

State of Florida



Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: July 9, 2015

TO: Office of Commission Clerk (Stauffer) *TK*

FROM: Division of Engineering (Ellis, Matthews) *POB*
Division of Economics (S. Brown, Margolis) *SB*
Office of the General Counsel (Murphy) *RM*

RE: Docket No. 150083-EG – Petition for approval of demand-side management plan of Duke Energy Florida, Inc. *TS*

AGENDA: 07/21/15 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Administrative

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: Staff recommends the Commission simultaneously consider Docket Nos. 150081-EG, 150083-EG, 150085-EG, 150086-EG, 150087-EG, 150088-EG, and 150089-EG.

Case Background

By Order No. PSC-14-0696-FOF-EU, the Commission established annual numeric demand-side management (DSM) goals for Duke Energy Florida (DEF) for the period 2015 through 2024.¹ The DSM goals were established for both DEF's residential and commercial/industrial customer classes for three categories: summer peak demand, winter peak demand, and annual energy consumption.

¹ FPSC Order No. PSC-14-0696-FOF-EU, Docket No. 130200-EI, Commission review of numeric conservation goals (Duke Energy Florida, Inc.), issued December 16, 2014.

Docket No. 150083-EG

Date: July 9, 2015

Rule 25-17.0021(4), Florida Administrative Code (F.A.C.), requires a utility to file DSM programs for Commission approval no later than 90 days after the Order establishing DSM goals is final. On March 16, 2015, DEF filed a petition requesting approval of its DSM Plan. As part of this filing, DEF provided a cost-effectiveness analysis of the proposed programs pursuant to Rule 25-17.008, F.A.C.

On May 7, 2015, the Southern Alliance for Clean Energy (SACE) petitioned to intervene.

The Commission has jurisdiction over this matter pursuant to Sections 366.80 through 366.83 and 403.519, Florida Statutes (F.S.), collectively known as the Florida Energy Efficiency and Conservation Act (FEECA).

Discussion of Issues

Issue 1: Is DEF's Demand-Side Management (DSM) Plan projected to meet the annual numeric conservation goals established by the Commission in Order No. PSC-14-0696-FOF-EU?

Recommendation: Yes. DEF's DSM Plan is cost-effective based upon the Rate Impact Measure (RIM) test and results in a net decrease in ratepayers' monthly rates. Although the Commission has allowed savings from audit programs to be counted towards the achievement of DSM goals in previous proceedings, staff recommends that no behavioral savings associated with audit programs be counted towards goals in this proceeding because behavioral savings are not directly monitorable.

DEF's DSM Plan is projected to meet or exceed the goals established by the Commission in Order No. PSC-14-0696-EU on a cumulative 10 year basis. With the removal of projected behavioral savings from audits, however, DEF's DSM Plan does not meet the annual residential winter peak demand goals in two of the 10 years. DEF may choose to modify its DSM Plan to include additional measures or programs that will make up the difference in this category. DEF will be responsible for monitoring actual participation rates and seeking Commission action if necessary to modify, add, or remove programs. If DEF is unable to meet the Commission's goals, the company may be subject to appropriate action by the Commission, up to and including financial penalties.

Staff recommends that DEF should have no annual total incentive cap on Florida Custom Incentive Program projects that pass the RIM test because staff does not anticipate a participation rate high enough to cause negative effects. Staff recommends that if DEF has concerns regarding the rate impact of the uncapped program in the future, DEF may petition the Commission to request a limit at that time. Staff does not object to DEF's proposal to cap the maximum incentive for a single project at \$500,000.

Staff recommends that the Commission approve the programs contained in DEF's DSM Plan. In addition, the Commission should allow DEF to file for cost recovery of the programs in the Energy Conservation Cost Recovery (ECCR) clause proceeding. DEF, however, must demonstrate that its expenditures to implement these programs are reasonable and prudent in order to recover the expenditures through the ECCR clause. Staff recommends that DEF may not discontinue its DSM programs or change its programs' rebate levels without seeking formal Commission approval.

Finally, staff recommends that DEF file its administrative program standards for all programs within 30 days of the Consummating Order being issued in this docket and that the Commission grant staff administrative authority to review and approve these standards. (Matthews)

Staff Analysis: The criteria used to review the appropriateness of DSM programs are: 1) whether the program advances the policy objectives of FEECA and its implementing rules; 2) whether the program is directly monitorable and yields measurable results; and 3) whether the

program is cost-effective.² Staff has reviewed DEF's DSM Plan, including its demand and energy savings, cost-effectiveness, and rate impact. The resulting demand and energy savings appear to meet the goals established by the Commission in Order No. PSC-14-0696-FOF-EU, with the exception of two years of annual residential winter peak demand as discussed above. The programs that staff recommends should be counted towards DEF's goals appear to be directly monitorable and measurable. Lastly, DEF's DSM Plan as a whole appears to be cost-effective and will reduce customer bills associated with conservation.

