



Writer's E-Mail Address: bkeating@gunster.com

April 27, 2015

HAND DELIVERY

Ms. Carlotta Stauffer, Clerk
Office of the Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

RECEIVED 11:50
15 APR 27 PM 4:16
COMMISSION
CLERK

Re: Docket No. 150089-EG - Petition for approval of demand-side management plan by Florida Public Utilities Company.

Dear Ms. Stauffer:

Attached for filing, please find the original and five (5) copies of Florida Public Utilities Company's responses to Staff's First Data Requests in the referenced docket. Also enclosed is a CD with the data responses in native format, as well as the requested Excel spreadsheets in native format.

As always, please don't hesitate to let me know if you have any questions whatsoever.

Sincerely,

Beth Keating
Gunster, Yoakley & Stewart, P.A.
215 South Monroe St., Suite 601
Tallahassee, FL 32301
(850) 521-1706

- COM _____
- AFD _____
- APA _____
- ECO 2
- ENG 2+CD
- GCL 1
- IDM _____
- TEL _____
- CLK _____

RE: Docket No. 150089-EG- Petition for approval of demand-side management plan by Florida Public Utilities Company.

Florida Public Utilities Company’s Responses to Commission Staff’s First Data Requests, issued on April 6, 2015, in the above-referenced docket are as follows:

1. Please provide the estimated costs of each program’s incentives, administrative & equipment costs, and total costs for the ten-year goals period (nominal and net present value). Also, please provide the percentage of total costs that are used for incentives by program. As part of this response, please provide an electronic version of the table below in Excel format with your response.

Program Costs (Nominal)				
Program Name	Incentives	Administrative & Equipment	Total	Percent Incentives
[Residential]				
Residential Subtotal				
[Comm/Industrial]				
Comm/Ind. Subtotal				
Common Expenses				
Total				

Program Costs (NPV)				
Program Name	Incentives	Administrative & Equipment	Total	Percent Incentives
[Residential]				
Residential Subtotal				
[Comm/Industrial]				
Comm/Ind. Subtotal				
Common Expenses				
Total				

Response to Data Request 1:

The requested tables are provided below. The Administrative & Equipment costs only include FPUC costs. For FPUC’s existing conservation programs, 10 percent of FPUC’s common expenses for 2014 are allocated as administrative and general expenses to each existing program based on energy saved. The Common Expenses shown below are the remaining 90 percent of the 2014 common expenses escalated at the assumed 2.3 percent annual escalation rate.

Program Costs (Nominal)				
Program Name	Incentives	Administrative & Equipment	Total	Percent Incentives (%)
Residential Energy Survey	-	579,480	579,480	0.00
Residential Heating & Cooling Efficiency Upgrade	125,000	374,110	499,110	25.04
Residential Subtotal	125,000	953,590	1,078,590	11.59
Commercial Heating & Cooling Efficiency	12,500	61,390	73,890	16.92

Program Costs (Nominal)				
Program Name	Incentives	Administrative & Equipment	Total	Percent Incentives (%)
Upgrade				
Commercial Chiller Upgrade	74,900	108,280	183,180	40.89
Commercial Reflective Roof	35,000	27,150	62,150	56.32
Comm/Ind. Subtotal	122,400	196,820	319,220	38.34
Common Expenses	-	3,885,900	3,885,900	0.00
Total	247,400	5,036,310	5,283,710	4.68

Program Costs (NPV)				
Program Name	Incentives	Administrative & Equipment	Total	Percent Incentives (%)
Residential Energy Survey	-	417,920	417,920	0.00
Residential Heating & Cooling Efficiency Upgrade	91,410	269,810	361,220	25.31
Residential Subtotal	91,410	687,730	779,140	11.73
Commercial Heating & Cooling Efficiency Upgrade	9,140	44,270	53,410	17.11
Commercial Chiller Upgrade	54,780	73,350	128,130	42.75
Commercial Reflective Roof	22,930	19,390	42,320	54.18
Comm/Ind. Subtotal	86,850	137,010	223,860	38.80
Common Expenses	-	2,802,550	2,802,550	0.00
Total	178,260	3,627,290	3,805,550	4.68

2. Please provide the estimated costs of each program’s administrative & equipment costs, costs for the ten-year goals period (nominal and net present value), broken into the categories detailed in the table below. As part of this response, please provide an electronic version of the table below in Excel format with your response.

