



April 15, 2019

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

Re: Docket No. 20190084-EQ – Petition for approval of new standard offer for purchase of firm capacity and energy from renewable energy facilities or small qualifying facilities and approval of tariff schedule REF-1, by Gulf Power Company

Dear Mr. Teitzman:

Attached for electronic filing is Gulf Power Company's response to Staff's First Data Request in Docket 20190084-EQ.

Sincerely,

A handwritten signature in blue ink that reads 'C. Shane Boyett'.

C. Shane Boyett
Regulatory Issues Manager

md

Attachments

cc: Florida Public Service Commission
Takira Thompson, Division of Engineering
Gulf Power Company
Russell Badders, Esq., VP & Associate General Counsel
Beggs & Lane

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, 2020, 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 2020 dollars, and also 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

RESPONSE:

See pages 2 through 6 for each scenario. Each scenario assumes a 50 MW renewable generator operating at 88% capacity factor and meeting the minimum Equivalent Availability Factor specified in Gulf's Schedule REF-1 needed to receive full capacity payments. For each scenario, Gulf assumes an in-service date of January 1, 2020 for the renewable generator.

Gulf uses the Excel formula to determine the NPV of each payment stream. The annual discount rate used in the NPV calculation is 7.25 percent.

Staff's First Data Request
Docket No. 20190084-EQ
GULF POWER COMPANY
April 15, 2019
Item No. 1
Page 2 of 6

As- Available Energy	Energy	Capacity Rates	Total Capacity Payments	Energy Rates	Total Energy Payments	Total Payments
Year	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2020	386,496	0	0	26.56	10,265,334	10,265,334
2021	385,440	0	0	29.64	11,424,442	11,424,442
2022	385,440	0	0	31.39	12,098,962	12,098,962
2023	385,440	0	0	34.06	13,128,086	13,128,086
2024	386,496	0	0	35.22	13,612,389	13,612,389
2025	385,440	0	0	36.17	13,941,365	13,941,365
2026	385,440	0	0	37.47	14,442,437	14,442,437
2027	385,440	0	0	39.07	15,059,141	15,059,141
2028	386,496	0	0	40.00	15,459,840	15,459,840
2029	385,440	0	0	41.49	15,991,906	15,991,906
2030	385,440	0	0	44.40	17,113,536	17,113,536
2031	385,440	0	0	45.43	17,510,539	17,510,539
2032	386,496	0	0	47.63	18,408,804	18,408,804
2033	385,440	0	0	50.21	19,352,942	19,352,942
2034	385,440	0	0	52.42	20,204,765	20,204,765
2035	385,440	0	0	53.79	20,732,818	20,732,818
2036	386,496	0	0	55.27	21,361,634	21,361,634
2037	385,440	0	0	56.43	21,750,379	21,750,379
2038	385,440	0	0	57.18	22,039,459	22,039,459
2039	385,440	0	0	59.88	23,080,147	23,080,147
Total (Nominal)			0		336,978,925	336,978,925
Total NPV (2020 \$)			0		171,387,652	171,387,652

