



Stephanie A. Cuello
SENIOR COUNSEL

May 6, 2024

VIA ELECTRONIC FILING

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

Re: *Petition for Approval of Amended Standard Offer Contract (Schedule COG-2);*
Docket No. 20240048-EQ

Dear Mr. Teitzman:

Please find enclosed for electronic filing Duke Energy Florida, LLC's Response to Staff's First Data Request.

Thank you for your assistance in this matter and if you have any questions, please feel free to contact me at (850) 521-1425.

Sincerely,

/s/ Stephanie A. Cuello

Stephanie A. Cuello

SAC/clg
Enclosures

cc: Segundo Sanchez, Division of Engineering, FPSC, ssanchez@psc.state.fl.us
discovery-gcl@psc.state.fl.us

**DUKE ENERGY FLORIDA, LLC'S (DEF), RESPONSE TO
STAFF'S FIRST DATA REQUEST REGARDING DEF'S PETITION FOR APPROVAL OF
AMENDED STANDARD OFFER CONTRACT (SCHEDULE COG-2)**

Docket No. 20240048-EQ

1. Please refer to paragraph 3 of the Utility's petition to amend the standard offer contract. Explain the discrepancy between the statement that "DEF does not project a generating unit addition during the period covered by its Ten-Year Site Plan," compared to the Utility's 2024 Ten-Year Site Plan which includes the avoided unit.

RESPONSE:

The statement "DEF does not project a generating unit addition during the period covered by its Ten-Year Site Plan," is a typo. Please disregard.

2. Please refer to Sheet Nos. 9.467 and 9.468 of the Utility's amended standard offer contract. Explain why there is an increase in the avoided unit capital costs and fixed O&M as compared to the previous year's avoided unit. As part of this explanation, describe the impact of any changes in financial assumptions, changes in unit type or capabilities, change in unit timing, or general industry trends on the unit cost.

RESPONSE:

The increase in the avoided unit capital costs and fixed O&M costs reflect an improved heat rate and current financial and market trends driven by inflation, labor markets, supply chain, material commodity markets and overall global supply and demand. DEF made these cost adjustments based on recent industry bid results seen across the company's total service area.

3. Please refer to Sheet No. 9.455 and Table 3. Please provide a copy of the amended Table 3 in Excel format, with formulas intact.

RESPONSE:

Please see the attached spreadsheet.

4. 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, 2025, 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 2025 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 (\$)
2025						
2026						
2027						
2028						
2029						
2030						
2031						
2032						
2033						
2034						
2035						
2036						
2037						
2038						
2039						
2040						
2041						
2042						
2043						
2044						
Total (Nominal)						
Total (NPV)						

RESPONSE:

