BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION

DOCKET NOs. 02___-EI, 02___-EI
FLORIDA POWER & LIGHT COMPANY

IN RE: PETITION FOR DETERMINATION OF NEED FOR PROPOSED ELECTRICAL POWER PLANT IN MARTIN COUNTY OF FLORIDA POWER & LIGHT COMPANY

IN RE: PETITION FOR DETERMINATION OF NEED FOR PROPOSED ELECTRICAL POWER PLANT IN MANATEE COUNTY OF FLORIDA POWER & LIGHT COMPANY

TESTIMONY & EXHIBITS OF:

C. DENNIS BRANDT

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF C. DENNIS BRANDT

DOCKET NOS. 02_____-EI, 02_____-EI

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 Development and Management.

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

A. I am responsible for the development and life cycle management of FPL's products and services. This includes overseeing the development, implementation, training, 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 also 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. Have you previously testified before this Commission?

A. Yes. I submitted testimony in Docket No. 971004-EG, Adoption of Numeric Conservation Goals.

Q. Are you sponsoring an exhibit in this case?

A. Yes. I am sponsoring an Exhibit that consists of the following documents:

- Document DB-1, which is Order No. PSC-99-1942-FOF-EG, approving FPL's current demand side management goals.
- Document DB-2, which is FPL's Commission-approved DSM goals for 2000 through 2009 with actual performance through 2001.

- Document DB-3, which is my testimony in Docket No. 971004-EG, Adoption of Numeric Conservation Goals
- Document DB-4, which is FPL's currently approved Demand Side Management Plan.
- Document DB-5, which is Order No. PSC-00-0915-PAA-EG, approving FPL's current Demand Side Management plan.

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

A. Yes. I am sponsoring Section VI 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 future 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 programs and research and development efforts. Fifth, I will provide a conclusion on whether there are any available DSM options that could defer the need for either Martin Unit 8 or the Manatee Unit 3.

I. Historical Overview of FPL's DSM Initiatives

Q. How does FPL classify its DSM related activities?

A. FPL's DSM efforts consist of activities in several areas: conservation, load management, energy audits for all classes of customers and research and development activities.

Q. When did FPL begin its DSM efforts and how have they progressed over time?

A. FPL has a long history of identifying, developing and implementing DSM resources to avoid or defer the construction of new power plants. FPL first began offering DSM programs in the late 1970's with the introduction of its Watt-Wise Home Program. An increasing number of additional DSM programs were then offered throughout the 1980's and 1990's. These programs have included both conservation and load management programs, targeting the residential, commercial and industrial markets.

FPL's portfolio of DSM programs has evolved over time. FPL continually looks for new DSM opportunities in its research and development activities. When a new DSM opportunity is identified and projected to be cost-effective, FPL attempts to either roll out 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 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 new power plant construction using DSM. Since the inception of our programs, we have achieved 3,076 megawatts (at the generator) of summer peak demand reduction, 2,680 megawatts (at the generator) of winter peak demand reduction, 19,713 gigawatt hours (at the generator) of energy savings and completed more than 1,730,000 energy audits of our customers' homes and facilities.

This amount of peak demand reduction has eliminated the need for the equivalent to 9 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 its 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. DSM is broken down to include both conservation and load management. Based on the most current data available, which is for the year 2000, FPL is ranked number one nationally for cumulative conservation achievement and number two in load management.

Another important indication of the success of DSM in Florida and FPL's service territory was the outcome of a benchmarking study conducted by the State of Florida Energy Office in 1992, entitled "Electricity Conservation and Energy Efficiency in Florida." That study found that since the early 1980's, FPL had been actively involved in DSM programs and has been an industry leader in DSM application. It further found that: "The Florida utilities have been extremely successful in reducing peak capacity requirements. The Florida utility peak capacity savings are generally higher than those obtained by other utilities. While the Florida utilities have been focusing their efforts on load management, they have been among the leaders in achieving energy savings."

II. Current Level of Maturity for DSM Initiatives

Q. Of the potential markets available to FPL for DSM initiatives, which technologies and/or market segments are currently reaching saturation?

A. There are several areas where DSM-related technologies are reaching market saturation. FPL's load management programs are a prime example. For these types of 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 (cycling loads versus continuous interruptions), length of the control periods and the payback effects once load control is released. Based on FPL's analysis, we are very close to the maximum usable amount of load management and, in fact, our plans for 2002 through 2009 show only a modest growth of just 102 megawatts.

Q. Are there other technologies nearing saturation?

A. Yes, interior lighting for commercial and industrial facilities is another technology nearing saturation. The introduction and quick market acceptance of T-8 fluorescent lighting as a DSM measure resulted in significant market penetration of this technology. However, its rapid, widespread acceptance has limited the potential for future reduction in this area. FPL has evaluated various other lighting technologies,

including daylight dimming and T-5 lamps, neither of which have significant market appeal nor penetration. Until there is another breakthrough in lighting technology related to energy efficiency, there will not be another mass-market opportunity in this area.

Yet another area where the market potential continues to decrease over time 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.

Q. How do other changes in Energy Codes impact FPL's DSM potential?

A. FPL's heating, ventilating and air conditioning (HVAC) programs for both residential and commercial/industrial customers are designed to encourage customers to install equipment that is typically a minimum of ten percent more efficient than the State Energy Code. As the minimum efficiency in the Code is raised, the effectiveness of programs like FPL's are diminished. 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 many cases, this results in programs no longer being cost-effective.

This is exactly what happened to FPL's Watt Wise program. This program was launched in the late 1970's. This program was very successful but was discontinued in 1984 when it became the model for the State's Energy Code.

Q. How would you summarize the overall maturity of FPL's DSM programs?

A. FPL has numerous programs that have been in existence for several years. These programs have continued to be modified based on changing cost-effectiveness, market conditions and feedback from our customers. These programs address the major end-uses of electricity of our customers that can be implemented in a cost-effective manner. Although FPL continues to be successful in program design and delivery, it is becoming increasingly difficult to meet our DSM objectives.

III. FPL/FPSC DSM Goal Setting Process

Q. Why are DSM goals established?

A. FPL establishes DSM annual goals for two major purposes. The first is to be responsive to the Florida Administrative Code, Rule 25-17.0021, which states "The Commission shall establish numerical goals for each affected electric utility, as defined by s. 366.82(1), F.S., to reduce the growth rates of weather-sensitive peak demand, to reduce and control the growth rates of electric consumption, and to increase the conservation of expensive resources, such as petroleum fuels."

The second purpose of establishing annual DSM goals is for use in planning to meet the future capacity needs of our customers. Our DSM goals are key inputs into FPL's annual Integrated Resource Planning (IRP) process.

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 commercial/industrial kw and kwh goals. FPL currently has Commission-approved goals for 2000 through 2009.

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

A. As shown in Exhibit ___, Document DB-1, FPL's current goals were approved on August 17, 1999, in FPSC Order No. PSC-99-1942-FOF-EG.

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

A. Exhibit ___, Document DB-2, shows FPL's current Commission-approved DSM goals and actual cumulative performance through 2001 (at the meter). Although FPL fell short of several goals in 2000, by the end of 2001 FPL had been successful in meeting all of its FPSC-approved goals.

Q. How did FPL develop its current DSM goals that were approved by the Commission?

A. Exhibit ___, Document DB-3, which is my testimony in Docket No. 971004-EG, *Adoption of Numeric Conservation Goals*, details the multi-step process used to develop its DSM goals. A summary of the process is presented here.

The first step was to determine which measures should be evaluated for cost-effectiveness. Based on input from the Commission, the Commission staff, other interested parties and FPL, 169 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 Rate Impact Measure (RIM) test 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 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. How do FPL's DSM goals relate to FPL's FPSC-approved DSM plan?

A. As part of the goal determination just discussed, FPL found 56 measures to be cost-effective under the RIM and Participant Cost tests. Those 56 measures were packaged into comprehensive FPL programs as part of the Company's DSM Plan. This DSM Plan, along with the supporting testimony, was submitted to the FPSC on December 29, 1999. This Plan was approved in Order No. PSC-00-

0915-PAA-EG on May 8, 2000. FPL's approved DSM Plan and the order approving it are included as Exhibit ___, Documents DB-4 and DB-5, respectively.

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 regard to a new goal setting procedure, the Florida Administrative Code requires goals to re-assessed every five years. Our current goals cover the time period 2000 through 2009, with 2004 being the fifth year. Based on past experience, FPL expects the goal setting process to be started no later than 2003.

IV. FPL's Current DSM Initiatives

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

A. FPL's current DSM Plan consists of six (6) Residential DSM programs and eight (8) Commercial/Industrial DSM programs.

The residential DSM programs are as follows:

Residential Conservation Service: This is an energy audit program which is 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 is designed to encourage the installation of energy-efficient ceiling insulation in residential dwellings that utilize whole-house electric air conditioning.

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

Residential Air Conditioning: This is a program which is designed 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.

FPL's current commercial/industrial DSM programs are as follows:

Business Energy Evaluation: This program encourages energy efficiency in both new and existing commercial and industrial facilities

by identifying DSM opportunities and providing recommendations to the customer.

Commercial/Industrial Heating, Ventilating, and Air Conditioning: This program is designed to encourage the use of high-efficiency heating, ventilating, and air conditioning (HVAC) systems in commercial/industrial facilities.

Commercial/Industrial Efficient Lighting: This program encourages the installation of energy-efficient lighting measures in commercial/industrial facilities.

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

Commercial/Industrial Load Control: This program is designed to reduce 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/Industrial Demand Reduction: This program (which started in 2001) is similar to the Commercial/Industrial Load Control

program mentioned above. Its objective is to reduce peak demand by controlling customer loads of 200 kW or greater during periods of extreme demand or capacity shortages. In exchange for giving FPL the right to exercise load control, participants receive monthly electric bill credits.

Commercial/Industrial Building Envelope: This program encourages the installation of energy-efficient building envelope measures such as window treatments and roof/ceiling insulation for commercial/industrial facilities.

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

Q. Has FPL continued to refine and improve these DSM programs?

A. Yes, even since implementing its latest DSM Plan in 2000, FPL has made changes to existing programs. These include revising incentive schedules for several programs as well as enhancing eligibility requirements to encourage additional participation.

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

A. Yes. Historically, FPL has performed extensive DSM research and development. FPL has continued such activities not only through its

Conservation Research and Development program, but also through individual research projects. These efforts examine a wide variety of technologies, which build on prior FPL research, where applicable, and will expand the research to new and promising technologies as they emerge. FPL's current initiatives are:

Conservation Research and Development Program: FPL's Conservation Research and Development Program is designed to evaluate emerging conservation technologies to determine which are worthy of pursuing for program development and approval. FPL has researched a wide variety of technologies and, from that research, has been able to develop new programs such as Residential New Construction, Commercial/Industrial Building Envelope and Business On Call.

Cool Communities Research Project: Cool Communities is a concept developed by American Forests to demonstrate the extent to which strategic tree planting and surface color lightening can cool ambient air temperature and impact energy consumption. This research project is designed to evaluate emerging conservation technologies and practices associated with residential structures to determine which are worthy of pursuing for program development and approval. The project, which consists of data gathering, statistical regression analysis and economic evaluation, will quantify savings from lightened roof color and tree shading of homes. This project was

recently completed and is being evaluated as a potential future DSM offering.

Low Income Weatherization Retrofit Project: This R&D project is investigating cost-effective methods of increasing the energy efficiency of FPL's low - income customers. The research project addresses the needs of low - income housing retrofits by providing monetary incentives to various housing authorities including, weatherization agency providers and non-weatherization agency providers. These incentives are used by the housing authorities to leverage their funds to increase the overall energy efficiency of the homes they are retrofitting. FPL either conducts a home energy survey, trains housing authority employees to perform FPL home energy surveys, accepts the National Energy audit (NEAT) (as supplemented to capture water heating recommendations not included in the NEAT audit), or approves similar FPL-approved audits conducted by weatherization providers to determine the need for energy-efficient retrofit measures for each home. FPL has designed the project so as to minimize extra work for the retrofit housing authorities.

Photovoltaic Research, Development and Education Project: Photovoltaic (PV) roof-tile systems are a relatively new technology which directly replaces existing roofing materials such as shingles and standing-rib roofing with PV materials. These PV materials have the

same water - proofing characteristics as conventional roofing materials. This project is consistent with the Federal Government's Million Solar Roofs initiative. However, based on FPL's research to date, a primary hurdle to the physical installation of PV systems, whether roofing materials or flat plate collectors, is the lack of awareness, understanding and acceptance by local building officials. For the most part, these officials are unclear about how these systems work and how to address these systems as part of the building permitting and inspection process. This creates barriers toward the use of this technology. This project will provide key understanding of the operation, performance, costs, and interconnection-related issues of this technology.

Green Energy Project: FPL recently finished an R&D project addressing customer acceptance of green energy, where donations were used as the funding mechanism for the purchase and installation of utility grid connected PV systems. This project raised in excess of $89,500 and a 10.1 kW (dc) PV system has been constructed at FPL's Martin power plant site.

FPL is now investigating potential customer acceptance of green pricing rates in its Green Energy Project. Under this project, FPL will purchase electric energy generated from new renewable resources including solar-powered technologies, biomass energy, landfill methane, wind energy, low impact hydroelectric energy and/or other

renewable resources. Participating customers will be charged higher "green" electric rates for utilizing electric energy derived from these sources. FPL is currently performing an evaluation to determine the availability of renewable supply sources in Florida and customer acceptance of the program concept. As part of this evaluation, in late 2001, FPL developed an RFP in order to determine the type, availability and potential costs of renewable energy. FPL received four bids from this process, and they are currently under evaluation.

Real-Time Pricing: Although not part of FPL's approved DSM Plan, FPL continues to research new conservation/efficiency options such as Real-Time Pricing. This option is an experimental service offering for large C/I customers designed to evaluate customer load response to hourly, marginal cost-based energy prices provided on a day-ahead basis.

Q. What would FPL's need for additional capacity be without the benefits of post-2001 DSM?

A. FPL's goals call for an additional 354 incremental MW (at the meter) of summer peak reduction during the 2002 through 2006 time frame. Without this additional DSM, FPL's future capacity needs would have significantly increased. In fact, FPL's capacity needs would have advanced a year from 2005 to 2004 if the incremental DSM MW called for in the Goals were not implemented. This 2004 need would have been approximately 400 MW.

V. Conclusion

Q. Is FPL doing everything required to ensure it is meeting its Commission-approved goals?

A. Yes, the Commission has previously determined that FPL's current DSM goals represent what is the reasonably achievable, cost-effective level. This determination was made based on a comprehensive analysis and record. There was no challenge to FPL's DSM goals, and there is no basis to conclude the goals fail to capture all of FPL's reasonably achievable DSM potential.

Q. Has FPL identified any DSM option that would lead to a significant increase in DSM penetration in sufficient time to defer capacity identified in this determination of need?

A. FPL has already identified its reasonably achievable DSM potential and used this as input to its reliability assessment that resulted in the need to add 1,722 MW of supply side resources. FPL's analysis therefore has already captured the cost-effective DSM available on FPL's system, and it was determined that FPL still needs additional capacity resources. Therefore, there is no available DSM potential that could mitigate the need for Martin Unit 8 or Manatee Unit 3.

Even if there were some modest potential for additional DSM on FPL's system, it is totally unrealistic to conclude that FPL could add significant incremental quantities in the next three and a half years to

mitigate the need for even Martin Unit 8, the smaller project on an incremental capacity basis. The Martin conversion will add 789 MW by the summer of 2005. The Commission previously determined that there was only 765 MW of achievable cost-effective DSM for the entire ten years, 2000 to 2009. It is unrealistic to conclude that FPL could achieve an additional 789 MW of DSM in the next three years, above and beyond its existing goals.

Q. Does this conclude your testimony?

A. Yes, it does.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Adoption of Numeric Conservation Goals by Florida Power & Light Company.	DOCKET NO. 971004-EG

In re: Adoption of Numeric Conservation Goals by Florida Power Corporation.DOCKET NO. 971005-EG

In re: Adoption of Numeric Conservation Goals by Gulf Power Company.DOCKET NO. 971006-EG

In re: Adoption of Numeric Conservation Goals by Tampa Electric Company.DOCKET NO. 971007-EG
ORDER NO. PSC-99-1942-FOF-EG
ISSUED: October 1, 1999

The following Commissioners participated in the disposition of this matter:

JOE GARCIA, Chairman
J. TERRY DEASON
SUSAN F. CLARK
JULIA L. JOHNSON
E. LEON JACOBS, JR.

Pursuant to Notice, a Formal Hearing was held in the abovreferenced dockets on August 17, 1999.

APPEARANCES:

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On behalf of the Commission Staff (STAFF).

FINAL ORDER ESTABLISHING NUMERIC CONSERVATION GOALS FOR FLORIDA POWER & LIGHT COMPANY, FLORIDA POWER CORPORATION, GULF POWER COMPANY, AND TAMPA ELECTRIC COMPANY

BY THE COMMISSION:

I. CASE BACKGROUND

Docket Nos. 971004-EG, 971005-EG, 971006-EG, and 971007-EG were opened to implement Rule 25-17.0021, Florida Administrative Code. This rule requires the Commission to establish numeric demand side management (DSM) goals for electric utilities subject to Section 366.82(1), Florida Statutes. The Commission originally established numeric goals by Order No. PSC-94-1313-FOF-EG issued October 25, 1994. Pursuant to the rule, the Commission is required to set goals for each jurisdictional utility at least once every five years.

An Order Establishing Procedure, Order No. PSC-98-0384-PCO-EG, was issued March 10, 1998. Pursuant to this order, Florida Power and Light Company (FPL), Florida Power Corporation (FPC), Gulf Power Company (Gulf), and Tampa Electric Company (TECO) were required to propose numeric goals for the ten year period

from 2000-2009. These proposed goals, based upon each utility's most recent planning process, consist of the total, cost-effective winter and summer peak demand (KW) and annual energy (kWh) savings reasonably achievable from DSM for the residential and commercial/industrial classes.

On May 3, 1999, FPC and LEAF filed a Joint Motion to Approve Stipulation in Docket No. 971005-EG. Order No. PSC-99-1380-FOF-EG, issued July 19, 1999, approved the joint stipulation. Pursuant to the Stipulation, LEAF agreed to withdraw from the docket and take no position on FPC's proposed numeric DSM goals. In return, FPC agreed to investigate and, if feasible, develop various energy-efficiency measures such as low income weatherization assistance, green pricing, and project-specific energy efficiency measures for commercial/industrial customers.

LEAF ultimately reached separate stipulations with Gulf, FPL, and TECO which ere essentially the same as the stipulation reached previously with FPC. Pursuant to all stipulations reached between LEAF and the utilities, LEAF agreed to withdraw from the goals dockets and take no position on the utilities' proposed numeric DSM goals. Order No. PSC-99-1381-FOF-EG, issued July 19, 1999, approved the stipulation between LEAF and Gulf in Docket No. 971006-EG. Order No. PSC-99-1412-S-EG, issued July 23, 1999, approved the stipulation between LEAF and FPL in Docket No. 971004-EG. Order No. PSC-99-1585-S-EG, issued August 13, 1999, approved the stipulation between LEAF and TECO in Docket No. 971007-EG.

In 1994, after lengthy hearings, the Commission established numeric goals for the IOUs based on DSM measures which passed the Rate Impact Measure (RIM) test. Intervenors to the prior goals dockets, LEAF and the Department of Community Affairs (DCA), argued that DSM measures which passed the Total Resource Cost (TRC) test alone but fail RIM should be used to establish goals. The Commission found in Order No. PSC-94-1313-FOF-EG, issued October 25, 1994, that:

> . . . goals based on measures that pass TRC but not RIM would result in increased rates and would cause customers who do not participate in a utility DSM measure to subsidize customers who do participate. Since the record reflects that the benefits of adopting a TRC goal are minimal, we do not believe that increasing rates, even slightly, is justified.

However, we did not preclude utilities from including TRC programs in their demand side management portfolios. Order No. PSC-94-1313-FOF-EG further states:

> Although we are setting goals based solely on RIM measures, we encourage utilities to evaluate implementation of TRC measures when it is found that the savings are large and the rate impacts are small. Some measures that may fall into this category are solar water heating, photovoltaics, high efficiency on-site cogeneration, renewable resources, end-use natural gas and commercial lighting.
>
> Utilities are free to file whatever portfolio of programs they wish, including TRC programs, in order to meet their goals. Demand and energy savings achieved through Commission approved TRC programs (including programs approved for incentives and lost revenue recovery) shall be counted toward each utility's RIM based goal.

Order No. PSC-94-1313-FOF-EG also included our decision regarding penalties for those utilities who fail to achieve their DSM goals:

> Any utility that does not achieve its goal shall be either penalized or have programs prescribed to it in a manner to be determined by this Commission on a case-by-case basis.

Overall, the level of each utility's demand and energy goals is lower than the goals approved by the Commission in 1994. The primary reason for decreased numeric goals is that the cost of new generating units has dropped substantially in the last five years. Without a corresponding decrease in the cost of delivering DSM, the result is that fewer DSM programs are cost-effective. In addition, some existing DSM programs are approaching saturation levels. This has reduced the market potential of some DSM measures.

For the same reasons noted above, the utilities have failed to meet some of the existing numeric goals set in 1994. Utilities have had to modify existing DSM programs, primarily by reducing rebates and incentives to customers, to keep them cost-effective. This resulted in less than forecasted participation in utility DSM programs. The savings of most DSM measures, with the exception of load management or any other utility controlled measure, are estimated using engineering models. Measuring actual savings is a costly, time consuming exercise which the IOUs attempt on a limited basis. This exercise, however, is not

completely precise. For these reasons, we are not proposing any penalties at this time.

