BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 070098-EI

In the Matter of:

PETITION FOR DETERMINATION OF NEED FOR GLADES POWER PARK UNITS 1 AND 2 ELECTRICAL POWER PLANTS IN GLADES COUNTY, BY FLORIDA POWER & LIGHT COMPANY.

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VOLUME 5

Pages 652 through 740

PROCEEDINGS:	HEARING
BEFORE:	CHAIRMAN LISA POLAK EDGAR COMMISSIONER MATTHEW M. CARTER, II COMMISSIONER KATRINA J. McMURRIAN
DATE:	Tuesday, April 17, 2007
TIME:	Commenced at 9:30 a.m. Recessed at 5:52 p.m.
PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	MARY ALLEN NEEL, RPR, FPR
APPEARANCES:	(As heretofore noted.)

I N D E X

WITNESSES

EXHIBITS

NUMBER		ID.	ADMTD.
23, 24	DB-2 and DB-2		736
130, 131	DB-3 and DB-4		736

P R O C E E D I N G S

(Transcript follows in sequence from Volume 4.)

CHAIRMAN EDGAR: Okay. We are going to get started again. Thank you all for your patience.

Ms. Smith, your witness.

MS. SMITH: FPL calls Mr. Dennis Brandt, and he has not been sworn.

Thereupon,

C. DENNIS BRANDT

was called as a witness on behalf of Florida Power & Light Company, and having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. SMITH:

Q. Would you please state your name and business address.

A. My name is Dennis Brandt. My business address is 9250 West Flagler Street, Miami, Florida.

Q. By whom are you employed and in what capacity?

A. I work for Florida Power & Light. I'm the Director of Product Development and Management.

Q. Have you prepared and caused to be filed 25 pages of prefiled direct testimony in this proceeding?

A. Yes, I have.

Q. Do you have any changes or revisions to your prefiled direct testimony?

A. No, I do not.

Q. If I asked you the same questions contained in your prefiled direct testimony today, would your answers be the same?

A. Yes, they would.

MS. SMITH: I ask that Mr. Brandt's prefiled direct testimony be inserted into the record as though read.

CHAIRMAN EDGAR: The prefiled direct testimony will be entered into the record as though read.

BY MS. SMITH:

Q. Are you also sponsoring any exhibits to your direct testimony?

A. Yes, I am.

Q. And do those exhibits consist of documents DB-1 and DB-2?

A. Yes, they do.

MS. SMITH: Madam Chairman, these exhibits have been premarked as 23 and 24.

CHAIRMAN EDGAR: Thank you.

BY MS. SMITH:

Q. Mr. Brandt, have you also prepared and caused to be filed 19 pages of prefiled rebuttal testimony in

this proceeding?

A. Yes, I have.

Q. Do you have any changes or revisions to your prefiled rebuttal testimony?

A. No, I do not.

Q. If I asked you the same questions contained in your rebuttal testimony today, would your answers be the same?

A. Yes, they would.

MS. SMITH: I ask that Mr. Brandt's prefiled rebuttal testimony be inserted into the record as though read.

CHAIRMAN EDGAR: The prefiled rebuttal testimony will be entered into the record as though read.

BY MS. SMITH:

Q. Are you also sponsoring any exhibits to your rebuttal testimony?

A. Yes, I am.

Q. And do those exhibits consist of documents DB-3 and DB-4?

A. Yes, they are.

MS. SMITH: And, Madam Chairman, those have been premarked for identification as 130 and 131.

CHAIRMAN EDGAR: Thank you.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF C. DENNIS BRANDT

DOCKET NO. 07_____ - EI

JANUARY 29, 2007

Q. Please state your name and business address.

A. My name is C. Dennis Brandt, and my business address is 9250 West Flagler Street, Miami, Florida 33174.

Q. By whom are you employed and what position do you hold?

A. I am employed by Florida Power & Light Company (FPL) as Director of Product Management and Operations.

Q. Please describe your duties and responsibilities in that position.

A. I am responsible for the life cycle management of FPL's products and services. This includes overseeing the implementation and tracking of the various Demand Side Management (DSM) programs offered to residential and business customers.

Q. Please describe your education and professional experience.

A. I received a Bachelor of Science Degree in Industrial Engineering from the University of Miami in 1978. I received my Masters Degree in Industrial Engineering from the University of Miami in 1984. I am a certified Professional Engineer in the State of Florida. I was hired by FPL in 1979 in the Materials Management department and have

worked in positions of increasing responsibility in the areas of Load Management, Commercial and Industrial Marketing, Residential and General Business Marketing and Sales & Marketing Product Support. In 1991, I was promoted to the position of Manager of Residential and General Business Marketing Support. I held this position until 1993, when I became the Manager of Commercial/Industrial Marketing Support. In late 1996, I became the Manager of Sales & Marketing Product Support, and in 1999, I assumed my current position.

Q. Are you sponsoring an exhibit in this case?

A. Yes. I am sponsoring an exhibit consisting of the following documents which are attached to my direct testimony:

- Document No. DB-1 FPL Current FPSC DSM Goals
- Document No. DB-2 FPL DSM Programs & Measures

Q. Are you sponsoring any part of the Need Study in this proceeding?

A. Yes. I am co-sponsoring Section VII, Non-Generating Alternatives of the Need Study, with Dr. Sim. In addition, I am sponsoring Appendix L of the Need Study.

Q. What is the purpose of your testimony?

A. My testimony has five main points. First, I will provide a historical overview of FPL's DSM initiatives. Second, I will discuss the current maturity of DSM and its potential on FPL's system. Third, I will outline the process used for setting DSM Goals. Fourth, I will provide an overview of FPL's current DSM and demand-side renewable

efforts, including recent Commission-approved modifications to FPL's DSM programs that have the effect of substantially increasing demand and energy savings going forward. Fifth, I will advise whether there are any available demand-side options that could eliminate the 2013 and 2014 capacity needs.

I. Historical Overview of FPL's DSM Initiatives

Q. What is Demand Side Management?

A. Demand Side Management, as used in my testimony, is the planning, implementation and monitoring of utility programs designed to reduce customer usage of electricity during peak demand periods in a cost-effective manner. Utility programs falling under the umbrella of DSM include load management, conservation, energy audits for all classes of customers and research and development (R&D).

FPL uses both of the Commission-approved cost-effectiveness tests to determine which DSM programs to offer to our customers – the Rate Impact Measure (RIM) test and the Participant test. By offering only those programs that are cost-effective, as measured by the RIM test, all customers benefit by avoiding or deferring the need for new capacity that results in lower electric rates than they would have otherwise had in absence of the programs. In addition, DSM programs that are cost-

effective as measured by the Participant test ensure that the program makes economic sense for customers who choose to participate in it.

Q. When did FPL begin its DSM efforts?

A. FPL has a long history of identifying, developing and implementing DSM resources to cost-effectively avoid or defer the construction of new power plants. FPL first began offering DSM programs in the late 1970s with the introduction of its Watt-Wise Home Program. FPL has continued to develop and offer to our customers additional DSM programs. These programs have included both conservation and load management programs, targeting the residential and business markets.

Q. Have FPL's DSM efforts progressed over time?

A. Yes. FPL's portfolio of DSM programs has evolved over time. FPL continually looks for new DSM opportunities as part of our research and development activities. When a new DSM opportunity is identified and projected to be cost-effective, FPL attempts to either implement a new DSM program or incorporate this DSM opportunity into one or more of our existing DSM programs. In addition, FPL has modified DSM programs over time in order to maintain the cost-effectiveness of the programs. This allows FPL to continue to offer the most cost-effective programs available. On occasion, FPL has also terminated DSM programs that were no longer cost-effective and could not be modified to become cost-effective.

Q. How effective has FPL been in implementing DSM, and what are the resulting impacts of these efforts?

A. FPL has been very successful in cost-effectively avoiding or deferring new power plant construction using cost-effective DSM. Since the inception of our programs, through the end of 2005, we have achieved 3,519 MW (at the generator) of summer peak demand reduction, 2,734 MW (at the generator) of winter peak demand reduction, 33,981 GWh (at the generator) of energy savings and completed over 2,192,000 energy audits of our customers' homes and businesses.

This amount of peak demand reduction has eliminated the need for the equivalent to ten power plants of 400 MW summer capacity each (including the impacts for reserve margin requirements). Most importantly, FPL has achieved this level of demand reduction without penalizing customers who are non-participants in our DSM programs. FPL has been able to avoid penalizing non-participating customers by offering only DSM programs that reduce electric rates for all customers, DSM participants and non-participants alike.

Q. How do FPL's DSM efforts compare to those of other utilities?

A. The U.S. Department of Energy reports on the effectiveness of utility DSM efforts through its Energy Information Administration. Based on the most current data available, which is for the year 2005, FPL is

ranked number one nationally for cumulative conservation achievement and number four in load management.

II. Current Maturity of DSM and Its Potential on FPL's System

Q. Of the potential markets available to FPL for DSM initiatives, are there technologies or market segments that have limited potential?

A. Yes. There are several areas where DSM-related technologies are reaching market saturation and this directly impacts FPL's ability to increase participation in many of our DSM programs. For FPL's load management programs, it is critical to determine how much load management is actually "usable" for an individual utility. Consideration must be given to the system load shapes and characteristics of load management measures, including control strategies, length of the control periods and the payback effects once load control is released. Based on this analysis, FPL's projected amount of annual load management capability is very close to the maximum usable amount.

Another area reaching saturation is installation of ceiling insulation for residential customers. FPL's research has found that for the vast majority of our customers, ceiling insulation levels above R-19 provide minimal additional energy savings. In 1982, the State of

Florida Energy Code was changed to require all new homes have at least R-19 levels of ceiling insulation. FPL's residential building envelope program has focused on that finite market of homes built prior to this code change. As a consequence, the eligible market shrinks as more pre-1982-built homes participate in our program.

Lastly, FPL's heating, ventilating and air conditioning (HVAC) programs for residential and business customers are designed to encourage customers to install equipment that is more efficient than the State Energy Code. The goal of a utility HVAC program should be to encourage customers to install more efficient equipment than they would without the program. When the Code minimum efficiency level becomes the same as the utility's program, then the impact of the utility program is greatly diminished because the baseline energy efficiency level is raised. This results in smaller impacts for incremental efficiency gains for the utility program at a relative increased cost. In 2006, the minimum efficiency standards for HVAC equipment were increased significantly. For instance, the minimum seasonal energy efficiency rating (SEER) for residential type air conditioners increased from 10 to 13.

