State of Florida

Public Service Commission

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

DATE: August 19, 2010

TO: Office of Commission Clerk (Cole)

FROM: Division of Regulatory Analysis (Lewis, Brown, Garl, Webb)
Office of the General Counsel (Fleming, Sayler)

RE: Docket No. 100160-EG – Petition of approval of demand-side management plan of Progress Energy Florida, Inc.

AGENDA: 08/31/10 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Administrative

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: S:\PSC\RAD\WP\100160.RCM.08-19-10.DOC

Case Background

The Commission, as required by the Florida Energy Efficiency and Conservation Act (FEECA), Sections 366.80 through 366.85 and 403.519, Florida Statutes (F.S.), adopted annual goals for seasonal peak demand and annual energy consumption for the FEECA Utilities. These include Florida Power & Light (FPL), Progress Energy Florida, Inc. (PEF), Tampa Electric Company (TECO), Gulf Power Company (Gulf), Florida Public Utilities Company (FPUC), JEA, and Orlando Utilities Commission (OUC).

Pursuant to Rule 25-17.008, Florida Administrative Code (F.A.C.), in any conservation goal setting proceeding, the Commission requires each FEECA utility to submit cost-effectiveness information based on, at a minimum, three tests: (1) the Participants Test; (2) the Rate Impact Measure (RIM) Test, and (3) the Total Resource Cost (TRC) Test. The Participants Test measures program cost-effectiveness to the participating customer. The RIM Test measures

program cost-effectiveness to the utility's overall rate payers, taking into consideration the cost of incentives paid to participating customers and lost revenues due to reduced energy sales that may result in the need for a future rate case. The TRC Test measures total net savings on a utility system-wide basis. In past goal setting proceedings, the Commission established conservation goals based on measures that pass both the Participants Test and the RIM Test.

The 2008 Legislative Session resulted in several changes to the FEECA Statute, and the Commission's goal-setting proceeding was the first implementation of these modifications. By Order No. PSC-09-0855-FOF-EG,[1] the Commission established annual numeric goals for summer peak demand, winter peak demand, and annual energy conservation for the period 2010 through 2019, based upon an unconstrained Enhanced-Total Resource Test (E-TRC) for the investor-owned utilities (IOUs). The E-TRC Test differs from the conventional TRC Test by taking into consideration the estimated additional costs imposed by the potential regulation of greenhouse gas emissions. In addition, the numeric impact of certain measures with a payback period of two years or less were also included in the goals. Further, the IOUs subject to FEECA were authorized to spend up to 10 percent of their historic expenditures through the Energy Conservation Cost Recovery (ECCR) clause as an annual cap for pilot programs to promote solar water heating (Thermal) and solar photovoltaic (PV) installations.

On January 12, 2010, PEF filed a Motion for Reconsideration of the Commission's decision in Docket No. 080408-EG. Order No. PSC-10-0198-FOF-EG[2] granted, in part, PEF's reconsideration which revised PEF's numeric goals to correct a discovery response that caused a double-counting error. On March 30, 2010, PEF filed a petition requesting approval of its Demand-Side Management (DSM) Plan pursuant to Rule 25-17.0021, F.A.C.

The Florida Industrial Power Users Group (FIPUG) was granted leave to intervene on May 7, 2010.[3] White Springs Agricultural Chemicals, Inc. d/b/a PCS Phosphate – White Springs (PCS Phosphate) was granted leave to intervene on June 18, 2010.[4] The Southern Alliance for Clean Energy (SACE) was granted leave to intervene on August 9, 2010.[5] The Florida Solar Energy Industry Association (FlaSEIA) was granted leave to intervene on August 11, 2010.[6] Wal-Mart Stores East, LP, and Sam's East, Inc. (Walmart) was granted leave to intervene on August 18, 2010.[7]

On July 14, 2010, the SACE filed comments on the FEECA Utilities' DSM Plans. These comments were amended on August 3, 2010, to include comments regarding FPUC. No other

[1] See Order No. PSC-09-0855-FOF-EG, issued December 30, 2009, in Docket No. 080408-EG, In re: Commission review of numeric conservation goals (Progress Energy Florida, Inc.).
[2] See Order No. PSC-10-0198-FOF-EG, issued March 31, 2010, in Docket No. 080408-EG, In re: Commission review of numeric conservation goals (Progress Energy Florida, Inc.).
[3] See Order No. PSC-10-0289-PCO-EG, issued May 7, 2010, in Docket No. 100160-EG, In re: Petition of approval of demand-side management plan of Progress Energy Florida, Inc. (FIPUG)
[4] See Order No. PSC-10-0399-PCO-EG, issued June 18, 2010, in Docket No. 100160-EG, In re: Petition of approval of demand-side management plan of Progress Energy Florida, Inc. (PCS Phosphate)
[5] See Order No. PSC-10-0498-PCO-EG, issued August 9, 2010, in Docket No. 100160-EG, In re: Petition of approval of demand-side management plan of Progress Energy Florida, Inc. (SACE)
[6] See Order No. PSC-10-0509-PCO-EG, issued August 11, 2010, in Docket No. 100160-EG, In re: Petition of approval of demand-side management plan of Progress Energy Florida, Inc. (FlaSEIA)
[7] See Order No. PSC-10-0529-PCO-EG, issued August 18, 2010, in Docket No. 100160-EG, In re: Petition of approval of demand-side management plan of Progress Energy Florida, Inc. (Walmart)

intervenors filed comments. On July 28, and August 12, 2010, PEF and Gulf, respectively, filed responses to SACE's comments. On page 2 of its comments, SACE offers four recommendations for the Commission to consider.

SACE's first and second recommendations are that the utilities should develop their programs further with the exception of PEF whose entire Plan should be revised within a 90-day period. As discussed in Issue 1, the five IOUs have proposed plans that do not meet all of the annual goals established by the Commission in terms of kilowatt (kW) or kilowatt-hour (kWh) savings. Consistent with Florida Statutes, staff is recommending a 30-day period to correct the deficiencies.

The third recommendation made by SACE is that the Commission should initiate a proceeding to develop an incentive mechanism for utilities that exceed their goals as well as addressing lost revenues. During the DSM goals proceeding, the Commission addressed the issue of utility incentives. Page 24 of Order No. PSC-09-0855-FOF-EG states that:

> We believe establishing incentives during this proceeding would unnecessarily increase costs to ratepayers at a time when consumers are already facing financial challenges. Increasing rates in order to provide incentives to utilities is more appropriately addressed in a future proceeding after utilities have demonstrated and we have evaluated their performance.

SACE's final recommendation is that the Commission should "evaluate alternative means of providing energy efficiency opportunities to utility customers, such as third-party administered programs, if it determines that one or more utilities are not willing or able to offer a leading program." As discussed in Issue 1, the Commission has the authority to penalize a utility if it does not meet its approved goals. However, the Commission does not have the statutory authority to require a third-party administrator to offer a particular program.