When forecasting QF as available rates, DEF uses its system marginal costs adjusted for a reasonable volume of potential solar QF projects in DEF’s generator interconnection queues and consistent with rule 25-17.0825(2)(a). It is important to note that current estimates are only valid and effective as of December 31, 2023 due to the volume of potential QF activity. It is also important to note that with large amounts of QF generators contributing to DEF’s as-available block size, it is anticipated DEF will have increasing amounts of time when required DEF system resources along with potential QF generation may exceed DEF load levels and that excess energy is not fully captured in the estimates herein. Finally, please see the attached spreadsheet for the table values. The NPV values were calculated using monthly values and the discount rate used 7.45% and an assumed capacity factor of 95%.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Avoided Unit Data														
2															
3															
4		FPSC Filing References													
5	Plant Data:														
6	Avoided Unit Name		Undesignated CT P1												
7	Unit Type		CT												
8	Unit Size (MW)		214.8	Summer (Winter 235)											
9	Construction Start Month		1												
10	In-Service Month		6												
11	In-Service Year	n=	2032												
12	Life of Plant	L=	35												
13	Tax Life		15.0												
14	Direct Plant Cost \$/kW in Year	I _n =	\$ 1,239.7	2024	On summer rating										
15	Escalation in Plant Cost \$/kW		\$ 1.2												
16	Total Direct Plant Cost \$/kW		\$ 1,240.9												
17		I _n =	\$ 180.9												
18	Total Plant Cost \$/kW in Year	I _n =	\$ 1,421.8												
19	Total Capital Expenditures (\$000)		\$ 266,541												
20	Total Plant Cost (\$000)		\$ 305,404												
21															
22	Plant Escalation Rate	i _p =	0.02%												
23	Capital Expenditure Spending Curve														
24	Capital Expenditure \$/kw														
25															
26	AFUDC														
27	Total Cap Reqmt. (\$000)														
28	Deescalating Payment Factor		0.93												
29	Escalating Payment Factor (r factor)		0.93												
30	1st Year Avoided Capital		\$ 29,592												
31	Value of K	K=	1.287												
32															
33	Fixed O&M data:														
34	Fixed O&M Cost \$/kW yr	O _n =	3.49												
35	O&M Escalation Rate	i _o =	2.50%												
36	O&M R-Factor		0.95												
37	1st Year Avoided Fixed O&M \$/kW yr		\$ 750												
38															
39															
40	Variable O&M data (info only):														
41	Variable O&M Cost \$/kW yr		11.01												
42	O&M Escalation Rate		2.50%												
43															
44	Cost of Capital:														
45	Cost of Debt:		6.00%	47.00%	2.82%										
46	Cost of Common		10.10%	53.00%	5.35%										
47	Cost of Capital-before tax			100.00%	8.17%										
48	Income Tax Rate (Composite)				25.35%										
49	Discount Rate	r=			7.45%										
50	Rev Req't Rate				9.99%										
51	AFUDC Rate		8.17%												
52															
53	Cost of Plant Ownership:														
54	Prop Tax Rate		0.66%												
55	Property Assessed at % of Inservice Cost		100%												
56	Annual Change in Assessed Value % per Year		0%												
57	Annual Change in Assessed Value # of Years		0												
58	Property Insurance as a % of Value		0.0903%												
59	Liability insurance Flat Rate		\$ -												
60	Insurance Escalation		0.00%												
61															
62	PPA Contract Terms:														
63	Current Year		2024												
64	Years Until Contract Begins		6												
65	Year Capacity Payments Begin	m=	2030												
66	Term of Contract with Early Payments	t=	13												
67	Year Contract Ends		2042												
68															
69															
70	Additional Information for Filing:														
71	NPV of Capital Cost for Normal Payments	F=	611.37												
72	NPV of Fixed O&M Cost for Normal Payments	G=	17.26												
73															

Check

As Available Only

	Energy (MWH)	Capacity Rates (\$/kw-month)	Total Capacity Payments (\$000)	Energy Rates (\$/MWh)	Total Energy Payments (\$000)	Total Payments to Renewable Provider (\$000)
2025	416,362	\$ -	\$ -	\$ 34.24	\$ 14,256	\$ 14,256
2026	416,362	\$ -	\$ -	\$ 33.48	\$ 13,941	\$ 13,941
2027	416,362	\$ -	\$ -	\$ 32.04	\$ 13,342	\$ 13,342
2028	417,503	\$ -	\$ -	\$ 30.44	\$ 12,710	\$ 12,710
2029	416,362	\$ -	\$ -	\$ 30.18	\$ 12,567	\$ 12,567
2030	416,362	\$ -	\$ -	\$ 29.40	\$ 12,243	\$ 12,243
2031	416,362	\$ -	\$ -	\$ 29.53	\$ 12,297	\$ 12,297
2032	417,503	\$ -	\$ -	\$ 28.88	\$ 12,057	\$ 12,057
2033	416,362	\$ -	\$ -	\$ 29.66	\$ 12,351	\$ 12,351
2034	416,362	\$ -	\$ -	\$ 29.20	\$ 12,159	\$ 12,159
2035	416,362	\$ -	\$ -	\$ 35.43	\$ 14,750	\$ 14,750
2036	417,503	\$ -	\$ -	\$ 37.67	\$ 15,729	\$ 15,729
2037	416,362	\$ -	\$ -	\$ 39.60	\$ 16,487	\$ 16,487
2038	416,362	\$ -	\$ -	\$ 40.41	\$ 16,827	\$ 16,827
2039	416,362	\$ -	\$ -	\$ 42.20	\$ 17,572	\$ 17,572
2040	417,503	\$ -	\$ -	\$ 43.83	\$ 18,299	\$ 18,299
2041	416,362	\$ -	\$ -	\$ 47.37	\$ 19,724	\$ 19,724
2042	416,362	\$ -	\$ -	\$ 48.13	\$ 20,039	\$ 20,039
2043	416,362	\$ -	\$ -	\$ 51.60	\$ 21,483	\$ 21,483
2044	417,503	\$ -	\$ -	\$ 52.62	\$ 21,970	\$ 21,970
Total	8,332,945		-		310,801	310,801
NPV 2025\$			\$ -		\$ 154,468	\$ 154,468