A. FPL's Evaluation of DSM Measures

FPL evaluated approximately 230 DSM measures for this docket. This list consisted primarily of measures evaluated during the last goals docket. A multi-step evaluation process, including tests for cost-effectiveness, were then performed. Those measures with a RIM and Participant test ratio greater than 1.0 were used to develop the savings potential. All potential DSM measures were evaluated against a base case, supply-side only expansion plan. As a result of FPL's analysis, the savings from 47 DSM measures were summed to arrive at the proposed numeric goals.

B. FPC's Evaluation of DSM Measures

FPC evaluated approximately 120 DSM measures, consisting essentially of the list of measures evaluated in the last goals docket. FPC's evaluation considered the issues and end-use categories specified in Rule 25-17.0021(3), Florida Administrative Code. All potential DSM measures were evaluated against a base case, supply-side only expansion plan for cost-effectiveness using the RIM, TRC, and Participant tests. From this analysis, ten residential and twelve commercial/industrial DSM measures were found to be cost-effective. The seasonal demand and annual energy savings associated with these cost-effective measures were summed by market segment to arrive at FPC's proposed goals.

C. Gulf's Evaluation of DSM Measures

Gulf evaluated approximately 120 DSM measures for this docket. These evaluated measures consist of the same measures Gulf evaluated in the last goals docket, along with new measures suggested by parties for which Florida-specific data was available. Gulf updated the financial assumptions and the estimated demand and energy savings for these measures where more recent data was available. All potential DSM measures were evaluated alongside supply-side measures in an integrated resource plan (IRP) that minimized total cost. For each of the five residential and six commercial/ industrial DSM measures included in Gulf's IRP, the seasonal demand and annual energy savings were added to arrive at Gulf's proposed goals.

D. TECO'S Evaluation of DSM Measures

TECO evaluated approximately 267 DSM measures which were determined to be potential utility programs in the last goals docket, measures for which it currently offers programs, measures which were designated in the last goals docket as having potential for inclusion in the building code, and measures suggested by parties for which Florida-specific data was available. These measures were then analyzed for cost-effectiveness, and those passing the RIM, TRC, and Participant tests were used in determining TECO's proposed numeric goals.

E. Treatment of Non-Firm Capacity

The treatment of non-firm capacity is an issue in Docket No. 981890-EU, an open docket investigating Peninsular Florida's reserve margins. If the Commission adjusts the amount of allowable non-firm resources for each utility as a result of a decision in the reserve margin docket, a corresponding adjustment in the affected utility's numeric goals should also be made.

Based on the positions taken by the parties in their prehearing statements, there is no disagreement as to the appropriate numeric conservation goals for any utility. Therefore, the matter will be presented to the Commission as a stipulation.

II. APPROPRIATE NUMERIC DEMAND AND ENERGY CONSERVATION GOALS

Having considered the evidence, the positions of the parties, and staff's recommendation, we find that FPL's proposed residential winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the following table, are reasonable and shall be approved:

FPL's Residential
Conservation Goals

Year	Summer MW	Winter MW	Annual gWh
2000	75.5	91.6	91.9
2001	126.5	139.0	178.3
2002	169.4	170.0	267.1
2003	212.8	200.4	357.3
2004	256.6	230.1	448.9
2005	302.0	260.6	544.2
2006	347.0	289.0	640.9
2007	392.6	317.2	739.3
2008	439.4	345.7	840.3
2009	485.9	372.4	943.2

Having considered the evidence, the positions of the parties, and staff's recommendation, we find that FPL's proposed commercial/industrial winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the following table, are reasonable and shall be approved:

FPL's Commercial/Industria 1 Conservation Goals

Year	Summer MW	Winter MW	Annual gWh
2000	46.2	20.5	68.5
2001	73.3	32.2	97.6
2002	99.6	44.1	126.4
2003	126.6	56.8	157.1
2004	153.8	70.1	188.8
2005	181.6	84.2	222.6
2006	207.2	97.1	254.9
2007	232.4	109.8	285.7
2008	257.2	122.2	315.3
2009	278.8	133.0	343.4

Florida Power Corporation - 971005-EG

Having considered the evidence, the positions of the parties, and staff's recommendation, we find that FPC's proposed residential winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the following table, are reasonable and shall be approved:

FPC's Residential Conservation Goals

Year	Summer MW	Winter MW	Annual gWh
2000	10	30	15
2001	20	64	32
2002	32	102	50
2003	45	142	69
2004	58	185	88
2005	72	229	108
2006	85	271	127
2007	99	312	147
2008	112	352	166
2009	125	389	185

Having considered the evidence, the positions of the parties, and staff's recommendation, we find that FPC's proposed commercial/industrial winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the following table, are reasonable and shall be approved:

FPC's Commercial/Industrial Conservation Goals

Year	Summer MW	Winter MW	Annual gWh
2000	4	4	2
2001	8	7	4
2002	11	11	6
2003	15	15	8
2004	19	18	10
2005	23	22	12
2006	26	26	13
2007	30	30	15
2008	34	33	17
2009	38	37	19

Gulf Power Company - 971006-EG

Having considered the evidence, the positions of the parties, and staff's recommendation, we find that Gulf's proposed residential winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the following table, are reasonable and shall be approved:

Gulf's Residential Conservation Goals

Year	Summer MW	Winter MW	Annual gWh
2000	22.3	26.0	16.7
2001	43.1	50.0	31.8
2002	67.9	78.7	49.8
2003	89.0	103.2	65.2
2004	107.5	124.6	78.9
2005	123.2	142.9	90.8
2006	135.1	156.6	99.9
2007	147.0	170.4	109.0
2008	155.0	179.6	115.4
2009	163.0	188.9	121.9

Having considered the evidence, the positions of the parties, and staff's recommendation, we find that Gulf's proposed commercial/industrial winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the following table, are reasonable and shall be approved:

Gulf's Commercial/Industrial Conservation Goals

Year	Summer MW	Winter MW	Annual gWh
2000	46.0	36.1	2.1
2001	47.4	37.3	4.2
2002	48.7	38.4	6.2
2003	50.0	39.6	8.3
2004	51.4	40.7	10.4
2005	52.7	41.8	12.5
2006	54.0	43.0	14.5
2007	55.3	44.1	16.6
2008	56.7	45.3	18.7
2009	58.0	46.4	20.8

Tampa Electric Company - 971007-EG

Having considered the evidence, the positions of the parties, and staff's recommendation, we find that TECO's proposed residential winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the following table, are reasonable and shall be approved:

TECO's Residential Conservation Goals

Year	Summer MW	Winter MW	Annual gWh
2000	5.8	16.7	10.3
2001	11.1	32.2	20.0
2002	16.1	46.3	29.0
2003	20.7	59.2	37.5
2004	25.0	70.7	45.3
2005	28.8	81.0	52.5
2006	32.2	90.0	59.1
2007	35.3	97.7	65.1
2008	38.0	104.1	70.5
2009	40.3	109.1	75.3

Having considered the evidence, the positions of the parties, and staff's recommendation, we find that TECO's proposed commercial/industrial winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the following table, are reasonable and shall be approved:

TECO's Commercial/Industrial Conservation Goals

Year	Summer MW	Winter MW	Annual gWh
2000	3.5	1.5	12.9
2001	6.9	3.0	25.7
2002	10.4	4.5	38.6
2003	13.5	5.9	50.3
2004	16.7	7.3	61.9
2005	19.9	8.7	73.6
2006	22.8	10.0	84.1
2007	25.8	11.3	94.5
2008	28.4	12.4	104.9
2009	30.8	13.4	114.1

Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that Florida Power & Light Company's proposed residential winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the body of this Order shall be approved It is further

ORDERED that Florida Power & Light Company's proposed commercial/industrial winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the body of this Order shall be approved. It is further

ORDERED that Florida Power Corporation's proposed residential winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the body of this Order shall be approved. It is further

ORDERED that Florida Power Corporation's proposed commercial /industrial winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the body of this Order shall be approved. It is further

ORDERED that Gulf Power Company's proposed residential winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the body of this Order shall be approved. It is further

ORDERED that Gulf Power Company's proposed commercial /industrial winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the body of this Order shall be approved. It is further

ORDERED that Tampa Electric Company's proposed residential winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the body of this Order shall be approved. It is further

ORDERED that Tampa Electric Company's proposed commercial /industrial winter demand, summer demand, and annual energy conservation goals for the period 2000-2009 as set forth in the body of this Order shall be approved. It is further

ORDERED that these dockets shall be closed.

By ORDER of the Florida Public Service Commission this 1st day of October, 1999.

/s/ Blanca S. Bayó
BLANCA S. BAYÓ, Director
Division of Records and Reporting

This is a facsimile copy. A signed copy of the order may be obtained by calling 1-850-413-6770.

(S E A L)

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NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing or judicial review of Commission orders that is available under Sections 120.57 or 120.68, Florida

Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing or judicial review will be granted or result in the relief sought.

Any party adversely affected by the Commission's final action in this matter may request: 1) reconsideration of the decision by filing a motion for reconsideration with the Director, Division of Records and Reporting, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, within fifteen (15) days of the issuance of this order in the form prescribed by Rule 25-22.060, Florida Administrative Code; or 2) judicial review by the Florida Supreme Court in the case of an electric, gas or telephone utility or the First District Court of Appeal in the case of a water and/or wastewater utility by filing a notice of appeal with the Director, Division of Records and reporting and filing a copy of the notice of appeal and the filing fee with the appropriate court. This filing must be completed within thirty (30) days after the issuance of this order, pursuant to Rule 9.110, Florida Rules of Appellate Procedure. The notice of appeal must be in the form specified in Rule 9.900(a), Florida Rules of Appellate Procedure.

FPL's Commission Approved DSM Goals

Residential & 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
2000	94.6	112	-16%	134.9	122	11%	188.9	160	18%
2001	175.2	171	2%	244.8	200	22%	400.0	276	45%
2002		214			269			394	
2003		257			339			514	
2004		300			410			638	
2005		345			484			767	
2006		386			554			896	
2007		427			625			1,025	
2008		468			697			1,156	
2009		505			765			1,287	

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
2000	78.3	91.6	-15%	93.4	75.5	24%	123.7	91.9	35%
2001	139.4	139.0	0%	158.4	126.5	25%	231.0	178.3	30%
2002		170.0			169.4			267.1	
2003		200.4			212.8			357.3	
2004		230.1			256.6			448.9	
2005		260.6			302.0			544.2	
2006		289.0			347.0			640.9	
2007		317.2			392.6			739.3	
2008		345.7			439.4			840.3	
2009		372.4			485.9			943.2	

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
2000	16.4	20.5	-20%	41.5	46.2	-10%	65.2	68.5	-5%
2001	35.9	32.2	11%	86.3	73.3	18%	169.0	97.6	73%
2002		44.1			99.6			126.4	
2003		56.8			126.6			157.1	
2004		70.1			153.8			188.8	
2005		84.2			181.6			222.6	
2006		97.1			207.2			254.9	
2007		109.8			232.4			285.7	
2008		122.2			257.2			315.3	
2009		133.0			278.8			343.4	

BEFORE THE PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

TESTIMONY OF C. DENNIS BRANDT

DOCKET NO. 971004-EG

FEBRUARY 1, 1999

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. Who is your employer and what position do you hold?

A. I am employed by Florida Power & Light Company (FPL) as Manager of Sales & Marketing Product Support.

Q. What are your responsibilities and duties as Manager of Sales & Marketing Product Support related to the development of FPL's Demand Side Management (DSM) goals and the corresponding programs to support them?

A. I am responsible for managing and supporting products and services for FPL's residential and business customers. This includes overseeing the implementation, development of systems, training, and tracking of the various Demand Side Management (DSM) programs offered to residential and business customers. I am also the Sales & Marketing business unit liaison for regulatory issues.

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 also 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.

Q. What is the purpose of your direct testimony?

A. The purpose of my testimony is to present FPL's proposed numerical demand side management (DSM) goals for the period 2000-2009. FPL's goals proposal is based upon the requirements of Rule FAC 25-17.0021 and the analytical work performed by FPL pursuant to the procedural order in this case, so my testimony will discuss the methodology used to arrive at goals that are reasonably achievable for the time period required. In my discussion, I will summarize the methodologies and data used in developing our proposed DSM goals.

Q. Please describe how your direct testimony is organized.

A. I have organized my testimony into seven (7) sections.

Section I of my testimony presents FPL's proposed numerical DSM goals for the period 2000-2009 as well as FPL's underlying projections of DSM potential from its effort.

Section II discusses the methodology used by FPL in developing the measures that were selected for evaluation.

Section III discusses the methodology used by FPL in developing its achievable potential projections of DSM based on the cost-effective measures selected and evaluated.

Section IV examines FPL's analyses of the Code/Utility (CUE) measures.

Section V discusses why the natural gas measures were categorized as Research & Development. It also explains the current status of FPL's natural gas measures R&D efforts and why FPL proposes that no natural gas potential be used to establish overall goals.

Section VI discusses renewable measures and high thermal efficiency self-service cogeneration, and why FPL proposes no renewable potential or high thermal efficiency self-service cogeneration be used to establish overall goals.

Section VII presents my conclusions based on the results of this goal setting process.

Q. Are you sponsoring an exhibit in this case?

A. Yes, it consists of the following documents:

- Document No. 1 presents the overall kW and kWh DSM goals for both the Residential and the Commercial/Industrial market segments proposed by FPL for the period 2000-2009.
- Document No. 2 shows FPL's DSM goals for the years 1994 through 2003 and FPL's actual DSM implementation results as of 1998.
- Document No. 3 presents FPL's 2000-2009 projections of achievable potential within major end-uses for the Residential and Commercial/Industrial markets. These projections are separated into the new construction and retrofit market segments.
- Document No. 4 is a measure-by-measure breakdown into both the new construction and the retrofit markets of the achievable potential results developed in FPL's Integrated Resource Plan.
- Document No. 5 is an overview of the four-step measure selection process used to determine which measures were evaluated.
- Document No. 6 is a summary of the first step of the measure selection process and the resulting measures.
- Document No. 7 is a summary of the second step of the measure selection process and the resulting measures.
- Document No. 8 is a summary of the measures combined, including the rationale for each grouping.
- Document No. 9 is a summary of the third step of the measure selection process and the resulting measures.

- Document No. 10 is a summary of the fourth step of the measure selection process and the resulting measures.
- Document No. 11 is a summary of the administrative and participant costs associated with each measure and the source of the information.
- Document No. 12 shows the results of the cost-effectiveness analysis for each measure.
- Document No. 13 shows the pre-screening for the CUE measures.
- Document No. 14 shows the CUE measures that were screened for cost-effectiveness and the results of the cost-effectiveness analysis.
- Document No. 15 is a summary of the administrative and participant costs associated with each CUE measure and the source of the information.

SECTION I: FPL'S PROPOSED NUMERICAL DSM GOALS

Q. What overall kW and kWh DSM goals are being proposed by FPL in this proceeding?

A. The DSM goals proposed by FPL for the period 2000-2009 are shown on my Document No.1. These goals are based upon the achievable potential of DSM measures analyzed by FPL as being cost-effective under the RIM and Participant tests.

Q. What are the cumulative demand and energy goals FPL proposes through 2009?

A. FPL proposes a cumulative total summer demand reduction goal from DSM of 765 MW's for the period 2000 through 2009 and a cumulative reduction of

GWH over the same period of 1,287 GWH. This represents the achievable potential for cost-effective DSM under the RIM and Participant tests over this ten-year period as determined in FPL's planning process. Broken down by Residential and Commercial/Industrial classes, this represents summer demand and energy reductions of 486 MW's and 943 GWH for the Residential market segment and 279 MW's and 343 GWH for the Commercial/Industrial market segment.

Q. How has FPL's performed relative to the goals set as part of the last goals docket for the 1994 through 2003 time period?

A. As originally stated by FPL in the last goals setting process and as is evident from Document No. 2, the goals set for the time period 1994 through 2000 were reasonably achievable. However, the FPSC increased FPL's goals for the years 2001 through 2003 by 256 MW's above the achievable potential identified by FPL. As of 1998, FPL has met the summer MW, winter MW and annual energy goals for both the Residential and Commercial/Industrial market segments. It is important to point out that it has been increasingly difficult to meet the annual goals in the last several years due to the program revisions required in order to continue to offer cost-effective programs. In addition, the Commission having set DSM goals that were not supported by reasonably achievable market potential make it likely FPL will not meet these goals beyond the year 2000.

Q. How effective has FPL been in implementing cost-effective DSM?

A. FPL has a long and successful history of offering DSM programs that are cost-effective and meet the energy-conservation related needs of our customers. FPL began its DSM efforts in the late 1970's with programs such as the "Watt-

Wise Living" and commercial audit programs. In the 1980's FPL intensified its efforts by implementing a broad portfolio of DSM programs. From 1981 to 1989 833 MW's of DSM was implemented. During the 1990's this success has continued. For the time period 1990 to 1998, an additional 1,830 MW's of DSM has been implemented. In summary, FPL has successfully implemented over 2,663 MW's of DSM since 1981. This 2,663 MW's, which has resulted in the avoidance of more than six 400 MW power plants, consists of 1,516 MW's of conservation and 1,147 MW's of load management.

Another important indication of the success of DSM in Florida and FPL's service territory was the results of a benchmarking study conducted by the State of Florida Energy Office in 1992. The "Electricity Conservation and Energy Efficiency in Florida" study found that since the early 1980's, FPL had been actively involved in DSM programs and had been an industry leader in DSM application. It further found that: "The Florida utilities have been extremely successful in reducing peak capacity requirements. The Florida utility peak capacity savings are generally higher than those obtained by other utilities. While the Florida utilities have been focusing their efforts on load management, they have been among the leaders in achieving energy savings".

Q. How were FPL's proposed new DSM goals developed?

A. FPL's proposed goals are based on DSM projections developed in FPL's most recent planning process of the total cost-effective demand and annual energy savings reasonably achievable in both the Residential and Commercial/Industrial classes. These achievable savings are cost-effective under the RIM and Participants test.

In developing these projections, FPL used a multi-step process.

The first step was to determine which measures should be evaluated for cost-effectiveness. The process used to select measures is described in detail in Section II. All selected measures were then screened for cost-effectiveness with an assumption of no incentives, and those having both RIM and Participant Test cost-effectiveness ratios greater than 1.0 were used to develop the 2000 through 2009 achievable potential. This process is described in Section III. FPL's achievable potential results are an integral part of FPL's Integrated Resource Planning (IRP) process. The results obtained in this phase of the process were further analyzed to identify the most cost-effective DSM portfolio for FPL's customers. The results of this comparison are further discussed in Dr. Sim's testimony.

The goals FPL has proposed reflect the cost-effective achievable potential projected by FPL for utility program measures analyzed under the RIM and Participant tests as well as the proper consideration of high thermal efficiency self-service cogeneration, renewable resources, CUE measures, and the gas measures.

Q. Should goals be established in this docket for any specific end-uses?

A. No. The establishment of end-use goals versus overall goals was a topic of spirited debate in the last Goals Proceeding. After months of argument, the Commission adopted a rule that calls for the establishment of overall goals for two market segments: Residential and Commercial/Industrial. The Commission declined to adopt a rule with more specific goals. This was re-confirmed in Procedural Order PSC-98-0384-PCO-EG, March 10, 1998, in this

docket. It is my understanding that the purpose of this case is to implement the rule adopted and not revisit whether something other than overall goals are appropriate.

It has not yet been determined how the goals adopted will be employed. Given that uncertainty, the flexibility a utility has under overall goals to achieve the goals is highly desirable. A shortfall in one end-use can be compensated for with more than anticipated success in another without consequence under overall goals.

While FPL strongly opposes any attempt to establish goals in this proceeding other than the overall kW and kWh goals called for by Rule 25-17.0021, F.A.C., I have prepared Document No. 3 that provides FPL's projections of reasonably achievable, cost-effective DSM for: the Residential New Construction major end-uses, the Residential Existing Construction major end-uses, the Commercial/Industrial New Construction major end uses, and the Commercial/Industrial Existing Construction major end-uses. As with FPL's proposed goals, these projections are premised upon cost-effective DSM under the RIM and Participant tests.

To further document the specific measures that comprise each of the end-use values in Document No. 3, I have prepared Document No. 4, which provides by measure for the years 2000 through 2009 the cost-effective, achievable potential summer and winter demand savings, and energy savings.

Q. How would you characterize FPL's proposed DSM goals?

A. FPL's proposed goals are reasonably achievable and based on FPL's IRP process. FPL has proposed as its goals a 765 MW DSM portfolio that is cost-effective under the RIM and Participant tests.

Q. Is the process you have broadly outlined an appropriate process for developing DSM projections and establishing DSM goals for FPL?

A. Yes. The process, as I have outlined it and as is more fully explained in the remainder of my testimony and Dr. Sim's testimony, is a sound analytical process. That process has been properly employed by FPL, and it has employed the best data available to FPL. Thus, FPL's proposed DSM goals are the fruits of a reasonable process and analysis.

Q. Has FPL addressed the energy conservation needs of lower income customers as part of the goal setting process?

A. Yes. While the process used to establish the reasonably achievable cost effective DSM goals does not specifically address lower income customers, these customer segments benefit in several ways as a result of this process.

First, by basing goals on only RIM passing measures, all customers receive the benefit of minimizing the rate impact of continuing to meet the growing demand for electricity of our customers in the most cost-effective manner. Even if a customer chooses not to participate in any of FPL's DSM programs, use of the RIM test ensures that nonparticipants still receive direct benefits through reduced rates.

Second, the measures used to develop our proposed goals all pass the Participant test. This test ensures that each measure makes economic sense for

customers who elects to participate in an FPL DSM program which include these measures.

