
THE ENERGY AUTHORITY	SCH. - J	26,180.0	0.0	26,180.0	5.210	1,364,067.00	7.599	1,989,545.55	625,478.55
<b>SUB-TOTAL</b>		<b>931,965.9</b>	<b>427.8</b>	<b>931,538.1</b>	<b>3.843</b>	<b>35,800,487.59</b>	<b>4.422</b>	<b>41,194,540.96</b>	<b>5,394,053.37</b>
SUB-TOTAL SCHEDULE REB ECONOMY PURCHASES		5.0	0.0	5.0	3.000	150.00	3.000	150.00	0.00
SUB-TOTAL SCHEDULE J ECONOMY PURCHASES		931,960.9	427.8	931,533.1	3.843	35,800,337.59	4.422	41,194,390.96	5,394,053.37
<b>TOTAL</b>		<b>931,965.9</b>	<b>427.8</b>	<b>931,538.1</b>	<b>3.843</b>	<b>35,800,487.59</b>	<b>4.422</b>	<b>41,194,540.96</b>	<b>5,394,053.37</b>
DIFFERENCE		618,685.9	427.8	618,258.1	0.745	26,094,017.59	(0.499)	25,777,510.96	(316,506.63)
DIFFERENCE %		197.5%	0.0%	197.4%	24.0%	268.8%	-10.1%	167.2%	-5.5%

**FUEL AND PURCHASED POWER COST RECOVERY**

**SCHEDULE A12**

**JANUARY 2018 - DECEMBER 2018**

**REDACTED**

CAPACITY COSTS  
ACTUAL PURCHASES AND SALES  
TAMPA ELECTRIC COMPANY  
FOR THE PERIOD JANUARY 2018 THROUGH DECEMBER 2018

SCHEDULE A12  
PAGE 1 OF 1

CONTRACT	TERM		CONTRACT TYPE
	START	END	
PASCO COGEN LTD	1/1/2009	12/31/2018	LT
SEMINOLE ELECTRIC **	6/1/1992	-----	LT

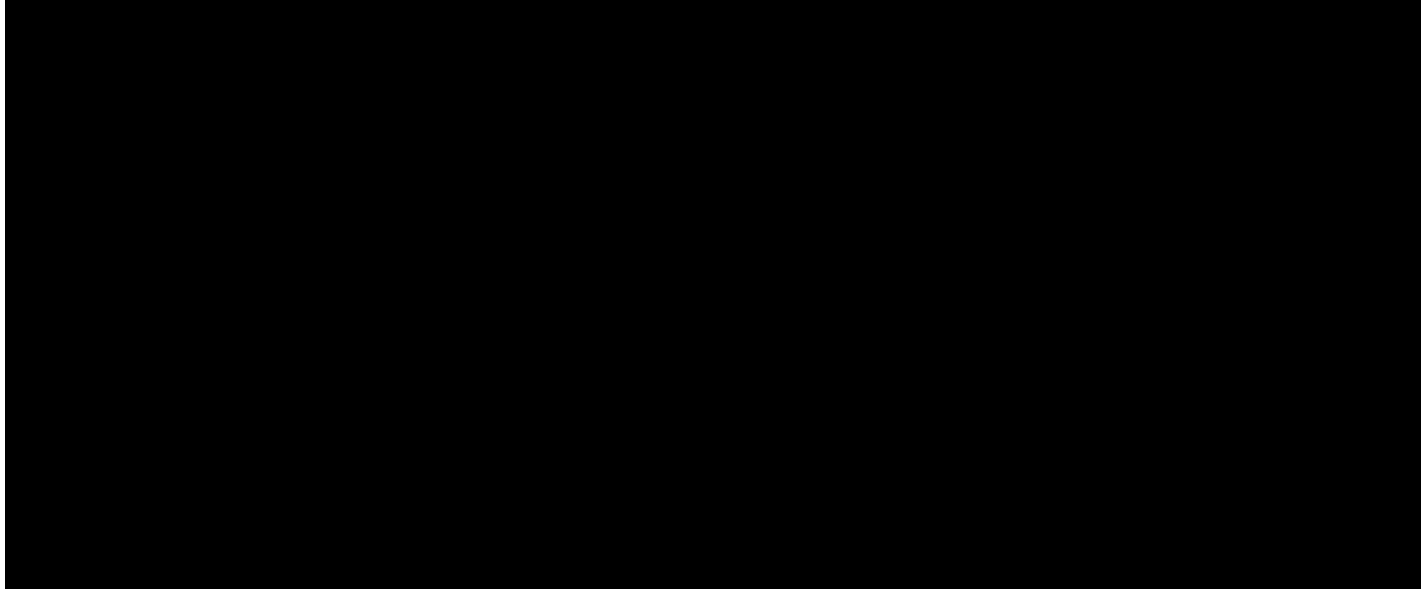
QF = QUALIFYING FACILITY  
 LT = LONG TERM  
 ST = SHORT-TERM  
 \*\* THREE YEAR NOTICE REQUIRED FOR TERMINATION.