Normal

	Energy (MWH)	Capacity Rates (\$/kw-month)	Total Capacity Payments (\$000)	Energy Rates (\$/MWh)	Total Energy Payments (\$000)	Total Payments to Renewable Provider (\$000)
2025	416,362	\$ -	\$ -	\$ 34.24	\$ 14,256	\$ 14,256
2026	416,362	\$ -	\$ -	\$ 33.48	\$ 13,941	\$ 13,941
2027	416,362	\$ -	\$ -	\$ 32.04	\$ 13,342	\$ 13,342
2028	417,503	\$ -	\$ -	\$ 30.44	\$ 12,710	\$ 12,710
2029	416,362	\$ -	\$ -	\$ 30.18	\$ 12,567	\$ 12,567
2030	416,362	\$ -	\$ -	\$ 29.40	\$ 12,243	\$ 12,243
2031	416,362	\$ -	\$ -	\$ 29.53	\$ 12,297	\$ 12,297
2032	417,503	\$ 11.77	\$ 4,120	\$ 28.88	\$ 12,057	\$ 16,177
2033	416,362	\$ 11.78	\$ 7,068	\$ 29.66	\$ 12,351	\$ 19,419
2034	416,362	\$ 11.79	\$ 7,074	\$ 29.20	\$ 12,159	\$ 19,233
2035	416,362	\$ 11.80	\$ 7,080	\$ 35.43	\$ 14,750	\$ 21,830
2036	417,503	\$ 11.81	\$ 7,085	\$ 37.67	\$ 15,729	\$ 22,814
2037	416,362	\$ 11.82	\$ 7,091	\$ 39.60	\$ 16,487	\$ 23,578
2038	416,362	\$ 11.83	\$ 7,097	\$ 40.41	\$ 16,827	\$ 23,924
2039	416,362	\$ 11.84	\$ 7,103	\$ 42.20	\$ 17,572	\$ 24,675
2040	417,503	\$ 11.85	\$ 7,110	\$ 43.83	\$ 18,299	\$ 25,409
2041	416,362	\$ 11.86	\$ 7,116	\$ 47.37	\$ 19,724	\$ 26,840
2042	416,362	\$ 11.87	\$ 7,123	\$ 48.13	\$ 20,039	\$ 27,162
2043	416,362	\$ 11.88	\$ 7,129	\$ 51.60	\$ 21,483	\$ 28,613
2044	417,503	\$ 11.89	\$ 7,136	\$ 52.62	\$ 21,970	\$ 29,107
Total	8,332,945		89,333		310,801	400,134
NPV 2025\$			\$ 34,569		\$ 154,468	\$ 189,037

