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October 15, 2010

Ms. Ann Cole, Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

Re: Docket 100160-EG  
PEF's Petition for Approval of Demand-side Management Plan  
Response to Staff's 7<sup>th</sup> Data Request (Nos. 1-11)

Dear Ms. Cole:

Enclosed for filing is the original and 5 copies of PEF's Response to Staff's 7th Data Request in the above-referenced docket.

Thank you for your assistance in this matter and please let me know if you have any questions.

Sincerely,

Dianne M. Triplett

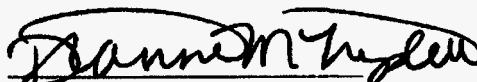
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**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic and U.S. Mail this 16<sup>th</sup> day of October, 2010 to all parties of record as indicated below.



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## PEF'S RESPONSE TO STAFF'S 7<sup>th</sup> DATA REQUEST

The citations in the following questions refer to the July 14, 2010 letter filed by the Southern Alliance for Clean Energy (SACE) in Docket No. 100160-EG.

### Cost Controls

1. Please explain or describe any program cost controls that PEF incorporates into its program design and/or monitoring.

### **RESPONSE:**

PEF incorporates program cost controls at every phase of its program, starting with its program design, then into implementation and monitoring, and ending with the decision to phase out a program. Certain controls are applied at all stages of the program life. Specifically, PEF utilizes internal auditing to ensure that program expenses are reasonable and prudent. In addition, as part of the Commission's annual process associated with cost recovery, the Commission reviews and conducts detailed audits of PEF's program costs for reasonableness and prudence. Finally, PEF utilizes standardized policies and procedures, and deploys workforce strategies and process improvements to reduce costs.

PEF also incorporates specific program cost controls at the various stages of the program, as described below:

1. Program Design - This is the first opportunity to implement program cost controls. PEF takes advantage of this opportunity by designing flexibility into its programs to allow it to expand and contract to meet program participation levels. PEF also uses market research to set appropriate cost levels to meet the goals of the program in the most cost-effective manner.
2. Program Implementation- PEF controls costs by using a combination of trained PEF employees and supplemental, seasonal contract labor to implement its programs. PEF also competitively bids work as appropriate.
3. Program monitoring/maintenance. PEF continues its cost controls during this phase by monitoring contractor and material costs and assessing market conditions to determine if program modifications are needed.
4. Program phase-out- During this phase, PEF determines whether it remains cost-effective to continue implementing a program or whether it is better to modify or close the program. This is a quantitative and qualitative analysis that involves consideration of participation levels, program costs, and cost-effectiveness of the program. By reassessing programs for cost-effectiveness, PEF ensures continued value to its customers.

### Residential Audits

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2. Please explain or describe any existing or proposed PEF programs that make use of demographic and energy analysis to emphasize behavioral changes, if any. (Appendix F)

**RESPONSE:**

PEF's DSM Plan filed on March 30, 2010 included two programs, Residential Education Program and Commercial Education Program, designed specifically to motivate the adoption of behaviors that improve the efficient use of energy. The programs will be available to all existing residential and commercial customers, focusing on energy efficiency education and behavioral changes. These programs build on the Home Energy Check and Business Energy Check programs, utilizing all energy audit types. Participants will be provided with energy efficiency tips and samples of easily installed energy efficiency measures. The programs promote continued customer involvement by demonstrating sustainable and measurable energy reductions in energy usage through the implementation of low cost energy efficiency measures.

PEF also offers a variety of energy checks that provide participants with an analysis of their energy consumption and insight on simple behavioral changes and practices that effectively reduce energy usage. Progress Energy's Neighborhood Energy Saver program is a custom energy conservation program designed to assist low-income households in targeted neighborhoods. Participants of the program will receive a home energy assessment by a trained professional energy evaluator, followed by the direct installation of specified electric energy conservation measures. Residents will also be provided energy saving tips for improving and sustaining household energy efficiency. The program is provided at no cost to participants.

