

1                   BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2                   DOCKET NO. 20210002-EG - In Re: Energy Conservation Cost Recovery

3                                   Clause

4                                   DIRECT TESTIMONY OF KIRA LAKE

5                                   On behalf of

6                                   Florida Public Utilities Company

7       **Q. Please state your name, occupation and business address.**

8       A. My name is Kira Lake. I am the Director of Growth and Retention for  
9           Florida Public Utilities Company. My business address is 450 S. Charles  
10          Richard Beall Blvd., DeBary, FL 32713.

11      **Q. Describe briefly your background and business experience?**

12      A. I graduated from Embry-Riddle Aeronautical University in 2003 with a  
13          Bachelor's of Science degree in Air Traffic Management and in 2007 with a  
14          Masters of Business Administration degree. I have been employed with FPUC  
15          since 2007 and have held different positions with the Company including  
16          Energy Conservation Representative, Energy Conservation Manager, Energy  
17          Logistics Manager and Manager of Business Financial Analysis. In my  
18          current role, I direct the activities of the Company's Energy Conservation and  
19          Sales departments.

20      **Q. Are you familiar with the electric conservation programs of the Company**  
21          **and costs which have been, and are projected to be, incurred?**

22      A. Yes.

23      **Q. What is the purpose of your testimony in this docket?**

24          To describe generally the expenditures made and projected to be made in  
25          implementing, promoting, and operating the Company's electric conservation

1 programs. This will include recoverable costs incurred in January through  
2 June 2021 and projections of program costs to be incurred from July through  
3 December 2021. It will also include projected electric conservation costs for  
4 the period January through December 2022, with a calculation of the  
5 Conservation Adjustment Factor to be applied to the Company's consolidated  
6 electric customers' bills during the collection period of January 1, 2022  
7 through December 31, 2022.

8 **Q. Is the Company planning to test any new technologies under its Conservation**  
9 **Demonstration and Development Program?**

10 **A. Yes.** While the Company continues to test the viability of using battery  
11 storage technology to lower FPUC's power supply cost and of using storage  
12 batteries to integrate renewables into FPUC's power purchase portfolio, the  
13 Company is also introducing a new project under its CDD program. The  
14 Powerhouse Technology pilot will test the viability of using a system to  
15 improve customers' electric system reliability and resiliency while also  
16 helping to reduce the overall cost of the customer's bill. A summary for this  
17 project is included with this filing (Attachment A). Florida Public Utilities  
18 Company will limit the total CDD expenditures to a maximum of \$75,000 per  
19 year. Costs for CDD projects that meet the program's criteria for acceptance  
20 will be charged to Energy Conservation Cost Recovery account

21 **Q. Are there any exhibits that you wish to sponsor in this proceeding?**

22 **A. Yes.** The Company wishes to sponsor as exhibits Schedules C-1, C-2, C-3, C-  
23 4, and C-5, contained in my composite Exhibit KIL-1.

24 **Q. Has the Company prepared summaries of its electric conservation**

1        **programs and the costs associated with these programs?**

2        A. Yes. Summaries of the electric conservation programs as approved in Docket  
3        No. 20200060-EG, the petition for approval of the demand-side management  
4        plan, are contained in Schedule C-5 of Exhibit KIL-1. Included are the  
5        Residential Energy Survey Program, the Residential Heating and Cooling  
6        Efficiency Program, the Commercial Heating and Cooling Efficiency  
7        Program, the Commercial Chiller Upgrade Program, the Electric Conservation  
8        Demonstration and Development Program, the Low Income Energy Outreach  
9        Program, the Commercial Reflective Roof Program and the Commercial  
10       Energy Consultation Program.

11      **Q. Has the Company prepared schedules that show the expenditures**  
12      **associated with its electric conservation programs for the periods you**  
13      **have mentioned?**

14      A. Yes, Schedule C-3, Pages 1 and 1A of 5, Exhibit KIL-1 shows actual expenses  
15      for the months January through June 2021. Projections for July through  
16      December 2021 are also shown on Schedule C-3, Pages 1 and 1A. Projected  
17      expenses for the January through December 2022 period are shown on  
18      Schedule C-2, Page 1 of 3 of Exhibit KIL-1.

19      **Q. Has the Company prepared schedules that show revenues for the period**  
20      **January through December 2021?**

21      A. Yes. Schedule C-4 shows actual revenues for the months January through  
22      June 2021 and projected revenues for July through December 2021 and  
23      January through December 2022.

24      **Q. Has the Company prepared a schedule that shows the calculation of its**

1        **proposed Conservation Adjustment Factor to be applied during billing**  
2        **periods from January 1, 2021 through December 31, 2021?**

3        A. Yes. Schedule C-1 of Exhibit KIL-1 shows these calculations. Net program  
4        cost estimates for the period January 1, 2022 through December 31, 2022 are  
5        used. The estimated true-up amount from Schedule C-3 (Page 4 of 5, Line 11)  
6        of Exhibit KIL-1, being an under-recovery, was added to the total of the  
7        projected costs for the twelve-month period. The total projected recovery  
8        amount, including estimated true-up, was then divided by the projected Retail  
9        KWH Sales for the twelve-month period ending December 31, 2022. The  
10       resulting Conservation Adjustment Factor is shown on Schedule C-1 (Page 1  
11       of 1) of Exhibit KIL-1.

12       **Q. What is the Conservation Adjustment Factor necessary to recover these**  
13       **projected net total costs?**

14       A. The Conservation Adjustment Factor is \$.00134.

15       **Q. Does this conclude your testimony?**

16       A. Yes.



COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - CONSOLIDATED ELECTRIC DIVISION

SCHEDULE C-1  
PAGE 1 OF 1

ENERGY CONSERVATION ADJUSTMENT  
SUMMARY OF COST RECOVERY CLAUSE CALCULATION

FOR MONTHS January-22 THROUGH December-22

1.	TOTAL INCREMENTAL COSTS (SCHEDULE C-2,PAGE 1, LINE 33)	<u>847,350</u>
2.	TRUE-UP (SCHEDULE C-3,PAGE 4,LIN 11)	<u>30,268</u>
3.	TOTAL (LINE 1 AND LINE 2)	<u>877,618</u>
4.	RETAIL KWH SALES	<u>657,640,572</u>
5.	COST PER KWH	<u>0.00133449</u>
6.	REVENUE TAX MULTIPLIER *	<u>1.00072</u>
7.	ADJUSTMENT FACTOR ADJUSTED FOR TAXES (LINE 5 X LINE 6)	<u>0.00133500</u>
8.	CONSERVATION ADJUSTMENT FACTOR- (ROUNDED TO THE NEAREST .001 CENTS PER KWH)	<u>0.134</u>

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COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - CONSOLIDATED ELECTRIC DIVISION