Early

	Energy (MWH)	Capacity Rates (\$/kw-month)	Total Capacity Payments (\$000)	Energy Rates (\$/MWh)	Total Energy Payments (\$000)	Total Payments to Renewable Provider (\$000)
2025	416,362	\$ -	\$ -	\$ 34.24	\$ 14,256	\$ 14,256
2026	416,362	\$ -	\$ -	\$ 33.48	\$ 13,941	\$ 13,941
2027	416,362	\$ -	\$ -	\$ 32.04	\$ 13,342	\$ 13,342
2028	417,503	\$ -	\$ -	\$ 30.44	\$ 12,710	\$ 12,710
2029	416,362	\$ -	\$ -	\$ 30.18	\$ 12,567	\$ 12,567
2030	416,362	\$ 8.92	\$ 5,354	\$ 29.40	\$ 12,243	\$ 17,597
2031	416,362	\$ 8.93	\$ 5,358	\$ 29.53	\$ 12,297	\$ 17,654
2032	417,503	\$ 8.94	\$ 5,362	\$ 28.88	\$ 12,057	\$ 17,419
2033	416,362	\$ 8.94	\$ 5,366	\$ 29.66	\$ 12,351	\$ 17,717
2034	416,362	\$ 8.95	\$ 5,371	\$ 29.20	\$ 12,159	\$ 17,529
2035	416,362	\$ 8.96	\$ 5,375	\$ 35.43	\$ 14,750	\$ 20,125
2036	417,503	\$ 8.97	\$ 5,380	\$ 37.67	\$ 15,729	\$ 21,109
2037	416,362	\$ 8.97	\$ 5,384	\$ 39.60	\$ 16,487	\$ 21,871
2038	416,362	\$ 8.98	\$ 5,389	\$ 40.41	\$ 16,827	\$ 22,215
2039	416,362	\$ 8.99	\$ 5,394	\$ 42.20	\$ 17,572	\$ 22,966
2040	417,503	\$ 9.00	\$ 5,399	\$ 43.83	\$ 18,299	\$ 23,698
2041	416,362	\$ 9.01	\$ 5,404	\$ 47.37	\$ 19,724	\$ 25,127
2042	416,362	\$ 9.01	\$ 5,409	\$ 48.13	\$ 20,039	\$ 25,448
2043	416,362	\$ 9.02	\$ 5,414	\$ 51.60	\$ 21,483	\$ 26,897
2044	417,503	\$ 9.03	\$ 5,419	\$ 52.62	\$ 21,970	\$ 27,390
Total	8,332,945		80,776		310,801	391,577
NPV 2025\$			\$ 34,569		\$ 154,468	\$ 189,037

Levelized

	Energy (MWH)	Capacity Rates (\$/kw-month)	Total Capacity Payments (\$000)	Energy Rates (\$/MWh)	Total Energy Payments (\$000)	Total Payments to Renewable Provider (\$000)
2025	416,362	\$ -	\$ -	\$ 34.24	\$ 14,256	\$ 14,256
2026	416,362	\$ -	\$ -	\$ 33.48	\$ 13,941	\$ 13,941
2027	416,362	\$ -	\$ -	\$ 32.04	\$ 13,342	\$ 13,342
2028	417,503	\$ -	\$ -	\$ 30.44	\$ 12,710	\$ 12,710
2029	416,362	\$ -	\$ -	\$ 30.18	\$ 12,567	\$ 12,567
2030	416,362	\$ -	\$ -	\$ 29.40	\$ 12,243	\$ 12,243
2031	416,362	\$ -	\$ -	\$ 29.53	\$ 12,297	\$ 12,297
2032	417,503	\$ 11.78	\$ 4,123	\$ 28.88	\$ 12,057	\$ 16,180
2033	416,362	\$ 11.79	\$ 7,073	\$ 29.66	\$ 12,351	\$ 19,424
2034	416,362	\$ 11.80	\$ 7,077	\$ 29.20	\$ 12,159	\$ 19,236
2035	416,362	\$ 11.80	\$ 7,082	\$ 35.43	\$ 14,750	\$ 21,832
2036	417,503	\$ 11.81	\$ 7,087	\$ 37.67	\$ 15,729	\$ 22,816
2037	416,362	\$ 11.82	\$ 7,092	\$ 39.60	\$ 16,487	\$ 23,578
2038	416,362	\$ 11.83	\$ 7,096	\$ 40.41	\$ 16,827	\$ 23,923
2039	416,362	\$ 11.84	\$ 7,102	\$ 42.20	\$ 17,572	\$ 24,673
2040	417,503	\$ 11.84	\$ 7,107	\$ 43.83	\$ 18,299	\$ 25,406
2041	416,362	\$ 11.85	\$ 7,112	\$ 47.37	\$ 19,724	\$ 26,836
2042	416,362	\$ 11.86	\$ 7,117	\$ 48.13	\$ 20,039	\$ 27,156
2043	416,362	\$ 11.87	\$ 7,123	\$ 51.60	\$ 21,483	\$ 28,607
2044	417,503	\$ 11.88	\$ 7,129	\$ 52.62	\$ 21,970	\$ 29,099
Total	8,332,945		89,320		310,801	400,121
NPV 2025\$			\$ 34,569		\$ 154,468	\$ 189,037