The Commission has jurisdiction over this matter pursuant to Sections 366.80 through 366.85 and 403.519, F.S.

Discussion of Issues

Issue 1: Does PEF's proposed Demand-Side Management (DSM) Plan satisfy the Company's numeric conservation goals set by the Commission in Order No. PSC-09-0855-FOF-EG and subsequently revised in Order No. PSC-10-0198-FOF-EG?

Recommendation: No. PEF's proposed DSM Plan fails to meet its annual residential goals in any category for the first six years. Similarly, the Company's Plan does not meet all the annual commercial/industrial goals by as early as 2011. PEF's failure to meet its annual conservation goals may result in financial penalties or other appropriate action.

Consistent with Section 366.82(7), F.S., PEF should file specific program modifications or additions that are needed in order for the 2010 DSM Plan to be in compliance with Order No. PSC-10-0198-FOF-EG within 30 days of the Commission's Order in this docket. (Lewis)

Staff Analysis: By Order No. PSC-09-0855-FOF-EG, the Commission established annual goals for the FEECA Utilities for the period 2010 through 2019. Order No. PSC-10-0198-FOF-EG granted, in part, PEF's reconsideration which revised PEF's numeric goals to correct a discovery response that caused a double-counting error. PEF's approved goals are divided into residential and commercial/industrial goals, with each of these further subdivided into three categories: summer peak demand, winter peak demand, and annual energy. PEF is responsible for meeting its required conservation goals, yet the projections provided by the Company show that they plan to fail in a number of years, as discussed below.

As detailed below in Table 1, PEF's proposed DSM Plan fails to meet its annual residential goals in any category for the first six years and its winter demand goals through year seven. Similarly, Table 2 shows that the Company's Plan does not meet all the annual commercial/industrial goals from 2010 through 2013.

Table 1 – Comparison of Residential Goals and Projected Savings

	Summer Demand (MW)		Winter Demand (MW)		Annual Energy (GWh)	
Year	Commission Approved Goal	PEF Projected Savings	Commission Approved Goal	PEF Projected Savings	Commission Approved Goal	PEF Projected Savings
2010	79.6	47.5	81.3	64.2	261.6	97.9
2011	81.5	51.0	86.8	72.0	267.6	114.5
2012	84.5	57.2	90.8	76.2	276.7	137.2
2013	86.5	62.3	93.5	80.2	282.7	158.0
2014	88.4	66.4	96.2	84.1	288.8	173.6
2015	93.8	85.7	100.9	88.9	309.9	258.1
2016	102.3	111.2	111.7	107.7	297.8	335.3
2017	101.9	129.4	111.1	121.1	291.8	393.1
2018	96.4	147.4	103.6	133.2	279.7	478.8
2019	81.9	152.0	79.1	132.3	270.6	525.6
Total	896.6	909.9	955.1	959.9	2827.1	2672.1

Table 2 – Comparison of Commercial/Industrial Goals and Projected Savings

	Summer Demand (MW)		Winter Demand (MW)		Annual Energy (GWh)	
Year	Commission Approved Goal	PEF Projected Savings	Commission Approved Goal	PEF Projected Savings	Commission Approved Goal	PEF Projected Savings
2010	13.7	14.4	5.3	8.7	31.1	24.5
2011	16.2	14.7	5.3	8.9	33.0	27.2
2012	25.5	24.1	11.4	11.3	35.9	37.9
2013	25.9	25.4	11.5	13.0	37.7	36.1
2014	26.4	29.0	11.5	16.2	39.6	47.0
2015	27.6	31.3	11.7	17.9	46.2	59.7
2016	27.1	33.5	11.6	18.4	42.5	69.6
2017	27.0	36.2	11.6	19.1	40.6	77.6
2018	25.7	37.6	11.4	18.0	36.8	85.1
2019	22.3	34.3	11.3	12.1	34.0	68.1
Total	237.3	280.5	102.6	143.6	377.4	532.6

Order No. PSC-10-0198-FOF-EG sets annual goals for conservation in a total of six areas. The Commission did not establish cumulative goals and the Company's DSM Plan should reflect this. Staff is aware that the values presented in this docket are projections based upon participation rates which may or may not occur. Based on these projections, it would appear that PEF does not plan to meet each of the Commission's annual goals. PEF claims its reduced levels in the first years are an effort to reduce the rate impact of the new goals. However, PEF did not request a waiver or modification of its approved goals. Depending on the actual results realized, failure to meet its goals in any year may result in financial penalties or other appropriate action by the Commission at the time of the violation. Pursuant to Section 366.82(7), F.S., the Commission could deny PEF's DSM Plan and require PEF to submit a modified Plan within 30 days. However, such action would delay the implementation of cost-effective DSM programs for many months. Therefore, as discussed in Issue 2, staff is recommending that the programs contained in PEF's 2010 DSM Plan be approved at this time and that PEF be required to file specific program modifications or additions that are needed in order for the 2010 DSM Plan to be in compliance with Order No. PSC-10-0198-FOF-EG within 30 days of the Commission's Order in this docket.

Conclusion

PEF's proposed DSM Plan does not satisfy the Company's annual numeric goals set by the Commission. The Commission did not establish cumulative goals, and the Company's DSM Plan should reflect this. It would appear that PEF will not meet the Commission's annual goals which may result in financial penalties or other appropriate action by the Commission. Therefore, consistent with Section 366.82(7), F.S., staff recommends that PEF should file specific program modifications or additions that are needed in order for the 2010 DSM Plan to be in compliance with Order No. PSC-10-0198-FOF-EG within 30 days of the Commission's Order in this docket.

Issue 2: Are the programs contained in PEF's proposed 2010 DSM Plan cost-effective as this criterion is used in Commission Order No. PSC-09-0855-FOF-EG?

Recommendation: Yes. All programs in PEF's proposed 2010 DSM Plan pass the E-TRC and Participants tests. Audits, Pilot Programs, and Research & Development programs are not included in this evaluation because they are not required to pass cost-effectiveness testing. Staff recommends that PEF should be required to file program standards within 30 days of the Commission's Order in this docket. As discussed in Issue 4, for some programs, PEF has not justified the level of incentives assumed at this time and should not be authorized to recover incentives that exceed the cost of the measure.

The Commission should approve cost-effective programs to allow PEF to file for cost recovery. However, staff recommends that PEF should still demonstrate, during the cost recovery proceeding, that expenditures in executing its DSM Plan were reasonable and prudent. In addition, the Commission should evaluate PEF's compliance filing and make a final determination at that time regarding the cost-effectiveness of any modified or new programs. (Lewis)

Staff Analysis: The Company's DSM Plan includes a variety of programs, some of which are retained from previous plans without modification, others incorporated with changes to incentive levels or other design aspects, as well as new programs. In total, the Company's Plan consists of 27 programs, which are broken down in Table 3 below. A summary of each program can be found in Attachment A.