CONTRACT	JANUARY MW	FEBRUARY MW	MARCH MW	APRIL MW	MAY MW	JUNE MW	JULY MW	AUGUST MW	SEPTEMBER MW	OCTOBER MW	NOVEMBER MW	DECEMBER MW
PASCO COGEN LTD	121.0	121.0	121.0	121.0	121.0	121.0	121.0	121.0	121.0	121.0	121.0	121.0
SEMINOLE ELECTRIC	10.3	7.1	5.9	5.6	0.9	1.9	2.1	2.3	2.1	8.9	2.1	7.8

CAPACITY	JANUARY (\$)	FEBRUARY (\$)	MARCH (\$)	APRIL (\$)	MAY (\$)	JUNE (\$)	JULY (\$)	AUGUST (\$)	SEPTEMBER (\$)	OCTOBER (\$)	NOVEMBER (\$)	DECEMBER (\$)	TOTAL (\$)
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38

PASCO COGEN LTD - D  
CITY OF TALLAHASSEE  
SEMINOLE ELECTRIC  
FLORIDA POWER & LIGHT  
DUKE ENERGY FLORIDA  
JACKSONVILLE ELECTRIC AUTHORITY  
**SUBTOTAL CAPACITY PURCHASES**



SEMINOLE ELECTRIC - D  
REEDY CREEK - CB  
DUKE ENERGY FLORIDA - MA  
FLORIDA POWER & LIGHT - MA  
CITY OF LAKELAND - MA  
ORLANDO UTILITIES - MA  
EXGEN - MA  
REEDY CREEK - MA  
THE ENERGY AUTHORITY - MA  
MACQUARIE ENERGY LLC - MA  
MORGAN STANLEY - MA  
SOUTHERN CO - MA  
NEW SMYRNA BEACH - MA  
EDF TRADING - MA  
**SUBTOTAL CAPACITY SALES**

<b>TOTAL PURCHASES AND (SALES)</b>	\$ 583,902	\$ 872,960	\$ 668,109	\$ 639,970	\$ 1,074,286	\$ 1,142,022	\$ 1,183,470	\$ 1,251,270	\$ 1,248,984	\$ 1,204,852	\$ 855,876	\$ 746,067	\$ 11,471,768
<b>TOTAL CAPACITY</b>	\$ 583,902	\$ 872,960	\$ 668,109	\$ 639,970	\$ 1,074,286	\$ 1,142,022	\$ 1,183,470	\$ 1,251,270	\$ 1,248,984	\$ 1,204,852	\$ 855,876	\$ 746,067	\$ 11,471,768

EXHIBIT TO THE TESTIMONY OF  
PENELOPE A. RUSK

DOCUMENT NO. 5

CAPITAL PROJECTS APPROVED FOR FUEL CLAUSE RECOVERY

JANUARY 2018 - DECEMBER 2018

POLK 1 CONVERSION  
SCHEDULE OF DEPRECIATION AND RETURN  
FOR THE PERIOD JANUARY 2018 THROUGH DECEMBER 2018

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1 BEGINNING BALANCE	\$16,143,951	\$16,143,951	\$16,143,951	\$16,143,951	\$16,143,951	\$16,143,951							\$16,143,951
2 ADD INVESTMENT	-	-	-	-	-	-							-
3 LESS RETIREMENTS	-	-	-	-	-	-							-
4 ENDING BALANCE	\$16,143,951	\$16,143,951	\$16,143,951	\$16,143,951	\$16,143,951	\$16,143,951							\$16,143,951
5													
6													
7 AVERAGE BALANCE	\$16,143,951	\$16,143,951	\$16,143,951	\$16,143,951	\$16,143,951	\$16,143,951							
8 DEPRECIATION RATE	1.666667%	1.666667%	1.666667%	1.666667%	1.666667%	1.666667%							
9 DEPRECIATION EXPENSE	\$269,225	\$269,225	\$269,225	\$269,225	\$269,225	\$269,225							\$1,615,350
10 LESS RETIREMENTS	-	-	-	-	-	-							-
11 BEGINNING BALANCE DEPRECIATION	\$14,528,600	\$14,797,825	\$15,067,050	\$15,336,276	\$15,605,501	\$15,874,726							\$14,528,600
12 ENDING BALANCE DEPRECIATION	\$14,797,825	\$15,067,050	\$15,336,276	\$15,605,501	\$15,874,726	\$16,143,951							\$16,143,951
13													
14													
15 ENDING NET INVESTMENT	\$1,346,125	\$1,076,900	\$807,675	\$538,450	\$269,225	-							-
16													
17													
18 AVERAGE INVESTMENT	\$1,480,738	\$1,211,513	\$942,288	\$673,063	\$403,838	\$134,613							
19 ALLOWED EQUITY RETURN	.35760%	.35760%	.35760%	.35760%	.35760%	.35760%							
20 EQUITY COMPONENT AFTER-TAX	\$5,295	\$4,332	\$3,370	\$2,407	\$1,444	\$481							\$17,329
21 CONVERSION TO PRE-TAX	1.63220	1.63220	1.63220	1.63220	1.34295	1.34295							
22 EQUITY COMPONENT PRE-TAX	\$8,642	\$7,071	\$5,501	\$3,929	\$1,939	\$646							\$27,728
23													
24 ALLOWED DEBT RETURN	.14966%	.14966%	.14966%	.14966%	.14966%	.14966%							
25 DEBT COMPONENT	\$2,216	\$1,813	\$1,410	\$1,007	\$604	\$201							\$7,251
26													
27 TOTAL RETURN REQUIREMENTS	\$10,858	\$8,884	\$6,911	\$4,936	\$2,543	\$847							\$34,979
28													
29 TOTAL DEPRECIATION & RETURN	\$280,083	\$278,109	\$276,136	\$274,161	\$271,768	\$270,072							\$1,650,329
30													
31 ESTIMATED FUEL SAVINGS	\$1,717,841	\$368,978	\$9,068,543	\$17,090,426	\$18,774,508	\$16,192,630							\$63,212,927
32 TOTAL DEPRECIATION & RETURN	\$280,083	\$278,109	\$276,136	\$274,161	\$271,768	\$270,072							\$1,650,329
33 NET BENEFIT (COST) TO RATEPAYER	\$1,437,758	\$90,869	\$8,792,407	\$16,816,265	\$18,502,740	\$15,922,558							\$61,562,598

