

State of Florida



## Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD  
TALLAHASSEE, FLORIDA 32399-0850

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

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**DATE:** August 3, 2006

**TO:** Director, Division of the Commission Clerk & Administrative Services (Bayó)

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

**RE:** Docket No. 060408-EI – Petition for approval of modifications to demand-side management plan by Florida Power & Light Company.

**AGENDA:** 08/15/06 – Regular Agenda – Tariff Filing – Interested Persons May Participate

**COMMISSIONERS ASSIGNED:** All Commissioners

**PREHEARING OFFICER:** Deason

**CRITICAL DATES:** None; 60-Day Suspension Date Waived by Petitioner

**SPECIAL INSTRUCTIONS:** None

**FILE NAME AND LOCATION:** S:\PSC\ECR\WP\060408.RCM.DOC

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### Case Background

The Commission approved numeric conservation goals for Florida Power & Light Company (FPL) by Order No. PSC-04-0850-CO-EG, issued September 1, 2004, in Docket No. 040029-EG, In re: Petition for Approval of Numeric Conservation Goals by Florida Power & Light Company. To meet these goals, FPL has a demand-side management (DSM) Plan consisting of 17 programs, including seven residential programs, nine commercial/industrial (C/I) programs, and one research and development program. By Order No. PSC-05-0323-CO-EG, issued on March 21, 2005 in Docket No. 040029-EG, the Commission approved FPL's DSM Plan except for two programs, BuildSmart and Residential Conservation Service. Following a formal proceeding, these two programs were subsequently approved by the Commission in Order No. PSC-06-0025-FOF-EG, issued on January 10, 2006 in Docket No. 040029-EG.

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By Order No. PSC-06-0555-FOF-E1, issued on June 28, 2006, in Docket No. 060225-EI, In re: Petition for Determination of Need for West County Units 1 and 2 Electrical Power Plants in Palm Beach County by Florida Power & Light Company, the Commission granted FPL's determination of need for the West County Energy Center Units 1 and 2. As a condition of approval, FPL agreed to file new and revised DSM programs to increase demand and energy savings on its system. On May 19, 2006, FPL petitioned the Commission for approval of two new DSM programs and revisions to seven existing DSM programs. FPL's petition contains rate tariffs associated with some of its DSM programs. By letter dated July 19, 2006, FPL waived the 60-day requirement for Commission action to suspend or approve these rate tariffs.

This recommendation addresses FPL's petition to approve two new and seven revised DSM programs. The Commission has jurisdiction over this matter pursuant to the Florida Energy Efficiency and Conservation Act (FEECA), Sections 366.80-366.85 and 403.519, Florida Statutes.

### **Discussion of Issues**

**Issue 1:** Should the Commission approve Florida Power & Light Company's Petition for Modifications to its Demand-Side Management Plan, including recovery of reasonable and prudent costs through the energy conservation cost recovery clause?

**Recommendation:** Yes. FPL's proposed modifications will increase incentives for certain conservation measures to increase participation levels and, therefore, increase demand and energy savings. All new and modified programs are expected to continue to meet the policy objectives of the Florida Energy Efficiency and Conservation Act (FEECA), and will continue to be monitorable and cost-effective. Within 60 days of an order approving FPL's petition, FPL should file detailed program standards, for all new and revised DSM programs, for administrative approval by staff. (Haff, Colson)

**Staff Analysis:** FPL has proposed to add two new DSM programs to its DSM Plan:

- Business Water Heating (heat recovery units, heat pump water heaters)

FPL's new Business Water Heating Program encourages the installation of energy-efficient heat recovery units or heat pump water heaters. A heat recovery unit captures waste heat rejected by an air conditioner compressor and runs the excess heat through pipes in a water heater tank. The recovered energy is used to displace electrical power used for commercial water heating. A heat pump water heater uses a dedicated electric heat pump to heat water circulating through a storage tank.

- Business Refrigeration (energy-efficient refrigeration equipment)

FPL's new Business Refrigeration Program encourages the installation of controls and equipment to reduce the usage of electric strip heat for defrosting purposes. Electric strip heater elements are normally needed to prevent condensation in display cases and to defrost freezer doorways. Advanced controls can stagger the defrost cycles to limit the amount of strip heat load operating in a given time period. A freezer can also reclaim hot gas from the compressor as a heat source for defrosting doorways, reducing or eliminating the need for electric strip heaters.

In addition to the two new DSM programs, FPL has also proposed to revise seven existing programs in its DSM Plan:

- Residential Building Envelope (ceiling and roof insulation measures)
- Residential Low Income Weatherization (heating/cooling system maintenance, reduction of air infiltration)
- Residential On-Call (load management program - closed to new participants as of March 6, 2003)
- Residential On-Call Pilot (replacement load management program for new participants)
- Business Building Envelope (ceiling and roof insulation measures, reflective windows)

- Business Efficient Lighting (energy-efficient lightning measures)
- Business On-Call (load management for air conditioning equipment)

Attachment A summarizes FPL's seven revised DSM programs as well as the two new programs discussed earlier. Attachment A includes the new benefit/cost ratios under the Participants test, Rate Impact Measure (RIM) test, and Total Resource Cost (TRC) test; projections of per-participant demand and energy savings from each program; and, a brief summary of new programs and the revisions to existing programs.

For the existing programs, the only changes to the three load management programs (Residential On-Call, Residential On-Call Pilot, Business On-Call) are small increases in the amount of time that central air conditioning can be cycled, or interrupted. FPL's system exhibits extended peak demands on summer days. FPL expects to gain additional summer peak demand savings from an opportunity to extend the cycling periods, when needed, for air conditioning equipment. The customer incentive remains unchanged for the load management programs. FPL does not expect the extended cycling periods to affect customer participation.