Description of DSM Plan

DEF's DSM Plan consists of 19 programs. A complete list of the programs and a brief description of each can be found in Attachment A. Five programs are residential non-solar, and three are residential solar photovoltaic (PV) programs. Six of the programs are intended for commercial/industrial customers, two of which are solar PV programs. In addition, the DSM Plan includes two research and development programs and one qualifying facilities program. All of the solar PV programs are pilot programs that are scheduled to expire at the end of the 2015 calendar year.

DEF has proposed to continue existing programs, some with modifications. Of the 19 programs, seven are continuations of existing programs with no modifications. The remaining 12 are continuations of existing programs with modifications. Those with modifications are illustrated in Table 1-1. Some of the program modifications consist of adding or deleting particular measures within the program.

² FPSC Order No. 22176, at 5, Docket No. 890737-PU, Implementation of Section 366.80-.85, Florida Statutes, Conservation Activities of Electric and Natural Gas Utilities, issued November 14, 1989.

**Table 1-1
 DEF DSM Plan Program Listing**

Program Name	Program Status		
	Existing	Modified	New
Residential Programs			
Home Energy Check	X	X	
Residential Incentive Program	X	X	
Neighborhood Energy Saver	X	X	
Low Income Weatherization Assistance Program	X	X	
Residential Energy Management Program	X	X	
Solar Water Heating with Energy Management ³	X	X	
Commercial/Industrial Programs			
Business Energy Check	X	X	
Better Business Program	X	X	
Florida Custom Incentive Program (previously titled Innovation Incentive Program)	X		
Standby Generation Program	X	X	
Interruptible Service	X		
Curtable Service	X		
Other Programs			
Research & Demonstration	X		
Technology Development	X		
Qualifying Facilities	X		
Renewable Pilot Programs⁴			
Residential Solar Photovoltaic Pilot	X	X	
Residential Low Income Solar Photovoltaic Water Heating Pilot	X	X	
Commercial Solar Photovoltaic Pilot	X	X	
Solar Photovoltaic for Schools Pilot	X		

Source: DEF DSM Plan Filing

DEF proposes elimination of the Mail-In and Student Audits in its Home Energy Check program due to lack of participation. The Residential Incentive Program includes changes in incentive levels and new incentives to comply with recent federal energy efficiency minimum requirements. Also, for both programs targeting low-income customers, Neighborhood Energy Saver and Low Income Weatherization Assistance, DEF proposes new measures including providing LED bulbs, duct sealing, and attic insulation.

DEF proposes to eliminate several measures in its commercial/industrial Better Business Check program because they are not cost-effective under the RIM test. DEF proposes to split the

³ This current program, although not a pilot, is being phased out along with all Renewable Pilot Programs as of December 31, 2015.

⁴ DEF's Renewable Pilot Programs are set to expire on December 31, 2015, pursuant to FPSC Order No. PSC-14-0632-FOF-EG.

Standby Generation program into two options (Emergency Standby and Non-emergency Standby) for possible operation, due to recent changes in federal emissions standards.

Although the solar programs will expire at the end of calendar year 2015, DEF is proposing changes in incentives and participation levels for all except the Solar PV for Schools program.

Audit Programs

In accordance with Rule 25-17.003, F.A.C., DEF will continue to offer energy audits for each sector, residential and commercial/industrial. While there may be many audit savings associated with customer behavior modifications, such savings are difficult to quantify and may expire before the end of the ten-year goal period. Although the Commission has allowed savings from these types of programs to be counted towards achieving DSM goals in previous proceedings, staff recommends that behavioral savings should no longer be counted towards achieving DSM goals because behavioral savings are not directly monitorable. Savings associated with actual equipment provided to participants, such as light bulbs, could still be included in the goal savings.

DEF's DSM Plan meets the cumulative goals for the 2015-2024 period. With behavioral savings removed, DEF's DSM Plan is not projected to meet the annual residential winter peak demand goals in 2015 and 2016, by 2.1 MW and 1.9 MW, respectively. On a combined basis with both residential and commercial/industrial, the annual winter goals are met for 2015, but fail by 1.2 MW in 2016. In order to rectify this slight deficit, DEF may choose to modify its DSM Plan to include additional measures within residential programs, or to include additional programs. DEF will be responsible for monitoring actual participation rates and seeking Commission action if necessary to modify, add, or remove programs. If DEF is unable to meet the Commission's goals, the company may be subject to appropriate action by the Commission, up to and including financial penalties.

Comparison of DSM Plan to Goals

DEF's DSM Plan, as modified by staff's recommendation to exclude behavioral savings associated with energy audits, will meet or exceed each of the established goals, with the exception of two years for residential annual winter peak demand. The Commission's established annual and cumulative goals, the projected savings for each goal in the company's proposed DSM Plan, and staff's recommendations are summarized in Table 1-2 and Table 1-3 below.

