



Russell Badders
Vice President, Associate General Counsel

April 16, 2020

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

Re: Docket No. 20200115-EQ – Petition for approval of new standard offer for purchase of firm capacity and energy from renewable energy facilities or small qualifying facilities and rate schedule QS-2, by Gulf Power Company

Dear Mr. Teitzman:

Attached for electronic filing is Gulf Power Company's response to Staff's First Data Request in the above-referenced docket.

Sincerely,

A handwritten signature in blue ink that reads 'Russell Badders'.

Russell Badders
Vice President & Associate General Counsel
Gulf Power Company

md

Attachments

cc: Florida Public Service Commission
Phillip Ellis, Division of Engineering
Damian Kistner, Division of Engineering

QUESTION:

Please refer to Appendix II on Sheet No. 9.81.11 of the petition filed in the instant docket, and to Sheet No. 10.311 in Florida Power & Light Company's (FPL) petition in Docket No. 20200114-EQ. Please explain the differences in capacity payments between Gulf's filing and FPL's filing, given that the avoided units are identical.

RESPONSE:

Although the baseline nominal cost inputs for the avoided unit of both FPL and Gulf Power are identical (*e.g.*, the estimated capital cost in 2030 dollars), the resulting capacity values differ by about 1% for the two utilities due to their distinct weighted average cost of capital (WACC). The capacity values are calculations that result in equivalent net present values (NPV) on January 1, 2022. Each utility's WACC is used in discounting the costs for each capacity payment scenario, which results in slightly different capacity values.

QUESTION:

Please refer to Sheet No. 9.81.13 of the petition filed in the instant docket, and to Sheet No. 10.313 in FPL's petition in Docket No. 20200114-EQ. Please explain the differences in economic assumptions, given that at the time of the avoided unit (2030) is put in service, both companies will be a combined business entity.

RESPONSE:

Gulf Power interprets this question as seeking an explanation of the differences between Gulf Power Sheet No. 9.81.13 and FPL Sheet No. 10.311.1, which are comparable pages as between the two companies' proposed tariffs.

As explained in Gulf Power's response to Staff's First Data Request No. 1, the Gulf Power and FPL WACCs are different, which shifts factors that result from the time-value analysis. At this time, Gulf Power and FPL do not operate as a single combined business entity. As such, the companies maintain differing WACCs, which, combined with economic assumptions that are based on present-value quantities, result in economic factors that yield slightly different results.

A summary of the time-value based economic assumptions across companies is provided below:

Parameter	FPL Value	Gulf Value	Explanation of Difference
R	7.52%	6.95%	Approved company WACC
K	1.4194	1.4846	Present value of revenue requirements are discounted more heavily at FPL's higher WACC, resulting in a lower K-factor
F	\$365.7/kW	\$366.6/kW	2030 present value of capacity payments are discounted more heavily at FPL's higher WACC, resulting in a lower F-factor
VAC_m	\$5.4390/ kW-mo	\$5.4325/ kW-mo	Value of unit deferral by one year is slightly higher for FPL because of its higher discount factor
O_n	\$12.49/ kW-yr	\$12.69/ kW-yr	The nominal future-year avoided unit O&M assumptions are the same for both companies, but because the annual O&M is not evenly distributed (<i>i.e.</i> , there are variously high- and low-cost years driven by unit outages), a 30-year levelized value is used. The FPL levelized value is slightly lower due to its higher discount rate.
G	\$94.56/kW	\$98.71/kW	2030 present value of annual O&M expenses are discounted more heavily at FPL's higher WACC, resulting in a lower G-factor

QUESTION:

Please identify any terms, conditions, or other language that are non-identical between this filing and FPL's tariff filing in Docket No. 20200114-EQ, excluding references to company name, logo, tariff page number, or similar.