Q. Has FPL continued to look for new DSM opportunities?

A. Yes. FPL performs extensive DSM research and development. FPL uses our Conservation Research and Development program as the

primary vehicle to examine a wide variety of technologies. From that research FPL has been able to develop new programs that help further the objectives of the Florida Energy Efficiency Conservation Act (FEECA) by cost-effectively reducing the growth rate of weather sensitive peak demand, reducing and controlling the growth rate of energy consumption, increasing the conservation of expensive resources and increasing the efficiency of the electrical system. Several of the new programs that have emerged as a result of FPL's Conservation Research and Development program include Residential New Construction, Business Building Envelope and Business On Call.

III. FPL/FPSC DSM Goal Setting Process

Q. Why are DSM goals established?

A. FPL establishes annual DSM goals to meet the requirements of FEECA and the Florida Administrative Code. Further, DSM Goals are established for use in planning to cost-effectively meet the future capacity needs of our customers. Our DSM goals are key inputs into FPL's annual Integrated Resource Planning (IRP) process, which is discussed in the testimony of Dr. Sim.

Q. How frequently are FPL's DSM goals established?

A. Every five years each utility submits for Commission approval, goals for a ten year period that address overall residential kw and kwh goals

and overall business kW and kWh goals. FPL currently has Commission-approved goals for the years 2005 through 2014.

Q. When were FPL's current Commission-approved DSM goals established?

A. FPL's current goals were approved on August 9, 2004, in FPSC Order No. PSC-04-0763-PAA-EG issued in Docket No. 040029-EG (Consummating Order 04-0850-CO-EG issued September 1, 2004).

Q. What are FPL's current DSM goals and how is the Company performing?

A. My Document No. DB-1 shows FPL's current Commission-approved DSM goals and actual cumulative performance through 2005 (at the meter). FPL was successful in meeting the summer peak MW reduction and GWh energy reduction goals in 2005. From a capacity planning perspective, the summer peak MW reduction goal is the most critical because summer peak demand is the key driver of the need for new capacity for FPL. FPL fell short of the winter peak MW reduction goal in 2005 primarily because there were fewer participants in the Residential Building Envelope program than planned, in part due to limited resources resulting from an active hurricane season. FPL expects to meet all approved DSM goals going forward.

Q. How were FPL's current Commission-approved DSM goals developed?

A. FPL used a multi-step process to develop DSM goals. The first step

was to determine which measures should be evaluated for cost-effectiveness. A total of 329 separate DSM measures were identified for screening. In the next step of the process, all selected measures were then screened for cost-effectiveness utilizing the RIM test for cost-effectiveness with an assumption of no incentives. The assumption of no incentives gives each measure the highest probability of passing the RIM test. The RIM passing incentive level was next determined for each measure and cost-effectiveness was then determined using the Participant test. For those measures that were found to be cost-effective as determined by the RIM and Participant tests, annual market acceptance rates, or the achievable potential, was identified based on cost-effective incentive levels. The results obtained in this phase of the process were further analyzed to identify the most cost-effective DSM portfolio for FPL's customers as part of FPL's IRP process.

In summary, the goals FPL developed reflected the cost-effective achievable potential projected by FPL for utility program measures analyzed under the RIM and Participant tests.

Q. What is the timing for the next FPSC DSM goal setting process?

A. Although there has not been any formal communication from the Commission in regards to a new goal setting procedure, the Florida Administrative Code requires goals to be re-assessed every five years.

Our current goals cover the time period 2005 through 2014, with 2009 being the fifth year. Based on past experience, FPL expects the goal setting process to be started no later than 2008.

IV. FPL's Current DSM and Renewables Initiatives

Q. How has the Company endeavored to achieve the Commission-approved DSM goals?

A. As part of the goals setting process just discussed, FPL found 92 measures to be cost-effective under the RIM and Participant tests. Those measures were packaged into comprehensive FPL programs as part of the Company's DSM plan, which was also approved by the Commission. FPL's DSM plan to meet our 2005-2014 goals was approved by the Commission in Order Nos. PSC-05-0162-PAA-EG, issued February 9, 2005 (Consummating Order No. PSC-05-0323-CO-EG, issued March 21, 2005) and PSC-06-0025-FOF-EG, issued January 10, 2006, in Docket No. 040029-EG.

Q. Has FPL made any significant changes to its DSM plan that was approved in Order Nos. PSC-05-0162-PAA-EG and PSC-06-0025-FOF-EG?

A. Yes. As previously discussed, FPL continually investigates additional cost-effective DSM opportunities and requests Commission approval of revisions to our DSM plan as appropriate. In 2005, FPL's forecast

of customer demand increased significantly. There were also changes to minimum equipment efficiency standards and changing market conditions. As a result of these changes, FPL performed a comprehensive review of all our DSM programs, as well as other potential measures.

In addition, in Order No. PSC-06-0555-FOF-EI, issued on June 28, 2006, in Docket No. 060225-EI, Petition for Determination of Need for West County Units 1 and 2 in Palm Beach County, FPL agreed, as a condition of approval of these two power plants, to file new and revised DSM programs to increase demand and energy savings on our system.

Q. What were the results of FPL's comprehensive review of its DSM programs?

A. For the time period from 2006 through 2015, FPL identified an additional 564 MW (at the generator) of summer demand reduction impact – or greater than the equivalent of a medium-sized power plant. Adding this 564 MW to FPL's current Commission approved DSM goals of 802 MW, (at the generator) for 2006 through 2014, results in 1,366 MW of DSM summer peak demand reduction from 2006 through 2015.

To produce these savings, FPL requested Commission approval of modifications to eight of our existing DSM programs. These modifications included changing the minimum qualifying SEER for air conditioners to reflect minimum mandated levels by the U.S. Department of Energy, modifying incentive levels for numerous program measures, enhancing program operating parameters and adding new measures to existing programs. In addition, FPL requested Commission approval of two new DSM programs -- Business Water Heating and Business Refrigeration. FPL's R&D initiatives resulted in adding demand control ventilation, light colored roof membranes and refrigeration technologies to these DSM offerings.

Q. Did the Commission approve FPL's request for approval of these modifications?

A. Yes. On June 26, 2006, the Commission issued Order No. PSC-06-0535-PAA-EG in Docket No. 060286-EG (Consummating Order No. PSC-06-0624-CO-EG issued July 20, 2006), approving changes to FPL's residential and business HVAC programs. On September 1, 2006, the Commission issued Order No. PSC-06-0740-TRF-EI in Docket No. 060408-EI (Consummating Order No. PSC-06-0801-CO-EI, issued September 26, 2006) approving the remaining modifications to FPL's DSM plan. The Commission found that approval of the proposed modifications to FPL's DSM plan was expected to increase FPL's system demand and energy savings, and would enable FPL's

DSM Plan to continue to meet the policy objectives of FEECA and continue to be monitorable and cost-effective. My Document No. DB-2 shows FPL's current Commission-approved DSM programs and their corresponding measures.

Q. Has FPL identified any other non-firm load that could help avoid future capacity needs?

A. Yes. FPL has several curtailable rate schedules. Historically, these rate schedules required only a one-year commitment from a customer who elected to receive service under its terms. With only a one-year commitment, the peak load reduction from this group of customers could not be used for capacity deferral because there was not adequate time to plan for meeting the capacity needs of customers discontinuing this non-firm service option. Recently, however, the Commission approved FPL's request to increase the minimum term under these rates to three years in Order No. PSC-06-0660-TRF-EI issued August 7, 2006 in Docket No. 060407-EI (Consummating Order PSC-06-0736-CO-EI, issued August 31, 2006). The Commission found that increasing the minimum term to three years would allow the demand reduction capability of this group of customers to be treated as non-firm load for capacity resource planning because FPL would have the ability to plan and respond when non-firm load that was being deferred by the avoided unit returns to the FPL system, thus helping to avoid or defer the need for additional new capacity.

Q. Did the change to curtailable rates identify additional non-firm load for capacity resource planning?

A. Yes. Based on FPL's current projections, curtailable rates will provide an additional 39 MW (at the generator) of peak demand reduction through 2015. This 39 MW is included in FPL's plan of 1,366 MW of summer peak demand reduction through 2015.

Q. What are FPL's current Commission-approved DSM programs?

A. FPL's current DSM Plan consists of seven residential DSM programs and ten business DSM programs.

The residential DSM programs are as follows:

Residential Conservation Service: This is an energy audit program designed to assist residential customers in understanding how to make their homes more energy-efficient through the installation of conservation measures/practices.

Residential Building Envelope: This program encourages the installation of energy-efficient ceiling insulation, reflective roofs and roof membranes in residential dwellings that utilize whole-house electric air conditioning.

Duct System Testing and Repair: This program encourages demand and energy conservation through the identification of air leaks in whole-house air conditioning duct systems and by the repair of these leaks by qualified contractors.

Residential Air Conditioning: This is a program to encourage customers to purchase higher efficiency central cooling and heating equipment.

Residential Load Management (On-Call): This program offers load control of major appliances/household equipment to residential customers in exchange for monthly electric bill credits.

New Construction (BuildSmart): This program encourages the design and construction of energy-efficient homes that cost-effectively reduce coincident peak demand and energy consumption.

Residential Low Income Weatherization: This program addresses the needs of low-income housing retrofits by providing monetary incentives to various housing authorities, including weatherization agency providers (WAPS), non-weatherization agency providers (non-WAPS) and other providers approved by FPL. The incentives are used by these providers to leverage their funds to increase the overall energy efficiency of the homes they are retrofitting.

FPL's business DSM programs are as follows:

Business Energy Evaluation: This program encourages energy efficiency in both new and existing businesses by identifying DSM opportunities and providing recommendations to business customers.

Business Heating, Ventilating and Air Conditioning: This program encourages the use of high-efficiency HVAC systems for business customers.

Business Efficient Lighting: This program encourages the installation of energy-efficient lighting measures for business customers.

Business Custom Incentive: This program encourages business customers to implement unique energy conservation measures or projects not covered by other FPL programs.

Commercial/Industrial Load Control: This program reduces peak demand by controlling customer loads of 200 kW or greater during periods of extreme demand or capacity shortages in exchange for monthly electric bill credits. (This program was closed to new participants in 2000).

Commercial Demand Reduction: This program, which started in 2002, is similar to the Commercial/Industrial Load Control program mentioned above. It reduces peak demand by controlling customer loads of 200 kW or greater during periods of extreme demand or capacity shortages in exchange for monthly electric bill credits.

Business Building Envelope: This program encourages the

installation of energy-efficient building envelope measures such as roof/ceiling insulation, reflective roof coatings and window treatments for business customers.

Business On Call: This program offers load control of central air conditioning units to both small non–demand-billed and medium demand-billed business customers in exchange for monthly electric bill credits.

Business Water Heating: This program encourages the installation of energy-efficient water heating equipment such as heat pump water heaters and heat recovery units for business customers and will be effective February 1, 2007.