**Table 1-2
 DEF Residential Sector Goals vs. DSM Plan and Staff Recommendation**

Year	Summer (MW)			Winter (MW)			Annual Energy (GWh)		
	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec
2015	26.4	31.8	29.6	58.4	58.5	56.3	25.5	50.1	44.6
2016	24.0	29.4	27.2	53.1	53.4	51.2	23.8	45.8	40.5
2017	22.2	28.2	26.1	48.7	50.9	48.8	20.8	43.1	37.9
2018	20.0	25.1	23.0	43.2	45.3	43.3	17.0	32.5	27.6
2019	17.7	24.0	22.0	37.5	42.6	40.6	13.0	30.7	26.0
2020	15.5	22.3	20.4	32.2	39.4	37.5	9.3	26.4	22.0
2021	13.7	21.5	19.6	27.8	37.3	35.5	6.2	25.0	20.8
2022	12.2	20.8	19.0	24.5	35.8	34.0	3.8	23.9	19.8
2023	11.3	20.4	18.6	22.3	34.7	32.9	2.2	23.2	19.2
2024	10.7	20.1	18.3	20.9	34.0	32.3	1.2	22.7	18.8
Total⁵	173.7	243.6	223.8	368.6	431.9	412.4	122.6	323.4	277.2

Source: FPSC Order No. PSC-14-0632-FOF-EG, DEF's DSM Plan Filing, Staff Calculation

**Table 1-3
 DEF Commercial/Industrial Sector Goals vs DSM Plan and Staff Recommendation**

Year	Summer (MW)			Winter (MW)			Annual Energy (GWh)		
	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec
2015	12.0	12.6	12.6	5.4	7.7	7.7	14.5	15.9	15.9
2016	11.6	11.6	11.6	5.4	6.1	6.1	13.6	13.6	13.6
2017	11.0	11.1	11.1	5.6	6.2	6.2	12.0	12.0	12.0
2018	10.0	10.0	10.0	5.1	5.7	5.7	10.0	10.0	10.0
2019	9.1	9.1	9.1	5.0	5.6	5.6	8.0	8.0	8.0
2020	8.2	8.2	8.2	5.2	5.6	5.6	5.9	5.9	5.9
2021	6.9	6.9	6.9	4.8	5.1	5.1	3.9	3.9	3.9
2022	6.0	6.0	6.0	4.7	4.9	4.9	2.4	2.4	2.4
2023	5.6	5.6	5.6	5.0	5.1	5.1	1.4	1.4	1.4
2024	5.0	5.0	5.0	4.6	4.7	4.7	0.8	0.8	0.8
Total⁶	85.4	86.1	86.2	50.7	56.6	56.6	72.4	73.9	73.9

Source: FPSC Order No. PSC-14-0632-FOF-EG, DEF's DSM Plan Filing, Staff Calculation

A majority of DEF's residential seasonal peak demand goals are met through the Residential Energy Management program, while annual energy goals are primarily met through the Neighborhood Energy Saver program. For commercial/industrial goals, the Standby Generation program provides the majority of seasonal peak demand savings, with annual energy savings provided primarily by the Better Business program. However, in terms of total expenditures, the

⁵ Totals may not equal due to rounding.

⁶ Totals may not equal due to rounding.

largest programs are the Residential Energy Management program and the Interruptible Service program, due to the large percentage of ECCR expenses attributable to rebates to participants from previous goal periods.

The values presented above are DEF's projections based upon participation rates which may or may not occur. DEF will be responsible for monitoring actual participation rates and seeking Commission action if necessary to modify, add, or remove programs. If DEF is unable to meet the Commission's goals, the company may be subject to appropriate action by the Commission, up to and including financial penalties.

Section 366.82(10), F.S., requires that the Commission provide an annual report (FEECA Report) to the Governor and Legislature concerning the progress of each FEECA utility towards meeting its established goals. Rule 25-17.0021(5), F.A.C., requires that DEF submit an annual report that summarizes the achieved results of its DSM Plan no later than March 1 of each year. Staff will continue to monitor and report the actual amount of DEF's DSM savings each year, on an annual and cumulative basis, as part of the FEECA Report.

Cost-Effectiveness Review

Pursuant to Rule 25-17.008, F.A.C., DEF provided a cost-effectiveness analysis of the proposed programs using the RIM test, the Total Resource Cost (TRC) test, and the Participants test. While the Commission in FPSC Order No. PSC-14-0696-FOF-EU established goals based upon the RIM test, staff reviews the results for each test. Staff addresses the assumptions associated with DEF's avoided costs and program savings below.

Avoided Cost

In calculating the economic benefit of its DSM programs, DEF used three natural gas-fired units for its avoided units. One unit is a simple-cycle combustion turbine unit with an in-service date of June 1, 2018, and two are combined cycle units with in-service dates of June 1, 2021, and June 1, 2024. Savings associated with avoiding or deferring generation, transmission, distribution, operations & maintenance expenses (fixed and variable), line losses, and fuel were considered in determining the avoided costs for each program. DEF's avoided units are consistent with DEF's filings in the goal-setting proceeding.⁷

Program Savings

Seasonal peak demand and annual energy savings for DEF's programs were also reviewed. DEF estimates and measures savings by a program using a combination of methodologies including engineering, modeling analyses and actual performance of systems depending upon the program type. DEF states that it utilized the same seasonal peak demand and energy savings for all measures during the goal-setting proceeding in Docket No. 130200-EI. In accordance with Rule 25-17.003(10), F.A.C., DEF plans on conducting inspections of at least 10 percent of program installations to verify that the installations were performed and the installations meet quality standards.

