

1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2 DIRECT TESTIMONY OF

3 LORI J. CROSS

4 ON BEHALF OF

5 DUKE ENERGY FLORIDA, LLC

6 DOCKET NO. 20210002-EG

7 August 6, 2021

8
9 **Q. State your name and business address.**

10 A. My name is Lori J. Cross. My business address is 299 First Avenue North, St.
11 Petersburg, FL 33701.

12
13 **Q. By whom are you employed and in what capacity?**

14 A. I am employed by Duke Energy Business Services, LLC ("DEBS"), as Strategy
15 Collaboration Director in the Portfolio Analysis and Regulatory Strategy Department.
16 DEBS is a service-company affiliate of Duke Energy Florida, LLC ("Duke Energy
17 Florida," "DEF," or "the Company").

18
19 **Q. What are your current duties and responsibilities at Duke Energy?**

20 A. My responsibilities include the regulatory planning, support and compliance of the
21 Company's energy-efficiency and demand-side management (DSM) programs. This
22 includes support for development, implementation and training, budgeting and
23 accounting functions related to these programs.

1 **Q. What is the purpose of your testimony?**

2 A. The purpose of my testimony is to describe the components and costs of the Company's
3 DSM programs. I will detail the projected costs for each program, explain how these
4 costs are presented in my attached exhibit, and show the resulting projected Energy
5 Conservation Cost Recovery (“ECCR”) factors for 2022 customer billings.

6

7 **Q. For what programs does DEF seek recovery?**

8 A. Pursuant to Rule 25-17.015, F.A.C., DEF seeks recovery through the ECCR clause of
9 costs related to the following conservation programs approved by the Commission as part
10 of the Company's DSM Plan on August 3, 2020 (see Order No. PSC-2020-0274-PAA-
11 EG), as well as for common, administrative expenses not linked to a specific program:

- 12 • Home Energy Check
- 13 • Residential Incentive Program
- 14 • Neighborhood Energy Saver
- 15 • Low-Income Weatherization Assistance Program
- 16 • Energy Management (Residential and Commercial)
- 17 • Business Energy Check
- 18 • Better Business
- 19 • Florida Custom Incentive
- 20 • Standby Generation
- 21 • Interruptible Service
- 22 • Curtailable Service
- 23 • Technology Development

- Qualifying Facility

Q. Do you have any exhibits to your testimony?

A. Yes. Exhibit No._(LJC-1P) supports DEF's energy conservation calculations for the 2021 actual/estimated period and the 2022 projection period. There are six (6) schedules included in this exhibit.

Q. Will you please explain your exhibit?

A. Yes. Exhibit No._(LJC-1P) presents Schedules C-1 through C-6. Schedules C-1 to C-4 provide projected program costs for calendar year 2022 along with an updated projection of program costs for 2021. The 2021 updated projection of costs includes the actual costs incurred for the period from January 2021 through June 2021 and forecasted costs for July through December 2021. Schedule C-5 provides a brief summary report for each program that includes a program description, estimated annual program expenditures for 2022, and a summary of program accomplishments through the period ending June 2021. Schedule C-6 is the capital structure and cost rates used to calculate the return for each applicable conservation program.

Q. Would you please discuss Schedule C-1?

A. Schedule C-1 provides the calculation of the cost recovery factors for 2022 by rate class.

Q. What does Schedule C-2 show?

1 A. Schedule C-2 provides annual and monthly conservation program cost estimates for the
2 2022 projection period for each conservation program as well as for common
3 administration expenses. Additionally, Schedule C-2 presents program costs by specific
4 category (e.g., payroll, materials, incentives, etc.) and includes a schedule of estimated
5 capital investments, depreciation and return for the projection period. The projected
6 expenses include the costs associated with the modifications to the FEECA programs
7 per the provisions the Memo of Understand (MOU) in DEF's 2021 Base Rate Settlement
8 Agreement (Docket No. 20210016-EI). Specifically, the expenses reflect a 5% increase
9 in the targeted participation for the Neighborhood Energy Saver Program above the
10 2020 DSM Plan level, the Home Energy Check Program includes the costs associated
11 with "Assistance" kits for up to 20,000 eligible low-income customers, and expenses
12 for the Residential Demand Response Program include the costs of "Assistance"
13 incentives for eligible, low-income customers who participate in the residential load
14 management program and whose accounts have arrearages greater than 60 days. Please
15 see Attachment A which provides a summary of the projected costs associated with these
16 commitments.

17
18 **Q. Would you please discuss Schedule C-3?**

19 A. Schedule C-3 contains a detailed breakdown of conservation program costs by specific
20 category and by month for the period of January through June 2021 (actual) and July
21 through December 2021 (estimated). In addition, Schedule C-3 presents a schedule of
22 capital investment, depreciation and return, an energy conservation adjustment
23 calculation of true-up, and a calculation of interest provision for the 2021

1 actual/estimated period.

2

3 **Q. What is the purpose of Schedule C-4?**

4 A. Schedule C-4 provides the projected ECCR revenues for the 2022 projection period.

5

6 **Q. Would you please discuss Schedule C-5?**

7 A. Schedule C-5 presents a brief description of each program, as well as a summary of
8 progress and projected expenditures for each program for which DEF seeks cost recovery
9 through the ECCR clause.

10

11 **Q. What is the purpose of Schedule C-6?**

12 A. Schedule C-6 provides the capital structure and cost rates used to calculate the Return on
13 Average Investment on Schedules C-2 and C-3.

14

15 **Q. Does the 2022 Projection Filing comply with the 2021 Settlement Agreement**
16 **approved by the Commission in Order No. PSC-2021-0202-AS-EI?**

17 A. Yes. All matters in the 2021 Settlement Agreement have been incorporated in the filing.

18

19 **Q. Would you please summarize the results presented in your Exhibit?**

20 A. Yes. Schedule C-2, Page 1 of 5, Line 22, shows total 2022 projected program costs of
21 \$108,615,631 plus a prior period over-recovery of \$8,754,221 resulting in estimated net
22 revenue requirements in 2022 of \$99,861,410. The following table includes DEF's
23 proposed ECCR billing factors, by retail rate class and voltage level for calendar year

1 2022, as contained in Schedule C-1, Page 2 of 2.

2

3

2022 ECCR Billing Factors

4

Secondary Primary

5

Transmission

6

Retail Rate Schedule

Voltage

Voltage

Voltage

7

Residential (Cents/kWh)

.283

N/A

N/A

8

General-Service-Non-Demand (Cents/kWh)

.255

.252

.250

9

General Service 100% Load Factor (Cents/kWh)

.194

N/A

N/A

10

General Service Demand (\$/kW)

.77

.76

.75

11

Curtable (\$/kW)

.35

.35

.34

12

Interruptible (\$/kW)

.64

.63

.63

13

Standby Monthly (\$/kW)

.074

.073

.073

14

Standby Daily (\$/kW)

.035

.035

.034

15

Lighting (Cents/kWh)

.108

N/A

N/A

16

17

Q. Does this conclude your testimony?

18

A. Yes.

19

20

21

22

23

DEF's SUMMARY OF PROJECTED COSTS ASSOCIATED WITH BASE RATE SETTLEMENT MOU

			Incentives		
	Program	MOU Commitment	2021	2022	Total
A	Home Energy Check	Assistance Kits	\$ 129,250	\$ 517,000	\$ 646,250
B	Energy Wise Home	Assistance Gift Cards	\$ 30,000	\$ 30,000	\$ 60,000
C	Neighborhood Energy Saver	Participation Increase	\$ -	\$ 249,253	\$ 249,253
	Total		\$ 159,250	\$ 796,253	\$ 955,503

A Assumes 5,000 Assistance Kits in 2021 based on 4th quarter implementation and 20,000 kits in 2022.

B Assumes 1000 Assistance Gift Cards in both 2021 and 2022.

C Assumes 5% increase in Program participation beginning in 2022.

Duke Energy Florida, LLC
Energy Conservation Cost Recovery
Calculation of Energy & Demand Allocation % by Rate Class
January 2022 - December 2022

FPSC Docket No. 20210002-EG
Duke Energy Florida, LLC
Witness: Lori J. Cross
Exhibit No. ____ (LJC-1P)
Schedule C-1
Page 1 of 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Average 12CP Load Factor at Meter (%)	Sales at Meter (mWh)	Avg 12 CP at Meter (MW) (2)/(8760hrs*(1))	Delivery Efficiency Factor	Sales at Source (Generation) (mWh) (2)/(4)	Avg 12 CP at Source (MW) (3)/(4)	Annual Average Demand (5)/(8760hrs)	mWh Sales at Source Energy Allocator (%)	12 CP Demand Allocator (%)	12CP & 25% AD Demand Allocator (%)
Rate Class										
<u>Residential</u>										
RS-1, RST-1, RSL-1, RSL-2, RSS-1										
Secondary	0.516	21,211,130	4,691.51	0.9361197	22,658,567	5,011.65	2,586.59	54.164%	64.006%	61.546%
<u>General Service Non-Demand</u>										
GS-1, GST-1										
Secondary	0.608	1,018,417	191.23	0.9361197	1,087,914	204.28	124.19	2.601%	2.609%	2.607%
Primary	0.608	18,825	3.53	0.9759311	19,289	3.62	2.20	0.046%	0.046%	0.046%
Transmission	0.608	2,666	0.50	0.9859311	2,704	0.51	0.31	0.006%	0.006%	0.006%
								2.653%	2.662%	2.660%
<u>General Service</u>										
<u>GS-2</u> Secondary	1.000	204,533	23.35	0.9361197	218,490	24.94	24.94	0.522%	0.319%	0.369%
<u>General Service Demand</u>										
GSD-1, GSDT-1										
Secondary	0.742	11,642,447	1,791.32	0.9361197	12,436,921	1,913.56	1,419.74	29.730%	24.439%	25.762%
Primary	0.742	1,638,508	252.10	0.9759311	1,678,917	258.32	191.66	4.013%	3.299%	3.478%
Sec Del/Primary Mtr	0.742	24,351	3.75	0.9759311	24,952	3.84	2.85	0.060%	0.049%	0.052%
Transmission	0.742	401,077	61.71	0.9859311	406,800	62.59	46.44	0.972%	0.799%	0.843%
<u>SS-1</u> Primary	0.958	48,108	5.73	0.9759311	49,294	5.87	5.63	0.118%	0.075%	0.086%
Transm Del/ Transm Mtr	0.958	3,723	0.44	0.9859311	3,776	0.45	0.43	0.009%	0.006%	0.007%
Transm Del/ Primary Mtr	0.958	1,546	0.18	0.9759311	1,585	0.19	0.18	0.004%	0.002%	0.003%
								34.906%	28.670%	30.229%
<u>Curtailable</u>										
CS-2, CST-2, CS-3, CST-3										
Secondary	1.028	0	0.00	0.0000000	0	0.00	0.00	0.000%	0.000%	0.000%
Primary	1.028	62,060	6.89	0.9759311	63,591	7.06	7.26	0.152%	0.090%	0.106%
<u>SS-3</u> Primary	2.390	58,185	2.78	0.9759311	59,620	2.85	6.81	0.143%	0.036%	0.063%
								0.295%	0.127%	0.169%
<u>Interruptible</u>										
IS-2, IST-2										
Secondary	0.957	406,762	48.52	0.9361197	434,520	51.83	49.60	1.039%	0.662%	0.756%
Sec Del/Primary Mtr	0.957	5,152	0.61	0.9759311	5,279	0.63	0.60	0.013%	0.008%	0.009%
Primary Del / Primary Mtr	0.957	1,171,449	139.72	0.9759311	1,200,340	143.17	137.03	2.869%	1.828%	2.089%
Primary Del / Transm Mtr	0.957	226	0.03	0.9859311	229	0.03	0.03	0.001%	0.000%	0.000%
Transm Del/ Transm Mtr	0.957	599,084	71.46	0.9859311	607,632	72.47	69.36	1.453%	0.926%	1.057%
Transm Del/ Primary Mtr	0.957	429,008	51.17	0.9759311	439,588	52.43	50.18	1.051%	0.670%	0.765%
<u>SS-2</u> Primary	1.147	13,316	1.32	0.9759311	13,644	1.36	1.56	0.033%	0.017%	0.021%
Transm Del/ Transm Mtr	1.147	1,250	0.12	0.9859311	1,268	0.13	0.14	0.003%	0.002%	0.002%
Transm Del/ Primary Mtr	1.147	44,422	4.42	0.9759311	45,518	4.53	5.20	0.109%	0.058%	0.071%
								6.569%	4.171%	4.770%
<u>Lighting</u>										
<u>LS-1 (Secondary)</u>	11.683	348,815	3.41	0.9361197	372,618	3.64	42.54	0.891%	0.046%	0.258%
		39,355,060	7,356		41,833,056	7,829.95	4,775.46	100.000%	100.000%	100.000%