Business Refrigeration: This program encourages the installation of qualifying controls and equipment that reduce electric strip heater usage in refrigeration equipment for business customers and will be effective February 1, 2007.

Q. Has FPL engaged in demand-side activities in support of renewables?

A. Yes. My testimony focuses on demand-side renewables. Mr. Silva's testimony discusses FPL's supply-side renewables activities. FPL has been a leader in examining ways to utilize renewable energy technologies to meet our customers' current and future needs. FPL's Conservation Water Heating Program, first implemented in 1982, offered incentive payments to customers choosing solar water heaters.

Before the program was ended (due to the fact that it was no longer cost-effective), FPL paid incentives to approximately 48,000 customers who installed solar water heaters.

In the mid-1980s, FPL introduced another renewable energy program. FPL's Passive Home Program was created in order to broadly disseminate information about passive solar building design techniques which are most applicable in Florida's climate. During its existence, this program was popular and received a U.S. Department of Energy award for innovation. The program was eventually phased out due to revisions of the Florida Model Energy Building Code. The revision was brought about in part by FPL's Passive Home Program.

In early 1991, FPL received approval from the Commission to conduct a research project to evaluate the feasibility of using small photovoltaic (PV) systems to directly power residential swimming pool pumps. This research project was completed with mixed results. Some of the performance problems identified in the test may be solvable, particularly when new pools are constructed. However, the high cost of PV, the significant percentage of sites with unacceptable shading and various customer satisfaction issues remain as barriers to wide acceptance and use of this particular solar application.

More recently, FPL has analyzed the feasibility of encouraging utilization of PV in another, potentially much larger way. FPL's basic approach did not require all of our customers to bear PV's high cost, but allowed customers who are interested in facilitating the use of renewable energy the means to do so. FPL's initial effort to implement this approach allowed customers to make voluntary contributions into a separate fund that FPL used to make PV purchases in bulk quantities. FPL began the effort in 1998 and received approximately $89,000 in contributions (that significantly exceeded the goal of $70,000). FPL purchased PV modules and installed them at FPL's Martin Plant site.

In 2000, FPL launched the Photovoltaic Research, Development and Education Project. This demonstration project's objectives were to: increase the public awareness of roof tile PV technologies, provide data to determine the durability of this technology and its impact on FPL's electric system, collect demand and energy data to better understand the coincidence between PV roof tile system output and FPL's system peaks (as well as the total annual energy capabilities of roof tile PV systems) and assess the homeowner's financial benefits and costs of PV roof tile systems. This project was completed in 2003.

In November of 2004, FPL launched its Green Power Pricing Research Project (GPPRP), that was marketed as the Sunshine Energy® program. The object of the project was to allow residential customers to sign up voluntarily and pay for energy produced by renewable resources, thus fostering the development of supplies of renewable energy that would not otherwise be developed. GPPRP participants paid a monthly premium of $9.75 per month for a 1,000 kWh block of renewable energy attributes. To supply the renewable energy for the GPPRP, FPL entered into a contract with a supplier for the purchase of tradable renewable energy credits (TRECs). In addition, for every 10,000 participants, FPL agreed to have built 150 kw of photovoltaic capacity in Florida.

In its short two and one half year history, the GPPRP became one of the top five programs in the country with more than 25,000 customers enrolled. The GPPRP purchased almost 225 GWhs of TRECs as of year end 2005 making it the fourth largest renewable energy program in the country. It also received the 2005 Green Power Leadership Award from the U.S. Department of Environmental Protection and the Department of Energy.

Solar photovoltaic projects are being built through the GPPRP. Construction of a 250 kW site in Sarasota is currently in the permitting

process with construction expected to be completed in early 2007. There are also several other smaller projects underway that will add additional photovoltaic capacity.

On September 17, 2006 FPL filed a petition with the Commission to convert the GPPRP to a permanent program and to extend the program to business customers. On December 1, 2006, the Commission issued Order No. PSC-06-0924-TRF-EI in Docket No. 060577-EI approving this request.

Q. Are there any other major initiatives that FPL has taken into account to address energy conservation?

A. The United States Energy Policy Act of 2005 mandates specific energy efficiency standards and is expected to result in the avoidance of as much as 1,256 MW of capacity needs for FPL by 2014. As Dr. Green describes in his testimony, this was taken into account in determining FPL's capacity needs.

V. Conclusion - Ability to satisfy capacity need through DSM

Q. Has FPL identified all of the cost-effective demand-side option potential for the 2006 through 2015 time frame?

A. Yes. As discussed above, FPL recently completed a comprehensive review of all our DSM programs. This has resulted in Commission

approval of extensive modifications to eight DSM programs, as well as two new programs. In addition, the Commission has approved modifications to FPL's curtailable rates so that they can now be considered in FPL's IRP process, thus helping to avoid or defer the need for additional new capacity. These changes have resulted in 1,366 MW (at the generator) of non-generation potential from 2006 through 2015.

Q. Has FPL identified any conservation, load management or demand-side renewables options that would lead to a significant increase in demand-side options potential in sufficient time to defer capacity identified in this determination of need?

A. No. FPL has already identified all our reasonably achievable DSM potential and used this as input to our system reliability assessment. FPL has also implemented changes to non-DSM rate options to increase the potential of the demand-side options. While there has been a small increase in the penetration of demand-side renewables, the economics of the various technologies has not yet reached the level necessary to make any significant impact on FPL's summer peak. FPL's analysis therefore has already captured all the cost-effective demand-side potential available on FPL's system, and it was determined that FPL still needs additional capacity resources. In order to meet FPL's 2013 and 2014 needs an additional 1,371 MW (at the generator) of demand-side resources would have to be identified.

Even if there were some modest potential for additional non-generation potential on FPL's system, it is unrealistic to conclude that FPL could add significant incremental quantities in time to mitigate the 2013 and 2014 need. Therefore, there is no available additional cost-effective demand-side potential that could mitigate the need for additional capacity in 2013 and 2014.

Q. Please summarize your testimony.

A. FPL has been very successful in cost-effectively avoiding or deferring new power plant construction using DSM. In fact, the U.S. Department of Energy, which reports on the effectiveness of utility DSM efforts through its Energy Information Administration, ranks FPL number one nationally for cumulative conservation achievement and number four in load management based on the most current data available (2005 data).

Through year-end 2005, FPL has implemented 3,519 MW (at the generator) of DSM – or the equivalent of 10 medium-sized power plants. In 2004, FPL received Commission approval of DSM goals that will add 802 MW (at the generator) of additional DSM from 2006 through 2015.

FPL continually investigates additional cost-effective DSM opportunities and requests Commission approval of revisions to our

DSM plan as appropriate. FPL recently received Commission approval of significant changes to our DSM plan offerings that added another 564 MW (at the generator) of summer demand reduction impact – greater than the equivalent of one medium-sized power plant – to FPL's Commission-approved goals.

FPL's accomplishments and future commitments to DSM are significant. With 3,519 MW of DSM implemented through 2005 and an additional 1,366 MW of DSM being added in the 2006 through 2015 time frame, FPL will have avoided 5,862 MW of generation capacity (including the impacts for reserve margin requirements) by 2015. This is three times the size of the FPL Glades Power Park. However, despite these outstanding accomplishments, there is still not enough additional cost-effective DSM to avoid or defer the need for the 2013 and 2014 units.

Q. Does this conclude your testimony?

A. Yes.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

REBUTTAL TESTIMONY OF C. DENNIS BRANDT

DOCKET NO. 070098-EI

MARCH 30, 2007

Q. Please state your name and business address.

A. My name is C. Dennis Brandt, and my business address is 9250 West Flagler Street, Miami, Florida 33174.

Q. By whom are you employed and what is your position?

A. I am employed by Florida Power & Light Company (FPL) as Director of Product Management and Operations.

Q. Have you previously testified in this docket?

A. Yes, I have.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to counter the argument that more demand-side management (DSM) is reasonably achievable by FPL that could defer the need for the proposed FPL Glades Power Park (FGPP), as asserted by Mr. John J. Plunkett testifying on behalf of the Sierra Club, Inc., Save Our Creeks, the Florida Wildlife Federation, the Environmental Confederation of Southwest Florida and Ellen Peterson. I explain how FPL has developed and implemented an aggressive, reasonable and comprehensive set of DSM programs. Despite FPL's substantial conservation efforts, which

are acknowledged by Mr. Plunkett, there is not sufficient cost-effective, reasonably achievable DSM potential on FPL's system to reduce peak load sufficiently to defer the need for the FGPP units. I address Mr. Plunkett's use of inappropriate metrics for measuring DSM effectiveness and his incorrect conclusions related to benchmarking FPL's DSM programs to those of other states. I also show that Mr. Plunkett's testimony contains a number of errors indicating his lack of familiarity with conservation activities in Florida and in particular with FPL's DSM programs. Thus, I will address numerous mistakes contained in Mr. Plunkett's testimony pertaining to FPL's DSM accomplishments, programs, future plans and their relationship to FPL's need for the FGPP units.

Q. Are you sponsoring any exhibits to your rebuttal testimony?

A. Yes. I am sponsoring an exhibit consisting of the following documents, which is attached to my rebuttal testimony:

- Document No. DB-3 Dollar per kW Comparison for FPL and PG&E
- Document No. DB-4 Prior Exhibits of John J. Plunkett

Q. Please describe how your rebuttal testimony is organized.

A. I have organized my testimony into four sections based on the major assertions of Mr. Plunkett's testimony:

- Section I - FPL's Planned DSM Savings
- Section II – Energy-Efficiency Portfolios in Other Jurisdictions
- Section III - The Effect of Additional FPL Energy-Efficiency on the Need for the Glades Units

- Section IV – Summary and Conclusion

I. FPL'S PLANNED DSM SAVINGS

Q. Mr. Plunkett references on page 7, lines 8-10, the American Council for an Energy-Efficient Economy (ACEEE) Florida report. Are you familiar with the report to which he is referring?

A. Yes, I am.

Q. What did Mr. Plunkett conclude from the ACEEE Florida report?

A. Mr. Plunkett states, "In fact, the Company's planned DSM savings add up to more than FP&L's share of statewide efficiency potential recently estimated by the American Council for an Energy-Efficient Economy."

Q. Do you agree with Mr. Plunkett's findings regarding the ACEEE report?

A. Taken at face value, Mr. Plunkett's findings indicate that FPL has done a more than credible job of identifying the potential for additional cost-effective DSM for the time period in question for this determination of need. However, the statewide efficiency potential in the ACEEE report is overstated.