Program Administrative & Equipment Costs (Nominal)									
Program Name	Depreciation & Return	Payroll & Benefits	Materials & Supplies	Outside Services	Advertising	Vehicles & Travel	Other	Revenues (if any)	Total
[Residential]									
Residential Total									
[Comm/Ind.]									
Comm/Ind. Total									
Common Expenses									
Total									

Program Administrative & Equipment Costs (NPV)									
Program Name	Depreciation & Return	Payroll & Benefits	Materials & Supplies	Outside Services	Advertising	Vehicles & Travel	Other	Revenues (if any)	Total
[Residential]									
Residential Total									
[Comm/Ind.]									
Comm/Ind. Total									
Common Expenses									
Total									

Response to Data Request 2:

The requested tables are provided below. FPUC did not use the individual components of Program Administrative & Equipment Costs to develop the utility costs for FPUC’s programs. Instead in an effort to reduce cost and to address the minimal resources that a small utility like FPUC uses to administer the programs, FPUC developed the utility costs as a whole. In order to provide the tables below, FPUC used actual costs from 2014 to allocate costs to the various components.

Program Administrative & Equipment Costs (Nominal)									
Program Name	Depreciation & Return	Payroll & Benefits	Materials & Supplies	Outside Services	Advertising	Vehicles & Travel	Other	Revenues (if any)	Total
Residential Energy Survey	0	402146	8057	27985	37218	72126	31946	0	579478
Residential Heating & Cooling Efficiency Upgrade	0	27178	398	0	341157	4712	125662	0	499107
Residential Total	0	429324	8455	27985	378375	76838	157608	0	1078585
Commercial Heating & Cooling Efficiency Upgrade	0	4025	132	0	55255	1906	12571	0	69864
Commercial Chiller Upgrade	0	22518	287	0	81954	2930	112944	0	220633
Commercial Reflective Roof	0	9167	178	0	10368	1642	5232	0	26587
Comm/Ind. Total	0	35710	597	0	147577	6478	130747	0	317084
Common Expenses	0	2569028	51473	178774	237759	460759	388150	0	3885942
Total	0	3034062	60525	206759	763711	544075	676505	0	5281611

Program Administrative & Equipment Costs (NPV)									
Program Name	Depreciation & Return	Payroll & Benefits	Materials & Supplies	Outside Services	Advertising	Vehicles & Travel	Other	Revenues (if any)	Total
Residential Energy Survey	0	296253	5936	20616	27418	53133	23534	0	403356
Residential Heating & Cooling Efficiency Upgrade	0	15339	225	0	192544	2660	93660	0	304428
Residential Total	0	311592	6161	20616	219962	55793	117194	0	707784
Commercial Heating & Cooling Efficiency Upgrade	0	2272	74	0	31185	1076	9369	0	43976
Commercial Chiller Upgrade	0	11299	144	0	41121	1470	79340	0	133374
Commercial Reflective Roof	0	9423	174	0	7965	1590	661	0	19813
Comm/Ind. Total	0	22994	392	0	80271	4136	89370	0	197163
Common Expenses	0	1892550	37919	131699	175152	339432	285942	0	2862694
Total	0	2227136	44472	152315	475385	399361	492506	0	3767641

3. For each program that includes "Outside Services" costs in the Data Request No.2, please detail what those outside services include.

Response to Data Request 3:

"Outside Services" costs in Data Request No. 2 include the following costs.

- Consulting/Sub-Contractor costs

4. For each program that includes Other costs in the data request above, please detail what those Other costs include.

Response to Data Request 4:

"Other" costs in Data Request No. 2 include the following costs.

- Legal costs
- Incentives (Rebates)
- Memberships and Subscriptions
- Uniforms

5. Please provide the estimated costs of each program’s incentive costs, costs for the ten-year goals period (nominal and net present value), broken into the categories detailed in the table below. As part of this response, please provide an electronic version of the table below in Excel format with your response.