⁷ Docket No. 130200-EI, Commission review of numeric conservation goals (Duke Energy Florida, Inc.).

Florida Custom Incentive Program

In its petition, DEF proposed a \$2.5 million annual cap on incentives offered to customers through the Florida Custom Incentive Program, with a maximum incentive for a single project at \$500,000. In response to staff’s data request, DEF explained that the \$2.5 million annual cap is intended to mitigate near term rate impacts to ratepayers. In response to a second staff data request, DEF stated that it may consider raising the cap on annual incentives for the Florida Custom Incentive Program in the future.

Projects that pass the RIM test will benefit all ratepayers. Therefore, staff recommends that DEF should have no incentive cap on Florida Custom Incentive Program projects that pass the RIM test because staff does not anticipate a participation rate high enough to impact ratepayers. Staff recommends that if DEF has concerns regarding the rate impact of the uncapped program in the future, DEF may petition the Commission to request a limit at that time. Staff does not object to DEF’s proposal to cap the maximum incentive for a single project at \$500,000.

Cost-Effectiveness Test Results

All of DEF’s proposed programs pass the RIM, TRC, and Participants tests. The results of these tests are obtained by dividing the program benefits by the program costs, as defined by Rule 25-17.008, F.A.C., so that each program is determined to be cost-effective if the result of the test is a ratio greater than 1.00 (i.e., the benefits are greater than the costs). The cost-effectiveness test results for each program are provided in Table 1-4 below.

**Table 1-4
 DEF Cost-Effectiveness Test Results by Program**

Program Name	RIM Test	TRC Test	Participants Test
Residential Programs			
Residential Incentive Program	1.07	1.96	2.09
Neighborhood Energy Saver	1.01	3.77	4.90
Low Income Weatherization Assistance Program	1.03	1.92	2.03
Residential Energy Management Program	2.76	8.32	Infinite
Commercial/Industrial Programs			
Better Business Program	1.04	2.87	3.60
Standby Generation Program	1.47	3.26	Infinite
Interruptible Service	2.58	20.35	Infinite
Curtable Service	3.63	67.67	Infinite

Source: DEF DSM Plan Filing; DEF Responses to Staff’s First Data Request, No. 17

To perform the calculations in Table 1-4 above, DEF estimated the administrative costs for implementing the proposed programs, and added it as a cost to the relevant tests. These administrative costs are not final. Moreover, the Commission’s acceptance of these test values would not signify that these values are reasonable for cost recovery purposes. DEF should continue to explore ways to reduce the administrative costs associated with implementing its DSM Plan. DEF must demonstrate that the administrative costs associated with implementing its

DSM programs are reasonable and prudent as part of its annual cost recovery filings in the ECCR clause proceeding.

Rate Impact

If approved, the cost to implement the programs of DEF’s DSM Plan would flow through to the ratepayers through the ECCR clause. In this annual docket, DEF files for recovery of incentives, equipment and administrative costs. The ECCR clause represents a monthly bill impact to customers as part of the non-fuel cost of energy and/or demand charges on their bill.

Much like investments in generation, transmission, and distribution, investments in energy efficiency have an immediate rate impact but produce savings over time. In addition to one time rebates and equipment cost, some programs have continued expenses from monthly bill credits for the duration of participation. DEF has several such programs, with demand response accounting for approximately 60 percent of ECCR clause expenditures over the next 10 years.

Overall, the ECCR impact of DEF’s DSM Plan is a small portion of a customer’s bill, and is anticipated to decrease over the ten-year period compared to 2014. Table 1-5 below is an estimate of the monthly rate impact of the ECCR clause on typical residential and commercial/industrial customers over a ten-year period. The estimated ECCR factors are based upon the participation rates and administrative costs used in the cost-effectiveness analysis discussed above, and are not final.

**Table 1-5
 DEF Estimated Rate Impact of Proposed DSM Plan**

Year	Residential Customer (1200 kWh/mo)		Commercial/Industrial Customer (400,000 kWh/mo, 1000 kW)	
	Bill Impact (\$/mo)	Savings From 2014	Bill Impact (\$/mo)	Savings From 2014
2014	\$4.82	n/a	\$1,180	n/a
2015	\$4.23	\$0.59	\$1,058	\$122
2016	\$4.08	\$0.74	\$1,021	\$159
2017	\$3.99	\$0.83	\$998	\$182
2018	\$3.88	\$0.94	\$971	\$209
2019	\$3.15	\$1.67	\$788	\$392
2020	\$2.88	\$1.94	\$720	\$460
2021	\$2.80	\$2.02	\$700	\$480
2022	\$2.70	\$2.12	\$675	\$505
2023	\$2.67	\$2.15	\$668	\$512
2024	\$2.66	\$2.16	\$665	\$515

Source: DEF Responses to Staff’s First Data Request, Nos. 9, 10

DEF’s DSM Plan includes a variety of programs that would allow participation by a wide spectrum of customer groups, including low-income, residential, and commercial/industrial customers. By participating in a DSM program, customers should be able to reduce their bills,

potentially eliminating the additional cost associated with DEF's DSM Plan. In addition, since the Commission approved goals based on the RIM Test, which considers the impact of lost revenues, even customers who do not participate in a DSM program should see a benefit of lower rates.