Table 3 - Summary of PEF's Proposed DSM Programs

Program Type	Residential	Comm./Ind.	Other*	Total
Existing	1	0	1	2
Modified	5	7	1	13
New	5	7		12
Total	11	14	2	27
* Other includes programs which encompass both Residential & Comm./Ind. customers.				

In reviewing PEF's DSM Plan, staff analyzed the assumptions made for a variety of aspects of the programs, including, but not limited to: rebate and incentive levels, participation rates, avoided costs, and program savings. Staff issued multiple data requests, and used previously submitted data from the utility's DSM programs, the goal-setting docket, and the Company's Ten-Year Site Plan to examine each category. Overall, staff believes the assumptions in PEF's DSM Plan are reasonable for use in evaluating PEF's DSM Plan.

Clearly, increased incentives tend to drive up customer participation. For rebates and incentives, PEF used the ITRON achievable study, developed during the DSM goals setting proceeding, to determine incentive and program costs required to reach energy and demand targets. Though many measures are not cost effective on a stand-alone basis, when combined with other measures and funded within specific programs they may increase PEF's ability to

achieve overall cost effectiveness within program groups. PEF's proposed programs contain incentives ranging from 0 percent to more than 100 percent for certain measures. While incentives do not impact the E-TRC Test, they do have a role in customers' rates. Therefore, as discussed more fully in Issue 4, PEF should not be authorized to recover incentives for certain measures that exceed the customer cost shown for the same measure. It should be noted that some programs which did not feature rebates or incentives did provide free equipment to customers. These include educational programs and some targeting low income cutomers, and the equipment consisted of items such as compact fluorescent light (CFL) bulbs, water heater blankets, and other simple devices.

Participation rates were compared to existing programs when applicable. However, of 27 programs PEF offered, 25 are modified or completely new programs. About 50 percent of the measures being offered in PEF's programs are also new, making it more difficult to make direct comparisons of participation levels with previous year's programs. For most of its programs, PEF assumes a low participation rate in the initial year, with participation ramping up throughout the ten-year period.

Staff questioned PEF regarding its Technical Potential Program being projected to reach 100 percent of all residential customers by 2019. The Technical Potential Program is expected to contribute approximately 50 percent towards PEF's energy goals. PEF believes higher incentives and marketing costs will be needed as the plan matures based on PEF's experience with existing programs. For example, for a similar program, PEF has experienced penetration of less than 70 percent of the eligible households, despite the fact that the program pays 100 percent of the energy improvement cost and provides professional installers at the customer's convenience. In other words, even when the measure was free, not all eligible customers participated. Therefore, a 100 percent participation rate may not be achievable. Staff would note however that PEF is responsible for continual monitoring of actual participation rates. Should participation fall below expected values, PEF is responsible for taking appropriate action to meet its conservation goals.

Seasonal peak demand and annual energy savings from the proposed programs in PEF's DSM Plan were compared to existing programs when applicable. Program energy savings vary somewhat from previous programs, partially due to increased efficiency standards and building codes, but also due to modifications and new additions to the program's component measures. Since many of PEF's programs are new, PEF relied on savings projections provided by ITRON for specific measures.

Over the ten year horizon, PEF used two natural gas-fired combustion turbines in 2013 and a single or combined cycle unit in 2014 as its avoided units. Staff compared the costs of PEF's avoided units against those of other utilities for the same type unit. Projected costs of the avoided units PEF used appear to be reasonable based on costs of the same sized combustion turbine and combined cycle units staff researched. Costs associated with potential greenhouse gas emissions were also included in the energy savings, and were identical to the values used in the goal-setting docket. Transmission and distribution line loss percentages are also similar to values provided by several utilities.

In addition to the savings associated with avoided or deferred generation or transmission assets, PEF included the potential cost of greenhouse gas emissions in its cost of energy, which it

calculated as $22/ton starting in 2015, and escalating in the future. As a result, the resulting cost-effectiveness tests are referred to as the E-TRC and E-RIM tests.

Cost-Effectiveness Results

By definition, a program passes a cost-effectiveness test if the benefits-to-cost ratio is greater than 1.00. All proposed programs pass both the E-TRC and Participants tests with ratios greater than 1.00, with the exception of the C/I Innovation Incentive program. Cost-effectiveness tests for this program will be conducted on a project basis, as proposed projects are considered. Eleven programs failed the E-RIM Test. Though the Commission's Order states E-RIM test results shall be considered in evaluating programs, it does not require programs to pass the E-RIM Test. The low E-RIM values may be due to the incentive levels assumed by PEF as discussed in Issue 4. Cost-effectiveness test results for PEF's programs are shown in Table 4 below:

Table 4 - Cost Effectiveness Test Results by Program

Program Name	E-TRC	E-RIM	Participant
Residential Portfolio			
Energy Management	1.79	1.17	-
Home Energy Improvement	1.19	0.74	1.82
Technical Potential	1.19	0.47	7.62
Home Energy Check (Audit)	-	-	-
Residential New Construction	1.25	0.75	1.88
Low Income & Education Programs			
Residential Education	1.61	0.68	13.64
Neighborhood Energy Saver	1.10	0.63	2.13
Weatherization Assistance	1.18	0.73	3.17
Commercial/Industrial Portfolio			
Better Business	1.06	0.69	1.63
Business Energy Saver	1.24	0.71	1.82
Commercial Educational Tools	1.38	0.63	10.72
Business Energy Response	2.58	1.07	-
Commercial Green Building	1.04	0.50	2.25
Business New Construction	1.04	0.71	1.60
Standby Generation	59.68	6.95	-
Curtailable Service	78.80	6.26	-
Interruptible Service	33.06	4.71	-
Innovation Incentive	-	-	-
Business Energy Check (Audit)	-	-	-

The Interruptible Service program for C/I customers, shown on Table 4 above, is a direct load control program that reduces PEF's demand at times of capacity shortage during peak or emergency conditions. The program includes a credit available under the IS-2 rate schedule of $3.31 per KW of load factor adjusted demand. The IS-2 credit was an issue in PEF's most recent rate case (Docket No. 090079-EI – In re: Petition for increase in rates by Progress Energy Florida, Inc.). In the rate case, FIPUG asserted that the IS-2 credit of $3.31/KW should be

adjusted and challenged PEF's methodology for determining how the credit should be applied to customers participating in the Interruptible Service program. FIPUG suggested two alternative methodologies for determining the amount of interruptible demand subject to the credit. By Order No. PSC-10-0131-FOF-EI,[8] the Commission determined that the IS-2 credit should remain at $3.31/KW. The Commission also determined that there was no basis in the rate case docket to change the methodology for applying the credit. However, the Commission's Order directed PEF to review the alternatives proposed by FIPUG's witness and provide an analysis to the Commission for review when it filed its proposed 2010 DSM Plan. PEF filed its analysis on March 30, 2010. Staff has reviewed PEF's analysis of FIPUG's alternative methodologies for applying the IS-2 credit. Staff believes that PEF's current methodology (load factor adjusted billing demand) for determining the amount of interruptible demand subject to the IS-2 credit is fair, reasonable and appropriate. Both of FIPUG's suggested alternatives would require additional costs to implement and staff does not believe that they offer significant benefits over PEF's present methodology.