SCHEDULE C-2  
PAGE 1 OF 3

ESTIMATED CONSERVATION PROGRAM COSTS

FOR MONTHS January-22 THROUGH December-22

A.	ESTIMATED EXPENSE BY PROGRAM	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1	Common	53,125	53,125	53,125	53,125	53,125	53,125	53,125	53,125	53,125	53,125	53,125	53,125	637,500
2	Residential Energy Survey Program	8,167	8,167	8,167	8,167	8,167	8,167	8,167	8,167	8,167	8,167	8,167	8,167	98,000
3	Commercial Energy Survey	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Low Income Program	500	500	500	500	500	500	500	500	500	500	500	500	6,000
5	Commercial Heating & Cooling Upgrade	646	646	646	646	646	646	646	646	646	646	646	646	7,750
6	Residential Heating & Cooling Upgrade	2,708	2,708	2,708	2,708	2,708	2,708	2,708	2,708	2,708	2,708	2,708	2,708	32,500
7	Commercial Indoor Efficient Lighting Rebate	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Commercial Window Film Installation Program	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Commercial Chiller Upgrade Program	583	583	583	583	583	583	583	583	583	583	583	583	7,000
10	Solar Water Heating Program	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Solar Photovoltaic Program	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Demonstration and Development	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	36,000
13	Affordable Housing Builders and Providers	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Commercial Reflective Roof Program	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	14,100
15	Commercial Energy Consultation	708	708	708	708	708	708	708	708	708	708	708	708	8,500
16														
17														
18	TOTAL ALL PROGRAMS	70,612	70,612	70,612	70,612	70,613	70,613	70,613	70,613	70,613	70,613	70,613	70,613	847,350
19														
20	LESS AMOUNT INCLUDED													
21	IN RATE BASE													
22														
23	RECOVERABLE CONSERVATION													
24	EXPENSES	70,612	70,612	70,612	70,612	70,613	70,613	70,613	70,613	70,613	70,613	70,613	70,613	847,350

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COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - CONSOLIDATED ELECTRIC DIVISION

SCHEDULE C-2  
PAGE 2 OF 3

ESTIMATED CONSERVATION PROGRAM COSTS PER PROGRAM

FOR MONTHS January-22 THROUGH December-22

PROGRAM NAME	LABOR & PAYROLL	ADVERTISING	LEGAL	OUTSIDE SERVICES	VEHICLE COST	MATERIALS & SUPPLIES	TRAVEL	GENERAL & ADMIN.	INCENTIVES	OTHER	SUB TOTAL	PROGRAM REVENUES	TOTAL
1 Common	370,000	35,000	50,000	75,000	40,000	7,500	45,000	0	0	15,000	637,500	0	637,500
2 Residential Energy Survey Program	40,000	6,000	0	40,000	5,000	1,000	5,000	0	0	1,000	98,000	0	98,000
3 Commercial Energy Survey	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Low Income Program	1,000	5,000	0	0	0	0	0	0	0	0	6,000	0	6,000
5 Commercial Heating & Cooling Upgrade	1,000	5,000	0	0	500	0	500	0	750	0	7,750	0	7,750
6 Residential Heating & Cooling Upgrade	1,500	15,000	0	0	500	0	500	0	15,000	0	32,500	0	32,500
7 Commercial Indoor Efficient Lighting Rebate	0	0	0	0	0	0	0	0	0	0	0	0	0
8 Commercial Window Film Installation Program	0	0	0	0	0	0	0	0	0	0	0	0	0
9 Commercial Chiller Upgrade Program	500	5,000	0	0	0	0	0	0	1,500	0	7,000	0	7,000
10 Solar Water Heating Program	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Solar Photovoltaic Program	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Demonstration and Development	1,000	0	0	35,000	0	0	0	0	0	0	36,000	0	36,000
13 Affordable Housing Builders and Providers	0	0	0	0	0	0	0	0	0	0	0	0	0
14 Commercial Reflective Roof Program	1,000	5,000	0	0	100	0	500	0	7,500	0	14,100	0	14,100
15 Commercial Energy Consultation	5,000	2,000	0	0	500	0	1,000	0	0	0	8,500	0	8,500
16													
17													
18													
19 TOTAL ALL PROGRAMS	421,000	78,000	50,000	150,000	46,600	8,500	52,500	0	24,750	16,000	847,350	0	847,350
20 LESS: BASE RATE													
21 RECOVERY													
22													
23 NET PROGRAM COSTS	421,000	78,000	50,000	150,000	46,600	8,500	52,500	0	24,750	16,000	847,350	0	847,350

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SCHEDULE C-2  
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SCHEDULE OF CAPITAL INVESTMENT, DEPRECIATION & RETURN

ESTIMATED FOR MONTHS January-22 THROUGH December-22

PROGRAM NAME:

	BEGINNING OF PERIOD	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1. INVESTMENT	NONE													
2. DEPRECIATION BASE														
3. DEPRECIATION EXPENSE														
4. CUMULATIVE INVESTMENT														
5. LESS: ACCUMULATED DEPRECIATION														
6. NET INVESTMENT														
7. AVERAGE NET INVESTMENT														
8. RETURN ON AVERAGE INVESTMENT														
9. EXPANSION FACTOR														
10. RETURN REQUIREMENTS														
11. TOTAL DEPRECIATION EXPENSE AND RETURN REQUIREMENT														NONE

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COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - CONSOLIDATED ELECTRIC DIVISION  
CONSERVATION PROGRAM COSTS

SCHEDULE C-3  
PAGE 1 OF 5

ACTUAL FOR MONTHS January-21 THROUGH June-21  
ESTIMATED FOR MONTHS July-21 THROUGH December-21