Normal	Energy	Capacity Rates ⁽¹⁾	Total Capacity Payments	Energy Rates ⁽²⁾	Total Energy Payments	Total Payments
Year	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2020	386,496	0.00	0.00	26.56	10,265,334	10,265,334
2021	385,440	0.00	0.00	29.64	11,424,442	11,424,442
2022	385,440	0.00	0.00	31.39	12,098,962	12,098,962
2023	385,440	0.00	0.00	34.06	13,128,086	13,128,086
2024	386,496	10.67	3,735,294	32.25	12,464,496	16,199,790
2025	385,440	10.77	6,460,024	30.51	12,668,770	19,128,794
2026	385,440	10.93	6,558,357	31.68	12,210,739	18,769,096
2027	385,440	11.10	6,658,765	32.35	12,468,984	19,127,749
2028	386,496	11.27	6,761,291	31.60	12,213,274	18,974,565
2029	385,440	11.44	6,865,981	32.76	12,627,014	19,492,995
2030	385,440	11.62	6,972,881	33.77	13,016,309	19,989,190
2031	385,440	11.80	7,082,035	34.58	13,328,515	20,410,550
2032	386,496	11.99	7,193,494	35.54	13,736,068	20,929,562
2033	385,440	12.18	7,307,304	37.06	14,284,406	21,591,710
2034	385,440	12.37	7,423,515	38.11	14,689,118	22,112,633
2035	385,440	12.57	7,542,179	38.89	14,989,762	22,531,941
2036	386,496	12.77	7,663,347	40.02	15,467,570	23,130,917
2037	385,440	12.98	7,787,072	41.28	15,910,963	23,698,035
2038	385,440	13.19	7,913,407	41.57	16,022,741	23,936,148
2039	385,440	13.40	8,042,408	44.17	17,024,885	25,067,293
Total (Nominal)			111,967,354		270,040,438	382,007,792
Total NPV (2020 \$)			50,741,932		143,805,102	194,547,034

- (1) Capacity rate effective as of avoided unit's June 1, 2024 in-service date.
(2) Projected as-available energy rates shown prior to the avoided unit's June 1, 2024 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 of Gulf's avoided unit.

Levelized	Energy	Capacity Rates ⁽¹⁾	Total Capacity Payments	Energy Rates ⁽²⁾	Total Energy Payments	Total Payments
Year	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2020	386,496	0.00	0	26.56	10,265,334	10,265,334
2021	385,440	0.00	0	29.64	11,424,442	11,424,442
2022	385,440	0.00	0	31.39	12,098,962	12,098,962
2023	385,440	0.00	0	34.06	13,128,086	13,128,086
2024	386,496	11.49	4,021,257	32.25	12,464,496	16,485,753
2025	385,440	11.51	6,905,959	30.51	12,668,770	19,574,729
2026	385,440	11.55	6,927,437	31.68	12,210,739	19,138,176
2027	385,440	11.58	6,949,369	32.35	12,468,984	19,418,353
2028	386,496	11.62	6,971,763	31.60	12,213,274	19,185,037
2029	385,440	11.66	6,994,629	32.76	12,627,014	19,621,643
2030	385,440	11.70	7,017,978	33.77	13,016,309	20,034,287
2031	385,440	11.74	7,041,820	34.58	13,328,515	20,370,335
2032	386,496	11.78	7,066,165	35.54	13,736,068	20,802,233
2033	385,440	11.82	7,091,023	37.06	14,284,406	21,375,429
2034	385,440	11.86	7,116,406	38.11	14,689,118	21,805,524
2035	385,440	11.90	7,142,325	38.89	14,989,762	22,132,087
2036	386,496	11.95	7,168,791	40.02	15,467,570	22,636,361
2037	385,440	11.99	7,195,815	41.28	15,910,963	23,106,778
2038	385,440	12.04	7,223,409	41.57	16,022,741	23,246,150
2039	385,440	12.09	7,251,586	44.17	17,024,885	24,276,471
Total (Nominal)			110,085,731		270,040,438	380,126,169
Total NPV (2020 \$)			50,741,937		143,805,102	194,547,039

- (1) Capacity rate effective as of avoided unit's June 1, 2024 in-service date.
(2) Projected as-available energy rates shown prior to the avoided unit's June 1, 2024 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 of Gulf's avoided unit.