Other Concerns

On May 7, 2015, the Southern Alliance for Clean Energy (SACE) petitioned to intervene in this proceeding. In its Petition for Intervention, SACE posed three disputed issues: 1) do the company's DSM programs meet the requirements of the Commission's goal-setting order, 2) are the company's DSM programs designed in the most efficient way to maximize customer energy savings, and 3) is the company's evaluation, measurement and verification process adequate to capture empirical data on so called free-ridership.

With regard to SACE's first disputed issue and as discussed above, the projected demand and energy savings from DEF's DSM Plan appears to meet the goals established by the Commission in Order No. PSC-14-0696-FOF-EU. Addressing SACE's second disputed issue, SACE's issue only addresses energy savings, and not seasonal peak demand. DSM programs should not focus solely on maximizing energy savings. Rather, programs should be a method for delivering the annual goals for seasonal peak demand and energy savings in a cost-effective manner, in order to decrease fuel consumption and to avoid or defer the construction of additional generating, transmission, and distribution facilities. As noted above, it is DEF's burden to demonstrate that the administrative costs associated with implementing its DSM programs are reasonable and prudent in its annual cost recovery filings in the ECCR clause.

SACE's third disputed issue addresses the methodology used to determine free-ridership. In the goal-setting proceeding, the Commission established a two-year payback methodology to account for free riders, but that educational and low income programs, including those with measures with a less than two year payback, were encouraged. In its Order establishing DSM goals, the Commission stated:

In response to Rule 25-17.0021(3), F.A.C., and Order No. PSC-13-0386-PCO-EU, the FEECA utilities filed a base case with a two-year payback to account for free riders. We approved goals based on a two-year payback criterion to identify free riders since 1994 and we find it appropriate to continue this policy. Each utility should continue to broadly educate all customer groups on energy efficiency opportunities. When the FEECA utilities file their DSM implementation plans, each plan should address how the utilities will assist and educate their low income customers, specifically with respect to the measures with a two-year or less payback.⁸

DEF has incorporated the two-year payback methodology into the design of its DSM Plan, and only includes savings from measures with a less than two-year payback in its residential low-income and audit programs.

⁸ FPSC Order No. PSC-14-0696-FOF-EU, Docket No. 130200-EI, Commission review of numeric conservation goals (Duke Energy Florida, Inc.), issued December 16, 2014, p. 27.

SACE's disputed issue focuses on the collection of additional data associated with DEF's DSM Plan regarding the adoption rates of measures in order to determine free ridership. This data collection, typically done through surveys sent to customers, would result in additional administrative costs with no additional seasonal peak demand or annual energy savings.

Conclusion

DEF's DSM Plan is cost-effective based upon the Rate Impact Measure (RIM) test and results in a net decrease in ratepayers' monthly rates. Although the Commission has allowed savings from audit programs to be counted towards the achievement of DSM goals in previous proceedings, staff recommends that no behavioral savings associated with audit programs be counted towards goals in this proceeding because behavioral savings are not directly monitorable.

DEF's DSM Plan is projected to meet or exceed the goals established by the Commission in Order No. PSC-14-0696-EU on a cumulative 10-year basis. With the removal of projected behavioral savings from audits, however, DEF's DSM Plan does not meet the annual residential winter peak demand goals in two of the 10 years. DEF may choose to modify its DSM Plan to include additional measures or programs that will make up the difference in this category. DEF will be responsible for monitoring actual participation rates and seeking Commission action if necessary to modify, add, or remove programs. If DEF is unable to meet the Commission's goals, the company may be subject to appropriate action by the Commission, up to and including financial penalties.

Staff recommends that DEF should have no annual total incentive cap on Florida Custom Incentive Program projects that pass the RIM test because staff does not anticipate a participation rate high enough to cause negative effects. Staff recommends that if DEF has concerns regarding the rate impact of the uncapped program in the future, DEF may petition the Commission to request a limit at that time. Staff does not object to DEF's proposal to cap the maximum incentive for a single project at \$500,000.

Staff recommends that the Commission approve the programs contained in DEF's DSM Plan. In addition, the Commission should allow DEF to file for cost recovery of the programs in the Energy Conservation Cost Recovery (ECCR) clause proceeding. DEF, however, must demonstrate that its expenditures to implement these programs are reasonable and prudent in order to recover the expenditures through the ECCR clause. Staff recommends that DEF may not discontinue its DSM programs or change its programs' rebate levels without seeking formal Commission approval.

Finally, staff recommends that DEF file its administrative program standards for all programs within 30 days of the Consummating Order being issued in this docket and that the Commission grant staff administrative authority to review and approve these standards.

Issue 2: Should this docket be closed?