When the ACEEE report was released in February 2007, FPL reviewed the report and the underlying assumptions presented. FPL's review was hampered by the lack of supporting detail and assumptions in the report. To help in understanding the report, FPL and the other Florida investor-owned utilities (IOUs), met with the project leader from ACEEE who helped develop

the report. During that meeting, concerns over the report were reviewed with the ACEEE project leader. He said that ACEEE planned to issue a revised report to correct overstated potential in several areas and he agreed to review and consider all feedback from the IOUs in revising the report. This feedback was provided on March 14, 2007 and, as of this date, I am not aware of the corrected report being issued.

Q. What type of feedback did FPL provide ACEEE regarding its study?

A. Besides expressing concerns over proposed polices and the misrepresentation of DSM accomplishments to-date for the state of Florida, FPL had concerns about the accuracy of energy savings portrayed for DSM measures, as well as the assumed market penetration for these measures. For example, FPL's concerns for the residential segment included:

- The ACEEE Florida report claims that replacing a heating, ventilating and air-conditioning (HVAC) unit that has a seasonal energy efficiency ratio (SEER) of 13 with a SEER 15 unit will save 2,785 kilowatt hours (kWh) per year for a resident of Florida. FPL's estimates, based on extensive monitoring and evaluation done of FPL customers who participate in its existing residential HVAC program, is a savings range of only 563 kWh per year to 692 kWh per year, depending on whether the unit is a straight cool unit or a heat pump. In February 2007, ACEEE published a report titled "Examining the Peak Demand Impacts of Energy Efficiency (EPDIEE)." This report estimated savings of 378 kWh per year for an

energy efficient central air conditioning system. Based on FPL's analysis and ACEEE's EPDIEE report, the energy savings for this measure as stated in the ACEEE Florida report is at least 4 times greater than it should be.[1]

- The ACEEE Florida report claims an annual savings of 589 kWh per home in Florida that has leaking ductwork repaired. FPL's own estimates, based on monitoring and evaluation done of FPL customers who participate in its existing residential Duct System Testing and Repair program, is only 308 kWh or 45 percent less than the ACEEE claim.

- The ACEEE Florida report claims an annual savings of 1,066 kWh for Energy Star refrigerators. The ACEEE EPDIEE report uses a range of savings from 52 kWh to 212 kWh per year. Once again, the ACEEE Florida report is overstating savings by as much as 20 times more than their own separate study.

- The ACEEE Florida report includes two packages of energy efficiency measures for retrofitting existing Florida homes that it claims would reduce annual energy usage by 9,159 kWh per home. Package one contains six measures that ACEEE claims will save 6,167 kWh per year

[1] While in many cases, the information provided by FPL to ACEEE was specific to FPL's service territory, I would not expect the statewide results to differ significantly because FPL has more customers than any other Florida utility.

per participant. Package two contains six measures that save 2,992 kWh per year per participant, of which 24% is identified as miscellaneous load reduction. To put this in perspective, an average FPL residential customer uses 13,964 kWh per year. Implementing these packages, which include 12 measures, would result in a 66% reduction in average residential usage if ACEEE's claims are true. It is highly improbable that ACEEE's projected savings from retrofitting homes would actually occur.

Unfortunately, there was insufficient data in the ACEEE Florida report to perform a similar comparison for the commercial segment, but FPL expressed its concerns that there is a similar gross overstatement of DSM potential for this customer segment.

FPL also expressed its concerns about the report's estimates of market penetration. In summary, the report recommends a totally unrealistic DSM potential for Florida that: 1) starts with non-Florida data, 2) vastly overstates customer participation rates, and 3) uses per-participant impacts that are in direct conflict with FPL's findings and ACEEE's own EPIDIEE report.

Three levels of market potential are discussed in the ACEEE Florida report. They are technical potential, economic potential and achievable potential. The methodology for translating technical potential to economic potential, and further to achievable potential, is not clear from the report. The technical

potential used was not for Florida but rather, was used from prior work in other states. The economic potential methodology is not explained, but ACEEE claims significant market penetration. For example, the report claims that 50% of existing homes can cost-effectively implement the six retrofitting measures in Package one discussed above and 25% can implement the six retrofitting measures in Package two. Again, this is highly unlikely. Further, the report adjusts from economic potential to achievable potential based on a set of proposed policy objectives, but there is not an explanation how these policies are linked to the economic potential. In conclusion, there are many missing pieces and speculative claims that make the report's findings regarding market potential highly unreliable.

Q. Did the ACEEE Florida report address any other means of meeting Florida's energy needs besides energy efficiency?

A. Yes. The report identified renewable energy as a second means of meeting the energy needs of Florida.

Q. Did the IOUs express concerns with renewable energy portion of the ACEEE Florida report?

A. Yes. The IOUs expressed concerns with ACEEE's conclusions regarding renewable energy potential in Florida. The ACEEE project leader agreed with the IOUs that there was a significant overstatement in the report of the potential for renewable energy in Florida. He said that ACEEE planned to issue a revised report to correct this error. The rebuttal testimony of Mr. Rene Silva addresses renewable energy potential in Florida.

Q. What do you conclude regarding the ACEEE Florida report and Mr. Plunkett's findings based on the report as it relates to FPL?

A. Mr. Plunkett states that FPL's DSM plan is more than the Company's share of the statewide potential identified in the ACEEE Florida report. Given the concerns that I have just discussed about this report, it is reasonable to conclude that FPL is not just doing "more than FP&L's share of statewide efficiency potential" but rather, doing substantially more than what a corrected ACEEE Florida report would show.

II. ENERGY-EFFICIENCY PORTFOLIOS IN OTHER JURISDICTIONS

Q. Mr. Plunkett bases his projections for additional DSM savings on portfolios from other jurisdictions because, he says, other states have longer track records of acquiring considerably more DSM than Florida (page 7, lines 13-17). Do you agree that Florida lags behind other states in its DSM efforts?

A. No I do not. Florida and FPL have a long history of identifying, developing and implementing DSM resources to cost-effectively avoid or defer the construction of new power plants. FPL first began offering DSM programs in the late 1970s with the introduction of its Watt-Wise Home Program. FPL has continued to develop and offer to its customers additional DSM programs. These programs have included both conservation and load management programs, targeting the residential and business markets. More importantly,

while other states moved away from DSM in the 1990s, Florida and FPL continued to emphasize the importance of this resource for meeting growth in peak demand. Indeed, based on the Florida Public Service Commission's (FPSC) February 2007 report titled Annual Report on Activities Pursuant to the Florida Energy Efficiency and Conservation Act (FEECA), between 1980 and 2006, utility DSM programs reduced peak summer demand by 4,983 MW, and thereby "deferred the need for ten typical 500 MW electric generating plants, or enough capacity to serve approximately 1.6 million households" (Executive Summary). This FPSC report is further evidence of the continued emphasis on and positive impact of DSM efforts in Florida.

Q. How do FPL's DSM efforts compare to the efforts of other utilities nationwide?

A. As addressed in detail in my direct testimony, FPL has compiled an enviable record nationally in regard to its DSM achievements. Indeed, the U.S Department of Energy ranks FPL first in the nation for cumulative conservation achievement and number four in load management, based on the most current data available.

Q. Is the amount spent on DSM per kWh, a concept suggested by Mr. Plunkett, an appropriate means of determining whether FPL is utilizing all reasonably available DSM measures?

A. No. A key element of successful DSM programs is cost-effectiveness, not how much money is spent. It is the peak hour kW reduction value of DSM options that enables utilities to avoid the need for new generation additions.

For a detailed discussion of the problems with Mr. Plunkett's testimony as it relates to the cost-effectiveness of DSM measures, please refer to the rebuttal testimony of FPL witness Dr. Sim. Without considering the cost-effectiveness of a DSM program or portfolio, excess spending directly impacts the price of electricity to customers in a non-cost effective manner.

Q. Do you agree with Mr. Plunkett that DSM plans in the Northeast and California offer a basis for projecting spending and savings for FPL? (pages 7-8).

A. No, I do not. I believe the process prescribed by the Commission and used by the Florida utilities is the appropriate means to determine DSM savings and spending. This very logical process starts with utilities determining all the cost-effective DSM potential for a 10-year planning horizon. The review and approval of this cost-effective DSM potential by the Commission results in DSM goals for each utility. The subsequent review and approval of 10-year DSM goals every five years ensures that all the relevant DSM potential is always included in the goal setting process. Based on these 10-year DSM goals, each utility develops a DSM Plan, which specifies the DSM programs that will be used to meet the DSM goals. Once again, the Commission approves each utility's DSM program plan. Finally, based on the approved DSM program plan, DSM spending levels are set. These spending levels are set such that goals can be achieved in a cost-effective manner.

This Florida and utility-specific approach is far superior for determining savings and spending targets than using other states' plans for projecting these targets.

Q. Do you feel it is reasonable to compare DSM spending between jurisdictions?

A. No, I do not. Mr. Plunkett's overly simplistic comparisons ignore many of the drivers of DSM spending and potential. Some of these drivers are customer mix, weather, customer growth, existing generation fleet, fuel costs, electric rates, availability of fuel switching opportunities, age of housing and building stock, cost-effectiveness, regulatory rules and the state of the local economy. The comprehensive approach to DSM in Florida appropriately considers each of these unique characteristics of FPL's service territory in setting the appropriate target for achievable savings. Nowhere in Mr. Plunkett's testimony does he explain his understanding of the FPL market and how it impacts his selection of other jurisdictions for comparisons.

Q. Do you agree with Mr. Plunkett that Massachusetts makes the best choice for projecting additional spending and savings for FPL (page 8, lines 23-25)?

A. No. Mr. Plunkett provides no reasonable basis for selecting Massachusetts as the best for projecting total spending and savings for FPL. Exhibit JJP-2 of Mr. Plunkett's testimony includes data that compares the annual kWh saved per dollar spent on DSM for seven northeastern states. In 2004, of these seven states, Massachusetts spent the most in the non-residential sector in terms of

absolute dollars and dollars per MWh of sales. However, when you examine the effectiveness of Massachusetts' energy efficiency programs in terms of annual kWh savings per dollar spent, Exhibit JJP-2 shows Massachusetts as the least effective of all states listed. Therefore, it appears Mr. Plunkett is more concerned with how much is being spent, rather than how effectively the money is being used.

Q. Do you agree that Pacific Gas & Electric (PG&E) offers a good basis for projecting FPL's performance (page 9, lines 24-25)?

A. No, for the reasons stated above. Also, one very prominent area where PG&E and FPL differ is the price for electricity. Based on PG&E's residential tariff that was effective July 2006, a 1,000 kWh monthly bill for a PG&E customer would be $193.85 versus $108.61 for an FPL customer. PG&E customers, whose electric rate is almost double that of FPL's, would achieve a much faster payback on a DSM investment than they would if they were an FPL customer. When a customer elects to participate in a DSM program, the customer's cost to implement the program measure is directly impacted by the cost of the measure, any tax benefits, grants, utility rebates and savings on the customer's utility bill. Therefore, all else equal, a customer is far more likely to implement a DSM measure where the price of electricity is higher.

