

State of Florida



## Public Service Commission

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

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**DATE:** September 27, 2007

**TO:** Office of Commission Clerk (Cole)

**FROM:** Division of Economic Regulation (Harlow, Devlin, Futrell, Trapp)  
Office of the General Counsel (Fleming)

**RE:** Docket No. 070626-EI – Review of Florida Power and Light Company’s Sunshine Energy Program

**AGENDA:** 10/09/07 – Regular Agenda – Proposed Agency Action for Issues 1-4 and Tariff Filing for Issue 5 - Interested Persons May Participate

**COMMISSIONERS ASSIGNED:** All Commissioners

**PREHEARING OFFICER:** Administrative

**CRITICAL DATES:** None

**SPECIAL INSTRUCTIONS:** None

**FILE NAME AND LOCATION:** S:\PSC\ECR\WP\070626.RCM.DOC

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### Case Background

On November 6, 2006, the Commission issued Order No. PSC-06-0924-TRF-EI, approving Florida Power and Light Company’s (FPL) green pricing program, the Sunshine Energy Program. In general, green pricing programs allow interested customers to voluntarily contribute towards renewable generating resources, which are often higher in cost than fossil-fuel based generation. The Sunshine Energy Program is a voluntary program, in which participating residential and commercial customers are charged \$9.75 per month in addition to each customer’s charges under the applicable rate schedule. In return for each \$9.75 customer contribution, FPL purchases the renewable energy credits associated with 1,000 kilowatt-hours (kWhs) of renewable energy. In addition, FPL has committed to the development or purchase of 150 kilowatts (kW) of solar capacity within Florida for every 10,000 participating residential

customers. Under the program's tariff, participants may make multiple contributions of \$9.75 per month, for which FPL will purchase multiple 1,000 kWh blocks of renewable energy credits.

*Commission Actions:*

The Commission first encouraged FPL to consider green pricing options in June 1995.<sup>1</sup> At the time, green pricing was a relatively new concept. In response, FPL requested, and the Commission approved, a two-year Green Pricing Research and Development Project to test customer response to a green pricing initiative.<sup>2</sup> Customer contributions were used to construct a 10 kW photovoltaic system at FPL's Martin generating site.

In August 1997, as a part of the demand-side management goal setting proceeding, the Commission approved a stipulation between FPL and the Legal Environmental Assistance Foundation.<sup>3</sup> Under the stipulation, FPL agreed to "[i]nvestigate and, if feasible, implement a Green Energy Program under which FPL would purchase energy generated from new renewable resources." The Commission subsequently approved a three-year green energy research program as a part of FPL's demand-side management plan.<sup>4</sup> Under this program, FPL performed additional research on customer preferences regarding renewable energy and the potential for developing a green pricing program. FPL used this customer preference information to design a three-year pilot green pricing program.

The Commission approved FPL's voluntary pilot green pricing program on December 22, 2003.<sup>5</sup> FPL's pilot green pricing program was available only to residential customers, and was based primarily on tradable renewable energy credits (TRECs). TRECs are financial instruments used to promote renewable generation by providing an additional revenue source to renewable generators. TRECs are essentially formed by separating the environmental attributes from the actual energy produced by renewable generating resources. Residential customers who chose to participate were charged \$9.75 per month. In return, FPL made two commitments: (1) to purchase the TRECs associated with 1,000 kWh of renewable energy for each \$9.75 contribution, and (2) to develop or purchase 150 kW of photovoltaic capacity within Florida for every 10,000 participating customers. In its order, the Commission capped program costs at \$1.5 million and allowed the recovery of these costs through the Energy Conservation Cost Recovery (ECCR) clause. The Commission also ordered FPL to provide marketing materials to staff prior to distribution to customers. Finally, the Commission required FPL to file detailed semi-annual progress reports, and to provide the Commission with a schedule for expanding the program to include commercial customers.

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<sup>1</sup> See Order No. PSC-95-0691-FOF-EG, issued June 9, 1995, in Docket No. 941170-EG, In Re: Approval of demand-side management plan of Florida Power and Light Company.

<sup>2</sup> See Order No. PSC-97-0528-FOF-EG, issued May 7, 1997, in Docket No. 960624-EG, In Re: Petition for approval of Green Pricing Research and Development Project by Florida Power and Light Company.

<sup>3</sup> See Order No. PSC-99-1412-S-EG, issued August 6, 1997, in Docket No. 971004-EG, In Re: Adoption of numeric conservation goals by Florida Power and Light Company.

