

Dorothy Menasco

100160-EG

**From:** Stright, Lisa [Lisa.Stright@pgnmail.com]  
**Sent:** Wednesday, December 22, 2010 3:39 PM  
**To:** Filings@psc.state.fl.us  
**Cc:** Marguerite McLean; Triplett, Dianne; Burnett, John; Lewis Jr, Paul; Lee Eng Tan; Vicki Gordon Kaufman; Jon C. Moyle Jr.; John W. McWhirter, Jr.; James Brew; george@cavros-law.com; suzannebrownless@comcast.net; rdc\_law@swbell.net  
**Subject:** E-filing Resubmission: PEF Response to Staff's 9th Data Request - Dkt# 100160-EG  
**Attachments:** Document.pdf  
 For resubmission.....

**This electronic filing is made by:**

**Dianne Triplett**  
**299 First Avenue North**  
**St. Petersburg, FL 33733**  
**(727) 820-5184**  
[dianne.triplett@pgnmail.com](mailto:dianne.triplett@pgnmail.com)

**Docket No. 100160-EG**

**On behalf of Progress Energy Florida**

**Consisting of 39 pages.**

**The attached document for filing is PEF's**  
**Responses to Staff's 9<sup>th</sup> Data Request**  
**in the above referenced docket.**

*Lisa Stright*

Regulatory Analyst - Legal Dept.  
 Progress Energy Svc Co.  
 106 E. College Ave., Suite 800  
 Tallahassee, FL 32301  
 direct line: (850) 521-1425  
 VN 230-5095  
[lisa.stright@pgnmail.com](mailto:lisa.stright@pgnmail.com)

**From:** Filings@psc.state.fl.us [mailto:Filings@PSC.STATE.FL.US]  
**Sent:** Wednesday, December 22, 2010 3:19 PM  
**To:** Stright, Lisa  
**Cc:** Marguerite McLean; Triplett, Dianne; Burnett, John; Lewis Jr, Paul; Lee Eng Tan; Vicki Gordon Kaufman; Jon C. Moyle Jr.; John W. McWhirter, Jr.; James Brew; george@cavros-law.com; suzannebrownless@comcast.net; rdc\_law@swbell.net  
**Subject:** FW: PEF Response to Staff's 9th Data Request - Dkt# 100160-EG

Ms. Stright:

12/22/2010

DOCUMENT NUMBER - DATE

10107 DEC 22 0

FPSC-COMMISSION CLERK

We have received the attachments referenced in your e-filing below. Please note that per Commission e-filing requirements, any attachments must be included in the electronic document (cover letter, petition, certificate of service, etc.) to which it relates, and shall not be submitted as a separate attachment to the email (one attachment to the e-mail). A link to the Commission's e-filing requirements is included for your convenience:

<http://www.psc.state.fl.us/dockets/e-filings/>

Your filing will need to be revised and resubmitted in order to be eligible for electronic filing.

Please feel free to call our office if you have any questions.

*Dorothy Menasco*  
*Chief Deputy Commission Clerk*  
*Florida Public Service Commission*  
*Office of Commission Clerk*  
*850-413-6770*

Please note: Florida has a very broad public records law. Most written communications to or from state officials regarding state business are public records available to the public and media upon request. Your e-mail communications may therefore be subject to public disclosure.

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**From:** Stright, Lisa [mailto:Lisa.Stright@pgnmail.com]  
**Sent:** Wednesday, December 22, 2010 9:36 AM  
**To:** Filings@psc.state.fl.us  
**Cc:** Triplett, Dianne; Burnett, John; Lewis Jr, Paul; Lee Eng Tan; Vicki Gordon Kaufman; Jon C. Moyle Jr.; John W. McWhirter, Jr.; James Brew; george@cavros-law.com; suzannebrownless@comcast.net; rdc\_law@swbell.net  
**Subject:** PEF Response to Staff's 9th Data Request - Dkt# 100160-EG

**This electronic filing is made by:**

**Dianne Triplett**  
**299 First Avenue North**  
**St. Petersburg, FL 33733**  
**(727) 820-5184**  
**[dianne.triplett@pgnmail.com](mailto:dianne.triplett@pgnmail.com)**

**Docket No. 100160-EG**

**On behalf of Progress Energy Florida**

**Consisting of 39 pages.**

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in the above referenced docket.**

*Lisa Stright*  
Regulatory Analyst - Legal Dept.  
Progress Energy Svc Co.  
106 E. College Ave., Suite 800  
Tallahassee, FL 32301  
direct line: (850) 521-1425  
VN 230-5095

12/22/2010

[lisa.stright@pgnmail.com](mailto:lisa.stright@pgnmail.com)



December 21, 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 9<sup>th</sup> Data Request (Nos. 1-11)

Dear Ms. Cole:

Enclosed for filing is the original and 5 copies of PEF's Responses to Staff's 9<sup>th</sup> Data Request in the above-referenced docket.

Also enclosed, per the informal meeting held December 9, 2010, is a copy of PEF's program participation standards reflecting certain changes to which PEF and Staff agreed. Those changes are noted by use of strike-through type for ease of reference. Please note that, with respect to the requirement that customers implement at least one other energy efficiency measure, PEF decided to remove the requirement rather than clarify it as discussed during the informal meeting. After further reflection, PEF believes that removing it will eliminate any unforeseen and unintended barriers to participation in the solar pilot programs.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Dianne M. Triplett".