Q. Can you provide an example of how the price of electricity influences customers' willingness to take advantage of a DSM program?

A. Yes. Assume a customer installs ceiling insulation that saves 600 kWh per year at an initial out-of-pocket cost of $300 (total job cost of $500, minus

utility rebate of $200). At 10 cents per kWh, the payback is five years ($300 / (600 kWh * $0.10/kWh)), while at 20 cents per kWh the payback is reduced to 2.5 years. It follows that many more people would participate in a program that has a 2.5 year payback than one with a five year payback.

Q. Besides substantial differences in the price of electricity, are there other reasons why PG&E does not afford a good basis for projecting FPL's conservation performance?

A. Yes. For example, each year utilities report to the U.S Department of Energy their annual conservation achievement and the corresponding dollars spent. Document No. DB-3 shows the cost per kW of conservation for PG&E and FPL from 1999 to 2005, the last year data is available from the U.S. Department of Energy. It shows that the amount FPL spends per kW of achieved savings is as much as one-third less than the amount PG&E spends per kW of achieved savings. Therefore, as was the case in selecting Massachusetts to compare to FPL, Mr. Plunkett's focus seems to be more on dollars spent versus results.

Q. Why do you think Mr. Plunkett selected PG&E and Massachusetts as benchmarks for FPL?

A. Mr. Plunkett has previously submitted substantially the same information in prior testimony and it did not require additional work or analysis on his part. For example in October 2006, Mr. Plunkett submitted testimony to the British Columbia Utilities Commission regarding BC Hydro's 2006 Integrated Electricity Plan. As part of his testimony, Mr. Plunkett once again chose to

try to benchmark BC Hydro's DSM efforts with the efforts of PG&E and utilities in the northeast United States. In fact, as shown in Document No. DB-4, Mr. Plunkett included as exhibits in his BC Hydro testimony exhibits that are substantially the same as his exhibits JJP-2 and JJP-3 in this proceeding. Exhibit JJP-1 is Mr. Plunkett's resume, so for this proceeding, only JJP-4 is new, and it merely consists of a table showing FPL's projected summer MW requirements with his incremental DSM savings added to it. Therefore, it seems that regardless of the utility and the appropriateness of the benchmark, Mr. Plunkett is simply relying on prior analysis not based on or related to FPL specific factors, leading to unfounded and erroneous conclusions.

III. THE EFFECT OF ADDITIONAL FPL ENERGY-EFFICIENCY ON THE NEED FOR THE GLADES UNITS

Q. Addressing one of the differences between FPL's service area and that of PG&E and Massachusetts utilities, Mr. Plunkett, on page 11, lines 8-14, states that "[p]otential savings from high-efficiency air conditioning should be greater and more cost-effective in FP&L territory than in Massachusetts or PG&E territory." Will incremental potential savings from air conditioning programs defer the need for the FGPP units?

A. No. The future potential for savings from high-efficiency air conditioning has been diminished due to the recent minimum efficiency code changes for this

equipment. All cost-effective achievable potential from high-efficiency air conditioning is already captured in FPL's existing programs and Mr. Plunkett's suggestion to the contrary is unfounded and incorrect.

Q. If FPL utilized what Mr. Plunkett refers to as "best practices...of the most aggressive DSM portfolios" (page 14, lines 1-2), would additional savings on the scale suggested by Mr. Plunkett be achievable to defer the need for the Glades units?

A. No. FPL continuously strives to implement best practices in the Company's DSM programs. These best practices are identified in numerous ways including, benchmarking with other utilities, the review of industry literature regarding successful DSM programs, the review of non-utility literature to identify transferable concepts from other industries and using consultants who work in DSM with multiple utilities. FPL continuously enhances its DSM portfolio to take advantage of cost-effective best practices. FPL has been doing DSM since the early 1980s and has been very successful. FPL's current level of cost-effective DSM potential incorporates best practices from both within and outside the utility industry, as well as, FPL's many years of experience. Furthermore, in Mr. Plunkett's testimony regarding BC Hydro's 2006 Integrated Electricity Plan, he referenced the "Best practices website: www.eebestpractices.com/." Several of FPL's DSM programs were included in this best practices study to which he referred and FPL's programs incorporate many of the recommended best practices. In fact, FPL's Business HVAC program was commended by this website for its program strategy and

goals, quality control, participation process, marketing and program evaluation.

Q. Should FPL be directed to conduct a thorough study of the economically achievable potential for energy-efficiency investments?

A. No, because FPL and other Florida utilities already do this. The Commission's DSM goal setting process already accomplishes this objective. FPL completed the Commission-required analysis in 2004. In 2005, FPL's forecast of customer demand increased significantly. There were also changes to minimum equipment efficiency standards and changing market conditions. As a result of these changes, in 2006 FPL performed a comprehensive review of all its DSM programs, as well as other potential measures. This analysis resulted in Commission approval of changes to FPL's offerings that will result in an incremental 564 MW of peak savings above that included in FPL's approved DSM goals. FPL has included all of this cost-effective DSM potential in its analysis of the need for the FGPP units. FPL expects to perform the next comprehensive DSM potential analysis as part of the Commission's goal setting process in 2009. In the interim, FPL will continue to perform research and development of new DSM concepts and request Commission approval as appropriate.

Q. Should FPL's need petition be denied on grounds that the units can be deferred if FPL triples the peak-demand reductions it plans to realize over the long-term from its DSM portfolio, as asserted by Mr. Plunkett on page 5, lines 10-11, of his testimony?

A. No. Mr. Plunkett has not presented any credible evidence that shows FPL can cost-effectively triple its DSM potential over the undefined time period that he refers to as "the long term." Section 403.519 of the Florida Statutes requires the Commission to consider the conservation measures taken by or reasonably available to the applicant which might mitigate the need for the proposed unit. Mr. Plunkett admits he has not done a detailed analysis of, and has no "actual experience" with, Florida (page 11, lines 4-5) and that his projections provide only a "rough idea" of how much DSM FPL could be expected to achieve (page 11, line 17) – in fact he did not even review my testimony or that of Dr. Sim addressing FPL's DSM efforts (Plunkett testimony, page 6, lines 9-17).

IV. SUMMARY AND CONCLUSION

Q. Please summarize your rebuttal testimony.

A. Mr. Plunkett's analysis of the potential for DSM at FPL is lacking in detail, unsubstantiated and not Florida specific. He apparently did not take any time to understand FPL's DSM plan, its current programs, the unique characteristics of the FPL service area, or how DSM potential is determined based on FPSC guidelines.

Mr. Plunkett discusses two estimates of the DSM potential for FPL, neither one of which provides a reasonable basis for accepting his recommendation that the need for FGPP units can be deferred through incremental DSM. The

first is his high level benchmarking analysis comparing FPL to Massachusetts utilities and PG&E that focuses on DSM spending per kWh. Of the Northeastern states identified by Mr. Plunkett, Massachusetts is the least effective in terms of annual kWh savings per dollar spent. Moreover, it is the peak hour kW reduction value of DSM options that enables utilities to defer the need for new generation additions. The amount FPL spends per kW of achieved savings is as much as one-third less than the amount PG&E spends per kW of achieved savings. Mr. Plunkett has not presented any credible evidence that shows FPL can cost-effectively triple its DSM potential over the undefined time period that he refers to as the "long term."

The second estimate Mr. Plunkett provides of FPL's DSM potential is based on the ACEEE Florida report. Though the findings in this report are questionable, Mr. Plunkett's conclusion that FPL's planned DSM savings exceed its share of statewide energy efficiency included in this report indicate that FPL has clearly met the conservation-related requirements of Section 403.519, Florida Statutes.

Despite FPL's substantial conservation efforts, which are acknowledged by Mr. Plunkett, there is not sufficient cost-effective, reasonably achievable DSM potential on FPL's system to defer the need for the FGPP units. For the reasons discussed above Mr. Plunkett's testimony does not afford a basis for reasonably concluding that the need for the FGPP units can be deferred.

Q. Does this conclude your testimony?

A. Yes, it does.

BY MS. SMITH:

Q. Mr. Brandt, have you prepared a summary of your direct testimony?

A. Yes, I have.

Q. Would you please provide that summary to the Commission?

A. Good afternoon, Chairman Edgar and Commissioners. My testimony addresses FPL's demand-side management efforts and whether sufficient additional DSM is available to cost-effectively reduce customer usage to eliminate FPL's 2013-2014 capacity needs.

FPL has been very successful in cost-effectively avoiding new power plants using DSM. In fact, based on the latest data for the Department of Energy, FPL is ranked number one nationally in conservation achievement and number four in load management.

FPL continually investigates additional cost-effective DSM opportunities and requests Commission approval of revisions to our DSM plan as appropriate. FPL recently completed a comprehensive review of all of our programs to determine whether additional savings were available. This review resulted in Commission approval of extensive modifications that added another 564 megawatts of summer demand reduction impact to FPL's

Commission-approved DSM goals of 802 megawatts for 2006 through 2014.

FPL's accomplishments and future commitments to DSM are significant. Through year-end 2005, FPL has implemented 3,519 megawatts for the equivalent of 10 medium sized power plants. By 2015, FPL will have avoided three times the equivalent of the FGPP power plants.

FPL's analysis has already captured all cost-effective demand-side management potential available on the FPL system. Even if there were some modest potential for additional DSM, regardless of the cost-effectiveness test used, it is unrealistic to conclude that FPL could add significant incremental quantities in time to mitigate the 2013-2014 capacity need. Therefore, despite FPL's outstanding accomplishments in the area of DSM, there is still not additional cost-effective DSM to avoid the need for the proposed units.

This concludes my summary.

Q. Mr. Brandt, have you also prepared a summary of your rebuttal testimony?

A. Yes, I have.

Q. Would you please provide that summary to the Commission?

A. Sure. My rebuttal testimony counters Mr. John J. Plunkett's argument that more demand-side management is reasonably achievable by FPL and could defer the need for the proposed FPL Glades Power Park. Mr. Plunkett's analysis of the potential DSM of FPL is lacking in detail, unsubstantiated, and not Florida-specific. He apparently did not take any time to understand FPL's DSM plan, its current DSM programs, and the unique characteristics of FPL's service area.

Mr. Plunkett discusses two estimates of DSM potential for FPL, neither of which provides a reasonable basis for accepting his recommendation that the need for the FGPP units can be deferred through incremental DSM. The first is his simplistic benchmark analysis comparing FPL to utilities in Massachusetts and Pacific Gas & Electric. As an initial matter, projected DSM savings for FPL cannot be looked at DSM spending in other areas. The utility's specific approach of looking at cost-effective DSM potential followed by this Commission and FPL is far superior.