Program Incentives (Nominal)			
Program Name	Incentives (Non-Recurring)	Incentives (Recurring)	Total
[Residential]			
Residential Subtotal			
[Comm/Industrial]			
Comm/Ind. Subtotal			
Common Expenses			
Total			

Program Incentives (NPV)			
Program Name	Incentives (Non-Recurring)	Incentives (Recurring)	Total
[Residential]			
Residential Subtotal			
[Comm/Industrial]			
Comm/Ind. Subtotal			
Common Expenses			
Total			

Response to Data Request 5:

The requested tables are provided below:

Program Incentives (Nominal)			
Program Name	Incentives (Non-Recurring)	Incentives (Recurring)	Total
Residential Energy Survey	-	0	-
Residential Heating & Cooling Efficiency Upgrade	125,000	0	125,000
Residential Subtotal	125,000	0	125,000
Commercial Heating & Cooling Efficiency Upgrade	12,500	0	12,500
Commercial Chiller Upgrade	74,900	0	74,900
Commercial Reflective Roof	35,000	0	35,000
Comm/Ind. Subtotal	122,400	0	122,400
Common Expenses	-	0	-
Total	247,400	0	247,400

Program Incentives (NPV)			
Program Name	Incentives (Non-Recurring)	Incentives (Recurring)	Total
Residential Energy Survey	-	0	-
Residential Heating & Cooling Efficiency Upgrade	93,290	0	93,290
Residential Subtotal	93,290	0	93,290
Commercial Heating & Cooling Efficiency Upgrade	9,330	0	9,330
Commercial Chiller Upgrade	79,040	0	79,040
Commercial Reflective Roof	23,590	0	23,590
Comm/Ind. Subtotal	111,960	0	111,960
Common Expenses	-	0	-
Total	205,250	0	205,250

6. Please provide for each program with demand and energy savings the net present value of the benefits and costs described in the Rate Impact Measure Test and detailed in the table below. As part of this response, please provide an electronic version of the table below in Excel format with your response.

Program Name	Benefits					Costs					Net Benefit
	Gen	T&D	Fuel	Other	Total	Utility	Incentives	Lost Revenues	Other	Total	
[Residential]											
Residential Subtotal											
[Comm/Industrial]											
Comm/Ind. Subtotal											
Total											

Response to Data Request 6:

The requested data is provided in the table below:

Program Name	Benefits					Costs					Net Benefit
	Gen	T&D	Fuel	Other	Total	Utility	Incent.	Lost Revenues	Other	Total	
Residential Energy Survey	12,910	1,360	68,753	0	83,023	426,890	0	168,310	0	595,200	-512,177
Residential Heating & Cooling Efficiency Upgrade	1,624,950	170,810	673,004	0	2,468,764	275,597	93,286	1,647,210	0	2,016,093	452,671
Residential Subtotal	1,637,860	172,170	741,757	0	2,551,787	702,487	93,286	1,815,520	0	2,611,293	-59,506
Commercial Heating & Cooling Efficiency Upgrade	162,490	17,080	67,300	0	246,870	45,224	9,329	161,170	0	215,723	31,147
Commercial Chiller Upgrade	483,270	49,970	184,187	0	717,427	75,255	79,042	477,590	0	631,887	85,540
Commercial Reflective Roof	172,350	17,180	87,604	0	277,134	27,140	35,000	202,890	0	265,030	12,104
Comm/Ind. Subtotal	818,110	84,230	339,091	0	1,241,431	147,619	123,371	841,650	0	1,112,640	128,791
Total	2,455,970	256,400	1,080,848	0	3,793,218	850,106	216,657	2,657,170	0	3,723,933	69,285

7. Please provide for each program with demand and energy savings the net present value of the benefits and costs described in the Total Resource Cost Test and detailed in the table below. As part of this response, please provide an electronic version of the table below in Excel format with your response.

Program Name	Benefits					Costs				Net Benefit
	Gen	T&D	Fuel	Other	Total	Utility	Participant	Other	Total	
[Residential]										
Residential Subtotal										
[Comm/Industrial]										
Comm/Ind. Subtotal										
Total										

Response to Data Request 7:

The requested data is provided in the table below:

Program Name	Benefits					Costs				Net Benefit
	Gen	T&D	Fuel	Other	Total	Utility	Participant	Other	Total	
Residential Energy Survey	12,910	1,360	68,750	0	83,020	426,890	0	0	426,890	-343,870
Residential Heating & Cooling Efficiency Upgrade	1,624,950	170,810	673,000	0	2,468,760	275,600	1,243,050	0	1,518,650	950,110
Residential Subtotal	1,637,860	172,170	741,750	0	2,551,780	702,490	1,243,050	0	1,945,540	606,240
Commercial Heating & Cooling Efficiency Upgrade	162,490	17,080	67,300	0	246,870	45,220	124,300	0	169,520	77,350
Commercial Chiller Upgrade	483,270	49,970	184,190	0	717,430	75,260	401,450	0	476,710	240,720
Commercial Reflective Roof	172,350	17,180	87,604	0	277,134	27,140	160,150	0	187,290	89,844
Comm/Ind. Subtotal	818,110	84,230	339,094	0	1,241,434	147,620	685,900	0	833,520	407,914
Total	2,455,970	256,400	1,080,844	0	3,793,214	850,110	1,928,950	0	2,779,060	1,014,154

8. Please provide for each program with demand and energy savings the net present value of the benefits and costs described in the Participants Test and detailed in the table below. As part of this response, please provide an electronic version of the table below in Excel format with your response.