Third, while FPL has not yet developed its DSM plan and the corresponding programs based on these measures to meet our proposed goals, our past experience show that lower income customers do, in fact, participate in significant numbers in our programs. Lower income (less the $25,000 of annual family income) segments comprises about 14% of FPL's residential customer base, but these customers comprise 25% of the participants in FPL's residential DSM programs. This data is taken from a 1998 Participant/Nonparticipant Survey conducted for FPL by an independent contractor. The breakdown of program participation by income category for each of FPL's residential programs is as follows:

Program Participation by Income Category

	HVAC	Duct Repair	Ceiling Insulation	On Call
$0 - $10,000	5%	4%	3%	3%
$10,000 - $25,000	20%	14%	14%	34%
$25,001 - $50,000	37%	32%	43%	32%
$50,001 - $75,000	19%	23%	26%	18%
$75,001 - $100,000	11%	15%	8%	8%
$100,001 +	8%	12%	6%	5%

Applying the percentages from this sample data to 1997 participants for each of FPL's programs shows that, overall, 24% of participants in these programs are lower income customers.

1997 Participants by Program

Participants	% Lower	# Lower

		Income	Income
HVAC	81,701	25%	19,751
Duct	57,103	18%	10,278
Ceiling Insulation	45,862	17%	7,796
On-Call	49,874	37%	18,453
Total	234,540	24%	56,278

This data shows that FPL's efforts to promote DSM among its lower income customers have been effective.

Fourth, FPL also works with housing authorities and social service agencies to facilitate the accessibility of DSM to lower income customers. The following are a few examples of activities that have occurred over the past 24 months.

Energy conservation seminars and workshops for families qualifying for Habitat for Humanity Homes were conducted in the Sarasota area. The classes were held at area community centers and fill the requirement that consumers are required to take in order to qualify for low interest loans.

FPL energy auditors conducted energy evaluations of 400 apartment homes for the Sarasota Housing Authority, which fulfilled their requirement by law to have energy evaluations every five years. Many of these dwellings do not have central air-conditioning, and installing insulation is not possible due to the flat roof construction. Our representatives provided low- or no-cost DSM practices.

Representatives in Bradenton worked with the Manatee Bankers Association and are providing three hour energy conservation workshops each month for lower income and first-time buyers.

FPL participated with the Consumer Credit Counseling Services of the Florida Gold Coast, Inc. This group provides assistance for first time home buyers. FPL conducted energy conservation workshops.

West Palm Beach FPL employees are working with Gold Coast Builder's Association to help establish a remodeler's council to help lower income customers make needed repairs/renovations to their homes. The FPL seminar consists of a 14 hour class for contractors from an eight county area. Topics covered include an overview of FPL DSM programs and duct repair techniques.

Energy surveys and duct tests were conducted for lower income customers in the following areas of Ft. Myers:

- Michigan Links - Ft. Myers Housing Authority - Ceiling insulation installed in 338 units,
- Royal Manor Apartment Complex - Ceiling insulation and duct repair in 72 units,
- Michigan Links Elderly Section - Ft Myers Housing Authority - Ceiling insulation and high efficiency air conditioners in 120 units.

For the past two years, FPL representatives in Dade County have participated in "Christmas in April". This project identifies homes in lower income neighborhoods for energy conservation surveys and general "fix-up" needs. FPL representatives plant trees and install various energy DSM measures. This year 30 homes were selected in the West Little River area for this effort.

In summary, even if lower income customers do not participate in any of FPL's DSM programs, those customers will receive direct benefits through minimizing rate impacts of meeting the growing electricity needs of all of FPL's customers. However, as FPL's program survey data shows, lower income customers not only receive the benefits associated with being a nonparticipant, but also a significant number receive the benefits associated with being DSM program participants.

SECTION II: IDENTIFICATION OF MEASURES FOR EVALUATION

Q. What was the process used to determine which measures should be included for evaluation in determining reasonably achievable DSM goals for 2000 - 2009?

A. FPL used a four (4) step process to develop the list of DSM measures to be analyzed in this proceeding. This process, which is attached as Document No. 5, builds upon the analyses performed in the last DSM Goals proceeding and the determinations made by the Prehearing Officer in this proceeding.

Step One. The first step of FPL's process is the development of a list of measures which the Commission found in the last DSM Goals proceeding to be an appropriate list of measures properly characterized as "Utility

Program" or "UP" measures. This list consists of 162 measures and was circulated by the Commission Staff as part of the materials provided at the workshops for this proceeding. This list of measures is included as Document No. 6. It is taken from the Commission's Fourth Order On Procedure in the last DSM Goals Proceeding. It is helpful to review the process of how these UP measures were identified in the last goals proceeding. In its Order Establishing Procedure in the last Goals docket, Order No. PSC-93-0953-PCO-EG, the Commission required the utilities to evaluate the DSM measures analyzed in a statewide study performed for the Department of Community Affairs by the consulting firm Synergic Resources Corporation (SRC). One of the requirements of the Commission was for each utility to characterize each of the measures in one of five categories: (1) better implemented by building codes (Code), (2) better left to self-adoption due to lifestyle (Behavioral), (3) better implemented in a different service territory (Climate or Demographic), (4) requires research (R&D), or (5) measures for utility implementation (UP).

The utilities performed that analysis, and there was considerable disagreement among the parties as to the proper characterization of measures. In addition, the Legal Environmental Assistance Foundation (LEAF) asked the Commission to add another approximately 70 measures to the utilities' lists for analysis. This controversy underwent several permutations with several different lists of measures evolving. The major change in the lists was a refinement by the Commission Staff of Code measures into one of five categories: C1 - currently in the prescriptive code; C2 - should be added to prescriptive code; C3 - currently an option in Code; C4 - should be an option in Code; and C5 - currently an option in Code but should be prescriptive.

Ultimately, Commissioner Deason, in the Fourth Order On Procedure, PSC-93-1679-PCO-EG resolved the issue of which measures would be analyzed by publishing a list of measures with various labels. He found that the measures listed as UP should be analyzed by utilities and included in their assessment of achievable potential. He found that measures listed as R&D should not be analyzed as part of the utility's achievable potential. He found that measures listed as Behavioral should not be listed as part of the utilities assessment of achievable potential. He found that as to Code measures, measures currently in the Code, whether prescriptive (C1) or optional (C3), should not be analyzed as part of the utilities achievable potential, but that measures which were not currently in either the prescriptive or option parts of the Code, measures categorized as C2, C4 or C5, should be evaluated by the utilities for their cost-effectiveness.

It is the list of measures designated by Commissioner Deason as UP measures in the Fourth Order on Procedure which Staff circulated during the workshops and which FPL believes is the appropriate starting point for analysis in this proceeding. Beginning with this list builds upon the considerable analysis performed in the last proceeding as well as the Commission's resolution of the dispute about the proper categorization of measures in the last proceeding.

Step Two. The second step in FPL's process calls for restating the list of UP measures for three reasons. (A) The list was expanded to accommodate FPL's analytical practices. For instance, FPL analyzes Commercial/Industrial DSM measures by rate class. So FPL expanded the number of analyses to be performed to accommodate the analysis of the C/I measures by rate class. **(B) The list was expanded to reflect the measures**

which FPL analyzed in the last case on its own initiative. In the last case each utility added some measures to be analyzed. FPL added to the list of measures to be analyzed the same additional measures that it (not other utilities) added last time. **(C) The list was consolidated to reflect measures that are properly combined given FPL's program experience**. FPL has two examples of this. FPL's experience with our C/I Lighting Program and our Residential Load Control Program provided the experience required to validate the consolidation of measures. Document No. 7 is a summary of all combined measures. Document No. 8 provides the basis for combining measures. Thus, the net effect of Step 2 was to expand the list of measures from 162 measures to 230 measures.

Step Three. The third step was a screening step designed to screen away measures which have no realistic opportunity of passing a cost-effectiveness test. In the last Goals proceeding, and in subsequent analysis performed by FPL, there were a number of UP measures analyzed which were not cost-effective. Since the last Goals proceeding, the cost of new generating units, a major source of benefits of DSM in either the RIM or TRC tests, has declined significantly. FPL's avoided cost has declined approximately 35% as discussed in Dr. Sim's testimony. All other things being equal, measure costs would have to decline more than 35% for a measure that was not cost-effective in the last analysis to become cost-effective under current conditions (or savings from the DSM measure would have to increase more than 35% for the measure to become cost-effective; this is addressed in the next step of the process). FPL knows from its most recent round of program modifications approved in November 1997 that a 35% decrease in costs is not possible,

particularly when the cost-effectiveness in the last case was performed with zero incentives. If it did not pass last time, it will not pass this time.

Even though FPL felt confident that measures which failed last time would fail under current assumptions, FPL took the more conservative approach and analyzed all measures which had a RIM cost-effectiveness ratio of .9 or greater. **So, step three was a screen to drop from the UP list developed in steps one and two all measures which were not cost-effective under the Participants test and had a RIM ratio less than .9 in their most recent analysis.** This step reduced the total measures from 230 measures to 129 measures. Document No. 9 is a summary of this step in the process.

Step Four. The fourth step in FPL's process is to add back measures to the list which were screened in step three. The measures added are measures for which FPL has updated monitoring data showing a change in the measure's savings. Since an increase in savings could potentially offset the decline in avoided costs, this step of adding back measures is appropriate. **In this step FPL also added other measures for analysis which it deemed appropriate**. These additional measures could come from several sources: the utility's research and development programs, measures which appear to have worked for other Florida utilities, or suggestions from third parties. At the workshop each of the utilities expressed a willingness to consider suggestions by third parties, and this is the logical step for that in FPL's process. In order for FPL to add a measure suggested by an outside party, the following information was required:

1. A clear definition of the measure was needed.

2. The baseline must be defined.

3. The measure must have Florida specific verifiable demand and energy savings, including load shapes, for winter and summer peak days as well as for winter, summer, spring, and fall typical days.

4. The measure must be market ready, with identifiable costs in 1998 dollars and operating characteristics.

Without this information, FPL could not perform the required cost-effectiveness and achievable potential analyses.

Q. How many new measures were added back as a result of this step?

A. FPL added back 43 measures to the final list of measures in this step. All of the measures except one (Blower Door Infiltration Reduction) were based on FPL's ongoing R&D efforts. Numerous other measures where suggested for evaluation but either; 1) FPL already was evaluating the measure or 2) the data required to perform a complete analysis was not available. In fact, the Blower Door Infiltration Reduction measure data was not provided by the party that recommended we evaluate it; it is based on using prior end-use evaluation data that FPL had.

Q. How many DSM measures were ultimately analyzed for cost-effectiveness as a result of the four-step process?

A. One hundred and seventy two measures were analyzed. Document No. 10 is a final listing of the resulting measures from this four-step process.

Q. What sources did you use for your data?

A. Data sources used for each measure varied by sector and end-use, but for the most part, it was consistent for the measures within an end-use. For the most part FPL utilized the data and assumptions based on its actual experience for measures that are part of FPL's existing programs. This included the latest findings from FPL's ongoing end-use evaluation efforts and actual measure administration costs. For measures which FPL did not have sufficient data, outside sources such as the Florida Solar Energy Center (FSEC) and the SRC Study were used.

Q. Does the implementation of multiple DSM measures affect the savings potential assumed for each measure if implemented individually?

A. Yes, it can. Measures can be classified as either competing or complementary. In determining the net impact of each measure on demand and energy usage, these effects must be considered. For example, the savings provided by adding ceiling insulation will be less when calculated with a high-efficiency air conditioning system than with a standard efficiency system. Ceiling insulation is an example of a complementary measure. Complementary measures are options that can be installed alone or jointly regardless of what other options are installed. Competing measures, such as two different types of high-efficiency central air conditioners, on the other hand, force the customer to choose only one of the measures to install. As a part of FPL's extensive end-use evaluation efforts, these effects are part of the evaluation process, and the resulting demand and energy impacts account for these interactive effects as they occur in the FPL customer population.

Q. In developing the demand and energy impacts of each measure, did FPL consider overlapping measures?

A. Yes, the statistical and engineering analyses conducted to estimate FPL measure impacts are based upon primary end-use metered (EUM), billing, and customer survey data that reflect the energy usage characteristics of FPL's entire customer population. As such, EUM and billing data are analyzed for a representative sample of the population, including participants who participate in more than one program. The resulting impacts, therefore, include the effects of overlapping measures on program impacts.

Q. In developing the demand and energy impacts of each measure, did FPL address rebound effects?

A. Yes, as part of the end-use evaluation efforts, a statistical analysis is performed which explicitly accounts for rebound. This analysis, which considers both pre- and post-participation electricity usage, captures changes in behavior (for example, lowering the thermostat setpoint as a result of the purchase of a new air conditioner). Rebound, if present, would result in a higher than expected (from an engineering model perspective) post-participation level of energy usage, and, therefore, lower than expected actual impacts.

Q. In developing the demand and energy impacts of each measure, did FPL consider free ridership?

A. Yes, measure net benefitswhich encompass both free ridership (free riders are program participants who would have installed the identical efficiency measure at the same time even if the utility program did not exist) and free drivership (free drivers are nonparticipating customers who install the identical efficiency measure which program participants installed because the utility program

increased the prevalence and awareness of the efficiency measure in the marketplace) -- are analyzed in comprehensive assessments of the effects of FPL's measures on the targeted energy-efficient technologies by both participants and nonparticipants. A key feature of these assessments is substantial annual nonparticipant and baseline surveys which form the basis for addressing these effects.

Q. In developing the demand and energy impacts of each measure, how did FPL address the interactions with building codes and appliance efficiency standards?

A. Current and expected building codes and appliance efficiency standards are a key input to the baseline efficiency levels established for each of FPL's measures. In addition, the effects of these codes and standards on nonparticipant and baseline energy efficiency actions are captured in the large nonparticipant and baseline surveys mentioned above.

Q. How were the administrative and participant costs developed?

A. These costs were based on either FPL's experience with the same or similar measures that are part of existing DSM programs or estimates developed by other parties such as FSEC or updated values from the SRC study. See Document No. 11 for a measure-by-measure detailed summary of the costs used and the source of the information.

Q. Is it appropriate to include administrative costs in the economic screening?

A. Yes. This is consistent with cost-effectiveness methodology prescribed by the Commission. For the RIM test, the methodology properly requires all measure

related costs such as lost revenues, measure incentives and administrative costs to be compared to the total benefits associated with the measure. Excluding a cost component would not result in a correct evaluation.

Q Please describe the preliminary screening used?

A. The preliminary cost-effectiveness tests were performed to determine incentive amounts FPL could cost-effectively pay participants under the RIM and Participant tests.

Document No. 12 shows the results of the preliminary screening. The maximum incentive dollars under this scenario were determined by calculating the measure cost which would result in a cost-effectiveness (benefit/cost) ratio close to 1.01-to-1 for the 2005 avoided unit and which continued to allow the measure to be cost-effective when compared to all other subsequent avoided units. The benefit amount or the avoided cost was assumed to be equal to an equivalent sized part of a single avoided unit (adjusted for reserve margins and line losses), system fuel impacts, plus transmission and distribution facilities. The costs consisted of the administrative costs, revenue losses and incentives. Since utility program costs (administrative costs) were identified prior to the screening, and revenue losses could be determined from the measure's kW and kWh impacts, the maximum incentive level could be determined by subtracting the utility program cost from the maximum available program dollars which already included revenue losses.

Simple participant payback **without** incentive was calculated, and if it was determined to be less than 2 years, the measure was also dropped from further analysis.

Simple payback with maximum incentive was determined. If it was greater than two (2) years, the maximum incentive was used. If the payback with maximum incentive was less than two (2) years, the incentive was adjusted downward to ensure a payback period of no less than 2 years.

Q. Why did you use the two (2) year payback criteria?

A. Incentives were calculated based on providing a two year payback to encourage the customer to implement the DSM measure. If a customer investment in a DSM measure will naturally pay for itself in less than two years, that was thought to be sufficient motivation and no additional cash incentive is offered. Without such a program design, free ridership, the phenomenon of paying incentives to participants who would participate anyway, would be higher. Simply stated, it is thought that FPL's DSM programs should not pay people to do what they would do anyway.

This two year payback methodology is the same methodology that was successfully used by FPL in the last goals proceeding to minimize free ridership.

Q. Which measures did you screen out of your portfolio that required no utility incentive to achieve less than a two year payback?

A. As shown in Document No. 12, the following measures passed the RIM and Participants tests but were screened out of the portfolio based on having less than a two year payback with $0 incentive:

- SC-D-6 GSLD Heat Pipe DX New and Existing Construction

- SC-D-26A GSD & GSLD Light Colored Roof Chiller Air Cooled - New Construction
- SC-D-26W GSD & GSLD Light Colored Roof Chiller Water Cooled - New Construction
- SC-D-27 GS, GSD & GSLD Light Colored Roof DX - New Construction
- INC8LP GS, GSD & GSLD Incandescent 8 Hour Low Permanence Existing Construction
- W-D-16 GSLD Low Flow / Variable Flow Shower Head

Q. How was the expected life of the DSM measure used in screening?

A. If after applying the maximum available incentive for a measure its payback period exceeded the life of the measure, then the measure was deemed not cost-effective for customers and was dropped from further analysis.

Q. How do you treat DSM measures which have a life expectancy shorter than the planning horizon?

A. Measures whose life are shorter than the planning period have to be replaced in order to continue to contribute to the energy and demand reductions. A residential high-efficiency air conditioner, for example, has a life expectancy of fifteen years. At that time, the DSM program must count the cost of resigning the same participant or signing a new one to the program. This approach is most appropriate in determining achievable potential for goal setting. By designing "programs" around individual measures, FPL can comply with the Commission directive to evaluate measures individually while maintaining a realistic expectation that long-term savings will result. These

recurring costs are included in the cost-effectiveness calculations and are part of the screening analysis performed. The recurring costs include administrative and incentive costs.

Q. In Step 3 of the process, FPL included measures with a latest RIM ratio between .9 and 1.0. Based on the analysis done for this proceeding, do any of these measures now have a RIM ratio greater than 1.0?

A. No. The following are the measures that were not cost-effective last time but still had a RIM ratio between .9 and 1.0. The current RIM ratio is provided. None of these measures had a RIM ratio greater than 1.0.

- FR-1 Best Freezer FF - 0.95
- RSC-16A Window Film & Reflective Glass - 0.99
- RSC-22A 2 Speed Central AC - 0.99
- PP-1 High Efficiency Pool Pump - 0.81
- V-D-9 GSLD High Efficiency Motors DX - 0.73
- V-D-10 GSLD Separate Makeup Air / Exhaust Hoods Chiller - 0.57
- V-D-11 GSD Separate Makeup Air / Exhaust Hoods DX - 0.62
- V-D-11 GSLD Separate Makeup Air / Exhaust Hoods DX - 1.00
- R-D-4 GSD Multiplex: Air Cooled Ambient & Mechanical Subcooling - 0.82
- R-D-6 GSD Open Drive Refrigeration System - 0.81
- W-D-13 GSD HRU - 0.87
- W-D-13 GSLD HRU - 0.92
- W-D-15 GSD DWH Heat Trap - 0.74

- W-D-15 GSLD DWH Heat Trap - 0.79
- W-D-17 DWH Recirculation Pump - Payback less than two years
- FPLM-1 GSD Motors - 0.66
- FPLM-1 GSLD Motors - 0.68

All of these measure's RIM ratios were calculated with $0 incentives. The RIM ratio will decline further if a non-zero incentive is assumed.

SECTION III: DETERMINATION OF THE 2000-2009 ACHIEVABLE POTENTIAL

Q. How was the achievable market potential estimate determined?

A. Depending on the time period and the measure, several different methods were used. From FPL's IRP process, avoided units to screen measure cost-effectiveness were identified in 2005 and 2008.

Q. How was the achievable market potential estimate for the year 2000 determined?

A. In determining the reasonably achievable potential for the year 2000, the timing of this proceeding is critical. FPL will file its proposed goals on February 1, 1999. The hearing for this proceeding is scheduled for May 10, 1999 through May 14, 1999 with the final order becoming effective September 8, 1999. (Although, at the time this testimony is being prepared, LEAF has proposed at least a four month delay in this proceeding and the schedule set forth above). After the final order in this case, FPL will have 90 days "or such longer period as approved by the Commission" to submit for Commission

approval a demand side management plan designed to meet the utility's approved goals. This would result in FPL submitting its DSM Plan in December 1999 at the earliest. Assuming an optimistic schedule and review process, FPL's new DSM plan would not be approved until March or April 2000. Allowing time for program implementation, the new DSM programs that support the 2000 - 2009 goals will not be completely implemented until mid-summer in 2000. For this reason, FPL's achievable potential for 2000 is based entirely on FPL's currently offered DSM programs.

Q. How was the achievable market potential estimate for the years 2001 through 2009 determined?

A. Achievable potential estimates were calculated in a two-part, iterative process. First, base-year (1999) eligible market estimates were made using data from FPL's Customer Information System (CIS), Marketing Information System (MIS), Home Energy Survey (HES), C/I Sector Survey (CISS) and Nonparticipant Canvass Survey data. Customer decisions regarding measure purchase and measure participation were then modeled by analyzing either stated preference or revealed preference data on customer response to program and measure features, as well as program awareness estimates obtained from Nonparticipant Canvass Surveys. The resulting estimates of the percentage of the eligible market installing a measure in a given year were then multiplied by the number of customers in the eligible market to obtain estimates of measure participation in a given year. Participation estimates were calibrated to actual participant and nonparticipant purchase data for 1997, to provide the best possible estimates of base year (1999) participation levels. 1999 participation and nonparticipant purchase estimates, as well as estimates of the growth and demolition of residences and facilities in FPL's service territory, were then

combined with the 1999 eligible market data to estimate the eligible market in the next year (2000). Updated measure feature (primarily incentive level), technology cost and savings, and awareness data were entered into the stated and/or revealed preference-based choice algorithms, and measure participation for the year 2000 was estimated. This procedure was repeated to estimate measure levels for each year in the planning period. The estimates of the number of measure participants was combined with end-use evaluation based demand and energy impacts to develop the achievable potential estimates.