Dianne M. Triplett

DMT/at

DOCUMENT NUMBER-DATE

10107 DEC 22 0

FPSC-COMMISSION CLERK

PROGRESS ENERGY FLORIDA'S RESPONSES TO STAFF'S 9<sup>TH</sup> DATA REQUEST  
DOCKET No. 100160-EG

1. Please explain the plan for offering solar pilot programs to customers in 2011, including the anticipated start date?

Answer: Progress Energy plans to implement the solar pilot programs as soon as possible after the program participation standards are approved. Preparation work has already begun in anticipation of receiving final approval on the standards. Program complexity and expected participation levels will be a primary consideration on how quickly each program can be implemented. Since the PV for Schools program aligns closely with Florida's SunSmart E-Shelters Program, PEF will utilize existing selection criteria to help launch this program more quickly, but will also need to develop an energy production tracking system to monitor and measure system performance. The Residential and Commercial PV programs involve a large number of potential participants, so it is imperative that an adequate application tracking system is in place to ensure the elements of participation are documented and incentives are guaranteed up to the incentive cap. Exclusion of this step could result in over-committal of available funds.

Anticipated start times required for programs are:

<b>PEF Demand-Side Management Renewable Program</b>	<b>Anticipated Start Dates upon administrative approval</b>
Solar Water Heating with Energy Management	6 weeks
Photovoltaic for Schools	2 – 4 weeks
Solar Water Heating for Low-income Residential	8 weeks
Residential Solar Photovoltaic	16 weeks *
Commercial Solar Photovoltaic	16 weeks *

\*Residential and Commercial Solar Photovoltaic programs will require the implementation of an application tracking system to manage a large number of potential participants and avoid over-assignment of available funds.

2. Please explain what obligations will be passed to subsequent owners of a system that has received rebates? For example: renewable energy credits, access to the system, data from the system.

Answer: There is no obligation for subsequent owners of a system. During the installation process, the systems must be accessible for verification by PEF and/or its contractor to ensure compliance with program standards.

## Data Collection

3. **Please explain how the company will measure and verify energy production and savings from devices funded through the pilot programs?**

Answer: The Solar for Schools pilot will include metering of the installed Solar PV systems. For all other programs PEF will use existing metering, billing data, and other applicable data (such as weather conditions, housing/appliance/demographic characteristics, etc.) to estimate the energy savings for each pilot using engineering and statistical analyses. If needed, PEF may elect to recruit voluntary participants to create a sample of installations for additional measurement and verification purposes.

4. **Please explain how the company will determine cost effectiveness?**

Answer: Cost-effectiveness will be measured on a program basis using the E-RIM, E-TRC and Participant tests based on the best available estimates of program demand and energy savings, utility program costs, customer incentive payments and participant costs.

5. **Please explain what criteria the company plans to use to determine if the pilot program will continue?**

Answer: At this time PEF has not identified the specific criteria to use for determining whether or not the renewable pilots should be continued beyond the current approved term of the pilots primarily because of the potential for significant changes in technological, economic, regulatory and/or market factors over this time period. Some of the key factors PEF expects to evaluate and consider are cost-effectiveness, customer adoption, maintenance requirements and costs, customer satisfaction, equipment and installation cost trends, and electric price trends.

6. **Does the company plan to collect data from the solar devices installed through the pilot programs?**

Answer: Yes. PEF plans to collect metering data from the PV systems installed under the Solar for Schools pilot. With respect to other pilot programs, as indicated in the response to Question 3, PEF may elect, on an as-needed basis, to recruit voluntary participants to create a sample of installations in order to collect data from installed devices

- a. **If so, what is the company's plan for presenting the data to the FPSC?**

Answer: As part of its annual report filed each March to the FPSC, PEF is proposing to present data collected from separately metered installations under the Solar for Schools pilot along with estimated savings related to the other pilot programs. Estimated savings were based on actual information from PEF's ECON site. The estimated or deemed savings related to pilots other than Solar for

Schools pilot program will be updated to reflect data collected through the monitoring of voluntary participants referenced above in PEF's response to Question #3.

b. **If not, please explain?**

Answer: N/A

7. **Please explain what access the company will have to systems to gather data for the pilot programs?**

Answer: PEF expects to have full access to the Solar for Schools PV systems. For all other renewable pilots, the amount of access will be dependent upon what will be voluntarily allowed by each individual customer through recruitment referenced in PEF's response to Question 3, above. PEF has not experienced lack of access in previously approved programs and does not expect access to be a constraint in gathering adequate data on these pilots.

8. **Please explain how excess money within a program will be treated if money has been exhausted within another program in a single year?**

Answer: PEF does not expect to transfer money between programs during the current year. However, as PEF learns about customer acceptance patterns, it may revise incentive caps and program support budgets and shift money between the pilot programs by submitting revisions to the Participation Standards for subsequent years.

#### Solar for Schools

9. **Please explain if the company will be participating in the Sun Smart Schools program, administered by the Florida Solar Energy Center?**

Answer: PEF's Solar for Schools pilot program is independent of the Sun Smart Schools program administered by the Florida Solar Energy Center (FSEC). It will fund PV installations at schools not covered by FSEC's Sun Smart Schools program.

a. **If so, explain whether the Solar for Schools pilot program funds will be used to supplement funding of the planned projects in the Sun Smart Schools program or to fund additional projects?**

Answer: N/A.

b. **If so, please explain if the company plans to coordinate the selection of schools with the Sun Smart Schools program.**

Answer: N/A.

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**10. Please refer to the response to Staff's Eighth Data Request, question number 36.**

**a. Please explain if the cost for interconnection will come from the Solar for Schools Pilot Program?**

Answer: The cost for interconnection for the Solar for Schools Pilot Program will not be funded by the program's budget for the duration of the pilot.

**b. If not, please explain how the costs will be paid?**

Answer: Interconnection costs for the Solar for Schools Pilot Program will continue to be treated as described in PEF's net metering tariff. PEF intends to revisit this treatment if this pilot were to become a permanent program in the future.

