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May 2, 2023

VIA: ELECTRONIC FILING

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

**Re: Petition of Tampa Electric Company for Approval of Revisions to Standard Offer Contract and Rate Schedule COG-2
Dkt. 20230041-EQ**

Dear Mr. Teitzman:

Attached for filing in the above-styled matter is Tampa Electric Company's response to Staff's First Data Request (No. 1), propounded by email on April 18, 2023.

Thank you for your assistance in connection with this matter.

Sincerely,

A handwritten signature in blue ink that reads 'Malcolm N. Means'.

Malcolm N. Means

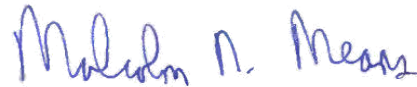
MNM/bml
Attachment
cc: All parties of record

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing response to Staff's First Date Request (No. 1), filed on behalf of Tampa Electric Company, has been furnished by electronic mail on this 2nd day of May 2023 to the following:

Jacob Imig
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Florida Public Service Commission
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ATTORNEY

**TAMPA ELECTRIC COMPANY
DOCKET NO. 20230041-EQ
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 Utility’s revised standard offer contract for each of the five scenarios listed below. For the calculations, assume a renewable generator with a 50 MW output providing firm capacity with an in-service date of January 1, 2024, operating at the minimum capacity factor required for full capacity payments and a contract duration of 20 years. As part of your response, state the capacity factor assumed for the calculations. Please calculate the total Net Present Value (NPV) of all payments in 2024 dollars, and also provide an explanation of the method and rate used to calculate the NPV.
- 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 (\$)
2024						
2025						
2026						
2027						
2038						
2029						
2030						
2031						
2032						
2033						
2034						
2035						
2036						
2037						
2038						
2039						
2040						
2041						
2042						
2043						
Total (Nominal)						
Total (NPV)						

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- A.** The payments for capacity and energy from a 50 MW renewable generator with an in-service date of January 1, 2024, under the various options (i.e., As-available only, normal capacity, levelized, early and early levelized) are provided in the tables below.

The payments are based on the renewable generator operating at an 80% capacity factor which is the minimum performance standard.

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 = 7.132%

n = (Payment year – 2024)

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As-available energy (energy only payments)

Year	Energy (MWh)	Capacity Rate (\$/kw-mo)	Total Capacity Payments (\$)	Energy Rate (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2024	351,360	-	-	35.97	12,638,693	12,638,693
2025	350,400	-	-	35.86	12,566,000	12,566,000
2026	350,400	-	-	37.49	13,135,347	13,135,347
2027	350,400	-	-	33.77	11,834,547	11,834,547
2038	351,360	-	-	36.28	12,745,893	12,745,893
2029	350,400	-	-	34.97	12,252,973	12,252,973
2030	350,400	-	-	34.69	12,155,040	12,155,040
2031	350,400	-	-	37.17	13,022,760	13,022,760
2032	351,360	-	-	37.68	13,240,640	13,240,640
2033	350,400	-	-	43.30	15,173,480	15,173,480
2034	350,400	-	-	41.02	14,375,147	14,375,147
2035	350,400	-	-	43.58	15,269,067	15,269,067
2036	351,360	-	-	47.70	16,759,573	16,759,573
2037	350,400	-	-	49.76	17,435,667	17,435,667
2038	350,400	-	-	55.95	19,604,107	19,604,107
2039	350,400	-	-	66.69	23,369,707	23,369,707
2040	351,360	-	-	66.04	23,204,613	23,204,613
2041	350,400	-	-	71.21	24,952,640	24,952,640
2042	350,400	-	-	73.92	25,902,400	25,902,400
2043	350,400	-	-	79.00	27,681,840	27,681,840
Total (Nominal)	7,012,800	-	-		337,320,133	337,320,133
Total (NPV)					170,693,447	170,693,447

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Normal capacity payments

Year	Energy (MWh)	Capacity Rate (\$/kw-mo)	Total Capacity Payments (\$)	Energy Rate (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2024	351,360	-	-	35.97	12,638,693	12,638,693
2025	350,400	-	-	35.86	12,566,000	12,566,000
2026	350,400	-	-	37.49	13,135,347	13,135,347
2027	350,400	-	-	33.77	11,834,547	11,834,547
2038	351,360	-	-	36.28	12,745,893	12,745,893
2029	350,400	-	-	34.97	12,252,973	12,252,973
2030	350,400	16.25	9,747,597	34.93	12,240,126	21,987,723
2031	350,400	16.58	9,945,970	37.32	13,078,521	23,024,491
2032	351,360	16.91	10,148,385	38.02	13,359,617	23,508,002
2033	350,400	17.26	10,354,926	43.58	15,269,382	25,624,309
2034	350,400	17.61	10,565,676	41.37	14,496,094	25,061,770
2035	350,400	17.97	10,780,722	43.88	15,376,259	26,156,981
2036	351,360	18.33	11,000,151	48.11	16,902,533	27,902,684
2037	350,400	18.71	11,224,052	50.20	17,590,641	28,814,693
2038	350,400	19.09	11,452,517	56.46	19,782,735	31,235,252
2039	350,400	19.48	11,685,639	66.60	23,337,955	35,023,593
2040	351,360	19.87	11,923,513	66.50	23,364,849	35,288,362
2041	350,400	20.28	12,166,236	71.11	24,918,285	37,084,520
2042	350,400	20.69	12,413,907	73.43	25,731,089	38,144,996
2043	350,400	21.11	12,666,627	77.79	27,256,238	39,922,865
Total (Nominal)	7,012,800		156,075,916		337,877,779	493,953,695
Total (NPV)			67,026,782		171,075,929	238,102,710