34 TAX REFORM TRUEUP (EXCLUDING INTEREST) (\$4,456) (\$4,456)

35 DEPRECIATION EXPENSE IS CALCULATED BASED UPON A FIVE YEAR PERIOD.

36 RETURN ON AVERAGE INVESTMENT IS CALCULATED FOR JANUARY - JUNE USING AN ANNUAL RATE OF 7.5587% (EQUITY 5.7628% , DEBT 1.7959%). RETURN ON AVERAGE INVESTMENT IS CALCULATED FOR JULY - DECEMBER USING AN ANNUAL RATE OF 7.5190% (EQUITY 5.8046% , DEBT 1.7144%)  
RATES ARE BASED ON THE MAY 2018 SURVEILLANCE REPORT PER THE WACC STIPULATION & SETTLEMENT AGREEMENT (JULY 17, 2012).

37 RETURN ON AVERAGE INVESTMENT IS CALCULATED FOR JANUARY - JUNE USING AN ANNUAL RATE OF 7.5587% (EQUITY 5.7628% , DEBT 1.7959%). RETURN ON AVERAGE INVESTMENT IS CALCULATED FOR JULY - DECEMBER USING AN ANNUAL RATE OF 7.5190% (EQUITY 5.8046% , DEBT 1.7144%)  
RATES ARE BASED ON THE MAY 2018 SURVEILLANCE REPORT PER THE WACC STIPULATION & SETTLEMENT AGREEMENT (JULY 17, 2012).

38 RETURN REQUIREMENT IS CALCULATED BASED UPON A COMBINED STATUTORY RATE OF 25.345%

39 ZERO PROJECTED GENERATION RESULTS IN ZERO ESTIMATED FUEL SAVINGS FOR THAT MONTH.

40 TAX REFORM TRUE-UP AMOUNT, INCLUDING INTEREST, IS SHOWN ON MAY 2018 SCHEDULE A2 AT LINE C.8.b. THE TOTAL TRUE-UP IS (\$43,064), WHICH CONSISTS OF (\$4,456) + (\$38,477) + (\$131).



**BIG BEND UNITS 1-4 IGNITERS CONVERSION TO NATURAL GAS  
SCHEDULE OF DEPRECIATION AND RETURN  
FOR THE PERIOD JANUARY 2018 THROUGH DECEMBER 2018**