PROGRAM NAME	LABOR & PAYROLL	ADVERTISING	LEGAL	OUTSIDE SERVICES	VEHICLE COST	MATERIALS & SUPPLIES	TRAVEL	GENERAL & ADMIN.	INCENTIVES	OTHER	SUB TOTAL	PROGRAM REVENUES	TOTAL
1. Common													
A. ACTUAL	156,093	7,617	17,791	77,314	10,584	3,233	3,304	0	0	6,153	282,089		282,089
B. ESTIMATED	162,000	17,500	25,000	25,000	10,000	2,500	20,000	0	0	7,500	269,500		269,500
C. TOTAL	318,093	25,117	42,791	102,314	20,584	5,733	23,304	0	0	13,653	551,589		551,589
2. Residential Energy Survey Program													
A. ACTUAL	8,470	150	0	33,597	846	89	117	0	0	0	43,269		43,269
B. ESTIMATED	20,000	3,000	0	20,000	1,750	750	2,500	0	0	750	48,750		48,750
C. TOTAL	28,470	3,150	0	53,597	2,596	839	2,617	0	0	750	92,019		92,019
3. Commercial Energy Survey													
A. ACTUAL	0	0	0	0	0	0	0	0	0	0	0		0
B. ESTIMATED	0	0	0	0	0	0	0	0	0	0	0		0
C. TOTAL	0	0	0	0	0	0	0	0	0	0	0		0
4. Low Income Program													
A. ACTUAL	0	0	0	0	0	0	0	0	0	0	0		0
B. ESTIMATED	500	2,250	0	0	0	250	50	0	0	0	3,050		3,050
C. TOTAL	500	2,250	0	0	0	250	50	0	0	0	3,050		3,050
5. Commercial Heating & Cooling Upgrade													
A. ACTUAL	0	1,006	0	0	0	0	0	0	125	0	1,131		1,131
B. ESTIMATED	250	2,500	0	250	50	50	50	0	750	0	3,900		3,900
C. TOTAL	250	3,506	0	250	50	50	50	0	875	0	5,031		5,031
6. Residential Heating & Cooling Upgrade													
A. ACTUAL	0	3,914	0	0	0	0	0	0	6,120	0	10,034		10,034
B. ESTIMATED	750	7,500	0	250	50	50	1,500	0	15,000	50	25,150		25,150
C. TOTAL	750	11,414	0	250	50	50	1,500	0	21,120	50	35,184		35,184
7. Commercial Indoor Efficient Lighting Rebate													
A. ACTUAL	0	0	0	0	0	0	0	0	0	0	0		0
B. ESTIMATED	0	0	0	0	0	0	0	0	0	0	0		0
C. TOTAL	0	0	0	0	0	0	0	0	0	0	0		0
SUB-TOTAL ACTUAL	164,563	12,687	17,791	110,911	11,430	3,322	3,421	0	6,245	6,153	336,523	0	336,523
SUB-TOTAL ESTIMATED	183,500	32,750	25,000	45,500	11,850	3,600	24,100	0	15,750	8,300	350,350	0	350,350
LESS: PRIOR YEAR AUDIT ADJ													
ACTUAL											0		0
ESTIMATED													
TOTAL													
NET PROGRAM COSTS	SEE PAGE 1A												

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COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - CONSOLIDATED ELECTRIC DIVISION  
CONSERVATION PROGRAM COSTS

SCHEDULE C-3  
PAGE 1A OF 5

ACTUAL FOR MONTHS ESTIMATED FOR MONTHS		January-21 July-21	THROUGH THROUGH	June-21 December-21										
PROGRAM NAME		LABOR & PAYROLL	ADVERTISING	LEGAL	OUTSIDE SERVICES	VEHICLE COST	MATERIALS & SUPPLIES	TRAVEL	GENERAL & ADMIN.	INCENTIVES	OTHER	SUB TOTAL	PROGRAM REVENUES	TOTAL
8. Commercial Window Film Installation Program														
A. ACTUAL		0	0	0	0	0	0	0	0	0	0	0		0
B. ESTIMATED		0	0	0	0	0	0	0	0	0	0	0		0
C. TOTAL		0	0	0	0	0	0	0	0	0	0	0		0
9. Commercial Chiller Upgrade Program														
A. ACTUAL		0	1,006	0	0	0	0	0	0	0	0	1,006		1,006
B. ESTIMATED		250	2,000	0	0	50	50	50	0	1,500	0	3,900		3,900
C. TOTAL		250	3,006	0	0	50	50	50	0	1,500	0	4,906		4,906
10. Solar Water Heating Program														
A. ACTUAL		0	0	0	0	0	0	0	0	0	0	0		0
B. ESTIMATED		0	0	0	0	0	0	0	0	0	0	0		0
C. TOTAL		0	0	0	0	0	0	0	0	0	0	0		0
11. Solar Photovoltaic Program														
A. ACTUAL		0	0	0	0	0	0	0	0	0	0	0		0
B. ESTIMATED		0	0	0	0	0	0	0	0	0	0	0		0
C. TOTAL		0	0	0	0	0	0	0	0	0	0	0		0
12. Demonstration and Development														
A. ACTUAL		0	0	0	35,042	0	0	0	0	0	0	35,042		35,042
B. ESTIMATED		500	750	0	38,533	50	50	75	0	0	0	39,958		39,958
C. TOTAL		500	750	0	73,575	50	50	75	0	0	0	75,000		75,000
13. Affordable Housing Builders and Providers														
A. ACTUAL		0	0	0	0	0	0	0	0	0	0	0		0
B. ESTIMATED		0	0	0	0	0	0	0	0	0	0	0		0
C. TOTAL		0	0	0	0	0	0	0	0	0	0	0		0
14. Commercial Reflective Roof Program														
A. ACTUAL		0	997	0	17,063	0	0	0	0	5,365	0	23,425		23,425
B. ESTIMATED		500	3,000	0	250	100	0	50	0	3,750	25	7,675		7,675
C. TOTAL		500	3,997	0	17,313	100	0	50	0	9,115	25	31,100		31,100
15. Commercial Energy Consultation														
A. ACTUAL		1,941	8	0	0	160	(1)	26	0	0	0	2,134		2,134
B. ESTIMATED		2,250	1,000	0	250	250	125	250	0	0	25	4,150		4,150
C. TOTAL		4,191	1,008	0	250	410	124	276	0	0	25	6,284		6,284
TOTAL ACTUAL		166,504	14,698	17,791	163,016	11,590	3,321	3,447	0	11,610	6,153	398,130	0	398,130
TOTAL ESTIMATED		187,000	39,500	25,000	84,533	12,300	3,825	24,525	0	21,000	8,350	406,033	0	406,033
LESS: PRIOR YEAR AUDIT ADJ.														
ACTUAL												0		0
ESTIMATED														
TOTAL														
NET PROGRAM COSTS		353,504	54,198	42,791	247,549	23,890	7,146	27,972	0	32,610	14,503	804,163	0	804,163

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COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - CONSOLIDATED ELECTRIC DIVISION  
SCHEDULE OF CAPITAL INVESTMENT, DEPRECIATION AND RETURN

SCHEDULE C-3  
PAGE 2 OF 5

ACTUAL FOR MONTHS  
ESTIMATED FOR MONTHS

January-21  
July-21

THROUGH  
THROUGH

June-21  
December-21

	BEGINNING OF PERIOD	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1. INVESTMENT	NONE													
2. DEPRECIATION BASE														
3. DEPRECIATION EXPENSE														
4. CUMULATIVE INVESTMENT														
5. LESS ACCUMULATED DEPRECIATION														
6. NET INVESTMENT														
7. AVERAGE NET INVESTMENT														
8. RETURN ON AVERAGE INVESTMENT														
9. EXPANSION FACTOR														
10. RETURN REQUIREMENTS														
11. TOTAL DEPRECIATION EXPENSE AND RETURN REQUIREMENT														NONE

