



Stephanie A. Cuello  
SENIOR COUNSEL

October 31, 2023

**VIA ELECTRONIC FILING**

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

Re: *Duke Energy Florida, LLC's Solar Plant Operation Status Report;*  
Docket No. 20230007-EI

Dear Mr. Teitzman:

Enclosed for filing on behalf of Duke Energy Florida, LLC ("DEF") is DEF's Solar Plant Operation Status Report for the month of September 2023, in accordance with Paragraph 15a. of the 2017 Second Revised and Restated Settlement Agreement, which was approved in Order No. PSC-2017-0451-AS-EU, dated November 20, 2017.

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/vr  
Attachment

**CERTIFICATE OF SERVICE**

*Docket No. 20230007-EI*

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 31st day of October, 2023.

/s/ Stephanie A. Cuello

Attorney

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Duke Energy Florida, LLC  
 Actual Data for Solar Generation Facilities  
 Solar Base Rate Adjustment (SoBRA) Reporting  
September, 2023

		AVERAGE HOURLY NET OUTPUT (MWh)	AVERAGE HOURLY NET OUTPUT (MWh)	AVERAGE HOURLY NET OUTPUT (MWh)	AVERAGE HOURLY NET OUTPUT (MWh)	AVERAGE HOURLY NET OUTPUT (MWh)	AVERAGE HOURLY NET OUTPUT (MWh)	AVERAGE HOURLY NET OUTPUT (MWh)	AVERAGE HOURLY NET OUTPUT (MWh)	AVERAGE HOURLY NET OUTPUT (MWh)	AVERAGE HOURLY NET OUTPUT (MWh)	
Hour of Day	System Firm Demand (MW)	Hamilton	Lake Placid	Trenton	Columbia	Debary	Santa Fe	Twin Rivers	Duette	Sandy Creek	Charlie Creek	
1	1	4,588.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	2	4,259.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	3	4,031.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	4	3,890.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	5	3,851.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	6	3,951.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7	7	4,169.0	1.9	1.1	1.9	3.1	1.4	2.2	1.3	2.0	1.0	3.3
8	8	4,360.1	22.9	7.7	23.0	27.4	11.3	22.1	21.3	21.6	18.2	26.0
9	9	4,605.6	42.7	13.6	40.9	44.8	24.7	39.4	40.6	36.5	39.0	40.6
10	10	5,006.3	48.2	16.9	44.9	51.6	36.2	46.3	45.7	43.1	46.3	47.3
11	11	5,494.3	50.8	19.1	48.1	52.6	43.2	46.4	47.3	44.4	48.3	48.4
12	12	6,083.8	48.4	19.8	48.7	52.2	44.9	45.9	45.5	46.0	44.0	47.1
13	13	6,702.6	48.8	20.1	47.2	51.7	43.1	45.2	45.6	46.4	48.4	44.7
14	14	7,221.2	47.0	20.1	50.2	48.4	39.1	45.5	44.6	46.0	48.6	45.8
15	15	7,572.1	44.6	16.9	47.0	44.8	34.4	42.6	40.4	38.5	42.8	43.8
16	16	7,814.5	39.3	13.6	40.4	41.6	28.5	39.7	35.3	32.3	39.8	35.9
17	17	7,981.0	33.7	10.0	34.1	35.4	16.6	34.1	30.3	24.7	33.4	24.3
18	18	7,959.2	15.0	3.2	17.0	18.5	6.2	15.4	14.8	12.2	19.8	10.3
19	19	7,691.9	1.2	0.3	1.3	1.2	0.4	0.9	1.1	1.1	2.8	0.8
20	20	7,248.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	21	6,865.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	22	6,290.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	23	5,652.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	24	5,033.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Duke Energy Florida, LLC  
Actual Data for Solar Generation Facilities  
Solar Base Rate Adjustment (SoBRA) Reporting  
PERIOD:  
September, 2023

Facility	Net Capability (MW)	Net Generation (MWh)	Capacity Factor (%)	Percent of Total Generation (%)	Total System Net Generation (MWh)
HAMILTON	74.9	13,334	24.7%	0.3%	3,965,928
LAKE PLACID	45.0	4,877	15.1%	0.1%	
TRENTON	74.9	13,344	24.7%	0.3%	
COLUMBIA	74.9	14,203	26.3%	0.4%	
DEBARY	74.5	9,896	18.4%	0.2%	
SANTA FE	74.9	12,767	23.7%	0.3%	
TWIN RIVERS	74.9	12,413	23.0%	0.3%	
DUETTE	74.5	11,841	22.1%	0.3%	
SANDY CREEK	74.9	12,970	24.1%	0.3%	
CHARLIE CREEK	74.9	12,549	23.3%	0.3%	
<b>Total:</b>	<b>718.3</b>	<b>118,194.0</b>	<b>22.9%</b>	<b>3.0%</b>	