Notes:

- (1) Average 12CP load factor based on load research study filed July 31, 2021 (Rule 25-6-0437 (7))
- (2) Projected kWh sales for the period January 2022 to December 2022
- (3) Calculated: Column 2 / (8,760 hours x Column 1)
- (4) Based on system average line loss analysis for 2020
- (5) Column 2 / Column 4

- (6) Column 3 / Column 4
- (7) Column 5 / 8,760 hours
- (8) Column 5/ Total Column 5
- (9) Column 6/ Total Column 6
- (10) Column 8 x .25 + Column 9 x .75

Duke Energy Florida, LLC
Energy Conservation Cost Recovery
Calculation of Energy Conservation Cost Recovery Rate Factors by Rate Class
January 2022 - December 2022

FPSC Docket No. 20210002-EG
Duke Energy Florida, LLC
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Schedule C-1
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Rate Class	(1) mWh Sales at Source Energy Allocator (%)	(2) 12CP & 25% AD Demand Allocator (%)	(3) Energy- Related Costs (\$)	(4) Production Demand Costs (\$)	(5) Total Energy Conservation Costs (\$)	(6) Projected Effective Sales at Meter Level (mWh)	(7) Billing KW Load Factor (%)	(8) Projected Effective KW at Meter Level (kW)	(9) Energy Conservation Cost Recovery (\$/kW-month)	(10) Energy Conservation Cost Recovery (cents/kWh)
Residential										
RS-1, RST-1, RSL-1, RSL-2, RSS-1 Secondary	54.164%	61.546%	\$10,089,522	\$	49,995,912	\$	60,085,434	21,211,130		0.283
General Service Non-Demand										
GS-1, GST-1										
Secondary						1,018,417				0.255
Primary						18,636				0.252
Transmission						2,613				0.250
TOTAL GS	2.653%	2.660%	\$494,225	\$	2,160,444	\$	2,654,669	1,039,667		
General Service										
GS-2 Secondary	0.522%	0.369%	\$97,290	\$	300,143	\$	397,433	204,533		0.194
General Service Demand										
GSD-1, GSDT-1, SS-1*										
Secondary						11,642,447			0.77	
Primary						1,695,388			0.76	
Transmission						396,704			0.75	
TOTAL GSD	34.906%	30.229%	\$6,502,162	\$	24,555,977	\$	31,058,139	13,734,539	46.61%	40,367,597
Curtailable										
CS-2, CST-2, CS-3, CST-3, SS-3*										
Secondary						-			0.35	
Primary						119,042			0.35	
Transmission						-			0.34	
TOTAL CS	0.295%	0.169%	\$54,864	\$	136,937	\$	191,801	119,042	29.79%	547,431
Interruptible										
IS-2, IST-2, SS-2*										
Secondary						406,762			0.64	
Primary						1,646,714			0.63	
Transmission						588,548			0.63	
TOTAL IS	6.569%	4.770%	\$1,223,652	\$	3,875,139	\$	5,098,790	2,642,025	45.10%	8,024,557
Lighting										
LS-1 Secondary	0.891%	0.258%	\$165,921	\$	209,223	\$	375,144	348,815		0.108
	100.000%	100.000%	\$	18,627,636	\$	81,233,774	\$	99,861,410	39,299,750	0.254

Notes:

- | | |
|--|--|
| (1) From Schedule C-1 1P, Column 8 | (6) kWh sales at effective secondary voltage |
| (2) From Schedule C-1 1P, Column 10 | (7) Class Billing kW Load Factor |
| (3) Column 1 x Total Energy Dollars, C-2 Page 1, line 20 | (8) Column 6 x 1000 / 8,760 / Column 7 x 12 |
| (4) Column 2 x Total Demand Dollars, C-2 Page 1, line 21 | (9) Column 5 / Column 8 (x voltage factor if applicable) |
| (5) Column 3 + Column 4 | (10) Column 5 / Column 6 / 10 |

Calculation of Standby Service kW Charges			
	ECCR Cost	Effective kW	\$/kW
Total GSD, CS, IS	\$36,348,730	48,939,585	0.74
SS-1, 2, 3 - \$/kW-mo			
Monthly - \$0.74/kW * 10%	0.074	0.073	0.073
Daily - \$0.74/kW / 21	0.035	0.035	0.034

Duke Energy Florida, LLC
Energy Conservation Cost Recovery
Estimated Conservation Program Costs
January 2022 - December 2022

FPSC Docket No. 20210002-EG
Duke Energy Florida, LLC
Witness: Lori J. Cross
Exhibit No. ___ (LJC-1P)
Schedule C-2
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Line No.	Program Demand (D) or Energy (E)	12 Month Total		
1	Home Energy Check (E)	\$4,973,759		
2	Residential Incentive Program (E)	4,990,692		
3	Business Energy Check (E)	750,875		
4	Better Business (E)	2,200,326		
5	Technology Development (E)	800,000		
6	Florida Custom Incentive (Innovation Incentive) (E)	680,637		
7	Interruptible Service (D)	35,884,899		
8	Curtailable Service (D)	3,108,417		
9	Energy Management (Residential & Commercial) (D)	39,302,060		
10	Low Income Weatherization Assistance Program (E)	507,281		
11	Standby Generation (D)	4,601,276		
12	Qualifying Facility (E)	1,624,500		
13	Neighborhood Energy Saver (E)	6,274,910		
14	Conservation Program Admin (E)	2,085,447		
15	Conservation Program Admin (D)	830,553		
16	Total ECCR Program Costs	<u>\$108,615,631</u>		
17			2021	
18		12 Months	End of Period Net True-Up	
19	Demand & Energy Summary	Total	(Over)/Under Recovery	Total Costs
20	Energy	<u>\$24,888,427</u>	<u>(\$6,260,791)</u>	<u>\$18,627,636</u>
21	Demand	<u>83,727,204</u>	<u>(2,493,430)</u>	<u>81,233,774</u>
22	Total Demand & Energy Costs	<u>\$108,615,631</u>	<u>(\$8,754,221)</u>	<u>\$99,861,410</u>

**Duke Energy Florida, LLC
Energy Conservation Cost Recovery
Estimated Conservation Program Costs
January 2022 - December 2022**

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Line No.	Program Demand (D) or Energy (E)	Est Jan-22	Est Feb-22	Est Mar-22	Est Apr-22	Est May-22	Est Jun-22	Est Jul-22	Est Aug-22	Est Sep-22	Est Oct-22	Est Nov-22	Est Dec-22	Total
1	Home Energy Check (E)	\$386,351	\$385,102	\$454,846	\$406,691	\$395,533	\$454,110	\$406,153	\$396,246	\$454,085	\$393,773	\$391,957	\$448,912	\$4,973,759
2	Residential Incentive Program (E)	400,895	400,558	405,646	424,444	439,115	439,414	443,164	439,115	421,477	417,497	413,097	346,269	4,990,692
3	Business Energy Check (E)	54,670	54,670	70,827	55,879	55,399	70,059	81,487	55,399	70,539	55,399	69,899	56,647	750,875
4	Better Business (E)	185,018	180,007	181,998	182,057	186,930	181,937	184,814	181,930	186,949	181,937	181,934	184,815	2,200,326
5	Technology Development (E)	66,543	35,043	35,098	36,598	43,098	43,098	43,926	43,098	58,098	132,098	132,098	131,206	800,000
6	Florida Custom Incentive Program (E)	56,454	56,450	56,715	56,735	56,693	56,695	57,059	56,693	56,699	56,695	56,693	57,057	680,637
7	Interruptible Service (D)	2,978,554	2,946,300	2,957,409	2,998,015	2,973,670	3,054,700	3,057,480	2,968,970	3,010,204	2,981,505	2,987,737	2,970,356	35,884,899
8	Curtailable Service (D)	236,379	236,379	236,489	236,489	259,026	259,026	259,190	259,026	281,562	281,562	281,562	281,727	3,108,417
9	Energy Management (Residential & Commercial) (D)	3,143,048	3,305,339	3,385,418	3,009,261	2,897,913	3,224,911	3,339,444	3,399,516	3,381,487	3,110,859	3,777,647	3,327,218	39,302,060
10	Low Income Weatherization Assistance Program (E)	37,909	40,978	44,299	42,764	42,764	42,764	43,141	44,299	45,833	44,299	42,764	35,469	507,281
11	Standby Generation (D)	361,093	361,093	374,803	375,529	375,529	389,061	381,834	381,135	399,291	395,691	395,691	410,526	4,601,276
12	Qualifying Facility (E)	186,135	186,185	153,474	103,524	143,474	103,524	146,870	103,524	143,474	103,624	143,474	107,220	1,624,500
13	Neighborhood Energy Saver (E)	443,476	502,651	566,341	535,789	528,954	533,504	549,066	562,601	588,062	558,777	527,923	377,764	6,274,910
14	Conservation Program Admin (E)	156,575	156,575	202,172	159,262	159,262	202,172	163,277	159,262	202,172	159,262	159,262	206,194	2,085,447
15	Conservation Program Admin (D)	62,358	62,358	80,517	63,428	63,428	80,517	65,027	63,428	80,517	63,428	63,428	82,119	830,553
16	Total ECCR Program Costs	\$8,755,457	\$8,909,687	\$9,206,052	\$8,686,465	\$8,620,787	\$9,135,493	\$9,221,932	\$9,114,239	\$9,380,450	\$8,936,405	\$9,625,165	\$9,023,498	\$108,615,631
17	<u>Demand & Energy Summary</u>													
18	Energy	\$1,974,025	\$1,998,219	\$2,171,415	\$2,003,743	\$2,051,222	\$2,127,278	\$2,118,957	\$2,042,165	\$2,227,389	\$2,103,361	\$2,119,101	\$1,951,553	\$24,888,427
19	Demand	6,781,432	6,911,469	7,034,637	6,682,722	6,569,566	7,008,215	7,102,975	7,072,074	7,153,062	6,833,044	7,506,064	7,071,945	83,727,204
20	Total Demand & Energy Costs	\$8,755,457	\$8,909,687	\$9,206,052	\$8,686,465	\$8,620,787	\$9,135,493	\$9,221,932	\$9,114,239	\$9,380,450	\$8,936,405	\$9,625,165	\$9,023,498	\$108,615,631