#### Low Income Water Heating

**11. Please refer to the response to Staff's Eighth Data Request, question number 11.**

**a. Please explain what criteria the company will use in determining the capacity of the system?**

Answer: The non-profit builders and their solar subcontractors will determine the home's capacity needs and size the system appropriately. Criteria used to determine capacity of the system will vary based on the specific needs of customers and will be influenced by home size, occupancy and irradiance availability. Cost effective solar hot water systems should be sized to provide 50% to 80% of household domestic hot water needs from solar. PEF endorses the "Simplified Sizing Procedure for Solar Domestic Hot Water Systems" from the Florida Solar Energy Center FSEC-GP-10-R01 to determine capacities and collector sizing.

**b. Please explain what criteria the company will use in determining the technology of the system used?**

Answer: Progress Energy does not expect to limit the technologies utilized in these pilot programs and does expect several technologies to be utilized. Progress Energy will evaluate the different technologies based upon the potential energy savings and life cycle maintenance cost.





**PROGRAM PARTICIPATION STANDARDS  
DEMAND-SIDE RENEWABLE PORTFOLIO  
2010 - 2019**

**PROGRESS ENERGY FLORIDA, INC.  
PROGRAM PARTICIPATION STANDARDS  
SOLAR WATER HEATING FOR LOW INCOME  
RESIDENTIAL CUSTOMERS PILOT**

**PROGRESS ENERGY FLORIDA, INC.**  
**PROGRAM PARTICIPATION STANDARDS**  
**SOLAR WATER HEATING FOR LOW INCOME RESIDENTIAL**  
**CUSTOMERS PILOT**

**1. PROGRAM OVERVIEW**

The Solar Water Heating for Low-income Residential Customers Pilot is designed to assist low-income households with energy costs by incorporating a solar thermal water heating system to their residence while it is under construction. Progress Energy Florida (PEF) will collaborate with Florida approved non-profit builders/agencies to provide low-income households with a residential solar thermal water heater. The non-profit builder and/or residential participants will own the solar thermal system provided by PEF and enjoy all energy saving benefits.

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 \$114,000.

Goals of the program are:

1. Provide low-income residential customers with a solar thermal water heating system on their newly constructed home.
2. Increase PEF's renewable energy portfolio
3. Identify and educate non-profit builders and low-income customers about energy saving opportunities to upgrade home energy efficiency.
4. Increase low-income households' participation in PEF's DSM programs.

**2. ELIGIBILITY REQUIREMENTS**

1. The premise must be in PEF's service area and be a newly constructed residential metered customer
2. Do-it-yourself installations are not eligible for program participation.

3. All installations must be accessible for verification by PEF and/or its contractor(s) to ensure compliance with program standards.
4. Florida approved non-profit builders/agencies must submit an application and receive approval for the program incentives prior to installation.
5. PEF will work with multiple non-profit builders/agencies throughout its service territory to distribute solar thermal water heating systems. All non-profit builders/agencies shall complete a memorandum of understanding (MOU) with PEF stating the installation and ownership terms as well as the number of systems that they are eligible to receive in a given year.
6. Low-income and program eligibility will be based upon the requirements of the non-profit builders/agencies participating in the program.
7. The home must support a south facing solar installation with minimal shading obstructions.
8. ~~The customer must transfer to PEF all renewable energy credits (REC's) and other environmental attributes associated with the solar thermal system receiving rebates from PEF. Customers must agree to the following provision: "Because Progress Energy is providing certain rebates for the equipment and/or installation, Customer acknowledges and agrees that Florida Administrative Code Section 25.6.065 does not apply to this Agreement with respect to the ownership of any environmental attributes."~~

### 3. CONTRACTOR REQUIREMENTS

The PEF contractor / low-income builder must comply with all local, state and federal rules and codes. The selected PEF contractor(s) / and or non-profit builder is/are responsible for all work performed and must meet and/or comply with the following requirements:

1. Contractor and/or subcontractor must have appropriate license(s) and meet current insurance requirements for work to be performed. PEF reserves the right to increase insurance requirements above state/federal minimum requirements at its discretion.
2. Contractor and/or subcontractor must comply with all federal, state, and local codes and regulations.
3. Contractors shall indemnify and hold harmless PEF from any and all losses, liabilities, injuries, damages, claims or costs whatsoever caused by items furnished or services rendered as a result of this Pilot Program.
4. PEF reserves the right to request background checks and drug screenings of contractors and/or subcontractors participating in this program.

5. PEF reserves the right to develop and post a list of contractors participating in this program.
6. Use of the PEF name or logo and any Pilot Program marks by contractors and/or subcontractors must be authorized by PEF in writing prior to use.
7. The contractor is responsible for the associated work to be performed, the supervision of their employees and/or subcontractors, and the use of the contractor's own equipment (or rental equipment) to meet the work specifications.
8. All contractors must comply with PEF contractor procedures as well as the manufacturers' specifications specific to this Pilot Program. Failure to do so may result in termination of participation in any or all PEF programs.
9. Contractor and/or subcontractor shall notify PEF of any incident occurring during installation of a pilot program or any follow-up procedure immediately at the time of incident.
10. The contractor and/or subcontractor must correct any deficiency found in the installation or product when advised by a PEF representative and notify the PEF representative of compliance within 30 days of the notification from the PEF representative.
11. Contractor and/or subcontractor doing business with PEF may be subject to additional requirements.

#### 4. INCENTIVES

The incentive payment structure is as follows:

Program Component	Incentive
Solar Water Heating for Low Income Residential Customers Pilot	The solar thermal system will be provided at no cost to the non-profit builder or the residential participant

#### 4.1 INCENTIVE PROCESSING

1. The contractor/builder will submit a completed application and all invoices to PEF within a 45 day period.
2. After a system has passed inspection, or if the system is not selected for inspection, completed invoices will be processed for payment. If, during this inspection PEF determines that the solar installation is unacceptable, a list of deficiencies will be

provided to the contractor/builder. The contractor/builder will be responsible for correcting these deficiencies before re-inspection and processing of the invoice.