Program Name	Benefits					Costs				Net Benefit
	Bill Savings	Tax Credits	Incentive	Other	Total	Equipment	O&M	Other	Total	
[Residential]										
Residential Subtotal										
[Comm/Industrial]										
Comm/Ind. Subtotal										
Total										

Response to Data Request 8:

The requested data is provided in the table below:

Program Name	Benefits					Costs				Net Benefit
	Bill Savings	Tax Credits	Incentive	Other	Total	Equipment	O&M	Other	Total	
Residential Energy Survey	255,310	0	0	0	255,310	0	0	0	0	255,310
Residential Heating & Cooling Efficiency Upgrade	2,498,640	0	125,000	0	2,623,640	1,687,310	0	0	1,687,310	936,330
Residential Subtotal	2,753,950	0	125,000	0	2,878,950	1,687,310	0	0	1,687,310	1,191,640
Commercial Heating & Cooling Efficiency Upgrade	244,420	0	12,500	0	256,920	168,740	0	0	168,740	88,180
Commercial Chiller Upgrade	745,920	0	112,350	0	858,270	577,640	0	0	577,640	280,630
Commercial Reflective Roof	202,890	0	35,000	0	237,890	160,150	0	0	160,150	77,740
Comm/Ind. Subtotal	1,193,230	0	159,850	0	1,353,080	906,530	0	0	906,530	446,550
Total	3,947,180	0	284,850	0	4,232,030	2,593,840	0	0	2,593,840	1,638,190

9. Please provide the actual and projected Energy Conservation Cost Recovery (ECCR) annual funds in nominal dollars for the period 2010 through 2024. As part of this response, please provide an electronic version of the table below in Excel format with your response.

Year	ECCR Expenditures
2010	
2011	
2012	
2013	
2014	
2015	
2016	
2017	
2018	
2019	
2020	
2021	
2022	
2023	
2024	

Response to Data Request 9:

The requested data is provided in the table below. Please note that projected ECCR costs do not include specific costs associated with the Goals Setting Dockets or the DSM Plan Dockets.

Year	ECCR Expenditures
2010	\$693,331
2011	\$941,462
2012	\$659,235
2013	\$806,696
2014	\$772,612
2015	\$508,150
2016	\$584,190
2017	\$669,110
2018	\$757,600
2019	\$844,630
2020	\$955,470
2021	\$1,064,250
2022	\$1,174,890
2023	\$1,294,560
2024	\$1,415,400

- Please provide the actual and projected monthly customer bill associated with the ECCR for a residential and commercial/industrial customer with the usage described in the table below, in nominal dollars. Please also provide the actual and projected total monthly customer bill. As part of this response, please provide an electronic version of the table below in Excel format with your response.

Year	Residential Customer 1,200 kWh/mo		Commercial/Industrial Customer 400,000 kWh/mo & 1,000 kW Peak	
	ECCR Portion (\$)	Total Bill (\$)	ECCR Portion (\$)	Total Bill (\$)
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				

Response to Data Request 10:

The requested data is provided in the table below. Historical data (2010 through 2015) includes the customer charge. Projected data does not include the customer charge since it is not avoidable with DSM. FPUC has different residential rates for under and over 1000 kwh per month, which is the basis for the historical data on 1200 kwh per month. Residential rate projections are based on a weighted average cost per kWh based on the 2014 sales for customers below and above 1000 kWh per month since a single rate is required for economic evaluation of residential programs. The projected rates in the table below are based on this weighted average projection.