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1 BEGINNING BALANCE	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348
2 ADD INVESTMENT: Big Bend Unit 3 (Jan 2015)	-	-	-	-	-	-	-	-	-	-	-	-	-
2a ADD INVESTMENT: Big Bend Unit 4 (May 2015)	-	-	-	-	-	-	-	-	-	-	-	-	-
2b ADD INVESTMENT: Big Bend Unit 2 (June 2015)	-	-	-	-	-	-	-	-	-	-	-	-	-
2c ADD INVESTMENT: Big Bend Unit 1 (November 2015)	-	-	-	-	-	-	-	-	-	-	-	-	-
3 LESS RETIREMENTS	-	-	-	-	-	-	-	-	-	-	-	-	-
4 ENDING BALANCE	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348
5													
6													
7 AVERAGE BALANCE	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348	\$20,910,348
8 DEPRECIATION RATE	1.666667%	1.666667%	1.666667%	1.666667%	1.666667%	1.666667%	1.666667%	1.666667%	1.666667%	1.666667%	1.666667%	1.666667%	1.666667%
9 DEPRECIATION EXPENSE	\$348,506	\$348,506	\$348,506	\$348,506	\$348,506	\$348,506	\$348,506	\$348,506	\$348,506	\$348,506	\$348,506	\$348,506	\$4,182,070
10 LESS RETIREMENTS	-	-	-	-	-	-	-	-	-	-	-	-	-
11 BEGINNING BALANCE DEPRECIATION	\$10,913,710	\$11,262,216	\$11,610,722	\$11,959,228	\$12,307,734	\$12,656,239	\$13,004,745	\$13,353,251	\$13,701,757	\$14,050,263	\$14,398,768	\$14,747,274	\$10,913,710
12 ENDING BALANCE DEPRECIATION	\$11,262,216	\$11,610,722	\$11,959,228	\$12,307,734	\$12,656,239	\$13,004,745	\$13,353,251	\$13,701,757	\$14,050,263	\$14,398,768	\$14,747,274	\$15,095,780	\$15,095,780
13													
14													
15 ENDING NET INVESTMENT	\$9,648,132	\$9,299,626	\$8,951,120	\$8,602,615	\$8,254,109	\$7,905,603	\$7,557,097	\$7,208,591	\$6,860,086	\$6,511,580	\$6,163,074	\$5,814,568	\$5,814,568
16													
17													
18 AVERAGE INVESTMENT	\$9,822,385	\$9,473,879	\$9,125,373	\$8,776,867	\$8,428,362	\$8,079,856	\$7,731,350	\$7,382,844	\$7,034,338	\$6,685,833	\$6,337,327	\$5,988,821	
19 ALLOWED EQUITY RETURN	.35760%	.35760%	.35760%	.35760%	.35760%	.35760%	.36019%	.36019%	.36019%	.36019%	.36019%	.36019%	.36019%
20 EQUITY COMPONENT AFTER-TAX	\$35,125	\$33,878	\$32,632	\$31,386	\$30,140	\$28,893	\$27,648	\$26,592	\$25,337	\$24,082	\$22,827	\$21,571	\$340,311
21 CONVERSION TO PRE-TAX	1.63220	1.63220	1.63220	1.63220	1.34295	1.34295	1.34295	1.34295	1.34295	1.34295	1.34295	1.34295	1.34295
22 EQUITY COMPONENT PRE-TAX	\$57,331	\$55,296	\$53,262	\$51,228	\$49,193	\$47,158	\$45,123	\$43,088	\$41,053	\$39,018	\$36,983	\$34,948	\$495,498
23													
24 ALLOWED DEBT RETURN	.14966%	.14966%	.14966%	.14966%	.14966%	.14966%	.14287%	.14287%	.14287%	.14287%	.14287%	.14287%	.14287%
25 DEBT COMPONENT	\$14,700	\$14,179	\$13,657	\$13,136	\$12,614	\$12,092	\$11,571	\$11,049	\$10,528	\$10,006	\$9,485	\$8,964	\$139,184
26													
27 TOTAL RETURN	\$72,031	\$69,475	\$66,919	\$64,364	\$61,809	\$59,253	\$56,698	\$54,142	\$51,587	\$49,031	\$46,476	\$43,921	\$634,682
28 PRIOR MONTH TRUE-UP													
29 TOTAL DEPRECIATION & RETURN	\$420,537	\$417,981	\$415,425	\$412,870	\$401,597	\$399,400	\$396,950	\$394,766	\$392,582	\$390,399	\$388,216	\$386,031	\$4,816,752
30													
31 ESTIMATED FUEL SAVINGS	\$368,460	\$796,030	\$230,045	\$437,507	\$385,672	\$700,247	\$334,668	\$313,580	\$310,913	\$488,425	\$685,268	\$186,674	\$5,237,489
32 TOTAL DEPRECIATION & RETURN	\$420,537	\$417,981	\$415,425	\$412,870	\$401,597	\$399,400	\$396,950	\$394,766	\$392,582	\$390,399	\$388,216	\$386,031	\$4,816,752
33 NET BENEFIT (COST) TO RATEPAYER	(\$52,077)	\$378,050	(\$185,380)	\$24,637	(\$15,925)	\$300,847	(\$62,282)	(\$81,186)	(\$81,669)	\$98,026	\$297,052	(\$199,356)	\$420,738

34 TAX REFORM TRUEUP (EXCLUDING INTEREST) (\$38,477) (\$38,477)

35 DEPRECIATION EXPENSE IS CALCULATED BASED UPON A FIVE YEAR PERIOD.

36 RETURN ON AVERAGE INVESTMENT IS CALCULATED FOR JANUARY - JUNE USING AN ANNUAL RATE OF 7.5587% (EQUITY 5.7628% , DEBT 1.7959%). RETURN ON AVERAGE INVESTMENT IS CALCULATED FOR JULY - DECEMBER USING AN ANNUAL RATE OF 7.5190% (EQUITY 5.8046% , DEBT 1.7144%)  
RATES ARE BASED ON THE MAY 2018 SURVEILLANCE REPORT PER THE WACC STIPULATION & SETTLEMENT AGREEMENT (JULY 17, 2012).

37 RETURN ON AVERAGE INVESTMENT IS CALCULATED FOR JANUARY - JUNE USING AN ANNUAL RATE OF 7.5587% (EQUITY 5.7628% , DEBT 1.7959%). RETURN ON AVERAGE INVESTMENT IS CALCULATED FOR JULY - DECEMBER USING AN ANNUAL RATE OF 7.5190% (EQUITY 5.8046% , DEBT 1.7144%)  
RATES ARE BASED ON THE MAY 2018 SURVEILLANCE REPORT PER THE WACC STIPULATION & SETTLEMENT AGREEMENT (JULY 17, 2012).