3. Incentives are paid to the contractor/builder.

## **5. REPORTING REQUIREMENTS**

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

## **6. EQUIPMENT/MATERIAL AND INSTALLATION SPECIFICATIONS**

1. The solar energy system must comply with all local, state, and federal rules and codes.
2. Solar Domestic Water Heating systems must be certified and approved by the Florida Solar Energy Center (FSEC) and have an FSEC approval number.
3. The system shall be designed to meet a minimum of 50% of the water heating needs.
4. Solar pool heating or photovoltaic systems are not eligible for this program.

**PROGRESS ENERGY FLORIDA, INC.  
PROGRAM PARTICIPATION STANDARDS  
SOLAR WATER HEATING WITH ENERGY  
MANAGEMENT PROGRAM**

**PROGRESS ENERGY FLORIDA, INC.  
PROGRAM PARTICIPATION STANDARDS  
SOLAR WATER HEATING WITH ENERGY MANAGEMENT  
PROGRAM**

**1. PROGRAM OVERVIEW**

The Solar Water Heating with Residential Energy Management Program is designed to reduce system peak demand and increase renewable energy generation on the Progress Energy Florida (PEF) grid. The program will be limited to a targeted annual incentive cap of \$1,237,500 for the solar water heating component of this program.

The program seeks to meet the following overall goals:

1. Obtain energy and demand reductions that are significant and measurable.
2. Enhance customers'/contractors' awareness of the capabilities of renewable energy technologies.
3. Educate customers/contractors about additional opportunities to generate/use renewable energy.
4. Develop and offer renewable energy measures to the marketplace.
5. Increase participation in the PEF's Residential Energy Management program.

**2. ELIGIBILITY REQUIREMENTS**

1. The premise must be in PEF's service area and be a residentially metered customer.
2. Do-it-yourself installations are not eligible for program participation.
3. All installations must be accessible for verification by PEF and/or its contractor(s) to ensure compliance with program standards.
4. The PEF account must have whole house electric cooling, heating, and water heating participating in PEF's Energy Management program (interruption schedules B or S, and C) and agree to the following:
  - a. Receive 25% of associated Energy Management monthly credits for the aforementioned devices for the lifetime of their PEF account.
  - b. Program participation, with all required devices connected to Energy Management, establishes a minimum 3 year commitment. Participants opting out of the program or



closing the account associated with the program will be required to reimburse a portion of the \$550 initial rebate per the following reimbursement formula:

<b>Energy Management Early Withdrawal Reimbursement Formula</b>
$(\$15.28) \times (\text{months of participation}) - \$550 = \text{Required Customer Reimbursement}$

<b>Examples:</b>
$(\$15.28) \times (8 \text{ months of participation}) - \$550 = \$122.24 - \$550 = \$ (427.76)$
$(\$15.28) \times (20 \text{ months of participation}) - \$550 = \$305.60 - \$550 = \$ (244.40)$
$(\$15.28) \times (36 \text{ months of participation and beyond}) - \$550 = \$550 - \$550 = \$ 0.00$

5. The Solar Water Heater must be new and installed after effective program start date.
6. The PEF premise shall not have previously received a Solar Water Heater with Energy Management program incentive.
- ~~7. The customer must transfer to PEF all renewable energy credits (RECs) and other environmental attributes associated with the solar thermal system receiving rebates from PEF. Customers must agree to the following provision: "Because Progress Energy is providing certain rebates for the equipment and/or installation, Customer acknowledges and agrees that Florida Administrative Code Section 25-6.065 does not apply to this Agreement with respect to the ownership of any environmental attributes."~~
8. PEF must receive the completed incentive application within 12 months of the solar water heating system installation.
8. Customers on PEF's Residential Energy Management program interruption schedule A & D are not eligible to participate in the Solar Water Heating with Energy Management program.
9. Applicant must provide PEF proof showing the installation passed the local building inspection, if applicable

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## 2.1 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The solar energy system must comply with all local, state, and federal rules and codes.
2. Solar Domestic Water Heating systems must be certified and approved by the Florida Solar Energy Center (FSEC) and have an FSEC approval number.

3. The system shall be designed to meet a minimum of 50% of the water heating needs.
4. Solar pool heating or photovoltaic systems are not eligible for this program.

### **3. CONTRACTOR REQUIREMENTS**

1. The contractor and/or subcontractor must possess appropriate license(s) and comply with all appropriate federal, state, and local building and safety codes for all work performed.
2. The contractor and/or subcontractor shall indemnify and hold harmless PEF from any and all losses, liabilities, injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.
3. PEF reserves the right to request background checks and drug screenings of contractors and/or subcontractors participating in the program.
4. PEF reserves the right to develop and post a list of the contractors participating in this program.
5. The contractor is responsible for the associated work to be performed, the supervision of their employees and/or subcontractors, and the use of contractors' own equipment (or rental equipment) to meet the work specifications.
6. The contractor shall provide customer with instruction manual and training on the solar system.
7. The contractor shall provide customers with explicit warranty information including the following:
  - a. Length of warranty
  - b. Cost of material during warranty period
  - c. Cost of labor during warranty period
8. The solar system must be installed in accordance with the manufacturers' recommendations and specifications.
9. The contractor must correct any deficiency found in the installation or product(s) associated with the program, when advised by a PEF representative, and notify the PEF representative of compliance within 30 days of notification by PEF representative.
10. The contractor and/or subcontractor shall assist customers in completing application for incentives.
11. The contractor and/or subcontractor must follow all PEF and program marketing guidelines and requirements.

12. All contractors must comply with PEF contractor procedures. Failure to do so may result in termination of participation in any or all PEF programs.

