

State of Florida



Public Service Commission

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

DATE: January 20, 2005

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

FROM: Division of Economic Regulation (Harlow, Colson, Sickel)
Office of the General Counsel (Vining)

RE: Docket No. 040029-EG – Petition for approval of numeric conservation goals by Florida Power & Light Company.

AGENDA: 02/01/05 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: S:\PSC\ECR\WP\040029A.RCM.DOC

Case Background

The Florida Energy Efficiency and Conservation Act (FEECA), specifically Section 366.82, Florida Statutes, requires the Commission to adopt goals to reduce and control the growth rates of electric consumption and weather sensitive peak demand. In Order No. PSC-04-0763-PAA-EG, issued August 9, 2004, the Commission set numeric conservation goals for Florida Power and Light Company (FPL).

Rule 25-17.0021(4), Florida Administrative Code, requires that within 90 days of a final Commission order establishing goals, each utility shall submit a demand-side management (DSM) plan designed to meet the utility's goals. FPL timely filed its proposed DSM Plan on November 30, 2004. FPL requests approval of its DSM Plan, including approval for cost recovery.

This recommendation addresses FPL's petition for approval of its 2005 Demand-side Management Plan. The Commission has jurisdiction over this matter pursuant to Sections 366.81 and 366.82, Florida Statutes.

Discussion of Issues

Issue 1: Should Florida Power and Light Company's (FPL) proposed 2005 Demand-side Management (DSM) Plan be approved, including approval for cost recovery?

Recommendation: Yes. FPL's DSM Plan: 1) meets the objectives of Rule 25-17.001, Florida Administrative Code, and FEECA; and, 2) contains programs that appear to be cost-effective, directly monitorable, and meet FPL's numeric conservation goals. If a hearing is held on the protest to the BuildSmart Program modifications approved in Order No. PSC-04-1046-PAA-EG, the inclusion of the BuildSmart program in FPL's DSM Plan should be addressed in that proceeding; if a hearing is not held, the BuildSmart Program as modified should be included in FPL's DSM Plan. FPL's research and development program expenditures should be capped as proposed in FPL's DSM Plan. (Harlow, Colson, Sickel)

Staff Analysis: FPL's proposed DSM Plan contains 20 programs, including seven residential programs, nine commercial/industrial programs, one umbrella research and development program, and three specific research projects. FPL proposes to continue all existing programs, with modifications to eight programs. FPL also proposes one new research and development project, the Business Green Energy Research Project. A summary of each of these programs is included beginning on page 7.

In Order No. 22176, issued November 14, 1989, in Docket No. 890737-PU, In re: Implementation of Sections 366.80 through 366.85, Florida Statutes, Conservation Activities of Electric and Natural Gas Utilities, the Commission stated that conservation programs will be evaluated using the following criteria:

- Whether the program advances the policy objectives of Rule 25-17.001, Florida Administrative Code, and Sections 366.80 through 366.85, Florida Statutes, also known as the "Florida Energy Efficiency and Conservation Act" (FEECA);
- Whether the program is directly monitorable and yields measurable results; and
- Whether the program is cost-effective.

Staff has reviewed FPL's proposed DSM Plan and believes it meets the Commission's three-pronged test. The resulting demand and energy savings also appear to meet FPL's newly set goals, as approved in Order No. PSC-04-0763-PAA-EG, issued August 9, 2004, in the instant docket. The DSM programs which FPL counts toward its goals appear to be directly monitorable. FPL's Plan also includes four research and development programs and a cogeneration program which, while not directly measurable, are specifically identified in FEECA. Several of the programs in FPL's Plan are marginally cost-effective. However, FPL excludes measures which would have a payback of less than two years without an incentive for consumers. This reduces the potential for free-riders in FPL's programs, and increases the probability that the programs will be cost-effective.

FPL has proposed to continue its seven existing residential DSM programs. FPL has proposed modifications to the incentive structures of three of its seven residential programs, including the Residential Building Envelope, Duct System Testing and Repair, and Residential Air Conditioning programs. FPL's proposed incentive modifications were based on revised kW and kWh savings estimates determined by recent end-use surveys. FPL has also proposed the addition of incentives for new qualifying measures to two of its residential programs, including: 1) a maximum incentive of \$461 per summer kW reduction for reflective roof measures under the Residential Building Envelope Program; and, 2) a maximum incentive of \$412 per summer kW reduction for plenum measures under the Residential Air Conditioning Program.