For the peak load shaving or load management measures, a different methodology is more appropriate. For these type of measures, 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 (cycling loads vs continuous interruptions), length of the control periods and the payback effects once load control is released. FPL has developed a technique, which is described in Dr. Sim's testimony, that outlines this process in detail. Performing this analysis for the various years in the goal setting time frame provides the upper annual limit of the amount of incremental load management FPL can use. The achievable potential for the load management measures were set using this technique.

Lastly, the achievable potential for the thermal energy storage and off-peak battery charging measures was determined based upon historical program participation. These measures have cost-effective incentive levels similar to our existing programs. This allows us to confidently forecast future acceptance of these rather uncommon measures by customers.

Q. Can you provide an example of the process used to calculate achievable potential?

A. Yes. Details of each step for the residential central air conditioner and heat pump measures are provided below.

The four components for the residential HVAC model (and of all the models used to estimate achievable potential) are estimating the: eligible market, likelihood of purchases, product choice, and annual purchases.

The model begins with an estimation of the eligible market. Eligibility is determined by applying measure eligibility requirements to information contained in FPL's Customer Information System (CIS) and FPL's Home Energy Survey (HES). FPL's residential Marketing Information System (MIS) is used to identify customers who have installed the measure via FPL's program in the past, and therefore may be ineligible for the program in future years. The eligible market is defined for 25 segments 3 house types, 5 geographic regions, and 3 usage segments.

Extensive research into the factors affecting the likelihood of HVAC purchase revealed that the vintage of existing HVAC equipment is the key factor affecting HVAC purchases. That is, the FPL rebate, while possibly accelerating the HVAC purchase decision slightly, primarily affects the efficiency of system chosen, rather than the time of purchase. As a consequence, the HVAC likelihood of purchase function in the HVAC model represents HVAC purchase as a function of existing equipment vintage, with different, replacement rates for the different vintage equipment. Total

replacements increase over time, as the existing stock of HVAC equipment ages.

The product choice module predicts the probability of a customer installing the measure through an FPL DSM program, as well as the efficiency (i.e., SEER) level chosen, for all HVAC purchasers (both participants and nonparticipants) in FPL's service territory in a given year. Stated preference data from over 2,000 customers is used in estimating these probabilities. The stated preference exercise determines the probabilities of purchasing different efficiency HVAC units, both within and outside an FPL DSM program based on actual rebate level, HVAC system cost, SEER rating, electricity savings and electricity price estimates.

Estimates of program awareness (obtained primarily from Nonparticipant Canvass Survey responses are then combined with the estimates of eligible market, likelihood of purchase and product choice to estimate the number of purchases within and outside the program at different SEER levels (for example, 10, 11, 12, 13, 14-plus SEER) in a given year. The model is calibrated to actual purchase and participation data. Nonparticipant purchases and SEER levels are estimated using Nonparticipant Canvass Survey data.

In subsequent years, the eligible market and equipment vintages are adjusted to reflect the previous year's purchase activity, new construction and housing demolitions. Electricity prices and capital costs are changed to reflect FPL price forecasts and estimated changes in capital costs. Program awareness levels are adjusted to reflect likely changes in awareness. Purchase and participation is estimated by entering these new data into the Residential

HVAC model. This procedure is repeated for each year of the desired forecast period.

Q. What is the resulting achievable market potential estimate?

A. FPL's estimated achievable market potential estimate for the years 2000 through 2009 is 765 MW's of summer demand reduction.

Q. What is the impact of FPL's achievable potential?

A. FPL's achievable potential results are an integral part of FPL's Integrated Resource Planning process. The results obtained in this phase of the process are subsequently used to determine how large a role DSM should play in FPL's resource plan.

SECTION IV: CODE/UTILITY EVALUATION (CUE) MEASURES

Q. What type of analysis was done to determine the achievable potential for the CUE measures?

A. Although not required by the Procedural Order for this proceeding, FPL has analyzed the cost-effectiveness of twenty-eight (28) measures labeled as CUE. FPL used the same four-step process as was used for the UP measures to determine which measures should be screened for cost-effectiveness. Consistent with this methodology, FPL did not re-evaluate those CUE measures which had a RIM ratio of less than .9. Document No. 13 shows the pre-screening for the CUE measures; Document No. 14 shows the CUE measures that were screened for cost-effectiveness with the results of the cost-effectiveness analysis; and Document No. 15 is a summary of the

administrative and participant costs associated with each CUE measure and the source of the information.

Q. What was the result of the CUE measure cost effectiveness screening?

A. Only one measure SC-D-23 Window Film DX AC (for all three Commercial/Industrial rate classes), passed both the RIM and Participant tests.

Q. What should the Commission do with the CUE measures that passed the RIM and Participant tests?

A. CUE measures that passed the cost-effectiveness tests are candidates for inclusion in the Energy Efficiency Code. The Commission should work with the utilities it regulates to encourage DCA to include these measures in the Energy Efficiency Code. Code implementation, particularly inclusion in the mandatory portion of the code, should achieve far higher market penetrations than utility programs. FPL volunteers to work with the DCA to incorporate these measures into the code.

Q. Should the savings associated with these measures be considered in the goals process?

A. No. The Energy Efficiency Code is the more efficient means to implement efficiency measures. Mandatory code measures should be extremely effective in achieving market penetration in relation to utility program. The Energy Efficiency Code is reviewed and updated on a periodic basis, thus, it does not seem reasonable to incur implementation costs in measures that have the potential to become part of the code in the near future.

SECTION V: NATURAL GAS

Q. How did FPL evaluate natural gas measures?

A. As part of the last goal setting process, FPL classified the natural gas measures as R&D. Pursuant to Florida Public Service Commission Order Number PSC-94-1313-FOF-EG, FPL submitted a Natural Gas Demand-Side Management Research & Development Plan to the Commission for approval. The Commission's order approving that plan requires FPL to conduct research and development projects in the functional areas of heating, cooling, dehumidification and water heating and to develop Florida-specific information on performance and cost-effectiveness of those technologies. An expressed Commission concern in Order No. PSC-94-1313-FOF-EG was the absence of Florida-specific data for the noted technologies.

A primary focus of FPL's natural gas research and development effort has been to determine the appropriate inputs to the cost-effectiveness tests. The development of both lab and actual field data specific to FPL's service territory will allow FPL to more accurately determine the cost-effectiveness of each natural gas end-use technology under the Commissions' approved cost-effectiveness tests. FPL's proposed research efforts and their scheduled completion dates for the final reports are: 1) Residential Gas Heat Pump - June 1999, 2) Residential Gas Water Heating - June 1999, 3) C/I Gas Engine Chiller - June 1999, 4) C/I Gas Desiccant Cooling - November 1998, and 5) C/I Gas DX Air Conditioning - June 1999.

In February 1997, FPL filed, and the Commission approved, a petition to terminate the C/I Gas DX Air Conditioning research project based on the joint

findings of Peoples Gas and FPL. Peoples' representatives raised concerns as to why FPL was researching this technology because they did not believe it to be applicable in Florida except with customers with very unique circumstances. The only use of the technology in Peoples' service territory of which Peoples was aware was a site in St. Petersburg where there was not electrical service available. Based upon Peoples' reservations about whether the technology was feasible for Florida, FPL and Peoples performed a joint study of the feasibility of the technology using manufacturers' performance data. The conclusion reached in the joint feasibility study regarding the use of gas engine-driven DX air conditioning solely for cooling was unless a customer has a specific interest in gas DX, or unusual circumstances that greatly offset the higher installation costs for the gas equipment, a customer will typically not choose gas DX for straight cooling applications. The feasibility study also examined the use on the gas engine-driven DX air conditioning in conjunction with a heat recovery application. The conclusion reached in the feasibility study regarding the use of this technology with heat recovery was both the operational scenario and the amount of recovered heat utilized are critical to the economics of the gas DX technology. That is why for heat recovery a customer-specific analysis is always necessary. Based on these findings there is no identifiable achievable potential for this technology.

The results of the C/I Gas Desiccant Cooling research project were filed with the Commission in December 1998.

Q. What are your conclusions in the area of natural gas substitution?

A. Based on the research findings to-date, FPL sees no cost-effective potential for the natural gas end-uses examined at this time. FPL does not recommend the inclusion of natural gas measures as part of the goal's process.

SECTION VI: RENEWABLE AND HIGH THERMAL EFFICIENCY COGENERATION

Renewables

Q. Which renewable measures did FPL evaluate?

A. From FPL's perspective, renewable measures include the following energy options: geothermal, wind, hydro, bio-mass, and solar.

Geothermal energy options do not exist in the State of Florida.

Wind options are available in other parts of the country; however, in Florida there are simply not enough sustainable winds to make wind power a viable alternative. FPL tested windmills during the 1980's and confirmed they were not cost-effective because of the lack of sustainable winds.

Hydro power options are not available within FPL's service territory because of our flat terrain.

Bio-mass options are one of the few renewable options available to Florida, although in a limited fashion. Already, there are several municipal solid waste facilities in our service territory where FPL has agreements to purchase the power output on a consistent basis, but even these applications are limited.

Therefore, FPL concludes that in our service territory the only renewable option that is feasible for development as a DSM option is solar.

Q. Did FPL's effort analyze solar measures?

A. Yes, solar measures were analyzed like other potential utility program measures. However, since none of the solar energy measures passed both the RIM and Participant tests, they were rejected for further evaluation.

Q. What is FPL's conclusion regarding renewable resources?

A. As discussed earlier, FPL has found the only technically viable resource was solar. But, based on the failure of solar measures to pass the required cost-effectiveness tests, FPL does not recommend the inclusion of solar measures in the goals process.

Q. Has FPL performed any other activities to promote renewable/solar energy?

A. Yes, FPL has been the leading Florida utility in regard to examining ways to utilize renewable energy technologies to meet its customers' current and future needs. FPL has been involved since 1976 in renewable energy research and development and in facilitating the implementation of various renewable technologies.

In terms of renewable technology research and development, FPL assisted the Florida Solar Energy Center (FSEC) in the late 1970's in demonstrating the first residential solar photovoltaic (PV) system east of the Mis-sissippi. This PV installation at FSEC's Brevard County location was in operation for over 15 years and provided valuable information about PV performance capabilities on both a daily and annual basis in Florida. FPL later installed a second PV

system at the FPL Flagami substation in Miami. This 10 kilowatt (kW) system was placed into operation in 1984. The testing of this PV installation was completed and the system was removed in 1990 to make room for substation expansion.

FPL's PV R&D project is a thin-film PV test facility located at the FPL Martin Plant site. The FPL PV test facility is used to test new thin-film PV technologies (and others as they become available for demonstration) and identifies design, equipment, or procedure changes necessary to accommodate direct current PV facilities into the FPL system. The site has a potential generating capacity of up to 100 kW.

In terms of utilizing renewable energy sources to meet its customers' needs, FPL initiated the first utility-sponsored conservation program in Florida designed to facilitate the implementation of solar technologies by its customers. FPL's Conservation Water Heating Program, first implemented in 1982, offered incentive payments to customers choosing solar water heaters. Before the program was recently ended (due to the fact that it was not cost-effective), FPL paid incentives to approximately 48,000 customers who installed solar water heaters.

In the mid-1980's, 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. Complete designs and construction blueprints for 6 passive homes were created by 3 Florida architectural firms with the assistance of the FSEC and FPL. These designs and blueprints were available

to customers at a low cost. 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 a revision of the Florida Model Energy Building Code. This revision was brought about in part by FPL's Passive Home Program and the revision incorporated into the Code one of the most significant passive design techniques highlighted in the program: radiant barrier insulation.

In early 1991, FPL received approval from the Florida Public Service Commission to conduct a research project to evaluate the feasibility of using small 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, as well as customer satisfaction issues remain as significant barriers to wide acceptance and use of this particular solar application.

Q. Is FPL currently performing any other activities to promote renewable/solar energy?

A. Yes, FPL is currently conducting a Green Pricing R&D project which is one of the R&D efforts submitted as part of FPL's 1995 DSM Program filing. This project is being done to test the willingness of FPL's customers to support the installation of photovoltaic panels in a grid connected facility at FPL's Martin power plant. The program concept allows customers to voluntarily contribute towards the purchase of renewable resources by FPL that would otherwise not be cost-effective for FPL to acquire. FPL planned to build at least a 10 kW facility. The revenues collected from these customers is put into a separate

account (the Green Fund) and are being used to purchase photovoltaic modules. This project was approved by the FPSC in June of 1997 and is scheduled to be completed (including construction) by June 1999. The project is split into a phase for marketing and solicitation of contributions, and a construction phase of the photovoltaic facility.

Q. What is the current status of the Green Pricing R&D project?

A. The marketing phase of this project was completed in the third quarter of 1998. Solicitations for the project were sent to both Residential and Commercial/Industrial customers. The total solicitations received were in excess of $89,000, which was above our goal of $70,000. This level of contribution will allow FPL to construct an 11 kW facility.

FPL is currently performing follow-up research with project participants to gain an understanding of the reasons for participation and ways to improve the number of participants in green pricing initiatives. This research will also examine alternatives for green pricing product offerings which may be considered in the future.

The construction phase is well underway. The design bidding package has been developed and requests for proposals were to be submitted in January 1999 to construct the photovoltaic facility at FPL's Martin power plant and a photovoltaic display at FPL's Energy Encounter, which is located at the St. Lucie power plant site. The construction project will be awarded in February 1999, and project completion is scheduled for June 1999.

High Thermal Efficiency Self-Service Cogeneration

Q. How did FPL categorize the High Thermal Efficiency Self-Service Cogeneration option?

A. The goals rule requires an assessment of this option in the Commercial/Industrial market sector, but the rule is not clear on the definition of this topic. Since FPL's experience shows that this option can only be meaningfully examined on a case-by-case basis, FPL has classified it as a research option.

Q. How does FPL define High Thermal Efficiency Self-Service Cogeneration?

A. FPL uses the following definition of high thermal efficient self-service cogeneration: "The simultaneous production of electricity and thermal energy from a single fuel source where the production of electricity and thermal energy will be used totally within the operations of the host facility. The cogeneration facility will also meet the basic thermal efficiency requirements of the Public Utility Regulatory Policy Act (PURPA), which requires at least 5% of the thermal output to be applied to a useful application. The facility must meet the requirements of a qualifying facility under the PURPA standards so that overall fuel source efficiency would be higher than simply direct conversion of a fuel into electric generation only." This definition excludes independent power producers who are selling their power output from a cogeneration facility to a utility, non-QFs that do not qualify or choose not to qualify under the PURPA standards, and small generation facilities that do not try to improve on overall fuel efficiency by providing a thermal output as well as an electric output.

Q. What are the key factors for screening cogeneration options?

A. Two primary screening factors that should be evaluated with high thermal efficient self-service cogeneration are: 1) to be feasible, the cogeneration option must have a relatively low priced fuel available for the customer. For example, a paper and pulp company may have wood chips and "black liquor" available from their industrial processes to be used as fuel. The sugar industries may have bagasse (the waste products of their sugar cane production) available as low cost fuel source for cogeneration options. 2) The thermal loads of the host facility must be relatively large and constant in order to make the output of the cogeneration facility effective. With sizable thermal loads of long duration, the cogeneration facility can operate many more hours throughout the year and take advantage of overall fuel efficiencies. If the thermal load is small, the operational feasibility of the project diminishes considerably. In FPL's service territory, there are relatively few known applications where the most effective thermal loads, steam and hot water, are large enough and of long enough duration to make the high thermal efficient self-service cogeneration option viable.

Q. What are the results of your analysis?

A. There has been a limited amount of high thermal efficient self-service cogeneration implemented within FPL's service territory. Seven customers have high thermal efficient self-service cogeneration in our service territory, representing approximately 234 megawatts of load that traditionally has not been served by FPL. These facilities are sugar and paper and pulp locations, where inexpensive fuel sources exist; thus, it makes sense for those customers to utilize those fuel sources to supply the thermal loads required by their industrial operations.

In addition, there are seven customers with high thermal efficient self-service cogeneration facilities on some basis to displace their load within our service territory. This load represents approximately 412 megawatts. Each project has been implemented on a case-by-case basis.

In the past, there have been some Commercial/Industrial customers who have considered high thermal efficiency cogeneration as an alternative and abandoned those options. FPL is aware of 31 situations of this nature representing a total of about 422 megawatts of load. These customers utilized FPL's assistance to evaluate the various cogeneration alternatives and found that it was not feasible and/or economical. Presently, ten customers are considering cogeneration as an energy alternative and are being assisted by FPL in the evaluation process to ensure that they get accurate results. It is uncertain how much activity will result from these specific evaluations, but these site specific, case-by-case evaluations do not lend themselves to the goals setting process.

Q. What is your conclusion regarding High Thermal Efficiency Self-Service Cogeneration?

A. High thermal efficiency self-service cogeneration was classified as research because case-by-case analysis is the appropriate manner to evaluate this option due to the unique nature of each building or facility. These are very site-specific, case-by-case determinations. Therefore, FPL reflects no value for this end-use in the development of its overall goals.

SECTION VII: CONCLUSIONS

Q. How much DSM have you concluded is reasonably achievable for FPL?

A. Based on the analysis performed for this goals proceeding, FPL can successfully implement 765 MW's of cost-effective DSM between 2000 and 2009. Document No. 1 is a summary of the 2000 through 2009 reasonably achievable goals.

FPL believes that DSM is a tool not only to increase energy efficiency, but also to lower electric rates and customer bills for all customers. FPL has ample incentive to promote DSM where appropriate. FPL is keenly aware from years of regulatory efforts to keep rates low and from the increasingly competitive market place that the rates of all customers should be minimized. FPL firmly believes that implementing the proposed goals and the resulting resource plan is the best choice for FPL customers.

Q. Has FPL used a reasonable and sound process to arrive at its goals?

A. Yes. The last goals proceeding required significant analysis that were not ultimately used in setting DSM goals. FPL has used its experience and analysis from the last proceeding to implement a goal setting methodology that allows it to focus its efforts on using the best available data to arrive at reasonably achievable goals which are both cost-effective and provide direct benefits to both DSM program participants and nonparticipants.

Q. Does the methodology used by FPL address the requirements of Rule 25-17.0021?

A. Yes. FPL's has properly evaluated the UP measures that was circulated by the Commission Staff as part of the materials provided at the workshops for this proceeding. FPL supplemented this list with additional measures that resulted in increasing the achievable potential. FPL also evaluated the feasibility of natural gas measures, CUE measures, renewable measures and high thermal efficiency cogeneration being included as part of its goals. In addition, FPL has developed goals using its most current assumptions applied to its IRP process to arrive at annual summer demand, winter demand and energy goals for both the Residential and Commercial/Industrial segments for the ten year horizon of 2000 through 2009.

Q. Are the proposed goals effective in avoiding or deferring the addition of new generation capacity?

A. Yes. FPL's proposed goals of 765 MW's for the period of 2000 through 2009 avoids the need for two 400 MW combined cycle units that would otherwise need to come in service during this time period.

Q. Does FPL proposed goals adequately address the needs of lower income customers?

A. Yes. The results of the process used by FPL to establish the reasonably achievable cost effective DSM goals ensures that these customers benefit by using a RIM screen which minimizes the rate impact of continuing to meet the growing demand for electricity of our all customers. The RIM test ensures that nonparticipants still receive direct benefits through reduced rates. Secondly, many lower income customer do participate in FPL's DSM programs. Data from 1997 shows that, overall, 24% of participants in FPL's DSM programs were lower income customers.

Q. Do the proposed goals provide the a cost-effective plan for meeting the need for additional capacity through 2009?

A. Yes. As Dr. Sim discusses, FPL's Integrated Resource Plan considers the cost-effectiveness of the various resources available to meet future capacity needs. By basing the DSM component of this plan on only measures that pass the RIM test and are achievable, FPL is assured that its ratepayers are provided the most cost-effective portfolio of resources to meet future capacity needs.

Q. Should FPL's proposed goals of 765 MW's be approved for the time period 2000 through 2009?

A. Yes. FPL's proposed goals are based on a sound and prudent methodology that uses the best available data to arrive at goals that; 1) meet the requirements of Rule 25-17.0021, 2) address the needs of our customers, 3) provides 765 MW's of summer demand reduction, 4) minimizes the rate impact of meeting the future need for capacity, 5) are cost-effective to both participants and nonparticipants and 6) are reasonably achievable.

Q. Does this conclude your testimony?

A. Yes it does.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 991788-EG

DEMAND-SIDE MANAGEMENT PLAN OF FLORIDA POWER & LIGHT COMPANY

PLAN DOCUMENT

DECEMBER 29, 1999

TABLE OF CONTENTS

INTRODUCTION

Pursuant to Florida Administrative Code Rule 25-17.0021, Florida Power & Light Company (FPL) is submitting a Demand Side Management Plan designed to meet the conservation goals established by the Commission in Order No. PSC-99-1942-FOF-EG. This Demand Side Management (DSM) Plan consists of: six (6) Residential DSM programs, nine (9) Commercial/Industrial DSM programs, one (1) Conservation Research and Development program, and five (5) research and development (R&D) projects. FPL anticipates that the proposed programs will achieve FPL's approved goals in their entirety through the year 2009. FPL's R&D projects and the continuation of the existing Conservation Research and Development program reflects FPL's commitment to find the savings necessary to ensure that it achieves its goals through 2009 as well as other DSM potential which may emerge.