#### 4. INCENTIVES

The incentive structure is as follows:

Program Component	Incentive
The Solar Water Heating with Energy Management program	\$550 per residence toward the purchase of a new solar thermal water heater.
	25% of associated Energy Management monthly credits for required devices (whole house electric cooling, heating, and water heating).
	100% Energy Management monthly pool pump credit, if applicable.

#### 4.1 INCENTIVE PROCESSING

1. Complete and send program form to specified PEF address. The form will record information such as:
  - Customer information - name, premise information, occupants living at the premise, account number, and telephone number.
  - Contractor information - name, license number, address, and telephone number.
  - System information - manufacturer, model number, installation date, permit number and the Florida Solar Energy Center (FSEC) certification number.
  - A copy of the contractor invoice.
2. Upon receipt of the completed form, PEF will select systems for verification.
3. If the system passes verification, or is not selected for verification, the form will be processed for payment.

4. All incentive payments are paid to the customer.

## **5. REPORTING REQUIREMENTS**

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

**PROGRESS ENERGY FLORIDA, INC.  
PROGRAM PARTICIPATION STANDARDS  
RESIDENTIAL SOLAR PHOTOVOLTAIC PILOT**

**PROGRESS ENERGY FLORIDA, INC.  
PROGRAM PARTICIPATION STANDARDS  
RESIDENTIAL SOLAR PHOTOVOLTAIC PILOT**

**1. PROGRAM OVERVIEW**

The Residential Solar Photovoltaic (PV) Pilot is designed to reduce the initial investment required to install a qualified renewable solar energy system in homes in PEF's territory. The program will be limited to a targeted annual incentive cap of \$1,000,000.

The program seeks to meet the following overall goals:

1. Provide residential customers with a higher return on investment in PV systems.
2. Increase renewable energy generation within PEF's service territory.
3. Increase participation in existing residential DSM measures.

**2. ELIGIBILITY REQUIREMENTS**

1. The premise must be in PEF's service area and be a residentially metered customer.
2. Do-it-yourself installations are not eligible for program participation.
3. All installations must be accessible for verification by PEF and/or its contractor(s) to ensure compliance with program standards.
4. The customer must make application to PEF for participation in this program. PEF must approve the application before the incentive is guaranteed. (See Section 4 for application process).
5. The PV system must be new and installed after effective program start date.
6. The PEF premise shall not have previously received a Residential Solar Photovoltaic program incentive.
7. ~~The customer must transfer to PEF all renewable energy credits (RECs) and other environmental attributes associated with the solar PV system receiving rebates from PEF. Customer must agree to the following provision: "Because Progress Energy is providing certain rebates for the equipment and/or installation, Customer acknowledges and agrees~~

~~that Florida Administrative Code Section 25-6.065 does not apply to this Agreement with respect to the ownership of any environmental attributes.~~

8. The applicant must be a customer of record within PEF's territory.
- ~~9. The applicant must first implement or have implemented within the last two years, at least one energy efficiency measure, which may include Home Energy Check.~~
- 10.9. The PV system must be rated between 2 kW and 10 kW (dc power rating) to qualify for this program. No rebates apply for residential systems rated less than 2 kW or more than 10 kW.
- ~~11.10. The residential PV system must be directly interconnected with the PEF power system in accordance with 25-6.065: Interconnection and Net Metering of Customer-Owned Renewable Generation.~~
- 12.11. Applicant must provide PEF proof showing the installation passed the local building inspection, if applicable.

## **2.1 EQUIPMENT AND INSTALLATION SPECIFICATIONS**

1. The solar PV system must comply with all local, state, and federal rules and codes.
2. Solar PV systems must be certified and approved by the Florida Solar Energy Center.
3. The PV system shall meet all applicable IEEE, UL, IEC, and NFPA Standards related to interconnection, distributed resources and Photovoltaic Systems that are in effect as of the date of installation, including the following standards or their successors:
  - a. IEEE 1547, "IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems".
  - b. UL Standard 1741, "Standard for Safety for Static Inverters and Charge Controllers for use in Distributed Resources".
  - c. UL Standards 1703, "Standard for Safety: Flat Plate Photovoltaic Modules and Panels".
  - d. IEEE Standard 1262-1995, "Recommended Practice for Qualification of Photovoltaic Modules" or IEC Standard 61646.
  - e. IEEE Standard 929 "Recommended Practice for Utility Interface of Photovoltaic (PV) Systems".
  - f. NFPA 70, "The National Electrical Code".

4. The residential PV system must be directly interconnected with the PEF power system and meet all of the requirements of the following applicable interconnection Tiers as stated in PEF's Interconnection Procedures (or succeeding versions):
  - a. Tier 1 ( $\leq 10$  kW) No application fee, disconnect switch or insurance requirement; simply complete the application and interconnection contract.
  - b. Tier 2 ( $> 10$  kW and  $\leq 100$  kW) Application fee of \$240, proof of general liability insurance of \$1 million, the installation of an externally accessible, lockable a/c disconnect switch located in close proximity to the meter location, in addition to the completed application and signed contract are required for this level of installation.
  - c. Tier 3 ( $> 100$  kW and  $\leq 2000$  kW) Application fee of \$750, proof of general liability insurance of \$2 million, the installation of an externally accessible, lockable a/c disconnect device located in close proximity to the meter location in addition to the completed application are required for this level of installation. Given the complexity and variability of systems of this size, there may be other protection equipment required beyond the disconnect switch which will be determined through the interconnection study that would be performed by Progress Energy. Upon receipt of the application fee and initial information on the generation system and location, Progress Energy will perform an analysis to determine interconnection requirements and will notify the customer of the results within 60 days.

