BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 070650-EI
FLORIDA POWER & LIGHT COMPANY

IN RE: FLORIDA POWER & LIGHT COMPANY'S PETITION TO DETERMINE NEED FOR TURKEY POINT NUCLEAR UNITS 6 AND 7 ELECTRICAL POWER PLANT

DIRECT TESTIMONY & EXHIBITS OF:

C. DENNIS BRANDT

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF C. DENNIS BRANDT

DOCKET NO. 07_____ - EI

OCTOBER 16, 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 any exhibits in this case?

A. Yes. I am sponsoring Exhibits DB-1 and DB-2, which are attached to my direct testimony:

Exhibit DB-1 FPL's Current FPSC DSM Goals

Exhibit DB-2 FPL's DSM Programs & Measures

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

A. Yes. I am sponsoring Section VIII, Non-Generating Alternatives of the Need Study. In addition, I am sponsoring Appendix K of the Need Study.

Q. What is the purpose of your testimony?

A. My testimony has six main points. First, I will advise whether there are any available demand-side options that could eliminate the 2018 and 2020 capacity needs. Second, I will provide a historical overview of FPL's DSM initiatives. Third, I will discuss the current maturity of FPL's DSM programs and their potential on FPL's system. Fourth, I

will outline the process used for setting DSM Goals. Fifth, 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. Sixth, I will discuss FPL's demand-side management projection through 2020.

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). When you consider that FPL serves about three percent of the total United States consumers but has achieved thirteen percent of the total U.S. conservation and six percent of the total load management, it is clear that FPL's success is not attributed just to its size relative to other utilities, but to its commitment to achieving the maximum amount of cost-effective DSM.

Through year-end 2006, FPL has implemented 3,659 MW (at the generator) of DSM – or the equivalent of 11 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 2014.

FPL continually investigates additional cost-effective DSM opportunities and requests Commission approval of revisions to its DSM plan as appropriate. FPL recently received Commission approval of significant changes to its DSM plan offerings

In addition, FPL's estimate is that it plans to achieve additional MW of demand reduction for the post DSM goals time frame of 2015 through 2020, such that it will implement a total of 1,899 MW at the generator of summer DSM demand reduction from August, 2006 through August, 2020.

FPL's accomplishments and future commitments to DSM are significant. With 3,588 MW of DSM implemented through July, 2006 and an additional 1,899 MW of DSM being added in the August, 2006 through August, 2020 time frame, FPL will have avoided approximately 6,584 MW of generation capacity (including the impacts for FPL's 20 percent reserve margin requirements) by 2020. This is three times the size of the two 1,100 MW power plants being considered. However, despite these outstanding accomplishments,

there is still not enough additional cost-effective DSM to eliminate FPL's capacity needs through 2020.

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, particularly 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 its 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 result in lower electric rates than they would otherwise have 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 additional DSM programs to its customers. 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 its 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 its existing DSM programs. In addition, FPL has modified DSM programs over time in order to maintain their cost-effectiveness. This allows FPL to continue to offer the most cost-effective programs available.

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 DSM. Since the inception of its programs, through the end of 2006, FPL has achieved 3,659 MW (at

the generator) of summer peak demand reduction, 2,816 MW (at the generator) of winter peak demand reduction, 38,169 GWh (at the generator) of energy savings and completed over 2,360,000 energy audits of its customers' homes and businesses.

This amount of peak demand reduction is equivalent to eliminating the need for eleven additional power plants of 400 MW summer capacity each (after accounting for the impacts of FPL's 20 percent reserve margin requirements). Most importantly, FPL has achieved this level of demand reduction without penalizing customers who are non-participants in its DSM programs. FPL has been able to avoid penalizing non-participating customers by offering only DSM programs that minimize 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 national data available, which is for the year 2005, FPL is ranked number one nationally for cumulative conservation achievement and number four in load management. To put this further in perspective, FPL serves about 3 percent of the total United States consumers but has achieved 13 percent of the total U.S. conservation and 6 percent of the total load management. Therefore, FPL's success

is not attributed just to its size relative to other utilities, but to its commitment to achieving the maximum amount of cost-effective DSM.

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 its 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 peak day load shapes when load management is most likely to be used 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 analysis using these factors, 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 its 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 to 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 the 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. This change in the minimum

SEER has had a significant impact, reducing the number of air conditioning units that qualify for FPL's air conditioning programs.