Duke Energy Florida, LLC
Energy Conservation Cost Recovery
Estimated Conservation Program Costs
January 2022 - December 2022

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Schedule C-2
Page 3 of 4

Line No.	Program Demand (D) or Energy (E)	Depreciation, Amortization & Return	Payroll & Benefits	Materials & Supplies	Outside Services	Advertising	Incentives	Vehicles	Other	Program Revenues (Credits)	Total
1	Home Energy Check (E)	0	2,756,857	38,044	592,606	360,000	1,028,860	116,488	80,904	0	4,973,759
2	Residential Incentive Program (E)	0	1,289,289	13,741	162,596	162,000	3,294,854	44,992	23,221	0	4,990,692
3	Business Energy Check (E)	0	378,037	33,220	217,500	55,200	58,000	4,200	4,718	0	750,875
4	Better Business (E)	0	997,989	22,081	326,200	80,400	733,200	10,080	30,375	0	\$2,200,326
5	Technology Development (E)	0	287,696	24,000	462,712	0	0	10,592	15,000	0	800,000
6	Florida Custom Incentive Program (E)	0	125,824	4,700	265,200	60,000	216,800	3,990	4,124	0	680,637
7	Interruptible Service (D)	360,995	240,820	108,750	0	0	35,158,770	9,888	5,676	0	35,884,899
8	Curtailable Service (D)	0	57,123	0	0	0	3,051,294	0	0	0	3,108,417
9	Energy Management (Residential & Commercial) (D)	8,951,541	1,883,587	18,602	1,472,426	312,000	26,590,548	46,405	26,950	0	39,302,060
10	Low Income Weatherization Assistance Program (E)	0	130,862	0	0	32,500	337,289	1,020	5,610	0	507,281
11	Standby Generation (D)	0	242,632	266,099	0	0	4,074,404	9,718	8,422	0	4,601,276
12	Qualifying Facility (E)	0	1,110,000	1,000	500,000	0	0	3,500	10,000	0	1,624,500
13	Neighborhood Energy Saver (E)	0	140,344	0	803,840	75,772	5,234,250	499	20,206	0	6,274,910
14	Conservation Program Admin (E)	0	1,394,589	7,152	529,229	0	0	715	153,762	0	2,085,447
15	Conservation Program Admin (D)	0	555,411	2,848	210,771	0	0	285	61,238	0	830,553
16	Total ECCR Program Costs	\$9,312,536	\$11,591,058	\$540,238	\$5,543,080	\$1,137,872	\$79,778,269	\$262,372	\$450,206	\$0	\$108,615,631
17	<u>Demand & Energy Summary</u>										
18	Energy	\$0	\$8,611,486	\$143,938	\$3,859,883	\$825,872	\$10,903,252	\$196,075	\$347,920	\$0	\$24,888,427
19	Demand	9,312,536	2,979,572	396,300	1,683,197	312,000	68,875,017	66,297	102,286	0	83,727,204
20	Total Demand & Energy Costs	\$9,312,536	\$11,591,058	\$540,238	\$5,543,080	\$1,137,872	\$79,778,269	\$262,372	\$450,206	\$0	\$108,615,631

Duke Energy Florida, LLC
Energy Conservation Cost Recovery
Schedule of Capital Investment, Depreciation & Return
January 2022 - December 2022

FPSC Docket No. 20210002-EG
Duke Energy Florida, LLC
Witness: Lori J. Cross
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Line No.	Program Demand (D) or Energy (E)	Beginning Balance	Est Jan-22	Est Feb-22	Est Mar-22	Est Apr-22	Est May-22	Est Jun-22	Est Jul-22	Est Aug-22	Est Sep-22	Est Oct-22	Est Nov-22	Est Dec-22	Total
1	Interruptible Service (D)														
2	Investments		\$38,700	\$115,800	\$111,800	\$115,800	\$107,800	\$147,750	\$111,800	\$99,800	\$115,800	\$107,800	\$111,800	\$107,800	\$1,292,450
3	Retirements		0	0	11,969	0	0	0	0	0	0	0	0	0	11,969
4	Depreciation Base		792,917	831,617	941,432	1,047,247	1,163,047	1,270,847	1,418,597	1,530,397	1,630,197	1,745,997	1,853,797	1,965,597	
5															
6	Depreciation Expense		13,216	13,861	15,691	17,454	19,385	21,181	23,644	25,507	27,170	29,101	30,897	32,761	269,868
7															
8	Cumulative Investment	792,917	831,617	947,417	1,047,247	1,163,047	1,270,847	1,418,597	1,530,397	1,630,197	1,745,997	1,853,797	1,965,597	2,073,397	2,073,397
9	Less: Accumulated Depreciation	98,119	111,335	125,196	128,918	146,372	165,757	186,938	210,582	236,089	263,259	292,360	323,257	356,018	356,018
10	Net Investment	694,798	720,282	822,221	918,330	1,016,676	1,105,091	1,231,660	1,319,816	1,394,109	1,482,739	1,561,438	1,642,341	1,717,380	1,717,380
11	Average Investment		707,540	771,251	870,275	967,503	1,060,883	1,168,375	1,275,738	1,356,962	1,438,424	1,522,088	1,601,889	1,679,860	
12	Return on Average Investment		3,591	3,914	4,417	4,911	5,384	5,930	6,475	6,888	7,301	7,726	8,131	8,526	73,194
13															
14	Return Requirements		4,471	4,873	5,499	6,114	6,703	7,383	8,061	8,576	9,090	9,619	10,123	10,615	91,127
15															
16	Program Total		\$17,687	\$18,734	\$21,190	\$23,568	\$26,088	\$28,564	\$31,705	\$34,083	\$36,260	\$38,720	\$41,020	\$43,376	\$360,995

Line No.	Program Demand (D) or Energy (E)	Beginning Balance	Est Jan-22	Est Feb-22	Est Mar-22	Est Apr-22	Est May-22	Est Jun-22	Est Jul-22	Est Aug-22	Est Sep-22	Est Oct-22	Est Nov-22	Est Dec-22	Total
17	Residential Energy Management - Load Management Switches (9080120) (D)														
18	Expenditures Booked Directly to Plant		\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$6,000,000
19	Retirements		582,155	364,586	531,287	870,347	298,506	634,481	424,784	967,595	225,056	586,697	564,912	552,360	6,602,767
20	Investments Booked to CWIP		0	0	0	0	0	0	0	0	0	0	0	0	0
21	Closings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
22	Amortization Base		40,623,088	40,649,718	40,701,781	40,500,964	40,416,538	40,450,044	40,420,411	40,224,222	40,127,896	40,222,019	40,146,214	40,087,578	
23															
24	Amortization Expense		677,065	677,509	678,377	675,030	673,622	674,181	673,687	670,417	668,812	670,380	669,117	668,140	8,076,337
25															
26	Cumulative Plant Investment	40,914,165	40,832,010	40,967,425	40,936,138	40,565,791	40,767,285	40,632,804	40,708,019	40,240,424	40,515,368	40,428,670	40,363,758	40,311,398	40,311,398
27	Less: Accumulated Depreciation	28,323,146	28,418,056	28,730,980	28,878,069	28,682,752	29,057,868	29,097,568	29,346,471	29,049,293	29,493,048	29,576,731	29,680,936	29,796,716	29,796,716
28	Cumulative CWIP Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Net Plant Investment	12,591,019	12,413,954	12,236,445	12,058,068	11,883,038	11,709,416	11,535,235	11,361,548	11,191,131	11,022,319	10,851,939	10,682,822	10,514,682	10,514,682
30	Average Investment		12,502,487	12,325,200	12,147,257	11,970,553	11,796,227	11,622,326	11,448,392	11,276,340	11,106,725	10,937,129	10,767,381	10,598,752	
31	Return on Average Investment		63,458	62,557	61,655	60,757	59,873	58,991	58,108	57,234	56,373	55,513	54,651	53,795	702,965
32															
33	Return Requirements		79,006	77,885	76,762	75,644	74,543	73,445	72,345	71,257	70,185	69,115	68,041	66,976	875,204
34															
35	Program Total		\$756,071	\$755,394	\$755,139	\$750,674	\$748,165	\$747,626	\$746,032	\$741,674	\$738,997	\$739,495	\$737,158	\$735,116	\$8,951,541
36	Demand & Energy Summary														
37	Energy		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
38	Demand		773,758	774,128	776,329	774,242	774,253	776,190	777,737	775,757	775,257	778,215	778,178	778,492	\$9,312,536
39	Total Depreciation & Return		\$773,758	\$774,128	\$776,329	\$774,242	\$774,253	\$776,190	\$777,737	\$775,757	\$775,257	\$778,215	\$778,178	\$778,492	\$9,312,536

Notes:
Based on ROE of 9.85%, weighted cost of equity component of capital structure and statutory income tax rate of 25.345% (inc tax multiplier = 1.3395). Using the WACC methodology prescribed in Order No. PSC-2020-0165-PAA-EU Docket No. 20200118-EU.