This report builds upon FPL's Adoption of Numeric Conservation Goals Report filed with the Commission and reviewed and approved in Docket No. 971004-EG. That report contained a detailed evaluation of 169 measures and identified 56 of those measures to be cost-effective under the Rate Impact Measure (RIM) and Participants tests. Those 56 measures been packaged into comprehensive FPL programs as part of the Demand Side Management Plan.

This report contains five sections. Section I provides an overview of FPL's DSM Plan, addressing how the Plan will achieve FPL's goals, listing the programs, projects and measures offered. Section II is a detailed description of the Residential DSM programs being proposed. Section III is a detailed description of the Commercial/Industrial DSM programs being proposed. Section IV is a detailed description of FPL's DSM research and development efforts being undertaken and proposed. Section V is a summary.

This report also has a companion Appendix A, which contains copies of the cost effectiveness analyses performed in support of individual programs.

SECTION I - OVERVIEW

A. Commission Approved Goals

FPL has developed a comprehensive portfolio of DSM programs in order to achieve the goals approved in Order No. PSC-99-1942-FOF-EG. The approved goals for FPL are shown in Tables 1 and 2 below.

Table 1

Residential Market Segment

Approved Goals @ Meter

Year	Summer Demand Savings Cum. MW	Winter Demand Savings Cum. MW	Cum Energy GWH
2000	75.5	91.6	91.9
2001	126.5	139.0	178.3
2002	169.4	170.0	267.1
2003	212.8	200.4	357.3
2004	256.6	230.1	448.9
2005	302.0	260.6	544.2
2006	347.0	289.0	640.9
2007	392.6	317.2	739.3
2008	439.4	345.7	840.3
2009	485.9	372.4	943.2

Table 2

Commercial/Industrial Market Segment

Approved Goals @ Meter

Year	Summer Demand Savings Cum. MW	Winter Demand Savings Cum. MW	Cum Energy GWH
2000	46.2	20.5	68.5
2001	73.3	32.2	97.6
2002	99.6	44.1	126.4
2003	126.6	56.8	157.1
2004	153.8	70.1	188.8
2005	181.6	84.2	222.6
2006	207.2	97.1	254.9
2007	232.4	109.8	285.7
2008	257.2	122.2	315.3
2009	278.8	133.0	343.4

B. Composition of DSM Plan

FPL's DSM Plan is a diversified plan designed to achieve FPL's approved conservation goals. To meet those goals, FPL's DSM Plan captures all known cost-effective DSM potential and attempts to find additional cost-effective savings through research. As set forth herein, FPL's DSM Plan consists of six (6) Residential programs, nine (9) Commercial/Industrial programs, one (1) research program and five (5) individual research projects. Other concepts may evolve into research projects or programs. As with prior plans, FPL anticipates that the Plan will likely change over time due to program experience, research results, changes in FPL's system needs, and the options which may become available to FPL.

Residential Programs

- Residential Building Envelope
- Duct System Testing and Repair
- Residential Air Conditioning
- Residential Load Management (On Call)
- Residential New Construction (BuildSmart)
- Residential Conservation Service (RCS)

Commercial/Industrial Programs

- Commercial/Industrial Heating, Ventilating and Air Conditioning
- Commercial/Industrial Efficient Lighting
- Commercial/Industrial Building Envelope
- Business Custom Incentive
- Business On Call
- Commercial/Industrial Demand Reduction
- Commercial/Industrial Load Control

- Business Energy Evaluation
- Cogeneration and Small Power Production

Research Efforts

Research Program:

- Conservation Research and Development

Research Projects:

- Cool Communities
- Green Energy
- Photovoltaic Research, Development and Education
- Commercial/Industrial New Construction
- Low Income Weatherization Retrofit

C. Comparison of Existing and Proposed DSM Plans

Tables 3 and 4 show how existing conservation programs are being incorporated into FPL's proposed Plan. These tables show that all existing FPL programs, except the Off Peak Battery Charging Program, will be continued in some fashion. These tables also illustrate how some of the existing programs have been combined with other measures under one of the proposed programs to offer a more comprehensive approach.

This is the approach that will be used in the future to address applications that previously would have qualified for the Off Peak Battery Program. Over the last two years, participation in the Off Peak Battery Program has only been approximately 150 kw annually. This level of participation does not support a full-scale DSM program and its associated administrative costs. For this reason, future off peak battery charging applications will be addressed using FPL's Business Custom Incentive Program.

The Commercial/Industrial Load Control program has been closed to new participants and customers with outstanding program participating agreements have until December 31, 2000 to go on the rate. Beyond 2000 no new customers will be added to the Commercial/Industrial Load Control program, but the program will continue in effect for then existing participants.

Table 3
Classification of Residential Programs and R&D Projects

DSM Program or R&D Project	Existing Program or R&D Project to Continue w/o Change	Existing Program or R&D Project to Continue with Modifications	Existing Program or R&D Project to be Discontinued	New Program or R&D Project
Building Envelope Program		X		
Duct System Testing and Repair Program		X		
Air Conditioning Program		X		
Residential Load Management (On Call) Program	X			
Residential New Construction (BuildSmart) Program		X		
Residential Conservation Service Program		X		
Conservation Research & Development		X		
Cool Communities R&D		X		
Green Energy R&D				X
Photovoltaic Research, Development and Education R&D				X
Low Income Weatherization Retrofit R&D				X
Thermal Energy Storage R&D			X	

Table 4
Classification of Commercial/Industrial Programs and R&D Projects

DSM Program or R&D Project	Existing Program or R&D Project to Continue w/o Change	Existing Program or R&D Project to Continue with Modifications	Existing Program or R&D Project to be Discontinued	New Program or R&D Project
Heating, Ventilating & Air Conditioning Program		X		
Efficient Lighting Program		X		
Building Envelope Program		X		
Business Custom Incentive Program	X			
Business On Call Program		X		
Commercial/Industrial Demand Reduction Program				X
Commercial/Industrial Load Control Program	X*			
Business Energy Evaluation Program	X			
Off Peak Battery Charging			Included as part of	

Program			Business Custom Incentive	
Cogeneration and Small Power Production Program	X			
Conservation Research & Development		X		
Green Energy R&D				X
New Construction R&D	X			

* The Commercial/Industrial Load Control Program is closed to new customers effective December 31, 2000; however, existing customers remain eligible for service.

D. Measures Comprising Programs

Table 5 lists the proposed Residential programs and the measures offered in each program. As shown in the table, FPL is proposing six (6) Residential programs: Residential Building Envelope, Duct System Testing and Repair, Residential Air Conditioning, Residential Load Management (On Call), Residential New Construction (BuildSmart) and Residential Conservation Services (RCS). The table also shows the maximum incentive amount and demand and energy savings associated with each program.

Table 5
Summary of Residential Programs

DSM Program	Eligible Measures	Measure Description	Summer kw Savings / Participant	Winter kw Savings / Participant	kWh Savings / Participant	Incentive / Participant
Residential Building Envelope Program	RSC-10A	Ceiling Ins R0-R19 AC	0.30	0.74	801	$190
	RSC-10B	Ceiling Ins R0-R19 HP	0.30	0.46	740	$168
	Program		0.30	0.71	795	$188
Duct System Testing & Repair Program	RSC-5A	Reduce Duct Leak AC	0.20	0.20	454	$82
	RSC-5B	Reduce Duct Leak HP	0.20	0.20	454	$82
	Program		0.20	0.20	454	$82
Residential Air Conditioning Program	RSC-1	Hi Eff Air Source HP	0.45	0.39	1200	$146
	RSC-2	Ground Source HP	0.73	0.28	1455	$318
	RSC-21A	Hi Eff Central AC	0.51	0.00	1273	$110
	Program		0.50	0.07	1260	$117
Residential Load Management (On Call) Program	RLC-1	Res Load Control	1.08	1.92	40	$72 *
Residential New Construction (BuildSmart) Program	BLDSMT-1	BuildSmart EPI <=90	0.95	.93	1421	$111
Residential Conservation Service Program	Program	Residential Audits	N/A	N/A	N/A	N/A

* Annual incentive

Table 6 lists the proposed Commercial/Industrial programs and their associated measures. The eight (8) Commercial/Industrial programs are: Commercial/Industrial Heating, Ventilation and Air Conditioning, Commercial/Industrial Efficient Lighting, Commercial/Industrial Building

Envelope, Business Custom Incentive (BCI), Commercial/Industrial Demand Reduction, Business On Call, Business Energy Evaluation (BEE) and Cogeneration and Small Power Production.

Table 6
Summary of Commercial/Industrial Programs

DSM Program	Eligible Measures	Measure Description	Rate Class	Summer kw Savings / Participant **	Winter kw Savings / Participant **	kWh Savings / Participant **	Incentive / Participant **
Commercial/Industrial Heating, Ventilating & Air Conditioning Program	SCD-1	High Eff Chiller	GSD	1.0	0.033	4241	$65
			GSLD	1.0	0.033	4339	$81
	SCD-2	High Eff Chiller w/ASD	GSD	1.0	0.033	4954	$25
			GSLD	1.0	0.033	5068	$90
	SCD-3	Hi Eff DX AC	GS	1.0	0.000	3694	$75
			GSD	1.0	0.000	3754	$105
			GSLD	1.0	0.000	3967	$145
	SCD-5	Cool Storage	GSD	1.0	0.341	(291)	$478
			GSLD	1.0	0.290	(377)	$338
	VD-1	Leak Free Ducts DX AC	GS	1.0	0.052	2054	$267
			GSD	1.0	0.052	2054	$140
			GSLD	1.0	0.052	2054	$161
	Program			1.0	0.209	1153	$275
Commercial/Industrial Efficient Lighting Program	FL8HP	Fluorescent 8 Hour High Permanence	GS	1.0	1.135	3275	$129
			GSD	1.0	1.130	3548	$102
			GSLD	1.0	1.140	4140	$111
	HID8HP	HID 8 Hour High Per	GSLD	1.0	1.130	3210	$189
	Program			1.0	1.134	3722	$120
Commercial/Industrial Building Envelope Program	SCD-18	Roof Ins Chiller	GSD	1.0	0.261	1724	$271
			GSLD	1.0	0.261	1724	$393
	SCD-19	Roof Ins DX AC	GS	1.0	0.156	1184	$418
			GSD	1.0	0.156	1184	$247
			GSLD	1.0	0.156	1184	$359
	SCD-22	Window Film Chiller	GSD	1.0	0.002	1995	$80
			GSLD	1.0	0.002	1895	$190
	SCD-23	Window Film DX AC	GS	1.0	0.002	2005	$295
			GSD	1.0	0.002	1995	$80
			GSLD	1.0	0.002	1895	$190
	SCD-26A	Light Colored Roof Chiller	GSD	1.0	0.000	1115	$200
			GSLD	1.0	0.000	1115	$340
	SCD-27	Light Colored Roof DX AC	GS	1.0	0.000	2619	$300
			GSD	1.0	0.000	2619	$200
			GSLD	1.0	0.000	2619	$300
	Program			1.0	0.179	1476	$303
Business Custom Incentive Program	OPBC	Off Peak Battery Charging	GSD	1.0	0.093	0	$144
			GSLD	1.0	0.093	0	$144
	Program			1.0	0.093	0	$144
Business On Call Program	CILM	Commercial Load Management	GS	1.0	0.0	88	$39 *
			GSD	1.0	0.0	88	$39 *
	Program			1.0	0.0	88	$39 *
Commercial/Industrial Demand Reduction Program	CIDR	Commercial/Industrial Demand Reduction	GSD	1.0	1.0	48	$57 *
			GSLD	1.0	1.0	48	$57 *
	Program			1.0	1.0	48	$57 *
Business Energy Evaluation Program	Program	C/I Energy Audits	ALL	N/A	N/A	N/A	N/A
Cogeneration and Small Power Production Program	Program	Cogeneration Support	ALL	N/A	N/A	N/A	N/A

* Annual incentive
** Participant is equal to 1 kw of summer demand reduction

E. Summary

FPL's DSM Plan provides a variety of programs in which FPL's customers may participate. It is designed to achieve FPL's Commission approved RIM based goals. To meet those goals FPL will offer programs that include all measures currently known to be cost-effective to both

participants and non-participants. To achieve its goals through 2009 and to address changing market conditions, FPL is supplementing these programs with additional R&D efforts as well.

SECTION II - RESIDENTIAL PROGRAMS

A. Residential Program Overview

FPL's DSM Plan offers six (6) conservation programs. The six conservation programs are: Residential Building Envelope, Duct System Testing and Repair, Residential Air Conditioning, Residential Load Management (On Call), BuildSmart and Residential Conservation Service. While the program descriptions that follow provide details as to the proposed changes to each program, the significant modifications being proposed are:

- **Residential Building Envelope** – The maximum cost-effective incentive level has increased slightly.

- **Duct System Testing and Repair** – The incentive structure is being revised as well as changes in eligibility requirements and testing procedures in order to encourage participation by single family attached and mobile homes.

- **Residential Air Conditioning** – The incentive structure is being revised and window/wall air conditioners are being eliminated due to a lack of cost-effectiveness. In addition, the minimum qualifying SEER for air-cooled air conditioners is being increased from 11.0 to 11.5.

- **Residential New Construction (BuildSmart)** – The fee structure for participants has been revised to encourage participation at the higher energy efficiency levels.

- **Residential Conservation Service** – The types of home energy surveys offered has been to expanded to allow FPL to include telephone and internet based audits.

B. DETAILED PROGRAM DESCRIPTIONS

RESIDENTIAL BUILDING ENVELOPE PROGRAM

Program Description

The Residential Building Envelope Program is designed to encourage qualified customers to install energy-efficient roof and ceiling insulation measures that cost-effectively reduce FPL's coincident peak air conditioning load and customer energy consumption. The objective is accomplished by providing incentives to customers to facilitate the installation of these measures.

The proposed Residential Building Envelope Program is basically unchanged from the existing program. The only substantive change to this program is to update the maximum cost-effective incentive from $614 per kw to $626 per kw.

FPL plans to make residential customers aware of this program through contractors, retail outlets and other trade allies, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

FPL plans to facilitate the application of this program to potential low income participants by targeting public agencies and governmental housing authorities for program education and implementation. An example of this effort is the potential qualification of public agency or housing authorities as participating contractors, thus, assisting in lowering the installation costs of measures for low income participants. FPL also will assist agencies in selecting qualifying contractors, if requested to do so.

Description of Program Administration

The Residential Building Envelope Program will be available to all existing residential customers served by FPL who have whole-house electric air conditioning or heating. Whole-

house electric air conditioning or heating is defined as a central system(s) or sufficient window/wall units to provide cooling to the majority of the living spaces of the house. An energy audit must be performed prior to FPL issuing an incentive (Watt-Saver Certificate) for the building envelope measure.

Building envelope measures that are required to be installed, by federal, state, or local building or energy codes when additions and/or renovations are made to existing buildings are not eligible for this program. To be eligible for incentives, qualifying building envelope measures must be installed according to manufacturer's recommendations and specifications by contractors who are certified, licensed and insured as deemed necessary by applicable state or local governmental agencies and FPL. All performance claims must be supported by testing procedures and documentation which are acceptable to FPL. All installations must be accessible for verification by FPL.

All incentive requests will be tracked by a computer system, which will record a history of the incentive payments made to customers/contractors.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 3.24 Participants, 1.04 RIM, and 2.18 TRC for the Residential Building Envelope program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Residential Building Envelope Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	413,886	6,851	1.66%
2001	3,462,962	378,499	18,315	6.65%
2002	3,525,089	342,326	16,338	12.12%
2003	3,585,232	309,809	14,581	18.10%
2004	3,643,479	280,563	13,021	24.63%
2005	3,700,888	254,241	11,633	31.76%
2006	3,757,466	230,538	10,400	39.53%
2007	3,813,758	209,180	9,302	48.02%
2008	3,870,300	189,924	8,323	57.27%
2009	3,927,596	172,553	7,453	67.35%

Note: Column a - The total number of customers in the residential rate class.
Column b - The total number of eligible customers in the residential rate class.
Column c - The annual number of participants in the program.
* Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	790	0.69	0.30	5,412,801	4,727	2,055
2001	795	0.71	0.30	14,568,244	13,085	5,494
2002	795	0.71	0.30	12,995,360	11,671	4,901
2003	795	0.71	0.30	11,597,828	10,414	4,374
2004	795	0.71	0.30	10,356,210	9,298	3,906
2005	795	0.71	0.30	9,252,101	8,306	3,490
2006	795	0.71	0.30	8,271,182	7,424	3,120
2007	795	0.71	0.30	7,397,292	6,639	2,790
2008	795	0.71	0.30	6,618,468	5,939	2,497
2009	795	0.71	0.30	5,926,487	5,317	2,236

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	850	0.76	0.33	5,821,468	5,195	2,259
2001	855	0.79	0.33	15,668,148	14,381	6,039
2002	855	0.79	0.33	13,976,511	12,826	5,387
2003	855	0.78	0.33	12,473,465	11,445	4,808
2004	855	0.78	0.33	11,138,105	10,219	4,293
2005	855	0.78	0.33	9,950,635	9,128	3,835
2006	855	0.78	0.33	8,895,657	8,159	3,429
2007	855	0.78	0.33	7,955,788	7,296	3,067
2008	855	0.78	0.33	7,118,163	6,527	2,744
2009	855	0.78	0.33	6,373,938	5,844	2,457

DUCT SYSTEM TESTING AND REPAIR PROGRAM

Program Description

The objective of FPL's Duct System Testing and Repair Program is to encourage demand and energy conservation through air leak identification in air conditioning duct systems and repair of those leaks by qualified contractors. This objective is accomplished by performing on-site tests at the customer's premise, identifying leak sites, and providing incentives to customers for leak repairs.

The proposed Duct Testing & Repair Program remains essentially unchanged from the existing program. The only substantive changes include the following:

- increasing the maximum average incentive from $ 369 per kw to $ 406 per kw, and
- offering no-cost duct tests for multi-family dwellings and manufactured homes.

FPL makes residential customers aware of this program through contractors, retail outlets and other trade allies, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

FPL plans to facilitate the application of this program to potential low income participants by: 1) offering no-cost duct tests to residential multi-family dwellings and manufactured homes, and 2) targeting public agencies and governmental housing authorities for program education and implementation. An example of this effort is the potential qualification of public agency or housing authority personnel to perform duct system testing or duct repairs as participating contractors, thus, assisting in lowering the installation costs of measures for low income participants. FPL also will assist agencies in selecting qualifying contractors, if requested to do

so. Additionally, by including multi-family units in the program, the potential to reach low income participants is increased.

Description of Program Administration

The Duct System Testing and Repair Program is available to residential customers. Dwellings must have an electric air conditioning duct system and have accessible duct systems. Eligible dwellings must be one year old or older to qualify for FPL test and repair incentives.

Duct tests are performed by diagnosticians using measurement equipment designed to assist in locating air leakage in air conditioning duct systems. A charge for this test may be assessed, and FPL proposes to continue to pay a portion of the customer cost of the test. If leaks are identified during the test, the diagnostician will provide the customer with a diagram of the leak sites and a list of independent FPL participating contractors. Repair incentive certificates are also given to customers by the diagnostician at the time the test is performed. When the repair of the duct system is completed, the customer signs and gives the Watt-Saver Certificate to the contractor as partial payment for the installation. The contractor then completes the Watt-Saver certificate and forwards it to FPL. FPL will perform post installation inspections on a random basis for a sample of participants prior to payment of incentives.

Duct system testing and duct system repairs must be performed by approved and current FPL Testing and Repair Contractors, to qualify for conservation incentives. As part of the Duct System Repair Contractor responsibilities, each contractor must complete an FPL specified training course in testing and repair techniques.

Repair incentives will be based on the amount of time required to repair the leak sites identified and will be included in the Program Standards. Incentives will not exceed a program average of $406 per kw, which is based on cost-effectiveness analyses included in Appendix A. All

incentive requests will be tracked by a computer system, which will record a history of incentive payments made to customers.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, program results, operational needs, application assumptions and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 2.86 Participants, 1.05 RIM, and 1.81 TRC for the Duct System Testing and Repair program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology

baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Duct System Testing and Repair Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	1,618,745	32,279	1.99%
2001	3,462,962	1,649,303	29,133	3.72%
2002	3,525,089	1,678,892	29,722	5.43%
2003	3,585,232	1,707,536	30,291	7.11%
2004	3,643,479	1,735,278	30,846	8.77%
2005	3,700,888	1,762,620	31,391	10.42%
2006	3,757,466	1,789,566	31,933	12.05%
2007	3,813,758	1,816,376	32,475	13.66%
2008	3,870,300	1,843,305	33,021	15.25%
2009	3,927,596	1,870,594	33,571	16.82%

Note: Column a - The total number of customers in the residential rate class.
Column b - The total number of eligible customers in the residential rate class.
Column c - The annual number of participants in the program.
* Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	454	0.20	0.20	14,654,577	6,412	6,436
2001	454	0.20	0.20	13,226,119	5,787	5,809
2002	454	0.20	0.20	13,493,696	5,904	5,926
2003	454	0.20	0.20	13,751,801	6,017	6,040
2004	454	0.20	0.20	14,003,986	6,127	6,151
2005	454	0.20	0.20	14,251,436	6,236	6,259
2006	454	0.20	0.20	14,497,702	6,343	6,367
2007	454	0.20	0.20	14,743,375	6,451	6,475
2008	454	0.20	0.20	14,991,417	6,559	6,584
2009	454	0.20	0.20	15,241,234	6,669	6,694

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	488	0.22	0.22	15,761,000	7,047	7,074
2001	488	0.22	0.22	14,224,692	6,360	6,384
2002	488	0.22	0.22	14,512,471	6,489	6,513
2003	488	0.22	0.22	14,790,063	6,613	6,638
2004	488	0.22	0.22	15,061,289	6,734	6,760
2005	488	0.22	0.22	15,327,421	6,853	6,879
2006	488	0.22	0.22	15,592,280	6,971	6,998
2007	488	0.22	0.22	15,856,502	7,090	7,116
2008	488	0.22	0.22	16,123,270	7,209	7,236
2009	488	0.22	0.22	16,391,949	7,329	7,357

RESIDENTIAL AIR CONDITIONING PROGRAM

Program Description

The Residential Air Conditioning Program is designed to reduce the summer and winter coincident peak demand and energy attributable to central and room heating, ventilating, and air conditioning (HVAC) equipment by encouraging customers, through the use of incentives, to purchase higher efficiency equipment.