Staff believes that the residential programs in FPL's proposed DSM Plan should be approved, with one caveat. On October 26, 2004, the Commission issued Order No. PSC-04-1046-PAA-EG, in Docket No. 040660-EG, In re: Petition for approval of modifications to BuildSmart Program by Florida Power & Light Company. By its order, the Commission approved several modifications to FPL's BuildSmart Program, including the elimination of service fees for participating builders. FPL filed its proposed DSM Plan subsequent to this order, and included the BuildSmart Program as modified. However, on November 15, 2004, the Commission's PAA order was protested by Compliance Data Services, Inc. Staff believes it would prejudice the issue to include the modified BuildSmart Program in FPL's DSM Plan at this time because the program modifications are the subject of an ongoing protest. If a hearing is held regarding the protest in Docket No. 040660-EG, staff believes it is appropriate to address the inclusion of the BuildSmart Program in FPL's DSM Plan as a part of that proceeding. If the Commission determines that a hearing should not be held, and Docket No. 040660-EG is closed, staff believes the modified BuildSmart Program, as approved in Order No. PSC-04-1046-PAA-EG, should be included in FPL's DSM Plan.

FPL plans to continue offering its nine existing commercial/industrial (C/I) DSM programs, with proposed modifications to three of the nine programs. FPL has proposed several modifications to its C/I Heating, Ventilating and Air Conditioning (HVAC) Program to account for upcoming changes in the building code. FPL plans to incorporate the new code into the program by adopting minimum program efficiencies using ASHRAE 90.1 2001 as a baseline. FPL will also eliminate the incentives for rooftop unit sealing in the HVAC Program because this measure will be required under the revised building code. FPL plans minimal reductions in the incentives for thermal storage and chillers, based on efficiency improvements above ASHRAE 90.1 2001. As a result of FPL's research under its Conservation Research and Development Program, FPL has added an incentive to the HVAC Program for energy recovery ventilator units, with a maximum of \$399 per summer kW reduction.

FPL has proposed a slight reduction to the incentives offered under its C/I Efficient Lighting Program. FPL's C/I Building Envelope Program incentive structure will also be revised, and window treatment measures will be eliminated because these measures are no longer cost-effective.

FPL's Plan also includes one existing umbrella research and development program, two existing research projects, and one proposed new research project. FPL's umbrella research and development program, the Conservation Research and Development (CRD) Program, has been

approved through December 31, 2004. FPL proposes that the program be extended until FPL's next DSM Plan is approved, or six years, whichever comes first, with a spending cap of \$2.5 million for the period. FPL's current spending cap is \$1.5 million through December 2004, with actual expenditures of \$1,446,000 for the period 1999 through 2004. According to FPL, the company expects to focus much of its upcoming effort in the CRD project on the opportunities for demand and energy savings for C/I customers, due to the impact of the substantial changes in the state building code. As the more stringent efficiency requirements of the state building code take effect, it will become more difficult to achieve demand and energy savings by installing HVAC equipment that is more efficient than required by code. Therefore, FPL intends to evaluate potential new technologies to meet C/I customers' HVAC needs while achieving demand and energy savings incremental to the savings achieved by equipment which meets code. FPL also stated that it intends to analyze what it believes are the substantial potential demand and energy savings from building control systems on C/I buildings. Staff believes that the increased spending cap for the CRD program is appropriate. FPL has had success in implementing new DSM programs and measures which were determined to be cost-effective in previous years in the CRD program. FPL has also provided information on promising future research plans for the program. Staff also notes that FPL has requested fewer specific research projects with separate funding in its proposed DSM Plan than in its previous Plan.

FPL has proposed one new research project, the Business Green Energy Project. The purpose of this project is to investigate FPL's business customers' preferences regarding renewable energy and their willingness to pay the incremental costs of such energy through green pricing rates. If it is determined to be feasible, FPL plans to design and implement a green pricing program that addresses the interests of its business customers. According to FPL, its previous research on renewable energy and green pricing rates did not include business customers. Under the project, FPL intends to build upon its research in its recently approved residential Green Power Pricing Research Project. FPL expects that the development and analysis phase of the project will be completed within 2 years, and has requested recovery of expected expenditures capped at \$700,000 over the life of this phase of the project. Staff believes that this project should be approved, including recovery of expenditures capped at \$700,000. Staff recommends that FPL should be required to file a final report upon completion of the Business Green Energy Project, which includes a summary of the results of its research and addresses whether FPL plans to implement a C/I green pricing program.

