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May 24, 2016

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

Re: Docket No. 160072-EQ – Petition for Approval of Renewable Standard Offer
Contract and Tariff Schedule REF-1

Dear Ms. Stauffer:

Attached for electronic filing is Gulf Power Company's supplemental response to Staff's Data Request in Docket 160072-EQ.

Sincerely,

A handwritten signature in blue ink that reads "Robert L. McGee, Jr." The signature is written in a cursive, flowing style.

Robert L. McGee, Jr
Regulatory and Pricing Manager

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Attachments

cc: Beggs & Lane
Jeffrey A. Stone, Esq.
Office of General Counsel
Bianca Lherisson

1. Please complete the following tables describing payments to a renewable provider based on the proposed tariffs included in GULF'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, 2017, 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 provide an Excel spreadsheet in support of the calculation, and provide the total Net Present Value (NPV) of all payments in 2017 dollars, with 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

RESPONSE:

See pages 2 through 6 for each scenario. For each scenario, Gulf assumes a 50 MW renewable generator operating at 95% capacity factor and meeting the minimum Equivalent Availability Factor specified in Gulf's Schedule REF-1 needed to receive full capacity payments. For each early scenario, Gulf assumed an in-service date of January 1, 2017. Gulf uses the Excel formula to determine the NPV of each payment stream. The annual discount rate used in the NPV calculation is 6.34%

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As- Available Energy	Energy	Capacity Rates	Total Capacity Payments	Energy Rates	Total Energy Payments	Total Payments
Year	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2017	416,100	0.00	0	28.61	11,904,621	11,904,621
2018	416,100	0.00	0	33.64	13,997,604	13,997,604
2019	416,100	0.00	0	36.55	15,208,455	15,208,455
2020	417,240	0.00	0	39.66	16,547,738	16,547,738
2021	416,100	0.00	0	41.77	17,380,497	17,380,497
2022	416,100	0.00	0	43.51	18,104,511	18,104,511
2023	416,100	0.00	0	46.58	19,381,938	19,381,938
2024	417,240	0.00	0	48.37	20,181,899	20,181,899
2025	416,100	0.00	0	50.41	20,975,601	20,975,601
2026	416,100	0.00	0	53.52	22,269,672	22,269,672
2027	416,100	0.00	0	56.59	23,547,099	23,547,099
2028	417,240	0.00	0	59.01	24,621,332	24,621,332
2029	416,100	0.00	0	62.32	25,931,352	25,931,352
2030	416,100	0.00	0	63.35	26,359,935	26,359,935
2031	416,100	0.00	0	65.57	27,283,677	27,283,677
2032	417,240	0.00	0	68.17	28,443,251	28,443,251
2033	416,100	0.00	0	71.77	29,863,497	29,863,497
2034	416,100	0.00	0	75.69	31,494,609	31,494,609
2035	416,100	0.00	0	78.48	32,655,528	32,655,528
2036	417,240	0.00	0	82.84	34,564,162	34,564,162
Total (Nominal)			0		460,716,978	460,716,978
Total NPV (2017 \$)			0		232,745,336	232,745,336