Duke Energy Florida, LLC
Energy Conservation Cost Recovery
Program Costs
January - June 2021 Actuals
July - December 2021 Estimates

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Duke Energy Florida, LLC
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Line No.	Program Demand (D) or Energy (E)	Depreciation		Operating & Maintenance Costs						Program Revenues (Credits)	Total
		Amortization & Return	Payroll & Benefits	Vehicles	Outside Services	Materials & Supplies	Advertising	Incentives	Other		
1	<u>Home Energy Check (E)</u>										
2	A. Actual	\$0	\$1,488,499	\$32,432	\$157,647	\$25,182	\$9,108	\$170,597	\$5,177	\$0	\$1,888,642
3	B. Estimated	0	1,512,000	45,000	280,000	6,000	151,000	456,827	6,000	0	2,456,827
4											
5	C. Total	\$0	\$3,000,499	\$77,432	\$437,647	\$31,182	\$160,108	\$627,423	\$11,177	\$0	\$4,345,468
6											
7	<u>Residential Incentive Program (E)</u>										
8	A. Actual	\$0	\$635,277	\$13,870	\$176,785	\$1,799	\$44,575	\$1,490,528	\$23,285		\$2,386,119
9	B. Estimated	0	660,000	14,100	160,358	3,000	111,000	1,490,467	(5,825)	0	2,433,100
10											
11	C. Total	\$0	\$1,295,277	\$27,970	\$337,143	\$4,799	\$155,575	\$2,980,995	\$17,460	\$0	\$4,819,219
12											
13	<u>Business Energy Check (E)</u>										
14	A. Actual	\$0	\$195,339	\$925	\$50,899	\$494	\$9,781	\$0	\$1,951	\$0	\$259,388
15	B. Estimated	0	192,000	1,800	78,000	12,000	12,000	17,000	2,700	0	315,500
16											
17	C. Total	\$0	\$387,339	\$2,725	\$128,899	\$12,494	\$21,781	\$17,000	\$4,651	\$0	\$574,888
18											
19	<u>Better Business (E)</u>										
20	A. Actual	\$0	\$500,458	\$288	\$59,846	\$1,045	\$28,396	\$727,464	\$9,840	\$0	\$1,327,337
21	B. Estimated	0	501,000	9,000	120,000	9,000	30,000	250,000	9,000	0	928,000
22											
23	C. Total	\$0	\$1,001,458	\$9,288	\$179,846	\$10,045	\$58,396	\$977,464	\$18,840	\$0	\$2,255,337
24											
25	<u>Technology Development (E)</u>										
26	A. Actual	\$0	\$88,025	\$3,008	\$53,142	(\$9,693)	\$0	\$0	\$1,737	\$0	\$136,219
27	B. Estimated	0	152,802	2,671	273,990	9,000	0	0	1,450	0	439,913
28											
29	C. Total	\$0	\$240,827	\$5,679	\$327,132	(\$693)	\$0	\$0	\$3,187	\$0	\$576,132
30											
31	<u>Florida Custom Incentive Program (E)</u>										
32	A. Actual	\$0	\$65,935	\$6	\$54,303	\$47	\$20,903	\$88,347	\$4,768	\$0	\$234,310
33	B. Estimated	0	64,000	900	136,000	900	18,500	94,000	6,000	0	320,300
34											
35	C. Total	\$0	\$129,935	\$906	\$190,303	\$947	\$39,403	\$182,347	\$10,768	\$0	\$554,610
36											
37	<u>Interruptible Service (D)</u>										
38	A. Actual	\$22,136	\$122,888	\$3,425	\$1,022	\$8,547	\$0	\$21,735,699	\$9,023	\$0	\$21,902,740
39	B. Estimated	62,834	129,548	4,781	3,066	4,763	0	25,837,300	9,725	0	26,052,016
40											
41	C. Total	\$84,970	\$252,436	\$8,206	\$4,088	\$13,310	\$0	\$47,572,999	\$18,748	\$0	\$47,954,756

Duke Energy Florida, LLC
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Line No.	Program Demand (D) or Energy (E)	Depreciation Amortization & Return	Operating & Maintenance Costs							Program Revenues (Credits)	Total
			Payroll & Benefits	Vehicles	Outside Services	Materials & Supplies	Advertising	Incentives	Other		
1	<u>Curtailable Service (D)</u>										
2	A. Actual	\$0	\$24,639	\$0	\$0	\$0	\$0	\$1,020,927	\$7,592	\$0	\$1,053,158
3	B. Estimated	0	25,412	0	0	0	0	1,243,428	6,710	0	1,275,550
4											
5	C. Total	\$0	\$50,051	\$0	\$0	\$0	\$0	\$2,264,355	\$14,302	\$0	\$2,328,708
6											
7	<u>Neighborhood Energy Saver (E)</u>										
8	A. Actual	\$0	\$79,802	\$0	\$2,397	\$44	\$6	\$8,817	\$3,157	\$0	\$94,222
9	B. Estimated	0	79,800	500	418,000	300	34,949	1,921,403	13,462	0	2,468,414
10											
11	C. Total	\$0	\$159,602	\$500	\$420,397	\$344	\$34,955	\$1,930,220	\$16,619	\$0	\$2,562,636
12											
13	<u>Energy Management (Residential & Commercial) (D)</u>										
14	A. Actual	\$4,829,785	\$1,010,665	\$21,353	\$837,434	\$188,055	\$16,773	\$12,897,268	\$13,132	\$0	\$19,814,466
15	B. Estimated	4,629,465	1,020,000	25,854	806,166	42,500	50,000	13,256,019	30,000	0	19,860,004
16											
17	C. Total	\$9,459,250	\$2,030,665	\$47,207	\$1,643,600	\$230,555	\$66,773	\$26,153,288	\$43,132	\$0	\$39,674,470
18											
19	<u>Low Income Weatherization Assistance Program (E)</u>										
20	A. Actual	\$0	\$36,009	\$0	\$0	\$0	\$0	\$36,973	\$1,203	\$0	\$74,185
21	B. Estimated	0	92,943	0	0	300	10,175	102,543	2,748	0	208,709
22											
23	C. Total	\$0	\$128,952	\$0	\$0	\$300	\$10,175	\$139,516	\$3,951	\$0	\$282,894
24											
25	<u>Standby Generation (D)</u>										
26	A. Actual	\$0	\$134,576	\$5,049	\$0	\$13,928	\$0	\$1,731,826	\$7,332	\$0	\$1,892,711
27	B. Estimated	0	135,084	6,169	0	15,891	0	1,835,914	7,313	0	2,000,371
28											
29	C. Total	\$0	\$269,660	\$11,218	\$0	\$29,819	\$0	\$3,567,740	\$14,645	\$0	\$3,893,082
30											
31	<u>Qualifying Facility (E)</u>										
32	A. Actual	\$0	\$545,783	\$0	(\$115,261)	\$65	\$0	\$0	\$1,830	\$0	\$432,417
33	B. Estimated	0	525,000	500	170,000	450	0	0	3,800	0	699,750
34											
35	C. Total	\$0	\$1,070,783	\$500	\$54,739	\$515	\$0	\$0	\$5,630	\$0	\$1,132,167
36											
37	<u>Conservation Program Admin (E)</u>										
38	A. Actual	(\$7,377)	\$991,827	\$3	\$273,439	\$27,386	\$10,045	\$0	\$88,871	\$0	\$1,384,193
39	B. Estimated	0	960,000	300	241,748	5,000	0	0	112,666	0	1,319,714
40											
41	C. Total	(\$7,377)	\$1,951,827	\$303	\$515,187	\$32,386	\$10,045	\$0	\$201,537	\$0	\$2,703,907
42	ECCR Program Costs	\$9,536,843	\$11,969,311	\$191,934	\$4,238,980	\$366,005	\$557,209	\$86,413,347	\$384,646	\$0	\$113,658,274

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Line No.	Program Demand (D) or Energy (E)	Beginning Balance	Act Jan-21	Act Feb-21	Act Mar-21	Act Apr-21	Act May-21	Act Jun-21	Est Jul-21	Est Aug-21	Est Sep-21	Est Oct-21	Est Nov-21	Est Dec-21	Total
1	Conservation Program Admin (E)														
2	Investments		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Retirements		0	0	0	0	0	29,481	0	0	0	0	0	0	29,481
4	Depreciation Base		29,481	29,481	29,481	29,481	29,481	0	0	0	0	0	0	0	
5															
6	Depreciation Expense (Note 1)		491	491	491	491	491	(7,856)	0	0	0	0	0	0	(5,401)
7															
8	Cumulative Investment	29,481	29,481	29,481	29,481	29,481	29,481	0	0	0	0	0	0	0	0
9	Less: Accumulated Depreciation	5,401	5,892	6,383	6,874	7,365	7,856	0	0	0	0	0	0	0	0
10	Net Investment	24,080	23,589	23,098	22,607	22,116	21,625	0	0	0	0	0	0	0	0
11	Average Investment		23,835	23,344	22,853	22,362	21,871	0	0	0	0	0	0	0	
12	Return on Average Investment		125	123	120	117	115	0	0	0	0	0	0	0	600
13															
14	Return Requirements (Note 1)		155	152	148	145	142	(2,718)	0	0	0	0	0	0	(1,976)
15															
16	Program Total		\$646	\$643	\$639	\$636	\$633	(\$10,574)	\$0	\$0	\$0	\$0	\$0	\$0	(\$7,377)

NOTE 1: All Expenses for this Program should be reversed, including the 2020 Revenue Requirement of \$7,377 (2020 Depreciation Expense of \$5,401 and 2020 Return Requirements of \$1,976) - this is not a DEF ECCR Program.