Recommendation: Yes. If no person whose substantial interests are affected by the proposed agency action files a protest within 21 days of the issuance of the PAA Order, a Consummating Order should be issued. If the Commission approves any programs, the programs should become effective on the date of the Consummating Order. If a protest is filed within 21 days of the issuance of the PAA Order, the programs should not be implemented until after the resolution of the protest. However, the docket should remain open for staff's verification that the program standards have been filed by the utility and approved by staff. When the PAA issues become final and the program standards have been approved, this docket should be closed administratively. (Murphy)

Staff Analysis: If no person whose substantial interests are affected by the proposed agency action files a protest within 21 days of the issuance of the PAA Order, a Consummating Order should be issued. If the Commission approves any programs, the programs should become effective on the date of the Consummating Order. If a protest is filed within 21 days of the issuance of the PAA Order, the programs should not be implemented until after the resolution of the protest. However, the docket should remain open for staff's verification that the program standards have been filed by the utility and approved by staff. When the PAA issues become final and the program standards have been approved, this docket should be closed administratively.

Duke Energy Florida 2015 – 2024 DSM Programs

Residential Programs:

Home Energy Check

This program is DEF's energy audit program required by Section 366.82(11), F.S., and by Rule 25-17.003, F.A.C. Customers are provided with an analysis of their energy use as well as recommendations on how they can save on their electricity bill. The auditor provides the customer with an Energy Efficiency Kit containing energy-saving devices including light bulbs, low-flow showerheads, faucet aerators, weather stripping, hot water gauges, digital refrigerator thermometers, and switch/outlet gaskets. The auditor will install some items in the kit, and others can easily be installed by the customer. In addition to the devices in the kit, the audit provides education and encouragement for customers to implement low-cost energy-saving practices and measures.

The Home Energy Check program provides the foundation for other residential programs in DEF's DSM Plan. In addition to the walk-through audit, DEF will offer phone-assisted audits and internet-based audits. All audit options are free to DEF customers except the Home Energy Rating (or BERS/HERS⁹) audit, which is \$630.

Residential Incentive Program

This program is designed to provide a cost-effective portfolio of energy efficiency improvements for various housing types, including single family, multi-family, and manufactured homes, both existing and new. All residential customers are eligible to participate in one or more measures in the program.

The measures included in this program are listed below.

High Efficiency HVAC Systems

This measure will provide customers an incentive to install a high efficiency HVAC system when replacing an existing one. The incentive is calculated on a per unit basis according to the efficiency rating and the type of the new system. Incentive payments for replacing strip-type heating systems with a new SEER 14 heat pump is \$150. A new HVAC unit with a SEER rating of 15 qualifies for an incentive of \$200 when replacing a unit with a lower SEER rating, and \$375 when replacing a strip system. A new HVAC unit with a SEER rating of 17 qualifies for an incentive of \$600 when replacing a unit with a lower SEER rating, and \$800 when replacing a strip system.

Duct Repair

This measure provides an incentive for customers to improve energy efficiency by sealing ducts. The incentive payment for this measure is \$150.

⁹ BERS: The Florida Building Energy-Efficiency Rating System; HERS: The Home Energy Rating System.

Attic Insulation Upgrade

This measure provides an incentive for customers to upgrade attic insulation over conditioned space. The incentive payment is \$0.19 per square foot with a maximum of \$200.

Replacement Windows

This measure provides an incentive for installing high performance windows. The incentive payment is \$2.00 per square foot with a maximum of \$400.

Energy Efficient Home

This measure provides incentives to builders for meeting or exceeding Energy Star requirements that include specific prescriptive measures. The maximum payment is \$200.

Neighborhood Energy Saver Program

This program is an energy conservation program available to customers in neighborhoods where approximately 50 percent of households have incomes equal to or less than 200 percent of the poverty level established by the U.S. Government. Following an energy use assessment in the home, DEF or a third-party contractor will install energy efficient devices, and the customer will be provided with a package of educational materials designed to assist them with energy saving practices. This measure is provided at no cost to the participating customer.

The energy-saving devices provided to customers include the following:

- Energy efficient lighting
- Refrigerator thermometer(s)
- Weatherization measures
- Water heater insulation wrap and insulation for water pipes
- Water conservation shower heads and faucet aerators
- Water heater temperature check and adjustment
- HVAC filters
- Indoor wall thermometer
- AC winterization kit
- Attic insulation upgrade
- HVAC maintenance/tune up
- Duct sealing
- Home Energy Report

Low Income Weatherization Assistance Program

This program is an energy conservation program designed to promote participation in DEF's DSM programs by low-income customers. The program combines energy-efficiency education and measures with local weatherization providers, partnerships to assist low-income families in achieving sustainable strategies to lower energy bills. Devices provided include compact fluorescent light (CFL) bulbs, LED bulbs, attic insulation, water heater wrap, high-efficiency electric heat pump, low flow shower head/aerator, and refrigerator replacement. Incentive payments are shown in the table below.