Early	Energy	Capacity Rates ⁽¹⁾	Total Capacity Payments	Energy Rates ⁽²⁾	Total Energy Payments	Total Payments
Year	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2020	386,496	6.49	3,893,654	26.56	10,265,334	14,158,988
2021	385,440	6.63	3,975,031	29.64	11,424,442	15,399,473
2022	385,440	6.76	4,058,110	31.39	12,098,962	16,157,072
2023	385,440	6.90	4,142,924	34.06	13,128,086	17,271,010
2024	386,496	7.05	4,229,511	32.25	12,464,496	16,694,007
2025	385,440	7.20	4,317,908	30.51	12,668,770	16,986,678
2026	385,440	7.35	4,408,152	31.68	12,210,739	16,618,891
2027	385,440	7.50	4,500,283	32.35	12,468,984	16,969,267
2028	386,496	7.66	4,594,339	31.60	12,213,274	16,807,613
2029	385,440	7.82	4,690,360	32.76	12,627,014	17,317,374
2030	385,440	7.98	4,788,389	33.77	13,016,309	17,804,698
2031	385,440	8.15	4,888,466	34.58	13,328,515	18,216,981
2032	386,496	8.32	4,990,635	35.54	13,736,068	18,726,703
2033	385,440	8.49	5,094,939	37.06	14,284,406	19,379,345
2034	385,440	8.67	5,201,424	38.11	14,689,118	19,890,542
2035	385,440	8.85	5,310,133	38.89	14,989,762	20,299,895
2036	386,496	9.04	5,421,115	40.02	15,467,570	20,888,685
2037	385,440	9.22	5,534,416	41.28	15,910,963	21,445,379
2038	385,440	9.42	5,650,086	41.57	16,022,741	21,672,827
2039	385,440	9.61	5,768,173	44.17	17,024,885	22,793,058
Total (Nominal)			95,458,048		270,040,438	365,498,486
Total NPV (2020 \$)			50,741,934		143,805,102	194,547,036

- (1) Capacity rate effective as of January 1, 2020.
(2) Projected as-available energy rates shown prior to the avoided unit's June 1, 2024 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.

Early Levelized	Energy	Capacity Rates ⁽¹⁾	Total Capacity Payments	Energy Rates ⁽²⁾	Total Energy Payments	Total Payments
Year	(MWh)	(\$/kW-mo)	(\$)	(\$/MWh)	(\$)	(\$)
2020	386,496	7.13	4,277,075	26.56	10,265,334	14,542,409
2021	385,440	7.19	4,311,133	29.64	11,424,442	15,735,575
2022	385,440	7.24	4,345,903	31.39	12,098,962	16,444,865
2023	385,440	7.30	4,381,400	34.06	13,128,086	17,509,486
2024	386,496	7.36	4,417,639	32.25	12,464,496	16,882,135
2025	385,440	7.42	4,454,635	30.51	12,668,770	17,123,405
2026	385,440	7.49	4,492,405	31.68	12,210,739	16,703,144
2027	385,440	7.55	4,530,963	32.35	12,468,984	16,999,947
2028	386,496	7.62	4,570,328	31.60	12,213,274	16,783,602
2029	385,440	7.68	4,610,515	32.76	12,627,014	17,237,529
2030	385,440	7.75	4,651,543	33.77	13,016,309	17,667,852
2031	385,440	7.82	4,693,428	34.58	13,328,515	18,021,943
2032	386,496	7.89	4,736,188	35.54	13,736,068	18,472,256
2033	385,440	7.97	4,779,842	37.06	14,284,406	19,064,248
2034	385,440	8.04	4,824,408	38.11	14,689,118	19,513,526
2035	385,440	8.12	4,869,905	38.89	14,989,762	19,859,667
2036	386,496	8.19	4,916,354	40.02	15,467,570	20,383,924
2037	385,440	8.27	4,963,773	41.28	15,910,963	20,874,736
2038	385,440	8.35	5,012,184	41.57	16,022,741	21,034,925
2039	385,440	8.44	5,061,606	44.17	17,024,885	22,086,491
Total (Nominal)			92,901,226		270,040,438	362,941,664
Total NPV (2020 \$)			50,741,935		143,805,102	194,547,037

- (1) Capacity rate effective as of January 1, 2020.
(2) Projected as-available energy rates shown prior to the avoided unit's June 1, 2024 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.