<sup>4</sup> See Order No. PSC-00-0915-PAA-EG, issued May 8, 2000, in Docket No. 991788-EG, In Re: Approval of demand-side management plan of Florida Power and Light Company.

<sup>5</sup> See Order No. PSC-03-1442-TRF-EI, in Docket No. 030752-EI, In Re: Petition for approval of green power pricing research project as part of Demand-Side Management Plan by Florida Power and Light Company.

On August 29, 2006, FPL filed a petition to convert its pilot green pricing program to a permanent program under its demand-side management plan, and to expand the program to include commercial customers. The Commission approved FPL's permanent green pricing program, the Sunshine Energy Program, and the associated tariff, by Order No. PSC-06-0294-TRF-EI, issued November 6, 2006, in Docket No. 060577-EI, In Re: Petition to convert green power pricing research project to permanent program and to extend program to commercial customers, by Florida Power and Light Company. Unlike the pilot program, the Commission's order did not require FPL to file semi-annual progress reports for the permanent program. Instead, FPL committed to record revenues and expenses, and provide status reports as part of its ECCR clause filings.

*Status of FPL's Sunshine Energy Program:*

As a part of staff's ongoing review of FPL's Sunshine Energy Program, staff has recently held informal meetings with FPL and has requested both historical data for the pilot program and an update on the permanent program. The table below displays the data FPL provided on program enrollments, revenues, and expenses, from the beginning of the pilot program in 2004, through June 30, 2007.

	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007*</b>	<b>Total</b>
<b>Cumulative Participants</b>	10,674	23,066	28,742	33,917	
<b>Revenues</b>	\$514,642	\$2,258,751	\$2,928,225	\$2,065,370	\$7,766,988
<b>Expenses</b>	\$476,590	\$2,101,449	\$2,819,106	\$1,990,623	\$7,387,768
<b>Net Revenues</b>	\$38,052	\$157,302	\$109,119	\$74,747	\$379,220

\* Note: 2007 data through June 30, 2007

Revenues for the program are obtained from the \$9.75 per month contributed by participating customers. Total program revenues through June 30, 2007, were \$7,766,988, with total expenses of \$7,387,768. Over the life of the program, revenues have exceeded expenses by \$379,220. Program expenses include FPL's payments to its third party contractors Green Mountain Energy Company (Green Mountain) and Sterling Planet, and FPL's internal administrative expenses. FPL contracted with Green Mountain to market the program to residential customers, purchase TRECs for these customers, and develop 150 kW of solar photovoltaic capacity for each 10,000 participating residential customers. FPL has recently contracted with Sterling Planet to purchase TRECs for participating commercial customers. FPL does not count commercial participants toward its solar development obligation. Staff intends to explore this decision further as well as the level of monetary contribution made by commercial customers in our ongoing review.

As noted above, FPL reported that as of June 30, 2007, total program revenues have exceeded expenses by \$379,220. Pursuant to Order No. PSC-06-0924-TRF-EI, FPL "planned to

defer excess revenues as a regulatory liability and reinvest these revenues to increase participation, reduce the monthly fee to participants, or invest in renewable resources.” FPL has not provided staff with its plan for these excess revenues. When staff recommended approval of FPL’s petition to convert its pilot program to a permanent program, it was staff’s understanding that excess program revenues would be used by FPL to develop solar projects. However, the information recently provided by FPL indicates that FPL has contracted with Green Mountain to fulfill FPL’s entire obligation with respect to developing solar projects. Staff intends to gather additional information on FPL’s intended uses of this revenue as a part of staff’s ongoing review.

Staff also requested that FPL provide an update on its progress to meet its commitment to develop 150 kW of solar capacity within Florida for every 10,000 participating residential customers. FPL’s status report of the projects installed to date and under construction is provided below:<sup>6</sup>

- 8 kW of solar installed in cooperation with the SunSmart Schools – 2 kW at 4 schools.
- 2 kW of solar installed at the Miami Science Museum.
- 32 kW of rooftop solar installed on 16 homes at a subdivision in Naples (as of July 17, 2007). An additional 8 kW will be installed on 4 homes.
- 250 kW solar array at Rothenbach Park in Sarasota, expected to be completed in October 2007.

As indicated above, as a result of the program, 42 kW of solar capacity has been installed as of July 17, 2007, with an additional 258 kW of solar capacity under development, for a total capacity of 300 kW. FPL enrolled 20,000 participants during 2005, and is just now completing the required solar projects. In the meantime, program participation has grown to over 33,900, indicating that FPL must develop an additional 150 kW of solar to meet its commitment. FPL has not provided information to staff on additional solar projects under development.