Year	Residential Customer 1,200 kWh/mo		Commercial/Industrial Customer 400,000 kWh/mo & 1,000 kW Peak	
	ECCR Portion (\$)	Total Bill (\$)	ECCR Portion (\$)	Total Bill (\$)
2010	0.96	167.71	320	46,252.00
2011	1.38	157.48	460	42,782.00
2012	1.38	153.87	460	40,636.00
2013	1.86	157.38	620	41,240.00
2014	1.20	156.01	400	41,086.00

Year	Residential Customer 1,200 kWh/mo		Commercial/Industrial Customer 400,000 kWh/mo & 1,000 kW Peak	
	ECCR Portion (\$)	Total Bill (\$)	ECCR Portion (\$)	Total Bill (\$)
2015	1.28	167.28	428	44,562.00
2016	1.09	157.88	363	43,913.00
2017	1.25	157.26	415	44,109.00
2018	1.40	157.85	467	44,305.00
2019	1.56	155.96	518	43,675.00
2020	1.75	164.76	583	47,728.00
2021	1.94	165.74	646	48,055.00
2022	2.13	166.22	710	48,216.00
2023	2.33	168.09	778	48,839.00
2024	2.54	168.97	846	49,133.00

11. For the company’s audit programs, please provide a list of measures used to determine energy and demand savings. Please identify each measure and specify whether it is equipment provided by the company and installed by the auditor, equipment provided but installed by the home or business owner, or a behavioral measure savings. As part of this response, please provide an electronic version of the table below in Excel format with your response.

Year	[Measure Name]					
	Audit Measure Savings (Savings @ Generator)					
	Per Customer			Total Annual		
	kWh Reduction	Winter kW Reduction	Summer kW Reduction	kWh Reduction	Winter kW Reduction	Summer kW Reduction
2015						
2016						
2017						
2018						
2019						
2020						
2021						
2022						
2023						
2024						

Response to Data Request 11:

As the smallest FEECA utility, FPUC tries to minimize the cost of program development and therefore minimize the cost to FPUC’s customers. Where possible FPUC tries to use program development work conducted by the larger FEECA utilities. For the Residential Energy Survey Program which is FPUC’s audit program, FPUC used the demand and energy savings from Duke Energy Florida, Inc.’s (Duke) Home Energy Check program as documented in Duke’s 2013 Annual Conservation Report which was the most recent information available at the time of the

development of FPUC’s Residential Energy Survey Program for the 2015 DSM Plan. FPUC was unable to determine which if any specific measures were quantifiably evaluated by Duke in either Duke’s 2010 DSM Plan or Duke’s 2013 Annual Conservation Report.

In developing FPUC’s Residential Energy Survey Program for the 2015 DSM Plan, FPUC relied on the experience FPUC gained in conducting the Residential Energy Survey Program from FPUC’s 2010 DSM Plan. The Residential Energy Survey Program provided participating customers with a conservation kit containing two CFL bulbs, weather stripping, caulk, insulators for wall sockets and light switches, and a water temperature thermometer if deemed appropriate by FPUC’s energy auditor. An example of where FPUC’s energy auditor would deem it not appropriate to provide the conservation kit would be for a participant with a new house that already included the weatherization measures in the conservation kit. In addition to the two CFL bulbs in the conservation kit, the Residential Energy Survey Program for the 2010 DSM plan provided eight additional CFL bulbs.

For the 2015 DSM plan, the two CFL bulbs in the conservation kit were replaced with two LED bulbs. The additional eight CFL bulbs from the 2010 DSM Plan were not included due to their short payback period. While all the components of the conservation kit save demand and energy, their quantities are small and they are intended to be more samples or hands on examples than demand and energy savings directly from the conservation kit. Thus direct savings from the conservation kit components were not quantified other than for the two LED bulbs. The demand and energy savings for the two LED bulbs were calculated based on the engineering model used in FPUC’s 2010 DSM Plan.

In order to be as responsive as possible to this data request given the lack of quantifiable measures, FPUC has prepared the following two tables one showing the savings from Duke’s Home Energy Check and the other showing the savings from the two LED bulbs.

The requested data for the Home Energy Check is provided in the table below.

Home Energy Check						
Year	Audit Measure Savings (Savings @ Generator)					
	Per Customer			Total Annual		
	kWh Reduction	Winter kW Reduction	Summer kW Reduction	kWh Reduction	Winter kW Reduction	Summer kW Reduction
2015	239	0.074	0.098	23,900	7.4	9.8
2016	239	0.074	0.098	23,900	7.4	9.8
2017	239	0.074	0.098	23,900	7.4	9.8
2018	239	0.074	0.098	23,900	7.4	9.8
2019	239	0.074	0.098	23,900	7.4	9.8
2020	239	0.074	0.098	23,900	7.4	9.8
2021	239	0.074	0.098	23,900	7.4	9.8
2022	239	0.074	0.098	23,900	7.4	9.8

Home Energy Check						
Year	Audit Measure Savings (Savings @ Generator)					
	Per Customer			Total Annual		
	kWh Reduction	Winter kW Reduction	Summer kW Reduction	kWh Reduction	Winter kW Reduction	Summer kW Reduction
2023	239	0.074	0.098	23,900	7.4	9.8
2024	239	0.074	0.098	23,900	7.4	9.8

The requested data is for the 2 LED Bulbs (installed by FPUC auditor) is provided in the table below.