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

A. Yes. FPL performs extensive DSM research and development. FPL uses its 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 Goals-Setting Process

Q. Why are DSM goals established?

A. FPL establishes annual DSM goals pursuant to 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 its customers. FPL's DSM goals are key inputs into

FPL's annual Integrated Resource Planning (IRP) process, which is discussed in the testimony of FPL witness Sim.

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

A. Every five years, each utility submits DSM goals for Commission approval. These are 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. Exhibit DB-1 shows FPL's current Commission-approved DSM goals and actual cumulative performance through 2006 (at the meter). In 2006, FPL was successful in meeting all of its goals.

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 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 goals-setting process?

A. Although there has not been any formal communication from the Commission in regard to a new goals-setting procedure, the Florida Statutes and the Florida Administrative Code require goals to be re-assessed every five years. FPL's current goals cover the time period 2005 through 2014, with 2009 being the fifth year.

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 its 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 FPL's 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 its DSM programs, as well as other potential measures.

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

A. Due primarily to the unexpectedly large summer 2005 peak load, and the possibility of future similar increases, FPL identified an average of approximately 60 MW of additional summer demand reduction impact per year for the time period from January 2006 through December 2014.

To produce these savings, FPL requested Commission approval of modifications to eight of FPL's 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. FPL's R&D initiatives resulted in adding demand control ventilation, light colored roof membranes and refrigeration technologies to these DSM offerings. In addition, FPL requested Commission approval of two new DSM programs -- Business Water Heating and Business Refrigeration.

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 Exhibit 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 their 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. In 2006, 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 the minimum term for curtailable rates identify additional non-firm load for FPL's 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 year end 2014. This 39 MW is included in the 60 MW per year of additional DSM previously discussed.

Q. Has FPL requested any other changes to its load control initiatives?

A. Yes. On June 15, 2007 FPL filed a petition with the Commission for the Residential Thermostat Load Control Pilot Project. A typical barrier to customer acceptance of utility load control programs is

reluctance to surrender control of heating and air conditioning appliances. Consequently, for an initial 24-month period, FPL is proposing to evaluate whether the benefits of the On-Call Program can be expanded through use of a new generation of communication and control technologies that put residential customers in charge of decisions that could lower energy costs, while allowing customers to override FPL control of their heating and air conditioning appliances. The Commission approved FPL's request on August 14, 2007. On the same day, the Commission approved FPL's request to make its residential On-Call Pilot Project a permanent part of FPL's DSM Plan.

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

A. Yes. The United States Energy Policy Act of 2005 mandates specific energy efficiency standards that are anticipated to reduce FPL's peak demand by 1,256 MW by 2020. As FPL witness Green describes in his testimony, this reduction was taken into account in determining FPL's capacity needs.

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.

Business Refrigeration: This program encourages the installation of qualifying controls and equipment that reduce electric strip heater

usage in refrigeration equipment for business customers.

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

A. Yes. My testimony focuses on demand-side renewables. FPL witnesses Silva's and McBee's testimonies discuss FPL's supply-side renewables activities. In the area of demand-side renewables, FPL has a long history of programs and research and development addressing the needs of its customers. The following is a discussion of FPL's efforts in this area.

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 the 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 photovoltaic (PV) systems to directly power residential swimming pool pumps. This research project was completed with mixed results. 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.

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 its customers to bear PV's high cost, but allowed customers who were 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, which was completed in 2003, provided valuable data to assess the cost-effectiveness of this technology for FPL and its customers.

In November of 2004, FPL launched its Green Power Pricing Research Project (GPPRP) that was marketed as the Sunshine Energy® program. The objective 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. A summary of the new photovoltaic sites is discussed below.

In its short history, the GPPRP became one of the top programs in the country with 28,742 customers enrolled by the end of 2006. The GPPRP purchased 1,894 GWhs of TRECs as of year end 2006 making it the third 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. The program has continued to grow, with 34,000 participants as of June, 2007.

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. How does the Sunshine Energy® program support the development of renewable energy?

A. The Sunshine Energy program promotes the development of renewable energy by creating an additional revenue stream for renewable energy project developers. Typically, when a renewable energy project is being developed, there are at least two potential

revenue streams that a developer can use to ensure the project is viable. The first revenue stream is to sell the energy and/or capacity to a utility. Typically the price paid by the utility is based on its avoided cost. The cost of developing these types of projects, in certain cases, is greater than the utility's avoided cost and, as a result, this revenue stream may be insufficient. A second revenue stream is created through the sale, to third parties, of the tradable renewable energy certificates associated with the project. When this revenue stream is combined with the revenues associated with sale of the energy and/or capacity, the financial viability of these projects improves.