Facility	Natural Gas Displaced (MCF)	Cost of NG (\$/MCF)	Oil Displaced (Bbls)	Cost of Oil (\$/Bbl)	Coal Displaced (Tons)	Cost of Coal (\$/Ton)
HAMILTON	95,780	\$3.30	553	\$144.94	1,260	\$56.57
LAKE PLACID	35,032	\$3.30	202	\$144.94	461	\$56.57
TRENTON	95,852	\$3.30	554	\$144.94	1,261	\$56.57
COLUMBIA	102,022	\$3.30	590	\$144.94	1,343	\$56.57
DEBARY	71,085	\$3.30	411	\$144.94	935	\$56.57
SANTA FE	91,707	\$3.30	530	\$144.94	1,207	\$56.57
TWIN RIVERS	89,165	\$3.30	515	\$144.94	1,173	\$56.57
DUETTE	85,056	\$3.30	492	\$144.94	1,119	\$56.57
SANDY CREEK	93,166	\$3.30	538	\$144.94	1,226	\$56.57
CHARLIE CREEK	90,141	\$3.30	521	\$144.94	1,186	\$56.57
<b>Total:</b>	<b>849,006</b>	<b>\$2,799,734</b>	<b>4,906</b>	<b>\$711,078</b>	<b>11,173</b>	<b>\$632,070</b>

Facility	CO2 Reductions (Tons)	NOx Reduction (Tons)	SO2 Reduction (Tons)	Hg Reduction (lbs)
HAMILTON	8,629	5	2	0
LAKE PLACID	3,156	2	1	0
TRENTON	8,636	5	2	0
COLUMBIA	9,192	5	2	0
DEBARY	6,404	4	2	0
SANTA FE	8,262	5	2	0
TWIN RIVERS	8,033	5	2	0
DUETTE	7,663	4	2	0
SANDY CREEK	8,394	5	2	0
CHARLIE CREEK	8,121	5	2	0
<b>Total:</b>	<b>76,491</b>	<b>45</b>	<b>21</b>	<b>1</b>

Facility	O&M (\$)	Carrying Costs (\$)	Capital (\$)	Other (\$)	Fuel Costs (\$)	Total Cost of Generation (\$)
HAMILTON	\$70,470	\$628,977	\$313,210	\$16,388	\$0	\$1,029,045
LAKE PLACID	\$322,122	\$342,197	\$168,705	\$8,683	\$0	\$841,707
TRENTON	(\$81,457)	\$560,393	\$277,663	\$17,550	\$0	\$774,149
COLUMBIA	(\$150,624)	\$633,690	\$295,284	\$17,645	\$0	\$795,995
DEBARY	\$57,690	\$511,709	\$245,835	\$14,286	\$0	\$829,520
SANTA FE	\$40,354	\$638,978	\$289,784	\$17,384	\$0	\$986,500
TWIN RIVERS	\$528,110	\$586,682	\$263,364	\$15,572	\$0	\$1,393,728
DUETTE	\$48,891	\$616,687	\$273,380	\$20,420	\$0	\$959,377
SANDY CREEK	\$59,121	\$477,014	\$252,932	\$16,083	\$0	\$805,150
CHARLIE CREEK	\$231,679	\$504,092	\$267,912	\$21,047	\$0	\$1,024,730
<b>Total:</b>	<b>\$1,126,356</b>	<b>\$5,500,419</b>	<b>\$2,648,069</b>	<b>\$165,058</b>	<b>\$0</b>	<b>\$9,439,902</b>

Notes: Lease expense true-up for Trenton and Columbia

Duke Energy Florida, LLC  
Actual Data for Solar Generation Facilities  
Solar Base Rate Adjustment (SoBRA) Reporting  
YEAR-TO-DATE THROUGH:  
**September, 2023**

