State of Florida

Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

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13 JUN 13 AM 11:01
COMMISSION CLERK

DATE: June 13, 2013

TO: Office of Commission Clerk (Cole)

FROM: Division of Engineering (Ellis)
Division of Economics (Garl)
Office of the General Counsel (Tan)

RE: Docket No. 130073-EQ – Petition for approval of revisions to standard offer contract and rate schedules COG-1 and COG-2, by Tampa Electric Company.

AGENDA: 06/25/13 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Administrative

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: S:\PSC\ENG\WP\130073.RCM.DOC

Case Background

Section 366.91(3), Florida Statutes (F.S.), requires that each investor-owned utility (IOU) continuously offer to purchase capacity and energy from renewable energy generators. Rules 25-17.200 through 25-17.310, Florida Administrative Code (F.A.C.), require each IOU to file with the Commission by April 1 of each year a standard offer contract based on the next avoidable generating unit or planned purchase. Tampa Electric Company (TECO or Company) filed its petition for approval of an amended standard offer contract on April 1, 2013.

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FPSC-COMMISSION CLERK

TECO's standard offer contract is based on an unsited natural gas-fired combustion turbine (CT) with a 2020 in-service date. This unit is included in the Company's proposed 2013 Ten-Year Site Plan.

On May 13, 2013, TECO submitted a revised tariff sheet to correct an error in the determination of annual scheduled maintenance.

The Commission has jurisdiction over this contract pursuant to Sections 366.04 through 366.06 and 366.91, F.S., and Rules 25-17.200 to 25-17.310, F.A.C.

Discussion of Issues

Issue 1: Should the Commission approve the standard offer contract and related rate schedules filed by Tampa Electric Company?

Recommendation: Yes. The revised standard offer contract and related rate schedules conform to all the requirements of Rules 25-17.200 through 25-17.310, F.A.C., and reflect the economic and technical assumptions of the avoided unit, a 2020 CT. The standard offer contract provides flexibility for developers of renewable generation in payments and other terms. Staff recommends that the revised standard offer contract and related rate schedules filed by TECO be approved. (Ellis)

Staff Analysis: Pursuant to Rule 25-17.250, F.A.C., an IOU must continuously make available a standard offer contract for the purchase of firm capacity and energy from renewable generating facilities and small qualifying facilities with a design capacity of 100 kilowatt (kW) or less. Rule 25-17.250(1), F.A.C., specifies that the standard offer contract must be based on the next avoidable fossil fueled generating unit identified in the utility's Ten-Year Site Plan.

TECO's standard offer contract is based on its proposed 2013 Ten-Year Site Plan which includes two generating unit additions, the Polk 2-5 combined cycle (CC) conversion in 2017 and an unsited CT in 2020. On January 8, 2013, the Commission granted the determination of need for the Polk 2-5 CC conversion.[1] Based on Rule 25-17.250(2), F.A.C., the Polk 2-5 CC conversion is not avoidable for purposes of the standard offer contract. TECO's proposed 2013 standard offer contract is based on an unsited 190 megawatt (MW) natural gas-fired CT with an in-service date in May, 2020.

Revised Standard Offer Contract

A renewable generator can elect to have no performance guarantees and deliver energy on an as-available basis. If the renewable generator commits to certain performance requirements based on the avoided unit, including being online and delivering capacity by the in-service date, it can receive a capacity payment under the proposed standard offer contract or a separately negotiated contract. To promote renewable generation, the Commission requires multiple options for capacity payments, including the option to receive normal, levelized, early, or early levelized payments.

If a renewable generator elects to receive normal or levelized payments, it would receive those payments starting on the in-service date of the avoided unit, May 2020. If early or early levelized capacity payments were selected, those payments would begin at an earlier date. Early or early levelized payments tend to be less in the later years as the net present value of payments must remain the same. In addition, capacity payments greater than those made under the normal option require additional security from the renewable generator. Table 1 below estimates the annual payments that would be made to a renewable facility of 50 megawatts (MW) running at a 90 percent capacity factor, with an in-service date of January 1, 2014.

[1] See Order No. PSC-13-0014-FOF-EI, issued January 8, 2013, in Docket 120234-EI, In re: Petition to determine need for Polk 2-5 combined cycle conversion, by Tampa Electric Company.