EXHIBIT NO. \_\_\_\_\_  
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COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - CONSOLIDATED ELECTRIC DIVISION  
CONSERVATION PROGRAM COSTS

SCHEDULE C-3  
PAGE 3 OF 5

ACTUAL FOR MONTHS  
ESTIMATED FOR MONTHS

January-21  
July-21

THROUGH  
THROUGH

June-21  
December-21

A.	ESTIMATED EXPENSE BY PROGRAM	ACTUAL						TOTAL ACTUAL	ESTIMATED						TOTAL ESTIMATED	GRAND TOTAL
		JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE		JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		
1	CV610 Common	47,206	30,412	65,033	49,543	43,843	46,052	282,089	40,750	45,750	45,750	45,750	45,750	45,750	269,500	551,589
2	CV613 Residential Energy Survey Program	1,849	34,817	2,056	2,115	1,041	1,391	43,269	8,125	8,125	8,125	8,125	8,125	8,125	48,750	92,019
3	CV616 Commercial Energy Survey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	CV617 Low Income Program	0	0	0	0	0	0	0	508	508	508	508	508	508	3,050	3,050
5	CV618 Commercial Heating & Cooling Upgrade	279	155	155	154	233	155	1,131	650	650	650	650	650	650	3,900	5,031
6	CV619 Residential Heating & Cooling Upgrade	2,670	1,109	1,207	331	2,963	1,754	10,034	4,192	4,192	4,192	4,192	4,192	4,192	25,150	35,184
7	CV621 Commercial Indoor Efficient Lighting Rebate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	CV622 Commercial Window Film Installation Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	CV623 Commercial Chiller Upgrade Program	155	154	155	155	233	154	1,006	650	650	650	650	650	650	3,900	4,906
10	CV624 Solar Water Heating Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	CV625 Solar Photovoltaic Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	CV626 Demonstration and Development	0	0	0	0	71,601	(36,559)	35,042	4,404	7,111	7,111	7,111	7,111	7,109	39,958	75,000
13	CV627 Affordable Housing Builders and Providers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	CV628 Commercial Reflective Roof Program	154	5,521	4,420	4,420	4,490	4,420	23,425	1,279	1,279	1,279	1,279	1,279	1,279	7,675	31,100
15	CV629 Commercial Energy Consultation	0	0	741	0	8	1,385	2,134	692	692	692	692	692	692	4,150	6,284
16								0							0	0
17	Prior period audit adj.							0							0	0
18								0							0	0
19																
20																
21	TOTAL ALL PROGRAMS	52,313	72,168	73,767	56,718	124,412	18,752	398,130	61,250	68,957	68,957	68,957	68,957	68,955	406,033	804,163
22																
23	LESS AMOUNT INCLUDED															
24	IN RATE BASE															
25																
26	RECOVERABLE CONSERVATION															
27	EXPENSES	52,313	72,168	73,767	56,718	124,412	18,752	398,130	61,250	68,957	68,957	68,957	68,957	68,955	406,033	804,163

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COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - CONSOLIDATED ELECTRIC DIVISION  
ENERGY CONSERVATION ADJUSTMENT  
CALCULATION OF TRUE UP AND INTEREST PROVISION

SCHEDULE C-3  
PAGE 4 OF 5

ACTUAL FOR MONTHS ESTIMATED FOR MONTHS		January-21 July-21	THROUGH THROUGH	June-21 December-21												
		JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL		
B.	CONSERVATION REVENUES															
1.	RCS AUDIT FEES															
	a.															
	b.															
	c.															
2.	CONSERVATION ADJ REVENUE (NET OF REVENUE TAXES)	(83,156)	(73,759)	(62,021)	(65,297)	(67,871)	(85,784)	(91,066)	(91,634)	(96,790)	(93,251)	(75,352)	(78,258)	(964,239)		
3.	TOTAL REVENUES	(83,156)	(73,759)	(62,021)	(65,297)	(67,871)	(85,784)	(91,066)	(91,634)	(96,790)	(93,251)	(75,352)	(78,258)	(964,239)		
4.	PRIOR PERIOD TRUE-UP-ADJ NOT APPLICABLE TO PERIOD	15,857	15,857	15,857	15,857	15,857	15,857	15,857	15,857	15,857	15,857	15,857	15,856	190,283		
5.	CONSERVATION REVENUES APPLICABLE TO PERIOD	(67,299)	(57,902)	(46,164)	(49,440)	(52,014)	(69,927)	(75,209)	(75,777)	(80,933)	(77,394)	(59,495)	(62,402)	(773,956)		
6.	CONSERVATION EXPENSES (FORM C-3,PAGE 3)	52,313	72,168	73,767	56,718	124,412	18,752	61,250	68,957	68,957	68,957	68,957	68,955	804,163		
7.	TRUE-UP THIS PERIOD	(14,986)	14,266	27,603	7,278	72,398	(51,175)	(13,959)	(6,820)	(11,976)	(8,437)	9,462	6,553	30,207		
8.	INTEREST PROVISION THIS PERIOD (C-3,PAGE 5)	12	9	7	6	6	5	5	4	3	2	1	1	61		
9.	TRUE-UP & INTEREST PROVISION	190,283	159,452	157,870	169,623	161,050	217,597	150,570	120,759	98,086	70,256	45,964	39,570	190,283		
10.	PRIOR TRUE-UP REFUNDED (COLLECTED)	(15,857)	(15,857)	(15,857)	(15,857)	(15,857)	(15,857)	(15,857)	(15,857)	(15,857)	(15,857)	(15,857)	(15,856)	(190,283)		
11.	END OF PERIOD TOTAL NET TRUE- UP (SUM OF LINES 7,8,9,10)	159,452	157,870	169,623	161,050	217,597	150,570	120,759	98,086	70,256	45,964	39,570	30,268	30,268		

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ENERGY CONSERVATION ADJUSTMENT  
CALCULATION OF TRUE UP AND INTEREST PROVISION

SCHEDULE C-3  
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ACTUAL FOR MONTHS January-21 THROUGH June-21  
ESTIMATED FOR MONTHS July-21 THROUGH December-21