As discussed above, the Sunshine Energy program has two major components – the development of solar sites and the purchase of TRECs. This purchase of TRECs by Sunshine Energy is specifically targeted to encourage the development of additional renewable energy projects.

Q. Has the Sunshine Energy program encouraged renewable energy development in Florida?

A. Yes. The Sunshine Energy program has supported the development of the following solar projects:

- 8 kW of solar installed in cooperation with the SunSmart Schools - 2 kW each at Palm City Elementary, MAST Academy, South Miami Senior High School and Edgewood High School

- A 2 kW solar array installed at the Miami Science Museum
- 54 kW of rooftop solar installed on homes at "The Quarry" subdivision by Centex Homes in Naples.
- Construction of a 250 kW site in Sarasota is currently underway and is expected to be completed and dedicated in October of 2007.

These projects are for the Sunshine Energy program's commitment for solar resources.

The Program is also purchasing TRECs from several biomass and wood waste facilities in Florida. The Program's TREC supplier has also responded to a request for proposal to purchase TRECs from another new renewable facility in Florida. As the Program continues to grow in participation, the objectives of developing additional solar facilities through the Program and creating a Florida market for TRECs will continue to be advanced.

Q. Is the Sunshine Energy program the only way FPL encourages development of sources of renewable energy supplies in Florida?

A. No. As addressed in the testimony of FPL witness Silva, FPL recently issued a request for proposals for renewable energy supplies and has also filed a renewable standard offer contract with the Commission. Also, as addressed in FPL witness McBee's testimony, FPL has investigated and continues to explore development of FPL-owned renewable energy projects. Thus, the Sunshine Energy program is just

one prong of FPL's multi-pronged effort to encourage the development of renewable energy supplies in Florida and elsewhere.

V. Projected DSM Savings through 2020

Q. Has FPL estimated additional DSM peak demand reduction capability for the time period 2015-2020, after the Commission's approved goals end?

A. The next goals-setting docket, which will include the time period 2015-2019, will occur in 2009. While FPL does not have approved DSM goals for 2015 though 2019, FPL estimates that it will implement a total of approximately 1,899 MW of additional DSM programs at the generator from August, 2006 through August, 2020.

Q. How was the demand reduction estimated for the 2015 through 2020 time frame?

A. FPL has estimated for this time frame it will continue to implement DSM at a rate that is consistent with its plans and accomplishments through 2014.

Q. Can FPL, at this time, say with certainty what its DSM goals through 2020 will be?

A. No. However, FPL's estimate for this time period is reasonable and actual savings would need to be almost three (5,130 / 1,899) times higher in order to meet FPL's projected capacity needs through 2020.

Under even the most dramatic improvements in technology, building codes and customer receptivity to energy efficiency, it would be unrealistic to conclude that FPL could achieve this level of savings.

VI. Conclusion - Ability to satisfy capacity need through DSM

Q. Has FPL identified all of the cost-effective demand-side option potential for the 2007 through 2020 time frame?

A. Yes. As discussed above, FPL recently completed a comprehensive review of its 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. In addition, FPL has included a reasonable projection of FPL's industry-leading efforts of additional demand reduction capability for the 2015 through 2020 time period. Combined, the result is 1,899 MW of summer DSM demand reduction at the generator from August of 2006 through August of 2020.

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 needs through 2020 identified in this determination of need?

A. No. FPL has already identified all of its reasonably achievable cost-effective DSM potential and used this as input to its 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 have not yet reached the level necessary to make any significant impact on FPL's summer peak. FPL's analysis and determination that it still needs additional capacity resources already takes into account all the cost-effective demand-side potential available on FPL's system. In order to meet FPL's projected capacity needs through 2020, 5,130 MW (at the generator) of demand-side resources would have to be identified. FPL witness Sim's testimony addresses this issue further.

As discussed above, 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 eliminate all of FPL's capacity needs through 2020. Therefore, there is not now, nor is there projected to be, sufficient available additional cost-effective demand-side potential that could eliminate FPL's capacity needs through 2020.