Table 1 – Estimated Annual Payments to a 50 MW Renewable Facility (90% Capacity Factor)

Year	Energy Payment	Capacity Payment by Type			
		Normal	Levelized	Early	Early Levelized
	($000)	($000)	($000)	($000)	($000)
2014	14,734	-	-	2,258	2,736
2015	15,701	-	-	2,323	2,744
2016	17,700	-	-	2,391	2,752
2017	14,949	-	-	2,461	2,760
2018	15,719	-	-	2,532	2,769
2019	16,944	-	-	2,606	2,778
2020	17,879	3,104	3,592	2,682	2,786
2021	19,255	4,792	5,404	2,760	2,796
2022	19,254	4,932	5,421	2,841	2,805
2023	22,627	5,075	5,438	2,924	2,814
2024	23,966	5,223	5,455	3,009	2,824
2025	24,257	5,375	5,473	3,097	2,834
2026	23,780	5,532	5,491	3,187	2,845
2027	27,384	5,693	5,510	3,280	2,855
2028	28,004	5,859	5,529	3,376	2,866
2029	28,436	6,030	5,548	3,474	2,877
2030	28,719	6,206	5,568	3,575	2,888
2031	31,969	6,387	5,589	3,680	2,900
2032	33,415	6,574	5,610	3,787	2,912
2033	33,740	6,766	5,631	3,898	2,924
Sum	**458,432**	**77,550**	**75,259**	**20,139**	**56,465**
NPV	**201,198**	**27,588**	**27,588**	**27,588**	**27,588**

TECO's revised tariff sheets reflect changes associated with the economic and technical parameters of the 2020 CT as compared to the previous avoided unit. Some maintenance costs were shifted from variable operations & maintenance (O&M) to fixed O&M, based on TECO's use of service contracts for periodic CT maintenance. On May 13, 2013, TECO submitted revised tariff sheets to reflect updated information regarding the maintenance schedule of the 2020 CT.

TECO's proposed standard offer also includes two revisions related to indemnification and insurance required for interconnection. The first revision references state and federal law relating to government entities, and acknowledges that in the event of a claim, legislative action may be required above certain amounts. The second revision allows for a self-insurance option for companies upon approval by TECO, with an annual requirement for the renewable generator to demonstrate its continued ability to self-insure. The option to self-insure increases the flexibility of the standard offer for renewable generators. Beyond these revisions, all other terms, such as performance, payment, and security are retained from the previous 2012 standard offer contract and related rate schedules. The proposed revised tariff sheets are attached to this recommendation in type and strike format as Attachment A.

Conclusion

The revised standard offer contract and related rate schedules conform to all the requirements of Rules 25-17.200 through 25-17.310, F.A.C., and reflect the economic and technical assumptions of the avoided unit, a 2020 CT. The standard offer contract provides flexibility for developers of renewable generation in payments and other terms. Staff recommends that the revised standard offer contract and related rate schedules filed by TECO be approved.

Issue 2: Should this docket be closed?

Recommendation: Yes. This docket should be closed upon issuance of a Consummating Order, unless a person whose substantial interests are affected by the Commission's decision files a protest within 21 days of the issuance of the Commission's proposed agency action order. Potential signatories should be aware that, if a timely protest is filed, TECO's standard offer contract may subsequently be revised. (Tan)

Staff Analysis: This docket should be closed upon issuance of a Consummating Order, unless a person whose substantial interests are affected by the Commission's decision files a protest within 21 days of the issuance of the Commission's proposed agency action order. Potential signatories should be aware that, if a timely protest is filed, TECO's standard offer contract may subsequently be revised.

TECO
TAMPA ELECTRIC

~~THIRD~~ FOURTH REVISED SHEET NO. 8.103
CANCELS ~~SECOND~~ THIRD REVISED SHEET NO. 8.103

Continued from Sheet No. 8.102

9. The Company's available maximum generation resources in this methodology is defined as the maximum capacity less ~~spinning~~ operating reserve requirements.

10. The "Standard Tariff Block" is defined to be an x-megawatt (XMW) block equivalent to the combined actual hourly generation delivered to Tampa Electric from all QFs making as-available energy sales to Tampa Electric. In the absence of metered information on exports from a QF making as-available energy sales to Tampa Electric, an estimate of the hourly exports from that Facility will be used, rounded to the nearest 5 MW and then added to the sum of all other known as-available energy purchases for that hour.

SUPPLEMENTAL FUEL

The term "supplemental fuel" refers to the variable cost for additional fuel to be delivered to Tampa Electric's generation facilities. The supplemental fuel price includes the cost of the fuel commodity at market prices plus the variable cost to deliver the commodity to the generation facility. Market prices for coal, oil and natural gas are based on published indexes or current market activity for commodities of comparable quality to those used in Tampa Electric's generation facilities.