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
C. INTEREST PROVISION													
1. BEGINNING TRUE-UP (LINE B-9)	190,283	159,452	157,870	169,623	161,050	217,597	150,570	120,759	98,086	70,256	45,964	39,570	30,268
2. ENDING TRUE-UP BEFORE INTEREST (LINE B7+B9+B10)	159,440	157,861	169,616	161,044	217,591	150,565	120,754	98,082	70,253	45,962	39,569	30,267	30,207
3. TOTAL BEG. AND ENDING TRUE-UP	349,723	317,313	327,486	330,667	378,641	368,162	271,324	218,841	168,339	116,218	85,533	69,837	60,475
4. AVERAGE TRUE-UP (LINE C-3 X 50 %)	174,862	158,657	163,743	165,334	189,321	184,081	135,662	109,421	84,170	58,109	42,767	34,919	30,238
5. INTEREST RATE-FIRST DAY OF REPORTING BUSINESS MONTH	0.09%	0.07%	0.06%	0.04%	0.04%	0.03%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	
6. INTEREST RATE-FIRST DAY OF SUBSEQUENT BUSINESS MONTH	0.07%	0.06%	0.04%	0.04%	0.03%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	
7. TOTAL (LINE C-5 + C-6)	0.16%	0.13%	0.10%	0.08%	0.07%	0.07%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	
8. AVG INTEREST RATE (C-7 X 50%)	0.08%	0.07%	0.05%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	
9. MONTHLY AVERAGE INTEREST RATE	0.007%	0.005%	0.004%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	
10. INTEREST PROVISION (LINE C-4 X C-9)	12	9	7	6	6	5	5	4	3	2	1	1	61

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COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - CONSOLIDATED ELECTRIC DIVISION  
 CALCULATION OF CONSERVATION REVENUES

SCHEDULE C-4  
 PAGE 1 OF 1

FOR THE PERIOD January-21 THROUGH December-22

MONTH	KWH/THERM SALES (000) (NET OF 3RD PARTY)	CONSERVATION ADJUSTMENT REVENUE (NET OF REVENUE TAXES)	RATE
2021 JANUARY	52,844	83,156	ACTUAL
FEBRUARY	51,902	73,759	ACTUAL
MARCH	41,375	62,021	ACTUAL
APRIL	42,576	65,297	ACTUAL
MAY	45,296	67,871	ACTUAL
JUNE	53,484	85,784	ACTUAL
JULY	60,933	91,066	0.149453
AUGUST	61,345	91,634	0.149375
SEPTEMBER	64,797	96,790	0.149374
OCTOBER	62,428	93,251	0.149374
NOVEMBER	50,445	75,352	0.149375
DECEMBER	52,391	78,258	0.149373
SUB-TOTAL	639,816	964,239	
2022 JANUARY	51,373	68,557	0.133449
FEBRUARY	50,445	67,319	0.133449
MARCH	42,494	56,708	0.133449
APRIL	45,717	61,009	0.133449
MAY	49,071	65,485	0.133449
JUNE	60,734	81,049	0.133449
JULY	63,545	84,801	0.133449
AUGUST	64,753	86,412	0.133449
SEPTEMBER	65,261	87,090	0.133449
OCTOBER	60,414	80,622	0.133449
NOVEMBER	51,313	68,478	0.133449
DECEMBER	52,520	70,088	0.133449
SUB-TOTAL	657,641	877,618	
TOTALS	1,297,457	1,841,857	

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SCHEDULE C-5  
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**Program**

1. Residential Energy Survey Program
2. Commercial Heating and Cooling Upgrade Program
3. Residential Heating and Cooling Upgrade Program
4. Commercial Chiller Upgrade Program
5. Conservation Demonstration and Development Program
6. Low Income Energy Outreach Program
7. Commercial Reflective Roof Program
8. Commercial Energy Consultation Program

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FLORIDA PUBLIC UTILITIES COMPANY  
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PROGRAM DESCRIPTION AND SUMMARY

SCHEDULE C-5  
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**PROGRAM TITLE:**

Residential Energy Survey Program

**PROGRAM DESCRIPTION:**

The objective of the Residential Energy Survey Program is to provide FPUC's residential customers with energy conservation advice that encourages the implementation of efficiency measures resulting in energy savings for the customer. These measures, once implemented, also lower FPUC's energy requirements and improve operating efficiencies. FPUC views this program as a way of promoting the installation of cost-effective conservation features. During the survey process, the customer is provided with specific whole-house recommendations and two LED bulbs.

**PROGRAM PROJECTIONS:**

For the twelve-month period of January 2022 to December 2022, the Company estimates that 100 residential surveys will be conducted. Fiscal expenditures for 2022 are projected to be \$98,000.00. For January 2022 through December 2022, the goal for the number of program participants is 100.

**PROGRAM ACTIVITY AND EXPENDITURES:**

From January 2021 through June 2021, 28 surveys were performed and actual expenditures were \$43,269. We estimate that another 50 surveys will be performed between July 2021 and December 2021. Projected program costs as filed for July 2021-December 2021 are \$48,750.

**PROGRAM SUMMARY:**

This program provides participating customers with the information needed to determine which energy saving measures are best suited to their individual needs and requirements. Due to the limitations of COVID-19, and with the safety of our customers and employees in mind, the Company is not performing in-home energy audits at this time. The Company is conducting energy audits via phone and has recently updated its online energy audit which customers can perform at their convenience.

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PROGRAM DESCRIPTION AND SUMMARY

SCHEDULE C-5  
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**PROGRAM TITLE:**

Commercial Heating and Cooling Upgrade Program

**PROGRAM DESCRIPTION:**

This program is directed at reducing the rate of growth in peak demand and energy throughout FPUC's commercial sector by providing rebates to small commercial customers (commercial establishments with a maximum of 5 ton units). The program will do this by increasing the saturation of high-efficiency heat pumps and air conditioners. The program requires that customer install a high-efficiency central air conditioning system or heat pump with a minimum 15 SEER.

**PROGRAM PROJECTIONS:**

For the twelve-month period of January to December 2022, the Company estimates that 5 Commercial Heating and Cooling allowances will be paid. Fiscal expenditures for 2022 are projected to be \$7,750.

**PROGRAM ACTIVITY AND EXPENDITURES:**

From January 2021 through June 2021, no Commercial Heating and Cooling allowances were paid and actual expenditures were \$1,131. We estimate that 5 Commercial Heating and Cooling allowances will be paid between July 2021 and December 2021. For July 2021 through December 2021 the projected expenses as filed are \$3,900. For January 2021 through December 2021, the goal for the number of program participants is 10.

**PROGRAM SUMMARY:**

This program provides an opportunity for FPUC commercial customers to install a more energy efficient heating and cooling system with the results being a decrease in energy consumption as well as a reduction in weather-sensitive peak demand for FPUC. The Company feels confident that by continuing to advertise the benefits of this program through our Energy Survey Program, bill inserts, promotional materials and social media platforms, it will see a higher participation level.