38 RETURN REQUIREMENT IS CALCULATED BASED UPON A COMBINED STATUTORY RATE OF 25.345%

39 ZERO PROJECTED GENERATION RESULTS IN ZERO ESTIMATED FUEL SAVINGS FOR THAT MONTH.

40 TAX REFORM TRUE-UP AMOUNT, INCLUDING INTEREST, IS SHOWN ON MAY 2018 SCHEDULE A2 AT LINE C.8.b. THE TOTAL TRUE-UP IS (\$43,064), WHICH CONSISTS OF (\$4,456) + (\$38,477) + (\$131).

**Tampa Electric Company**  
**Calculation of Revenue Requirement Rate of Return**  
**For Cost Recovery Clauses**  
**January 2018 to June 2018**

	(1) Jurisdictional Rate Base Actual May 2017 Capital Structure (\$000)	(2) Ratio %	(3) Cost Rate %	(4) Weighted Cost Rate %
Long Term Debt	\$ 1,611,554	33.14%	5.12%	1.6968%
Short Term Debt	118,708	2.44%	1.55%	0.0378%
Preferred Stock	0	0.00%	0.00%	0.0000%
Customer Deposits	101,181	2.08%	2.55%	0.0531%
Common Equity	2,031,177	41.77%	10.25%	4.2815%
Accum. Deferred Inc. Taxes & Zero Cost ITC's	988,845	20.34%	0.00%	0.0000%
Deferred ITC - Weighted Cost	<u>11,216</u>	<u>0.23%</u>	7.78%	<u>0.0179%</u>
<b>Total</b>	<b>\$ <u>4,862,681</u></b>	<b><u>100.00%</u></b>		<b><u>6.09%</u></b>

**ITC split between Debt and Equity:**

Long Term Debt	\$ 1,611,554	Long Term Debt	42.84%
Short Term Debt	118,708	Short Term Debt	3.16%
Equity - Preferred	0	Equity - Preferred	0.00%
Equity - Common	<u>2,031,177</u>	Equity - Common	<u>54.00%</u>
<b>Total</b>	<b>\$ <u>3,761,439</u></b>	<b>Total</b>	<b><u>100.00%</u></b>

**Deferred ITC - Weighted Cost:**

Debt = 0.0179% * 46.00%	0.0082%
Equity = 0.0179% * 54.00%	<u>0.0097%</u>
Weighted Cost	<u>0.0179%</u>

**Total Equity Cost Rate:**

Preferred Stock	0.0000%
Common Equity	4.2815%
Deferred ITC - Weighted Cost	<u>0.0097%</u>
	4.2912%
Times Tax Multiplier	1.34295
Total Equity Component	<u>5.7628%</u>

**Total Debt Cost Rate:**

Long Term Debt	1.6968%
Short Term Debt	0.0378%
Customer Deposits	0.0531%
Deferred ITC - Weighted Cost	<u>0.0082%</u>
Total Debt Component	<u>1.7959%</u>
	<u><u>7.5587%</u></u>

**Notes:**

Column (1) - Per WACC Stipulation & Settlement Agreement Dated July 17, 2012, and 2017 Settlement Agreement Dated September 27, 2017.  
 Column (2) - Column (1) / Total Column (1)  
 Column (3) - Per WACC Stipulation & Settlement Agreement Dated July 17, 2012, and 2017 Settlement Agreement Dated September 27, 2017.  
 Column (4) - Column (2) x Column (3)

**Tampa Electric Company**  
**Calculation of Revenue Requirement Rate of Return**  
**For Cost Recovery Clauses**  
**July 2018 to December 2018**

	(1)	(2)	(3)	(4)
	Jurisdictional Rate Base Actual May 2018 Capital Structure (\$000)	Ratio %	Cost Rate %	Weighted Cost Rate %
Long Term Debt	\$ 1,719,219	30.51%	5.13%	1.5652%
Short Term Debt	244,333	4.34%	2.18%	0.0945%
Preferred Stock	0	0.00%	0.00%	0.0000%
Customer Deposits	96,005	1.70%	2.43%	0.0414%
Common Equity	2,367,502	42.02%	10.25%	4.3067%
Accum. Deferred Inc. Taxes & Zero Cost ITC's	1,187,473	21.07%	0.00%	0.0000%
Deferred ITC - Weighted Cost	<u>20,116</u>	<u>0.36%</u>	8.10%	<u>0.0289%</u>
<b>Total</b>	<b>\$ <u>5,634,648</u></b>	<b><u>100.00%</u></b>		<b><u>6.04%</u></b>

**ITC split between Debt and Equity:**

Long Term Debt	\$ 1,719,219	Long Term Debt	46.00%
Equity - Preferred	0	Equity - Preferred	0.00%
Equity - Common	<u>2,367,502</u>	Equity - Common	<u>54.00%</u>
<b>Total</b>	<b>\$ <u>4,086,721</u></b>	<b>Total</b>	<b><u>100.00%</u></b>

**Deferred ITC - Weighted Cost:**

Debt = 0.0289% * 46.00%	0.0133%
Equity = 0.0289% * 54.00%	<u>0.0156%</u>
Weighted Cost	<u>0.0289%</u>