Changes to the other four existing programs consist primarily of small to moderate increases in the level of incentives paid by FPL to customers to install energy-efficient measures. FPL expects that increased incentives will lead to increased customer participation levels, which should in turn increase system demand and energy savings. The Residential Building Envelope Program, Business Building Envelope Program, and Residential Low Income Weatherization Program each include one additional conservation measure.

When the Commission evaluates conservation programs, it considers three criteria:

- Whether the programs advance the policy objectives of Rule 25-17.001, Florida Administrative Code, and the Florida Energy Efficiency and Conservation Act (FEECA), Sections 366.80 through 366.85, Florida Statutes;
- Whether the programs are directly monitorable and produce measurable results; and,
- Whether the programs are cost effective

FPL's new and revised DSM programs meet the policy objectives of FEECA by producing energy savings and reductions to weather-sensitive peak demand. By 2014, the nine programs are expected to produce cumulative summer peak demand savings on FPL's system of approximately 454 MW, winter peak demand savings of 310 MW, and annual energy savings of 54,068 MWh. FPL is currently meeting its Commission-prescribed numeric conservation goals without counting the additional demand and energy savings from the new and revised DSM programs.

FPL's new and revised DSM programs are monitorable and will continue to yield measurable results. FPL will track customer participation in the two new programs to evaluate

actual demand and energy savings. The majority of the revised programs are mature technologies which FPL has studied for several years. Additionally, FPL will continue to examine the load management programs using metered customer data to observe the effects of cycling activities.

FPL's new and revised DSM programs are cost-effective. All programs were evaluated against FPL's next uncommitted generating unit, a 181 MW gas-fired combustion turbine unit with an in-service date of June 2011. As shown in Attachment A, all programs have a benefit/cost ratio greater than 1.0 under the Participants, RIM, and TRC tests. A cost-effective DSM program under the RIM test means that program participants, as well as those customers who do not participate, will benefit from the program.

Staff recommends that the Commission approve the proposed modifications to FPL's DSM Plan. The new and revised programs are expected to increase FPL's system demand and energy savings, are expected to continue to meet the policy objectives of the Florida Energy Efficiency and Conservation Act (FEECA), and are expected to continue to be monitorable and cost-effective. If the Commission approves FPL's modified DSM Plan, staff recommends that FPL be required to file detailed program standards within 60 days of the Commission's order approving the petition. These standards should be filed for all new and revised DSM programs for administrative approval by the staff.

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

**Recommendation:** Yes, if Issue 1 is approved, this tariff should become effective on August 15, 2006. If a protest is filed within 21 days of the issuance of the order, this tariff should remain in effect with any increase held subject to refund pending resolution of the protest. If no timely protest is filed, this docket should be closed upon the issuance of a consummating order. (Fleming)

**Staff Analysis:** If Issue 1 is approved, this tariff should become effective on August 15, 2006. If a protest is filed within 21 days of the issuance of the order, this tariff should remain in effect with any increase held subject to refund pending resolution of the protest. If no timely protest is filed, this docket should be closed upon the issuance of a consummating order.

**ATTACHMENT A**  
**Proposed Modifications to FPL's Demand-Side Management Programs**

Program Name	Benefit / Cost Ratio		Per-Customer Savings - at generator		Proposed Modifications	
	Part.	RIM	TRC	KW - Sum. KW - Win. KW/h		
Residential Building Envelope	1.77	1.28	1.58	0.37	795 Increases in maximum incentive levels Ceiling Insulation: from \$570/summer KW to \$1676 Reflective Roofs: from \$461/summer KW to \$706 Roof coatings (NEW): \$1518/summer KW	
Residential Low Income Weatherization	1.78	1.47	1.7	0.17	0.05	361 Increases in maximum incentive levels HVAC maintenance: from \$35/participant to \$45 Reduced air infiltration: from \$10/participant to \$60 Room AC replacement (NEW): \$25/participant
Residential On-Call (and Residential On-Call PILOT)	--	2.55	6.03	1.23	1.20	19 Extend option C interrupt schedule for A/C per 30 min. period: from 15 min. to 17.5 min. cumulative time: from 180 min. to 210 min.
Business Building Envelope	1.92	1.42	2.22	1.10	0.06	2095 Name change from "C/I" to "Business" Increases in maximum incentive levels Ceiling insulation: from \$181/summer KW to \$185 Roof insulation: from \$181/summer KW to \$219 Reflective roofs: from \$181/summer KW to \$579 Window treatments (NEW): \$429/summer KW
Business Efficient Lighting	4.31	1.44	4.71	1.10	0.72	5250 Name change from "C/I" to "Business" Increase in maximum incentive level From \$101/summer KW to \$132
Business On-Call	∞	2.62	7.73	1.10	0.00	1 Extend interrupt schedule for A/C per 30 min. period: from 15 min. to 17.5 min. cumulative time: from 180 min. to 210 min.
Business Water Heating (NEW)	1.49	1.11	1.31	1.10	1.27	11045 Applies to new equipment: heat recovery water heaters (HPWH) heat recovery units (HRU) Maximum incentive level of \$881/summer KW
Business Refrigeration (NEW)	2.42	1.4	2.57	1.10	0.98	8692 Applies to controls that reduce strip heat usage in refrigeration Maximum incentive level of \$80/summer KW