Early Levelized

	Energy (MWH)	Capacity Rates (\$/kw-month)	Total Capacity Payments (\$000)	Energy Rates (\$/MWh)	Total Energy Payments (\$000)	Total Payments to Renewable Provider (\$000)
2025	416,362	\$ -	\$ -	\$ 34.24	\$ 14,256	\$ 14,256
2026	416,362	\$ -	\$ -	\$ 33.48	\$ 13,941	\$ 13,941
2027	416,362	\$ -	\$ -	\$ 32.04	\$ 13,342	\$ 13,342
2028	417,503	\$ -	\$ -	\$ 30.44	\$ 12,710	\$ 12,710
2029	416,362	\$ -	\$ -	\$ 30.18	\$ 12,567	\$ 12,567
2030	416,362	\$ 8.93	\$ 5,359	\$ 29.40	\$ 12,243	\$ 17,601
2031	416,362	\$ 8.94	\$ 5,362	\$ 29.53	\$ 12,297	\$ 17,658
2032	417,503	\$ 8.94	\$ 5,365	\$ 28.88	\$ 12,057	\$ 17,422
2033	416,362	\$ 8.95	\$ 5,369	\$ 29.66	\$ 12,351	\$ 17,719
2034	416,362	\$ 8.95	\$ 5,372	\$ 29.20	\$ 12,159	\$ 17,531
2035	416,362	\$ 8.96	\$ 5,376	\$ 35.43	\$ 14,750	\$ 20,126
2036	417,503	\$ 8.97	\$ 5,379	\$ 37.67	\$ 15,729	\$ 21,108
2037	416,362	\$ 8.97	\$ 5,383	\$ 39.60	\$ 16,487	\$ 21,870
2038	416,362	\$ 8.98	\$ 5,387	\$ 40.41	\$ 16,827	\$ 22,214
2039	416,362	\$ 8.98	\$ 5,391	\$ 42.20	\$ 17,572	\$ 22,963
2040	417,503	\$ 8.99	\$ 5,395	\$ 43.83	\$ 18,299	\$ 23,694
2041	416,362	\$ 9.00	\$ 5,399	\$ 47.37	\$ 19,724	\$ 25,123
2042	416,362	\$ 9.01	\$ 5,403	\$ 48.13	\$ 20,039	\$ 25,442
2043	416,362	\$ 9.01	\$ 5,408	\$ 51.60	\$ 21,483	\$ 26,891
2044	417,503	\$ 9.02	\$ 5,412	\$ 52.62	\$ 21,970	\$ 27,383
Total	8,332,945		80,759		310,801	391,560
NPV 2025\$			\$ 34,569		\$ 154,468	\$ 189,037