### 3. CONTRACTOR REQUIREMENTS

1. The contractor and/or subcontractor must possess appropriate license(s) and comply with all appropriate federal, state, and local building and safety codes for all work performed.
2. The contractor and/or subcontractor shall indemnify and hold harmless PEF from any and all losses, liabilities, injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.
3. PEF reserves the right to request background checks and drug screenings of contractors and/or subcontractors participating in the program.
4. PEF reserves the right to develop and post a list of the contractors participating in this program
5. The contractor is responsible for the associated work to be performed, the supervision of their employees and/or subcontractors, and the use of contractors' own equipment (or rental equipment) to meet the work specifications.
6. The contractor shall provide the customer with instruction manual and training on the solar system.



7. The contractor shall provide customers with explicit warranty information including the following:
  - a. Length of warranty
  - b. Cost of material during warranty period
  - c. Cost of labor during warranty period
8. The solar system must be installed in accordance with the manufacturers' recommendations and specifications.
9. The contractor must correct any deficiency found in the installation or product(s) associated with the program, when advised by a PEF representative, and notify the PEF representative of compliance within 30 days of notification by PEF representative.
10. The contractor and/or subcontractor shall assist customers in completing application for incentives.
11. The contractor and/or subcontractor must follow all PEF and program marketing guidelines and requirements.
12. All contractors must comply with PEF contractor procedures. Failure to do so may result in termination of participation in any or all PEF programs.

#### **4. INCENTIVES**

The incentive for this program is a maximum payment of \$2.00 per watt (up to \$20,000) of the DC power rating up to a maximum of 10 kW on a new photovoltaic system.

##### **4.1 INCENTIVE APPLICATION**

1. Customer must complete and submit an Application for participation under the Program prior to installation of the generating system.
  - a. For an Application to be approved by PEF, the system must be rated by a certified solar contractor to produce a minimum of 1000 kWh/year of ac energy per kW dc rating.
  - b. If System construction or installation occurs before Application acceptance, then PEF may, in its sole and absolute discretion, determine that the Applicant's System is ineligible for the Program. In such event, PEF shall have no obligation to make any Program payment to Applicant.
2. Upon approval, PEF will assign a reservation number to the Application, and notify the Applicant of said reservation number and amount.

3. Within 90 days of the Application acceptance, the Applicant must submit the completed PEF solar incentive form and supporting documents; providing proof of completion, local inspection(s) and readiness for PEF verification.
4. Failure to submit the completed PEF solar incentive form and supporting documents within 90 days shall void the reservation number and amount.
  - a. Funding reservations will be reallocated to the program and if there is additional funding available, the applicant may reapply for the incentive.
  - b. Applicants may apply for an extension. Extensions will be granted on a case by case basis based on a review of the project advancement.
5. Reservations for a year's funding will begin October 1 of the previous year and close September 30 of the funding year
  - a. The reservation process for incentives will be on a first come first served basis.
  - b. Once the \$1,000,000/year program funding has been allocated, no additional reservations for that year will be accepted.
  - c. Incentives will only be awarded to systems that are specifically reserved for the given year.

#### **4.2 INCENTIVE PROCESSING**

1. Complete and send program form to specified PEF address. The form will record information such as:
  - Customer information - name, premise information, occupants living at the premise, account number, and telephone number.
  - Contractor information - name, license number, address, and telephone number.
  - System information - manufacturer, model number, installation date, permit number, and production projections (kWh).
  - A copy of the contractor invoice.
  - PEF Application for participation with valid reservation number.
2. Upon receipt of the completed form, PEF will select systems for verification.

3. If the system passes verification, or is not selected for verification, the form will be processed for payment.
4. All incentive payments are paid to the customer.

## **5. REPORTING REQUIREMENTS**

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

**PROGRESS ENERGY FLORIDA, INC.  
PROGRAM PARTICIPATION STANDARDS  
COMMERCIAL SOLAR PHOTOVOLTAIC PILOT**

**PROGRESS ENERGY FLORIDA, INC.  
PROGRAM PARTICIPATION STANDARDS  
COMMERCIAL SOLAR PHOTOVOLTAIC PILOT**

**1. PROGRAM OVERVIEW**

The Commercial Solar Photovoltaic (PV) Pilot of Progress Energy Florida (PEF) is designed to reduce the initial investment required to install a qualified renewable solar energy system. The program will be limited to a targeted annual incentive cap of \$1,000,000.

The program seeks to meet the following overall goals:

1. Provide commercial customers with a higher return on investment in PV systems.
2. Increase renewable energy generation within PEF's service territory.
3. Increase participation in existing commercial DSM measures.

**2. ELIGIBILITY REQUIREMENTS**

1. The premise must be in PEF's service area and be a commercially metered customer.
2. Do-it-yourself installations are not eligible for program participation.
3. All installations must be accessible for verification by PEF and/or its contractor(s) to ensure compliance with program standards.
4. The customers must make application to PEF for participation in this program. PEF must approve the application before the incentive is guaranteed. (See Section 4 for application process).
5. The PV system must be new and installed after effective program start date.
6. Each commercial customer can participate with one PV system per premise. Since the quantity of rebates are limited, customers with multiple premises "sites" that are individually metered and physically separated may apply for multiple incentives;

however, they will be evaluated on a case by case basis based upon prospective allocations.

~~7. The customer must transfer to PEF all renewable energy credits (RECs) and other environmental attributes associated with the solar PV system receiving rebates from PEF. Customer must agree to the following provision: "Because Progress Energy is providing certain rebates for the equipment and/or installation, Customer acknowledges and agrees that Florida Administrative Code Section 25-6.065 does not apply to this Agreement with respect to the ownership of any environmental attributes."~~

~~8.7~~ The applicant must be customer of record in PEF's territory.

~~9. The applicant must implement at least one energy efficiency measure, which may include Business Energy Check.~~

~~8. The PV system must be rated between 2 kW and 100 kW (dc power rating) to qualify for this program. No rebates apply for commercial systems rated less than 2 kW or more than 100 kW.~~

~~9. The commercial PV system must be directly interconnected with the PEF power system in accordance with 25-6.065: Interconnection and Net Metering of Customer-Owned Renewable Generation.~~

~~13.10.~~ Applicant must provide PEF proof showing the installation passed the local building inspection, if applicable.