2 LED Bulbs						
Year	Audit Measure Savings (Savings @ Generator)					
	Per Customer			Total Annual		
	kWh Reduction	Winter kW Reduction	Summer kW Reduction	kWh Reduction	Winter kW Reduction	Summer kW Reduction
2015	146	0.059	0.059	14,600	5.9	5.9
2016	146	0.059	0.059	14,600	5.9	5.9
2017	146	0.059	0.059	14,600	5.9	5.9
2018	146	0.059	0.059	14,600	5.9	5.9
2019	146	0.059	0.059	14,600	5.9	5.9
2020	146	0.059	0.059	14,600	5.9	5.9
2021	146	0.059	0.059	14,600	5.9	5.9
2022	146	0.059	0.059	14,600	5.9	5.9
2023	146	0.059	0.059	14,600	5.9	5.9
2024	146	0.059	0.059	14,600	5.9	5.9

12. If the company’s audit programs include behavioral savings, please describe the empirical basis for asserting such savings (i.e. double blind experiments, transfer of findings from other utilities, engineering guesses) and how they are monitored and verified.

Response to Data Request 12:

Please see Response for No. 11.

13. Do any of the programs in the company’s DSM Plan include savings associated with Compact Fluorescent Lightbulbs? If so, what baseline used?

Response to Data Request 13:

None of FPUC’s programs include Compact Fluorescent Lightbulbs.

14. Please identify each program in the company’s DSM Plan that include measures with an estimated 2 year or less payback period, and which measures are included by program.

Response to Data Request 14:

The only FPUC program that includes a measure with an estimated 2 year or less payback period is the Residential Energy Survey Program; however, the purpose of the two LED bulbs in that program are to be samples and examples not savings measures. Please see Response for No. 11.

15. For each program that includes measures with an estimated 2 year or less payback period, please provide the amount of savings (kWh, Win kW, and Sum kW) associated with these measures for each program and for the entire DSM Plan. As part of this response, please provide an electronic version of the table below in Excel format with your response.

[Program Name or DSM Plan Combined]						
Program Savings from 2-Year Payback Measures (Savings @ Generator)						
Year	Per Customer			Total Annual		
	kWh Reduction	Winter kW Reduction	Summer kW Reduction	kWh Reduction	Winter kW Reduction	Summer kW Reduction
2015						
2016						
2017						
2018						
2019						
2020						
2021						
2022						
2023						
2024						

Response to Data Request 15:

As discussed in the Response for No. 11, the only program that FPUC proposes that includes measures a 2 year or less payback period is the Residential Energy Survey Program with the two LED bulbs included in the conservation kit. As discussed in the Response for No. 11, the purpose of those bulbs is to provide a sample and hands on example rather than energy and demand savings. Nevertheless, as further discussed in the Response for No. 11, the two LED bulbs do provide energy and demand savings. The two requested tables are identical to the table for the 2 LED bulbs in the Response for No. 11.

- 16. Please describe the avoided unit used in the company’s cost-effectiveness evaluations of the programs in its DSM Plan.

Response to Data Request 16:

FPUC does not own any generation assets; therefore, it purchases all of its power. For purposes of determining the Company’s “avoided cost,” the Commission has recognized that the appropriate analysis addresses avoided purchases under FPUC’s purchased power contracts with JEA (Northeast Division) and Gulf Power (Northwest Division). The avoided costs are the avoided demand and energy charges under those contracts. The avoided demand and energy charges for each Division are weight averaged by 2014 Net Energy For Load from each of FPUC’s divisions to provide a single avoided cost to evaluate DSM programs.

- 17. Please provide the annual avoided cost savings associated with each of the following four scenarios for a measure that reduces energy or demand by: 1000 kWh, 1 kW Summer Demand, 1 kW Winter Demand, or 1 kW Summer and Winter Demand. Please provide the savings through the longest time period used to evaluate the programs in your DSM Plan. As part of this response, please provide an electronic version of the table below in Excel format with your response.

