State of Florida

Public Service Commission

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

DATE: July 8, 2004

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

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

RE: Docket No. 040031-EG – Petition for approval of numeric conservation goals by Progress Energy Florida, Inc.

AGENDA: 07/20/04 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

CRITICAL DATES: New conservation goals must be set by January 1, 2005

SPECIAL INSTRUCTIONS: Take up recommendations for Docket Nos. 040029-EG, 040030-EG, 040031-EG, 040032-EG, 040033-EG, 040034-EG, and 040035-EG consecutively

FILE NAME AND LOCATION: S:\PSC\ECR\WP\040031.RCM.DOC

Case Background

Section 366.82, Florida Statutes, part of the Florida Energy Efficiency and Conservation Act (FEECA), requires the Commission to adopt goals to increase the efficiency of energy consumption, increase the development of cogeneration, and reduce and control the growth rates of electric consumption and weather-sensitive peak demand. Pursuant to Section 366.82(2), Florida Statutes, the Commission must review a utility's conservation goals not less than every five years. These statutes are implemented by Rules 25-17.001 and 25-17.0021, Florida Administrative Code.

The Commission first established numeric conservation goals for Progress Energy Florida (PEF) in Order No. PSC-94-1313-FOF-EG, issued October 25, 1994 in Docket No. 930549-EG, In Re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section 111) by Florida Power Corporation. In that order, the Commission found:

> We will set overall conservation goals for each utility based on measures that pass both the participant and (Rate Impact Measure) RIM tests. The record in this docket reflects that the difference in demand and energy saving between RIM and (Total Resource Cost) TRC portfolios are negligible. We find that goals based on measures that pass TRC but not RIM would result in increased rates and would cause customers who do not participate in a utility DSM measure to subsidize customers who do participate. Since the record reflects that the benefits of adopting a TRC goal are minimal, we do not believe that increasing rates, even slightly, is justified.

The Commission set numeric conservation goals for PEF a second time in Order No. PSC-99-1942-FOF-EG, issued October 1, 1999 in Docket No. 971005-EG, In Re: Adoption of Numeric Conservation Goals by Florida Power Corporation. In setting PEF's numeric goals, the Commission accepted a stipulation between PEF and the Legal Environmental Assistance Foundation. Again, PEF's numeric goals were based on measures that passed the participant and RIM tests.

The instant docket, opened on January 13, 2004, represents the third time that the Commission will set numeric conservation goals for PEF. On June 1, 2004, PEF timely filed its new numeric goals.

Rule 25-17.0021(4), Florida Administrative Code, requires that, within 90 days of a final order establishing goals, a utility shall submit a demand-side management (DSM) plan which contains conservation and DSM programs designed to meet its numeric goals. As part of its numeric goals filing, PEF filed its DSM Plan. PEF also filed testimony and exhibits in support of its proposed numeric goals and DSM Plan.

The Florida Industrial Power Users Group (FIPUG) was granted leave to intervene on May 5, 2004. The Florida Industrial Cogeneration Association (FICA) was granted leave to intervene on May 12, 2004.

This recommendation addresses PEF's petition for approval of its numeric conservation goals and approval of its DSM Plan. The Commission has jurisdiction over this matter pursuant to Sections 366.81 and 366.82, Florida Statutes.

Discussion of Issues

Issue 1: Should the Commission approve Progress Energy Florida's numeric conservation goals for the 2005-2014 period?

