

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:** August 2, 2007

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

**FROM:** Division of Economic Regulation (Colson, Draper)  
Office of the General Counsel (Fleming)

**RE:** Docket No. 070376-EG – Petition for approval of residential thermostat load control pilot project by Florida Power & Light Company.

**AGENDA:** 08/14/07 – Regular Agenda – Tariff Filing – Interested Persons May Participate

**COMMISSIONERS ASSIGNED:** All Commissioners

**PREHEARING OFFICER:** Administrative

**CRITICAL DATES:** August 14, 2007 (60-Day Suspension Date)

**SPECIAL INSTRUCTIONS:** None

**FILE NAME AND LOCATION:** S:\PSC\ECR\WP\070376.RCM.DOC

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## Case Background

On June 15, 2007, Florida Power & Light Company (FPL) submitted a petition to the Commission requesting approval of its Residential Thermostat Load Control Pilot Project (TLCPP). Participating customers in the TLCPP are provided a programmable thermostat and the option of overriding FPL's control of their central air conditioning and heating appliances via telephone or the Internet.

FPL has had a residential load management program, the On-Call Program, since 1986. The residential On-Call Program is designed primarily to reduce system coincident peak demand, and it also reduces energy consumption. The On-Call Program involves the installation of load control equipment to allow FPL to control residential customer appliances on an as-needed basis. To secure the opportunity to exercise load control, FPL provides a monthly bill

credit to On-Call Program participants. These credits, including the cost of any FPL-owned equipment, are recovered through the Energy Conservation Cost Recovery (“ECCR”) clause.

On January 15, 2003, FPL petitioned for approval of modifications to the On-Call Program. In its petition, FPL requested approval to close the On-Call Program, offered under Rate Schedule RSL, to new customers effective April 1, 2003. In its place, FPL proposed a new residential load management pilot project (RLCPP), which reduced the monthly bill credits paid to program participants. The Commission approved FPL’s request to close the On-Call Program and offer the RLCPP on March 6, 2003.<sup>1</sup>

On May 31, 2007, in Docket No. 070350-EG, FPL requested that the RLCPP be made into a permanent program. The Commission will decide on FPL’s request for approval for both the RLCPP and the TLCPP at the August 14, 2007 Agenda. There are approximately 742,400 participants in the combined RLCPP and closed On-Call programs.

In contrast to the existing load management programs, participants in the TLCPP will not receive monthly bill credits for permitting the utility to interrupt their heating and air conditioning. Instead, the benefits to the customer would come through using the programmable thermostat (given free to each participant) to reduce energy consumption with the assurance that they could override FPL control at their option. If approved, FPL’s TLCPP will be limited to 400 residential customers located in Broward County and will last 24 months. FPL selected Broward County because they believe that this allows the evaluation of impacts under weather conditions experienced by many of FPL’s customers.

The Petition also requests that the Commission authorize FPL to recover cost associated with the TLCPP through the ECCR clause. FPL’s petition includes the tariffs (see Attachment 1) that are needed to implement the proposed Pilot Project.

The Commission is vested with jurisdiction over this matter pursuant to Section 366.80 – 366.82, Florida Statutes.

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<sup>1</sup> Order No. PSC-03-03-0322-TRF-EG, in Docket No. 030051 EG, in re: Petition for modification of residential on-call program and for approval of residential load control pilot project by Florida Power & Light Company.

### **Discussion of Issues**

**Issue 1:** Should the Commission approve Florida Power & Light Company's (FPL) Petition for approval of its Residential Thermostat Load Control Pilot Project (TLCPP) for an initial 24-month period and recover the requested amount of \$728,000 associated with the TLCPP through the Energy Conservation Cost Recovery (ECCR) clause?

**Recommendation:** Yes. If the petition is approved, FPL will perform monitoring and evaluation to determine the demand (kW) and energy (kWh) impacts of the TLCPP. FPL will also perform quality control checks to verify the reliability of communications with the thermostats. FPL will utilize the data to perform a cost effectiveness analysis at the end of the Project. Staff also recommends that FPL provide annual progress reports to the Commission by September each year. The TLCPP will take effect August 14, 2007 and will expire on August 13, 2009. (Colson)

**Staff Analysis:** According to the petition, FPL would like to evaluate whether the benefits of direct load control programs can be expanded through use of a new generation of communication and control technologies that put residential customers in charge of decisions that could lower energy costs. FPL believes that the TLCPP will increase the appeal of residential load management among residential customers, by removing the barrier to customers that are unwilling or reluctant to surrender control of their heating and air conditioning appliances.

