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May 20, 2015

VIA: ELECTRONIC FILING

Ms. Carlotta S. Stauffer
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

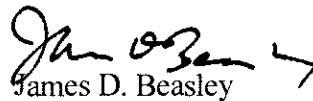
Re: Petition for approval of revisions to standard offer contract and rate schedule COG-2
by Tampa Electric Company; FPSC Docket No. 150105-EI

Dear Ms. Stauffer:

Attached for filing in the above docket is Tampa Electric Company's Responses to Staff's
Data Request (No. 1) dated April 29, 2015.

Thank you for your assistance in connection with this matter.

Sincerely,


James D. Beasley

JDB/pp
Attachment

cc: Kelley F. Corbari (w/attachment)

**TAMPA ELECTRIC COMPANY
DOCKET NO. 150105-EI
STAFF'S FIRST DATA REQUEST
REQUEST NO. 1
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1. Please complete the following table describing payments to a renewable provider based on the proposed tariffs included in the Company's revised standard offer contract. When responding, assume a renewable generator with a 50 MW output providing firm capacity with an in-service date of January 1, 2016, operating at the minimum capacity factor required for full capacity payments and a contract duration of 20 years. Please state the capacity factor assumed for the calculations. In addition, please calculate the total Net Present Value (NPV) of all payments in 2016 dollars, and provide an explanation of the method and rate used to calculate the NPV.

Please provide the completed table for the following five scenarios:
 As-available energy (energy only payments)
 Normal capacity payments
 Levelized payments
 Early payments
 Early levelized payments

Please also provide an explanation of the method and rate used to calculate the NPV. Please calculate the NPV in 2015 dollars.

Year	Energy	Capacity Rate	Total Capacity Payments	Energy Rate	Total Energy Payments	Total Payments
	(MWh)	(\$/kw-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2016						
2017						
2018						
2019						
2020						
2021						
2022						
2023						
2024						
2025						
2026						
2027						
2028						
2029						
2030						
2031						
2032						
2033						
2034						
2035						
Total						

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(Nominal)						
Total NPV (\$2016)						

- A.** The payments for capacity and energy from a 50 MW a renewable facility with an in-service date of January 1, 2015 under the various options (i.e., as-available only, standard, levelized, early, and early levelized) are provided in the tables on Pages 3 through 7 of 7. The payments are based on the renewable facility operating at a 90% capacity factor; however, Tampa Electric's minimum performance standard for capacity is based on net operating factor making it possible to achieve full capacity payments with less than 90% capacity factor.

To determine if all of the payment streams were equal on a Net Present Value or Net Present Worth basis, the company multiplied the payment in each year by the Present Worth Factor:

$$\frac{1}{(1+i)^n}$$

Where:

i = discount rate = 7.287 %
n = (payment year - 2016)

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Committed Capacity:	50 MW
Capacity Factor:	90%
Payment Type:	As-Available Energy Only

Year	Energy	Capacity Rate	Total Capacity Payments	Energy Rate	Total Energy Payments	Total Payments
	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2016	395,280	-	-	37.97	15,010,033	15,010,033
2017	394,200	-	-	34.14	13,459,604	13,459,604
2018	394,200	-	-	35.12	13,843,639	13,843,639
2019	394,200	-	-	35.83	14,125,981	14,125,981
2020	395,280	-	-	37.93	14,991,889	14,991,889
2021	394,200	-	-	40.91	16,125,653	16,125,653
2022	394,200	-	-	40.23	15,858,752	15,858,752
2023	394,200	-	-	42.00	16,557,448	16,557,448
2024	395,280	-	-	43.35	17,133,837	17,133,837
2025	394,200	-	-	45.24	17,834,844	17,834,844
2026	394,200	-	-	45.98	18,125,272	18,125,272
2027	394,200	-	-	46.84	18,464,361	18,464,361
2028	395,280	-	-	50.11	19,807,851	19,807,851
2029	394,200	-	-	52.71	20,777,181	20,777,181
2030	394,200	-	-	56.25	22,172,602	22,172,602
2031	394,200	-	-	57.45	22,648,614	22,648,614
2032	395,280	-	-	61.37	24,257,246	24,257,246
2033	394,200	-	-	66.42	26,180,827	26,180,827
2034	394,200	-	-	67.30	26,530,474	26,530,474
2035	394,200	-	-	71.41	28,148,723	28,148,723
Total (Nominal)	7,889,400		-		382,054,831	382,054,831
Total NPV (\$2016)					194,597,724	194,597,724

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Committed Capacity:	50 MW
Capacity Factor⁽¹⁾:	90%
Payment Type:	Normal