Recommendation: Yes. The programs, assumptions, and evaluation methodology used by PEF to develop its proposed numeric goals are reasonable and adequately meet the requirements of Rule 25-17.0021, Florida Administrative Code. PEF appropriately used the RIM and participant tests to determine the cost-effectiveness level of achievable demand and energy savings. (Haff, Colson, Sickel)

Staff Analysis: In developing its numeric conservation goals, PEF evaluated the measures identified by the Commission when it set goals in 1994 and again in 1999. In addition, PEF separately identified and evaluated promising new measures. The evaluation considered the issues and end-use categories specified in Rule 25-17.0021(3), Florida Administrative Code. All potential measures were evaluated against a base case, supply-side only expansion plan for cost-effectiveness using the RIM, TRC, and participant tests. From PEF's analysis, twenty-nine residential and nineteen commercial/industrial measures passed the RIM test. The seasonal demand and annual energy savings associated with these cost-effective measures were summed by market segment to arrive at PEF's proposed goals. These goals are as follows:

PROPOSED CONSERVATION GOALS - CUMULATIVE

Year	Residential			Commercial / Industrial		
	Summer MW	Winter MW	Annual GWh	Summer MW	Winter MW	Annual GWh
2005	13	43	21	4	3	3
2006	21	75	35	7	7	6
2007	30	108	50	11	10	9
2008	38	142	65	14	14	12
2009	47	175	80	18	17	15
2010	55	210	95	21	20	18
2011	65	248	112	25	24	20
2012	74	287	128	29	28	23
2013	83	324	144	32	31	26
2014	92	366	161	36	34	29

According to its most recent FEECA report, PEF has been successful in surpassing all six of its current numeric demand and energy conservation goals that were set by the Commission in 1999. Nonetheless, five of the six numeric goals proposed by PEF are slightly lower than the current goals. The primary reasons for this reduction are: (1) the forecasted impact of more stringent energy codes, particularly on residential air conditioning systems; and, (2) decreased participation in certain existing DSM programs due to saturation. A comparison of PEF's current and proposed conservation goals is shown below.

COMPARISON OF CURRENT AND PROPOSED CONSERVATION GOALS

Year	Residential			Commercial / Industrial		
	Summer MW	Winter MW	Annual GWh	Summer MW	Winter MW	Annual GWh
Current (*cumulative 2000-2009*)	125	389	185	38	37	19
Proposed (*cumulative 2005-2014*)	92	366	161	36	34	29

Staff has reviewed the programs, assumptions, and evaluation methodology used by PEF and believes they are reasonable. The DSM measures evaluated are based on an adequate assessment of the market segments and major end-use categories in accordance with Rule 25-17.0021(3), Florida Administrative Code. In addition, as required by the rule, PEF's analysis adequately reflects consideration of overlapping measures, rebound effects, free riders, interactions with building codes and appliance efficiency standards, and PEF's latest monitoring and evaluation of conservation programs and measures. PEF's chosen avoided units and the associated assumptions reflect the information provided in PEF's latest Ten-Year Site Plan and is reasonable. PEF appropriately used the RIM and participant tests to determine the cost-effective level of achievable DSM goals. Therefore staff recommends that PEF's proposed conservation goals should be approved..

Issue 2: Should the Commission approve Progress Energy Florida's Demand-Side Management Plan, including approval for cost recovery?

Recommendation: Yes. The programs contained in PEF's DSM Plan meet the policy objectives of Rule 25-17.001, Florida Administrative Code, and FEECA. The programs are cost-effective and are expected to allow PEF to meet its Commission-prescribed conservation goals. (Haff, Colson, Sickel)

Staff Analysis: PEF's DSM Plan contains five residential programs, seven commercial and industrial (C/I) programs, a qualifying facilities program, and a research and development program. These programs are summarized in Attachment A. Tables illustrating each DSM program's projected demand and energy savings and contribution towards PEF's numeric conservation goals are also included in Attachment A. Demand and energy savings from PEF's DSM Plan are expected to meet or exceed the summer demand, winter demand, and energy savings goals shown in Issue 1 for both the residential and commercial/industrial segments.

Pursuant to Order No. 22176, issued November 14, 1989 in Docket No. 890737-PU, In Re: Implementation of Section 366.80-.85, F.S., 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.