Q. Does this conclude your testimony?

A. Yes.

FPL Current FPSC DSM Goals

Residential and Commercial/Industrial

	Winter Peak mW Reduction			Summer Peak mW Reduction			gWh Energy Reduction		
Year	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance
2005	36.3	38.8	-6%	92.5	74.0	25%	184.2	121.8	51%
2006	110.8	79.3	40%	219.8	141.7	55%	383.9	216.8	77%
2007		122.5			211.9			306.0	
2008		170.6			287.2			401.1	
2009		221.5			365.9			501.2	
2010		275.2			447.9			606.1	
2011		330.9			532.1			714.3	
2012		388.5			618.8			825.8	
2013		448.1			707.9			940.5	
2014		512.4			801.7			1,058.6	

Residential

	Winter Peak mW Reduction			Summer Peak mW Reduction			gWh Energy Reduction		
Year	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance
2005	21.4	26.0	-18%	49.8	47.8	4%	91.6	90.3	1%
2006	62.5	55.6	12%	118.5	91.9	29%	191.2	166.0	15%
2007		89.2			140.6			246.9	
2008		127.3			194.6			333.3	
2009		168.0			252.1			424.1	
2010		211.3			313.2			519.5	
2011		256.3			377.1			617.9	
2012		303.3			443.6			719.3	
2013		352.0			512.8			823.7	
2014		405.1			586.9			931.0	

Commercial/Industrial

	Winter Peak mW Reduction			Summer Peak mW Reduction			gWh Energy Reduction		
Year	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance
2005	14.9	12.8	16%	42.7	26.3	62%	92.6	31.5	194%
2006	48.3	23.7	104%	101.3	49.8	103%	192.7	50.8	279%
2007		33.3			71.3			59.1	
2008		43.2			92.6			67.8	
2009		53.5			113.8			77.0	
2010		63.9			134.6			86.5	
2011		74.4			155.1			96.4	
2012		85.1			175.2			106.5	
2013		96.1			195.1			116.9	
2014		107.3			214.9			127.6	

FPL DSM Programs & Measures

Residential Programs	**Measures**
Residential Conservation Service	On-site Energy Audit
	Telephone Energy Audit
	On-line Energy Audit
Residential Building Envelope	Ceiling Insulation - Cooling Ony
	Ceiling Insulation - Heat Pump
	Reflective Roof
	Multi-family Roof Coating
	Multi-family Reflective Roof
Duct System Testing & Repair	Duct Repair - Cooling Ony
	Duct Repair - Heat Pump
Residential Air Conditioning	Air Conditioning - Cooling Only
	Heat Pumps
	Ground Source Heat Pump
	Proper Sizing - Cooling Ony
	Proper Sizing - Heat Pump
	Plenum Repair - Cooling Ony
	Plenum Repair - Heat Pump
	Electronically Commutated Motor - Cooling Ony
	Electronically Commutated Motor - Heat Pump
Residential Load Management (On Call)	Air Conditioning Cycle
	Air Conditioning Shed
	Space Heating Cycle
	Space Heating Shed
	Water Heating
	Pool Pump
Residential New Construction (BuildSmart)	Prescriptive
	Flexible
Residential Low Income Weatherization	Room Air Conditioner
	Air Conditioner Maintenance
	Reduced Infiltration

FPL DSM Programs & Measures

Business Programs	**Measures**
Business Energy Evaluation	New Construction Energy Audit
	Existing Construction Energy Audit
Business Heating, Ventilating & Air Conditioning	Chillers
	Direct Expansion Air Conditioner
	Room / PTAC Air Conditioner
	Thermal Energy Storage
	Demand Control Ventilation - Heat
	Demand Control Ventilation - No Heat
	Electronically Commutated Motor
	Energy Recovery Ventilator - Strip Heat No Bypass
	Energy Recovery Ventilator - Strip Heat Active Bypass
	Energy Recovery Ventilator - No Heat No Bypass
	Energy Recovery Ventilator - No Heat Active Bypass
Business Efficient Lighting	Standard High Efficiency Retrofit
	Low Mercury High Efficiency Retrofit
Business Custom Incentive	Customer Specific Measure >= 25 kw
Commercial/Industrial Load Control	Load Reduction >= 200 kw
Commercial Demand Reduction	Load Reduction >= 200 kw
Business Building Envelope	Roof Insulation
	Reflective Roof Coating
	Ceiling Insulation
	Window Treatments
Business On Call	Air Conditioning Cycle
Business Water Heating	Heat Recovery Units
	Heat Pump Water Heaters
Business Refrigeration	Anti-Condensate Heat Control