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Levelized payments

Year	Energy (MWh)	Capacity Rate (\$/kw-mo)	Total Capacity Payments (\$)	Energy Rate (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2024	351,360	-	-	35.97	12,638,693	12,638,693
2025	350,400	-	-	35.86	12,566,000	12,566,000
2026	350,400	-	-	37.49	13,135,347	13,135,347
2027	350,400	-	-	33.77	11,834,547	11,834,547
2038	351,360	-	-	36.28	12,745,893	12,745,893
2029	350,400	-	-	34.97	12,252,973	12,252,973
2030	350,400	18.17	10,902,042	34.93	12,240,126	23,142,169
2031	350,400	18.17	10,902,042	37.32	13,078,521	23,980,563
2032	351,360	18.17	10,902,042	38.02	13,359,617	24,261,659
2033	350,400	18.17	10,902,042	43.58	15,269,382	26,171,425
2034	350,400	18.17	10,902,042	41.37	14,496,094	25,398,136
2035	350,400	18.17	10,902,042	43.88	15,376,259	26,278,301
2036	351,360	18.17	10,902,042	48.11	16,902,533	27,804,575
2037	350,400	18.17	10,902,042	50.20	17,590,641	28,492,683
2038	350,400	18.17	10,902,042	56.46	19,782,735	30,684,778
2039	350,400	18.17	10,902,042	66.60	23,337,955	34,239,997
2040	351,360	18.17	10,902,042	66.50	23,364,849	34,266,891
2041	350,400	18.17	10,902,042	71.11	24,918,285	35,820,327
2042	350,400	18.17	10,902,042	73.43	25,731,089	36,633,132
2043	350,400	18.17	10,902,042	77.79	27,256,238	38,158,281
Total (Nominal)	7,012,800		152,628,592		337,877,779	490,506,371
Total (NPV)			67,026,782		171,075,929	238,102,711

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Early payments

Year	Energy (MWh)	Capacity Rate (\$/kw-mo)	Total Capacity Payments (\$)	Energy Rate (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2024	351,360	8.53	5,120,511	35.97	12,638,693	17,759,205
2025	350,400	8.71	5,224,712	35.86	12,566,000	17,790,712
2026	350,400	8.89	5,331,037	37.49	13,135,347	18,466,383
2027	350,400	9.07	5,439,528	33.77	11,834,547	17,274,074
2028	351,360	9.25	5,550,230	36.28	12,745,893	18,296,123
2029	350,400	9.44	5,663,188	34.97	12,252,973	17,916,161
2030	350,400	9.63	5,778,448	34.93	12,240,126	18,018,575
2031	350,400	9.83	5,896,058	37.32	13,078,521	18,974,579
2032	351,360	10.03	6,016,064	38.02	13,359,617	19,375,681
2033	350,400	10.23	6,138,517	43.58	15,269,382	21,407,899
2034	350,400	10.44	6,263,465	41.37	14,496,094	20,759,559
2035	350,400	10.65	6,390,961	43.88	15,376,259	21,767,220
2036	351,360	10.87	6,521,055	48.11	16,902,533	23,423,588
2037	350,400	11.09	6,653,801	50.20	17,590,641	24,244,442
2038	350,400	11.32	6,789,253	56.46	19,782,735	26,571,989
2039	350,400	11.55	6,927,467	66.60	23,337,955	30,265,421
2040	351,360	11.78	7,068,498	66.50	23,364,849	30,433,347
2041	350,400	12.02	7,212,405	71.11	24,918,285	32,130,689
2042	350,400	12.27	7,359,245	73.43	25,731,089	33,090,334
2043	350,400	12.52	7,509,079	77.79	27,256,238	34,765,318
Total (Nominal)	7,012,800		124,853,521		337,877,779	462,731,300
Total (NPV)			67,026,782		171,075,929	238,102,710

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Early levelized payments

Year	Energy (MWh)	Capacity Rate (\$/kw-mo)	Total Capacity Payments (\$)	Energy Rate (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2024	351,360	9.94	5,966,526	35.97	12,638,693	18,605,220
2025	350,400	9.94	5,966,526	35.86	12,566,000	18,532,526
2026	350,400	9.94	5,966,526	37.49	13,135,347	19,101,873
2027	350,400	9.94	5,966,526	33.77	11,834,547	17,801,073
2028	351,360	9.94	5,966,526	36.28	12,745,893	18,712,420
2029	350,400	9.94	5,966,526	34.97	12,252,973	18,219,500
2030	350,400	9.94	5,966,526	34.93	12,240,126	18,206,653
2031	350,400	9.94	5,966,526	37.32	13,078,521	19,045,047
2032	351,360	9.94	5,966,526	38.02	13,359,617	19,326,143
2033	350,400	9.94	5,966,526	43.58	15,269,382	21,235,909
2034	350,400	9.94	5,966,526	41.37	14,496,094	20,462,620
2035	350,400	9.94	5,966,526	43.88	15,376,259	21,342,785
2036	351,360	9.94	5,966,526	48.11	16,902,533	22,869,059
2037	350,400	9.94	5,966,526	50.20	17,590,641	23,557,167
2038	350,400	9.94	5,966,526	56.46	19,782,735	25,749,262
2039	350,400	9.94	5,966,526	66.60	23,337,955	29,304,481
2040	351,360	9.94	5,966,526	66.50	23,364,849	29,331,375
2041	350,400	9.94	5,966,526	71.11	24,918,285	30,884,811
2042	350,400	9.94	5,966,526	73.43	25,731,089	31,697,616
2043	350,400	9.94	5,966,526	77.79	27,256,238	33,222,765
Total (Nominal)	7,012,800		119,330,524		337,877,779	457,208,303
Total (NPV)			67,026,782		171,075,929	238,102,710