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## 2.1 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The solar PV system must comply with all local, state, and federal rules and codes.
2. Solar PV systems must be certified and approved by the Florida Solar Energy Center.
3. The PV system shall meet all applicable IEEE, UL, IEC, and NFPA Standards related to interconnection, distributed resources and Photovoltaic Systems that are in effect as of the date of installation, including the following standards or their successors:
  - a. IEEE 1547, "IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems".
  - b. UL Standard 1741, "Standard for Safety for Static Inverters and Charge Controllers for use in Distributed Resources".
  - c. UL Standards 1703, "Standard for Safety: Flat Plate Photovoltaic Modules and Panels".

- d. IEEE Standard 1262-1995, "Recommended Practice for Qualification of Photovoltaic Modules" or IEC Standard 61646.
  - e. IEEE Standard 929 "Recommended Practice for Utility Interface of Photovoltaic (PV) Systems".
  - f. NFPA 70, "The National Electrical Code".
4. The commercial PV system must be directly interconnected with the PEF power system and meet all of the requirements of the following applicable interconnection Tiers as stated in PEF's Interconnection Procedures (or succeeding versions):
- a. Tier 1 (=10 kW) No application fee, disconnect switch or insurance requirement; simply complete the application and interconnection contract.
  - b. Tier 2 (> 10kW and <=100kW) Application fee of \$240, proof of general liability insurance of \$1 million, the installation of an externally accessible, lockable a/c disconnect switch located in close proximity to the meter location, in addition to the completed application and signed contract are required for this level of installation.
  - c. Tier 3 (> 100kW and <=200kW) Application fee of \$750, proof of general liability insurance of \$2 million, the installation of an externally accessible, lockable a/c disconnect device located in close proximity to the meter location in addition to the completed application are required for this level of installation. Given the complexity and variability of systems of this size, there may be other protection equipment required beyond the disconnect switch which will be determined through the interconnection study that would be performed by Progress Energy. Upon receipt of the application fee and initial information on the generation system and location, Progress Energy will perform an analysis to determine interconnection requirements and will notify the customer of the results within 60 days.

### **3. CONTRACTOR REQUIREMENTS**

- 1. The contractor and/or subcontractor must possess appropriate license(s) and comply with all appropriate federal, state, and local building and safety codes for all work performed.
- 2. The contractor and/or subcontractor shall indemnify and hold harmless PEF from any and all losses, liabilities, injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.
- 3. PEF reserves the right to request background checks and drug screenings of contractors and/or subcontractors participating in the program.

4. PEF reserves the right to develop and post a list of the contractors participating in this program.
5. The contractor is responsible for the associated work to be performed, the supervision of their employees and/or subcontractors, and the use of contractors' own equipment (or rental equipment) to meet the work specifications.
6. The contractor shall provide customer with instruction manual and training on the solar system.
7. The contractor shall provide customers with explicit warranty information including the following:
  - a. Length of warranty
  - b. Cost of material during warranty period
  - c. Cost of labor during warranty period
8. The solar system must be installed in accordance with the manufacturers' recommendations and specifications.
9. The contractor must correct any deficiency found in the installation or product(s) associated with the program, when advised by a PEF representative, and notify the PEF representative of compliance within 30 days of notification by PEF representative.
10. The contractor and/or subcontractor shall assist customers in completing application for incentives.
11. The contractor and/or subcontractor must follow all PEF and program marketing guidelines and requirements.
12. All contractors must comply with PEF contractor procedures. Failure to do so may result in termination of participation in any or all PEF programs.

#### **4. INCENTIVES**

The incentive for this program is a tiered rebate, based on the PV DC power rating, as follows:

- a. Up to \$2.00 per Watt for the first 10 kW
- b. Up to \$1.50 per Watt for each increment of capacity above 10 kW up to 50 kW
- c. Up to \$1.00 per Watt for each increment of capacity above 50 kW up to a maximum total system size of 100 kW

#### **4.1 INCENTIVE APPLICATION**



1. Customer must complete and submit an Application for participation under the Program prior to installation of the generating system.
  - a. For an Application to be approved by PEF, the system must be rated by a certified solar contractor to produce a minimum of 1000 kWh /year of ac energy per kW dc rating.
  - b. If System construction or installation occurs before Application acceptance, then PEF may, in its sole and absolute discretion, determine that the Applicant's System is ineligible for the Program. In such event, PEF shall have no obligation to make any Program payment to Applicant.
2. Upon approval, PEF will assign a reservation number to the Application, and notify the Applicant of said reservation number and amount.
3. Within 90 days of the Application acceptance, the Applicant must submit the completed PEF solar incentive form and supporting documents; providing proof of completion, local inspection(s) and readiness for PEF verification.
4. Failure to submit the completed PEF solar incentive form and supporting documents within 90 days shall void the reservation number and amount.
  - a. Funding reservations will be reallocated to the program and if there is additional funding available, the applicant may reapply for the incentive.
  - b. By case basis based on a review of the project advancement.
5. Reservations for a year's funding will begin October 1 of the previous year and close September 30 of the funding year.
  - a. The reservation process for incentives will be on a first come first served basis.
  - b. Once the \$1,000,000/year program funding has been allocated, no additional reservations for that year will be accepted.
  - c. Incentives will only be awarded to systems that are specifically reserved for the given year.

## **4.2 INCENTIVE PROCESSING**

1. Complete and send program form to specified PEF address. The form will record information such as:
  - Customer information - name, premise information, account number, and telephone number.

- Contractor information - name, license number, address, and telephone number.
- System information - manufacturer, model number, installation date, permit number, and production projections (kWh).
- A copy of the contractor invoice.
- PEF Application for participation with valid reservation number.