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Normal	Energy	Capacity Rates ⁽¹⁾	Total Capacity Payments	Energy Rates ⁽²⁾	Total Energy Payments	Total Payments
Year	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2017	416,100	0.00	0	28.61	11,904,621	11,904,621
2018	416,100	0.00	0	33.64	13,997,604	13,997,604
2019	416,100	0.00	0	36.55	15,208,455	15,208,455
2020	417,240	0.00	0	39.66	16,547,738	16,547,738
2021	416,100	0.00	0	41.77	17,380,497	17,380,497
2022	416,100	0.00	0	43.51	18,104,511	18,104,511
2023	416,100	4.34	1,518,724	46.58	19,381,938	20,900,662
2024	417,240	4.43	2,659,936	48.37	20,181,899	22,841,835
2025	416,100	4.56	2,733,195	50.41	20,975,601	23,708,796
2026	416,100	4.68	2,808,471	53.52	22,269,672	25,078,143
2027	416,100	4.81	2,885,821	56.59	23,547,099	26,432,920
2028	417,240	4.94	2,965,302	59.01	24,621,332	27,586,634
2029	416,100	5.08	3,046,971	62.32	25,931,352	28,978,323
2030	416,100	5.22	3,130,890	63.35	26,359,935	29,490,825
2031	416,100	5.36	3,217,120	65.57	27,283,677	30,500,797
2032	417,240	5.51	3,305,725	68.17	28,443,251	31,748,976
2033	416,100	5.66	3,396,770	71.77	29,863,497	33,260,267
2034	416,100	5.82	3,490,322	75.69	31,494,609	34,984,931
2035	416,100	5.98	3,586,452	78.48	32,655,528	36,241,980
2036	417,240	6.14	3,685,229	82.84	34,564,162	38,249,391
Total (Nominal)			42,430,927		460,716,978	503,147,905
Total NPV (2017 \$)			18,342,825		232,745,336	251,088,161

(1) Capacity rate effective as of avoided unit's June 1, 2023 in-service date.

(2) Projected as-available energy rates shown prior the avoided unit's June 1, 2023 in-service date. The lower of the projected as-available energy rate or the projected avoided unit energy rate shown as of in-service date.

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Levelized	Energy	Capacity Rates ⁽¹⁾	Total Capacity Payments	Energy Rates ⁽²⁾	Total Energy Payments	Total Payments
Year	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2017	416,100	0.00	0	28.61	11,904,621	11,904,621
2018	416,100	0.00	0	33.64	13,997,604	13,997,604
2019	416,100	0.00	0	36.55	15,208,455	15,208,455
2020	417,240	0.00	0	39.66	16,547,738	16,547,738
2021	416,100	0.00	0	41.77	17,380,497	17,380,497
2022	416,100	0.00	0	43.51	18,104,511	18,104,511
2023	416,100	4.87	1,704,587	46.58	19,381,938	21,086,525
2024	417,240	4.90	2,937,854	48.37	20,181,899	23,119,753
2025	416,100	4.93	2,958,251	50.41	20,975,601	23,933,852
2026	416,100	4.97	2,979,210	53.52	22,269,672	25,248,882
2027	416,100	5.00	3,000,746	56.59	23,547,099	26,547,845
2028	417,240	5.04	3,022,875	59.01	24,621,332	27,644,207
2029	416,100	5.08	3,045,614	62.32	25,931,352	28,976,966
2030	416,100	5.11	3,068,978	63.35	26,359,935	29,428,913
2031	416,100	5.15	3,092,987	65.57	27,283,677	30,376,664
2032	417,240	5.20	3,117,656	68.17	28,443,251	31,560,907
2033	416,100	5.24	3,143,005	71.77	29,863,497	33,006,502
2034	416,100	5.28	3,169,053	75.69	31,494,609	34,663,662
2035	416,100	5.33	3,195,817	78.48	32,655,528	35,851,345
2036	417,240	5.37	3,223,319	82.84	34,564,162	37,787,481
Total (Nominal)			41,659,952		460,716,978	502,376,930
Total NPV (2017\$)			18,342,824		232,745,336	251,088,160

(1) Capacity rate effective as of avoided unit's June 1, 2023 in-service date.

(2) Projected as-available energy rates shown prior the avoided unit's June 1, 2023 in-service date. The lower of the projected as-available energy rate or the projected avoided unit energy rate shown as of in-service date.