Additionally, PEF's DSM Plan filed on March 30, 2010 included a behavioral measure as part of its Technical Potential Program. PEF will continue to include this measure as a stand-alone home comparison report program in PEF's Revised Goals Scenario in its upcoming filing due on November 3rd. This program targets behavioral modification and energy reductions by providing usage analysis and comparative household energy information.

**Residential New Construction**

3. On page H-2 of Appendix H, SACE states, "[f]our Florida utilities forecast savings of 1,300 to 1,600 kWh per home. Progress Energy forecasts savings at about half that level (500 to 700 kWh)." Please explain why PEF's forecast savings amounts are approximately half the level of the four other Florida utilities referenced above.

**RESPONSE:**

PEF developed its Residential New Construction Program to consider the impacts of upcoming changes to the state's building codes. These changes will result in the incorporation

of all currently available technologies to meet and exceed code, while savings impacts per measure will be reduced. PEF's forecasted savings reflect the impacts of building code changes, the number, and the type of measures employed by participants. PEF does not possess detailed information about similarly-targeted programs being offered by the other utilities and, thus, is unable to assess the reasonableness of the average impacts of those utilities. However, differences in savings impacts among utility programs may primarily be due to the mix, composition, and scope of measures within the respective programs.

4. Please explain or describe how PEF expects to obtain approximately 50% market penetration for its Residential New Construction program when other Florida utilities only forecast between 2% and 20% market penetration for similar type programs, according to SACE. (Appendix H: Residential New Construction, page H-2)

**RESPONSE:**

It appears that the annual market penetration rates referenced above are inconsistent for comparative purposes. For example, PEF's penetration rate is a cumulative penetration rate. By comparison the 2% rate quoted by SACE for TECO is an annual penetration rate for the year 2010. The 20% rate for FPL also appears to be an annual penetration rate. Additionally, differences in the mix and composition of measures within the respective utility programs may be creating further disparities when comparing market penetration rates.

Based on the high goals approved for Progress Energy, PEF had to assume very aggressive penetration rates for this program in order to attempt to meet the original goal. As such, PEF also had to assume aggressive marketing and high incentive costs. Even with these aggressive assumptions, PEF knows that practical, real-world constraints will challenge its ability to achieve these penetration rates over the planning period. As building codes increase, saving impacts will be further reduced, forcing even more aggressive strategies and/or new technologies to be identified and employed to meet this goal. However, these aggressive assumptions were made in a good-faith effort to put forth the best plan to meet the original Commission goal.

**Residential Lighting**

5. On page I-2 of Appendix I of SACE's comments filed on July 14, 2010, SACE states that although 25% of PEF's savings are projected to come from residential lighting, the majority of the CFL's (93%) will not be installed until after federal standards are phased in. If this statement is true, please explain how PEF calculated the kW and kWh savings associated with this program that are above and beyond the pending federal standards. Please note, SACE indicated that it excluded low-income programs from its residential lighting analysis.

**RESPONSE:**

PEF reiterates that 608 GWh of the Commission approved goal of 3,205 GWh was based on the technical potential, not achievable potential, of residential lighting in PEF's service

territory. Given that this represents over 20% of the cumulative goal, PEF had to consider inclusion of the impacts by this measure over the planning period.

However, the company equally recognizes that market penetration of CFLs is already occurring in a rapid manner. Market studies indicate that 70% of PEF's residential customers have already purchased at least 1 CFL, and over 20% have already replaced all possible sockets with CFLs. In addition, the Energy Independent Security Act (EISA) impacts begin to phase in between 2012-2014, creating a level of uncertainty for any utility as to how to incorporate commonly-used CFLs into a portfolio in a cost-effective manner. Thus, PEF chose to shift a representative portion of the 608 GWh technical potential impacts towards the latter part of the 10-year plan, so as to deal with these uncertainties and risks, await further clarity in the marketplace, and monitor the development of potentially new cost-effective alternative lighting technologies.