*Staff’s Recommendation:*

As part of the Commission’s ongoing monitoring of FPL’s Sunshine Energy Program, several additional issues have come to light. This recommendation will address several changes to the program that staff believes should be considered by the Commission.

The Commission has jurisdiction in this matter under Sections 366.04, 366.05, 366.06, 366.80, 366.81, and 366.82, Florida Statutes.

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<sup>6</sup> Note: the 10 kW photovoltaic system FPL installed at its Martin generating site as a result of an earlier pilot program is not counted toward FPL’s solar commitment in its Sunshine Energy Program.

### **Discussion of Issues**

**Issue 1:** Should FPL modify its Sunshine Energy Program to exclude the use of Tradable Renewable Energy Credits from out-of-state renewable facilities?

**Recommendation:** Yes. The use of Tradable Renewable Energy Credits (TRECs) should be limited to in-state renewable generation. (Devlin)

**Alternate Staff Recommendation:** No. However, FPL should be required to demonstrate that all “affordable” Florida TRECs have been exhausted before any out-of-state TRECs are purchased. (Harlow, Trapp)

**Primary Staff Analysis:** Primary staff believes that FPL’s Sunshine Energy Program has been a success in that there has been a consistent growth in the number of participating customers. The recommended changes discussed in Issues 1 through 3 should be considered a suggested “fine tuning” based on experience gained since the inception of this program.

TRECs are used to account for the generation of 1,000 kWhs of renewable energy. They facilitate the development of renewable energy by providing additional financial support. In the order approving the Sunshine Energy pilot program, the Commission addressed TRECs. Order No. PSC-03-1142-TRF-EI, dated December 22, 2003, states:

TRECs from out-of-state projects may be purchased, especially in the project’s initial stages. However FPL’s committed preference for Florida TRECs should encourage the development of renewable resources and the TREC market in the state. We strongly support FPL’s preference for Florida-based renewable sources; however, we also recognize the constraints of availability and costs associated with in-state sources.

The Commission recognized from the very beginning that there should be a preference for in-state TRECs. Out-of-state TRECs do not facilitate renewable generation in Florida. Neither do they facilitate fuel diversity or economic development in Florida. The Commission authorized the use of out-of-state TRECs to help jump start this program and it has worked well. FPL has been trending toward in-state TRECs. The proportion of in-state TRECs has increased from 40 percent in 2004 to 63 percent in 2007. But it has been almost four years since the program began and the program is now well established. Primary staff believes the voluntary funds provided by the program’s participants would provide more benefits if the funds are used exclusively on in-state renewable projects and in-state TRECs.

FPL has expressed concerns that if TRECs were restricted to Florida renewable generators: (1) it could increase the prices of TRECs to unacceptable levels, and (2) there may not be sufficient TRECs available in Florida to fully support the program. If the cost or availability of Florida TRECs becomes a problem, staff recommends that FPL renegotiate its contracts with Green Mountain and Sterling Planet in order to determine an acceptable balance between the quantity of Florida TRECs purchased and FPL’s commitment to develop Florida-based renewable facilities.

**Alternative Staff Analysis:** Alternative staff agrees with primary staff that the Sunshine Energy Program should, to the maximum extent possible, rely on TRECs generated in Florida. However, while FPL has been successful at increasing its proportion of in-state TRECs over time, staff does not have enough information to determine if sufficient in-state TRECs are currently available to fully supply the program. FPL should be required to demonstrate that all “affordable” Florida TRECs have been exhausted before any out-of-state TRECs are purchased. Staff notes that Commission Order No. PSC-03-1142-TRF-EI, which approved FPL’s pilot program, had a similar requirement. The Order required FPL to report to staff on the availability of in-state TRECs and on FPL’s efforts to obtain Florida TRECs. Staff will address additional recommended reporting requirements for the permanent program in Issue 4. However, alternative staff believes it is premature to exclude the use of out-of-state TRECs in the program at this time.

**Issue 2:** In addition to solar photovoltaic projects, should FPL evaluate additional types of renewable facilities for development under the Sunshine Energy Program?

**Recommendation:** Yes. FPL should evaluate additional types of renewable facilities under the Sunshine Energy Program. (Harlow, Devlin)

**Staff Analysis:** By Order No. PSC-06-0294-TRF-EI, FPL committed to develop 150 kW of in-state solar photovoltaic capacity for every 10,000 residential participants. The Order also states that FPL has had requests for solar thermal systems and intended to consider these systems as the program continues to grow. To date, Green Mountain has developed only solar photovoltaic systems under its contract with FPL. Under the current arrangement with Green Mountain, we expect that only solar photovoltaic facilities will be developed.