Year	Energy	Capacity Rate	Total Capacity Payments ⁽¹⁾	Energy Rate ⁽²⁾	Total Energy Payments	Total Payments
	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2016	395,280	-	-	37.97	15,010,033	15,010,033
2017	394,200	-	-	34.14	13,459,604	13,459,604
2018	394,200	-	-	35.12	13,843,639	13,843,639
2019	394,200	-	-	35.83	14,125,981	14,125,981
2020	395,280	-	-	37.93	14,991,889	14,991,889
2021	394,200	7.29	2,915,748	41.45	16,338,709	19,254,457
2022	394,200	7.45	4,468,166	40.60	16,006,216	20,474,383
2023	394,200	7.61	4,564,763	42.47	16,740,679	21,305,443
2024	395,280	7.77	4,663,458	43.91	17,354,806	22,018,264
2025	394,200	7.94	4,764,296	45.99	18,127,462	22,891,758
2026	394,200	8.11	4,867,324	46.48	18,321,507	23,188,831
2027	394,200	8.29	4,972,591	47.52	18,730,847	23,703,438
2028	395,280	8.47	5,080,144	51.08	20,189,385	25,269,529
2029	394,200	8.65	5,190,034	53.64	21,145,860	26,335,894
2030	394,200	8.84	5,302,312	57.09	22,503,988	27,806,300
2031	394,200	9.03	5,417,030	58.48	23,053,036	28,470,066
2032	395,280	9.22	5,534,241	62.44	24,681,805	30,216,046
2033	394,200	9.42	5,654,000	68.10	26,844,527	32,498,528
2034	394,200	9.63	5,776,363	68.43	26,974,960	32,751,323
2035	394,200	9.84	5,901,386	72.68	28,651,864	34,553,250
Total (Nominal)	7,889,400		75,071,859		387,096,797	462,168,655
Total NPV (\$2016)			32,261,967		196,630,061	228,892,028

(1) The capacity payment under the Normal payment option begins May 1st of 2021 which is the in-service date of the avoided unit. Each successive year's payment is based on four months at the previous year's \$/kWh-mo rate and eight months at the current year's \$/kW-mo. rate.

(2) The energy rate beginning in 2021 is a weighted blend based on the projected capacity factor of the avoided unit, the estimated avoided unit energy rate, and the estimated as-available energy rate.

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Committed Capacity:	50 MW
Capacity Factor⁽¹⁾:	90%
Payment Type:	Levelized

Year	Energy	Capacity Rate	Total Capacity Payments ⁽¹⁾	Energy Rate ⁽²⁾	Total Energy Payments	Total Payments
	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2016	395,280	-	-	37.97	15,010,033	15,010,033
2017	394,200	-	-	34.14	13,459,604	13,459,604
2018	394,200	-	-	35.12	13,843,639	13,843,639
2019	394,200	-	-	35.83	14,125,981	14,125,981
2020	395,280	-	-	37.93	14,991,889	14,991,889
2021	394,200	8.08	4,846,217	41.45	16,338,709	21,184,926
2022	394,200	8.11	4,863,080	40.60	16,006,216	20,869,296
2023	394,200	8.13	4,880,364	42.47	16,740,679	21,621,043
2024	395,280	8.16	4,898,080	43.91	17,354,806	22,252,886
2025	394,200	8.19	4,916,239	45.99	18,127,462	23,043,701
2026	394,200	8.22	4,934,852	46.48	18,321,507	23,256,359
2027	394,200	8.26	4,953,930	47.52	18,730,847	23,684,777
2028	395,280	8.29	4,973,486	51.08	20,189,385	25,162,871
2029	394,200	8.32	4,993,530	53.64	21,145,860	26,139,390
2030	394,200	8.36	5,014,075	57.09	22,503,988	27,518,063
2031	394,200	8.39	5,035,134	58.48	23,053,036	28,088,171
2032	395,280	8.43	5,056,720	62.44	24,681,805	29,738,524
2033	394,200	8.46	5,078,845	68.10	26,844,527	31,923,372
2034	394,200	8.50	5,101,523	68.43	26,974,960	32,076,483
2035	394,200	8.54	5,124,768	72.68	28,651,864	33,776,632
Total (Nominal)	7,889,400		74,670,841		387,096,797	461,767,638
Total NPV (\$2016)			32,261,772		196,630,061	228,891,833

1) The capacity payment under the Levelized payment option begins May 1st of 2021 which is the in-service date of the avoided unit. Each successive year's payment is based on four months at the previous year's \$/kWh-mo rate and eight months at the current year's \$/kW-mo. rate.