Further, Mr. Plunkett bases his comparison on dollars spent per kWh saved, but you cannot conclude that units can be deferred by only looking at kWh savings. To determine whether new generation can be deferred, the critical consideration is cost per kW of

peak reduction. Based on Department of Energy information, the amount FPL spends per kW on achieving savings is as much as one-third less than the amount spent by PG&E for comparable savings. Even if you look at the annual kWh dollar savings spent as Mr. Plunkett did, Massachusetts was the least effective of the Northeast states that Mr. Plunkett identified.

Mr. Plunkett also discussed FPL's DSM potential based on a recently released ACEEE report on Florida. As I discussed in my testimony, Mr. Plunkett's -- I'm sorry, ACEEE's findings regarding achievable conservation and renewable potential in Florida are substantially overstated, and the author of the report has acknowledged that there are errors in this report. Even assuming the ACEEE report's findings are correct, Mr. Plunkett concludes that FPL's planned DSM savings exceeds it share of the statewide energy efficiency included in the report.

Despite FPL's industry-leading conservation efforts, which were acknowledged by Mr. Plunkett, there are not sufficient cost-effective, reasonably achievable DSM potential in FPL's system to avoid the need for the FGPP units.

This concludes my summary.

MS. SMITH: Thank you, Madam Chairman.

Mr. Brandt is available for cross-examination.

CHAIRMAN EDGAR: Thank you. Ms. Perdue, any questions?

MS. PERDUE: No questions.

CHAIRMAN EDGAR: No questions. Mr. Beck, I know you said no questions.

Mr. Gross. No questions.

Mr. Krasowski.

MR. KRASOWSKI: I have questions, yes. Thank you, Madam Chair.

CROSS-EXAMINATION

BY MR. KRASOWSKI:

Q. Good evening, Mr. Brandt.

A. Good afternoon.

Q. Good afternoon, good evening. It's two after 5:00.

A. Okay.

Q. I have a strong interest in your work and much of your testimony, not just to pick it apart or criticize it. But I think it's really a valuable effort, so if you would help me understand it and what the implications are for increasing the effect of your work, I would appreciate it.

So I would like to start off with, on page 5, line 14 of your testimony, you state that FP&L has been

able to avoid penalizing nonparticipating customers by offering only DSM programs that reduce electric rates for all customers, DSM participants and nonparticipants alike. So my question is, why does FP&L take this viewpoint, or why do you do things this way? Doesn't this put the participants in the efficiencies at a disadvantage because you have to spread the benefit over everyone? What do you mean by that?

A. Well, first of all, it doesn't put anybody at a disadvantage, and that's kind of the beauty of how we try to implement DSM. You know, we use something called the rate impact measure test to determine cost-effectiveness, and the rate impact measure test's goal is to make sure that everybody benefits through the lowest rates possible. So even if you don't participate in a DSM program, your rates that you pay for electricity are as low as possible considering the alternatives.

Now, the second test we look at is something called a participant test. And the participant test ensures that it makes economic sense for a customer who elects to participate in one of our DSM programs to realize benefits.

So by using these two tests, the rate impact measure test and the participant test, both participants

in the programs benefit through lower rates and through reducing their consumption through the program, and nonparticipants benefit through having as a low a rate as possible.

Q. Okay. Let me relate this to the first program you list under the residential DSM programs, and that is residential conservation services. That's where you go to someone's home and you do an energy audit, and you explain to them how they can make their home more efficient through the installation of conservation measures and practices.

Let's get specific and say it's through increasing insulation to save energy. Now, how does what you just explained to me relate -- how does that person's insulation of their home save the cost of energy for everyone involved in the system?

A. Well, first of all, I think -- let me clarify. The residential conservation service program that you talked about is really our energy audit program, and that's where customers have the option of either us going to their home, doing it on the phone, or through the Internet. They actually do a survey of the customer's home to identify ways to increase the efficiency of their home.

An outcome of that would be recommendations

for some of our other programs, such as our duct program, our building envelope program, or our HVAC program, or there's others. Those programs, if the customer who has the audit qualifies, they'll typically get a certificate that they can redeem for part of the cost to install that conservation measure.

For instance, we go to your house and we find that you don't have adequate ceiling insulation, we will determine how much you have and a recommendation of where you ought to be as far as the level of ceiling insulation, and we would write something called a watt saver, which is basically a certificate that you can redeem with a participating contractor to get your ceiling insulation brought up to our recommended level. Once you've done that, now that program, the building envelope program, if you do that as a participant, will help reduce the demand for electricity on our system, and it will also reduce our peak demand, which will help avoid building power plants.

Q. And that's how a general savings is experienced? I see this. I'm just -- the individual saves by putting in the insulation, and the system saves because you don't have to build a new power plant?

A. I think you've got it right, yes, sir.

Q. Okay. Good. So am I right in connecting what

you just told me to the amount of 5,800 megawatts of savings, which represents 20 percent of the energy either generated or saved? When you put those together, it's 20 percent of your total energy picture over the years. Through your savings, you've been able to put that must have aside or avoid that much.

A. Well, we haven't got there yet. I think the 5,800 number that was discussed by a prior witness, I believe Mr. Green, was actually what we intend to have done through 2014. We've done about 3,519 megawatts through 2005. And you are correct in stating that the way you get those megawatts is through getting customers to participate in these programs.

Q. Since you generate less energy now than you will in 2005, would the percentage, the 3,519, would that -- what percentage is that then? That's where you're at. In 2005 you're at 3,500. Do you understand my question? How does that relate to the 20 percent projected to be 5,800?

A. I'm not sure I understand your question, sir.

Q. Okay. If in 2014 you're estimating that you'll be at 5,800 megawatts of savings, which then will represent 20 percent, is the 3,519 number of 2005 20 percent as well?

A. I don't know for sure.

Q. Okay. We'll have to do the math. You don't know the math for sure. Okay.

How many of your customers -- what percentage of your customer base -- do you know how many customers you have? I can't recall. I've read it.

A. We have about 3.8 million residential customers and about 500,000 business customers.

Q. How many of your residential customers have taken advantage of the residential customer service energy audit? Do you have a percentage for me?

A. I have the absolute number if that would help.

Q. That would do.

A. We've had -- 2,192,000 customers have had a home energy survey.

Q. Okay. Because this program is sort of like a feeder program into the other opportunities that you help people take advantage of, do you have a breakdown of the residential building envelope program? That's more specific, isn't it, in that you help people with insulation, putting stuff around windows, and that type of thing? Do you have a number on that, what percentage of people you've -- this is all voluntary; right?

A. Yes, sir, it is voluntary. Once again, I don't have a percentage, but I have the absolute number if that would help.

Q. That helps.

A. There's been 730,000, approximately, customers that have received rebates and processed them for the residential building envelope program.

Q. That's great. Duct system testing and repair, sir?

A. Duct system testing and repair, about 405,000 customers.

Q. Residential air conditioning? And I'm going down the list here of the programs you offer people, opportunities.

A. The residential air conditioning program is 1 million -- approximately 1,100,000 customers have participated.

Q. That's out of how many customers?

MS. KRASOWSKI: 3.8 million.

MR. KRASOWSKI: 3.8 million. Okay. Nice.

BY MR. KRASOWSKI:

Q. Residential load management?

A. Our residential load management program has 742,000 customers in it today.

Q. And that's unique, in that it's a program that offers load control to major appliances in the household and household equipment to customers in exchange for a monthly electric bill credit, so that goes specifically

-- say if my swimming pool heater is an electric one, I sign up with you, and you're allowed to shut that down if you're in a -- instead of a brownout or something like that, if you need to?

A. You're pretty close, sir. We don't control swimming pool heaters, but we do control swimming pool pumps, along with water heaters and air conditioners and space heating, you know, home heating.

Q. Okay. But not the swimming pool heaters?

A. That's correct.

Q. Is there a reason for that?

A. Well, the program typically gets used in summer. You know, typically we build power plants to meet load in summer, and there aren't too many swimming pool heaters, I think, that would be on during the summer.

Q. Okay. Thank you.

A. So we wouldn't get very much benefit.

Q. Right. That makes sense.

Did I ask about the residential air conditioner, how many people participate in it? I did. Okay. I have that.

How about residential load management? Did you give me a number on that?

A. Yes, sir.

Q. You did. Okay. I'm sorry.

So now we're to the new construction BuildSmart program.

A. BuildSmart -- I'm sorry.

Q. That's all right.

A. BuildSmart has about 15,000 participants.

Q. 15,000. Is that -- do you do that in concert with the Florida Solar Energy Center? Do you work with them at all on that?

A. This actually was a project that we -- actually, we worked with the Florida Solar Energy Center when we initially developed the program. They provided quite a bit -- actually, they did the research for us, and they actually helped certify our representatives that go work with builders on these programs.

Q. Great program. Are you familiar with the Florida Solar Energy Center's project where they built three different homes, one in southern, one central, one northern Florida, 2,000 square foot homes, and then they put a control home right next to it? And they maximized all efficiencies in the test home and compared the energy usage to the control home, which had kind of standard appliances and design and insulation, so one home maximized all of those things, not just solar. Are you familiar with that program?

A. I am familiar with the summary of the research, yes, sir.

Q. Okay. I'm trying to remember. I thought I remembered that there was a 70 percent differential between the control home and the maximized efficiency home. It might be less than that, so I don't want to misrepresent it and hurt the credibility of our conversation, or my credibility. But do you remember what efficiencies there were when you maxed out, maximized every aspect of what you're doing here as far as your voluntary programs?

A. I'm not sure I understand your question, sir.

Q. Do you understand the Florida Solar Energy research project, the three homes?

A. Yes, I do.

Q. Okay. Do you remember the differential between the energy use, like what percentage of energy was saved in the experimental home?

A. I don't remember the exact numbers, but I think your numbers of 70 percent are in the ballpark.

Q. Okay. I'll have to check that. And then we talked about new construction, residential low -- residential low weatherization, low income weatherization. I think we've kind of touched on that already. Do you have a number of people that have

accessed that?

A. Actually, sir, no, I don't.

Q. And these numbers, are they since the beginning of the program, or are they annual numbers?

A. They are since the program was implemented.

Q. And I noticed some information here that you have some programs that have started and stopped. Some have been redesigned and adjusted. So when did this program -- when did these programs start, if you can even answer that based on what I just said?

A. Well, it varies by program. I don't remember exactly when all of them started. BuildSmart, for instance, probably started about five or six years ago.

Our residential building envelope program has been around for quite a number of years.

Our residential HVAC program, we had it for a while, and then changes to the energy code basically made the program obsolete, because the building code minimum efficiency was basically what we were incenting customers to do, so we weren't really -- you know, you weren't getting any benefit from that. And over time, new technology was developed that actually allowed us to start the program up again. So that has been on and off.