At the time the pilot program was approved, FPL planned to focus on developing solar photovoltaic capacity for two reasons. First, FPL stated that its market research revealed a strong customer preference for solar energy. Second, FPL stated that solar projects have an added educational benefit if they are sited in public places such as schools and museums.

Staff agrees with FPL that there are benefits associated with using participant contributions to support solar photovoltaic systems. FPL should continue to develop solar photovoltaic projects under the program. However, in addition to solar photovoltaic facilities, staff believes it would also be beneficial for FPL to evaluate other types of renewable projects. Expanding the types of renewable resources under the program will provide FPL with the flexibility to increase renewable development and fuel diversity in Florida while keeping program costs low.

**Issue 3:** Should FPL modify its Sunshine Energy Program to exclude development of renewable projects placed on individual homes?

**Recommendation:** Yes. Prospectively, solar projects (or other renewables) developed under the program should either be sited at publicly owned facilities or owned by FPL. (Harlow, Devlin)

**Staff Analysis:** As discussed in Issue 1, Green Mountain has developed four solar photovoltaic projects on FPL's behalf as a result of the Sunshine Energy Program. One of the projects involves installing 2 kW solar arrays on 20 rooftops on new homes in "The Quarry" subdivision in Naples, Florida. Sixteen homes (32 kW) have been interconnected as of July 17, 2007. This project was discussed in Order No PSC-06-0924-TRF-EI.<sup>7</sup>

Upon further review, staff has several concerns about the use of funds from this voluntary program to support photovoltaic systems for private homeowners. There is a fairness question about having a small select group of homeowners receive a subsidy from this voluntary program. In addition, it is unclear whether the developer will gain from any financial support Green Mountain provided for the photovoltaic systems on homes in The Quarry development. If the prices of the homes are not reduced to reflect any financial support provided by Green Mountain, then The Quarry's developer is receiving a gain from voluntary funds provided by the Sunshine Energy Program's participants.

The above concerns could be alleviated prospectively if renewable projects developed as a result of the program are sited at public facilities or owned by FPL. There are educational benefits associated with siting renewable projects at public facilities such as libraries, schools and museums. This can raise public awareness about the importance of renewable energy and may increase program participation. Energy produced by systems sited at public facilities would also reduce public costs by offsetting energy usage at these facilities. The associated benefits would have a more far reaching effect among Floridians if the renewable projects are no longer sited on individual homes. FPL's other three photovoltaic projects are sited at public facilities, so excluding individual homes should not be a significant restriction.

Staff also believes there are benefits associated with FPL owning renewable resources developed as a result of the program. While capital costs for renewable generation are typically high, renewable generation owned by FPL would benefit FPL's ratepayers by producing energy with low fuel costs over the life of the generating unit. Generation from FPL-owned facilities would directly benefit all of FPL's ratepayers, not just a select few individual homeowners. It would also provide "hands-on" operating experience for the company that would be beneficial in further developing their expertise with renewables.

For the reasons cited above, staff recommends that renewable projects developed as a result of the Sunshine Energy Program should be sited at public facilities, or owned by FPL on a prospective basis. The associated benefits would have a more far reaching effect among Floridians if the renewable projects are no longer sited on individual homes.

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<sup>7</sup> Order No. PSC-06-0924-TRF-EI states that FPL intended to connect "approximately 90 new homes for photovoltaic production."



**Issue 4:** Should Florida Power & Light Company be required to file detailed semi-annual progress reports for the Sunshine Energy Program?

**Recommendation:** Yes. Detailed semi-annual reports with the information listed in staff's analysis will facilitate staff's oversight of the program's revenues and expenditures, and FPL's achievements toward its commitments under the program. (Harlow)

**Staff Analysis:** On December 22, 2003, the Commission approved FPL's voluntary pilot green pricing program by Order No. PSC-03-1442-TRF-EI. Pursuant to the order, FPL was required to provide semi-annual progress reports on the program. At a minimum, the order required FPL to provide information on: (1) customer participation; (2) program revenues and expenses; (3) quantity and sources of the TRECs purchased; (4) progress on solar installations; and (5) copies of marketing materials.

On November 6, 2006, the Commission approved FPL's request to convert the pilot program to the permanent Sunshine Energy Program. Order No. PSC-06-0924-TRF-EI did not require FPL to file semi-annual progress reports. Rather, as stated in the order, "FPL proposes to record revenues and expenses for the project in its ECCR clause filings and will prepare a status report of the project for each of its ECCR true-up proceedings." The order is silent on the specific information FPL is required to provide in its ECCR filings. As discussed further below, staff's review of FPL's Green Pricing Program has raised a number of issues. For the reasons discussed below, staff believes reinstating detailed reporting requirements will facilitate the Commission's oversight of the program.