Continued to Sheet No. 8.104

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~July 13, 2010~~

TAMPA ELECTRIC

~~FOURTH~~ FIFTH REVISED SHEET NO. 8.326
CANCELS ~~THIRD~~ FOURTH REVISED SHEET NO. 8.326

RATE SCHEDULE COG-2
TABLE OF APPENDICES

APPENDIX	TITLE	SHEET NO.
A	VALUE OF DEFERRAL METHODOLOGY	8.328
B	METHODOLOGY TO BE USED IN THE CALCULATION OF AVOIDED ENERGY COST	8.344
C	~~2019~~ 2020 COMBUSTION TURBINE • Minimum Performance Standard • Parameters for Avoided Unit Capacity Costs • Exemplary Capacity Payment Schedules • Parameters for Avoided Unit Energy Costs	8.406
D	RESERVED FOR FUTURE USE	-
E	RESERVED FOR FUTURE USE	-
F	RESERVED FOR FUTURE USE	-

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~June 10, 2012~~

TECO
TAMPA ELECTRIC

~~FIRST~~ SECOND REVISED SHEET NO. 8.356
CANCELS ~~ORIGINAL~~ FIRST REVISED SHEET NO. 8.356

Continued from Sheet No. 8.352

9. The Company's Maximum Available Generation in this methodology is defined as the maximum capacity less ~~spinning~~ operating reserve requirements.

10. The "Standard Tariff Block" is defined to be an x-megawatt (XMW) block equivalent to the combined actual hourly generation delivered to the Company from all CEPs making As-Available Energy sales to the Company. In the absence of metered information on exports from the CEP making As-Available Energy sales to the Company, an estimate of the hourly exports from that Facility will be used, rounded to the nearest 5 MW and then added to the sum of all other known As-Available Energy purchases for that hour.

Continued to Sheet No. 8.376

ISSUED BY: ~~C. R. Black~~ G. L. Gillette, President

DATE EFFECTIVE: ~~July 29, 2008~~

TECO
TAMPA ELECTRIC

~~FOURTH~~ FIFTH REVISED SHEET NO. 8.406
CANCELS ~~THIRD~~ FOURTH REVISED SHEET NO. 8.406

RATE SCHEDULE COG-2
APPENDIX C

~~2019~~ 2020 COMBUSTION TURBINE

This Designated Avoided Unit is a ~~177~~ 220 MW (winter rating) natural gas-fired combustion turbine with a May 1, ~~2019~~2020, in-service date.

MINIMUM PERFORMANCE STANDARDS

In order to receive a Monthly Capacity Payment, all Contracted Capacity and Associated Energy provided by CEPs shall meet or exceed the following MPS on a monthly basis. The MPS are based on the anticipated peak and off-peak dispatchability, unit availability, and operating factor of the Designated Avoided Unit over the term of this Standard Offer Contract. The CEP's proposed generating facility ("the Facility") as defined in the Standard Offer Contract will be evaluated against the anticipated performance of a combustion turbine, starting with the first Monthly Period following the date selected in Paragraph 6.b.ii of the Company's Standard Offer Contract.

1. **Dispatch Requirements:** The CEP shall provide peaking capacity to the Company on a firm commitment, first-call, on-call, as-needed basis. In order to receive a Contracted Capacity Payment for each calendar month that the Facility is to be dispatched, the CEP must meet or exceed both the minimum Monthly Availability and Monthly Capacity Factor requirements.

2. **Dispatch Procedure:** Commencing on the calendar day prior to the Facility In-Service Date or the Extended Facility In-Service Date, as applicable, and continuing each calendar day thereafter during the Term, by 7:00 A.M. EPT, the CEP shall electronically transmit a schedule ("Available Schedule") of the hour-by-hour amounts of Contracted Capacity expected to be available from the Facility the next day ("Committed Capacity"). Commencing on the calendar day prior to the Facility In-Service Date or the Extended Facility In-Service Date, as applicable, and continuing each calender day thereafter during the Term, by 3:00 P.M. EPT, the Company shall electronically transmit the hour-by-hour amounts of Contracted Capacity that the Company desires the CEP to dispatch from the Facility the next day based on the Available Schedule supplied at 7:00 A.M. EPT by the CEP ("Dispatch Schedule"). The CEP's Available Schedule and the Company's Dispatch

Continued to Sheet No. 8.408

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~June 19, 2012~~

TECO
TAMPA ELECTRIC

~~FIRST~~ <u>SECOND</u> REVISED SHEET NO. 8.416
CANCELS ~~ORIGINAL~~ <u>FIRST REVISED</u> SHEET NO. 8.416

<u>Continued from Sheet No. 8.414</u>

4. **Annual Scheduled Maintenance:** Each year the CEP shall prepare, coordinate, and provide by April 1st all planned maintenance with the Company. The Company will review and approve annual/major scheduled maintenance by July 1st for the balance of the current year and following calendar year. A maximum of ~~3~~<u>13</u> days (~~72~~ <u>312</u> hours) each year for annual maintenance and a ~~total~~<u>maximum</u> of ~~12~~ <u>6</u> weeks (~~2,016~~<u>1,008</u> hours) every fifteenth year for major maintenance will be allowed. Scheduled maintenance shall not be planned during December through February without prior written consent from the Company. At the option of the CEP and by written notification to the Company, scheduled outage time may be utilized during any other months to improve the CEP's Availability and Capacity Factors and such scheduled outage hours will be disregarded from the Monthly Availability Factor and Capacity Factor calculations. However, once allowable maintenance hours have been utilized, all other hours during the year will be considered in Availability and Capacity Factor calculations.