Table A-1: DEF - Low Income Incentive Payments

Measure Name	Incentive
Attic Insulation	\$300
Duct Leak	\$150
Air Infiltration	\$37.50
Water Heater Wrap	\$20
HVAC Tune-up	\$150
High Efficiency Heat Pump replacing heat pump	\$1,000
High Efficiency Heat Pump replacing strip heat system	\$,1500
Low-flow showerhead	\$10
CFL bulbs	\$3/bulb
LED bulbs	\$4.50/bulb
Faucet aerator	\$5
Refrigerator replacement	\$400

Residential Energy Management Program

This program is a voluntary demand reduction program designed to control service to selected electrical equipment through communications devices installed at the customer's location. Customers participate in this program by requesting to be changed to Rate Schedules RSL-1 (Residential Year Round Energy Management) or RSL-2 (Winter Only). The credits for this program vary according to the duty cycle, and particular electrical equipment selected by the customer. This information is detailed in rate schedules RSL-1 and RSL-2.

Solar Water Heating with Energy Management

This program is designed to encourage energy conservation for residential customers through installation of a solar water heater. The program also requires that customers participate in DEF's Residential Energy Management program. In this manner, the program incorporates components of energy conservation with peak demand reduction.

The incentives for this program are a one-time rebate of \$550 toward the cost of the solar thermal system, and a monthly credit on their bills associated with participation in the Residential Energy Management program.

This program, although not a pilot program, will end on December 31, 2015, along with all of DEF's renewable pilot programs because it is no longer cost-effective under the RIM test.

COMMERCIAL/INDUSTRIAL PROGRAMS:

Business Energy Check

This program is DEF's energy audit program for commercial customers. Commercial customers are provided with an analysis of their energy use as well as recommendations on how they can save on their electricity bill. The auditor provides the customer with an energy efficiency kit. The Business Energy kit will contain energy efficient security lights and a power strip. The auditor may install some of the items in the kit and the business owner will install others. In addition, the audit provides business customers with information on implementation of minimal cost energy-saving practices and measures.

The Business Energy Check program serves as the foundation for other commercial and industrial DSM programs. In addition to the walk-through audit, DEF will offer phone-assisted audits. These options are free to participating customers.

Better Business Program

This program is an energy conservation program designed to incorporate high-efficiency equipment and measures into commercial, industrial, and governmental customer locations. The measures included in this program are listed below:

- **HVAC Equipment**

This measure will provide customers with a financial incentive to install high efficiency unitary heat pumps and air conditioners, thermal energy storage systems, package terminal heat pumps, package terminal air conditioners, water-cooled chillers, and air-cooled chillers. In addition, incentives to maintain, re-commission, tune-up or repair existing HVAC equipment is provided, as well as a one-time incentive for coil cleaning to encourage annual maintenance.

- **Energy Recovery Ventilation/Demand Control Ventilation**

This measure promotes high-efficiency energy recovery ventilation units in the conditioned air stream for customers with electric heating and cooling systems.

- **Duct Leakage Test and Repair/Duct Seal**

This measure promotes energy efficiency through improved duct system sealing.

- **Ceiling Insulation Upgrade**

This measure provides incentives to customers for adding insulation to the conditioned ceiling area.

- **Cool Roof/Roof Insulation**

This measure provides incentives to customers with electric cooling for installing approved "cool roof" and roof insulation upgrades.

The incentive payments available under this program are listed below.

Table A-2: DEF Incentive Payments Program

Measure Name	Measure Specifications	Incentive
HVAC Equipment	Heat Pump < 65,000 Btu/h replacing resistance heating	\$375
	Heat Pump < 65,000 Btu/h replacing less efficient heat pump (up to 15 SEER)	\$200
	Unitary A/C and Heat Pumps > 65,000 Btu/h	\$75 dollars per ton
	Package Terminal Heat Pumps (PTHPs)	\$100 dollars per ton
	Single Package Vertical Heat Pump (SPVHP)	\$75 dollars per ton
	Air-Cooled and Water-Cooled Electric Chillers	\$50 dollars per ton
	HVAC Steam Cleaning	\$20 per unit
	HVAC Chemical Cleaning	\$20 per unit
	HVAC Tune-up	\$10 per ton
	Roof Top Recommissioning	\$25 per ton
Energy Recovery Ventilation / Demand Control Ventilation		\$1.40 per CFM
Duct Leakage Tests and Repair/Duct Seal	Duct Leak	50% of test cost up to \$30 for first tested unit; \$20 for second tested unit (if any)
	Duct Repair	25% of repair cost up to \$50 with non-ducted heat; 50% of repair cost up to \$150 if ducted electric heat
Ceiling Insulation Upgrade	Ceiling R-0 to R-19	\$0.10 per square foot
	Ceiling Insulation R-19 to R-38	\$0.75 per square foot
Cool Roof/Roof Insulation	Cool Roof	\$0.15 per square foot

Florida Custom Incentive Program

This program encourages customers to make capital investments in measures which result in reduced peak demand and energy consumption. Incentives are customized according to the specific projects implemented, to achieve a RIM value of at least 1.0. The program is intended to provide savings through means not available through other DSM programs.

Examples of projects that could be considered under this program are new construction whole building projects, more efficient compressed air systems, and new thermal energy storage systems. This program has a maximum incentive of \$500,000 per project.