**Total Equity Cost Rate:**

Preferred Stock	0.0000%
Common Equity	4.3067%
Deferred ITC - Weighted Cost	<u>0.0156%</u>
	4.3223%
Times Tax Multiplier	1.34295
Total Equity Component	<u>5.8046%</u>

**Total Debt Cost Rate:**

Long Term Debt	1.5652%
Short Term Debt	0.0945%
Customer Deposits	0.0414%
Deferred ITC - Weighted Cost	<u>0.0133%</u>
Total Debt Component	<u>1.7144%</u>
	<u>7.5190%</u>

**Notes:**

Column (1) - Per WACC Stipulation & Settlement Agreement Dated July 17, 2012 and 2017 Settlement Agreement Dated September 27, 2017.  
 Column (2) - Column (1) / Total Column (1)  
 Column (3) - Per WACC Stipulation & Settlement Agreement Dated July 17, 2012 and 2017 Settlement Agreement Dated September 27, 2017.  
 Column (4) - Column (2) x Column (3)



**BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION**

**DOCKET NO. 20190001-EI  
IN RE: FUEL & PURCHASED POWER COST RECOVERY  
AND  
CAPACITY COST RECOVERY**

**2018 OPTIMIZATION MECHANISM**

**TESTIMONY AND EXHIBIT**

**JOHN C. HEISEY**

**FILED: MARCH 1, 2019**

1                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2                                   **PREPARED DIRECT TESTIMONY**

3   **OF**

4   **JOHN C. HEISEY**

5  
6   **Q.**   Please state your name, address, occupation and employer.

7  
8   **A.**   My name is John C. Heisey. My business address is 702 N.  
9           Franklin Street, Tampa, Florida 33602. I am employed by  
10          Tampa Electric Company ("Tampa Electric" or "company") as  
11          Manager, Gas and Power Trading.

12  
13   **Q.**   Please provide a brief outline of your educational  
14          background and business experience.

15  
16   **A.**   I graduated from Pennsylvania State University with a  
17          Bachelor of Science in Business Logistics. I have over 25  
18          years of power and natural gas trading experience,  
19          including employment at TECO Energy Source, FPL Energy  
20          Services, El Paso Energy, and International Paper. Prior  
21          to joining Tampa Electric, I was Vice President of Asset  
22          Trading for the Entegra Power Group LLC ("Entegra") where  
23          I was responsible for Entegra's energy trading  
24          activities. Entegra managed a large quantity of merchant  
25          capacity in bilateral and organized markets. I joined

1 Tampa Electric in September 2016 as the Manager of Gas  
2 and Power Trading and currently hold that position. I am  
3 responsible for all natural gas and power trading  
4 activities and work closely with Unit Commitment to  
5 provide low cost, reliable power to our customers. In  
6 addition, I am responsible for portfolio optimization and  
7 all aspects of the Optimization Mechanism.

8  
9 **Q.** Please state the purpose of your testimony.

10  
11 **A.** The purpose of my testimony is to present, for the  
12 Commission's review, the 2018 results of Tampa Electric's  
13 activities under the Optimization Mechanism, as  
14 authorized by FPSC Order No. PSC-2017-0456-S-EI, issued  
15 in Docket No. 20160160-EI on November 27, 2017.

16  
17 **Q.** Do you wish to sponsor an exhibit in support of your  
18 testimony?

19  
20 **A.** Yes. Exhibit No. JCH-1, entitled Optimization Mechanism  
21 Results, was prepared under my direction and supervision.  
22 My exhibit demonstrates the gains for each type of  
23 activity included in the Optimization Mechanism and the  
24 gains sharing between customers and the company.

25

1 Q. Please provide an overview of the Optimization Mechanism.

2

3 A. The Optimization Mechanism is designed to create  
4 additional value for Tampa Electric's customers while  
5 also providing an incentive to the company if certain  
6 customer-value thresholds are achieved. The Optimization  
7 Mechanism includes gains from wholesale power sales and  
8 savings from wholesale power purchases, as well as gains  
9 from other forms of asset optimization.

10

11 Q. Please describe Tampa Electric's Optimization Mechanism  
12 submitted in Docket No. 20160160-EI and approved by Order  
13 No. PSC-2017-0456-S-EI.

14

15 A. Effective January 1, 2018, for the four-year period from  
16 2018 through 2021, gains on all optimization mechanism  
17 activities, including short-term wholesale sales, short-  
18 term wholesale purchases, and all forms of asset  
19 optimization undertaken each year will be shared between  
20 shareholders and customers. The sharing thresholds are  
21 (a) for the first \$4.5 million per year, 100 percent of  
22 gains to customers; (b) for gains greater than \$4.5  
23 million per year and less than \$8.0 million per year,  
24 split 60 percent to shareholders and 40 percent to  
25 customers; and (c) for gains greater than \$8.0 million

1 per year, 50-50 sharing between shareholders and  
2 customers.

3  
4 **Optimization Mechanism Transactions**

5 **Q.** Please provide the details of Tampa Electric's short-term  
6 wholesale sales under the Optimization Mechanism for  
7 2018.

8  
9 **A.** Optimization Mechanism gains from wholesale sales were  
10 \$2,546,558 or 40 percent of Optimization Gains for 2018.  
11 The monthly detail is shown in my exhibit in the schedule  
12 "Wholesale Sales-Table 3."