FPL proposes to implement the following substantive changes to the Residential Air Conditioning Program:

- the minimum qualifying SEER for central air-cooled air conditioners (straight-cooled and heat pumps) is being increased from 11.0 to 11.5,
- the exclusion of window/wall units due to a lack of cost-effectiveness, and
- the program incentive structure will change from a range not exceeding $182 to $ 303 per kw of summer demand reduction to a range not to exceed $216 to $436 per kw, depending on the technology.

FPL plans to make residential customers aware of this program through contractors, retail outlets and other trade allies, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

FPL plans to continue to facilitate the application of this program to potential low income participants by targeting public agencies and governmental housing authorities for program education and implementation. Another example of how FPL will facilitate low income participation in this program is the potential qualification of public agency or housing authority personnel to install measures as participating contractors, thus, assisting in lowering the

installation costs of measures for low income participants. FPL also will assist agencies in the selection of qualified contractors for the installation of qualifying measures, if requested to do so.

Description of Program Administration

The primary method of encouraging prospective customers to participate in the program will be the payment of incentives. The amount of the incentives will vary depending on several factors: the size of the unit being installed and the Seasonal Energy Efficiency Ratio (SEER) or Energy Efficiency Ratio (EER) for central units. Incentive tables will be included in FPL's Program Standards and will range from $216 to $436 per kw which is based on cost effectiveness analyses included in Appendix A. Eligible units can be either a straight cool or a heat pump. Central air conditioning units must have a single speed compressor. To be eligible for incentives for central air conditioning systems, the customer must make an installation at a residence which has had a Certificate of Occupancy or equivalent for at least one year.

The incentives for central air conditioning systems will be issued to the customer at the time the customer purchases a qualifying HVAC unit(s) from a qualifying contractor. The contractor fills out the incentive certificate and gives it to the customer for his/her signature. The customer signs and gives the incentive certificate back to the contractor as partial payment for the installation. The contractor then forwards the certificate to FPL for payment.

FPL will perform random post installation inspection on a selected sample of participants prior to payment of incentives. All incentive requests will be tracked by a computer system, which will record a history of incentive payments made to customers.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based upon factors such as, but not limited to,

technological advances, operational needs, program evaluation results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 2.73 Participants, 1.06 RIM, and 1.83 TRC for the Residential Air Conditioning program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to

be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Residential Air Conditioning Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	1,377,603	49,460	3.59%
2001	3,462,962	1,426,850	45,252	6.64%
2002	3,525,089	1,474,755	47,212	9.62%
2003	3,585,232	1,521,812	49,020	12.55%
2004	3,643,479	1,568,405	50,714	15.41%
2005	3,700,888	1,615,207	52,331	18.20%
2006	3,757,466	1,662,336	53,903	20.93%
2007	3,813,758	1,710,067	55,453	23.59%
2008	3,870,300	1,758,629	56,998	26.18%
2009	3,927,596	1,808,218	58,550	28.70%

Note: Column a - The total number of customers in the residential rate class.
Column b - The total number of eligible customers in the residential rate class.
Column c - The annual number of participants in the program.
* Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1247	0.15	0.49	61,667,628	7,183	24,176
2001	1260	0.07	0.50	56,998,213	3,302	22,582
2002	1260	0.07	0.50	59,467,098	3,442	23,560
2003	1260	0.07	0.50	61,744,406	3,572	24,463
2004	1260	0.07	0.50	63,878,903	3,695	25,308
2005	1260	0.07	0.50	65,915,806	3,813	26,115
2006	1260	0.07	0.50	67,895,364	3,927	26,900
2007	1260	0.07	0.50	69,848,057	4,040	27,673
2008	1260	0.07	0.50	71,793,461	4,153	28,444
2009	1260	0.07	0.50	73,748,605	4,266	29,219

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1341	0.16	0.54	66,323,541	7,895	26,569
2001	1355	0.08	0.55	61,301,584	3,629	24,818
2002	1355	0.08	0.55	63,956,870	3,783	25,893
2003	1355	0.08	0.55	66,406,116	3,926	26,885
2004	1355	0.08	0.55	68,701,767	4,061	27,815
2005	1355	0.08	0.55	70,892,456	4,190	28,701
2006	1355	0.08	0.55	73,021,472	4,316	29,563
2007	1355	0.08	0.55	75,121,593	4,440	30,414
2008	1355	0.08	0.55	77,213,875	4,564	31,261
2009	1355	0.08	0.55	79,316,632	4,689	32,112

RESIDENTIAL LOAD MANAGEMENT PROGRAM ("ON CALL" PROGRAM)

Program Description

The On Call Program is designed primarily to reduce system peak demand, but it also reduces energy consumption. The On Call Program involves the installation of direct load control equipment on selected customer end-use equipment to allow FPL to control customer loads on an as needed basis. FPL is proposing no change to this program.

FPL plans to make residential customers aware of this program through contractors, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

Description of Program Administration

FPL's On Call Program is available to all residential customers who are individually metered (i.e., who do not receive service through commonly owned facilities of condominium, cooperative or homeowners' associations) and who have one or more of the following electrical appliances/equipment: central electric air conditioners, central electric space heaters, conventional electric water heaters and swimming pool pumps. A customer may sign up for one, or more than one, of these appliances/equipment (with the exception of electric space heating, which is eligible only in combination with one of the other equipment types).

Customers who participate in the Program will be eligible based on three primary factors: whether the customer has the proper eligible loads, whether their service characteristics (voltage, etc.) are compatible with existing load control equipment, and whether the customer receives service from a substation which has load control equipment installed.

Once the customer signs-up for the program, the installation request will be sent to a contractor for installation. Once the installation is completed, the contractor sends the paperwork to FPL, which is then entered into the Load Management Information System (LMIS), resulting in the activation of the equipment at the customer's facility. Upon installation and inspection of the equipment, the customer will receive a monthly credit, which may vary seasonally, on his/her electric bill.

The incentives will be paid as specified in the On Call Program tariff sheets, Schedule RSL. FPL maintains an internal audit trail for all incentive payments by means of LMIS. This computer database maintains interview and installation information for each program participant as well as a history of all incentives paid.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on the program monitoring and evaluation results performed to determine the demand reductions obtained for the On Call Program and are from FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can

be found in Appendix A. These analyses show the following benefit-cost ratios: infinite Participants, 1.26 RIM, and 3.46 TRC for the On Call Program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Residential Load Management (On Call) Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	2,135,321	36,808	1.72%
2001	3,462,962	2,126,591	13,585	2.37%
2002	3,525,089	2,117,563	5,094	2.62%
2003	3,585,232	2,108,299	5,094	2.87%
2004	3,643,479	2,098,875	5,094	3.13%
2005	3,700,888	2,089,905	5,094	3.39%
2006	3,757,466	2,081,372	4,245	3.60%
2007	3,813,758	2,073,550	4,245	3.82%
2008	3,870,300	2,066,687	4,245	4.04%
2009	3,927,596	2,060,997	3,396	4.22%

Note: Column a - The total number of customers in the residential rate class.
Column b - The total number of eligible customers in the residential rate class.
Column c - The annual number of participants in the program.
** Does not reflect participation prior to 2000.*

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	40	1.92	1.08	1,477,841	70,671	39,753
2001	40	1.92	1.08	545,445	26,084	14,672
2002	40	1.92	1.08	204,542	9,781	5,502
2003	40	1.92	1.08	204,542	9,781	5,502
2004	40	1.92	1.08	204,542	9,781	5,502
2005	40	1.92	1.08	204,542	9,781	5,502
2006	40	1.92	1.08	170,452	8,151	4,585
2007	40	1.92	1.08	170,452	8,151	4,585
2008	40	1.92	1.08	170,452	8,151	4,585
2009	40	1.92	1.08	136,361	6,521	3,668

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	43	2.11	1.19	1,589,418	77,669	43,689
2001	43	2.11	1.19	586,626	28,666	16,125
2002	43	2.11	1.19	219,985	10,750	6,047
2003	43	2.11	1.19	219,985	10,750	6,047
2004	43	2.11	1.19	219,985	10,750	6,047
2005	43	2.11	1.19	219,985	10,750	6,047
2006	43	2.11	1.19	183,321	8,958	5,039
2007	43	2.11	1.19	183,321	8,958	5,039
2008	43	2.11	1.19	183,321	8,958	5,039
2009	43	2.11	1.19	146,657	7,167	4,031

RESIDENTIAL NEW CONSTRUCTION PROGRAM ("BUILDSMART[R] PROGRAM")

Program Description

The BuildSmart[R] Program objective is to encourage the design and construction of energy-efficient homes that cost-effectively reduce FPL's coincident peak load and customer energy consumption.

The BuildSmart[R] Program will utilize an FPL approved energy-rating tool to qualify each home for participation. The program standard will utilize a performance based energy standard rather than a prescriptive based standard. Therefore, the BuildSmart[R] Program will accept any efficiency technique or combination of efficiency improvements that are recognized by the energy-rating tool.

The current recognized rating tool is Florida's Building Energy Code or the Energy Performance Index (EPI) rating. As rating tools and methodologies are developed or modified, FPL will review and consider them as a potential program rating standard.

The BuildSmart[R] Program includes an educational effort that will promote the benefits of building homes energy efficiently and support the residential new construction market in their efforts as well. FPL, through its BuildSmart[R] Program, will consult with builders, developers and customers on which efficiency combinations would be most cost-effective. FPL, through its BuildSmart[R] Program, will perform plan reviews and home inspections throughout the construction process and provide certification of completed homes once successfully meeting program standards.

Participation is encouraged by educating customers on the benefits and advantages of building homes that are more energy efficient. These benefits/advantages include:

- installation cost savings - installation cost as compared to retrofit options,
- improved cash flow - no capital investment required, upgrades amortized through mortgage,
- immediate energy and cost savings,
- increased comfort levels with improved design and equipment performance, and
- quality control advantages with FPL 's inspection/certification process.

FPL proposes to modify the existing Program by changing the fee structure. Currently, a fixed fee of $175 is charged by FPL for each participating home, regardless of the level of energy efficiency of the new home. The revised fee structure will be tiered to encourage participation at higher energy efficiency levels, with higher energy efficiency homes having a lower fee.

FPL plans to make residential customers aware of this program through participating builders, community developments, new homebuyers workshops, other trade allies, appropriate advertising and promotional activities.

Description of Program Administration

The BuildSmart^{R} Program is available to all residential customers that construct a home in FPL's service territory, whether built by a developer, a custom builder or an owner-builder. The new home must have whole-house electric air-conditioning to qualify. Each participating developer or custom builder must enter into a BuildSmart^{R} Program Agreement with FPL. An owner builder must enter into a BuildSmart^{R} Program Single Home Agreement with FPL. To be eligible for BuildSmart^{R} certification, builders must comply with all national, state and local codes and ordinances.

FPL reserves the right to perform a series of inspections on each BuildSmart^{R} home to verify that energy-efficiency upgrades are incorporated as submitted. FPL will be the final judge of whether the requirements of the BuildSmart^{R} Program are met.

BuildSmart offers three levels of energy efficiency to select. The Gold Level certifies the home is at least 30% more energy efficient than the minimum required by the Energy Code; the Silver Level is between 20 to 29% more energy efficient; and the Bronze Level is certified to be at least 10% more energy efficient.

Each home is inspected and certified by an FPL Representative accredited by the State of Florida to rate the energy efficiency of homes per the applicable Energy Code. The process begins with each home's set of plans analyzed and the energy calculations done to determine the energy efficiency level. FPL will assist the builder and/or the homebuyer to determine the achievable levels and the measures that are the most cost effective. Just prior to the Certificate of Occupancy being issued, FPL will inspect the home to verify all energy measures called for have been installed and to determine if any changes were made to the home that will affect the energy efficiency level of the home. In addition, an air conditioning duct test is performed to determine the level of tightness of the air ducts. Following this inspection, FPL will re-run the energy calculation, if needed, and then certify the home at its final energy efficiency level. A certificate is then issued for the home and provided to the homeowner indicating the energy level achieved.

The BuildSmart Gold Level is equal to the EPA's Energy Star Program – 5 Star level. FPL will also be able to provide the HERS rating required to obtain this certification from the Energy Star Program.

FPL will offer three different service offerings as part of its BuildSmart^{R} Program. Two service offerings for certification will be available to participating builders. The Basic Service Offering will include an initial inspection and a final inspection. The Premium Service Offering will include the same features as the Basic Service as well as a midpoint inspection. For qualifying homes, in both service offerings, the builder or new homeowner will be awarded appropriate BuildSmart^{R} Certification. Although the per unit savings achieved from both level of services are the same, there is a benefit to the builder/home owner in identifying duct leakage and/or changes to the homes during the construction phase. The third service offering will be for builders which opt not to participate in certification but choose to purchase the EPI calculations performed by FPL as part of FPL's ongoing efforts to recruit participating builders. Builders must pay FPL a fee dependent on which of the three service offerings they select.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, state energy code revisions or rating tool improvements.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The participation levels, energy consumption and demand projections are based on results from the New Home Construction Research Project and the 1999 program evaluation just completed.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can

be found in Appendix A. These analyses show the following benefit-cost ratios: 1.20 Participants, 1.21 RIM, and .99 TRC for the BuildSmart^{R} Program.

Program Evaluation and Monitoring

The feasibility and cost-effectiveness of a residential new construction program were studied in detail during the New Home Construction Research Project which FPL filed a final report on June 1, 1995. Included in this final report were results from an extensive end-use monitoring and engineering evaluation effort coupled with a detailed pilot program market analysis. The results from these research efforts were used to develop and design the BuildSmart^{R} program. The updated demand and energy impacts as utilized in this filing, were validated by a study conducted in 1999. These analyses also included end-use metering and engineering evaluations and were concluded in October 1999.

FPL anticipates that the demand and energy impact evaluation efforts will be valid until there are significant changes in the construction market practices or viable new technology applications emerge. Program participation and efficiency upgrades will be tracked in a BuildSmart^{R} database in which actual results will be compared to those forecasted. FPL will monitor the program's actual results on a continual basis and re-evaluate the research participation levels along with the energy and demand impact data as necessary over time.

Program Name: Residential New Construction (BuildSmart^{R}) Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	44,386	3,140	7.07%
2001	3,462,962	45,904	2,572	6.33%
2002	3,525,089	45,177	3,181	6.56%
2003	3,585,232	44,437	3,128	6.68%
2004	3,643,479	43,717	3,077	6.75%
2005	3,700,888	43,760	4,276	7.25%
2006	3,757,466	43,788	4,279	7.60%
2007	3,813,758	44,225	4,322	7.87%
2008	3,870,300	45,082	4,861	8.20%
2009	3,927,596	46,353	4,998	8.47%

Note: Column a - The total number of customers in the residential rate class.
Column b - The total number of eligible customers in the residential rate class.
Column c - The annual number of participants in the program.
* Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1421	0.93	0.95	4,462,064	2,927	2,979
2001	1421	0.93	0.95	3,654,937	2,398	2,440
2002	1421	0.93	0.95	4,519,488	2,965	3,018
2003	1421	0.93	0.95	4,445,049	2,916	2,968
2004	1421	0.93	0.95	4,372,738	2,869	2,920
2005	1421	0.93	0.95	6,076,319	3,986	4,057
2006	1421	0.93	0.95	6,080,572	3,989	4,060
2007	1421	0.93	0.95	6,141,187	4,029	4,100
2008	1421	0.93	0.95	6,906,841	4,531	4,611
2009	1421	0.93	0.95	7,101,445	4,659	4,741

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1528	1.02	1.04	4,798,950	3,217	3,274
2001	1528	1.02	1.04	3,930,885	2,635	2,682
2002	1528	1.02	1.04	4,860,710	3,259	3,316
2003	1528	1.02	1.04	4,780,651	3,205	3,262
2004	1528	1.02	1.04	4,702,880	3,153	3,209
2005	1528	1.02	1.04	6,535,081	4,381	4,459
2006	1528	1.02	1.04	6,539,656	4,384	4,462
2007	1528	1.02	1.04	6,604,847	4,428	4,506
2008	1528	1.02	1.04	7,428,308	4,980	5,068
2009	1528	1.02	1.04	7,637,605	5,120	5,211

RESIDENTIAL CONSERVATION SERVICE

Program Description

The Residential Conservation Service (RCS) Program is an existing program which FPL intends to continue offering to its residential customers. The RCS Program has been an integral component of FPL's demand side management efforts since the 1980's.

FPL offers its residential energy audits through the RCS Program. The program provides a walk through energy audit, a computer generated Class A audit and a customer assisted energy audit. The walk through energy audits and the computerized Class A audits are conducted by an FPL representative in order to inform residential customers of cost-effective conservation measures and practices that are suitable for the customer's home. The walk through, computerized, and customer assisted energy audit provide a residence's energy analysis directly to the customer, and is based on the customer's responses to an energy survey.

The only change to this Program is to increase the effectiveness of the customer assisted audit. This type of audit has been administered as a mail audit, focused primarily at customers who prefer to receive information in this manner. Based on advances in technology and results from FPL conducted customer research, the customer assisted audit will be expanded to include telephone and internet based audits. It is expected that this change will increase the number of customers who participate in an audit (increasing the overall energy efficiency of our customers) and decrease the cost per audit.

In addition to providing conservation information, the RCS Program also serves as the vehicle for introducing customers to residential conservation incentive programs featuring incentive payments for qualified customers to help them overcome the initial cost of implementing conservation measures.

During the RCS Program audit, the auditor discusses a variety of potential conservation measures with the customer. In addition, if the customer is eligible for participating in any, or all, of the residential conservation programs featuring incentive payments, the customer receives a Watt-$aver Certificate(s), which can be used by the customer as a partial payment for the cost of the conservation measure with the participating contractors. Upon request, FPL's representative also provides a listing of participating contractors from which the customer can choose.

Description of Program Administration

The number of audits which FPL will conduct in the future are related to the number of projected participants for the residential conservation programs featuring incentive payments as well as customers' requests for evaluations of their overall energy conservation opportunities.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, and application assumptions.

Projected Participation and Savings

FPL does not project demand or energy savings associated with the performance of a home energy audit. Demand and energy savings attributable to the implementation of measures identified during the performance of a residential home energy audit will be reported through their respective programs. It should be pointed out that FPL recommends measures beyond FPL's programs, and there should be additional savings associated with these measures.

Cost Effectiveness Analysis

Since FPL does not project demand or energy savings from the implementation of this program, a cost effectiveness analysis is not applicable.

Program Monitoring and Evaluation

Since FPL does not project demand or energy savings from the implementation of this program, separate monitoring and evaluation is not necessary for RCS. Savings achieved through other programs will be monitored and evaluated in those programs.

Program Name: Residential Conservation Service Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	3,398,802	50,000 - 70,000	1.5% - 2.1%
2001	3,462,962	3,462,962	50,000 - 70,000	2.9% - 4.0%
2002	3,525,089	3,525,089	50,000 - 70,000	4.3% - 6.0%
2003	3,585,232	3,585,232	50,000 - 70,000	5.6% - 7.8%
2004	3,643,479	3,643,479	50,000 - 70,000	6.9% - 9.6%
2005	3,700,888	3,700,888	50,000 - 70,000	8.1% - 11.3%
2006	3,757,466	3,757,466	50,000 - 70,000	9.3% - 13.0%
2007	3,813,758	3,813,758	50,000 - 70,000	10.5% - 14.7%
2008	3,870,300	3,870,300	50,000 - 70,000	11.6% - 16.3%
2009	3,927,596	3,927,596	50,000 - 70,000	12.7% - 17.8%

Note: Column a - The total number of customers in the residential rate class.
Column b - The total number of eligible customers in the residential rate class.
Column c - The annual number of participants in the program.
* Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	N/A	N/A	N/A	N/A	N/A	N/A
2001	N/A	N/A	N/A	N/A	N/A	N/A
2002	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A
2004	N/A	N/A	N/A	N/A	N/A	N/A
2005	N/A	N/A	N/A	N/A	N/A	N/A
2006	N/A	N/A	N/A	N/A	N/A	N/A
2007	N/A	N/A	N/A	N/A	N/A	N/A
2008	N/A	N/A	N/A	N/A	N/A	N/A
2009	N/A	N/A	N/A	N/A	N/A	N/A

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	N/A	N/A	N/A	N/A	N/A	N/A
2001	N/A	N/A	N/A	N/A	N/A	N/A
2002	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A
2004	N/A	N/A	N/A	N/A	N/A	N/A
2005	N/A	N/A	N/A	N/A	N/A	N/A
2006	N/A	N/A	N/A	N/A	N/A	N/A
2007	N/A	N/A	N/A	N/A	N/A	N/A
2008	N/A	N/A	N/A	N/A	N/A	N/A
2009	N/A	N/A	N/A	N/A	N/A	N/A

SECTION III - COMMERCIAL/INDUSTRIAL PROGRAMS

A. Commercial/Industrial Program Overview

FPL's DSM Plan offers nine (9) Commercial/Industrial Conservation Programs. FPL will continue to offer with some modifications the following programs: Commercial/Industrial Heating, Ventilating and Air Conditioning, Commercial/Industrial Efficient Lighting, and Commercial/Industrial Building Envelope. While the program descriptions that follow provide details as to the proposed changes to each program, the significant modifications being proposed are:

- **Commercial/Industrial Heating Ventilating and Air Conditioning** – This program will have a revised incentive structure, eligible technologies will be slightly expanded, and more stringent commissioning requirements.