In its upcoming filing due on November 3<sup>rd</sup>, PEF's Revised Goal Scenario will contain changes to the residential lighting measure, and will propose a stand-alone residential lighting program that targets the "achievable potential" rather than the "technical potential", while still balancing the risks and uncertainties created by EISA and natural market dynamics.

### Residential HVAC

6. Please explain or describe whether PEF's costs are 3 to 10 times greater than peer utilities for programs which incorporate maintenance and replacement of residential heating and air conditioning systems.

#### **RESPONSE:**

PEF assumes that this question relates to the Residential HVAC related costs being referred to on page J-1 of Appendix J of SACE's comments filed on July 14, 2010. This information is not a completely accurate ("apples-to-apples") comparative analysis as SACE attempts to compare certain PEF measures against whole programs of other utilities which likely consist of a different mix of measures.

It is noted that PEF has assumed a substantially higher level of incentive costs over the 10-year period relative to the other Florida utilities. The aggressive goal established by the Commission, which is 200 to 400 percent higher than the other Florida utilities, required the company to assume a level of incentives necessary to maximize participation levels for the these measures, such as the SEER 16+ measure reflected in PEF Technical Potential Program. PEF reiterates the 100% penetration projection for the Technical Potential Program is not supported by any achievable study. However, such an assumption was required in order to meet the Commission's 3,205 GWh goal.

In its upcoming filing due on November 3<sup>rd</sup>, PEF will include a Revised Goals Scenario plan that it expects to be achievable, cost-effective, and more in line with peer Florida utilities, both in energy savings and in cost to customers

Non-Residential Audits/Evaluation

7. Please refer to page L-1 of Appendix L of SACE's comments filed on July 14, 2010. Please explain or describe whether the audit costs for PEF's Business Energy Check program and the comparison of costs per audit with other utilities is an accurate representation.

**RESPONSE:**

The information regarding the cost per audits reflected on page L-1 of Appendix L of SACE's comments filed on July 14, 2010 is not an accurate ("apples-to-apples") comparative analysis of non-residential audit programs, primarily because of the composition of each utility's program.

For example, PEF offers a larger range of audit options for its C&I customers with four different types of non-residential audits. By contrast, Gulf offers three types and FPL and TECO offers two types. It is unclear from the information available to PEF with regards to the other utilities programs as to the extent of the on-site audits being conducted by the other Florida utilities.

In addition to the direct labor costs associated with conducting non-residential audits, PEF's Business Energy Check program includes costs for a kit containing CFL's, thermometers, and a smart strip. Also, PEF's projected program cost projections include transportation, promotion and marketing, IT support, and other indirect support costs. PEF does not possess sufficient detailed information about similarly-titled programs being offered by the other Florida utilities, and as result, is unable to assess the comparability of program costs between PEF and other utilities.

8. Please explain or describe how PEF determined the costs of the sample items SACE identified on page L-2: CFLs, refrigerator thermometer, switch plate thermometer and smart strip. (Appendix L)

**RESPONSE:**

PEF based its material costs on information obtained from various vendors, and then appropriate overhead rates were applied including labor installation, and administration costs. These costs were then increased over the 10-year period by 7 to 10% depending on the measure.

Commercial Lighting

9. Please provide an estimate of the cost per project and cost per annual kWh saved of the commercial lighting measures contained in PEF's Better Business and Commercial Education Tools programs to aid in the Comparison of Utility Commercial Lighting Programs as shown in the table on page O-1 of Appendix O.

**Better Business: Lighting Annual Savings (includes AC reduction in cooling) and Costs**

Measure	Annual kWh Saved	Project Cost Avg. 10 Yrs	Cost per kWh Saved
Premium T8 4 lamps with electronic ballast	329	\$35	\$0.11
1 - CFL 26watt hardwire	259	\$22	\$0.08
1 - Ceramic Metal Halide 39watt	459	\$117	\$0.25
1-High Bay T-5	781	\$214	\$0.27
LED Food Cabinet Display—6 LF	1,039	\$1,171	\$1.12
Occupancy Sensor per Lighting KW	1,145	\$246	\$0.21

The Itron E-TRC High Case commercial lighting measures have approximately 400% higher incentives than PEF's current 2006 DSM plan. The table above reflects the E-TRC high case criteria: Incentives at a level to meet a 2-year payback or 100% of incremental participant cost.