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Early	Energy	Capacity Rates ⁽¹⁾	Total Capacity Payments	Energy Rates ⁽²⁾	Total Energy Payments	Total Payments
Year	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2017	416,100	2.21	1,324,934	28.61	11,904,621	13,229,555
2018	416,100	2.27	1,361,425	33.64	13,997,604	15,359,029
2019	416,100	2.33	1,398,921	36.55	15,208,455	16,607,376
2020	417,240	2.40	1,437,449	39.66	16,547,738	17,985,187
2021	416,100	2.46	1,477,039	41.77	17,380,497	18,857,536
2022	416,100	2.53	1,517,719	43.51	18,104,511	19,622,230
2023	416,100	2.60	1,559,520	46.58	19,381,938	20,941,458
2024	417,240	2.67	1,602,471	48.37	20,181,899	21,784,370
2025	416,100	2.74	1,646,606	50.41	20,975,601	22,622,207
2026	416,100	2.82	1,691,956	53.52	22,269,672	23,961,628
2027	416,100	2.90	1,738,556	56.59	23,547,099	25,285,655
2028	417,240	2.98	1,786,438	59.01	24,621,332	26,407,770
2029	416,100	3.06	1,835,640	62.32	25,931,352	27,766,992
2030	416,100	3.14	1,886,197	63.35	26,359,935	28,246,132
2031	416,100	3.23	1,938,146	65.57	27,283,677	29,221,823
2032	417,240	3.32	1,991,525	68.17	28,443,251	30,434,776
2033	416,100	3.41	2,046,375	71.77	29,863,497	31,909,872
2034	416,100	3.50	2,102,736	75.69	31,494,609	33,597,345
2035	416,100	3.60	2,160,649	78.48	32,655,528	34,816,177
2036	417,240	3.70	2,220,157	82.84	34,564,162	36,784,319
Total (Nominal)			34,724,458		460,716,978	495,441,436
Total NPV (2017\$)			18,342,829		232,745,336	251,088,165

(1) Capacity rate effective as of January 1, 2017.

(2) Projected as-available energy rates shown prior the avoided unit's June 1, 2023 in-service date. The lower of the projected as-available energy rate or the projected avoided unit energy rate shown as of in-service date.

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Early Levelized	Energy	Capacity Rates ⁽¹⁾	Total Capacity Payments	Energy Rates ⁽²⁾	Total Energy Payments	Total Payments
Year	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2017	416,100	2.59	1,555,559	28.61	11,904,621	13,460,180
2018	416,100	2.61	1,565,644	33.64	13,997,604	15,563,248
2019	416,100	2.63	1,576,006	36.55	15,208,455	16,784,461
2020	417,240	2.64	1,586,653	39.66	16,547,738	18,134,391
2021	416,100	2.66	1,597,594	41.77	17,380,497	18,978,091
2022	416,100	2.68	1,608,836	43.51	18,104,511	19,713,347
2023	416,100	2.70	1,620,387	46.58	19,381,938	21,002,325
2024	417,240	2.72	1,632,257	48.37	20,181,899	21,814,156
2025	416,100	2.74	1,644,454	50.41	20,975,601	22,620,055
2026	416,100	2.76	1,656,986	53.52	22,269,672	23,926,658
2027	416,100	2.78	1,669,864	56.59	23,547,099	25,216,963
2028	417,240	2.81	1,683,096	59.01	24,621,332	26,304,428
2029	416,100	2.83	1,696,693	62.32	25,931,352	27,628,045
2030	416,100	2.85	1,710,665	63.35	26,359,935	28,070,600
2031	416,100	2.88	1,725,021	65.57	27,283,677	29,008,698
2032	417,240	2.90	1,739,772	68.17	28,443,251	30,183,023
2033	416,100	2.92	1,754,930	71.77	29,863,497	31,618,427
2034	416,100	2.95	1,770,506	75.69	31,494,609	33,265,115
2035	416,100	2.98	1,786,510	78.48	32,655,528	34,442,038
2036	417,240	3.00	1,802,955	82.84	34,564,162	36,367,117
Total (Nominal)			33,384,388		460,716,978	494,101,366
Total NPV (2017\$)			18,342,822		232,745,336	251,088,158

(1) Capacity rate effective as of January 1, 2017.

(2) Projected as-available energy rates shown prior the avoided unit's June 1, 2023 in-service date. The lower of the projected as-available energy rate or the projected avoided unit energy rate shown as of in-service date.