RESPONSE:

Other than references to company name, logo, tariff page number, or similar; there are four distinct differences between the two SOC's:

- 1) Slight differences to the capacity values and economic factors, as described in Gulf Power's responses to Staff's First Data Request Nos. 1-2.
- 2) The referenced time zone was changed from "Eastern" to "Central" in Gulf Power's Tariff Sheet Nos. 9.81.5 and 9.81.14.
- 3) The "Value of Capacity Location" map on Tariff Sheet No. 9.81.12 shows the value at locations corresponding to Gulf Power's generators in Florida's panhandle as opposed to FPL's generators in peninsular Florida.
- 4) A reference to sections 2.7 and 2.71 of FPL's tariff (FPL Tariff Sheet No. 6.020) was struck from section 14.1 of the Gulf Power version of the Standard Offer Contract (SOC) on Gulf Tariff Sheet No. 9.100.12. These sections do not exist elsewhere in Gulf Power's tariff sheets.

QUESTION:

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, 2021, operating at the minimum capacity factor required for full capacity payments and a contract duration of 20 years. As part of your answer, please state the capacity factor assumed for the calculations. Please calculate the total Net Present Value (NPV) of all payments in 2021 dollars, and please also explain the method and rate used to calculate the NPV. Please provide the completed table for each of the following scenarios:

- a. As-available energy (energy only payments)
- b. Normal capacity payments
- c. Levelized payments
- d. Early payments
- e. Early levelized payments

Year	Energy (MWh)	Capacity Rate (\$/kw-mo)	Total Capacity Payments (\$)	Energy Rate (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2021						
2022						
2023						
2024						
2025						
2026						
2027						
2028						
2029						
2030						
2031						
2032						
2033						
2034						
2035						
2036						
2037						
2038						
2039						
2040						
Total (nominal)						
Total (NPV)						

RESPONSE:

Please see Attachment No. 1 to this response.

2030 CC Avoided Unit

Committed Capacity (MW) 50
 Capacity Factor (%) 94%
 Payment Type: Energy Only

Gulf Power Company
Docket No. 20200115-EQ
Staff's First Data Request
Request No. 4
Attachment No. 1
Page 1 of 5

	Energy (MWh)	Capacity Rates (\$/kW-mo)	Total Capacity Payments (\$)	Energy Rates (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2021	411,720	-	-	16.78	6,907,723	6,907,723
2022	411,720	-	-	16.84	6,933,146	6,933,146
2023	411,720	-	-	19.52	8,038,156	8,038,156
2024	412,848	-	-	21.10	8,709,204	8,709,204
2025	411,720	-	-	23.43	9,647,516	9,647,516
2026	411,720	-	-	24.80	10,211,574	10,211,574
2027	411,720	-	-	25.84	10,639,030	10,639,030
2028	412,848	-	-	27.90	11,517,085	11,517,085
2029	411,720	-	-	28.03	11,540,461	11,540,461
2030	411,720	-	-	28.23	11,624,651	11,624,651
2031	411,720	-	-	28.93	11,910,458	11,910,458
2032	412,848	-	-	30.41	12,555,929	12,555,929
2033	411,720	-	-	31.24	12,862,180	12,862,180
2034	411,720	-	-	32.56	13,404,283	13,404,283
2035	411,720	-	-	31.66	13,034,993	13,034,993
2036	412,848	-	-	31.73	13,101,617	13,101,617
2037	411,720	-	-	30.05	12,370,154	12,370,154
2038	411,720	-	-	29.33	12,076,085	12,076,085
2039	411,720	-	-	33.59	13,828,144	13,828,144
2040	<u>412,848</u>	-	<u>-</u>	32.97	<u>13,612,518</u>	<u>13,612,518</u>
Total	8,240,040		-		224,524,906	224,524,906
Total NPV @6.95% Discount Rate					111,166,163	111,166,163

2030 CC Avoided Unit

Committed Capacity (MW) 50
 Capacity Factor (%) 94%
 Payment Type: Normal

Gulf Power Company
Docket No. 20200115-EQ
Staff's First Data Request
Request No. 4
Attachment No. 1
Page 2 of 5