In conclusion, staff recommends that, with the exception of the BuildSmart Program, FPL's proposed 2005 DSM Plan should be approved, because the Plan meets the objectives of Rule 25-17.001, Florida Administrative Code, and FEECA. The programs which FPL counts toward its goals are directly monitorable and the resulting demand and energy savings appear to meet FPL's newly set goals. Expenditures on FPL's proposed research and development programs should be capped at the levels contained in FPL's DSM Plan. If a hearing is held regarding the protest to the modifications of the BuildSmart Program, as approved in Order No. PSC-04-1046-PAA-EG, in Docket No. 040660-EG, staff believes it is appropriate to address the inclusion of the BuildSmart program in FPL's DSM Plan as a part of that proceeding. If the Commission determines that a hearing should not be held, and Docket No. 040660-EG is closed, the BuildSmart Program, as approved in Order No. PSC-04-1046-PAA-EG, should be included in FPL's DSM Plan.

Issue 2: Should Florida Power and Light Company be required to submit detailed program participation standards?

Recommendation: Yes. If Issue 1 is approved, FPL should file program participation standards within 30 days of the issuance of the order. Staff should administratively approve the program participation standards if they conform to the description of the programs contained in FPL's DSM Plan.

Staff Analysis: If Issue 1 is approved, FPL should file program participation standards within 30 days of the issuance of the order. FPL's program standards should clearly state the requirements for participation in the programs, customer eligibility requirements, details on how rebates or incentives will be processed, technical specifications on equipment eligibility, and necessary reporting requirements. Staff recommends that these standards be administratively approved by staff if they conform to the description of the programs outlined in FPL's approved DSM Plan. (Harlow, Colson, Sickel)

Docket No. 040029-EG

Date: January 20, 2005

Issue 3: Should this docket be closed?

Recommendation: If no person whose substantial interests are affected by the proposed agency action files a protest within 21 days of the issuance of the order, this docket should be closed upon the issuance of a consummating order. (Vining)

Staff Analysis: If no person whose substantial interests are affected by the proposed agency action files a protest within 21 days of the issuance of the order, this docket should be closed upon the issuance of a consummating order.

RESIDENTIAL PROGRAMS:

1. *Residential Building Envelope:* This program offers incentives to residential customers to install energy efficient roof and ceiling insulation measures. FPL plans to decrease the incentive offered from \$626 per summer kW to \$570 per summer kW. FPL also plans to expand the program to include reflective roof measures, with a maximum incentive of \$461 per summer kW.
2. *Duct System Testing and Repair Program:* This program provides reduced cost duct system testing to identify leaks in air conditioning duct systems, and encourages the repair of those leaks by qualified contractors. Incentives are offered for duct system repair. FPL has proposed increasing the maximum incentive from \$406 to \$466 per summer kW reduction.
3. *Residential Air Conditioning Program:* This program offers incentives to customers to purchase higher efficiency heating, ventilating, and air conditioning equipment. FPL has proposed several changes to the program, including: 1) expanding the program to include plenum repair measures, with a maximum incentive level of \$412 per summer kW reduction; and, 2) increasing incentive levels for straight cool and heat pump units from a range not exceeding \$216 to \$436 per kW of summer demand reduction to a range not exceeding \$356 to \$490 per summer kW reduction.
4. *Residential Load Management Program (On Call Program):* This is an existing load management program in which direct load control equipment is installed on selected customer end-use equipment, allowing FPL to control these customer loads as needed. Qualifying end-use equipment includes central electric air conditioners, central electric space heaters, conventional electric water heaters and swimming pool pumps. As part of its approved Residential Load Control Pilot Project, FPL has closed the On Call Program to new participants. FPL has proposed no changes to the On Call Program.
5. *Residential New Construction Program (BuildSmart):* BuildSmart encourages the design and construction of energy efficient homes by offering: education to contractors on energy efficiency measures, construction design reviews and home inspections, and an energy rating system. FPL has proposed no changes to this program as modified by Order No. PSC-04-1046-PAA-EG, issued in Docket No. 040660-EG. However, this order is the subject of an ongoing protest, and should be addressed as discussed in Issue 1.
6. *Residential Low Income Weatherization Program:* This program combines energy audits and incentives to encourage low income housing administrators to retrofit homes with energy efficiency measures. FPL offers incentives for HVAC maintenance and reduced air infiltration measures. FPL has proposed no changes to this program.
7. *Residential Conservation Service:* This program offers a walk-through energy audit, a computer generated Class A audit, and a customer-assisted energy audit. For customer-assisted energy audits, a mail-in, phone, or Internet audit option may be offered. FPL does not apply demand and energy savings from this program towards its goals. FPL has proposed no changes to this program.