Staff recommends that the Commission should reinstate semi-annual status reports as required for the pilot program pursuant to Order No. PSC-03-1442-TRF-EI, and require additional detailed information. While FPL is required to provide status reports as a part of the ECCR proceedings, staff believes it is important for the Commission to specify the information that should be provided.

These reports should include, at a minimum:

1. number of participants, broken down by residential and commercial customers;
2. program revenues;
3. program expenses, broken down by the following categories: in-state TREC purchases, out-of-state TREC purchases, marketing, development of renewable projects, internal administration costs, and applicable taxes;
4. number of TRECs purchased, broken down by the following categories: fuel type, and in-state versus out-of-state sources;
5. information on each solar (or other renewable) installation, including: schedule for completion, capacity size, and ownership of each system; and status on upcoming solar projects necessary to meet FPL's commitment. If FPL does not

own a solar installation, FPL should provide information on the price FPL pays to purchase the system's energy;

6. copies of marketing materials; and
7. plans for and actual disposition of excess revenues.

Staff believes these detailed semi-annual reports will facilitate the Commission's oversight of the program's revenues and expenditures, along with FPL's progress toward meeting its solar commitment. Further, as indicated in the Commission's order, FPL has made a commitment to purchase TRECs from in-state renewable facilities, when such TRECs are economically available. FPL has increased the percentage of in-state TRECs it purchases each year.<sup>8</sup> However, it is unclear whether FPL intends to provide cost information broken down by type of expense, including costs for in-state versus out-of-state TRECs, as a part of its ECCR status reports. Staff believes this information is vital in determining if FPL has met its commitment to purchase in-state TRECs when those TRECs can be obtained for an economical price.

Staff also believes these reports are essential to determine if the program should be redesigned to provide greater support toward developing actual renewable generation projects in Florida. Staff has anecdotal evidence that the cost to obtain TRECs is less than staff anticipated. With expected annual revenues of over \$4 million in 2007, coupled with relatively low TREC costs, staff believes there may be greater opportunities for FPL to develop renewable generation within Florida. As discussed above, the \$379,220 of excess revenues collected by FPL over the life of the program indicates an additional opportunity to develop renewable projects. Staff's recommended reporting requirements will facilitate the Commission's efforts to determine if the program's participants would be better served if more of the program's revenues were used to develop renewable projects within the state.

Finally, FPL is in a unique position among Florida's investor-owned utilities to provide the Commission with information on the status of Florida's market for TRECs. Detailed information on the source and costs of FPL's TREC purchases will provide valuable information for the Commission's exploration of a renewable portfolio standard for Florida. Staff notes that many of the renewable portfolio standards in other states employ a market for renewable energy credits as a means of encouraging renewable development while potentially reducing compliance costs.

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<sup>8</sup> FPL purchased approximately 40 percent of the program's TRECs from Florida renewable generators in 2004, increasing to 48 percent in 2005, 45 percent in 2006, and 63 percent in the first half of 2007.

**Issue 5:** Should FPL be required to file a revised tariff for the Sunshine Energy Program?

**Recommendation:** If the Commission's vote on Issues 1 through 3 requires a revision to the existing tariff, FPL should file a revised tariff for the Sunshine Energy Program to reflect the Commission's changes to the program. Staff should administratively approve FPL's revised tariff if the tariff appropriately reflects the Commission's vote. (Harlow)

**Staff Analysis:** If the Commission's vote on Issues 1 through 3 requires a revision to the existing tariff, FPL should file a revised tariff for the Sunshine Energy Program to reflect the Commission's changes to the program. Staff will work with FPL to determine if tariff revisions are required. If so, a revised tariff should be filed within 60 days of the Commission's vote. For administrative efficiency, staff should be permitted to administratively approve FPL's revised tariff if the tariff appropriately reflects the Commission's vote.

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**Issue 6:** Should this docket be closed?

**Recommendation:** If no substantially affected person files a protest to Issues 1 through 4, those issues will become final upon the issuance of a consummating order and the docket may be closed if no tariff revisions are required. If tariff revisions are required, this docket should remain open until staff administratively approves FPL's revised tariff. (Fleming)

**Staff Analysis:** If no substantially affected person files a protest to Issues 1 through 4, those issues will become final upon the issuance of a consummating order and the docket may be closed if no tariff revisions are required. If tariff revisions are required, this docket should remain open until staff administratively approves FPL's revised tariff.