Our duct program is probably about 10 years

old. And that --

Q. Okay.

A. I'm sorry.

Q. That's okay. The one program where -- I think it was the air conditioning program where the regulatory requirements came up to the point where you were trying incentivize people to go.

A. Yes, sir.

Q. Do you recall what SEER rate is the new excellence target to hit? Is it something like a SEER of 14 or 16? What's the best?

A. Well, the minimum based on the code is now a SEER of 13. So we obviously don't want to incent customers to put in SEER 13s, so we strive to incent customers starting at 14 and above. You know, there's SEER 19 equipment out there, and to the extent -- you know, we make our incentives that we give customers, structure it so that we try to move them to the higher SEERs.

Q. All right. You also address your business energy evaluation program?

A. Yes, sir.

Q. Where you encourage energy efficiencies in business. Would I be correct in saying that that would include air conditioning and -- well, any kind of

electrical -- what is included in that, if I may?

A. Our business energy evaluation, you can think of it similar to what we do with a residential home energy audit, but we did it for business customers. We go into business customers' facilities and do a couple of things. Number one, we try to qualify them for our other DSM programs, for instance, lighting or air conditioning or building envelope. And we also give them practical things they can do that are low cost or no cost that they can implement on their own without making a financial investment, things like -- you know, as simple as when you shut down your business at the end of the day, make sure you're turning out the lights, and make sure you're raising your thermostat if that's appropriate, those types of things.

Q. Are smart thermostats part of your -- are those -- are you involved in encouraging people in residences -- I'm going back to that. Are you encouraging as part of your program people to use smart thermostats in either your individual home visits or your visits to builders?

A. Yes, we are. When we do a home energy survey, one of the recommendations to customers would be programmable thermostats. Also, in our new home construction program, which is BuildSmart, that's one of

the technologies that we encourage builders to put in for our customers.

Q. Okay. And then -- okay. I see right here the next one, business heating, ventilation, and air conditioning. What percentage of your business -- how many business customers do you have?

A. We have about 500,000 customers.

Q. And what number or percentage of those people have taken advantage of what you offer?

A. It's much more difficult on the business side to track that information, only because we tend to -- there's so much variation in a business customer. You could go from a small business all the way to a large, multi-campus type of facility. So we don't really track participants. We try to focus on how many kW we get out of them, so I really couldn't tell you exactly the number of participants.

Q. But if you have a large warehouse with lighting and they ask to you come in and help them assess their energy options, you'll go in and help them with that?

A. Oh, absolutely.

Q. Okay. Sounds good.

Next is business custom incentive, encourages businesses to implement unique energy conservation

measures or projects not covered by other FP&L programs. That's pretty open.

And then we have a different category, commercial/industrial load control. Oh, that was ended in 2000. Okay.

But was it picked up again, commercial demand reduction, in 2002? And that's a program which, similar to the previous one, it reduces peak demand by controlling customer loads of 2,000 kilowatt or greater during periods of extreme demand or capacity -- so that's kind of the load control on the business side that you have in the residential.

A. That's correct.

Q. And then business building envelope, a program you offer there as well.

A. Yes, sir.

Q. So we have a 20 percent kind range, maybe a little less, in that range, of energy need displacement as a result of your efforts here, and it was identified in some of the documents as 10 400-megawatt plants, or it would be two 2,000-megawatt plants. And the percentage of participants that you have represents quite a few people. But in general, what percentage did you come up with again?

Okay. Well, they're all different for all the

different categories, but it's like a fifth, an eighth, or a third. The greatest is a third.

Okay. Are you familiar with a program that Lakeland Electric has implemented? It's a couple of years old now, where they themselves provide customers with a solar hot water heater, and then they maintain that. They install it. They own it. It's sort of like what Microsoft does with the operating systems on computers, where we get to use these things, but we never own the operating system; right? So they put in that appliance, continue to own it and maintain it, but they have a meter that is right next to the regular electric meter, so they charge for the electricity -- they have a special way of doing it, but they can tell what power benefit there is in doing this for the customer, and the customer pays for the solar heating of their water. But the utility profits from this. So it's a very clever way of arranging things. I haven't heard of many quite like this. But are you aware of that program?

A. I'm somewhat aware of that program, yes, sir. That program actually began in 1997, and as of today, there's about 60 customers for the City of Lakeland that are participating in it. And typically what they do is, they install solar water heating panels on a customer's

facility, and it has Btu meters that measure the amount of hot water that a customer uses, and they charge the customer based on hot water usage, and then they also charge them for their electric usage for their non-hot water needs.

Q. So it's a clever way of keeping the utility serving the energy need, but transferring from electricity to -- and there's a benefit towards using this type of -- being in this type of situation, right, because the electricity that that defers, there's also a savings in -- the electricity lost in the transmission over the lines is also a factor of efficiency. We've been talking about that. That's been a point.

When Mr. Olivera was here, he said you folks were looking at something like that as well, that you were kind of the main man, so I wanted to --

A. Right. FPL is currently looking at trying to offer a solar water heating program to our customers. We're finishing the analysis and trying to make sure that program will be cost-effective, and if it is, we would potentially come to the Commission and ask for their approval to offer that to our customers.

Q. Okay. I want to catch myself here, because I don't want to be beating around the bush and maybe it would be suggested that I was starting to be like a

professional witness, or maybe even a professional attorney, you know, so let me stay grassroots here.

Okay. So with all this good work you're doing, I'm wondering why, or we're wondering why, if next legislative session, when the Governor has said he's going to pull out all stops and get the best minds in his State of the State address -- I don't know if you saw that, but he said he's going to bring in -- do his best, you know, bring from the best minds and work with everybody to find the best solution or to make an effort towards a solution on climate change. And, of course, coal power is a big part of that.

So if the Legislature, which now has the Environmental and Conservation Committee in the House and the Senate, and Senator Saunders, and then also has appointed the Century Commission, which identified climate change as the number one issue for Florida to look at for future planning, and also there's a new -- I'm sure you're familiar with this. There's a new Energy Commission that's supposed to come up with an energy plan, and then the Governor. So if of all these efforts, which oftentimes generate great ideas, because it's in the open environment, political and social and all that, scientific --

MS. SMITH: Madam Chairman, I just have to

interpose an objection. I think that Mr. Krasowski is getting into the area of unsworn testimony at this point, so perhaps if he can just ask a question.

CHAIRMAN EDGAR: I'm going to have to ask you to bring it into a question.

MR. KRASOWSKI: Okay. I'm sorry. I'll do that. So where was I?

BY MR. KRASOWSKI:

Q. Could you agree -- my question is, if we double -- this is a voluntary program. You have a small but very impressive percentage of participants, participation from the various -- from your customers. Would you agree that we would be able, if many of these things were standardized into policy and procedure, to double, to double the efficiencies that we realize just in these programs alone if they were spread across the board, everybody -- these became the new standards, like the air conditioner standards, these standards become the new standard, and they're new standards?

A. Well, first of all, I wouldn't characterize what we've done as small. I think if you look at the data, we've probably done -- we have done more conservation that anybody in the country.

Q. Undeniable.

A. Okay. So if you're asking me is a better way

to accomplish this through code changes, I think Dr. Green gave an excellent example on the impact of code changes on customers' usage. I believe he mentioned that the Energy Policy Act of 2005, when he looked at the impact of that, that was about 1,200 megawatts through 2014 that he was able to reduce his forecast.

Obviously, as things come into code that utilities are incenting, the utility's goal is to look at those changes and figure out, you know, how to react to them. And you can react to them a couple of ways. Number one, you could stop incenting customers to do something because they're going to do it by code anyway, so it's not the kind of -- you know, you're not really getting any benefit from that, or you can redesign your programs.

And FPL has taken both tacks at different times. Just recently, we filed revisions to our residential air conditioning program that looks to address those code changes that you're talking about.

So there are ways that efficiencies can be achieved through code, and there's ways efficiencies can be achieved through DSM programs by utilities. I have no idea if doubling it -- making it a code would double what we're doing.

Q. Fair enough. Would you agree, though, that if we were to increase by 10 percent the success, overall 10 percent, like by 50 percent, the amount that you've accomplished here, that we would be able to replace the 1,960 megawatts requirement need that is identified at this time under these standards, under these conditions, so we do not have to put this power plant on the edge of the Everglades, at the headwaters of Lake Okeechobee?

A. No, sir, I don't agree. And I guess it's based on -- as we've gone through this process, one of our goals was to identify all the cost-effective DSM that we could do in this time frame. And to that extent, the plan for FGPP already includes all the achievable cost-effective DSM in the plan. So I don't think we could cost-effectively come up with enough incremental DSM to avoid those units.

Q. So obviously, we disagree. Well, okay.

I would like to ask you, what does cost-effective mean when it's used so much throughout these documents?

A. I think it's very similar to, as I answered one of your prior questions, you know, we look at the impact on potentially a DSM program versus the option of meeting the need through purchased power or building another power plant, the different options. And to the

extent that the conservation or DSM program is a more cost-effective solution than those alternatives, then the DSM program gets implemented or proposed. If it's not more cost-effective, then we would have to build one of the alternatives to it.

Q. And how does the RIM standards come into this? I'm not clear on that.

A. The RIM test is basically the test that we use, one of the two tests to look at the cost-effectiveness of our DSM programs. And the goal of the RIM test is to make sure that the DSM program that is being proposed has the effect of minimizing rate impacts to all customers.

Q. And there are some programs that don't -- that are energy efficient, but don't qualify because they don't meet RIM standards, because FP&L loses money if they implement the program? That's a question. Do you have an answer? If you don't, that's fine.

A. No. We, first of all, don't lose money. I mean, that's not the objective. The whole idea of -- you know, there are measures out there that don't pass the RIM test, and typically what you'll find is, those types of conservation measures are ones that don't have a significant impact on demand, which means if we implemented them, we still wouldn't be able to realize

the benefits of avoiding power plants, because they don't defer capacity typically, or a minimal capacity deferral.

Q. Could I have a second?

I think that's coming -- I thought that was my phone. It's not my phone. It's a computer.

I think that just about covers it, but if I can return to two main points, the Florida Solar Energy Research Center, on their standards for housing. If we were to live up to those standards, we could reduce the new home energy uses by an enormous amount. Therefore, the projection of need for this power plant into the future, that need would be altered, or we would have to refigure that. Would you agree with that or not?

A. To the extent that the work of the Florida Solar Energy Center was cost-effective, I would agree. However, I don't believe that would truly be cost-effective, both for participants and for a customer to do. I mean, those types of things have extremely long paybacks.