5. **Monthly Capacity Payment:** Starting with the CEP's Commercial In-Service Date, for months when the CEP unit has been dispatched (provided that CEP has achieved at least a 90% Monthly Availability Factor), the Monthly Capacity Payment for each Monthly Period shall be calculated according to the following:

   a. In the event that the Monthly Capacity Factor is less than 80%, no Monthly Capacity Payment shall be paid to the CEP. That is:

   $$MCP = \$0$$

   b. In the event that the Monthly Capacity Factor is greater then or equal to 80% but less than 90%, the Monthly Capacity Payment shall be calculated from the following formula:

   $$MCP = [(BCC) \times (.02 \times (CF - 45))] \times CC$$

<u>Continued on Sheet No. 8.418</u>

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~July 13, 2010~~

TECO
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~~FIFTH~~ SIXTH REVISED SHEET NO. 8.422
CANCELS ~~FOURTH~~ FIFTH REVISED SHEET NO. 8.422

Continued from Sheet No. 8.418

PARAMETERS FOR AVOIDED CAPACITY COSTS

Beginning with the in-service date (5/1/~~2019~~2020) of the Company's Designated Avoided Unit, a ~~177~~ 220MW (Winter Rating) natural gas-fired Combustion Turbine, for a 1 year deferral:

			VALUE
VAC_m	=	Company's monthly value of avoided capacity, \$/kW/month, for each month of year n	~~8.43~~7.76
K	=	present value of carrying charges for one dollar of investment over L years with carrying charges computed using average annual rate base and assumed to be paid at the middle of each year and present value to the middle of the first year	~~1.4763~~1.4759
I_n	=	total direct and indirect cost, in mid-year \$/kW including AFUDC but excluding CWIP, of the Designated Avoided Unit(s) with an in-service date of year n, including all identifiable and quantifiable costs relating to the construction of the Designated Avoided Unit that would have been paid had the Designated Avoided Unit(s) been constructed	~~878.11~~813.08
O_n	=	total fixed operation and maintenance expense for the year n, in mid-year \$/kW/year, of the Designated Avoided Unit(s);	~~9.67~~13.46
i_p	=	annual escalation rate associated with the plant cost of the Designated Avoided Unit(s)	3.0%
i_o	=	annual escalation rate associated with the operation and maintenance expense of the Designated Avoided Unit(s);	2.4%
r	=	discount rate, defined as the Company's incremental after tax cost of capital;	7.95%

Continued to Sheet No. 4.424

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~June 19, 2012~~

TECO
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~~FIFTH~~ SIXTH REVISED SHEET NO. 8.424
CANCELS ~~FOURTH~~ FIFTH REVISED SHEET NO. 8.424

Continued from Sheet No. ~~8.122~~8.422

L	=	expected life of the Designated Avoided Unit(s); and	25
n	=	year for which the Designated Avoided Unit is deferred starting with its original anticipated in-service date and ending with the termination of the contract for the purchase of firm capacity and energy.	~~2019~~2020
A_m	=	monthly early capacity payments to be made to the CEP for each month of the contract year n, in $/kW/month, if payments start in ~~2012~~2013;	~~3.25~~3.10
m	=	Earliest year in which early capacity payments to the CEP may begin;	~~2012~~2013*
F	=	the cumulative present value, in the year contractual payments will begin, of the avoided capital cost component of capacity payments over the term of the contract which would have been made had capacity payments commenced with the anticipated in-service date of the Designated Avoided Unit(s);	~~411.58~~381.00*
t	=	the term, in years, of the contract for the purchase of firm capacity if early capacity payments commence in year m;	17*

** Actual values will be determined based on the capacity payment start date and contract term selected by the CEP.*

Continued to Sheet No. 8.426

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~June 19, 2012~~

TECO
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~~FIFTH~~ SIXTH REVISED SHEET NO. 8.426
CANCELS ~~FOURTH~~ FIFTH REVISED SHEET NO. 8.426

Continued from Sheet No. 8.424

~~2016 COMBUSTION TURBINE – AVOIDED UNIT~~
~~MONTHLY CAPACITY PAYMENT RATE ($/KW-MONTH)~~
~~NON-LEVELIZED PAYMENT OPTIONS~~