13  
14 **Q.** Please provide the details of Tampa Electric's short-term  
15 wholesale purchases under the Optimization Mechanism for  
16 2018.

17  
18 **A.** Optimization Mechanism gains from wholesales purchases  
19 were \$2,973,160 or 47 percent of Optimization Gains for  
20 2018. The monthly detail can be found in my exhibit on  
21 the schedule labeled "Wholesale Purchases-Table 4."

22  
23 **Q.** Please describe Tampa Electric's asset optimization  
24 activities and the gains from those transactions under  
25 the Optimization Mechanism for 2018.



1 **A.** Optimization Mechanism gains from asset optimization  
2 activities were \$847,539 or 13 percent of Optimization  
3 Gains for 2018. The gains from asset optimization  
4 activities are shown in my exhibit at "Asset Optimization  
5 Detail-Table 5."

6  
7 A description of the asset optimization activities in  
8 which Tampa Electric engaged during 2018 is provided  
9 below.

- 10 • Gas storage utilization - release contracted storage  
11 space or sell stored gas during non-critical demand  
12 seasons;
- 13 • Delivered gas sales using existing transport - sell  
14 gas to Florida customers, using Tampa Electric's  
15 existing gas transportation capacity during periods  
16 when it is not needed to serve Tampa Electric's  
17 native electric load;
- 18 • Delivered solid fuel and or transportation capacity  
19 sales using existing transport - sell coal and coal  
20 transportation to Florida industrial customers,  
21 using Tampa Electric's existing coal and  
22 transportation capacity during periods when it is  
23 not needed to serve Tampa Electric's native electric  
24 load;
- 25 • Asset Management Agreement ("AMA") - outsource

1 optimization functions to a third party through  
2 assignment of power, transportation and/or storage  
3 rights in exchange for a premium to be paid to Tampa  
4 Electric.

5

6 **Q.** Please summarize the activities and results of the  
7 Optimization Mechanism for 2018.

8

9 **A.** Tampa Electric participated in the following Optimization  
10 Mechanism activities in 2018: wholesale power purchases  
11 and sales, gas storage utilization, delivered gas sales,  
12 delivered solid fuel sales, and natural gas storage AMAs.  
13 The Optimization Gains for 2018 were \$6,367,256 which  
14 exceeded the \$4,500,000 threshold by \$1,867,256 as shown  
15 in my exhibit on schedule "Total Gains Threshold Schedule-  
16 Table 1". Customer benefits were \$5,246,902, and company  
17 benefits were \$1,120,353 in 2018.

18

19 **Q.** Did Tampa Electric incur incremental Optimization  
20 Mechanism costs during 2018?

21

22 **A.** Tampa Electric incurred incremental Optimization  
23 Mechanism personnel costs to establish processes and  
24 manage these new activities. However, the company agreed  
25 that it would not seek recovery of these costs if the

1 Optimization Mechanism was approved and therefore has not  
2 tracked the costs.

3

4 **Q.** Overall, were Tampa Electric's activities under the  
5 Optimization Mechanism successful in 2018?

6

7 **A.** Yes, Tampa Electric produced customer gains of \$5,246,902  
8 in the first year of Optimization Mechanism activity. The  
9 company is also optimistic about increasing future  
10 customer gains through continued improvements in  
11 processes, reporting, and optimization strategies.

12

13 Tampa Electric began 2018 with significant gains on both  
14 power and gas activities in January as cold weather  
15 provided some optimization opportunities. Wholesale power  
16 sales were consistent in most months during the year,  
17 while wholesale power purchases increased during typical  
18 spring and fall outage seasons when purchased power from  
19 the market was less than the cost of the company's  
20 generation. Natural gas storage AMA activity was  
21 initiated in 2018, with a short-term trial with one  
22 company and then the selection of a longer-term AMA  
23 partner following an RFP process.

24

25 Despite the success of the program in 2018, without the

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gains resulting from activities allowed by the very cold weather in January 2018, the gains would be close to the \$4,500,000 customer-value threshold, leaving the company with minimal gains relative to the risk incurred to operate the Optimization Mechanism.