According to FPL, the programmable thermostat will act as FPL's control device for the central air conditioner and heater appliances, cycling the equipment for the same percentage of time as the current interruption schedules as the RLCPP program. The TLCPP participants may combine the programmable thermostat option with water heater and/or pool pump options, receiving the RLCPP monthly bill credits associated with the latter appliances.

The TLCPP participants will not be allowed to switch to the RLCPP option, however, FPL will solicit a sample of the RLCPP air conditioning option participants, offering them the TLCPP in lieu of the RLCPP air conditioning bill credits. FPL believes that this will show the degree of the RLCPP participants interested in switching. FPL will permit a maximum of 50 customers to switch from the RLCPP option to the TLCPP during FPL's solicited switch offer.

FPL's TLCPP will be limited to 400 residential customers located in Broward County and will last 24 months. The TLCPP participants must be individually metered and the residences must have central electric air conditioners. Among the TLCPP participants, central electric space heating is eligible only in combination with central air conditioning, and when controlled by the thermostat. FPL will solicit customers in Broward County, including a sample of the RLCPP participants, and the first 400 customers that respond will be selected for the TLCPP. FPL believes that the statistical sample size of 400 participants is appropriate for this study and has a confidence level of 95%.

FPL will perform monitoring and evaluation of the TLCPP participants to determine the demand (kW) and energy (kWh) impacts of the thermostat approach vs. the RLCPP approach. Quality control checks will also be performed to verify the reliability of communications with

the thermostats. According to the petition, FPL will track all TLCPP participants using an independent database as well as its customer information system. FPL will be able to determine if the TLCPP participants choose to override the utility control of the air conditioner or heater during load control events. In addition, FPL will track customer questions and concerns related to the TLCPP, dropout rates and reason for the dropouts, and overall satisfaction. Since this is a pilot research project, a cost-effectiveness analysis is not required to approve this petition. At the end of the 24 month test period, FPL will perform a final cost-effectiveness analysis.

FPL's estimated costs of the TLCPP for the 24 month period are \$728,000, which include costs associated with marketing, equipment, installation and maintenance, computer hosting and support, and evaluation of the TLCPP. If approved, the TLCPP will take effect August 14, 2007 and will expire on August 13, 2009. The TPCPP and the RLCPP are two load management programs being offered by FPL in Broward County, the later program is also offered over FPL's entire service area. FPL will provide annual progress reports to the Commission by September each year and sent to the Director of Economic Regulation.

### **Conclusion**

Staff believes that the TLCPP explained above may increase the appeal of residential load management among FPL's residential customers by removing the barrier to customers that are unwilling or reluctant to surrender control of their heating and air conditioning appliances. Staff also believes that the TLCPP will put FPL's residential customers in charge of decisions that could lower their energy costs and reduce FPL's system peak demand. The program is projected to reduce FPL's coincident peak load and reduce customers' energy consumption. The program can be monitored and produce measurable results. Therefore, staff recommends that the Commission approve FPL's Petition for the TLCPP, and the tariffs needed to implement the proposed Pilot program. Staff also recommends that FPL provide annual progress reports to the Commission by September each year, and be allowed to request recovery of the cost of this program, up to \$728,000, through the ECCR clause.

**Issue 2:** Should this docket be closed?

**Recommendation:** Yes. If Issue 1 is approved, the tariffs should become effective August 14, 2007. If a protest is filed within 21 days of the issuance of the order, the tariffs should remain in effect with any increase held subject to refund pending resolution of the protest. If no timely protest is filed, the docket should be closed upon the issuance of a consummating order. (Fleming)

**Staff Analysis:** If Issue 1 is approved, the tariffs should become effective August 14, 2007. If a protest is filed within 21 days of the issuance of the order, the tariffs should remain in effect with any increase held subject to refund pending resolution of the protest. If no timely protest is filed, the docket should be closed upon the issuance of a consummating order.