Standby Generation Program

This program is a demand control program designed to reduce DEF's peak demand based on control of customer equipment. The program is voluntary and is available to all commercial and industrial customers that have on-site generation capability and are willing to reduce their DEF demand when required by initiating their own generation. This program now allows customers to select either a non-emergency schedule or an emergency schedule, based on EPA emissions certification of their generation equipment.

The program is offered through rate schedule GSLM-2, and incentives are set out therein. Participants receive a monthly credit to their energy bills based on their ability to reduce demand. Additional credits are based on the energy provided to DEF by the customer's generation equipment.

Interruptible Service Program

This program is a direct load control program designed to reduce DEF's demand at times of capacity shortage during peak or emergency conditions. The program is available to all non-residential customers with a minimum billing demand of 500 KW who are willing to have their power interrupted when required.

The program is offered through the Interruptible General Service (IS-2) and Interruptible General Service Time of Use (IST-2) rate schedules.

Curtable Service Program

This program is an indirect load control program designed to reduce DEF's demand at times of capacity shortage during peak or emergency conditions. The program is available to non-residential customers who agree to curtail demand upon request.

The program is offered through the Curtable General Service (CS-2), Curtable General Service Time of Use (CST-2), and the Curtable General Service – Fixed Curtable Demand (CS-3) rate schedules. The CS-2 and CST-2 rate schedules have been closed to new customers since 1996, but remain active for customers who were grandfathered onto the rates. Customers who wish to take service under the CS-3 rate schedule must have a minimum demand of 2,000 KW.

DEMAND-SIDE RENEWABLE PROGRAMS:

These programs are part of a five year pilot program approved by the Commission in FPSC Order No., PSC-10-0605-PAA-EG. The first four years of the five year pilot were completed under the 2010 DSM Plan. The programs described below are offered only during 2015, the last year of the five year pilot.

Solar Water Heating for Low-income Residential Pilot

This program is a custom renewable energy measure designed for low-income residential customers. The solar water heaters will be provided at no cost during construction of the residence, with DEF collaborating with non-profit builders.

The incentive for this program is the total cost of the solar thermal system plus the associated installation cost. The program is limited to an annual cap of \$150,000.

Residential Solar Photovoltaic Pilot

This program promotes renewable energy by encouraging residential customers to install new solar PV systems on their homes. The program requires participating customers to also participate in at least one other residential energy conservation measure.

This program provides rebates of up to \$2.00 per watt, with a maximum of \$20,000. The program has an annual incentive cap of \$2,750,000.

Commercial Solar Photovoltaic Pilot

This program promotes renewable energy by encouraging commercial customers to install new solar PV systems on their business facilities. The program requires participating customers to also participate in at least one other commercial energy conservation measure.

This program provides rebates on new solar PV systems using a tiered structure based on the power rating of the system. The amounts offered are as follows:

- \$2.00 per Watt for the first 10 KW
- \$1.50 per Watt for 11KW to 50 KW
- \$1.00 per Watt for 51KW to 100 KW

Total incentives per participant are limited to \$130,000, based on a maximum installation of 100KW PV system. The program has an annual incentive cap of \$1,400,000.

Photovoltaic for Schools Pilot

This program promotes renewable energy by providing solar PV systems to participating public schools at no cost to the school. The program will fully fund the PV system with the school assuming ownership after installation is complete. The rebate is considered to be the cost of the new solar PV system and its installation.

The program is limited to one system with a rating up to 100 KW installed on post-secondary public school, and up to ten 10 KW systems with battery backup options on public schools, preferably those also serving as emergency shelters.

Research and Technology Development Programs:

Research & Demonstration Pilot

This program is designed to research technology and establish initiatives to support the development of future renewable energy pilot programs. Projects under this program provide demonstration and field testing of these initiatives.

The program is limited to a targeted annual expenditure cap of five percent of the total annual expenditures for demand-side renewable programs. Because all of DEF's renewable programs will end on December 31, 2015, this program will also end.

Technology Development Program

This program is designed to allow DEF to investigate technologies that may support the development of new demand response and energy efficiency programs. Examples of potential projects that may be funded under this program include demand response and energy efficiency technologies, market transformation initiatives and other innovative technologies.

All costs, including incentives and rebates, will be included as part of the pre-approved project expenditures under this program. Expenditures up to \$800,000 annually may be made and recovered through the conservation cost recovery clause for all energy efficiency and conservation projects that are proposed and investigated. If any single project's expenditures exceed \$100,000, a status report will be filed as a component of the Conservation Cost Recovery True-Up filing identifying each project, the scope and purpose of the project, the project development schedule, and the project's actual and proposed expenditures.

Qualifying Facilities Program

This program is designed to meet the objectives of Florida Statutes and Commission Rules regarding the purchase of as-available energy and firm energy and capacity from qualifying facilities including those that utilize renewable sources. This program develops standard offer contracts, negotiates, enters into, amends and restructures non-firm energy, and firm energy and capacity contracts entered into with qualifying cogeneration, small power producers, and renewable facilities.