- **Commercial/Industrial Efficient Lighting** – This program will have a revised incentive structure.

- **Commercial/Industrial Building Envelope** – In addition to revised incentive structures, the eligible technologies will be expanded.

- **Business On Call** – This program is being expanded to include customers is the 21 to 499 kw range.

The Business Custom Incentive, Business Energy Evaluation, Commercial/Industrial Load Control, and Cogeneration and Small Power Production programs remain unchanged. In addition, FPL is proposing one new program. The Commercial/Industrial Demand Reduction

program is designed to reduce peak demand by controlling customer loads of 200 kw or greater during periods of extreme demand or capacity shortages. FPL is also proposing to terminate the Off Peak Battery Charging program.

B. DETAILED PROGRAM DESCRIPTIONS

COMMERCIAL/INDUSTRIAL HEATING, VENTILATING, AND AIR CONDITIONING PROGRAM

Program Description

FPL's Commercial/Industrial Heating, Ventilating, and Air Conditioning (C/I HVAC) Program is designed to reduce the current and future growth of coincident peak demand and energy consumption of commercial and industrial customers by increasing the use of high efficiency heating, ventilating, and air conditioning (HVAC) systems.

FPL will provide an incentive to customers (or their designees), who install qualifying HVAC equipment. The customers will also receive any operating savings from the installation of the equipment.

FPL proposes to make the following modifications to the existing Program:

- Increase the Commercial High Efficiency DX HVAC Program maximum incentive from $77 per kw to $100 per kw.
- Allow water cooled DX heat pumps to use ground water along with closed loop heat exchangers as long as ARI certified temperatures and flows are maintained at the condensing unit.
- Reduce the average kw shift credit for thermal storage from 1 kw per ton to .9 kw per ton to account for the current efficiencies and the actual ratio of air cooled to water cooled equipment being installed in FPL's service territory.
- Increase the maximum thermal storage incentive from $330 per kw to $367 per kw.
- Require the commissioning of thermal storage systems by a Florida Professional Engineer to enhance the savings potential performance for the customer and to ensure

consistent on-peak cooling load shift. A sealed Florida Professional Engineer's letter stating that the thermal storage system is operating as designed will be required prior to issuing the last incentive payment and commissioning incentive.

FPL plans to make commercial and industrial customers aware of this program through dealers, distributors, contractors, other trade allies, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

Description of Program Administration

All commercial and industrial customers are eligible for this program. The program applies to customers who are retrofitting/ replacing existing or installing new HVAC equipment. They must also comply with the participation rules and regulations specified in the FPL Program Standards.

To qualify, the commercial/industrial customer must submit equipment specifications to FPL. These specifications must meet or exceed FPL's Program Standards. FPL's Program Standards shall consist of both equipment and installation requirements. The Standards will be subject to periodic review and change based on factors such as equipment efficiencies, energy code, program results and operational considerations. If changed, they will be submitted to the Commission Staff for review as a change in the Program Standards.

The chiller and DX split/packaged electric equipment incentives are based on efficiency improvements above the Florida Energy Efficiency Code. New high efficiency chillers may include adjustable speed drives. Ventilation measures provide the opportunity to reduce kw by improving the HVAC system for eligible customers. All thermal energy storage systems must use electricity as the primary energy source. The systems must be designed and operated to reduce FPL's summer and winter system peaks. Before the installation of the thermal energy

storage system, the cooling load to be shifted must regularly operate or be designed to operate during FPL's on-peak hours as defined by the current or any subsequent applicable time-of-use rate tariff approved by the Commission.

The incentive for DX split/packaged and chillers electric equipment will not exceed $100 per kw and $77 per kw, respectfully. The incentive for thermal energy storage will not exceed $367 per kw. Incentives for thermal energy storage will include both rebates paid for installations and funding for other inducements such as additional design expenses and commissioning costs. The incentives for ventilation measures will remain at $139 per kw. These incentives are based on cost-effectiveness analyses, an average participant's payback to be not less than 2 years, and the assumption the load being reduced is associated with equipment that operates between the hours of 3:00 P.M. and 6:00 P.M., weekdays, for the months of April through October.

FPL will determine the incentive amount based on:

- Heating and cooling equipment efficiency above the Florida Energy Efficiency Codes with a minimum threshold;
- kw or tons removed from FPL's summer peak period for thermal energy storage or;
- kw or tons reduced for rooftop duct sealing measures.

In order to calculate incentives, the customer will supply FPL with the equipment specifications. FPL will calculate the incentive based on the customer's equipment specifications and FPL Program Standards. All incentive payments will be tracked by a computer system. This system will record a history of incentive payments made to customers.

FPL will do random post installation inspections to verify the proper installation of equipment. The participating customer shall allow FPL, at FPL's discretion, to access, monitor and/or analyze the customer's system.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 1.63 Participants, 1.08 RIM, and 1.53 TRC for the Commercial/Industrial Heating, Ventilating and Air Conditioning program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Commercial/Industrial Heating, Ventilating & Air Conditioning Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	696,495	482,803	17,482	3.62%
2001	711,330	461,059	10,375	6.04%
2002	726,481	440,318	10,383	8.68%
2003	741,955	420,531	10,407	11.57%
2004	757,759	401,655	10,235	14.66%
2005	773,899	383,646	10,072	17.97%
2006	790,383	366,463	9,918	21.52%
2007	807,218	350,068	9,771	25.32%
2008	824,412	334,423	9,633	29.39%
2009	841,972	319,494	9,501	33.73%

Note: Column a - The total summer kw demand reduction for all HVAC equipment of C/I customers.
Column b - The total summer kw demand reduction capability of eligible HVAC equipment.
Column c - The annual number of participants in the program expressed in summer kw demand reduction.
* Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	2,600	0.10	1.00	45,449,431	1,744	17,482
2001	1,178	0.21	1.00	12,221,950	2,201	10,375
2002	1,104	0.22	1.00	11,459,944	2,261	10,383
2003	1,031	0.22	1.00	10,734,011	2,323	10,407
2004	986	0.23	1.00	10,093,414	2,320	10,235
2005	942	0.23	1.00	9,486,362	2,316	10,072
2006	899	0.23	1.00	8,911,146	2,313	9,918
2007	856	0.24	1.00	8,366,071	2,310	9,771
2008	815	0.24	1.00	7,849,534	2,308	9,633
2009	775	0.24	1.00	7,360,017	2,305	9,501

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	2,796	0.11	1.10	48,880,868	1,916	19,213
2001	1,267	0.23	1.10	13,144,709	2,419	11,402
2002	1,187	0.24	1.10	12,325,171	2,485	11,411
2003	1,109	0.25	1.10	11,544,430	2,553	11,438
2004	1,061	0.25	1.10	10,855,468	2,549	11,248
2005	1,013	0.25	1.10	10,202,584	2,546	11,069
2006	966	0.26	1.10	9,583,939	2,542	10,900
2007	921	0.26	1.10	8,997,710	2,539	10,739
2008	876	0.26	1.10	8,442,174	2,536	10,586
2009	833	0.27	1.10	7,915,699	2,533	10,442

COMMERCIAL/INDUSTRIAL EFFICIENT LIGHTING PROGRAM

Program Description

The Commercial/Industrial Efficient Lighting (CIL) Program is designed to reduce FPL's commercial and industrial on-peak lighting loads and energy usage. This program encourages eligible commercial and industrial customers to install high efficiency, cost effective lighting measures at time of replacement.

Through the CIL program, FPL will provide incentives to customers, or their designees, for the installation of cost effective, high efficiency lighting retrofit measures. The CIL participating customer will also receive any energy and operating savings derived from the installation of the higher efficiency lighting measures.

The proposed Commercial/Industrial Efficient Lighting Program is basically unchanged from the existing program. The only substantive change to this program is to update the maximum cost-effective incentive from $75 per kw to $119 per kw.

FPL plans to make commercial and industrial customers aware of this program through dealers, distributors, contractors, retail outlets and other trade allies, as well as direct contact with potential participants by FPL personnel.

Description of Program Administration

The CIL Program will be available to commercial and industrial customers who are ready to receive service from FPL and whose facility is a completed building for which a Certificate of Occupancy, or equivalent approval for occupancy, has been issued. Participating customers must replace existing lighting measures (measures are units of qualifying lighting technologies -- i.e., ballast's, fluorescent and H.I.D. fixtures) with higher efficiency lighting measures that meet the

technical requirements, are cost effective, and reduce on-peak summer loads. For customers with facilities that have twenty (20) or less lighting fixtures (a self-contained combination of luminaire, lamp and, if necessary, ballast), all qualifying measures must be performed at the same time and included on the same application. For customers with more than twenty (20) lighting fixtures, multiple incentive applications may be submitted as long as a minimum of twenty (20) measures are installed at each application.

All proposed measures must meet minimum power quality specifications for power factor and total harmonic distortion established by FPL, which will be listed in the Program Standards. Product specific power quality ratings reflecting test results from an accredited independent testing facility must be provided. The lighting levels resulting from the installation of measures must meet or exceed standard levels recommended by the Illuminating Engineering Society of North America.

Installations may be performed by either the customer or a contractor. Installations must result in a net installed kw reduction, and the customer must provide assurance that the lighting fixtures for which lighting measures are provided an incentive will operate between the hours of 3:00 P.M. and 6:00 P.M., weekdays, for the months of April through October.

Incentives will be paid to customers, or their designees, and will be based upon the net installed kw reduction for specific measures. Measures will be aggregated into groups reflecting permanence and other factors, and incentives will not exceed an average of $119 per summer peak kw reduced for all installations. Within cost effectiveness parameters, incentives will be adjusted over time in response to changing market conditions and emergence of new measures. Current incentive values will be listed in the approved Program Standards.

All installations shall be open to inspections before and after installation and prior to payment of incentives. Qualifying measures must be purchased and installed on or after the date the modified program is approved. Proof of purchase and purchase price must be provided to FPL prior to an incentive being paid.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 2.34 Participants, 1.06 RIM, and 1.98 TRC for the Commercial/Industrial Efficient Lighting program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Commercial/Industrial Efficient Lighting Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	764,864	426,054	4,634	1.09%
2001	781,156	409,618	2,871	1.83%
2002	797,794	393,873	3,051	2.68%
2003	814,787	378,787	3,743	3.77%
2004	832,142	364,331	4,203	5.08%
2005	849,867	350,475	4,945	6.69%
2006	867,969	337,192	4,724	8.35%
2007	886,457	324,456	4,512	10.07%
2008	905,338	312,244	4,312	11.85%
2009	924,622	300,531	4,121	13.68%

Note: Column a - The total summer kw demand reduction for all lighting equipment of C/I customers.
Column b - The total summer kw demand reduction capability of eligible lighting equipment.
Column c - The annual number of participants in the program expressed in summer kw demand reduction.
* Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	3,699	1.13	1.00	17,142,438	5,252	4,634
2001	3,713	1.13	1.00	10,660,789	3,256	2,871
2002	3,718	1.13	1.00	11,343,769	3,460	3,051
2003	3,724	1.13	1.00	13,937,802	4,245	3,743
2004	3,728	1.13	1.00	15,668,690	4,767	4,203
2005	3,733	1.13	1.00	18,460,234	5,609	4,945
2006	3,736	1.13	1.00	17,646,417	5,358	4,724
2007	3,738	1.13	1.00	16,869,394	5,119	4,512
2008	3,741	1.13	1.00	16,131,124	4,891	4,312
2009	3,744	1.13	1.00	15,427,555	4,675	4,121

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	3,979	1.25	1.10	18,436,694	5,772	5,093
2001	3,994	1.25	1.10	11,465,680	3,578	3,155
2002	3,998	1.25	1.10	12,200,225	3,803	3,353
2003	4,005	1.25	1.10	14,990,108	4,665	4,114
2004	4,010	1.25	1.10	16,851,678	5,239	4,619
2005	4,015	1.25	1.10	19,853,983	6,165	5,435
2006	4,018	1.25	1.10	18,978,723	5,889	5,191
2007	4,021	1.25	1.10	18,143,035	5,626	4,959
2008	4,024	1.25	1.10	17,349,025	5,376	4,739
2009	4,027	1.25	1.10	16,592,337	5,138	4,529

COMMERCIAL/INDUSTRIAL BUILDING ENVELOPE PROGRAM

Program Description

The Commercial/Industrial Building Envelope (CIBE) Program is designed to reduce FPL's commercial and industrial heating, ventilating, and air conditioning (HVAC) loads. This program will encourage eligible commercial and industrial customers to increase the efficiency of qualifying portions of their building's envelope, which will reduce HVAC energy consumption and demand.

This program will provide incentives to customers, or their designees, for the installation of cost-effective high-efficiency building envelope measures and products, such as window treatments, roof/ceiling insulation and reflective roof coatings. The CIBE participating customer will also receive all energy, demand, and operational savings from the installation of the higher efficiency measures.

FPL proposes to make the following modifications to the existing Program:

- The program incentive structure will change from a range not exceeding $155 to $288 per kw of summer demand reduction to a range not to exceed $150 to $320 per kw of summer demand reduction, depending on technology.
- Reflective roof coatings will be added as a qualifying technology

FPL plans to make commercial and industrial customers aware of this program through dealers, distributors, contractors, and other trade allies, as well as through direct contact with potential participants by FPL personnel.

Description of Program Administration

The CIBE program will be available to commercial and industrial customers who are currently receiving electric service from FPL and whose facility is a completed building for which a Certificate of Occupancy, or equivalent approval for occupancy, has been issued. Participating customers must either replace specific existing building envelope components with higher efficiency products, or enhance these components with higher efficiency retrofit measures.

All measures and products will be required to meet technical eligibility requirements, which will be detailed in the CIBE Program Standards. The Program Standards will be subject to periodic review and may be modified over time in response to factors such as, but not limited to, changing program delivery strategies, market needs, program evaluation results, and incentive amounts.

In order to qualify for the CIBE program, a customer must provide assurance that the portion of the building for which an incentive is being provided is conditioned by an HVAC system using electricity as its primary fuel source. This HVAC system must operate between the hours of 3:00 P.M. and 6:00 P.M., weekdays, for the months of April through October.

Products and measures which are required by or necessary to meet the requirements of any applicable federal, state, or local municipal building or energy codes are not eligible for CIBE program incentives. Eligible installations shall be open to inspections before and after installation for verification of qualifying criteria, as well as for monitoring and assessment of the impact of the installed measures and products. The Program Standards will detail all qualifying requirements for participation in the CIBE program.

The CIBE program incentives will be capped at an average incentive of $303 per summer kw reduced, which is supported by the cost-effectiveness analyses shown in Appendix A. Incentive

payments will be tracked in a computer database over the lifetime of the CIBE program. Within cost-effectiveness parameters, incentives may be adjusted over the program's lifetime in response to program evaluation results, changing market conditions, and the emergence of new technologies.

Incentive amounts to the customer will be based upon the efficiency of existing building envelope components as well as the efficiency of the installed measures or products. CIBE program incentives for each measure or product will be limited to provide no less than a two-year payback on the incremental installation cost to the average participant. Incentive amounts for individual participants will be limited to the actual incremental installation cost of the building envelope measures or products.

Incentive certificates will be issued to qualifying customers prior to the installation of building envelope measures and products. It is expected that these certificates will be submitted by the customer to either the contractor or to FPL for payment of the incentive. Prior to payment of incentives, FPL will require proper documentation of all installations and will make the final determination as to eligibility and applicability.

Qualifying measures and products must be installed on or after the date the CIBE program is approved.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 1.32 Participants, 1.08 RIM, and 1.23 TRC for the Commercial/Industrial Building Envelope program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Commercial/Industrial Building Envelope Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	1,328,466	651,588	5,100	0.78%
2001	1,356,762	641,765	3,766	1.38%
2002	1,385,662	632,171	3,734	1.99%
2003	1,415,176	622,795	3,702	2.62%
2004	1,445,319	613,631	3,671	3.25%
2005	1,476,105	604,672	3,640	3.91%
2006	1,507,546	595,913	3,609	4.57%
2007	1,539,656	587,348	3,579	5.24%
2008	1,572,451	578,972	3,549	5.93%
2009	1,605,944	570,781	3,519	6.63%

Note: Column a - The total summer kw demand reduction for building envelope technologies of C/I customers.
Column b - The total summer kw demand reduction capability of eligible building envelope technologies.
Column c - The annual number of participants in the program expressed in summer kw demand reduction.
* Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1,437	0.11	1.00	7,327,048	559	5,100
2001	1,477	0.18	1.00	5,564,602	671	3,766
2002	1,476	0.18	1.00	5,512,897	667	3,734
2003	1,475	0.18	1.00	5,461,962	662	3,702
2004	1,474	0.18	1.00	5,411,778	657	3,671
2005	1,473	0.18	1.00	5,362,330	652	3,640
2006	1,472	0.18	1.00	5,313,602	648	3,609
2007	1,471	0.18	1.00	5,265,576	643	3,579
2008	1,470	0.18	1.00	5,218,237	639	3,549
2009	1,469	0.18	1.00	5,171,571	634	3,519

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1,545	0.12	1.10	7,880,241	614	5,605
2001	1,589	0.20	1.10	5,984,731	738	4,139
2002	1,588	0.20	1.10	5,929,121	733	4,104
2003	1,587	0.20	1.10	5,874,340	727	4,069
2004	1,586	0.20	1.10	5,820,368	722	4,034
2005	1,585	0.20	1.10	5,767,187	717	4,000
2006	1,583	0.20	1.10	5,714,779	712	3,966
2007	1,582	0.20	1.10	5,663,127	707	3,933
2008	1,581	0.20	1.10	5,612,215	702	3,900
2009	1,580	0.20	1.10	5,562,025	697	3,868

BUSINESS CUSTOM INCENTIVE PROGRAM

Program Description

The Business Custom Incentive (BCI) Program is designed to encourage the implementation by FPL's commercial and industrial customers of unique energy conservation measures or projects not covered by other FPL programs, but which cost-effectively reduce or shift electric demand from FPL's system peak.

FPL plans to make commercial and industrial customers aware of this program through direct contact between FPL field representatives and FPL's commercial/industrial customers.

FPL currently operates the Business Custom Incentive Program. There are no modifications proposed for this program.

Description of Program Administration

The program is available to all of FPL's commercial and industrial customers. In order for a conservation measure or project to be eligible, it must not be covered by another of FPL's conservation programs, and it must reduce or shift at least 25 kw between the hours of 3:00 P.M. and 6:00 P.M., weekdays, for the months of April through October. The demand and energy savings attributable to the conservation project must be verifiable through monitoring. Both retrofit and new construction projects are eligible. In order to qualify for an incentive, the Rate Impact Measure (RIM) Test benefit-to-cost ratio of a project, including the incentive, must be at least 1.01. The project must also pass the Participants Test.

Incentives are paid based on the cost-effectiveness achieved under the RIM Test. To determine the incentive amount available, the project will be evaluated utilizing the assumptions of the

current integrated resource plan, either as a replacement of a portion of existing DSM resources included in the resource plan, or as an addition of resources beyond the needs satisfied by DSM in the current resource plan. If it is determined that the project is a replacement of some existing DSM resources, it will have, with the incentive, at least the same net benefits per kw under RIM as the competing DSM, as well as a minimum 1.01 benefit-to-cost ratio against the same generation resource deferred by the competing DSM. If the project is positioned as an addition, it will, with the incentive, have at least a 1.01 RIM benefit-to-cost ratio against the next required generation resource beyond the needs satisfied by DSM in the current resource plan. FPL will determine whether the project is a replacement or addition of resources based on all project and resource plan information available at the time.

In addition, the incentive amount shall not cause the customer's payback to be less than two years. The number and timing of payments toward the total incentive amount will be determined by FPL for each project on an individual basis.

Any customer receiving an incentive under this program must remain served by FPL for its electricity-related needs for at least five years from the date of payment of the incentive, or the customer shall refund the incentive amount in full to FPL. FPL will be solely responsible for determining the eligibility of any measure or project, performing the RIM and Participant cost-effectiveness tests of any measure or project, and determining the available incentive.

The program is not available for: operational or maintenance improvements that are not permanent, equipment eligible under other FPL programs (unless bundled with and related to equipment not eligible under another FPL program), equipment or measures which FPL is actively researching, fuel switching, power generation technologies, or wheeling of any type.

Projected Participation and Savings

FPL has incorporated into the Business Custom Incentive Program the projected DSM contributions of the off peak battery charging measures included in its Adoption of Numeric Conservation Goals Report. FPL anticipates measures other than these in the Program, but cannot meaningfully quantify the projected contributions from these measures at this time. Therefore, the projections for the Business Custom Incentive Program are those for the off peak battery charging measures. These projections are shown in Attachment A, B and C.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. The analyses for the off peak battery charging measures resulted in the following benefit-cost ratios: 1.67 Participants, 1.95 RIM, and 3.00 TRC. For other measures, FPL cannot predict at this time the demand or energy reduction profiles that will result, so cost effectiveness evaluations will be performed at the time such measures are proposed for participation in the program. Only measures which at least at 1.01 Rim and Participants tests ratios will qualify in the Program.

Program Monitoring and Evaluation

All BCI projects will be monitored. Monitoring will consist of one of two levels of activity based on FPL's determination:

- **High-Moderate confidence projects -** measures with which FPL has significant experience and/or confidence as to the performance characteristics. For these projects, FPL will require, at a minimum, an engineering analysis with relevant calculations. FPL, at its determination, may also require a feasibility study performed by an independent, registered professional engineer, and/or field monitoring of the project.