		~~OPTION 1~~	~~OPTION 2~~						
		~~NORMAL PAYMENT~~	~~EARLY PAYMENT~~						
~~CONTRACT YEAR~~		~~Starting~~ [illegible]	~~Starting~~ [illegible]	~~Starting~~ [illegible]	~~Starting~~ [illegible]	~~Starting~~ [illegible]	~~Starting~~ [illegible]	~~Starting~~ [illegible]	~~Starting~~ [illegible]
~~FROM~~	~~TO~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~
[illegible]	[illegible]								[illegible]
[illegible]	[illegible]							[illegible]	[illegible]
[illegible]	[illegible]						4.04	[illegible]	[illegible]
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ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~June 19, 2012~~

TECO
TAMPA ELECTRIC

~~FIFTH~~ SIXTH REVISED SHEET NO. 8.426
CANCELS ~~FOURTH~~ FIFTH REVISED SHEET NO. 8.426

2020 COMBUSTION TURBINE - AVOIDED UNIT
MONTHLY CAPACITY PAYMENT RATE ($/KW-MONTH)
NON-LEVELIZED PAYMENT OPTIONS

		OPTION 1	OPTION 2						
		NORMAL PAYMENT	EARLY PAYMENT						
CONTRACT YEAR		Starting 5/1/20	Starting 5/1/19	Starting 5/1/18	Starting 5/1/17	Starting 5/1/16	Starting 5/1/15	Starting 5/1/14	Starting 5/1/13
FROM	TO	$/kw-mo	$/kw-mo	$/kw-mo	$/kw-mo	$/kw-mo	$/kw-mo	$/kw-mo	$/kw-mo
5/1/13	4/30/14								3.10
5/1/14	4/30/15							3.40	3.19
5/1/15	4/30/16						3.93	3.50	3.29
5/1/16	4/30/17					4.46	4.04	3.60	3.39
5/1/17	4/30/18				5.06	4.58	4.16	3.80	3.48
5/1/18	4/30/19			5.80	5.21	4.71	4.28	3.91	3.58
5/1/19	4/30/20		6.68	5.97	5.36	4.85	4.41	4.02	3.69
5/1/20	4/30/21	7.76	6.87	6.14	5.52	4.99	4.54	4.14	3.79
5/1/21	4/30/22	7.99	7.07	6.32	5.68	5.14	4.67	4.26	3.90
5/1/22	4/30/23	8.22	7.28	6.50	5.85	5.29	4.81	4.39	4.02
5/1/23	4/30/24	8.46	7.49	6.69	6.02	5.44	4.95	4.51	4.14
5/1/24	4/30/25	8.71	7.71	6.89	6.19	5.60	5.09	4.65	4.26
5/1/25	4/30/26	8.96	7.94	7.09	6.37	5.76	5.24	4.78	4.38
5/1/26	4/30/27	9.22	8.17	7.29	6.56	5.93	5.39	4.92	4.51
5/1/27	4/30/28	9.49	8.41	7.51	6.75	6.10	5.56	5.06	4.64
5/1/28	4/30/29	9.77	8.65	7.73	6.95	6.28	5.71	5.21	4.77
5/1/29	4/30/30	10.05	8.90	7.95	7.15	6.47	5.88	5.36	4.91