Year	Savings by Measure Type							
	1000 kWh		1 kW Summer		1 kW Winter		1 kW Sum & Win	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
2015								
2016								
2017								
2018								
2019								
2020								
2021								
2022								
2023								
2024								

Response to Data Request 17:

The requested data is provided in the table below. Please note that since FPUC purchases all of its power, the avoided demand cost was developed as a single annual number. Thus, it is the same for summer and winter.

Year	Savings by Measure Type							
	1000 kWh		1 kW Summer		1 kW Winter		1 kW Sum & Win	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
2015	54.54	54.54	178.32	178.32	178.32	178.32	178.32	178.32
2016	53.69	50.09	178.92	166.92	178.92	166.92	178.92	166.92
2017	54.18	47.16	179.52	156.24	179.52	156.24	179.52	156.24
2018	54.67	44.39	181.08	147.03	181.08	147.03	181.08	147.03
2019	53.1	40.22	182.64	138.35	182.64	138.35	182.64	138.35
2020	52.14	36.85	258.72	182.83	258.72	182.83	258.72	182.83
2021	52.95	34.91	282.36	186.16	282.36	186.16	282.36	186.16
2022	53.35	32.81	285.48	175.59	285.48	175.59	285.48	175.59
2023	54.91	31.51	281.88	161.74	281.88	161.74	281.88	161.74
2024	55.65	29.79	285.00	152.57	285.00	152.57	285.00	152.57

18. Please discuss the methodology used to estimate expected participation for each program proposed by the company.

Response to Data Request 18:

Several factors were considered when projecting participation rates. When projecting participation rates for the continuation of existing programs, historical participation rates were used to establish a projection baseline.

Once a baseline was established, a qualitative projection adjustment was used to account for regulatory and program management changes (see response to Interrogatory No. 20) that are expected to impact participation rates. When projecting participation rates for the new Commercial Reflective Roof program, a qualitative projection approach was used to allow for low participation at first as the program is launched and communicated to customers and contractors; followed by an increase in projected participation levels through the sixth year of the program where participation then levels off as the program garners notoriety.

19. Please compare the projected participation rates of continuing programs with the actual participation rates for the previous ten years (or less, depending upon the start date of the program).

Response to Data Request 19:

	Actual Participation				Projected Participation										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Residential Energy Survey	272	231	234	299	100	100	100	100	100	100	100	100	100	100	
Residential Heating and Cooling Efficiency Upgrade	323	213	258	271	100	100	100	100	100	100	100	100	100	100	
Commercial Heating and Cooling Efficiency Upgrade	0	12	10	12	10	10	10	10	10	10	10	10	10	10	
Commercial Chiller Upgrade	1	0	0	2	1	1	1	1	1	1	2	2	2	2	

The table above illustrates Actual Program Participation and Projected Program Participation for the four FPUC Programs that are seeking approval for continuation and is provided to serve as a reference for the supplemental explanation of each program below:

- Residential Energy Survey: The primary qualitative factor that resulted in the Projected Participation rate of 100 participants annually was due to saturation and the elimination of the 10 free CFL bulbs.
- Residential Heating & Cooling Efficiency Upgrade: Minimum efficiency requirements for residential air conditioners within the *Florida Building Code, Energy Conservation* will limit the amount of eligible systems within this program. This regulatory force of increased efficiency provisions will yield lower than traditional participation rates in this program.
- Commercial Heating & Cooling Efficiency Upgrade: Projected participation rates for this program are expected to continue at the historical rate of approximately 10 per year.
- Commercial Chiller Upgrade: Projected participation rates for this program are expected to continue at the historical rate of approximately 1 or 2 year.

20. Please discuss what measures the company has considered or implemented to reduce the level or growth of administrative costs of its demand-side management programs.

Response to Data Request 20:

The Company has considered and is currently implementing multiple measures to help reduce the administrative costs of its demand-side management programs. These measures include:

- Cross training of department employees so that they can assist with multiple functions within the Company's demand-side management programs.
- Assessment and improvement of processes related to the Company's demand-side management programs, identifying opportunities to administer the programs more efficiently and effectively.
- Continuous review of program expenses, evaluating opportunities to use outside services whenever it is cost effective.

21. Please provide the following information regarding the Company's current and proposed Conservation Demonstration and Development program:
- a. Provide any information/documentation regarding any planned areas of research under the proposed program.
 - b. Provide any information/documentation regarding how the Company plans to implement any proposed or future projects.