RESIDENTIAL DEMAND-SIDE MANAGEMENT PROGRAMS

DSM PROGRAM	Summer Peak Demand		Winter Peak Demand		Annual Energy Consumption		Benefit / Cost Ratio (RIM)
	Savings (MW)	% of Goal	Savings (MW)	% of Goal	Savings (GWh)	% of Goal	
Building Envelope	49.517	8.4%	63.752	15.7%	123.975	13.3%	1.04
Duct System Testing & Repair	26.362	4.5%	26.922	6.6%	54.192	5.8%	1.02
Air Conditioning	299.177	51.0%	66.998	16.5%	625.903	67.2%	1.02
Load Management	145.332	24.8%	173.224	42.8%	2.737	0.3%	1.31
New Construction (BuildSmart)	65.540	11.2%	73.946	18.3%	122.681	13.2%	1.06
Low Income Weatherization	.869	0.1%	.248	0.1%	1.833	0.2%	1.05
Res. Conservation Service	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL SAVINGS	586.8	100.0%	405.1	100.0%	931.3	100.0%	
GOAL	586.9		405.1		931.0		

COMMERCIAL/INDUSTRIAL PROGRAMS:

1. *C/I HVAC Program:* This is an existing program which offers C/I customers financial incentives to upgrade to higher efficiency HVAC equipment. FPL has proposed several changes to the program, including: 1) decreasing the maximum thermal storage incentive from \$367 per kW to \$350 per summer kW reduction; 2) decreasing the maximum incentive for chillers from \$77 per kW to \$75 per summer kW; 3) adopting minimum program efficiencies using ASHRAE 90.1 2001 as a baseline; 4) adding incentives for energy recovery ventilator units with a maximum incentive of \$399 per summer kW reduction; and, 5) eliminating incentives for rooftop unit sealing.
2. *C/I Efficient Lighting Program:* The Efficient Lighting program offers C/I customers financial incentives to install high efficiency lighting measures at the time of replacement. FPL has proposed decreasing the existing program's incentive from \$119 to \$101 per summer kW reduction.
3. *C/I Building Envelope Program:* This existing program offers financial incentives to C/I customers to install high efficiency building envelope measures such as roof/ceiling insulation and reflective roof coatings. FPL has proposed a change to the incentive structure from a range not exceeding \$150 to \$320 per kW of summer demand reduction to an incentive not exceeding \$181 per kW. FPL has also proposed eliminating incentives for window-related technologies.
4. *Business Custom Incentive Program:* This is an existing "catch-all" program for cost-effective C/I efficiency measures which are not included in other FPL programs. DSM measures must reduce or shift at least 25 kW during peak hours, have verifiable demand and energy savings, and pass RIM. FPL has proposed no changes to this program.
5. *Business On Call Program:* This is an existing program which offers incentives to General Service and General Service Demand customers for the direct control of participating customers' direct expansion, central air conditioners. FPL has proposed no changes to the program.
6. *C/I Demand Reduction Program:* This is an existing program designed to reduce peak demand by allowing the direct control of customer loads of 200 kW or greater during periods of extreme demand or capacity shortages. Participants contract for a firm demand level which may not be exceeded during capacity shortage periods. In return, participants receive a monthly credit of \$4.75 per kW during a specified control period less their firm demand. Participants must provide a five-year termination notice to discontinue service under this rider. FPL has proposed no changes to the program.
7. *Business Energy Evaluation:* This is a C/I audit program which offers free standard level energy evaluations. More detailed evaluations are available with costs shared between FPL and the participating customer. Participation in FPL's other C/I DSM programs is promoted through this program. FPL has proposed no changes to this program.