	Energy (MWh)	Capacity Rates (\$/kW-mo)	Total Capacity Payments (\$)	Energy Rates (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2021	411,720	-	-	16.78	6,907,723	6,907,723
2022	411,720	-	-	16.84	6,933,146	6,933,146
2023	411,720	-	-	19.52	8,038,156	8,038,156
2024	412,848	-	-	21.10	8,709,204	8,709,204
2025	411,720	-	-	23.43	9,647,516	9,647,516
2026	411,720	-	-	24.80	10,211,574	10,211,574
2027	411,720	-	-	25.84	10,639,030	10,639,030
2028	412,848	-	-	27.90	11,517,085	11,517,085
2029	411,720	-	-	28.03	11,540,461	11,540,461
2030	411,720	5.34	3,205,474	27.40	11,279,658	14,485,132
2031	411,720	5.45	3,272,755	26.90	11,075,125	14,347,881
2032	412,848	5.57	3,341,462	27.39	11,309,068	14,650,530
2033	411,720	5.69	3,411,623	27.89	11,481,176	14,892,799
2034	411,720	5.81	3,483,272	28.35	11,671,763	15,155,035
2035	411,720	5.93	3,556,438	28.78	11,849,746	15,406,184
2036	412,848	6.05	3,631,156	29.18	12,048,167	15,679,323
2037	411,720	6.18	3,707,457	29.55	12,168,233	15,875,690
2038	411,720	6.31	3,785,377	29.90	12,308,698	16,094,075
2039	411,720	6.44	3,864,949	30.21	12,436,565	16,301,514
2040	<u>412,848</u>	6.58	<u>3,946,209</u>	30.49	<u>12,586,305</u>	<u>16,532,514</u>
Total	8,240,040		39,206,172		214,358,400	253,564,572
Total NPV @6.95% Discount Rate			14,433,438		107,338,394	121,771,832

2030 CC Avoided Unit

Committed Capacity (MW) 50
 Capacity Factor (%) 94%
 Payment Type: Levelized

Gulf Power Company
Docket No. 20200115-EQ
Staff's First Data Request
Request No. 4
Attachment No. 1
Page 3 of 5

	Energy (MWh)	Capacity Rates (\$/kW-mo)	Total Capacity Payments (\$)	Energy Rates (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2021	411,720	-	-	16.78	6,907,723	6,907,723
2022	411,720	-	-	16.84	6,933,146	6,933,146
2023	411,720	-	-	19.52	8,038,156	8,038,156
2024	412,848	-	-	21.10	8,709,204	8,709,204
2025	411,720	-	-	23.43	9,647,516	9,647,516
2026	411,720	-	-	24.80	10,211,574	10,211,574
2027	411,720	-	-	25.84	10,639,030	10,639,030
2028	412,848	-	-	27.90	11,517,085	11,517,085
2029	411,720	-	-	28.03	11,540,461	11,540,461
2030	411,720	5.66	3,395,837	27.40	11,279,658	14,675,496
2031	411,720	5.66	3,395,837	26.90	11,075,125	14,470,963
2032	412,848	5.66	3,395,837	27.39	11,309,068	14,704,906
2033	411,720	5.66	3,395,837	27.89	11,481,176	14,877,013
2034	411,720	5.66	3,395,837	28.35	11,671,763	15,067,600
2035	411,720	5.66	3,395,837	28.78	11,849,746	15,245,583
2036	412,848	5.66	3,395,837	29.18	12,048,167	15,444,005
2037	411,720	5.66	3,395,837	29.55	12,168,233	15,564,070
2038	411,720	5.66	3,395,837	29.90	12,308,698	15,704,536
2039	411,720	5.66	3,395,837	30.21	12,436,565	15,832,402
2040	<u>412,848</u>	5.66	<u>3,395,837</u>	30.49	<u>12,586,305</u>	<u>15,982,142</u>
Total	8,240,040		37,354,209		214,358,400	251,712,609
Total NPV @6.95% Discount Rate			13,943,974		107,338,394	121,282,368

2030 CC Avoided Unit

Committed Capacity (MW) 50
 Capacity Factor (%) 94%
 Payment Type: Early

Gulf Power Company
Docket No. 20200115-EQ
Staff's First Data Request
Request No. 4
Attachment No. 1
Page 4 of 5