Facility	Net Capability (MW)	Net Generation (MWh)	Capacity Factor (%)	Percent of Total Generation (%)	Total System Net Generation (MWh)
HAMILTON	74.9	129,360	26.4%	0.4%	33,509,682
LAKE PLACID	45.0	50,348	17.1%	0.2%	
TRENTON	74.9	117,730	24.0%	0.4%	
COLUMBIA	74.9	116,373	23.7%	0.3%	
DEBARY	74.5	96,285	19.7%	0.3%	
SANTA FE	74.9	110,543	22.5%	0.3%	
TWIN RIVERS	74.9	119,066	24.3%	0.4%	
DUETTE	74.5	112,895	23.1%	0.3%	
SANDY CREEK	74.9	126,552	25.8%	0.4%	
CHARLIE CREEK	74.9	136,435	27.8%	0.4%	
<b>Total:</b>	<b>718.3</b>	<b>1,115,587</b>	<b>23.7%</b>	<b>3.3%</b>	

Facility	Natural Gas Displaced (MCF)	Cost of NG (\$/MCF)	Oil Displaced (Bbls)	Cost of Oil (\$/Bbl)	Coal Displaced (Tons)	Cost of Coal (\$/Ton)
HAMILTON	1,023,885	\$2.94	7,336	\$127.19	6,408	\$51.87
LAKE PLACID	401,766	\$2.87	2,558	\$126.68	2,405	\$52.04
TRENTON	931,152	\$2.95	6,692	\$127.89	5,812	\$52.20
COLUMBIA	919,880	\$2.96	6,665	\$128.20	5,786	\$52.22
DEBARY	762,141	\$2.93	5,082	\$128.09	4,446	\$52.31
SANTA FE	883,412	\$2.87	6,080	\$127.37	5,603	\$52.20
TWIN RIVERS	946,653	\$2.91	6,684	\$127.43	5,921	\$52.13
DUETTE	896,033	\$2.89	5,614	\$126.92	5,306	\$52.12
SANDY CREEK	1,005,524	\$2.93	7,476	\$127.53	6,405	\$51.96
CHARLIE CREEK	1,084,479	\$2.89	7,133	\$126.73	6,500	\$52.00
<b>Total:</b>	<b>8,854,925</b>	<b>\$25,797,196</b>	<b>61,320</b>	<b>\$7,812,246</b>	<b>54,592</b>	<b>\$2,844,498</b>

Facility	CO2 Reductions (Tons)	NOx Reduction (Tons)	SO2 Reduction (Tons)	Hg Reduction (lbs)
HAMILTON	78,554	47	13	1
LAKE PLACID	30,455	17	5	0
TRENTON	71,417	43	12	1
COLUMBIA	70,667	42	12	1
DEBARY	57,639	33	9	0
SANTA FE	67,811	40	12	1
TWIN RIVERS	72,576	43	12	1
DUETTE	67,761	38	11	0
SANDY CREEK	77,497	47	14	1
CHARLIE CREEK	82,326	47	13	1
<b>Total:</b>	<b>676,703</b>	<b>398</b>	<b>114</b>	<b>5</b>

Facility	O&M (\$)	Carrying Costs (\$)	Capital (\$)	Other (\$)	Fuel Costs (\$)	Total Cost of Generation (\$)
HAMILTON	\$932,587	\$5,740,969	\$2,818,885	\$147,492	\$0	\$9,639,932
LAKE PLACID	\$1,128,559	\$3,121,597	\$1,518,349	\$78,147	\$0	\$5,846,653
TRENTON	\$891,135	\$5,111,875	\$2,498,960	\$175,500	\$0	\$8,677,470
COLUMBIA	\$664,455	\$5,762,754	\$2,657,555	\$158,805	\$0	\$9,243,569
DEBARY	\$448,747	\$4,666,720	\$2,212,515	\$128,574	\$0	\$7,456,556
SANTA FE	\$407,940	\$5,816,968	\$2,604,428	\$156,456	\$0	\$8,985,792
TWIN RIVERS	\$1,300,956	\$5,347,199	\$2,370,280	\$140,148	\$0	\$9,158,583
DUETTE	\$507,423	\$5,620,268	\$2,460,157	\$183,780	\$0	\$8,771,628
SANDY CREEK	\$1,159,207	\$4,344,527	\$2,282,991	\$144,747	\$0	\$7,931,472
CHARLIE CREEK	\$1,069,928	\$4,575,620	\$2,405,493	\$189,423	\$0	\$8,240,464
<b>Total:</b>	<b>\$8,510,937</b>	<b>\$50,108,497</b>	<b>\$23,829,613</b>	<b>\$1,503,072</b>	<b>\$0</b>	<b>\$83,952,119</b>

Notes: Lease expense true-up for Trenton and Columbia