

AUSLEY & McMULLEN

ATTORNEYS AND COUNSELORS AT LAW

123 SOUTH CALHOUN STREET
P.O. BOX 391 (ZIP 32302)
TALLAHASSEE, FLORIDA 32301
(850) 224-9115 FAX (850) 222-7560

May 14, 2021

VIA: ELECTRONIC FILING

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

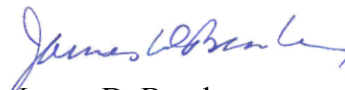
Re: Petition of Tampa Electric Company for Approval of Revisions to Standard Offer
Contract and Rate Schedule COG-2; Dkt. 20210063-EG

Dear Mr. Teitzman:

Attached for filing in the above docket are Tampa Electric Company's revised responses to Staff's First Data Request (No. 1), originally filed on April 26, 2021.

Thank you for your assistance in connection with this matter.

Sincerely,


James D. Beasley

JDB/bmp
Attachment

cc: Damian Kistner (w/encl.)
Paula Brown (w/encl.)

**TAMPA ELECTRIC COMPANY
DOCKET NO. 20210063-EQ
STAFF'S FIRST DATA REQUEST
REQUEST NO. 1
PAGE 1 OF 7
FILED: APRIL 26, 2021
REVISED: MAY 14, 2021**

1. Please complete the following table describing payments to a renewable provider based on the proposed tariffs included in the Utility's revised standard offer contract. Please assume a renewable generator with a 50 MW output providing firm capacity with an in-service date of January 1, 2022, 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. Please calculate the total Net Present Value (NPV) of all payments in 2022 dollars, and also provide an explanation of the method and rate used to calculate the NPV.

Please provide the completed table for each of the following five scenarios:

- As-available energy (energy only payments)
- Normal capacity payments
- Levelized payments
- Early payments
- Early levelized payments

Year	Energy (MWh)	Capacity Rate (\$/kw-mo)	Total Capacity Payments (\$)	Energy Rate (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2022						
2023						
2024						
2025						
2026						
2027						
2028						
2029						
2030						
2031						
2032						
2033						
2034						
2035						
2036						
2037						
2038						
2039						
2040						
2041						
Total (nominal)						
Total (NPV)						

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- A.** The payments for capacity and energy from a 50 MW a renewable facility with an in-service date of January 1, 2022 under the various options (i.e., as-available only, standard, levelized, early, and early levelized) are provided in the tables below.

The payments are based on the renewable facility achieving the minimum performance standard, which has two criteria. Those criteria are (i) maintaining at least a 90% monthly availability factor and (ii) operating at an 80% monthly capacity factor. The availability factor calculation is an expression of the amount of capacity the facility can provide relative to its contracted amount. The monthly capacity factor is a measure of how much energy the facility delivered to Tampa Electric relative to Tampa Electric's requested amount, and it is weighted by both on-peak and off-peak time periods. For the period April 1st through October 31st, the capacity factor weighting is 80% on-peak and 20% off-peak. For the period November 1st through March 31st, the capacity factor weighting is 90% on-peak and 10% off-peak.

To determine if the sums of the payment streams of the various payment methods 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 which is calculated as follows:

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

Where:

i = discount rate = 6.703 %

n = (payment year – 2022)

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Payment Type: As-Available (Energy Only)
Committed Capacity: 50 MW
Capacity Factor: 80%

Year	Energy	Capacity Rate	Total Capacity Payments	Energy Rate	Total Energy Payments	Total Payments
	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2022	350,400	-	-	27.10	9,495,160	9,495,160
2023	350,400	-	-	22.38	7,843,187	7,843,187
2024	350,400	-	-	24.09	8,440,608	8,440,608
2025	351,360	-	-	25.99	9,132,178	9,132,178
2026	350,400	-	-	27.97	9,801,627	9,801,627
2027	350,400	-	-	29.86	10,464,400	10,464,400
2028	350,400	-	-	33.42	11,709,705	11,709,705
2029	351,360	-	-	36.18	12,713,282	12,713,282
2030	350,400	-	-	34.42	12,062,480	12,062,480
2031	350,400	-	-	34.87	12,218,307	12,218,307
2032	350,400	-	-	37.39	13,101,572	13,101,572
2033	351,360	-	-	42.91	15,077,034	15,077,034
2034	350,400	-	-	42.08	14,744,613	14,744,613
2035	350,400	-	-	42.53	14,901,373	14,901,373
2036	350,400	-	-	44.75	15,680,932	15,680,932
2037	351,360	-	-	46.57	16,362,640	16,362,640
2038	350,400	-	-	52.11	18,260,133	18,260,133
2039	350,400	-	-	52.73	18,477,800	18,477,800
2040	350,400	-	-	47.24	16,553,129	16,553,129
2041	351,360	-	-	43.04	15,122,438	15,122,438
Total (Nominal)	7,012,800	-	-		262,162,599	262,162,599
Total NPV (\$2022)					138,981,620	138,981,620

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Payment Type: Normal
Committed Capacity: 50 MW
Capacity Factor: 80%