Line No.	Program Demand (D) or Energy (E)	Beginning Balance	Act Jan-21	Act Feb-21	Act Mar-21	Act Apr-21	Act May-21	Act Jun-21	Est Jul-21	Est Aug-21	Est Sep-21	Est Oct-21	Est Nov-21	Est Dec-21	Total
17	Interruptible Service (D)														
18	Investments		\$0	\$0	\$49,859	\$0	\$0	\$27,866	\$95,575	\$95,575	\$95,575	\$95,575	\$95,575	\$95,575	\$850,975
19	Retirements		44,502	0	0	0	48	0	0	0	0	0	0	0	44,550
20	Depreciation Base		164,241	141,990	141,990	191,849	191,825	191,801	219,467	315,042	410,617	506,192	601,767	697,342	
21															
22	Depreciation Expense		2,737	2,367	2,367	3,198	3,197	3,197	3,658	5,251	6,944	8,437	10,030	11,623	62,906
23															
24	Cumulative Investment	186,492	141,990	141,990	191,849	191,849	191,801	219,467	315,042	410,617	506,192	601,767	697,342	792,917	792,917
25	Less: Accumulated Depreciation	79,763	37,998	40,365	42,732	45,930	49,079	52,276	55,934	61,185	68,029	76,466	86,496	98,119	98,119
26	Net Investment	106,729	103,992	101,625	149,117	145,919	142,722	167,191	259,108	349,432	438,163	525,301	610,846	694,798	694,798
27	Average Investment		105,360	102,808	125,371	147,518	144,320	154,956	213,149	304,270	393,797	481,732	568,073	652,822	
28	Return on Average Investment		554	541	659	776	759	815	1,121	1,600	2,071	2,533	2,987	3,433	17,849
29															
30	Return Requirements		685	669	815	959	938	1,007	1,386	1,978	2,560	3,131	3,692	4,244	22,064
31															
32	Program Total		\$3,422	\$3,036	\$3,182	\$4,157	\$4,135	\$4,204	\$5,044	\$7,229	\$9,404	\$11,568	\$13,722	\$15,867	\$84,970

Line No.	Program Demand (D) or Energy (E)	Beginning Balance	Act Jan-21	Act Feb-21	Act Mar-21	Act Apr-21	Act May-21	Act Jun-21	Est Jul-21	Est Aug-21	Est Sep-21	Est Oct-21	Est Nov-21	Est Dec-21	Total
33	Residential Energy Management - Summary (Itemized below) (D)														
34	Expenditures Booked Directly to Plant		\$10,608	\$72,050	\$400,008	\$271,184	\$137,809	\$95,254	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$3,988,912
35	Retirements		\$14,020,249	\$1,527,278	\$173,188	\$115,510	\$716,048	\$520,148	\$546,159	\$478,289	\$494,594	\$400,226	\$780,483	\$906,585	20,678,756
36	Investments Booked to CWIP		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
37	Closings to Plant		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
38	Depreciation Base		\$43,661,112	\$42,119,315	\$42,141,771	\$42,326,721	\$42,165,611	\$41,684,821	\$41,247,422	\$41,235,198	\$41,248,757	\$41,301,346	\$41,210,991	\$40,632,541	
39															
40	Depreciation Expense		\$720,076	\$701,085	\$700,297	\$703,223	\$700,538	\$692,529	\$685,239	\$685,035	\$685,261	\$686,138	\$684,632	\$677,223	8,321,276
41															
42	Cumulative Plant Investment	57,606,008	\$43,598,368	\$42,141,140	\$42,367,962	\$42,523,636	\$41,945,396	\$41,520,502	\$41,474,343	\$41,496,054	\$41,501,460	\$41,601,233	\$41,320,750	\$40,914,165	40,914,165
43	Less: Accumulated Depreciation	40,023,644	\$26,965,227	\$26,139,035	\$26,666,145	\$27,253,858	\$27,238,348	\$27,410,729	\$27,549,809	\$27,756,555	\$27,947,222	\$28,233,134	\$28,137,282	\$28,323,146	28,323,146
44	Cumulative CWIP Investment	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
45	Net Plant Investment	17,582,364	16,631,141	16,002,106	15,701,816	15,269,777	14,707,048	14,109,773	13,924,534	13,739,499	13,554,238	13,368,100	13,183,468	12,591,019	12,591,019
46	Average Investment		17,106,752	16,316,623	15,851,961	15,485,797	14,988,412	14,408,410	14,017,153	13,632,016	13,646,868	13,461,169	13,275,784	12,679,631	
47	Return on Average Investment		89,953	85,798	83,354	81,430	78,814	75,764	73,706	72,733	71,759	70,782	69,808	66,673	920,574
48															
49	Return Requirements		89,953	85,798	83,354	81,430	78,814	75,764	73,706	72,733	71,759	70,782	69,808	66,673	920,574
50															
51	Program Total		\$831,272	\$807,145	\$803,335	\$803,883	\$797,965	\$786,185	\$776,351	\$774,945	\$773,966	\$773,636	\$770,926	\$759,641	\$9,456,250

Note:

WACC based on ROE of 10.5%, weighted cost of equity component of capital structure and statutory income tax rate of 24.522% (inc tax multiplier = 1.32489). Using the WACC methodology prescribed in Order No. PSC-2020-0165-PAA-EU Docket No. 20200118-EU.

Duke Energy Florida, LLC
Energy Conservation Cost Recovery
Schedule of Capital Investment, Depreciation & Return
January - June 2021 Actuals
July - December 2021 Estimates

FPSC Docket No. 20210002-EG
Duke Energy Florida, LLC
 Witness: Lori J. Cross
 Exhibit No. (LJC-1P)
 Schedule C-3
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Line No.	Program Demand (D) or Energy (E)	Beginning Balance	Act Jan-21	Act Feb-21	Act Mar-21	Act Apr-21	Act May-21	Act Jun-21	Est Jul-21	Est Aug-21	Est Sep-21	Est Oct-21	Est Nov-21	Est Dec-21	Total
1	Residential Energy Management - SmartGrid Hardware for ODS, LMS, APPDEV & TELECOM (D)														
2	Expenditures Booked Directly to Plant		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Retirements		2,580,680	1,411,566	(244,581)	(33,029)	0	1,002	0	0	0	0	0	469,833	4,185,472
4	Investments Booked to CWIP		0	0	0	0	0	0	0	0	0	0	0	0	0
5	Closings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
6	Depreciation Base		1,604,792	193,226	437,806	470,835	470,835	469,833	469,833	469,833	469,833	469,833	469,833	0	
7															
8	Depreciation Expense		19,124	2,303	5,217	5,611	5,611	5,599	5,599	5,599	5,599	5,599	5,599	0	71,460
9															
10	Cumulative Plant Investment	4,185,472	1,604,792	193,226	437,806	470,835	470,835	469,833	469,833	469,833	469,833	469,833	469,833	0	0
11	Less: Accumulated Depreciation	3,698,786	1,137,230	(272,033)	(22,235)	16,405	22,016	26,613	32,212	37,811	43,410	49,009	54,608	0	0
12	Cumulative CWIP Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Net Plant Investment	486,685	467,561	465,258	460,041	454,430	448,819	443,220	437,621	432,022	426,423	420,824	415,225	0	0
14	Average Investment		477,123	466,410	462,650	457,236	451,625	446,020	440,421	434,822	429,223	423,624	418,025	0	
15	Return on Average Investment		2,509	2,453	2,432	2,405	2,375	2,346	2,315	2,286	2,257	2,227	2,198	0	25,803
16															
17	Return Requirements		3,102	3,032	3,006	2,973	2,936	2,900	2,862	2,826	2,790	2,753	2,717	0	31,897
18															
19	Program Total		\$22,226	\$5,335	\$8,223	\$8,584	\$8,547	\$8,499	\$8,461	\$8,425	\$8,389	\$8,352	\$8,316	\$0	\$103,357

Line No.	Program Demand (D) or Energy (E)	Beginning Balance	Act Jan-21	Act Feb-21	Act Mar-21	Act Apr-21	Act May-21	Act Jun-21	Est Jul-21	Est Aug-21	Est Sep-21	Est Oct-21	Est Nov-21	Est Dec-21	Total
20	Residential Energy Management - SmartGrid Software for ODS, LMS, APPDEV (D)														
21	Expenditures Booked Directly to Plant		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	Retirements		11,288,866	15,263	70,131	0	0	0	0	0	0	0	0	0	11,374,260
23	Investments Booked to CWIP		0	0	0	0	0	0	0	0	0	0	0	0	0
24	Closings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
25	Depreciation Base		85,394	70,131	0	0	0	0	0	0	0	0	0	0	
26															
27	Depreciation Expense		1,423	1,169	0	0	0	0	0	0	0	0	0	0	2,592
28															
29	Cumulative Plant Investment	11,374,260	85,394	70,131	0	0	0	0	0	0	0	0	0	0	0
30	Less: Accumulated Depreciation	11,129,912	84,225	70,131	0	0	0	0	0	0	0	0	0	0	0
31	Cumulative CWIP Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Net Plant Investment	244,347	1,169	0	0	0	0	0	0	0	0	0	0	0	0
33	Average Investment		122,758	585	0	0	0	0	0	0	0	0	0	0	
34	Return on Average Investment		645	3	0	0	0	0	0	0	0	0	0	0	648
35															
36	Return Requirements		797	4	0	0	0	0	0	0	0	0	0	0	801
37															
38	Program Total		\$2,220	\$1,173	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,393

Line No.	Program Demand (D) or Energy (E)	Beginning Balance	Act Jan-21	Act Feb-21	Act Mar-21	Act Apr-21	Act May-21	Act Jun-21	Est Jul-21	Est Aug-21	Est Sep-21	Est Oct-21	Est Nov-21	Est Dec-21	Total
39	Residential Energy Management - Load Management Switches (D)														
40	Expenditures Booked Directly to Plant		\$10,608	\$72,050	\$400,008	\$271,184	\$137,809	\$95,254	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$3,986,912
41	Retirements		150,703	100,449	347,636	148,538	716,048	519,146	546,159	478,289	494,594	400,226	780,483	436,751	5,119,024
42	Investments Booked to CWIP		0	0	0	0	0	0	0	0	0	0	0	0	0
43	Closings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
44	Amortization Base		41,970,926	41,855,958	41,703,965	41,855,886	41,694,776	41,214,988	40,777,589	40,765,365	40,778,924	40,831,513	40,741,158	40,632,541	
45															
46	Amortization Expense		699,529	697,613	695,080	697,612	694,927	686,930	679,640	679,436	679,662	680,539	679,033	677,223	8,247,224
47															
48	Cumulative Plant Investment	42,046,277	41,906,182	41,877,783	41,930,155	42,052,801	41,474,561	41,050,669	41,004,510	41,026,221	41,031,627	41,131,400	40,850,917	40,914,165	40,914,165
49	Less: Accumulated Depreciation	25,194,946	25,743,772	26,340,936	26,688,380	27,237,454	27,216,333	27,384,117	27,517,597	27,718,744	27,903,812	28,184,125	28,082,674	28,323,146	28,323,146
50	Cumulative CWIP Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Net Plant Investment	16,851,331	16,162,410	15,536,847	15,241,775	14,815,347	14,258,228	13,666,552	13,486,912	13,307,476	13,127,814	12,947,275	12,768,242	12,591,019	12,591,019
52	Average Investment		16,506,871	15,849,629	15,389,311	15,028,561	14,536,787	13,962,390	13,576,732	13,397,194	13,217,645	13,037,545	12,857,759	12,679,631	
53	Return on Average Investment		86,799	83,342	80,922	79,025	76,439	73,418	71,391	70,447	69,502	68,555	67,610	66,673	894,123
54															
55	Return Requirements		107,297	103,024	100,032	97,687	94,491	90,756	88,250	87,084	85,915	84,745	83,577	82,418	1,105,276
56															
57	Program Total		\$806,826	\$800,637	\$795,112	\$795,299	\$789,418	\$777,686	\$767,890	\$766,520	\$765,577	\$765,284	\$762,610	\$759,641	\$9,352,500

58	Summary of Demand & Energy														
59	Energy		\$646	\$643	\$639	\$636	\$633	(\$10,574)	\$0	\$0	\$0	\$0	\$0	\$0	(\$7,377)
60	Demand		834,694	810,181	806,517	808,040	802,100	790,389	781,395	782,174	783,370	785,204	784,648	775,508	9,544,220
61	Total Return & Depreciation		\$835,340	\$810,824	\$807,156	\$808,676	\$802,733	\$779,815	\$781,395	\$782,174	\$783,370	\$785,204	\$784,648	\$775,508	\$9,536,843

Notes:
 WACC based on ROE of 10.5%, weighted cost of equity component of capital structure and statutory income tax rate of 24.522% (inc tax multiplier = 1.32489). Using the WACC methodology prescribed in Order No. PSC-2020-0165-PAA-EU Docket No. 20200118-EU.