Continued to Sheet No. 8.427

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~June 19, 2012~~

TECO
TAMPA ELECTRIC

~~ORIGINAL~~ FIRST REVISED SHEET NO. 8.427
CANCELS ORIGINAL SHEET NO. 8.427

Continued from Sheet No. 8.426

~~2019 COMBUSTION TURBINE - AVOIDED UNIT~~
~~MONTHLY CAPACITY PAYMENT RATE ($/KW-MONTH)~~
~~LEVELIZED PAYMENT OPTIONS~~

		~~OPTION 3~~	~~OPTION 4~~						
		~~LEVELIZED NORMAL PAYMENT~~	~~LEVELIZED EARLY PAYMENT~~						
~~CONTRACT YEAR~~		~~Starting 5/1/19~~	~~Starting 5/1/18~~	~~Starting 5/1/17~~	~~Starting 5/1/16~~	~~Starting 5/1/15~~	~~Starting 5/1/14~~	~~Starting 5/1/13~~	~~Starting 5/1/12~~
~~FROM~~	~~TO~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~	~~$/kw-mo~~
~~5/1/12~~	~~4/30/13~~								~~3.80~~
~~5/1/13~~	~~4/30/14~~							~~4.23~~	~~3.84~~
~~5/1/14~~	~~4/30/15~~						~~4.44~~	~~4.24~~	~~3.84~~
~~5/1/15~~	~~4/30/16~~					~~5.30~~	~~4.73~~	~~4.25~~	~~3.82~~
~~5/1/16~~	~~4/30/17~~				~~5.87~~	~~5.31~~	~~4.74~~	~~4.26~~	~~3.83~~
~~5/1/17~~	~~4/30/18~~			~~6.77~~	~~5.99~~	~~5.32~~	~~4.76~~	~~4.27~~	~~3.84~~
~~5/1/18~~	~~4/30/19~~		~~7.72~~	~~6.78~~	~~6.00~~	~~5.33~~	~~4.77~~	~~4.27~~	~~3.85~~
~~5/1/19~~	~~4/30/20~~	~~8.88~~	~~7.74~~	~~6.80~~	~~6.01~~	~~5.35~~	~~4.78~~	~~4.28~~	~~3.86~~
~~5/1/20~~	~~4/30/21~~	~~8.90~~	~~7.75~~	~~6.81~~	~~6.03~~	~~5.36~~	~~4.79~~	~~4.29~~	~~3.87~~
~~5/1/21~~	~~4/30/22~~	~~8.92~~	~~7.77~~	~~6.83~~	~~6.04~~	~~5.37~~	~~4.80~~	~~4.31~~	~~3.88~~
~~5/1/22~~	~~4/30/23~~	~~8.94~~	~~7.79~~	~~6.84~~	~~6.05~~	~~5.38~~	~~4.81~~	~~4.32~~	~~3.89~~
~~5/1/23~~	~~4/30/24~~	~~8.96~~	~~7.81~~	~~6.86~~	~~6.07~~	~~5.40~~	~~4.82~~	~~4.33~~	~~3.90~~
~~5/1/24~~	~~4/30/25~~	~~8.98~~	~~7.83~~	~~6.88~~	~~6.08~~	~~5.41~~	~~4.83~~	~~4.34~~	~~3.91~~
~~5/1/25~~	~~4/30/26~~	~~9.00~~	~~7.85~~	~~6.90~~	~~6.10~~	~~5.43~~	~~4.85~~	~~4.35~~	~~3.92~~
~~5/1/26~~	~~4/30/27~~	~~9.02~~	~~7.87~~	~~6.91~~	~~6.11~~	~~5.44~~	~~4.86~~	~~4.36~~	~~3.93~~
~~5/1/27~~	~~4/30/28~~	~~9.04~~	~~7.89~~	~~6.93~~	~~6.13~~	~~5.46~~	~~4.87~~	~~4.37~~	~~3.94~~
~~5/1/28~~	~~4/30/29~~	~~9.07~~	~~7.91~~	~~6.95~~	~~6.15~~	~~5.47~~	~~4.89~~	~~4.39~~	~~3.95~~

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~June 10, 2012~~

TECO
TAMPA ELECTRIC

~~ORIGINAL~~ FIRST REVISED SHEET NO. 8.427
CANCELS ORIGINAL SHEET NO. 8.427

2020 COMBUSTION TURBINE - AVOIDED UNIT
MONTHLY CAPACITY PAYMENT RATE ($/KW-MONTH)
LEVELIZED PAYMENT OPTIONS

		OPTION 3	OPTION 4						
		LEVELIZED NORMAL PAYMENT	LEVELIZED EARLY PAYMENT						
CONTRACT YEAR		Starting 5/1/20	Starting 5/1/19	Starting 5/1/18	Starting 5/1/17	Starting 5/1/16	Starting 5/1/15	Starting 5/1/14	Starting 5/1/13
FROM	TO	$/kw-mo	$/kw-mo	$/kw-mo	$/kw-mo	$/kw-mo	$/kw-mo	$/kw-mo	$/kw-mo
5/1/13	4/30/14								3.67
5/1/14	4/30/15							4.09	3.68
5/1/15	4/30/16						4.57	4.10	3.69
5/1/16	4/30/17					5.12	4.58	4.11	3.70
5/1/17	4/30/18				5.78	5.14	4.59	4.12	3.71
5/1/18	4/30/19			6.55	5.79	5.16	4.61	4.14	3.73
5/1/19	4/30/20		7.47	6.57	5.81	5.17	4.62	4.15	3.74
5/1/20	4/30/21	8.59	7.49	6.59	5.83	5.19	4.64	4.16	3.75
5/1/21	4/30/22	8.62	7.52	6.61	5.85	5.20	4.65	4.18	3.76
5/1/22	4/30/23	8.65	7.54	6.63	5.87	5.22	4.67	4.19	3.78
5/1/23	4/30/24	8.68	7.57	6.65	5.89	5.24	4.68	4.21	3.79
5/1/24	4/30/25	8.70	7.59	6.68	5.91	5.26	4.70	4.22	3.80
5/1/25	4/30/26	8.73	7.62	6.70	5.93	5.28	4.72	4.24	3.82
5/1/26	4/30/27	8.76	7.65	6.72	5.95	5.30	4.74	4.25	3.83
5/1/27	4/30/28	8.79	7.67	6.75	5.97	5.32	4.75	4.27	3.85
5/1/28	4/30/29	8.83	7.70	6.77	6.00	5.34	4.77	4.29	3.86
5/1/29	4/30/30	8.86	7.73	6.80	6.02	5.36	4.79	4.30	3.88