PEF's DSM programs are designed to minimize free riders, minimize rate impacts, and meet the Commission-prescribed conservation goals. The programs contained in PEF's DSM plan appear to meet the policy objectives of Rule 25-17.001, Florida Administrative Code, and FEECA. PEF's measurement plan to evaluate assumed demand and energy savings for each program appears reasonable. Each program included in PEF's DSM plan is cost-effective under the RIM, TRC, and participant tests. However, it must be emphasized that staff is not addressing the prudence of expenditures for the programs contained in PEF's DSM plan; such a review is performed annually in the Energy Conservation Cost Recovery Clause docket.

All fourteen programs contained in PEF's DSM Plan are existing programs approved by the Commission in 2000 as part of PEF's current DSM Plan. Ten of these programs remain unchanged from that time. The remaining four programs have been modified because, due to small demand or energy savings and historically low participation rates, certain components of these four programs were no longer cost-effective. Two of the four modified programs also contain new measures to replace those that were removed. The modifications are:

- Residential New Construction program -- no longer includes the high efficiency alternate water heating component.

- Home Energy Improvement program -- no longer includes the high efficiency alternate water heating component.

- Better Business program -- no longer includes the high-efficiency motors or window film components, but now includes energy recovery ventilation (installation of high-efficiency energy recovery ventilation units that remove heat and humidity from conditioned space) and cool roofs (installation of "cool roof" coating which reflects heat and sun).

- C/I New Construction program -- no longer includes the high-efficiency motors or heat recovery equipments, but now includes energy recovery ventilation and cool roofs.

PEF's Qualifying Facilities program is essentially unchanged from what was approved by the Commission in 1995 and again in 2000. This program allows PEF to meet its obligations under Section 366.051, Florida Statutes, and Chapter 25-17, Florida Administrative Code, regarding the purchase of as-available energy and firm capacity and energy from qualifying facilities. Under the program, PEF develops standard offer contracts and administers existing standard offer and negotiated contracts.

PEF's Technology Development program, a research & development program, is essentially unchanged from what was approved by the Commission in 1995 and again in 2000. Under this program, PEF will research, develop, and demonstrate potential cost-effective conservation programs. Program expenses are again capped at $800,000 per year, with a $100,000 annual cap on expenditures for any single project. PEF does not count any kW and kWh savings from its proposed Technology Development program toward its numeric conservation goals. If a legitimate DSM program results from PEF's research efforts, the program would be incorporated into the DSM Plan and its kW and kWh savings would be applied toward the goals. Examples of potential projects under the Technology Development program include demand reduction energy efficiency techniques, market transformation initiatives, indoor air quality measures, thermal energy storage technologies, and innovative metering techniques. PEF will provide a final report on each demonstration project or file and offer a permanent conservation program for each program investigated.

Staff believes that the programs contained in PEF's DSM Plan meet the policy objectives of Rule 25-17.001, Florida Administrative Code, and FEECA. Therefore, staff recommends that the Commission approve PEF's DSM Plan, including approval for cost recovery.

Issue 3: Should Progress Energy Florida be required to submit detailed program participation standards?

Recommendation: Yes. PEF should file program participation standards within 30 days of the issuance of the Consummating Order in this docket. Consistent with past Commission practice, staff should be allowed to administratively approve the program participation standards if they conform to the description of the programs contained in PEF's DSM Plan. (Haff, Colson, Sickel)

Staff Analysis: PEF'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. In the past, the Commission has allowed the staff to administratively approve program participation standards if they conform to the description of the programs contained in a utility's DSM Plan. Staff recommends that it be allowed to administratively approve PEF's program participation standards.

Issue 4: Should this docket be closed?

Recommendation: Yes. 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.

ATTACHMENT A

PROGRESS ENERGY FLORIDA / DEMAND-SIDE MANAGEMENT PLAN

RESIDENTIAL DEMAND-SIDE MANAGEMENT PROGRAMS

Home Energy Check: Residential energy audit program. Company auditor examines home and makes recommendations on low-cost or no-cost energy-saving practices and measures. Offers six types of audits: free walk-through, customer-completed (mail-in), customer-completed (online), phone-assisted customer survey, paid walk-through ($15 cost), and home energy rating (BERS audit promoted by DCA).