8. *Cogeneration and Small Power Production*: This program is designed to facilitate FPL in complying with all regulatory requirements concerning qualifying facilities and small power producers. One role of the program is to assist customers in the evaluation of potential cogeneration projects, including self-generation. FPL does not project demand and energy savings from this program. Therefore a cost-effectiveness analysis is not performed, and demand and energy savings attributable to the program are not included in FPL's goals. FPL has proposed no changes to this program.
9. *C/I Load Control (CILC)*: The CILC program reduces peak demand by controlling customer loads of 200 kW or greater during peak periods. In return, participating customers receive service under a reduced rate. Pursuant to Order No. PSC-99-0505-PCO-EG, issued March 10, 1999, the program has not been offered to new participants since December 31, 2000. However, the program will continue for customers participating prior to December 31, 2000.

COMMERCIAL / INDUSTRIAL DEMAND-SIDE MANAGEMENT PROGRAMS

DSM PROGRAM	Summer Peak Demand		Winter Peak Demand		Annual Energy Consumption		Benefit / Cost Ratio (RIM)
	Savings (MW)	% of Goal	Savings (MW)	% of Goal	Savings (GWh)	% of Goal	
Heating, Vent. & Air Conditioning	75.472	35.1%	31.966	29.8%	34.291	26.9%	1.06
Efficient Lighting	9.683	4.5%	6.329	5.9%	48.166	37.7%	1.01
Building Envelope	18.347	8.5%	2.915	2.7%	35.645	27.9%	1.06
Business Custom Incentive	2.820	1.3%	2.810	2.6%	8.618	6.8%	1.04
Business On Call	45.240	21.1%	0	0%	.046	0.04%	1.52
C/I Demand Reduction	63.330	29.5%	63.330	59.0%	.854	0.7%	1.25
Business Energy Evaluation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL SAVINGS	214.9	100.0%	107.4	100.0%	127.6	100.0%	
GOAL	214.9		107.3		127.6		

RESEARCH AND DEVELOPMENT PROGRAMS:

1. *Conservation Research and Development Program (CRD)*: This is an existing umbrella research project under which new DSM technologies are analyzed. Several FPL DSM programs have emerged from the CRD program, including the C/I Building Envelope, Business On Call and Residential New Construction programs. The program has also resulted in the addition of cost-effective measures to existing programs, such as the proposed inclusion of Energy Recovery Ventilators to the C/I HVAC Program. FPL proposes extending the program until the next DSM Plan is approved, or six years, whichever occurs first, with a spending cap of \$2,500,000 for the period.
2. *Residential On Call Pilot Project*: Under this project, approved by the Commission on March 31, 2003, FPL has opened a new pilot project rate schedule with reduced incentives for all new residential load control participants. FPL has also closed the existing On Call rate schedule to additional participants. FPL will monitor dropout rates and response rates of new participants. As of July 2004, FPL had over 141,000 participants, with a savings to the ECCR Clause (as compared to incentives offered under the On Call Program) of \$4.6 million. FPL has experienced few customer complaints regarding the reduced incentives. The project was approved through March 31, 2006.
3. *Green Power Pricing Research Project*: This existing residential green energy research project was approved by the Commission on January 16, 2004. FPL has proposed no changes to this program. The voluntary program provides interested customers with the opportunity to support renewable energy development. The program includes a special tariff, under which participating residential customers voluntarily pay a \$9.75 monthly premium. In exchange, FPL purchases a 1,000 kWh block of tradable renewable energy credits. For every 10,000 customers participating in the program, FPL will cause to be developed 150 kW of photovoltaic capacity in Florida. The research project will be completed in December 2006, and has a Commission approved spending cap of \$1.5 million over the study period. As of June 2004, FPL had 4,088 participating customers, with project revenues of \$101,322 and expenses of \$91,925.
4. *Business Green Energy Research Project*: FPL has proposed the Business Green Energy Research Project to investigate its business customers' preferences regarding renewable energy and their willingness to pay the incremental costs of such energy. If it is determined to be feasible, FPL plans to design and implement a green pricing program that addresses the interests of its business customers. FPL expects that the development and analysis phase of the project will be completed within 2 years, and has requested recovery of expected expenditures capped at \$700,000 over the life of the project.