Duke Energy Florida, LLC
Energy Conservation Cost Recovery
Calculation of Interest Provision
January 2021 - December 2021

FPSC Docket No. 20210002-EG
Duke Energy Florida, LLC
Witness: Lori J. Cross
Exhibit No. ____ (LJC-1P)
Schedule C-3
Page 5 of 6

Line No.		Act Jan-21	Act Feb-21	Act Mar-21	Act Apr-21	Act May-21	Act Jun-21	Est Jul-21	Est Aug-21	Est Sep-21	Est Oct-21	Est Nov-21	Est Dec-21	Total
1	Beginning True-Up Amount (C3, Page 6, Lines 7 & 8)	(\$2,295,039)	(\$1,789,477)	(\$1,326,768)	(\$1,203,916)	(\$1,525,928)	(\$3,595,165)	(\$5,558,415)	(\$7,154,209)	(\$9,029,116)	(\$10,693,200)	(\$11,499,811)	(\$10,335,977)	
2	Ending True-Up Amount Before Interest (C3, Page 6, Lines 5,7-10)	(1,789,290)	(1,326,632)	(1,203,811)	(1,525,826)	(3,595,048)	(5,558,186)	(7,153,785)	(9,028,577)	(10,692,543)	(11,499,071)	(10,335,249)	(8,753,585)	
3	Total Beginning & Ending True-Up (Line 1 + Line 2)	(4,084,329)	(3,116,109)	(2,530,580)	(2,729,743)	(5,120,976)	(9,153,351)	(12,712,199)	(16,182,785)	(19,721,659)	(22,192,271)	(21,835,060)	(19,089,562)	
4	Average True-Up Amount (50% of Line 3)	(2,042,164)	(1,558,055)	(1,265,290)	(1,364,871)	(2,560,488)	(4,576,675)	(6,356,100)	(8,091,393)	(9,860,829)	(11,096,135)	(10,917,530)	(9,544,781)	
5	Interest Rate: First Day Reporting Business Month	0.10%	0.12%	0.09%	0.11%	0.07%	0.04%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	
6	Interest Rate: First Day Subsequent Business Month	0.12%	0.09%	0.11%	0.07%	0.04%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	
7	Total (Line 5 & Line 6) (Line 5 + Line 6)	0.22%	0.21%	0.20%	0.18%	0.11%	0.12%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	
8	Average Interest Rate (50% of Line 7)	0.110%	0.105%	0.100%	0.090%	0.055%	0.060%	0.080%	0.080%	0.080%	0.080%	0.080%	0.080%	
9	Interest Provision (Line 4 * Line 8) / 12	(\$187)	(\$136)	(\$105)	(\$102)	(\$117)	(\$229)	(\$424)	(\$539)	(\$657)	(\$740)	(\$728)	(\$636)	(\$4,600)

Duke Energy Florida, LLC
Energy Conservation Cost Recovery
Energy Conservation Adjustment
Calculation of True-Up
January 2021 - December 2021

FPSC Docket No. 20210002-EG
Duke Energy Florida, LLC
Witness: Lori J. Cross
Exhibit No. ____ (LJC-1P)
Schedule C-3
Page 6 of 6

Line No.	Act Jan-21	Act Feb-21	Act Mar-21	Act Apr-21	Act May-21	Act Jun-21	Est Jul-21	Est Aug-21	Est Sep-21	Est Oct-21	Est Nov-21	Est Dec-21	Total
1 ECCR Revenues	\$8,882,958	\$8,558,158	\$8,872,676	\$8,957,180	\$9,710,635	\$11,161,000	\$11,724,410	\$12,004,187	\$11,794,442	\$10,938,719	\$8,967,731	\$8,540,761	\$120,112,856
2 Prior Period True-Up Over/(Under) Recovery	191,253	191,253	191,253	191,253	191,253	191,253	191,253	191,253	191,253	191,253	191,253	191,253	2,295,039
3 ECCR Revenues Applicable to Period	9,074,211	8,749,411	9,063,930	9,148,433	9,901,888	11,352,253	11,915,663	12,195,440	11,985,695	11,129,973	9,158,984	8,732,014	122,407,895
4 ECCR Expenses	9,388,707	9,021,002	8,995,633	8,635,270	7,641,515	9,197,979	10,129,040	10,129,819	10,131,015	10,132,849	10,132,293	10,123,153	113,658,274
5 True-Up This Period (Over)/Under Recovery	314,495	271,592	(68,297)	(513,163)	(2,260,373)	(2,154,274)	(1,786,623)	(2,065,621)	(1,854,680)	(997,124)	973,308	1,391,139	(8,749,621)
6 Current Period Interest	(187)	(136)	(105)	(102)	(117)	(229)	(424)	(539)	(657)	(740)	(728)	(636)	(4,600)
7 Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0
8 True-Up & Interest Provision Beginning of Period	(2,295,039)	(1,789,477)	(1,326,768)	(1,203,916)	(1,525,928)	(3,595,165)	(5,558,415)	(7,154,209)	(9,029,116)	(10,693,200)	(11,499,811)	(10,335,977)	(2,295,039)
9 GRT Refunded	0	0	0	0	0	0	0	0	0	0	0	0	0
10 Prior Period True-Up Over/(Under) Recovery	191,253	191,253	191,253	191,253	191,253	191,253	191,253	191,253	191,253	191,253	191,253	191,253	2,295,039
11 End of Period Net True-Up	(\$1,789,477)	(\$1,326,768)	(\$1,203,916)	(\$1,525,928)	(\$3,595,165)	(\$5,558,415)	(\$7,154,209)	(\$9,029,116)	(\$10,693,200)	(\$11,499,811)	(\$10,335,977)	(\$8,754,221)	(\$8,754,221)

**Duke Energy Florida, LLC
Energy Conservation Cost Recovery
Calculation of ECCR Revenues
January 2022 - December 2022**

Line No.	Month	Jurisdictional mWh Sales	ECCR Revenue
			Net of Revenue Taxes
1	January	3,047,458	\$7,910,552
2	February	2,656,306	6,922,355
3	March	2,649,623	6,819,990
4	April	2,682,843	6,796,767
5	May	3,058,558	7,628,470
6	June	3,596,260	9,019,384
7	July	3,918,548	9,844,836
8	August	4,135,702	10,365,992
9	September	4,017,743	10,071,191
10	October	3,684,185	9,213,233
11	November	3,051,571	7,644,962
12	December	2,802,155	7,120,333
13	Total	39,300,952	\$99,358,066

Program Description and Progress

Program Title: Home Energy Check

Program Description: The Home Energy Check is a residential energy audit program that provides residential customers with an analysis of their energy consumption as well as educational information on how to reduce energy usage and save money. The audit provides the opportunity to inform customers about incentives and bill savings that may be available through DEF's energy efficiency and demand response programs, while also educating and encouraging customers to implement energy-saving practices.

Program Projections - January 2022 - December 2022: DEF estimates that 25,000 customers will participate in this program during the projection period.

Program Fiscal Costs - January 2022 - December 2022: Costs for this program are projected to be \$4,973,759.

Program Progress Summary: As of year-to-date, 10,272 customers have participated in this program in the current year. Due to safety concerns related to COVID-19, DEF's walk-through audits were suspended through March 1, 2021. During the suspension period, DEF encouraged customers to complete phone-assisted and online audits. DEF will continue to inform customers about cost effective energy efficiency measures that will provide savings through this Program.

In addition, consistent with the modifications included in paragraph 5(b) of the Memorandum of Understanding ("MOU") filed in DEF's 2021 Settlement Agreement Docket (see Docket No. 20210016-EI), beginning in 2021, eligible low-income customers who complete either a walk-through or on-line audit will be eligible for an "Assistance" kit. These kits will be provided to eligible customers in addition to the normal HEC Kits. The projected costs include \$129,250 in 2021 for 5,000 "Assistance" kits and \$517,000 in 2022 for 20,000 kits.

Program Description and Progress

Program Title: Residential Incentive Program

Program Description: The Residential Incentive Program provides incentives to residential customers for energy efficiency improvements for existing homes. The Residential Incentive Program includes incentives for measures such as duct testing, duct repair, attic insulation, replacement windows, high efficiency heat pump replacing resistance heat, and high efficiency heat pump replacing a heat pump.

Program Projections - January 2022 - December 2022: DEF estimates that 15,136 completions will be performed through this program during the projection period.

Program Fiscal Costs - January 2022 - December 2022: Costs for this program are projected to be \$4,990,692.

Program Progress Summary: As of year-to-date, June 30, 2021, DEF has provided incentives to customers on a total of 7,790 measure installations.

Program Description and Progress

Program Title: Neighborhood Energy Saver Program

Program Description: The Neighborhood Energy Saver Program is designed to assist customers in selected neighborhoods where approximately 50% of the households have incomes equal to or less than 200% of the poverty level as established by the U.S. Government. DEF or a third-party contractor directly installs energy conservation measures, identified through an energy assessment, in customer homes to increase energy efficiency. Customers also receive a comprehensive package of energy education materials which inform them on ways to better manage their energy usage. The energy conservation measures are installed, and energy efficiency education is provided at no cost to the participants.

Program Projections - January 2022 - December 2022: DEF's projections assume that energy conservation measures will be installed in 5,250 homes. Consistent with the terms of the MOU, this projection includes a targeted increase of 5%, or 250 homes, above the projected participation included in DEF's 2020 Program Plan.