Response to Data Request 21:

21(a): The Company recognizes the growing interest among customers with large demand for hot water and steam to learn more about the feasibility and viability of installing on-site combined heat and power technologies. These technologies efficiently produce hot water and/or steam while producing electricity as well. As such, the Company plans to research this technology and other onsite generation technologies under the Conservation Demonstration and Development program.

21 (b): The Company would implement these research projects by: 1) conducting a thorough research of potential technologies, 2) developing appropriate criteria for inclusion in research project, 3) developing research objectives and study methodology, 4) partnering with customers in its service territory to install and conduct research at the customer's site, 5) gathering data during study period, and 6) compiling results including recommendations for use of technology.

22. What projects are currently being evaluated under the Company’s Conservation Demonstration and Development program? As part of your response, please provide the following: name and description of the project, initial startup date of the project, and year-to-date dollars spent on each project. Additionally, please provide whether or not the company believes said project(s) could result in a potential conservation program. If the company perceives a program(s) is imminent, please provide expected startup date.

Conservation Demonstration and Development			
Project Name	Description	Implementation Date	Expenditures

Response to Data Request 22:

Currently, there are no projects being evaluated under the Company’s Conservation Demonstration and Development program. The Company is planning to conduct research projects that would begin in 2016 as described in the Company’s responses to Data Requests Nos. 21 and 25.

23. What current programs has the company offered to its customers as a result of the Conservation Demonstration and Development program? In addition to the name of the program, please provide the description, startup date and year-to-date expenditures for each program.

Response to Data Request 23:

The Company has not offered any programs to its customers as a result of the Conservation Demonstration and Development Program. The Company did conduct an LED Street Lighting Research Project in partnership with the City of Fernandina, which resulted in the upgrading of streetlights from High Pressure Sodium lighting (HPS) to Light Emitting Diode lighting (LED).

24. Please provide the amount spent on Conservation Demonstration and Development programs for each of the past five years. Please provide the corresponding project name, implementation date, and dollar amount for each project.

Response to Data Request to 24:

In the past five years, there has only been one program initiated under the Company’s Conservation Demonstration and Development program. The project information is as follows:

Project Name	Project Dates	Project Expense
LED Street Lighting Research Program	2011 – 2013 (3 years)	\$46,877.54

25. Please complete the following chart using Excel format to illustrate the Company’s expected projects in the Conservation Demonstration and Development.

Conservation Demonstration and Development – Project Name			
Year	Project Name	Description	Expected Expenditures
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			

Response to Data Request 25:

Conservation Demonstration and Development – Project Name			
Year	Project Name	Description	Expected Expenditures
2015	No planned projects		
2016	Distributed Generation Opportunities	Use of combined heat and power technology or other onsite generation to produce energy more efficiently	\$50,000
2017	Distributed Generation Opportunities	Use of combined heat and power technology or other onsite generation to produce energy more efficiently	\$25,000
2018	Distributed Generation	Use of combined heat and	\$25,000

Conservation Demonstration and Development – Project Name			
Year	Project Name	Description	Expected Expenditures
	Opportunities	power technology or other onsite generation to produce energy more efficiently	
2019	No planned projects		
2020	No planned projects		
2021	No planned projects		
2022	No planned projects		
2023	No planned projects		
2024	No planned projects		

26. The company’s DSM Plan’s summary tables do not include savings associated with the Solar Pilot Programs. Please provide an estimate of what those demand and energy savings would be for 2015.

Response to Data Request 26:

During the period January 1, 2015 through April 16, 2015, FPUC has paid 8 incentives for the installation of PV systems. These 8 PV systems have the combined generating capacity of 55.25 kW, with the average size of the 8 PV systems being 6.9 kW. Rebates for these 8 systems totaled \$40,000.00, with each of the 8 participants of this rebate program receiving \$5,000.00. The annual budgetary cap for this program is \$47,233.00, and also includes rebates for solar thermal systems as well. As of April 16, 2015, the solar water thermal program has had zero participants.

Assuming the per installation energy savings depicted within the 2014 FPUC DSM Annual Report, these 8 PV installations in 2015 will yield a total reduction at the meter of 35,040 kWh, 1 kW of Winter capacity, and 20 kW of Summer capacity. These installations will also yield a total reduction at the generator of 36,701 kWh, 1 kW of Winter capacity, and 21 kW of Summer capacity.