Several types of programs are not evaluated for cost-effectiveness. These include audits, which are mandated by the Commission to be available for ratepayers, and pilot programs, which are designed to gather additional information on conservation measures or methods. PEF does not include any kW or kWh savings associated with audits in order to meet its goals.

Program Standards

Most programs have an administrative component that describes the eligibility requirements, billing practices, etc. Historically, this information is provided to staff, for administrative approval, after a program has been approved by the Commission. Therefore, PEF should file its program standards for all its programs, including any modified or new programs, as a result of the vote in Issue 1, within 30 days of the Commission's Order in this docket. If final incentive levels are estimated in the program standards, these will be brought back to the Commission for approval.

Conclusion

All programs in PEF's proposed DSM Plan pass the E-TRC and Participants tests. Audits, Pilot Programs, and Research & Development programs are not included in this evaluation because they are not required to pass cost-effectiveness testing. The Commission should approve cost-effective programs to allow PEF to file for cost recovery. However, staff recommends that PEF should still demonstrate, during the cost recovery proceeding, that expenditures in executing its DSM Plan were reasonable and prudent. In addition, the Commission should evaluate PEF's compliance filing and make a final determination at that time regarding the cost-effectiveness of any modified or new programs. As discussed in Issue 4, PEF has not justified the level of incentives assumed at this time for some program measures and should not be authorized to recover incentives that exceed the cost of those measures. Thus, staff recommends that PEF should be required to file program standards within 30 days of the Commission's Order in this docket.

[8] See Order No. PSC-10-0131-FOF-EI, issued March 5, 2010, Docket No. 090079-EI – In re: Petition for increase in rates by Progress Energy Florida, Inc.

Issue 3: Does PEF's proposed DSM Plan include pilot programs that encourage the development of solar water heating and solar PV technologies consistent with Commission Order No. PSC-09-0855-FOF-EG?

Recommendation: Yes. The cost of the proposed pilot programs is within the annual expenditure cap of $6,467,592 as specified by Commission Order No. PSC-09-0855-FOF-EG. However, the allocation of funds to: (1) solar thermal vs. solar PV, (2) private customers vs. public institutions, and (3) low-income residential varies widely among the investor-owned utilities. If the Commission desires to have more uniformity among the IOUs' programs, then the Commission should initiate public workshops to explore that issue further. (Lewis)

Staff Analysis: Commission Order No. PSC-09-0855-FOF-EG directed the IOUs to file pilot programs focused on encouraging solar water heating and solar PV technologies subject to an expenditure cap of 10 percent of the average annual recovery through the Energy Conservation Cost Recovery clause in the previous five years. The Commission-approved annual expense cap for PEF is $6,467,592. The projected annual expenditures for PEF's pilot programs do not exceed the approved annual expense cap as shown in Table 5 below.

Table 5 – PEF's Solar Expenditures by Program

Program Name	First Full Year Expenditures ($)	First Full Year Percentage of Annual Expenditure Cap (%)
Solar for Schools	$2,050,000	31.7%
Commercial Solar Photovoltaics	$977,500	15.1%
Residential Solar Photovoltaics	$1,000,000	15.5%
Solar Water Heating for Low Income Residential	$114,000	1.8%
Solar Water Heating with Energy Management	$1,237,500	19.1%
Research & Demonstration	$323,380	5.0%
Administrative & Education/Marketing Costs	$635,826	9.8%
Total	$6,338,206	98.0%

As a pilot program, the utility should collect information relating to customer acceptance rates, energy production, and other data to refine potential future program offerings for solar renewable technologies. PEF's demand-side renewable energy portfolio is comprised of the following pilot programs:

Solar Water Heating for Low Income Residential Customers – PEF will collaborate with non-profit builders to provide low-income families with a residential solar thermal water heater at no cost to the non-profit builders or the residential participants. The incentive is the total cost of the solar thermal system plus associated installation cost. Participation is expected to be about 30 homes per year.

Solar Water Heating with Energy Management – An existing program that has been enhanced by increasing the amount of the rebate to increase customer participation and

collecting demographic information to support PEF's marketing efforts and correlate anticipated energy savings to PEF's residential end-use metering study. The program encourages residential customers to install new solar thermal water heating systems on their residence by combining incentives from two programs. Customers are required to participate in the residential demand response program and receive the associated monthly bill credit in addition to a one-time $550 rebate to reduce the upfront cost of purchasing the renewable energy system. PEF projects about 2,250 homes will be participating in this program each year.

Residential Solar Photovoltaic – A program to reduce the initial investment required for a residential customer to install a new solar PV system on their home by providing a rebate of up to $2.00/Watt up to a $20,000 maximum. Customer is also required to participate in at least one existing residential energy efficiency measure. PEF expects about 100 homes per year will participate in this program.

Commercial Solar Photovoltaic – A program to reduce the initial investment required for a commercial customer to install a new solar PV system on their facility by providing a tiered rebate based on the PV power rating up to: $2.00/Watt for the first 10 KW; $1.50/Watt for 11 - 50 kW; and, $1.00/Watt for 51 – 100 kW. Customer is also required to participate in at least one commercial energy efficiency measure. Total incentives per participant will be limited to $130,000 based on a maximum installation of 100 kW. PEF projects about 23 commercial customers will participate annually.

Photovoltaic for Schools – Participating schools receive a new PV system at no cost to the school. Schools enter an agreement by which PEF will install, own, operate and maintain the system for five years. Program participation is limited to an annual target of one system with a rating up to 100 kW installed on a post secondary public school and ten systems of 10 kW each with battery backup option installed on other public schools, with a preference for schools serving as emergency shelters. The program has an educational component that will be funded in part by customers participating in other PEF energy management programs that elect to contribute their monthly credit toward an energy education fund.

Research and Demonstration – A program designed to research renewable energy technologies and establish research and development initiatives to support the development of future solar and renewable energy pilot programs. Program is limited to a targeted annual expenditure cap of $323,000. The number of projects that will be proposed for investigation within this program each year is unknown at this time.

Allocation of Funds

Because the costs of these pilot programs are shared by all customers, staff looked at whether or not the programs offered opportunities for participation by all customer classes. PEF offers programs for residential, low-income, commercial, and public facilities. The allocation of funds to each of the programs is listed above in Table 5. Staff also looked at the allocation of funds between solar PV and solar water heating programs. As shown in Table 6, approximately 67 percent of the funding goes towards solar PV technology and 21 percent towards solar thermal installations.