Continued to Sheet No. 8.428

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~June 19, 2012~~

TECO
TAMPA ELECTRIC

~~FIFTH~~ SIXTH REVISED SHEET NO. 8.428
CANCELS ~~FOURTH~~ FIFTH REVISED SHEET NO. 8.428

Continued from Sheet No. 8.427

BASIS FOR MONTHLY ENERGY PAYMENT CALCULATION:

1. **Energy Payment Rate:** Prior to the in-service date of the avoided unit, the CEP's Energy Payment Rate shall be the Company's As-Available Energy Payment Rate (AEPR), as described in Appendix B. Starting the in-service date of the avoided unit, the basis for determining the Energy Payment Rate will be whether:

   a. The Company has dispatched the CEP's unit on AGC; or

   b. The Company has dispatched the CEP's unit off AGC and the CEP is operating its unit at or below the dispatched level; or

   c. The Company has dispatched the CEP's unit off AGC but the CEP is operating its unit above the dispatched level; or

   d. The Company has not dispatched the CEP's unit but the CEP is providing capacity and energy.

   Note: For any given hour the CEP unit must be operating on AGC a minimum of 30 minutes to qualify under case (a).

   The CEP's total monthly energy payment shall equal: (1) the sum of the hourly energy at the Unit Energy Payment Rate (UEPR), when the CEP's unit was dispatched by the Company, plus (2) the sum of the hourly energy at the corresponding hourly AEPR when the CEP's unit was operating at times other than when the Company dispatched the unit.

2. **Unit Energy Payment Rate:** Starting the in-service date of the avoided unit, the CEP will be paid at the UEPR for energy provided in Paragraph 1.a, Paragraph 1.b and that portion of the energy provided up to the dispatched level in Paragraph 1.c as defined above. The UEPR, which is based on the Company's Designated Avoided Unit and Heat Rate value of ~~10,799~~10,146 Btu/kWh, will be calculated monthly by the following formula:

$$UEPR = FC + O_v$$

where;

O_v = Unit Variable Operation & Maintenance Expense in $/MWH.

Continued to Sheet No. 8.434

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~June 19, 2012~~

TECO
TAMPA ELECTRIC

~~THIRD~~ FOURTH REVISED SHEET NO. 8.434
CANCELS ~~SECOND~~ THIRD REVISED SHEET NO. 8.434

Continued from Sheet No. 8.428

FC = Fuel Component of the Energy Payment in $/MWH as defined by:

FC = ~~11,083~~ 10,146 Btu/kWh x FP / 1,000

where;

FP = Fuel Price in $/MMBTU determined by:

FP = GC/(1-FRP) + TC

where;

GC = Fuel Price in $/MMBTU determined by taking the first publication of each month of Inside FERC's Gas Market Report low price quotation under the column titled "Index" for "Florida Gas Transmission Co., "Zone 2", listings.

TC = then currently approved Florida Gas Transmission (FGT) Company tariff rate in $/MMBTU for forward haul Interruptible Market Area Transportation (ITS-1), including usage and surcharges.

FRP= then currently approved FGT Company tariff Fuel Reimbursement Charge Percentage in percent applicable to forward hauls for recovery of costs associated with the natural gas used to operate FGT's pipeline system.

3. **As-Available Energy Payment Rate (AEPR):** For energy provided and not covered under Paragraph 2 above, the AEPR will be applicable and will be based on the system avoided energy cost as defined in Appendix B.

Continued to Sheet No. 8.436

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~June 10, 2012~~

TECO
TAMPA ELECTRIC

~~FIFTH~~ SIXTH REVISED SHEET NO. 8.436
CANCELS ~~FOURTH~~ FIFTH REVISED SHEET NO. 8.436

Continued from Sheet No. 8.428

PARAMETERS FOR AVOIDED UNIT ENERGY AND VARIABLE OPERATION AND MAINTENANCE COSTS

Beginning on May 1, ~~2019~~2020, to the extent that the Designated Avoided Unit(s) would have been operated had it been installed by the Company:

			VALUE
O_v	=	total variable operating and maintenance expense, in $/MWH, of the Designated Avoided Unit(s), in year n	~~4.67~~2.13
H	=	The average annual heat rate, in British Thermal Units (Btus) per kilowatt-hour (Btu/kWh), of the Designated Avoided Unit(s)	~~11,983~~10,146

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: ~~June 19, 2012~~

TECO
TAMPA ELECTRIC

~~ORIGINAL~~ FIRST REVISED SHEET NO. 8.720
CANCELS ORIGINAL SHEET NO. 8.720

Continued from Sheet No. 8.715

iv. Any other event or act that is the result of, or proximately caused by a party.