Home Energy Improvement: Umbrella program for existing homes. Combines thermal envelope efficiency improvements with upgraded equipment and appliances. Offers choice of rebates, as described below, or interest-free installment billing over 12 months. Promotes the following energy-efficiency measures:

Attic Insulation Upgrade: Encourages customers who have electric space heat to add ceiling insulation. PEF pays portion of the installed cost. Specific incentive amount based on increase in insulation amount above a maximum of R-12, with maximum incentive amount of $100 per customer.

Duct Test and Repair: Promotes energy efficiency through improved duct system sealing. Program helps identify and reduce energy loss by measuring air leakage rate through the central duct system. Customer must have electric heating and centrally-ducted cooling system to participate. PEF pays up to $30 for the first unit ($20 for each additional unit at same address) for duct leakage test and up to $100 per unit for duct repair.

High Efficiency Electric Heat Pumps: Pays financial incentive, not exceeding $350 per unit, to replace existing electric heating equipment with high-efficiency electric heat pumps. Specific incentive based on minimum heating and/or cooling efficiency levels. Indoor air handler and outdoor condenser must both be replaced with new equipment to qualify for this rebate.

Supplemental Incentive Bonus: Encourages adoption of several energy-efficiency measures through an additional incentive of up to $50. Incentive is paid to a participant in PEF's high efficiency electric heat pump program who also implements the ceiling insulation upgrade, duct leakage repair, or both, within 90 days.

Residential New Construction: Umbrella program for new home construction, multi-family, and manufactured homes. Promotes energy-efficient construction which exceeds the building code. Provides information, education, and advice to home builders and contractors on energy-related issues and efficiency measures. Promotes energy-efficient electric heat pumps with an incentive identical to that offered in the Home Energy Improvement program for existing homes.

Low Income Weatherization Assistance (LIWAP): Umbrella program to improve the energy efficiency of low-income family homes. Efficiency measures and incentives are identical to those offered in PEF's Home Energy Improvement Program, with the following additions:

Reduced Air Infiltration: A $75 incentive is paid for work which reduces air infiltration by a minimum specified amount.

Water Heater Wrap / Replacement: Provides wrap for water heater and associated piping near the tank. A $25 incentive may be paid towards the purchase of a high-efficiency water heater in lieu of an insulating jacket.

High-Efficiency Alternate Water Heating: Promotes installation of high-efficiency alternative electric water heating equipment. Provides incentive of $100 for each heat recovery unit and $200 per unit for each dedicated heat pump water heater unit.

Heating and Air Conditioning Maintenance: A $40 incentive is paid for service/tune-up maintenance on an existing electric central heating and air conditioning system.

Residential Energy Management: Voluntary load control program in which PEF reduces winter peak demand by interrupting electric service to water heaters and central electric heating units. Program is offered only during winter months (November through March). Maximum monthly bill credit is $11.50, but is paid only during winter months when customer usage exceeds 600 kWh per month.

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	
Home Energy Check	11.186	12.2%	11.186	3.1%	36.550	22.7%	N/A
Home Energy Improvement	51.948	56.5%	157.298	43.0%	82.920	51.5%	1.05
Residential New Construction	31.700	34.5%	111.962	30.6%	46.548	28.9%	1.28
Low Income Weatherization Assistance	1.032	1.1%	2.814	0.8%	1.967	1.2%	1.01
Residential Energy Management	0.000	0.0%	95.872	26.2%	0.000	0.0%	1.51
TOTAL SAVINGS	95.866	104.2%	379.132	103.6%	167.985	104.3%	
GOAL	92.0		366.0		161.0		

COMMERCIAL / INDUSTRIAL DEMAND-SIDE MANAGEMENT PROGRAMS

Business Energy Check: C/I energy audit program. Offers a free walk-through audit (inspection), a paid walk-through audit (energy analysis), and an online business energy check (customer-completed internet audit).