(2) The energy rate beginning in 2021 is a weighted blend based on the projected capacity factor of the avoided unit, the estimated avoided unit energy rate, and the estimated as-available energy rate.

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Committed Capacity:	50 MW
Capacity Factor:	90%
Payment Type:	Early

Year	Energy	Capacity Rate	Total Capacity Payments	Energy Rate ⁽¹⁾	Total Energy Payments	Total Payments
	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2016	395,280	4.11	2,468,500	37.97	15,010,033	17,478,533
2017	394,200	4.20	2,521,851	34.14	13,459,604	15,981,455
2018	394,200	4.29	2,576,361	35.12	13,843,639	16,420,000
2019	394,200	4.39	2,632,054	35.83	14,125,981	16,758,035
2020	395,280	4.48	2,688,957	37.93	14,991,889	17,680,845
2021	394,200	4.58	2,747,095	41.45	16,338,709	19,085,804
2022	394,200	4.68	2,806,496	40.60	16,006,216	18,812,712
2023	394,200	4.78	2,867,187	42.47	16,740,679	19,607,866
2024	395,280	4.88	2,929,196	43.91	17,354,806	20,284,002
2025	394,200	4.99	2,992,553	45.99	18,127,462	21,120,015
2026	394,200	5.10	3,057,286	46.48	18,321,507	21,378,793
2027	394,200	5.21	3,123,426	47.52	18,730,847	21,854,273
2028	395,280	5.32	3,191,003	51.08	20,189,385	23,380,388
2029	394,200	5.43	3,260,049	53.64	21,145,860	24,405,909
2030	394,200	5.55	3,330,595	57.09	22,503,988	25,834,583
2031	394,200	5.67	3,402,676	58.48	23,053,036	26,455,712
2032	395,280	5.79	3,476,323	62.44	24,681,805	28,158,128
2033	394,200	5.92	3,551,572	68.10	26,844,527	30,396,099
2034	394,200	6.05	3,628,457	68.43	26,974,960	30,603,417
2035	394,200	6.18	3,707,015	72.68	28,651,864	32,358,879
Total (Nominal)	7,889,400		60,958,651		387,096,797	448,055,447
Total NPV (\$2016)			32,261,967		196,630,061	228,892,028

(1) The energy rate beginning in 2021 is a weighted blend based on the projected capacity factor or the avoided unit, the estimated avoided unit energy rate, and the estimated as-available energy rate.

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Committed Capacity: Capacity Factor: Payment Type:	50MW 90% Early Levelized
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Year	Energy	Capacity Rate	Total Capacity Payments	Energy Rate ⁽¹⁾	Total Energy Payments	Total Payments
	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2016	395,280	4.71	2,823,830	37.97	15,010,033	17,833,863
2017	394,200	4.72	2,833,286	34.14	13,459,604	16,292,890
2018	394,200	4.74	2,842,979	35.12	13,843,639	16,686,618
2019	394,200	4.75	2,852,914	35.83	14,125,981	16,978,894
2020	395,280	4.77	2,863,097	37.93	14,991,889	17,854,986
2021	394,200	4.79	2,873,535	41.45	16,338,709	19,212,244
2022	394,200	4.81	2,884,234	40.60	16,006,216	18,890,451
2023	394,200	4.83	2,895,201	42.47	16,740,679	19,635,880
2024	395,280	4.84	2,906,442	43.91	17,354,806	20,261,248
2025	394,200	4.86	2,917,963	45.99	18,127,462	21,045,425
2026	394,200	4.88	2,929,773	46.48	18,321,507	21,251,280
2027	394,200	4.90	2,941,878	47.52	18,730,847	21,672,725
2028	395,280	4.92	2,954,286	51.08	20,189,385	23,143,671
2029	394,200	4.95	2,967,003	53.64	21,145,860	24,112,863
2030	394,200	4.97	2,980,039	57.09	22,503,988	25,484,027
2031	394,200	4.99	2,993,401	58.48	23,053,036	26,046,437
2032	395,280	5.01	3,007,096	62.44	24,681,805	27,688,901
2033	394,200	5.04	3,021,134	68.10	26,844,527	29,865,661
2034	394,200	5.06	3,035,523	68.43	26,974,960	30,010,483
2035	394,200	5.08	3,050,272	72.68	28,651,864	31,702,136
Total (Nominal)	7,889,400		58,573,886		387,096,797	445,670,683
Total NPV (\$2016)			32,261,967		196,630,061	228,892,028

(1) The energy rate beginning in 2021 is a weighted blend based on the projected capacity factor or the avoided unit, the estimated avoided unit energy rate, and the estimated as-available energy rate.