**Commercial Education Tools Annual Savings and Costs**

Measure	Annual kWh Saved	Project Cost Avg. 10 Yrs	Cost per kWh Saved
3 - CFL 15watt	321	\$93	\$0.29

Commercial HVAC

10. Please provide an estimate of the cost per project and cost per annual kWh saved of the commercial HVAC measures contained in PEF's Better Business program to aid in the Comparison of Utility Commercial HVAC Programs as shown in the table on page P-1 of Appendix P.

**HVAC Annual Savings and Costs  
 (Savings per ton for every type of system)**



Measure	Annual kWh Saved	Project Cost Avg. 10 Yrs	Cost per kWh Saved
Centrifugal chiller 0.63 kw	68	\$208	\$3.06
Air Cooled chiller EER 1.26	176	\$190	\$1.08
DX packaged EER 10.6	199	\$349	\$1.75
PTHP EER 9.7	593	\$327	\$0.55
Duct Repair	292	\$396	\$1.35
DX Tune Up	181	\$63	\$0.35

The Itron E-TRC High Case commercial HVAC measures have approximately 500% higher incentives than PEF's current 2006 DSM plan which has a weighted average project cost of 12 cents per KWH. The table above reflects the E-TRC high case criteria: Incentives at a level to meet a 2-year payback or 100% of incremental participant cost.

Other

11. Please provide any other information that would be helpful to the Commission's analysis and understanding of PEF's proposed DSM programs in comparison to programs offered by peer utilities with regard to program design, cost-effectiveness and energy savings. (Appendix T)

**RESPONSE:**

Progress Energy believes it is helpful to consider that there are two approaches to the development of a DSM program plan. One approach is to set the energy savings goal and then "back in" to that number by developing programs and measures, with associated costs and and measures that would otherwise not be considered must be implemented only for purposes of reaching the numerical goal. Additionally, extraordinary incentive levels and program costs must be employed. Each of these actions effectively deteriorates the overall cost effectiveness of the portfolio. participant projections, that will achieve that number. An alternative approach screens measures based on their cost effectiveness. The process then leverages historic experience, industry review, and market research to determine which programs and measures, at what participation levels, are cost-effective and most logical for the utility to implement. The energy savings goal is then naturally established based on the expected savings from the chosen programs and measures.

Under the first approach, the set numerical goal imposes certain restrictions on the utility's options for designing the portfolio. If the goal is established too high, programs

When using the second approach, the ultimate portfolio energy savings to be achieved is based only on those programs and measures that make the most sense. Because the number is a product of using only those programs that are most cost effective and achievable, as well as based on sound research and historic experience, the resulting

energy savings are realistic, achievable, and attained with maximum cost effectiveness. If consistently applied, this approach can also assure parity among peer utilities with similar customer composition and geographical proximity.

Progress Energy believes that its development of a DSM program plan to meet the Commission's original 3,205 GWH goal falls into the first approach described above. By necessity, Progress Energy had to incorporate programs, measures, and participation levels that would otherwise not be cost-effective over the 10-year planning period. It also had to assume aggressive marketing, advertising, and incentive costs to have any chance of meeting that goal.

In its upcoming filing, Progress Energy will file a Revised Goal Scenario plan using the second approach discussed above and expects that plan to be achievable, cost-effective, and more in line with peer Florida utilities both in energy savings and in cost to customers. Progress Energy believes that this is the same approach that other peer utilities have used to develop their respective plans, and this will bring Progress Energy more in line with its peers and will move PEF closer to achieving cost parity as well if the Commission accepts that plan.