Comparison With Other Utilities

Commission Order No. PSC-09-0855-FOF-EG provided no guidance on how the annual expense cap was to be allocated. While each utility has complied with Order No PSC-09-0855-FOF-EG, the renewable pilot programs of each of the IOUs varies in the weight it provides to the two major types of solar renewable resources, photovoltaics (PV) and thermal water heating (Thermal), as outlined in the Table 6 below. However, all IOUs generally tend to allocate a greater percentage of funding to PV applications.

Table 6 - Percentage of Funds Allocated by Technology Type[9]

Company	FPL	PEF	TECO	GULF	FPUC
PV	41.0%	67.3%	86.7%	63.9%	Not Available
Thermal	37.6%	20.9%	13.3%	19.4%	
The percentages above do not sum to 100% as administrative, education, and R&D costs are excluded.					

The distribution of funds between solar installations intended for public facilities, such as schools, and privately owned facilities, including residential housing and commercial properties, is another area of variation among the utilities. Table 7 below, illustrates these differences, which overall favor private installations.

Table 7 - Percentage of Funds Allocated by Ownership Type

Company	FPL	PEF	TECO	GULF	FPUC
Public	7.2%	31.7%	10.4%	15.5%	Not Available
Private	68.9%	56.5%	89.6%	67.8%	
The percentages above do not sum to 100% due to administrative and education costs being excluded.					

The variations between the utilities' plans represent different service territories and program designs. If the Commission desires increased uniformity in the values of the pilot programs between utilities, it could initiate a workshop or other proceeding to determine the appropriate split between these technological and customer categories.

Conclusion

PEF's proposed DSM Plan includes pilot programs to encourage the development of solar water heating and solar PV technologies. The cost of the proposed pilot programs is within the annual expenditure cap specified by Commission Order No. PSC-09-0855-FOF-EG. Staff recommends that the pilot programs included in PEF's proposed DSM Plan be approved and incorporated into the compliance filing. However, the allocation of funds to: (1) solar thermal

[9] Refer to Docket No. 100154-EG – In re: Petition of approval of demand-side management plan of Gulf Power Company. Docket No. 100155-EG – In re: Petition of approval of demand-side management plan of Florida Power & Light Company. Docket No. 100158-EG – In re: Petition of approval of demand-side management plan of Florida Public Utilities Company. Docket No. 100159-EG – In re: Petition of approval of demand-side management plan of Tampa Electric Company. Docket No. 100160-EG – In re: Petition of approval of demand-side management plan of Progress Energy Florida, Inc.

vs. solar PV, (2) private customers vs. public institutions, and (3) low-income residential varies widely among the investor-owned utilities. If the Commission desires to have more uniformity among the IOUs' programs, then the Commission should initiate public workshops to explore that issue further.

Issue 4: Do any of the programs in PEF's proposed DSM Plan have an undue impact on the costs passed on to customers?

Recommendation: No. The proposed programs costs are not undue because the increase in program costs correlates with the increase in goals. However, inappropriate incentive levels for certain measures may be contributing to higher than necessary costs in some programs. Because PEF has not justified the level of incentives assumed at this time, staff recommends that PEF should not be authorized to recover the costs of such incentives. The Commission should evaluate the Company's compliance filing and make a final determination in the ECCR clause proceedings regarding the appropriateness of incentive levels. (Lewis)

Staff Analysis: PEF's energy goals for the 2010 through 2019 period are more than eight times higher than the previous ten-year period, as illustrated in Table 8 below.

Table 8 – Goal Comparison

2005-2014 Goals			2010-2019 Goals			% Change		
Summer (MW)	Winter (MW)	Energy (GWH)	Summer (MW)	Winter (MW)	Energy (GWH)	Summer (MW)	Winter (MW)	Energy (GWH)
128	400	190	1133.9	1057.7	3204.5	785.9%	164.4%	1586.6%

This increase also results in higher expenditures required for conservation programs, as more participants and new programs add costs. There are two basic components to a rate impact: the ECCR clause and base rates.

ECCR Clause

The costs to implement a DSM program consist of administrative, equipment, and incentive payments to the participants, which is recovered by the company through its ECCR clause. This clause represents a monthly bill impact to customers as part of the non-fuel cost of energy on their bill. As discussed in Issue 2, if a program passes the E-TRC Test it is cost-effective from a system basis. However, utility incentive payments are not included in the E-TRC Test but are recovered through the utility's ECCR factor and have an immediate impact on customer rates.

PEF estimates the cost to deploy the proposed DSM Plan to be $4.8 billion (nominal) over the ten-year period 2010-2019. As shown in Table 9 below, for a residential customer, the impact to the Energy Conservation Cost Recovery clause is projected to increase from the current level of $3.24/mo. to a peak level of $30.17/mo., or an 831 percent increase by 2019. In comparing Tables 8 and 9, the percentage increase in rates is significantly lower than the percentage increase in energy goals. However, as noted in Issue 1, the Company's DSM Plan does not comply with the Commission's annual goals, and these projections may not represent the final rate impact to customers.

Table 9 – Estimated Rate Impact

Year		ECCR Revenue Requirement	Rate Impact ($/Mo.)	% Increase
Current		$86,501,449	$3.24	-
Projected	2010	$179,793,313	$6.38	96.9%
	2014	$359,035,186	$12.65	290.4%
	2019	$892,060,225	$30.17	831.2%
Current Rates refer to those established in Docket 090002				
Rate impact assumes a residential customer with 1,200 kWh/Mo. usage				

While staff does not believe overall program costs are unduly high considering the aggressive new goals, staff notes that incentive levels for some program measures exceed the estimated cost of the measure in approximately 25 percent of the total measures offered by PEF. Table 10 below includes an example from PEF's response to a staff data request.

Table 10 - Estimated Rebate vs. Customer Cost

Technical Potential Program Selected Measures	Incentive/ Rebate	Customer Equip Cost
Water heater blanket on old water heaters	30.00	20.00
Annual maintenance	120.00	160.00
Install solar window screens	200.00	350.00
Replace current HVAC system with high efficiency model with ECM (16+SEER)	2,000.00	90.00
Pool Pump (variable)	2,000.00	1,927.00
CFL discounts thru retailers	2.00	2.00
Freezer Recycling	100.00	0.00
Refrigerator Recycling	100.00	0.00
Air Filters	60.00	40.00

The Residential Technical Potential program is the largest contributor towards PEF's energy goal (51 percent of the total savings) and is the second highest cost program in terms of ECCR expenditures. As shown in Table 10 above, PEF is proposing to pay participating customers more than the cost of the equipment for water heater blankets, high efficient HVAC motors, variable speed pool pumps, and air filters. If the Technical Potential Program were to be approved as proposed, PEF would give participating customers a free pool pump and a check for $73. Since utility incentive payments are not included in the E-TRC Test, such assumptions do not impact the E-TRC cost-effectiveness results. However, such assumptions do put upward pressure on rates for all customers as indicated by the low E-RIM results (0.47) for the Technical Potential Program. Just because a program passes the E-TRC Test does not mean the costs associated with the program are recoverable. PEF has not justified the level of incentives assumed at this time and should not be authorized to recover incentives that exceed the cost of the measure.