For the purpose of this paragraph, the term party shall mean either the Company or ~~qf~~QF, as the case may be.

With respect to a QF that is the state, a state agency or subdivision (as those terms are defined in Section 768.28(2), Florida Statutes, or the successor thereto), the obligations of Customer set forth in Paragraph 6.b above shall be subject to Section 768.28 (or the successor thereto), including the limitations contained therein. With respect to a QF that is the United States of America, or agency or subdivision thereof, the obligations set forth in the first sentence of Paragraph 6.b shall not apply. In either case, the Company reserves its rights under Section 768.28 (or the successor thereto), and the Federal Tort Claims Act (or the successor thereto), as applicable, including, but not limited to, the right to pursue legislative relief.

c. Insurance: The ~~qf~~ QF shall deliver to the Company, at least fifteen (15) days prior to the start of any interconnection work, a certificate of insurance certifying the ~~qf's~~ QF's coverage under a liability insurance policy issued by a reputable insurance company authorized to do business in the State of Florida naming the ~~qf~~ QF as named insured, and the Company as an additional named insured, which policy shall contain a broad form contractual endorsement specifically covering the liabilities accepted under this agreement arising out of the interconnection to the ~~qf~~QF, or caused by operation of any of the ~~qf's~~ QF's equipment or by the ~~qf's~~ QF's failure to maintain its equipment in satisfactory and safe operating condition.

i. In subsequent years, a certificate of insurance renewal must be provided annually to the Company indicating the ~~qf's~~ QF's continued coverage as described herein. Renewal certification shall be sent to:

Tampa Electric Company
Risk Management Department
P. O. Box 111
Tampa, FL 33601

ii. The policy providing such coverage for a Standard Offer Contract shall provide public liability insurance, including coverage for personal injury, death and property damage, in an amount not less than $1,000,000 for each occurrence; provided however, if ~~qf~~ QF has insurance with limits greater than the minimum limits required herein, the ~~qf~~ QF shall set any amount higher than the minimum limits required by the Company to satisfy the insurance requirements of this Agreement.

Continued to Sheet No. 8.725

ISSUED BY: ~~J. B. Ramil~~G. L. Gillette, President

DATE EFFECTIVE: ~~March 30, 1999~~

TECO
TAMPA ELECTRIC

~~ORIGINAL~~ FIRST REVISED SHEET NO. 8.725
CANCELS ORIGINAL SHEET NO. 8.725

Continued from Sheet No. 8.720

iii. The policy providing such coverage for a Negotiated Contract shall provide public liability insurance, including coverage for personal injury, death and property damage, in an amount not less than $1,000,000 for each occurrence. The Parties may negotiate the amount of insurance over $1,000,000.

iv. The above required policy shall be endorsed with a provision requiring the insurance company will notify the Company thirty (30) days prior to the effective date of cancellation or material change in said policy.

v. The QF shall pay all premiums and other charges due on said policy and keep said policy in force during the entire period of interconnection with the Company.

vi. As an alternative to the foregoing insurance requirement, the QF may self-insure upon receiving the Company's prior written approval. The Company will provide the QF with written notification of approval or disapproval of a self-insurance application with 30 business days after the Company's receipt of all documentation required to support the application. In the event that the Company approves QF's request to self-insure, QF shall provide proof of its continuing ability to self-insure to the Company on an annual basis, or more frequently if requested by the Company. Notwithstanding the foregoing, the minimum insurance coverage amount set forth above shall be limited for the state, a state agency or subdivision (as those terms are defined in Section 768.28(2), or the successor thereto), to the maximum dollar amounts set forth in Section 768.28(5), or the successor thereto.

7. Protection and Operation: It will be the responsibility of the ~~qf~~ QF to provide all devices necessary to protect the ~~qf's~~ QF's equipment from damage by the abnormal conditions and operations which occur on the Company system that result from interruptions and restorations of service by the Company's equipment and personnel. The ~~qf~~ QF shall protect its generator and associated equipment from overvoltage, undervoltage, overload, short circuits (including ground fault condition), open circuits, phase unbalance and reversal, over or under frequency condition, and other injurious electrical conditions that may arise on the Company's system and any reclose attempt by the Company.

The Company may reserve the right to perform such tests as it deems necessary to ensure safe and efficient protection and operation of the ~~qf's~~ QF's equipment.

Continued to Sheet No. 8.730

ISSUED BY: ~~J. B. Ramil~~ G. L. Gillette, President

DATE EFFECTIVE: ~~March 20, 1999~~