Q. Okay. But are you -- can I ask you economic questions about that? Are you the representative of the economic -- I suppose you are if you're the DSM man. These paybacks, if these programs are standardized and implemented in all new housing, then the payback goes

with the house; right? I mean, there's no -- and there's also programs to mitigate the increased cost with assistance through government policies, which are all coming up in the next legislative session and are being analyzed by the entities I mentioned before. So I'm confident that many questions regarding that could be answered by those very bright, talented, knowledgeable, like yourself, people on the issue.

Okay. And then the other issue is that program that you might be coming out with your version of, the one in Lakeland. It saved 7 percent energy per household. If we put them on all the houses, along with other programs, what would -- how much of a benefit could you see, an increase over the 20 percent we're achieving now?

A. I guess to put the Lakeland program in perspective, they have approximately 100,000 customers, and they have 60 participants. If you apply that to FPL's customers, we would have about 2,600 participants, which would be about one megawatt of impact, so very, very small. Our goal is to be more successful than them, in the sense that even a -- I guess a -- well, FPL had a program like this several years ago, and over probably about a 10-year period, we were able to get about 40,000 participants in the program, and that

results in about 16 megawatts of summer peak demand reduction. So you need a lot of people participating in solar water heating to defer these types of power plants that we're here talking about today.

MR. KRASOWSKI: Correct. So if it was one megawatt, that would leave us 1,959 megawatts to handle with other programs, but not to make a big joke of it.

Thank you very much. I really appreciate the conversation, and although I don't agree with you, I really respect and appreciate your answers.

I'm done with the questions. Thank you very much, Madam Chair.

CHAIRMAN EDGAR: Thank you, Mr. Krasowski. Are there questions from staff?

MS. BRUBAKER: Staff has none.

CHAIRMAN EDGAR: No questions. Commissioners? Commissioner Carter.

COMMISSIONER CARTER: I was looking at my little pad here, and next time I go on break, I'm going to turn it down. I think Mr. Krasowski was looking at my notes here. I think he got an answer to all of the questions I had here.

CHAIRMAN EDGAR: That was a joke.

COMMISSIONER CARTER: But I do think that -- Mr. Brandt, I want to say to you, I know that sometimes

when you work in an environment where the goal is to sell more electricity and you're the DSM guy, you may not be the most popular guy in the company. But I think you're doing a great job with two national leadership awards. Keep on keeping on, and I think that as long as we keep DSM in the forefront of what we're doing and keep on, you know, maintaining your national standards, we're going to do -- we're going to get there. And I just want to say I appreciate it.

Thank you, Madam Chair.

THE WITNESS: Thank you.

CHAIRMAN EDGAR: Commissioner McMurrian.

COMMISSIONER McMURRIAN: I'm going to try a couple. Bear with me.

Mr. Brandt, can you give me an idea of the percentage of reserves that are currently supplied by DSM, or is that something that's better to ask of --

THE WITNESS: Actually, that would probably be best answered by Dr. Sim.

COMMISSIONER McMURRIAN: Okay. Okay. Then no questions. Thank you.

CHAIRMAN EDGAR: Ms. Smith, any questions on redirect?

MS. SMITH: I just have a few. Thank you.

REDIRECT EXAMINATION

BY MS. SMITH:

Q. Mr. Brandt, you and Mr. Krasowski discussed cost-effectiveness of DSM a great deal. Do you recall that discussion?

A. Yes, I do.

Q. When you say DSM is cost-effective, what do you mean?

A. What I mean by cost-effective is, when you compare the DSM alternative to other options for meeting peak demand, DSM results in lower rates for our customers.

Q. And you said that there is not enough cost-effective DSM to avoid or defer the need for the FGPP units; correct?

A. That's correct.

Q. If FPL used a different cost-effectiveness test for DSM measures, do you think the need for FGPP could be avoided or deferred?

A. No, I do not. Typically, as I talked briefly about, most of the other cost-effectiveness tests and measures that would pass them don't necessarily guarantee significant peak demand reduction, which you really need to defer a power plant.

Q. And you may have already clarified this, but Mr. Krasowski said in one question if FPL doesn't

implement a DSM measure, that's because FPL loses money if they implement these programs. Is that what the RIM test determines, whether FPL loses money?

A. No, it does not. It looks at the rate impact on our customers.

Q. And Mr. Krasowski discussed the new construction, residential new construction BuildSmart program with you. Is that a partnership of sorts with developers and builders in FPL's service area?

A. Oh, absolutely. For this to work, you have to work with developers. And FPL has actually teamed up with some of the larger builders in Florida such as Pulte, Mercedes Homes, Lennar, and we work with them to help sell energy efficient homes at the beginning. Obviously, it's a lot more cost-effective to build an energy efficient home than it is to retrofit one. So to the extent that we can work with customers up front, we kind of avoid this whole retrofit process, and it makes us more effective.

Q. And have you made any changes to the BuildSmart program to try to increase customer participation in that program?

A. Yes, we have. We actually changed the program last year, and there was a lot more focus on working with developers that build multiple family units and

trying to get, you know, the kind of mass market type of homes involved in the program.

Q. And you discussed participation in other DSM programs with Mr. Krasowski; correct?

A. Yes, I did.

Q. All else equal, does the price of electricity in FPL's service area affect participation rates?

A. Sure it does. To the extent that you have lower rates, you know, part of the reason a customer participates is, you know, you have a first cost to install the measure, then you have the utility's rebate or incentive, and then the third part of the equation is how much the customer saves on his bill. So obviously, your rates impact how much they save on their every month from the reduced energy usage.

Q. And if a utility has higher priced electricity than FPL, how would you expect that to change participation rates in DSM programs, again, all else equal?

A. All things being equal, obviously, the higher your rates, the more the customer would save each month, and the more attractive, in a sense, the DSM measure might look to that customer. They would have a shorter payback.

Q. And you and Mr. Krasowski discussed the

Lakeland Electric water heating program. Do you recall that?

A. Yes, I do.

Q. And you said approximately 60 customers have participated in that program. That was implemented in what year?

A. 1997.

Q. And how many megawatts have been saved under the Lakeland Electric program since its inception?

A. It might be easier to talk in kilowatts. It's been 24 kilowatts.

Q. And how many megawatts? Not even one?

A. Divide that by a thousand, .024.

Q. We were just discussing the participation rates in DSM measures where the price of electricity is higher. How do FPL's rates compare to the rates of utilities in Massachusetts and PG&E in northern California?

A. FPL's rates, to kind of put it in perspective, a thousand kilowatt-hour bill for an FPL customer is maybe around $110 a month, and out in PG&E, a thousand kilowatt-hour bill is about $195.

MS. SMITH: I just have two more, Madam Chairman.

BY MS. SMITH:

Q. Mr. Brandt, Mr. Krasowski discussed FSEC's policies and standards with you. Do you recall that discussion?

A. Yes, I do.

Q. If FPL were to implement FSEC's policies and standards, do you think that that would avoid or defer the need for FGPP?

A. No, I do not.

Q. And you're familiar with the work of the Florida Energy Commission that Mr. Krasowski discussed with you, are you not?

A. Yes, I am.

Q. Are you a aware of any policies being considered by the Florida Legislature, the implementation of which could avoid or defer the need for FGPP through conservation?

A. Not that I'm aware of.

MS. SMITH: I have no further redirect.

CHAIRMAN EDGAR: Okay. We have exhibits. I have 23 and 24, 130 and 131. Seeing no objection, we will enter those into the record.

(Exhibits 23, 24, 130, and 131 admitted into the record.)

CHAIRMAN EDGAR: Thank you, Mr. Brandt. You

are excused.

THE WITNESS: Thank you.

CHAIRMAN EDGAR: Okay. We are going to conclude for the day. I do appreciate everybody's cooperation these past two days.

As we discussed earlier, we will come back on Wednesday of next week, which is the 25th. We have the 26th available to go into if indeed we need to. I would ask in the interim that all of the parties obviously work with your witnesses, and then please get with staff and work up a proposed schedule that accommodates scheduling needs. I will do everything I can to accommodate and to show latitude, again with always my caution that we will also try to proceed in a manner that is orderly and helps lay out the record and the case in a manner that makes sense to us up here as well.

MS. SMITH: Excuse me, Madam Chairman.

CHAIRMAN EDGAR: Yes, Ms. Smith.

MS. SMITH: Was Mr. Brandt dismissed?

CHAIRMAN EDGAR: I said that he was.

MS. SMITH: Okay. Great. Thank you.

CHAIRMAN EDGAR: And he's gone.

MS. SMITH: Thank you.

CHAIRMAN EDGAR: That's okay. Yes, yes, he is. And I know that we did do his direct and rebuttal,

so he is excused excused.

Okay. Ms. Brubaker, any other matters?

MS. BRUBAKER: No. I would also ask the parties -- perhaps it would be better to address any subsequent commensurate changes in the briefing schedule, take that up as a matter when the hearing is continued, but I could ask the parties to think about any particular concerns they have. My suggestion would be to look at maybe offsetting the briefs by about a week, but we can talk about it further during the week if you would like.

CHAIRMAN EDGAR: Yes. And that is -- thank you for bringing that up, and I meant to raise that. I would ask the same thing, that you look at your schedules and work with our staff. And what I would like to do is have a requested/proposed schedule both for the continuation and finishing of the proceeding next Wednesday and Thursday, and then also looking at dates from that point forward for briefing and for our staff rec as well so that we can have it before us, and when we are all together, we can make some decisions. Does that work?

MS. BRUBAKER: Absolutely. And also, this is perhaps just an aspirational goal, but to the extent also we can look to stipulating further witnesses, staff

is happy to discuss that also.

CHAIRMAN EDGAR: And when we're talking about the schedule, I would also ask, if it makes sense to go ahead and take up direct and rebuttal at the same time, then I am open to doing that as well.

Are there other matters while we are gathered here together?

MS. PERDUE: Madam Chair, do we have a --

CHAIRMAN EDGAR: Yes, ma'am.

MS. PERDUE: Do we have a time for next Wednesday?

CHAIRMAN EDGAR: 9:30 works for me. Is there anybody that has a problem with 9:30 on Wednesday?

Okay. 9:30 on Wednesday it is. All right. Then the hearing is continued, and we are adjourned for the day.

(Proceedings recessed at 5:52 p.m.)

(Transcript continues in sequence in Volume 6.)

CERTIFICATE OF REPORTER

STATE OF FLORIDA:

COUNTY OF LEON:

I, MARY ALLEN NEEL, Registered Professional Reporter, do hereby certify that the foregoing proceedings were taken before me at the time and place therein designated; that my shorthand notes were thereafter translated under my supervision; and the foregoing pages numbered 652 through 739 are a true and correct record of the aforesaid proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor relative or employee of such attorney or counsel, or financially interested in the foregoing action.

DATED THIS 18th day of April, 2007.

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