Staff ranked PEF's programs based upon their contribution to the ECCR rate impact and has identified the top five programs that account for the greatest percentage of rate impact in Table 11 below. However, some of these five programs also account for substantial demand and energy savings. For example, the Technical Potential program is expected to provide 51 percent of PEF's total energy savings.

Table 11 – Top Five Programs by ECCR Contribution

Program Name	% of ECCR Total	% of Goals		
		Summer	Winter	Energy
Energy Management	18.97%	9.92%	22.96%	0.00%
Technical Potential	18.33%	33.10%	15.99%	50.55%
Home Energy Improvement	13.81%	22.04%	37.54%	17.56%
Interruptible Service	10.23%	0.28%	0.32%	0.00%
Residential Education	8.25%	7.39%	4.99%	8.97%

In the event the Commission wishes to reduce the rate impact of PEF's DSM Plan, these five programs represent the largest contributors to the ECCR clause. The increase in monthly rates required by PEF's DSM Plan is compounded by the current economic situation, in which an increase in the cost of electricity is undesirable. Staff would note that if a program is removed to reduce the rate impact, the Company's goals should be modified accordingly.

As discussed in Issue 1, staff recommends that PEF should file specific program modifications or additions that are needed in order for the 2010 DSM Plan to be in compliance with Order No. PSC-10-0198-FOF-EG within 30 days of the Commission's Order in this docket. The Commission will have an opportunity to review these updated values upon receipt of the filing, and can make a determination on whether the programs have an undue rate impact at that time.

Base Rates

While not immediately applied to customer's bills, energy saving DSM programs can also have an impact on a utility's base rates. When revenues go down because fewer kWh were consumed, the utility may have to make up the difference by requesting an increase in rates in order to maintain its authorized Return on Equity (ROE). If a company's ROE falls below the 100 basis point range, the utility may file a petition with this Commission for a rate increase. Based on PEF's current projections the Company's lost revenue from energy savings will not have a basis point impact of more than 100 points until 2016. It is possible that PEF's filing as discussed in Issue 1 could increase the lost revenue contribution and therefore accelerate the need for a base rate proceeding. Other factors may also interact with a company's earnings and may either delay or accelerate a base rate proceeding.

Staff notes that PEF's DSM Plan does include a variety of programs that would allow participation by a wide spectrum of customer groups, including low-income, residential, and commercial customers. While rates may increase due to additional DSM programs, customers should be able to reduce or eliminate the potential rate impact of PEF's DSM Plan by participating in a DSM program. However, because the Commission approved goals were based on the E-TRC Test, which does not consider costs associated with utility incentives, those who do not or cannot participate in an incentive program will not see their monthly utility bill go down unless they directly decrease their consumption of electricity. If that is not possible, non-participants could actually see an increase in the monthly utility bill.

Conclusion

The impact of PEF's proposed programs on costs passed on to customers does not have an undue impact because the increase in program costs correlates with the increase in goals. Inappropriate incentive levels for certain measures may be contributing to higher than necessary costs in some programs, as discussed in the staff analysis. Because PEF has not justified the level of incentives assumed at this time, staff recommends that PEF should not be authorized to recover the costs of such incentives that exceed the cost of the measure. The Commission should evaluate the Company's compliance filing and make a final determination at that time regarding the appropriateness of incentive levels.

Issue 5: Should this docket be closed?

Recommendation: No. This docket should remain open in order for PEF to refile its demand-side management plan within 30 days from the date of this Order. In addition, 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 Order, the programs should not be implemented until after the resolution of the protest. (Fleming, Sayler)

Staff Analysis: This docket should remain open in order for PEF to refile its demand-side management plan within 30 days from the date of this Order. In addition, 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 Order, the programs should not be implemented until after the resolution of the protest.

Description of PEF's DSM Portfolio

RESIDENTIAL DEMAND-SIDE MANAGEMENT PROGRAMS:

1. **Home Energy Check Program** A residential energy audit program which provides customers with an analysis of their energy use and recommendations on how they can save on their electricity bill. The audit also provides education on the implementation of minimal cost energy-saving practices and measures providing PEF the opportunity to promote cost effective measures. The Home Energy Check serves as the foundation for participation in the Home Energy Improvement program through recommendations for the retrofit-type components of the Home Energy Improvement program. The Home Energy Check program offers 6 types of energy audits: Free Walk-Through, Customer-completed Mail-In, Customer Online (Internet Option), Customer Phone Assisted, Home Energy Check for Kids, Paid Walk-Through (Computer Assisted Audit), and Home Energy Rating (Class I, II).

2. **Home Energy Improvement Program** Designed for the existing single family, multi-family and manufactured home customers who want to retrofit with high energy efficiency improvements. All residential customers are eligible to participate in one or more measures of this program. The program builds on customer awareness by utilizing various audit types, contractor participation and PEF influence to educate customers on cost-effective measures relevant to their residence. Goals of the program are to: provide a cost-effective and comprehensive program portfolio of measures across all housing types; improve customer energy savings and demand reduction through the installation of energy efficient equipment and thermal envelope upgrades, obtain energy and demand impacts that are significant, accurate and measurable, and educate the residential retrofit market about best practices, innovative technologies and opportunities to leverage participation in all applicable incentives for managing energy consumption

3. **Residential New Construction Program** Designed to improve the energy efficiency of newly constructed residences in the single family, multi-family and manufactured homes segments. The program seeks to meet the following overall goals: Provide a cost-effective comprehensive program portfolio of measures across all housing types, educate the residential new construction industry and home-buyers/renters about energy efficient building design, obtain energy and demand impacts that are significant, measurable and accurate, evaluate and recommend the most cost-effective energy efficient building envelope and equipment measures for the new construction market.

4. **Neighborhood Energy Saver Program** Designed to assist low-income families with escalating energy costs by making energy efficiency improvements at their residence. Trained professional surveyors and installers representing PEF will offer low-income families in targeted neighborhoods a home energy assessment followed by the installation of specified electric energy conservation measures. While in the home, residents will be provided energy saving tips for improving and sustaining household energy efficiency. The energy conservation measures installed and energy efficiency education provided will be at no cost to the participants.