Better Business: Umbrella efficiency program for existing C/I buildings. Gives customers information and advice on energy-related issues and efficiency measures. Offers choice of rebates, as described below, or interest-free installment billing over 12 months. Promotes the following energy-efficiency measures:

HVAC Equipment: Pays financial incentive, of up to $100 per kW reduced, for the purchase of high-efficiency HVAC equipment such as packaged terminal heat pumps, packaged rooftop units, water-cooled and air-cooled chillers, and unitary heat pumps and air conditioners.

Energy Recovery Ventilation: Pays financial incentive of up to $1,500 for the installation of high-efficiency energy recovery ventilation units that remove heat and humidity from conditioned space. Customer must have electric heating and cooling system to participate.

Duct Leakage Test and Repair: Promotes energy efficiency through improved duct system sealing. Program helps identify and reduce energy loss by measuring air leakage rate through the central duct system. Customer must have electric heating and centrally-ducted cooling system to participate. PEF pays up to $30 per unit for duct leakage test and up to $100 per unit for duct repair.

Roof Insulation Upgrade: Encourages customers who have electric space heat to add roof insulation. PEF pays portion of the installed cost. Eligibility based on demonstration that additional insulation results in heating and/or cooling use reductions. Specific incentive amount based on increase in insulation amount above a maximum of R-12, with maximum incentive amount of $100 per customer.

Cool Roof: Promotes the installation of "cool roof" coating which reflects heat and sun. Customer must have electric cooling system to participate. PEF pays $50 per 1,000 square foot of cool roof coating installed up to a maximum of $1,000.

C/I New Construction: Umbrella efficiency program for new C/I buildings. Provides information, education, and advice on energy-related issues and efficiency measures. Allows PEF to be involved early in the building's design process. Also provides incentives for energy-efficient equipment, such as HVAC equipment, energy recovery ventilation, and cool roof coating. Incentive levels are identical to those offered in the Better Business program for existing buildings.

Innovation Incentive: Provides incentives for customer-specific demand and energy conservation projects, on a case-by-case basis, where cost-effective to all PEF customers. To be eligible, projects must reduce or shift a minimum of 10 kW of peak demand. Rebates will be

limited to $150 per kW reduced or shifted. Focuses on measures not offered in PEF's other DSM programs. Examples include refrigeration equipment replacement, thermal energy storage, microwave drying systems, and inductive heating (to replace resistance heat).

Standby Generation: Voluntary demand control program available to all C/I customers having on-site generation capability. Customer controls the equipment but operates it when needed by PEF. Incentive based on the load served by the customer's generator and is based on PEF's GSLM-2 rate schedule.

Interruptible Service: Direct load control program. PEF interrupts service by disconnecting electric service at the breaker during peak or emergency conditions. Offered under PEF's IS-2 and IST-2 tariffs. Available to any non-residential customer with an average billing demand of at least 500 kW. Monthly credit paid based on level of billing demand and load factor.

Curtailable Service: Direct load control program that is similar to interruptible service, only the customer's entire load is not shed. Offered under the CS-2 and CST-2 tariffs. Available to any non-residential customer with an average billing demand of at least 500 kW. Customer must be willing to reduce 25% of its average monthly billing demand upon request by PEF. Monthly credit paid to customer based on level of curtailable demand.

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	
Business Energy Check	2.345	6.5%	2.345	6.9%	5.000	17.2%	N/A
Better Business	6.912	19.2%	5.926	17.4%	11.948	41.2%	1.20
C/I New Construction	4.685	13.0%	6.321	18.6%	10.407	35.9%	1.20
Innovation Incentive	0.840	2.3%	0.840	2.5%	1.441	5.0%	N/A
Standby Generation	18.600	51.7%	17.760	52.2%	0.250	0.9%	1.22
Interruptible Service	0.880	2.4%	1.000	2.9%	0.009	0.0%	1.04
Curtailable Service	0.880	2.4%	1.000	2.9%	0.017	0.1%	1.27
TOTAL SAVINGS	35.142	97.6%	35.192	103.5%	29.072	100.2%	
GOAL	36.0		34.0		29.0		