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PROGRAM DESCRIPTION AND SUMMARY**

**SCHEDULE C-5  
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**PROGRAM TITLE:**

Residential Heating and Cooling Efficiency Upgrade Program

**PROGRAM DESCRIPTION:**

This program is directed at reducing the rate of growth in peak demand and energy throughout FPUC's electricity service territories. The program will do this by increasing the saturation of high-efficiency heat pumps and central air conditioning systems. The program requires that customer install a high-efficiency central air conditioning system or heat pump with a minimum 15 SEER. The Residential Heating & Cooling Efficiency Upgrade Program focuses in two areas. The first is to incent customers operating inefficient heat pumps and air conditioners to replace them with more efficient units. The program also incents customers with resistance heating to install a new heat pump. The second area of focus for the program is to incent customers that are replacing a heat pump or air conditioner that has reached the end of its life with a more efficient heat pump or air conditioner than is required by codes and standards. The incentive to install a more efficient heat pump or air conditioner also applies to heat pumps and air conditioners being installed in new construction.

**PROGRAM PROJECTIONS:**

For the twelve-month period of January to December 2022, the Company estimates that 100 Residential Heating and Cooling allowances will be paid. Fiscal expenditures for 2022 are projected to be \$32,500.

**PROGRAM ACTIVITY AND EXPENDITURES:**

From January 2021 through June 2021, 31 Residential Heating and Cooling allowances were paid and actual expenditures were \$10,034. We estimate that another 50 Residential Heating and Cooling allowances will be paid between July 2021 and December 2021. For July 2021 through December 2021 the projected expenses as filed are \$25,150.

**PROGRAM SUMMARY:**

This program provides an opportunity for FPUC customers' to install a more energy efficient heating and cooling system with the results being a decrease in energy consumption as well as a reduction in weather-sensitive peak demand for FPUC. We feel confident that by continuing to advertise the benefits of this program we will continue to see a high participation level.

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PROGRAM DESCRIPTION AND SUMMARY

SCHEDULE C-5  
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**PROGRAM TITLE:**

Commercial Chiller Upgrade Program

**PROGRAM DESCRIPTION:**

The program is directed at reducing the rate of growth in peak demand and energy throughout FPUC's commercial/industrial sector. To serve this purpose, this program requires that commercial/industrial customers replace existing chillers with a more efficient system. By doing so, they will qualify for an incentive of up to \$175 per kW of additional savings above the minimum efficiency levels. The program covers water-cooled centrifugal chillers, water-cooled scroll or screw chillers, and air-cooled electric chillers. Minimum qualifications for efficiency exist for each of the chiller types based on size and are presented in the participation standards section of this program description.

**PROGRAM PROJECTIONS:**

For the twelve-month period of January to December 2022, the Company estimates that 1 Commercial Chiller Upgrades rebate will be paid. Fiscal expenditures for 2022 are projected to be \$7,000.

**PROGRAM ACTIVITY AND EXPENDITURES:**

From January 2021 through June 2021, no Commercial Chiller Upgrade allowances were paid and actual expenditures were \$1,006. We estimate that 1 Commercial Chiller Upgrade rebate will be paid between July 2021 and December 2021. For July 2021 through December 2021 the projected expenses as filed are \$3,900.

**PROGRAM SUMMARY:**

Interested customers will send project proposals to Florida Public Utilities Company and a representative will schedule an on-site visit for inspection prior to installation. After the project is completed, a Florida Public Utilities Company representative will conduct an on-site inspection. By following the guidelines, the customer will qualify for the rebate.

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PROGRAM DESCRIPTION AND SUMMARY**

**SCHEDULE C-5  
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**PROGRAM TITLE:**

Conservation Demonstration and Development Program

**PROGRAM DESCRIPTION:**

The primary purpose of the Conservation Demonstration and Development (CDD) program is to pursue research, development, and demonstration projects that are designed to promote energy efficiency and conservation. This program will supplement and complement the other demand-side management programs offered by Florida Public Utilities Company. The CDD program is meant to be an umbrella program for the identification, development, demonstration, and evaluation of promising new end-use technologies. The CDD program does not focus on any specific end-use technology but, instead, will address a wide variety of energy applications.

**PROGRAM PROJECTIONS:**

For the twelve-month period of January to December 2022, the Company will continue to work on any existing or on-going CDD projects. Fiscal expenditures for 2022 are projected to be \$36,000.

**PROGRAM ACTIVITY AND EXPENDITURES:**

From January 2021 through June 2021 actual expenditures were \$35,042. For July 2021 through December 2021 the projected expenses as filed are \$39,958.

**PROGRAM SUMMARY:**

Per the Company's 2020 Demand Side Management Plan (approved by ORDER NUMBER PSC-2020-0274-PAA-EG), FPUC will notify the Florida Public Service Commission of any CDD project that exceeds \$15,000. FPU continues to test the viability of using battery storage technology to lower FPU's power supply cost and to integrate renewables into FPU's power purchase portfolio, and will complete its battery storage project in 2021. In addition, the Company is introducing a new project under its CDD program. The Powerhouse Technology pilot will test the viability of using a system to improve customers' electric system reliability and resiliency while also helping to reduce the overall cost of the customer's bill (Exhibit A). Florida Public Utilities Company will limit the total CDD expenditures to a maximum of \$75,000 per year. Costs for CDD projects that meet the program's criteria for acceptance will be charged to Energy Conservation Cost Recovery account.

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SCHEDULE C-5  
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**PROGRAM TITLE:**

Low Income Program

**PROGRAM DESCRIPTION:**

The Low Income Energy Outreach Program is an educational program designed to enhance the effectiveness of existing weatherization programs for low-income households. FPUC's Low Income Energy Outreach Program partners with Department of Economic Opportunity approved Low Income Weatherization Program operators by offering Residential Energy Surveys scheduled by the Low Income Weatherization Program operators, weatherization contractor training, distributing energy efficiency educational literature to participants, and hosting energy conservation events customized for low income households.

**PROGRAM PROJECTIONS:**

For the twelve-month period of January to December 2022, fiscal expenditures are projected to be \$6,000.

**PROGRAM ACTIVITY AND EXPENDITURES:**

From January 2021 through June 2021 actual expenditures were \$0. For July 2021 through December 2021 the projected expenses as filed are \$3,050.

**PROGRAM SUMMARY:**

The main purpose of the Low Income Energy Outreach Program is to ensure that low income households are implementing all the necessary energy efficiency measures available. FPUC believes that by working with Weatherization Program operators, it is not only offering a valuable service to its Low Income residents, but that much needed thermal efficiency and weatherization improvements will be made. COVID-19 has and may continue to have an impact on this program.