5. **Low-Income Weatherization Assistance Program** Designed to leverage working relationships with providers to integrate Demand Side Management measures and offer energy efficiency with an education component. Combines weatherization provider partnerships with energy education and energy efficiency improvements to benefit low-income families. Goals of the program are to integrate PEF's Low Income Weatherization Assistance program procedures with the Department of Community Affairs and local home improvement providers to deliver energy efficiency measures to low-income families, identify and educate contractors and low income customers regarding energy saving opportunities to improve home energy efficiency, increase low-income families' participation in PEF's Demand Side Management programs, educate low income families on achievable, sustainable strategies to reduce individual energy bills.

6. **Residential Energy Management Program** A voluntary customer program that allows PEF to reduce peak demand and defer generation construction. Peak demand is reduced by interrupting service to selected electrical equipment with radio controlled switches installed on the customers' premises. These controlled interruptions are at PEF's option during specified time periods and coincident with hours of peak demand.

7. **Residential Education Program** Designed for all existing residential customers, focusing on energy efficiency education and behavioral changes. Builds on the Home Energy Check program, utilizing all energy audit types. Customers will be provided with energy efficiency tips and examples of easily installed energy efficiency measures. The program promotes continued customer involvement by demonstrating sustainable and measurable energy reductions in energy usage through the implementation of low cost energy efficiency measures. The customer will receive a residential Energy Efficiency Kit that contains items that are program approved and easily implemented for energy efficiency, such as energy efficient lighting, thermometers, weatherization items, low-flow devices as well as education for the customer on the savings associated with the installation of the items in the kit.

8. **Technical Potential Program** Focused on providing savings opportunities for customers who want to reduce energy consumption but may be unable to make the necessary capital investments to do so. Promotes low-cost measures that have a payback period of two years or less, including but not limited to: installation of water heater blanket, HVAC annual maintenance, installation of solar window screens, electronically commutated motors as part of HVAC replacement 16 SEER or higher, pool pump replacement - variable speed, residential lighting (CFLs), refrigerator and freezer recycling, and air filter replacement. Since many of the measures in this program share the same general target audience as the Home Energy Improvement program, these measures will be marketed through the Home Energy Improvement Program and other programs as appropriate.

COMMERCIAL/INDUSTRIAL CONSERVATION PROGRAMS:

1. **Business Energy Check Program** An energy audit program that provides commercial, industrial and governmental customers with an analysis of their energy usage as well as recommendations on how they can save on their electric bill. The audit encourages customers to implement minimal cost energy-saving practices and measures. The audit also provides PEF the opportunity to promote cost effective measures in customers' facilities. The Business Energy Check program serves as the foundation for other commercial, industrial and governmental Demand Side Management programs. The Business Energy Check program offers the following types of audits: Type 1: Free Walk-Through Type 2: Paid Walk-Through Type 3: Customer Online (Internet Option) Type 4: Customer Phone Assisted

2. **Better Business Program** Designed for all existing commercial, industrial, and government customers who want to retrofit with high efficiency improvements. Educates customers on cost effective measures relevant to their businesses. Focused on improving customer energy savings and demand reduction through the installation of energy efficient equipment and thermal envelope upgrades, obtaining energy and demand reductions that are significant, accurate and measurable, educating the commercial retrofit market about best practices, innovative technologies and opportunities to participate in additional non-PEF incentives for managing energy consumption.

3. **Commercial Industrial New Construction Program** Designed to improve the energy efficient construction of commercial buildings by educating the commercial new construction industry about energy efficient commercial building design. Customers will be provided with current information on innovative technologies for managing energy consumption to maximize participation.

4. **Business Energy Saver Program** Designed to encourage and educate business customers located in low income areas by demonstration and installation of sustainable energy conservation measures to help control and reduce energy consumption. Trained, professional surveyors and installers representing PEF will offer businesses an energy assessment followed by the installation of specified electric energy conservation measures at no cost to the participants. Provide one-on-one customer education on energy efficiency techniques and the installation of energy conservation measures to create an immediate measurable and sustainable energy reduction in their business Promote behavioral changes that will help businesses in targeted areas to more effectively control their energy consumption over time

5. **Commercial Education Program** Offers educational and behavior change information to all commercial customers. Provides customers with sustainable educational and behavioral energy saving examples of easily installed energy conservation measures to reduce energy consumption. Promotes continued customer involvement by demonstrating sustainable and measureable energy reduction in the business' energy consumption by the implementation of low-cost energy conservation measures.

6. **Commercial Green Building New Construction Program** Designed to encourage the energy efficient construction of new commercial facilities according to guidelines set forth by LEED-NC by offering a capped incentive in the amount of 50% of the registration and certification fees for obtaining a LEED-NC certificate. The LEED-NC rating system for commercial buildings focuses on improving energy efficiency, reducing carbon emissions, and addressing other environmental and human-health outcomes.

7. **Innovation Incentive Program** Encourages customers to make capital investments for the installation of energy efficiency measures which reduce peak KW and energy on the PEF system. Offers customized incentives specifically designed for individual innovative projects which are not otherwise addressed by PEF Demand Side Management programs. Representative examples of energy efficient technologies that would be considered under this program include, but are not limited to, refrigeration equipment replacement and new lighting technologies. PEF will perform a customer-specific cost-effectiveness analysis for each project being considered under the Innovation Incentive program, using the Commission-approved cost effectiveness tests described in Rule 25-17.008, Florida Administrative Code. The customer's incentive shall be based upon the cost effectiveness test results and will be the lesser of 50% of the total project cost or buy down to a two year payback. The maximum incentive for one facility or premise is $500,000 per year. For large, complex engineering projects, PEF reserves the right to stage the total incentive amount. After PEF has reviewed and approved the project, an application will be executed between PEF and the customer, in which PEF agrees to subsidize the customer upon completion and inspection of the project.

8. **Standby Generation Program** Seeks to reduce PEF's demand based upon the indirect control of customer equipment where customer's standby generation capacity is at least 50 KW. . Available to all commercial and industrial customers who have on-site generation capability with a generation capacity of at least 50 KW. Participants receive a monthly credit on their energy bill according to the demonstrated ability of the customer to reduce demand at PEF's request. An additional credit will be based on the KWh the customer provides to support customer O&M associated with run time requested by PEF.

9. **Interruptible Service program** Direct load control program that reduces PEF's demand at times of capacity shortage during peak or emergency conditions. Available to any nonresidential customer willing to have their power interrupted by allowing PEF remote control of the circuit breaker or disconnect switch supplying the customer's equipment. If purchased power is available at the time of potential interruption, customers who choose not to have their load interrupted will be assessed at the price of purchased power supplied. Participating customers will receive a monthly interruptible demand credit based on their billing demand and billing load factor.

10. **Curtailable Service Program** Tarriffed indirect load control program to reduce PEF's demand at times of capacity shortage during peak or emergency conditions. Available to any nonresidential customer who agrees to curtail 25% of their average monthly billing demand for CS-2 and CST-2 and a minimum of 2000 KW for CS-3 and CST-3. Participating customers receive a monthly curtailable demand credit based on their

curtailable demand and billing load factor. If purchased power is available, customers who choose not to reduce their load will be assessed charges as set forth in the tariff.