Program Fiscal Costs for January 2022 - December 2022: Costs for this program are projected to be \$6,274,910.

Program Progress Summary: As of year-to-date, June 30, 2021, DEF has installed measures on 98 homes. Due to concerns about customer safety related to COVID-19, DEF suspended in home appointments in March 2020 and that suspension continued through May 17, 2021. DEF has now implemented safety precautions and resumed field work but continues to monitor the situation to ensure the safety of customers.

Program Description and Progress

Program Title: Low-Income Weatherization Assistance Program

Program Description: The Low-Income Weatherization Assistance Program is designed to integrate DEF's program measures with assistance provided by the Florida Department of Economic Opportunity (DEO) and local weatherization providers to deliver energy efficiency measures to low-income eligible families. Through this partnership, DEF assists local weatherization agencies and other non-profit or government agencies by providing energy education materials and financial incentives to weatherize the homes of low-income families.

Program Projections - January 2022 - December 2022: It is estimated that 3,000 weatherization measures will be installed on approximately 250 residential homes.

Program Fiscal Costs - January 2022 - December 2022: Costs for this program are projected to be \$507,281.

Program Progress Summary: As of year-to-date, June 30, 2021, measures have been installed on 45 homes through this program. There has been less participation in the current year date than expected as work was suspended by the weatherization agencies in the early part of the year and the agencies have just recently resumed field work. DEF continues to work to engage with the weatherization agencies and recently added Rebuild Tampa Bay to the list of agencies participating in the program. DEF has also partnered with Orange County to provide energy audits and weatherization measures to approximately 40 income-eligible customers.

Program Description and Progress

Program Title: Energy Management Program (Residential & Commercial)

Program Description: The Residential Energy Management Program is a voluntary program that incorporates direct control of selected customer equipment to reduce system demand during winter and summer peak capacity periods and/or emergency conditions by temporarily interrupting selected customer appliances for specified periods of time. Residential customers have a choice of options and receive a credit on their monthly electric bills depending on the load control options selected and their monthly kWh usage. The Commercial program was closed to new participants as of July 20, 2000. This program provides approximately 697 MWs of winter and 409 MWs of summer load reduction. Approximately 438,000 customers currently participate in the program.

Program Projections - January 2022 - December 2022: During this period, DEF anticipates adding 2,500 new participants to this program.

Program Fiscal Costs - January 2022 - December 2022: Program costs during this period are projected to be \$39,302,060.

Program Progress Summary: Through year-to-date, June 30, 2021, DEF added a total of 890 new participants to this program.

In addition, consistent with the modifications included in paragraph 5(a) of the MOU, beginning in 2021, an eligible, low-income, program participant having arrearages greater than 60 days will receive a \$30 Assistance incentive. The Assistance incentive will be available to eligible customers in 2021 and 2022, for a total up to \$60, to help customers recover from the economic impacts of COVID-19 and to maintain the demand response resource associated with the customer. Projected Program costs include \$30,000 for these Assistance incentives in both 2021 and 2022.

Program Description and Progress

Program Title: Business Energy Check Program

Program Description: The Business Energy Check Program provides no-cost energy audits at non-residential facilities. This program acts as a motivational tool to identify, evaluate and inform consumers about cost-effective, energy saving measures that can be installed at their facility. The Business Energy Check Program serves as the foundation for the Better Business Program.

Program Projections - January 2022 - December 2022: It is estimated that 400 customers will participate in this program during the projection period.

Program Fiscal Costs - January 2022 - December 2022: Costs for this program are projected to be \$750,875.

Program Progress Summary: As of year-to-date, June 30, 2021, DEF has performed a total of 174 commercial audits.

Program Description and Progress

Program Title: Better Business Program

Program Description: This umbrella efficiency program provides incentives to existing commercial, industrial, and governmental customers for heating, air conditioning, roof insulation, duct leakage and repair, demand-control ventilation, high efficiency energy recovery ventilation and HVAC-optimization-qualifying measures.

Program Projections - January 2022 - December 2022: DEF's 2022 projected costs are based on the measures and projected participation included in the 2020 Program Plan and include \$733,000 in incentives to customers.

Program Fiscal Costs - January 2022 - December 2022: Costs for this program are projected to be \$2,200,326.

Program Progress Summary: As of year-to-date, June 30, 2021, DEF has provided \$1.3 million in incentives to 184 customers through this program and expects to provide an additional \$1.0 million through year-end.

Program Description and Progress

Program Title: Florida Custom Incentive Program

Program Description: The Florida Custom Incentive Program is designed to encourage customers to make capital investments for energy efficiency measures which reduce peak KW and provide energy savings. This program provides incentives for individual custom projects, which are cost effective, but not otherwise addressed through DEF's prescriptive programs. Examples of energy-efficient technologies that would be considered under this program include, but are not limited to, new construction measures and new thermal energy storage systems.

Program Projections - January 2022 - December 2022: DEF estimates that 60 customers will participate in the program during the projection period.

Program Fiscal Costs - January 2022 - December 2022: Costs for this program are projected to be \$680,637.

Program Progress Summary: As of year-to-date June 30, 2021, 20 customers have participated in this program and there are several additional applications that are currently being evaluated.

Program Description and Progress

Program Title: Standby Generation

Program Description: The Standby Generation Program is a demand control program that is designed to reduce DEF's system demand based on control of customer equipment. It is a voluntary program available to commercial and industrial customers who have on-site generation capability and are willing to reduce their DEF demand when necessary. This program is offered to customers through DEF's General Service Load Management-2 (GSLM-2) rate schedule.

Program Projections - January 2022 - December 2022: DEF estimates that 7 new installations will be completed during the projection period.

Program Fiscal Costs - January 2022 - December 2022: Expenses for this program are projected to be \$4,601,276.

Program Progress Summary: There are currently a total of 180 accounts participating in this program.

Program Description and Progress

Program Title: Interruptible Service

Program Description: Interruptible Service is a direct load control DSM program in which customers contract to allow DEF to interrupt their electrical service during times of capacity shortages during peak or emergency conditions. In return, customers receive a monthly credit on their bill based on their monthly peak demand.

Program Projections - January 2022 - December 2022: 5 new accounts are estimated to sign up for this program during the projection period.

Program Fiscal Costs - January 2022 - December 2022: Costs for this program are projected to be \$35,884,899.

Program Progress Summary: There are currently a total of 195 accounts participating in this program.

Program Description and Progress

Program Title: Curtailable Service

Program Description: Curtailable Service is an indirect load control DSM program in which customers contract to curtail or reduce a portion of their electric load during times of capacity shortages. The curtailment is managed by the customer when notified by DEF. In return, customers receive a monthly rebate for the curtailable portion of their load.

Program Projections - January 2022 - December 2022: DEF is projecting to add 2 new participants during the projection period.

Program Fiscal Costs - January 2022 - December 2022: Costs for this program are projected to be \$3,108,417.

Program Progress Summary: As of June 30, 2021, there are 4 customers participating in this program.

Program Description and Progress

Program Title: Technology Development

Program Description: The Technology Development Program allows DEF to investigate technologies that support the development of cost-effective demand reduction and energy efficiency programs.

Program Projections - January 2022 - December 2022: DEF has partnered with various research organizations, including the University of South Florida (USF), the University of Central Florida (UCF), and the Electric Power Research Institute (EPRI) to evaluate energy efficiency, energy storage, demand response, and smart-charging technologies. Several research projects associated with these four focus areas will continue and/or launch in 2022:

- Energy Management Circuit Breakers
- Smart Charging for Electric Transportation
- Smart Appliances for Demand Response (CTA-2045)
- USF Renewable Energy Storage
- Persistent Wi-Fi for Demand Side Management
- UCF Long Duration Energy Storage
- Home Energy Management System Demand Response
- Residential Energy Storage Demand Response
- EPRI programs (energy efficiency, energy storage, integration of renewable resources, electric transportation infrastructure)

Program Fiscal Costs - January 2022 - December 2022: Costs for this program are projected to be \$800,000.

Program Progress Summary: The following provides a summary of projects that DEF is currently supporting through this program:

- **Energy Management Circuit Breaker (EMCB) Project:** This project will continue to explore the potential for developing a Florida program for customer circuit breakers that include communication, metering and remote operation for potential applications including energy efficiency, demand response and integration of distributed energy resources. A field pilot consisting of 10 customer homes was installed and operational data was collected from appliances. In 2020, DEF upgraded the EMCB hardware to new commercial grade units and upgraded the communications path to prepare for large-scale implementation by the vendor. This upgrade is giving DEF the opportunity to test units and infrastructure that could be implemented in large scale. We will continue to test smart breaker applications including smart breakers that have electric vehicle charging capabilities in 2022. DEF will document the operation of these breakers and assess the cost-effectiveness for potential EE and DR programs.

Program Description and Progress

- Smart Charging for Electric Transportation: Testing includes analysis of residential and public charging, vehicle charging programs and Electric Vehicle Supply Equipment (EVSE) control technology. An electric vehicle charging load research project is providing data on residential customer charging behavior.
- Smart Appliance Demand Response Project: The CTA-2045 standard provides for a modular communications interface to residential appliances for demand management. CTA-2045 also provides standard signals for DSM to control appliances. DEF, in partnership with EPRI, tested: CTA-2045 thermostats, heat pump water heaters, electric water heaters, pool pump/timers and electric vehicle chargers. DEF also tested retrofit devices that could bring the features of CTA-2045 to existing appliances including water heaters, pool pumps, and electric vehicle chargers. The functionality and commercialization of devices utilizing this standard are being verified in field demonstrations for potential program development. In 2022, the testing of CTA-2045 equipped appliances will include local control through Home Energy Management Systems.
- EPRI and National Labs HEMS EE/DR Project: This project will leverage the CTA-2045 Project to provide field testing of Home Energy Management Systems (HEMS) for energy efficiency and demand response. This project is in the field-testing phase of a FOA that is being executed by EPRI and a consortium of US National Labs. The project designed the hardware and software to enable customer appliance control through the HEMS. DEF installed the HEMS systems and they will be tested through 2021.
- USF Renewable Energy Storage System: This project will evaluate the use of a customer-sited energy storage system and a solar photovoltaic (PV) installation to renewably control customer demand, including high demand spikes from fast electric vehicle charging. DEF will also determine the feasibility of a potential DSM program using the solar and energy storage systems. The renewable energy storage system will also have the capability to supply loads during a prolonged utility outage (due to storms, etc.). This project has an online dashboard that is open to the public and provides solar, energy storage and load data (<https://dashboards.epri.com/duke-usfsp-parking>).
- Persistent Wi-Fi for Demand Side Management Project: This project will design and test hardware and software to enable consistent connection of utility demand response equipment utilizing customer-provided internet connection in a secure Wi-Fi configuration.
- UCF Long-Duration Energy Storage Project: This project is a collaboration with UCF to document the value of long duration customer-side energy storage systems. Long duration energy storage (4 hours+) may be best achieved by employing technologies other than Lithium Ion. This project is using the technology at UCF's Microgrid Control lab to

Program Description and Progress

directly test a long duration vanadium flow battery energy storage system in multiple use cases, including integration of solar PV, operation and control of smart building loads for demand response and study of battery performance.