2. Upon receipt of the completed form, PEF will select systems for verification.

3. If the system passes verification, or is not selected for verification, the form will be processed for payment.

4. All incentive payments are paid to the customer.

## **5. REPORTING REQUIREMENTS**

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

**PROGRESS ENERGY FLORIDA, INC.  
PROGRAM PARTICIPATION STANDARDS  
PHOTOVOLTAIC FOR SCHOOLS PILOT**

**PROGRESS ENERGY FLORIDA, INC.  
PROGRAM PARTICIPATION STANDARDS  
PHOTOVOLTAICS FOR SCHOOLS PILOT**

**1. PROGRAM OVERVIEW**

The Photovoltaic for Schools Pilot is designed to assist public and post secondary schools with energy costs while promoting energy education. This program will provide participating public schools with new photovoltaic (PV) systems at no cost to the school.

Public schools that are customers of PEF can apply for participation in this program. 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 up to (10) 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 criteria such as attendance and energy consumption associated with their main campus, as well as the schools' plan to use the solar array as an educational and research tool. 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. PEF will have the option to own and operate the equipment for the first five years after installation, at the end of which time the ownership and maintenance responsibilities will transfer to the Customer. The incentive for this program is the total equipment cost of the solar PV system plus the associated installation.

This program places an emphasis on energy education and promotes environmental stewardship. As such, PEF residential 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 designed to support and promote energy education. The fund will accumulate associated participant credits for a period of 2 years, at which time the customer may elect to renew for an additional 2 years. All proceeds collected from participating customers

and their associated monthly credits, will be used to promote energy efficiency and renewable energy educational opportunities.

Goals of the program are to:

1. Eliminate the initial investment required to install a renewable solar PV system
2. Increase participation in existing residential Demand Side Management measures through energy education.
3. Increase solar education and awareness in PEF communities and schools.

## 2. ELIGIBILITY REQUIREMENTS

1. The building/facility must be a public educational facility and have a metered PEF commercial account.
2. PEF will have the option to own and maintain the photovoltaic system for the first five (5) years after installation. At the end of the five (5) year period, the school shall assume ownership and all associated maintenance and operating costs of the photovoltaic system. Alternatively, should PEF elect not to own the photovoltaic system, the school must agree to own, operate and maintain all equipment immediately upon installation, and commissioning of the system.
3. Public schools serving as emergency shelters will be preferred and receive a photovoltaic system up to 10 kW in size with the potential to also receive a battery backup component. The sizing of the PV system and batteries will be based upon the application criteria and physical campus constraints.
4. Postsecondary schools will receive a photovoltaic system up to 100 kW. The sizing of the PV system will be based upon the application criteria and physical campus constraints.
5. The school shall meet all applicable PEF Interconnection requirements.
6. All installations must be accessible for verification by a PEF representative and/or its contractor(s) to ensure compliance with program standards and, in the instance of PEF system ownership, ongoing maintenance.
7. The School's PV system must be directly interconnected with the PEF power system in accordance with 25-6.065: Interconnection and Net Metering of Customer-Owned Renewable Generation.

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### **3. CONTRACTOR REQUIREMENTS**

PEF will select a contractor to conduct the installation. The PEF contractor(s) must comply with all local, state and federal rules and codes. The selected PEF contractor(s) / and or project facilitator is/are responsible for all work performed and must meet and/or comply with PEF requirements.

#### 4. INCENTIVES

The incentive payment structure is as follows:

<b>Program Component</b>	<b>Incentive</b>
Photovoltaic for Schools Pilot – Postsecondary Schools	The solar PV system will be provided at no cost to the school (approximately \$750,000 /system).
Photovoltaic for Schools Pilot – Emergency Shelters	The solar PV system will be provided at no cost to the school (approximately \$130,000 /system).

#### 5. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

**PROGRESS ENERGY FLORIDA, INC.  
PROGRAM PARTICIPATION STANDARDS  
RESEARCH AND DEMONSTRATION PILOT**



**PROGRESS ENERGY FLORIDA, INC.  
PROGRAM PARTICIPATION STANDARDS  
RESEARCH AND DEMONSTRATION PILOT**

**1. PROGRAM OVERVIEW**

The purpose of this program component 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 of \$323,380; 5% of the total Demand-Side Renewable Portfolio targeted annual expenditure.

Each R&D project will be designed to support the development of future solar and renewable energy pilot programs, and in general will proceed as follows:

- Project concept or idea development
- Project research and design, including estimated costs and benefits
- Conduct field test, modeling, general research, and theoretical testing

**2. ELIGIBILITY REQUIREMENTS**

Customers who are eligible to participate in field demonstration projects will be determined during the project research and design phase, and will be dependent on the type of project being proposed and investigated. Field demonstrations will involve only a limited number of customers. Participants in field demonstration projects must allow Progress Energy and its contractors access to the facility for maintaining and monitoring the evaluation equipment. Progress Energy will be solely responsible for determining the technologies to be evaluated under this program.

**3. CONTRACTOR REQUIREMENTS**

Support of the Demand Side Renewable Portfolio Research and Demonstration Pilot for equipment installation, research and analysis, etc. may be performed by contractors and/or consultants. Expenditures for these services will be documented and included toward the total annual financial project limits.

**4. INCENTIVES**

As part of this program, Progress Energy may compensate participants in field demonstration projects for their willingness to support the technology evaluation.

Incentives will be project specific, captured as an expenditure, and commensurate with the impact to the participants. Targeted annual expenditure for this program is \$323,380; 5% of the total Demand Side Renewable Portfolio expenditure cap.

## **5. REPORTING REQUIREMENTS**

A status report will be filed as a component of the Energy Conservation Cost Recovery Projection and True-Up filings, and will include a summary of activities and expenditures.