11. **Business Energy Response Program** Tariffed direct load control program that utilizes a "smart meter" that is connected to the PEF Advanced Metering Infrastructure/Demand Response network with two-way communications active. Provides time-of-use energy information, enabling the customer to utilize current energy usage data to identify opportunities to reduce electric consumption during high peak/rate periods. A critical peak rebate incentive will be offered to encourage customers to reduce load during peak events by allowing PEF direct load control of their air-conditioning systems and/or interfacing with their energy management systems.

RENEWABLE PORTFOLIO:

The six programs in this portfolio are designed to emphasize the benefits of solar photovoltaic technology and encourage the development of renewable programs, with a focus on low income and education pilots. The programs will be implemented over a five year period.

Solar Water Heating for Low-income Residential Customers PEF will collaborate with non-profit builders to provide low-income families with a residential solar thermal water heater while the home is under construction. The solar thermal system will be provided at no cost to the non-profit builders or the residential participants. The incentive for this program is the total cost of the solar thermal system plus the associated installation cost. The program will be limited to a targeted annual incentive cap of $90,000.

Solar Water Heating with Energy Management Encourages residential customers to install new solar thermal water heating systems. This program incorporates a long standing cost effective Demand Side Management program with the requirement for customers to participate in our residential demand response program. Participants will receive a one-time $550 rebate designed to reduce the upfront cost of the renewable energy system and will also receive a monthly bill credit for participating in the residential demand response program. This program was designed with the support and input of the solar industry. The program will record participant occupancy levels to capture the most accurate energy savings. The program will be limited to a targeted annual incentive cap of $1,237,500.

Residential Solar Photovoltaic This pilot promotes the installation of renewable energy systems by reducing the participating customer's initial investment. The program requires participants to also participate in at least one residential energy efficiency measure. Participating customers receive a rebate of up to $2.00 per Watt of the PV dc power rating up to a $20,000 maximum for installing a new PV system. The program will be limited to a targeted annual incentive cap of $1,000,000 per year.

Commercial Solar Photovoltaic Pilot program encourages customers to install new solar PV systems on their facilities by providing customers with a higher return on their investment. The program is intended to increase renewable energy generation on PEF's system and increase participation in DSM measures by requiring customers to participate in at least one existing

commercial energy efficiency measure. Rebates for participating customers who install a new PV system range from $1.00 to $2.00 per Watt based upon the PV system's dc power rating. Total incentives per participant will be limited to $130,000, based on a maximum installation of 100KW. The program will be limited to a targeted annual incentive cap of $1,000,000 per year.

Photovoltaic for Schools Pilot program allows participating public schools to receive new PV systems at no cost to the school. These systems will be installed, owned, operated and maintained by PEF for a period of 5 years, after which the school assumes ownership and system benefits. The program eliminates the initial investment required to install a renewable solar PV system, increases renewable energy generation on PEF's system, and may also increase participation in existing residential DSM measures through energy education of students. The program will be limited to an annual target of one system with a rating up to 100 KW installed on a post secondary public school and ten 10 KW systems with battery backup option installed on public schools, preferably serving as emergency shelters. Post secondary school participation will be prioritized based on attendance and consumption associated with their main campus. Public schools will be selected using a competitive process that aligns with Florida's SunSmart E-Shelters Program Application with an emphasis placed on the schools commitment to energy efficiency and renewable energy education. The incentive for this program is the total equipment cost of the solar PV system plus the associated installation, operation and maintenance cost for the first five years. The solar PV system and installation will be considered a rebate that will eliminate the cost to the customer for providing new renewable energy system on their facilities. This program places an emphasis on energy education and promotes environmental stewardship. As such, customers participating in the Winter-Only Energy Management or Year Round Energy Management residential demand response programs can elect to contribute their monthly credit toward a fund design to support and promote energy education. The fund will accumulate associated participant credits for a period of two years, at which time the customer may elect to renew for an additional two years. All proceeds collected from participating customers and their associated monthly credits will be used to promote energy efficiency and renewable energy educational opportunities.

Research & Demonstration The purpose of this program is to research technology and establish R&D initiatives to support the development of renewable energy pilot programs. Demonstration projects will provide real-world field testing to assist in the development of these initiatives. The program will be limited to a targeted annual expenditure cap of 5% of the total Demand-Side Renewable Portfolio annual expenditures. Proposed projects will be designed to support the development of future solar and renewable energy pilot programs. Each proposed R&D project will be investigated, analyzed for costs and benefits, modeled and field tested.

OTHER PROGRAMS:

Technology Development Program The purpose of this program is to establish a system for meeting the goals in Section 366.82(2), Florida Statutes, and Rule 25-17, Florida Administrative Code. PEF will undertake certain research and demonstration projects which provide support for the development of cost effective demand reduction, energy efficiency, and alternative energy programs. The program is designed to allow PEF to investigate technologies and support the development of new programs from initial concept through submittal to the Commission for consideration and approval. Eligible customers will be dependent on the type of project proposed. Each project that is proposed and investigated will have to meet one or more of the goals identified in Section 366.82(2), Florida Statutes, and Rule 25-17, Florida Administrative Code. Examples of potential projects that may be funded under this program include: demand reduction, energy efficiency technologies, such as energy awareness devices; market transformation initiatives, such as smart charging for electric vehicles; and other alternative energy and innovative technologies.

All costs will be included as part of the pre-approved project expenditures under this program. At the discretion of PEF, annual basis expenditures up to 1% of the previous year's Energy Conservation Cost Recovery budget, not to exceed $2,000,000 annually, may be made and recovered through the Energy Conservation Cost Recovery clause for all research projects that are proposed and investigated. If any single project's expenditures exceed 25% of the preapproved annual program budget, a status report will be filed as a component of the Energy Conservation Cost Recovery Clause Projection and True-Up filings. The status report will identify each project under investigation with disbursements exceeding 25% of the pre-approved annual program budget, the scope and purpose of the project, its development schedule identifying accomplishments and projections, and the project's actual and proposed expenditures for Commission review. If total program expenditures are projected to exceed 1% of the previous year's total Energy Conservation Cost Recovery expenditure, PEF will apply to the Commission staff for approval to proceed with the particular project which would cause PEF to exceed the limit. Finally, PEF will account for and maintain records of all expenses for each project in accordance with Rule 25-17.015, Florida Administrative Code.

Qualifying Facilities Program An existing program, mandated by Rule 25-17.082, F.A.C., under which PEF develops standard offer contracts, negotiates, enters into, amends and restructures firm energy and capacity contracts entered into with qualifying cogeneration and small power production facilities, and administers all such contracts.