**Q.** Does this conclude your testimony?

**A.** Yes, it does.

EXHIBIT TO THE TESTIMONY OF  
JOHN C. HEISEY

OPTIMIZATION MECHANISM RESULTS  
JANUARY 2018 - DECEMBER 2018

**TAMPA ELECTRIC  
OPTIMIZATION MECHANISM  
Actual for the Period: January 2018 through December 2018**

**TOTAL GAINS THRESHOLD SCHEDULE-Table 1**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Month	Wholesale Sales Total Gains (\$)	Wholesale Purchases Total Savings (\$)	Asset Optimization Gains (\$)	Total Monthly Gains (\$)	Threshold 1 Gains ≤ \$4.5 M (\$)	Threshold 2 \$4.5M < Gains ≤ \$8.0M (\$)	Threshold 3 Gains > \$8.0 M (\$)
				(2) + (3) + (4)			
January	957,186	9,131	788,141	1,754,458	1,754,458	-	-
February	1,615	190,770	-	192,385	192,385	-	-
March	139,559	264,767	-	404,326	404,326	-	-
April	242,660	11,971	(8,813)	245,818	245,818	-	-
May	299,845	352,904	-	652,749	652,749	-	-
June	306,237	297,177	-	603,414	603,414	-	-
July	152,867	-46,631	685	106,921	106,921	-	-
August	141,559	-46,631	1,621	96,549	96,549	-	-
September	127,807	233,847	(51,872)	309,782	309,782	-	-
October	81,452	550,512	12,715	644,679	133,599	511,080	-
November	18,654	1,155,110	80,159	1,253,922	-	1,253,922	-
December	77,117	234	24,903	102,254	-	102,254	-
<b>Total</b>	<b>2,546,558</b>	<b>2,973,160</b>	<b>847,539</b>	<b>6,367,256</b>	<b>4,500,000</b>	<b>1,867,256</b>	<b>-</b>

**TOTAL GAINS SHARING SCHEDULE-Table 2**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Month	Threshold 1 Gains ≤ \$4.5 M 100% Customer Benefit (\$)	Threshold 2 \$4.5M < Gains ≤ \$8.0M 40% Customer Benefit (\$)	Threshold 2 \$4.5M < Gains ≤ \$8.0M 60% TEC Benefit (\$)	Threshold 3 Gains > \$8.0 M 50% Customer Benefit (\$)	Threshold 3 Gains > \$8.0 M 50% TEC Benefit (\$)	Total Customer Benefits (\$)	Total TEC Benefits (\$)
January	1,754,458	-	-	-	-	1,754,458	-
February	192,385	-	-	-	-	192,385	-
March	404,326	-	-	-	-	404,326	-
April	245,818	-	-	-	-	245,818	-
May	652,749	-	-	-	-	652,749	-
June	603,414	-	-	-	-	603,414	-
July	106,921	-	-	-	-	106,921	-
August	96,549	-	-	-	-	96,549	-
September	309,782	-	-	-	-	309,782	-
October	133,599	204,432	306,647	-	-	338,030	306,647
November	-	501,569	752,353	-	-	501,569	752,353
December	-	40,902	61,352	-	-	40,902	61,352
<b>Total</b>	<b>4,500,000</b>	<b>746,902</b>	<b>1,120,353</b>	<b>-</b>	<b>-</b>	<b>5,246,902</b>	<b>1,120,353</b>

**TAMPA ELECTRIC**  
**WHOLESALE POWER DETAIL**  
**Actual for the Period: January 2018 through December 2018**

**Wholesale Sales-Table 3**

(1)	(2)	(3)	(4)	(5)
Month	Wholesale Sales (MWh)	Wholesale Gross Gains (\$)	Third Party Transmission Costs (\$)	Total Net Wholesale Sales Gains (\$) (3) + (4)
January	54,103	1,136,530	(179,344)	957,186
February	765	1,615	-	1,615
March	30,976	140,083	(524)	139,559
April	51,571	242,660	-	242,660
May	32,138	305,838	(5,993)	299,845
June	24,093	311,831	(5,594)	306,237
July	15,478	157,256	(4,389)	152,867
August	16,495	151,126	(9,567)	141,559
September	14,094	134,893	(7,086)	127,807
October	7,222	82,188	(736)	81,452
November	2,604	37,006	(18,352)	18,654
December	8,202	83,030	(5,913)	77,117
<b>Total</b>	<b>257,741</b>	<b>2,784,056</b>	<b>(237,498)</b>	<b>2,546,558</b>

**Wholesale Purchases-Table 4**

(1)	(2)	(3)	(4)	(5)
Month	Wholesale Purchases (MWh)	Wholesale Savings (\$)	Capacity Purchases (\$)	Total Net Wholesale Purchase Gains (\$) (3) + (4)
January	2,101	9,131	-	9,131
February	37,394	190,770	-	190,770
March	103,400	264,767	-	264,767
April	4,375	11,971	-	11,971
May	84,140	352,904	-	352,904
June	114,400	297,177	-	297,177
July	117,800	(46,631)	-	(46,631)
August	117,800	(46,631)	-	(46,631)
September	112,400	233,847	-	233,847
October	118,446	550,512	-	550,512
November	9,560	1,155,110	-	1,155,110
December	100	234	-	234
<b>Total</b>	<b>821,916</b>	<b>2,973,160</b>	<b>-</b>	<b>2,973,160</b>

**TAMPA ELECTRIC**  
**ASSET OPTIMIZATION DETAIL-Table 5**  
**Actual for the Period: January 2018 through December 2018**

(1)	(2)	(3)	(4)	(5)	(6)
Month	Natural Gas Delivered City- Gate Sales (\$)	Natural Gas Storage Optimization (\$)	Natural Gas AMA Gains (\$)	Resale of Solid Fuel (\$)	Total Asset Optimization Gains (\$)
January					788,141
February					-
March					-
April					(8,813)
May					-
June					-
July					685
August					1,621
September					(51,872)
October					12,715
November					80,159
December					24,903
<b>Total</b>	<b>2,131</b>	<b>754,225</b>	<b>90,209</b>	<b>974</b>	<b>847,539</b>