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PROGRAM DESCRIPTION AND SUMMARY**

**SCHEDULE C-5  
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**PROGRAM TITLE:**

Commercial Reflective Roof Program

**PROGRAM DESCRIPTION:**

The Commercial Reflective Roof Program is a new program that provides rebates to non-residential customers that either convert their existing roof to a cool roof or install a new cool roof on an existing building or a new building. The rebate covers up to 25% of the incremental cost of providing the cool roof compared to a standard roof. Rebates will be \$0.075 per sqft for new roofs on new or existing facilities and \$0.325 per sqft for roofs converting to a cool roof. Roofing material must be Energy Star certified in all cases. The program will reduce energy and demand required for cooling. Participation rates are measured per 1000 sq. ft. of roof. FPUC will work with roofing contractors to promote the program in a manner similar to the Residential and Commercial Heating & Cooling Upgrade Programs. The roofing contractors will provide copies of their proposal to provide roofing services for FPUC's customers. FPUC will inspect the roof before work begins and after the work is completed. FPUC will make the determination of which level of rebate will apply to the project and that the project qualifies for a rebate by using Energy Star certified materials.

**PROGRAM PROJECTIONS:**

For the twelve-month period of January to December 2022, the Company estimates that 10 Commercial Reflective Roof allowances will be paid. Fiscal expenditures for 2022 are projected to be \$14,100.

**PROGRAM ACTIVITY AND EXPENDITURES:**

From January 2021 through June 2021, 0 commercial roofing rebates was paid and actual expenditures were \$23,425. We estimate that 10 commercial roofing rebates will be paid between July 2021 and December 2021. For July 2021 through December 2021 the projected expenses as filed are \$7,675. For July 2021 through December 2021, the goal for the number of program participants is 10.

**PROGRAM SUMMARY:**

The program started upon approval of FPUC's 2015 DSM Plan and Program Standards. We feel confident that by advertising the benefits of this program through our Energy Survey Program, bill inserts, promotional materials and social media platforms, we will begin to receive participants in this program.

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PROGRAM DESCRIPTION AND SUMMARY

SCHEDULE C-5  
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**PROGRAM TITLE:**

Commercial Energy Consultation Program

**PROGRAM DESCRIPTION:**

The Florida Public Utilities Company Commercial Energy Consultation Program is designed to directly communicate the availability of the commercial DSM programs to commercial customers. This program allows for FPUC energy conservation representatives to conduct commercial site visits to educate customers about FPUC's commercial DSM programs, assess the potential for applicable DSM Programs, conduct an electric bill review, offer commercial energy savings suggestions, and inform customer about FPUC's commercial online energy efficiency resources and tools.

**PROGRAM PROJECTIONS:**

For the twelve-month period of January to December 2022, fiscal expenditures are projected to be \$8,500.

**PROGRAM ACTIVITY AND EXPENDITURES:**

From January 2021 through June 2021 2 commercial consultations were completed. The actual expenditures were \$2,134. For July 2021 through December 2021 the projected expenses as filed are \$4,150. The goal for the program is 10 participants.

**PROGRAM SUMMARY:**

In recent research of commercial/industrial customers, consistent response for areas of improvement from this class of customer include individualized attention and service in helping them improve their cost of operation and efficiency. We have built trusting relationships with many of these customers by offering education on new technologies and by offering expertise in energy conservation. This work will continue to benefit FPUC and its rate payers, however, the COVID-19 pandemic has limited our ability to visit our customers in-person.

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## **“The Powerhouse” Technology Pilot**

### **Secured Energy**

#### **Pilot Concept:**

Florida Public Utilities (“FPU”) desires to launch a Pilot to test the viability of using a system that will improve customers’ electric system reliability and resiliency while also helping to reduce the overall cost of the customer’s bill (the “Pilot”). In addition, the Pilot will test whether the technology can be used to lower FPU’s power supply cost, improve the system power factor and test the viability of integrating the technology into FPU’s power purchase portfolio.

FPU’s customers, especially those located on Amelia Island, are interested in finding innovative ways to reduce their power supply costs. Residents are also interested in improving electric reliability and power quality. FPU would like to be able to offer its customers safe, reliable and affordable alternatives that will also reduce power supply costs and help the environment. This Pilot will test the technology’s ability to reduce customers’ power supply costs while improving overall reliability/power quality and help FPU prepare for the future with innovative solutions that support and maintain grid integrity. FPU believes that partnering with a recognized brand will enhance customer adoption and improve the likelihood of success for the Pilot.

While conducting this Pilot, FPU will be able to learn more about the technology and be prepared for a changing energy landscape where consumers demand reliable, cost effective, and environmentally friendly energy solutions.

#### **Literature Review**

Secured Energy’s manufacturer patented “The Powerhouse” in 2010 (Patent No. US 8,971,007 B2) and first introduced the device to the market in 2013. “The Powerhouse” is a mechanical control device (Equipment) that reduces energy consumption by balancing and increasing voltage across all phases of supply, effectively lowering kW demand and reducing overall energy consumption of the electric circuit.

## ATTACHMENT A

Application of the device provides the following:

- Power Factor Improvement
- Reduced Line Losses
- Balanced and Increased Voltage
- Protection from Surges, Sags, Blips, and Spikes that cause internal Voltage Fluctuations
- Equipment Maintenance Cost Reduction
- Cost reduction due to reduction in kW and kWh Usage
- Typical Savings range from 7% - 15%

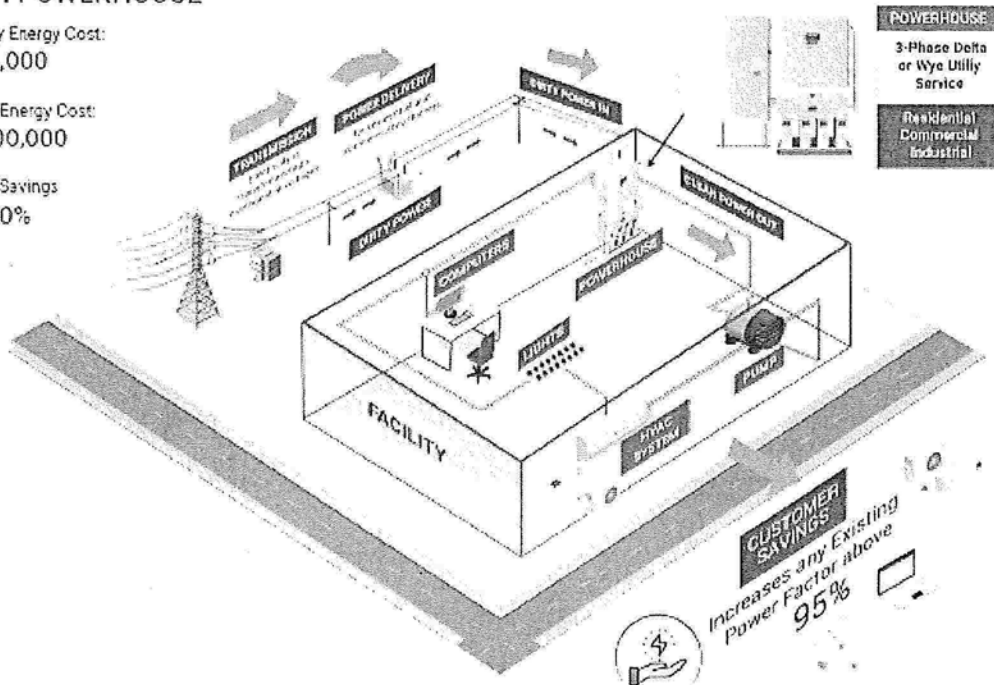
After monitoring the customer's energy usage, equipment is sized and constructed based on load specific requirements for each main distribution panel. Certified and licensed electricians perform the installation and maintenance required. Remote monitoring of the equipment is used to determine if the technology is providing benefits based on original estimates.