	Energy (MWh)	Capacity Rates (\$/kW-mo)	Total Capacity Payments (\$)	Energy Rates (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2021	411,720	1.74	1,042,027	16.78	6,907,723	7,949,750
2022	411,720	1.74	1,042,027	16.84	6,933,146	7,975,173
2023	411,720	1.77	1,062,867	19.52	8,038,156	9,101,024
2024	412,848	1.81	1,084,125	21.10	8,709,204	9,793,328
2025	411,720	1.84	1,105,807	23.43	9,647,516	10,753,323
2026	411,720	1.88	1,127,923	24.80	10,211,574	11,339,497
2027	411,720	1.92	1,150,482	25.84	10,639,030	11,789,511
2028	412,848	1.96	1,173,491	27.90	11,517,085	12,690,576
2029	411,720	1.99	1,196,961	28.03	11,540,461	12,737,422
2030	411,720	2.03	1,220,900	27.40	11,279,658	12,500,559
2031	411,720	2.08	1,245,318	26.90	11,075,125	12,320,444
2032	412,848	2.12	1,270,225	27.39	11,309,068	12,579,293
2033	411,720	2.16	1,295,629	27.89	11,481,176	12,776,805
2034	411,720	2.20	1,321,542	28.35	11,671,763	12,993,305
2035	411,720	2.25	1,347,973	28.78	11,849,746	13,197,718
2036	412,848	2.29	1,374,932	29.18	12,048,167	13,423,099
2037	411,720	2.34	1,402,431	29.55	12,168,233	13,570,663
2038	411,720	2.38	1,430,479	29.90	12,308,698	13,739,178
2039	411,720	2.43	1,459,089	30.21	12,436,565	13,895,654
2040	<u>412,848</u>	2.48	<u>1,488,271</u>	30.49	<u>12,586,305</u>	<u>14,074,575</u>
Total	8,240,040		24,842,498		214,358,400	239,200,898
Total NPV @6.95% Discount Rate			12,657,914		107,338,394	119,996,308

2030 CC Avoided Unit

Committed Capacity (MW) 50
 Capacity Factor (%) 94%
 Payment Type: Early Levelized

Gulf Power Company
Docket No. 20200115-EQ
Staff's First Data Request
Request No. 4
Attachment No. 1
Page 5 of 5

	Energy (MWh)	Capacity Rates (\$/kW-mo)	Total Capacity Payments (\$)	Energy Rates (\$/MWh)	Total Energy Payments (\$)	Total Payments (\$)
2021	411,720	1.95	1,172,190	16.78	6,907,723	8,079,913
2022	411,720	1.95	1,172,190	16.84	6,933,146	8,105,336
2023	411,720	1.95	1,172,190	19.52	8,038,156	9,210,346
2024	412,848	1.95	1,172,190	21.10	8,709,204	9,881,393
2025	411,720	1.95	1,172,190	23.43	9,647,516	10,819,706
2026	411,720	1.95	1,172,190	24.80	10,211,574	11,383,764
2027	411,720	1.95	1,172,190	25.84	10,639,030	11,811,219
2028	412,848	1.95	1,172,190	27.90	11,517,085	12,689,274
2029	411,720	1.95	1,172,190	28.03	11,540,461	12,712,650
2030	411,720	1.95	1,172,190	27.40	11,279,658	12,451,848
2031	411,720	1.95	1,172,190	26.90	11,075,125	12,247,315
2032	412,848	1.95	1,172,190	27.39	11,309,068	12,481,258
2033	411,720	1.95	1,172,190	27.89	11,481,176	12,653,366
2034	411,720	1.95	1,172,190	28.35	11,671,763	12,843,953
2035	411,720	1.95	1,172,190	28.78	11,849,746	13,021,935
2036	412,848	1.95	1,172,190	29.18	12,048,167	13,220,357
2037	411,720	1.95	1,172,190	29.55	12,168,233	13,340,422
2038	411,720	1.95	1,172,190	29.90	12,308,698	13,480,888
2039	411,720	1.95	1,172,190	30.21	12,436,565	13,608,754
2040	<u>412,848</u>	1.95	<u>1,172,190</u>	30.49	<u>12,586,305</u>	<u>13,758,494</u>
Total	8,240,040		23,443,791		214,358,400	237,802,191
Total NPV @6.95% Discount Rate			12,466,598		107,338,394	119,804,992