- **Home Energy Management for Energy Efficiency and Demand Response:** This project will develop software, firmware and applications for a Smart Home Gateway that will enable demand response. The Smart Home Gateway currently includes processing and communications capabilities to perform on-site operations including receiving energy data from the AMI meter. DEF plans to develop local control integration with CTA-2045 appliances and the Eaton Energy Management Circuit Breaker (EMCB) to test water heater, pool pump, electric vehicle service equipment and thermostats demand response. DEF also plans to develop bindings to control common IoT devices, such as commonly available thermostats, lighting, etc. Demand response capabilities will be developed using the CTA-2045 and OpenADR protocols. DEF will document this project for a potential Energy Efficiency and Demand Response Program.
- **Residential Energy Storage Demand Response:** This project will test the potential for Demand Response from Residential Energy Storage Systems commonly integrated with Solar PV Renewable Energy Systems. This project will utilize a Demand Response Aggregator to control a group of volunteer customers' energy storage systems during demand response events. This project's goals are to quantify the capability of these energy storage systems to provide demand response, verify the ability of the Aggregator to control these energy storage resources and study the customer experience of participating in demand response events. The results of this study will inform the feasibility of utilizing residential energy storage systems to support a residential demand response program.

Program Description and Progress

Program Title: Qualifying Facility

Program Description: This program supports the costs to administer and facilitate the interconnection and purchase of as-available energy and firm energy and capacity from qualifying facilities including those that utilize renewable sources and distributed energy resources.

Program Projections - January 2022 - December 2022: DEF, on behalf of its customers, will continue to engage with interested parties wanting to provide cogeneration and renewable, or distributed resource (DR) power to DEF. Discussions are expected to include potential projects, designs, commitments, obligations, grid access, and the commission's QF rules with renewable, energy storage and combined heat and power companies. DEF expects most parties to explore small power production and options to transact with DEF as the technologies advance, the markets and incentives remain in place, technology costs decline, and technology accessibility becomes even more common. DEF expects that the number of potential distributed resources and QFs that engage DEF will remain steady for 2022; therefore, DEF will require planning, forecasting, screening techniques and expanded QF business practices as the size and number of QFs and DRs continues to evolve. For example, DEF will engage in more in-depth research and analytics to support grid interconnections, good faith and non-discriminatory QF contract negotiations, system impacts studies and thorough state jurisdictional interconnection processes. DEF will monitor the existing potential QFs under development inside DEF's balancing authority for: permitting, interconnection and/or transmission study progress, construction, financing, insurance, and performance as that information is made available to DEF. DEF will continue to prudently administer all executed and in-service QF contracts for compliance and defend, on behalf of its customers, against all claims originating from QFs and DRs.

Program Fiscal Costs - January 2022 - December 2022: Costs for this program are projected to be \$1,624,500.

Program Progress Summary: For 2021, DEF has approximately 412 MW under firm wholesale purchase contracts from in-service QFs and 6 non-firm, as-available energy QF contracts. The total firm capacity from cogeneration facilities is 334 MW and the total firm capacity from renewable facilities is 78 MW. Approximately 67 MW of renewables are delivering energy to the Company under DEF's COG-1, as-available QF contract. DEF continues to monitor the potential count of non-firm COG-1 renewable QFs that are under development in its balancing authority. DEF continues to manage over 4,700 MW of all renewables or distributed energy resources in its state and FERC jurisdictional generation interconnection queues. Further, DEF continues to prudently administer all in-service QF contracts, renewal negotiations under DEF's most current full avoided cost, contract compliance, and defend, arbitrate, or mediate, on behalf of its customers, against all claims made by QFs. Finally, after DEF terminated a QF contract for default in the fall of 2018, DEF received a dispute notice, in March 2019, under a demand for arbitration in accordance with the FPSC-approved QF contract. DEF has and continues to defend

Program Description and Progress

this arbitration, on behalf of its customers, under the American Arbitration Association's, (AAA) Large Complex Commercial Rules. The formal hearing was held in December 2020. The AAA Arbitration 3-person panel issued its interim Award to DEF on March 3, 2021, where the panel unanimously found that DEF rightfully terminated the QF PPA, the QFs' claims were denied and dismissed with prejudice, and DEF's counterclaim for delay damages as entitled under the contract were granted. On May 14, 2021, the panel issued its final Award where DEF was awarded all attorney fees and all arbitration costs and expenses while also confirming the total Award granted for delay damages. Currently, DEF continues its attempts to collect the panel's Award from the QF, on behalf of its customers.

Duke Energy Florida
Cost Recovery Clause
January 2021 - December 2021
Approved Capital Structure and Cost Rates

FPSC Docket No. 20210002-EG
Duke Energy Florida, LLC
Witness: Lori J. Cross
Exhibit No. ____ (LJC-1P)
Schedule C-6
Page 1 of 2

	(1)	(2)	(3)	(4)	(5)	(6)
	Jurisdictional Rate Base Adjusted Retail (\$000s)	Cap Ratio	Cost Rate	Weighted Cost	Revenue Requirement Rate	Monthly Revenue Requirement Rate
1 Common Equity	\$ 6,564,170	43.08%	10.50%	4.523%	5.99%	0.50%
2 Long Term Debt	5,970,469	39.18%	4.22%	1.66%	1.66%	0.14%
3 Short Term Debt	141,506	0.93%	1.10%	0.01%	0.01%	0.00%
4 Cust Dep Active	181,717	1.19%	2.36%	0.03%	0.03%	0.00%
5 Cust Dep Inactive	1,883	0.01%			0.00%	0.00%
6 Invest Tax Cr	176,535	1.16%	7.51%	0.09%	0.11%	0.01%
7 Deferred Inc Tax	2,202,583	14.45%			0.00%	0.00%
8 Total	15,238,864	100.00%		6.30%	7.80%	0.6500%

	ITC split between Debt and Equity**:	Ratio	Cost Rate	Ratio	Ratio	ITC	Weighted ITC	After Gross-up
9	Common Equity	6,564,170	52%	10.5%	5.50%	73.2%	0.09%	0.064%
10	Preferred Equity	-	0%				0.09%	0.000%
11	Long Term Debt	5,970,469	48%	4.22%	2.01%	26.8%	0.09%	0.023%
12		12,534,639	100%		7.51%			0.09%
								0.108%

Breakdown of Revenue Requirement Rate of Return between Debt and Equity:

13	Total Equity Component (Lines 1 and 9)	6.07%
14	Total Debt Component (Lines 2, 3 , 4 , and 11)	1.73%
15	Total Revenue Requirement Rate of Return	7.80%

Notes:

Effective Tax Rate: 24.522%

Column:

- (1) Per Order No. PSC-2020-0165-PAA-EU, issued May 20, 2020, approving amended joint motion modifying WACC methodology
- (2) Column (1) / Total Column (1)
- (3) Per Order No. PSC-2020-0165-PAA-EU, issued May 20, 2020, approving amended joint motion modifying WACC methodology
- (4) Column (2) x Column (3)
- (5) For equity components: Column (4) / (1-effective income tax rate/100)
- * For debt components: Column (4)
- ** Line 6 is the pre-tax ITC components from Lines 9 and 11
- (6) Column (5) / 12

Duke Energy Florida
Storm Protection Cost Recovery Clause
January 2022 - December 2022
Projected Capital Structure and Cost Rates

FPSC Docket No. 20210002-EG
Duke Energy Florida, LLC
Witness: Lori J. Cross
Exhibit No. ____ (LJC-1P)
Schedule C-6
Page 2 of 2

	(1)	(2)	(3)	(4)	(5)	(6)			
	Jurisdictional Rate Base Adjusted Retail (\$000s)	Cap Ratio	Cost Rate	Weighted Cost	Revenue Requirement Rate	Monthly Revenue Requirement Rate			
1 Common Equity	\$ 7,302,840	43.96%	9.85%	4.33%	5.80%	0.4833%			
2 Long Term Debt	6,603,424	39.75%	4.11%	1.63%	1.63%	0.1358%			
3 Short Term Debt	74,501	0.45%	1.66%	0.01%	0.01%	0.0008%			
4 Cust Dep Active	182,161	1.10%	2.36%	0.03%	0.03%	0.0025%			
5 Cust Dep Inactive	1,888	0.01%			0.00%	0.0000%			
6 Invest Tax Cr	215,728	1.30%	7.13%	0.09%	0.11%	0.0092%			
7 Deferred Inc Tax	2,230,499	13.43%			0.00%	0.0000%			
8 Total	\$ 16,611,041	100.00%		6.09%	7.58%	0.6317%			

	ITC split between Debt and Equity**:	Ratio	Cost Rate	Ratio	Ratio	Deferred Inc Tax	Weighted ITC	After Gross-up
9 Common Equity	7,302,840	53%	9.85%	5.17%	72.6%	0.09%	0.0653%	0.088%
10 Preferred Equity	-	0%				0.09%	0.0000%	0.000%
11 Long Term Debt	6,603,424	47%	4.11%	1.95%	27.4%	0.09%	0.0247%	0.025%
12 ITC Cost Rate	13,906,264	100%		7.13%			0.0900%	0.112%

Breakdown of Revenue Requirement Rate of Return between Debt and Equity:								
13 Total Equity Component (Lines 1 and 9)					5.89%	Total Pre-Tax Equity		
14 Total Debt Component (Lines 2, 3 , 4 , and 11)					1.70%	Total Debt		
15 Total Revenue Requirement Rate of Return					7.58%	WACC		

Notes:

Effective Tax Rate: 25.345%

Column:

- (1) Per Order No. PSC-2020-0165-PAA-EU, issued May 20, 2020, approving amended joint motion modifying WACC methodology
- (2) Column (1) / Total Column (1)
- (3) Per Order No. PSC-2020-0165-PAA-EU, issued May 20, 2020, approving amended joint motion modifying WACC methodology
Line 6 and Line 12, the cost rate of ITC's is determined under Treasury Regulation section 1.46-6(b)(3)(ii).
- (4) Column (2) x Column (3)
- (5) For equity components: Column (4) / (1-effective income tax rate/100)
- * For debt components: Column (4)
- ** Line 6 is the pre-tax ITC components from Lines 9 and 11
- (6) Column (5) / 12