### WITH POWERHOUSE

Monthly Energy Cost:  
\$200,000

Annual Energy Cost:  
\$2,400,000

Energy Savings  
8%-10%



### **Consumer Value Proposition:**

- Cost reduction based on reduced kW and kWh usage
- Improved power quality and protection of equipment
- Improved equipment efficiency based on power factor correction and optimized voltage conditions
- Reduced line losses that contribute to additional power supply costs

### **Applications**

The Pilot will incorporate the use of the technology in multiple applications across two customer segments. The focus will be on the industrial and large commercial customer segments to test the overall impact of “The Powerhouse” on energy usage. FPU plans to use the information gathered during the Pilot to explore the impact of the Equipment and how best to introduce it into the market.

The Pilot will be designed to:

- Evaluate the cost savings associated with the Equipment
- Evaluate users’ acceptance and experience with the Equipment to improve energy efficiency and reliability
- Test the Equipment’s reliability and ease of operation
- Collect base line data that will be used to model cost-benefit analysis of the Equipment’s various energy benefits

### **Potential Business Models**

Data gathered during this Pilot phase will be used to determine and design the appropriate business model and regulatory structure that should be used to move forward with full implementation. Below are the business models being explored.

- The Equipment can be sold directly to the customer. The customer would own, operate and control the Equipment.

- FPU leases Equipment to the customer and at the end of the lease customer owns the Equipment. Customer would pay a monthly fee to FPU who will own and control the Equipment during the lease period.
- FPU owns and operates the Equipment as part of a DSM program – FPU installs, maintains and has control of Equipment. FPU and the customer would share in the savings achieved through the installation of the Equipment.

### **Pilot Offering**

During the Pilot FPU will identify and offer customers “The Powerhouse” installation at no cost to the customer. Customer will agree to allow FPU to control, measure and test the Equipment during the Pilot.

The selection criteria for Pilot participants is discussed below and most likely will include industrial and large commercial customers on Amelia Island.

### **Data Collection Requirements**

Data to be collected with “The Powerhouse” will be energized and de-energized in order to determine the impact. Items reviewed will be:

- Voltage and Amperage readings
- Power Factor, KVA, KW and KVAR amounts
- Outages and the cause
- Reported equipment failures

The data will be analyzed to determine what impact is realized when the Equipment is energized compared to when the Equipment is de-energized.

### **Communications Systems Requirements**

Remote monitoring will be established in order to be able to sample energy usage when the Equipment is energized versus de-energized. FPU will work with the customer selected to determine how best to establish the communications. After initial findings, FPU will work with Secured Energy to better evaluate all the data available and/or necessary in a consistent and detailed manner.



## **Electrical Systems Requirements**

All electrical systems will comply with all aspects of the National Electric Code and National Electric Safety Code (when applicable). Additionally, the Equipment will be installed in compliance with the manufacturer's specifications, inspected by customer personnel and must be approved by the local utility representative. In order to ensure the safety of personnel, a main disconnect and fuses will be installed that are capable of completely isolating any potential Equipment failure.

## **Site Selection Criteria**

In order to assure the long-term success of the program, the following criteria will be utilized when selecting customer and location for the Pilot:

- Current industrial or large commercial FPU customer with excellent credit rating
- Structure is in good condition as evaluated by FPU personnel
- Customer agrees to allow scheduled access to the Equipment
- Customer/FPU will agree on approved contractors to perform the installation of Equipment
- Equipment to be installed on main switchgear's with significant load and associated monthly utility costs that meet or exceed \$10,000.00 USD per month at such particular switchgear location.
- Customer agrees to allow communication access to the Equipment
- Installation should occur during normal business hours
- Customer agrees to allow monitoring of Equipment for a minimum of 5 years

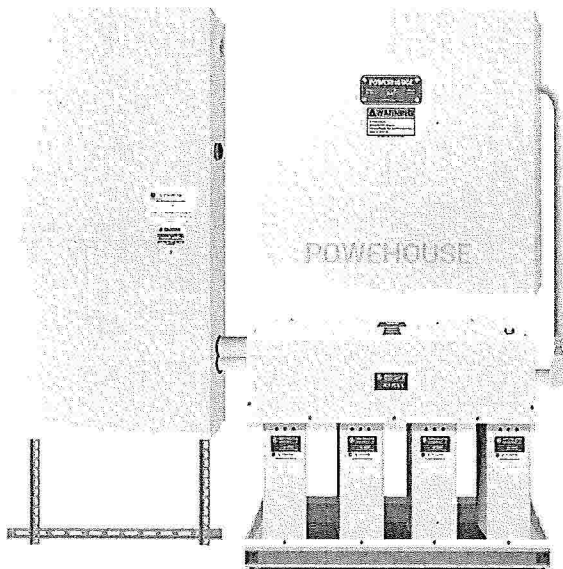
## **Budget**

The Pilot will be funded through the Electric Conservation Demonstration and Development (CDD) program at a maximum of \$90,000 per year for a two-year period. Typical industrial and large commercial equipment and installation cost ranges between \$70K and \$95K per location. Although the Pilot will include two installations, many larger industrial facilities may allow for 30 – 50 separate locations.

## Equipment Information

### Powerhouse Patent:

The inventor of the Powerhouse understood the neutral line for more than just its traditional function of looping an AC electrical circuit. In fact, the Powerhouse function primarily relies on an oversized neutral line to capture energy that normally is lost to the ground or is sent back to the utility grid. Because energy travels in the path of least resistance, most of this energy loss is mitigated by the neutral lines capturing and recycling process. Please reference such process as further described in the patent, provided. Losses captured are variable and contingent on the application, but for design purposes the Powerhouse function is unrivaled by any other known device in the marketplace.



Powerhouse Patent No.  
US 8.971, 007 B2



The Powerhouse is custom fit for each application but is also well-suited for scale, as savings range from 7%-15%, depending on existing facility efficiency and load profiles. Typical return on investment is 3-5 years.

## Contractors and Partners in Pilot

The contractors selected to participate in this program will have been trained and certified by Secured Energy to install the Equipment. The manufacturer may add other contractors after training and certification.

- Miller Electric
- Cogburn Electric