Year	Energy	Capacity Rate	Total Capacity Payments	Energy Rate	Total Energy Payments	Total Payments
	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2022	350,400	-	-	27.10	9,495,160	9,495,160
2023	350,400	-	-	22.38	7,843,187	7,843,187
2024	350,400	12.33	7,395,628	24.09	8,440,608	15,836,237
2025	351,360	12.58	7,545,745	25.99	9,132,178	16,677,923
2026	350,400	12.83	7,698,912	27.97	9,801,627	17,500,539
2027	350,400	13.09	7,855,193	29.86	10,464,400	18,319,593
2028	350,400	13.36	8,014,649	33.42	11,709,705	19,724,354
2029	351,360	13.63	8,177,347	36.18	12,713,282	20,890,629
2030	350,400	13.91	8,343,351	34.42	12,062,480	20,405,831
2031	350,400	14.19	8,512,729	34.87	12,218,307	20,731,036
2032	350,400	14.48	8,685,551	37.39	13,101,572	21,787,122
2033	351,360	14.77	8,861,885	42.91	15,077,034	23,938,919
2034	350,400	15.07	9,041,803	42.08	14,744,613	23,786,417
2035	350,400	15.38	9,225,379	42.53	14,901,373	24,126,752
2036	350,400	15.69	9,412,687	44.75	15,680,932	25,093,619
2037	351,360	16.01	9,603,802	46.57	16,362,640	25,966,442
2038	350,400	16.33	9,798,803	52.11	18,260,133	28,058,936
2039	350,400	16.66	9,997,768	52.73	18,477,800	28,475,568
2040	350,400	17.00	10,200,778	47.24	16,553,129	26,753,907
2041	351,360	17.35	10,407,915	43.04	15,122,438	25,530,354
Total (Nominal)	7,012,800		158,779,924		262,162,599	420,942,523
Total NPV (\$2022)			82,083,367		138,981,620	221,064,987

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Payment Type: Levelized
Committed Capacity: 50 MW
Capacity Factor: 80%

Year	Energy	Capacity Rate	Total Capacity Payments ⁽¹⁾	Energy Rate	Total Energy Payments	Total Payments
	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2022	350,400	-	-	27.10	9,495,160	9,495,160
2023	350,400	-	-	22.38	7,843,187	7,843,187
2024	350,400	14.06	8,433,635	24.09	8,440,608	16,874,243
2025	351,360	14.10	8,457,879	25.99	9,132,178	17,590,057
2026	350,400	14.14	8,482,656	27.97	9,801,627	18,284,283
2027	350,400	14.18	8,507,979	29.86	10,464,400	18,972,379
2028	350,400	14.22	8,533,858	33.42	11,709,705	20,243,564
2029	351,360	14.27	8,560,307	36.18	12,713,282	21,273,590
2030	350,400	14.31	8,587,338	34.42	12,062,480	20,649,818
2031	350,400	14.36	8,614,963	34.87	12,218,307	20,833,270
2032	350,400	14.41	8,643,197	37.39	13,101,572	21,744,769
2033	351,360	14.45	8,672,051	42.91	15,077,034	23,749,085
2034	350,400	14.50	8,701,540	42.08	14,744,613	23,446,153
2035	350,400	14.55	8,731,678	42.53	14,901,373	23,633,051
2036	350,400	14.60	8,762,479	44.75	15,680,932	24,443,411
2037	351,360	14.66	8,793,958	46.57	16,362,640	25,156,598
2038	350,400	14.71	8,826,129	52.11	18,260,133	27,086,262
2039	350,400	14.77	8,859,008	52.73	18,477,800	27,336,808
2040	350,400	14.82	8,892,610	47.24	16,553,129	25,445,739
2041	351,360	14.88	8,926,951	43.04	15,122,438	24,049,389
Total (Nominal)	7,012,800		155,988,215		262,162,599	418,150,814
Total NPV (\$2022)			83,006,541		138,981,620	221,988,161

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Payment Type: Early 2022
Committed Capacity: 50 MW
Capacity Factor: 80%

Year	Energy	Capacity Rate	Total Capacity Payments	Energy Rate	Total Energy Payments	Total Payments
	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2022	350,400	10.22	6,133,039	27.10	9,495,160	15,628,199
2023	350,400	10.43	6,257,526	22.38	7,843,187	14,100,712
2024	350,400	10.64	6,384,542	24.09	8,440,608	14,825,150
2025	351,360	10.86	6,514,140	25.99	9,132,178	15,646,318
2026	350,400	11.08	6,646,371	27.97	9,801,627	16,447,998
2027	350,400	11.30	6,781,290	29.86	10,464,400	17,245,690
2028	350,400	11.53	6,918,952	33.42	11,709,705	18,628,657
2029	351,360	11.77	7,059,411	36.18	12,713,282	19,772,693
2030	350,400	12.00	7,202,725	34.42	12,062,480	19,265,205
2031	350,400	12.25	7,348,952	34.87	12,218,307	19,567,259
2032	350,400	12.50	7,498,152	37.39	13,101,572	20,599,724
2033	351,360	12.75	7,650,384	42.91	15,077,034	22,727,418
2034	350,400	13.01	7,805,711	42.08	14,744,613	22,550,325
2035	350,400	13.27	7,964,196	42.53	14,901,373	22,865,569
2036	350,400	13.54	8,125,902	44.75	15,680,932	23,806,834
2037	351,360	13.82	8,290,896	46.57	16,362,640	24,653,536
2038	350,400	14.10	8,459,244	52.11	18,260,133	26,719,378
2039	350,400	14.39	8,631,015	52.73	18,477,800	27,108,815
2040	350,400	14.68	8,806,278	47.24	16,553,129	25,359,407
2041	351,360	14.98	8,985,105	43.04	15,122,438	24,107,543
Total (Nominal)	7,012,800		149,463,833		262,162,599	411,626,433
Total NPV (\$2022)			82,859,241		138,981,620	221,840,861