- **Innovative projects** - measures with which FPL has no significant experience or confidence with the performance characteristics. For these projects, FPL will require field monitoring/measurement of the project's performance.

The costs for all monitoring equipment and activities will be recognized in the cost-effectiveness determination for each project. FPL will maintain a database of the kw and kWh savings for participants in the program.

Program Name: Business Custom Incentive Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	23,760	2,970	80	2.69%
2001	23,760	2,890	125	7.09%
2002	23,760	2,765	150	12.84%
2003	23,760	2,615	125	18.36%
2004	23,760	2,490	150	25.30%
2005	23,760	2,340	125	32.26%
2006	23,760	2,215	150	40.86%
2007	23,760	2,065	125	49.88%
2008	23,760	1,940	150	60.82%
2009	23,760	1,790	125	72.91%

Note: Column a - The total summer kw demand reduction for battery charging customers.
Column b - The total summer kw demand reduction of targeted battery charging customers.
Column c - The annual number of participants in the program expressed in summer kw demand reduction.
* Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	0	0.09	1.00	0	7	80
2001	0	0.09	1.00	0	12	125
2002	0	0.09	1.00	0	14	150
2003	0	0.09	1.00	0	12	125
2004	0	0.09	1.00	0	14	150
2005	0	0.09	1.00	0	12	125
2006	0	0.09	1.00	0	14	150
2007	0	0.09	1.00	0	12	125
2008	0	0.09	1.00	0	14	150
2009	0	0.09	1.00	0	12	125

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	0	0.10	1.10	0	8	88
2001	0	0.10	1.10	0	13	137
2002	0	0.10	1.10	0	15	165
2003	0	0.10	1.10	0	13	137
2004	0	0.10	1.10	0	15	165
2005	0	0.10	1.10	0	13	137
2006	0	0.10	1.10	0	15	165
2007	0	0.10	1.10	0	13	137
2008	0	0.10	1.10	0	15	165
2009	0	0.10	1.10	0	13	137

BUSINESS ON CALL PROGRAM

Program Description

The Business On Call Program is designed primarily to reduce system peak demand, but will also reduce energy consumption. The Business On Call Program involves the installation of direct load control equipment on customers' direct expansion (DX), central air conditioners, allowing FPL to control customer loads on an as-needed basis. This is an existing program that FPL proposes to continue offering to General Service (GS) customers. In addition, FPL will also include General Service Demand (GSD) customers as well.

FPL plans to make commercial and industrial customers aware of this program through contractors, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

Currently, the existing Business On Call program is available to all General Service (GS) customers that have a monthly demand billing of less than 20 kw. These customers are individually metered and have DX central air conditioners serving their facility. FPL is proposing to modify this program to include customers that have a monthly billing demand between 21 and 499 kw, FPL's General Service Demand (GSD) rate. The recently completed Demand Load Control R&D Project provided the required information to ensure that customers in the 21 to 499 kw range are good candidates for this program. The revised program will offer another group of FPL customers the opportunity to participate in the load control program. The customer will not only receive a credit each month during the offering, but will also contribute to the reduction of FPL 's coincident peak demands. The customer incentives will remain the same as currently cost-effective. The revised Business On Call Program tariff sheets, Schedule GSL, are attached.

Description of Program Administration

The Business On Call Program will be available to commercial and industrial customers with a demand of 499 kw or less, are individually metered and have DX central air conditioners that can be successfully interrupted by FPL when needed. A customer may sign-up if the facility has one or more DX central air conditioning units serving the facility. Customers who participate in the Program will be eligible based on three primary factors: whether the customer has the proper type of air conditioning equipment, whether their service characteristics (voltage, etc.) are compatible with existing load control equipment, and whether the customer receives service from a substation which has load control equipment installed.

Participants in the Business On Call Program will receive an incentive payment, in the form of a monthly credit, of $2.00 per ton of air conditioning, per month. The tonnage will be based on the nameplate rating of the customer's air conditioning system and will be rounded to the nearest one-half ton. Once the customer signs up for the program, the installation request will be sent to a contractor for installation. Once the installation is completed, the contractor sends the paperwork to FPL, the installation is then entered into the Load Management Information System (LMIS), resulting in the activation of the equipment at the customer's facility. Upon installation and inspection of the load management equipment, the customer will receive a monthly credit on his/her electric bill.

The incentives will only be paid during the cooling months of April through October. FPL maintains an internal audit trail for all incentive payments by means of its LMIS system. This computer database maintains interview and installation information for each program participant as well as a history of all incentives paid.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to,

technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: infinite Participants, 1.28 RIM, and 2.72 TRC for the Business On Call program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to

be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

FLORIDA POWER & LIGHT COMPANY

GENERAL SERVICE LOAD MANAGEMENT PROGRAM
(FPL "BUSINESS ON CALL" PROGRAM)

SCHEDULE: GSL

AVAILABLE:

Available only within the geographic areas served by the Company's Load Management system.

APPLICATION:

To customers receiving service under Rate Schedules GS-1 and GSD-1 who elect to participate in this program, who utilize direct expansion central electric air conditioning and have operating hours that include 3 p.m. to 5 p.m., a minimum of four weekdays per week.

SERVICE:

The same as specified in Rate Schedules GS-1 and GSD-1.

LIMITATION OF SERVICE:

The same as specified in Rate Schedules GS-1 and GSD-1. Central electric air conditioning equipment shall be interrupted at the option of the Company by means of load management equipment installed on the Customer's premises.

MONTHLY CREDIT:

Customers receiving service under this schedule will receive a credit on the monthly bill as follows:

DEVICE	APPLICABILITY	CREDIT
Central electric air conditioning	April - October	$2 per ton of air conditioning

The total monthly credit shall not exceed 40 percent of the Rate Schedules GS-1 and GSD-1 non-fuel energy and (where applicable) base demand charges actually incurred for the month and no credit will be applied to reduce the minimum bill specified on Rate Schedules GS-1 and GSD-1.

The air conditioning tonnage will be calculated by dividing the name plate BTU rating by 12,000 BTUs per ton. The tonnage will then be rounded to the nearest half-ton to calculate the monthly credit amount.

INTERRUPTION SCHEDULE:

The Customer's participating central electric air conditioning equipment will be interrupted only during the following period, except under emergency conditions:

April 1 through October 31: 2 p.m. to 10 p.m.

Central electric air conditioning equipment may be interrupted an accumulated total of 15 minutes during any 30-minute period with a cumulative interruption time of up to 180 minutes per day.

The limitations on interruptions of central electric air conditioning equipment shall not apply during emergencies on the Company's system or to interruptions caused by force majeure or other causes beyond the control of the Company.

(Continued on Sheet No. 8.110)

FLORIDA POWER & LIGHT COMPANY

GENERAL SERVICE LOAD MANAGEMENT PROGRAM
(FPL "BUSINESS ON CALL" PROGRAM)

SCHEDULE: GSL

AVAILABLE:

Available only within the geographic areas served by the Company's Load Management system.

APPLICATION:

To customers receiving service under Rate Schedules GS-1 and GSD-1 who elect to participate in this program, who utilize direct expansion central electric air conditioning and have operating hours that include 3 p.m. to 5 p.m., a minimum of four weekdays per week.

SERVICE:

The same as specified in Rate Schedules GS-1 and GSD-1.

LIMITATION OF SERVICE:

The same as specified in Rate Schedules GS-1 and GSD-1. Central electric air conditioning equipment shall be interrupted at the option of the Company by means of load management equipment installed on the Customer's premises.

MONTHLY CREDIT:

Customers receiving service under this schedule will receive a credit on the monthly bill as follows:

DEVICE	APPLICABILITY	CREDIT
Central electric air conditioning	April - October	$2 per ton of air conditioning

The total monthly credit shall not exceed 40 percent of the Rate Schedules GS-1 and GSD-1 non-fuel energy and (where applicable) base demand charges actually incurred for the month and no credit will be applied to reduce the minimum bill specified on Rate Schedules GS-1 and GSD-1.

The air conditioning tonnage will be calculated by dividing the name plate BTU rating by 12,000 BTUs per ton. The tonnage will then be rounded to the nearest half-ton to calculate the monthly credit amount.

INTERRUPTION SCHEDULE:

The Customer's participating central electric air conditioning equipment will be interrupted only during the following period, except under emergency conditions:

April 1 through October 31: 2 p.m. to 10 p.m.

Central electric air conditioning equipment may be interrupted an accumulated total of 15 minutes during any 30-minute period with a cumulative interruption time of up to 180 minutes per day.

The limitations on interruptions of central electric air conditioning equipment shall not apply during emergencies on the Company's system or to interruptions caused by force majeure or other causes beyond the control of the Company.

(Continued on Sheet No. 8.110)

Program Name: Business On Call Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	420,366	406,854	3,030	0.74%
2001	429,320	412,778	4,585	1.84%
2002	438,465	417,338	3,668	2.70%
2003	447,804	423,009	3,668	3.53%
2004	457,342	428,879	3,668	4.34%
2005	467,084	434,953	3,668	5.12%
2006	477,033	441,234	2,751	5.67%
2007	487,193	448,643	2,751	6.19%
2008	497,571	456,270	2,751	6.69%
2009	508,169	464,117	1,376	6.88%

Note: Column a - The total summer kw demand reduction of controllable load attributable to C/I customers
Column b - The total summer kw demand reduction of controllable load for eligible C/I customers.
Column c - The annual number of participants in the program expressed in summer kw demand reduction.
* Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	126	0.00	1.00	381,416	0	3,030
2001	87	0.00	1.00	396,771	0	4,585
2002	89	0.00	1.00	326,436	0	3,668
2003	89	0.00	1.00	326,436	0	3,668
2004	89	0.00	1.00	326,436	0	3,668
2005	89	0.00	1.00	326,436	0	3,668
2006	93	0.00	1.00	256,102	0	2,751
2007	93	0.00	1.00	256,102	0	2,751
2008	93	0.00	1.00	256,102	0	2,751
2009	93	0.00	1.00	128,051	0	1,376

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	135	0.00	1.10	410,213	0	3,330
2001	93	0.00	1.10	426,727	0	5,039
2002	96	0.00	1.10	351,082	0	4,031
2003	96	0.00	1.10	351,082	0	4,031
2004	96	0.00	1.10	351,082	0	4,031
2005	96	0.00	1.10	351,082	0	4,031
2006	100	0.00	1.10	275,437	0	3,023
2007	100	0.00	1.10	275,437	0	3,023
2008	100	0.00	1.10	275,437	0	3,023
2009	100	0.00	1.10	137,719	0	1,512

COMMERCIAL/INDUSTRIAL DEMAND REDUCTION PROGRAM

Program Description

The Commercial/Industrial Demand Reduction program is designed to reduce coincident peak demand by controlling customer loads of 200 kw or greater during periods of extreme demand or capacity shortages. Participation in the program involves the installation of direct load control equipment on the customers' electrical switch gear to allow FPL to control customer loads. Customers in the program contract for a firm demand level which may not be exceeded during control periods. All other loads are subject to direct control by FPL. Participants receive advance notification of load control events via a FPL provided notification system installed at the customer's location. Participants in the program receive a monthly credit for allowing FPL to control their loads.

FPL will make eligible commercial and industrial customers aware of this program through direct contact with their FPL Account Managers.

Description of Program Administration

The Commercial/Industrial Demand Reduction Program will be available to customers served under Rate Schedules GSD-1, GSDT-1, GSLD-1, GSLDT-1, GSLD-2, GSLDT-2, GSLD-3 and GSDLT-3 that allow FPL to control at least 200 kw of their load. Customers may participate in this program by allowing FPL to directly control selected switch gear in the customer's facility or to transfer the load to the customer's standby generator.

Participants in the Commercial/Industrial Demand Reduction Program will receive a monthly incentive credit of $4.75 per kw based on their average demand during a specified "controllable rating period" less their Firm Demand. The "controllable rating period" shall be those periods specified in the Commercial/Industrial Demand Reduction Rider, which are consistent with

FPL's typical system peak periods. The incentive (credit) is applied to the customer's monthly demand charges. The customer's Firm Demand is that level of demand not subject to direct load control by FPL.

The customer begins service on the Commercial/Industrial Demand Reduction Program after successfully demonstrating its load can be reduced to the Firm Demand during a not less than one hour load control test conducted and monitored by FPL.

Participants in the Commercial/Industrial Demand Reduction Program shall not have their non-firm load served on a firm service basis until service has been terminated under the Commercial/Industrial Demand Reduction rider.

The level of "Firm Demand" shall not be exceeded during the periods when FPL is controlling the customer's load. If the customer exceeds the "Firm Demand" during a period when FPL is controlling load, then the customer will be billed $4.75 per kw for the excess kw above the contracted firm demand for the prior 60 months, or the number of months the customer has been billed under this rate schedule, which ever is less. A customer will not be penalized or rebilled twice for the same excess kw. The customer will also be billed a penalty charge of $1.00 per kw of excess kw for each month of rebilling. However, if the cause for the customer's failure to meet its firm demand is a result of a) force majeure events, b) maintenance of generation equipment or switch gear necessary for the implementation of load control, which is performed at a pre-arranged time and date mutually agreeable to FPL and the customer, c) adding firm load that was not previously non-firm load to the customer's facility, d) an event affecting local, state, or national security, or e) an event whose nature requires that space launch activities be placed in the critical mode (requiring a closed-loop configuration of FPL's transmission system) as designated and documented by the NASA Test Director at Kennedy Space Center and/or the

USAF Range Safety Officer at Cape Canaveral Air Force Station, the re-billing and penalty will not be imposed.

Compliance with Firm Demands is verified after each event on an individual customer basis. For those customers that exceed their Firm Demand level during a load control event, the causes for exceeding Firm Demand are investigated to determine if they meet allowed exclusions to the penalty or if they are to be penalized.

A "Continuity of Service Provision" is available which allows customers to continue using power during load control events when power is available from non-FPL providers.

Service under this rider requires a five-year termination notice, except in very specific circumstances set forth in the Rider. This termination notice ensures that non-firm load that is being deferred by the avoided unit is not placed back on the FPL system without giving FPL the ability to plan and respond to that load. Customers are allowed to exit the Commercial/Industrial Demand Reduction rider under certain conditions, but will be penalized for returning to Firm Service without meeting those conditions.

To establish initial qualification for service under this program, the customer must have had a demand during the summer "controllable rating period" (3:00 P.M. to 6:00 P.M., weekdays, April through October) for at least three of the previous twelve months of at least 200 kw greater than their Firm Demand. This prevents low load factor, seasonal customers from realizing program savings without providing the corresponding benefits.

Interconnection of the FPL control circuit and customer's energy management system is allowed under special circumstances where prevention of human intervention in control activities can be assured.

The proposed Commercial/Industrial Demand Reduction Rider and Customer Agreement are attached.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The types of customers that are potential candidates for this program include office buildings, water and sewer plants, hospitals, computer centers and industrial process customers such as steel mills. The energy consumption and demand reduction projections are based on FPL's experience with its other load control programs.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: infinite Participants, 1.13 RIM and 7.28 TRC for the Commercial/Industrial Demand Reduction program.

Program Monitoring and Evaluation

The system that is utilized to activate demand reductions is also used to monitor individual participant's performance during control/interruption periods. A check of individual participant's performance is done following each of these control/interruption periods. In addition, FPL continually monitors the status of the options through periodic reviews of program performance indicators (no. of signups, etc.) . The information necessary to monitor these program performance indicators is maintained in computer and/or paper files.

COMMERCIAL/INDUSTRIAL DEMAND REDUCTION RIDER

& CUSTOMER AGREEMENT

FLORIDA POWER & LIGHT COMPANY

COMMERCIAL INDUSTRIAL DEMAND REDUCTION RIDER (CDR)
(OPTIONAL)

AVAILABLE:

In all territory served. Available to any commercial or industrial customer receiving service under Rate Schedules GSD-1, GSDT-1, GSLD-1, GSLDT-1, GSLD-2, GSLDT-2, GSLD-3, or GSLDT-3, through the execution of a Commercial Industrial Demand Reduction Agreement in which the load control provisions of this rider can feasibly be applied.

LIMITATION OF AVAILABILITY:

This rider may be modified or withdrawn subject to determinations made under Commission Rules 25-17.0021(4), F.A.C., Goals for Electric Utilities and 25-6.0438, F.A.C., Non-Firm Electric Service - Terms and Conditions or any other Commission determination.

APPLICATION:

For electric service provided to any commercial or industrial customer receiving service under Rate Schedule GSD-1, GSDT-1, GSLD-1, GSLDT-1, GSLD-2, GSLDT-2, GSLD-3, or GSLDT-3, who as a part of the Commercial Industrial Demand Reduction Agreement between the Customer and the Company, agrees to allow the Company to control at least 200 kW of the Customer's load during periods when the Company is controlling load. A Customer shall enter into a Commercial Industrial Reduction Demand Agreement with the Company to be eligible for this rider. To establish the initial qualification for this rider, the Customer must have had a Utility Controlled Demand during the summer Controllable Rating Period (April through October) for at least three out of seven (7) months of at least 200 kW greater than the Firm Demand level specified in Section 4 of the Commercial Industrial Demand Reduction Agreement. The Utility Controlled Demand shall not be served on a firm service basis until service has been terminated under this rider.

LIMITATION OF SERVICE:

Customers participating in the General Service Load Management Program (FPL "Business On Call" Program) are not eligible for this rider.

MONTHLY RATE:

All rates and charges under Rate Schedules GSD-1, GSDT-1, GSLD-1, GSLDT-1, GSLD-2, GSLD-3, GSLDT-3 shall apply. In addition, the applicable Monthly Administrative Adder and Utility Controlled Demand Credit shall apply.

MONTHLY ADMINISTRATIVE ADDER:

Rate Schedule	Adder
GSD-1	$ 565.00
GSDT-1	$ 558.50
GSLD-1, GSLDT-1	$ 559.00
GSLD-2, GSLDT-2	$ 430.00
GSLD-3, GSLDT-3	$ 2,800.00

UTILITY CONTROLLED DEMAND CREDIT:

A monthly credit of $ 4.75 per kW is allowed based on the Customer's Utility Controlled Demand.

UTILITY CONTROLLED DEMAND:

The Utility Controlled Demand for a month in which there are no load control events during the Controllable Rating Period shall be the sum of the Customer's kWh usage during the hours of the applicable Controllable Rating Period, divided by the total number of hours in the applicable Controllable Rating Period, less the Customer's Firm Demand.

In the event of Load Control occurring during the Controllable Rating Period, the Utility Controlled Demand shall be the sum of the Customer's kWh usage during the hours of the applicable Controllable Rating Period less the sum of the Customer's kWh usage during the load control period, divided by the number of non-load control hours occurring during the applicable Controllable Rating Period, less the Customer's Firm Demand.

(Continued on Sheet No. 8.681)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 8.680)

CONTROLLABLE RATING PERIODS:

November 1 through March 31: Mondays through Fridays during the hours from 6 a.m. to 9 a.m. excluding Thanksgiving Day, Christmas Day, and New Year's Day.

April 1 through October 31: Mondays through Fridays during the hours from 3 p.m. to 6 p.m. excluding Memorial Day, Independence Day, and Labor Day.

FIRM DEMAND:

The Customer's monthly Firm Demand shall be the lesser of the "Firm Demand" level specified in the Commercial Industrial Demand Reduction Agreement with the Company, or the Customer's maximum demand during the applicable Controllable Rating Period. The level of "Firm Demand" specified in the Commercial Industrial Demand Reduction Agreement shall not be exceeded during the periods when the Company is controlling the Customer's load.

LOAD CONTROL:

Control Condition:

The Customer's controllable load served under this rider is subject to control when such control alleviates any emergency conditions or capacity shortages, either power supply or transmission, or whenever system load, actual or projected, would otherwise require the peaking operation of the Company's generators. Peaking operation entails taking base loaded units, cycling units or combustion turbines above the continuous rated output, which may overstress the generators.

Frequency: The Control Conditions will typically result in less than fifteen (15) control periods per year and will not exceed twenty-five (25) control periods per year. Typically, the Company will not initiate a control period within six (6) hours of a previous control period.

Notice: The Company will provide one (1) hour's advance notice or more to a Customer prior to controlling the Customer's controllable load. Typically, the Company will provide advance notice of four (4) hours or more prior to a control period.

Duration: The duration of a single period of load control will typically be three (3) hours and will not exceed six (6) hours.

In the event of an emergency, such as a Generating Capacity Emergency (see Definitions) or a major disturbance, greater frequency, less notice, or longer duration than listed above may occur. If such an emergency develops, the Customer will be given 15 minutes' notice. Less than 15 minutes' notice may only be given in the event that failure to do so would result in loss of power to firm service customers or the purchase of emergency power to serve firm service customers. The Customer agrees that the Company will not be liable for any damages or injuries that may occur as a result of providing no notice or less than one (1) hour's notice.

Customer Responsibility:

Upon the successful installation of the load control equipment, a test of this equipment will be conducted as specified in the Commercial Industrial Demand Reduction Demand Agreement. Testing will be conducted outside of the Controllable Rating Periods at a mutually agreeable time and date.

The Customer shall be responsible for providing and maintaining the appropriate equipment required to allow the Company to electrically control the Customer's load, as specified in the Commercial Industrial Demand Reduction Agreement.

The Company will control the controllable portion of the Customer's service for a one-hour period (excluding the Controllable Rating Periods) once per year for Company testing purposes on the first Wednesday in November or, if not possible, at a mutually agreeable time and date, if the Customer's load has not been successfully controlled during a load control event in the previous twelve (12) months. Testing purposes include the testing of the load control equipment to ensure that the load is able to be controlled within the agreed specifications.

LOAD CONTROL PERIOD:

All hours established by the Company during a monthly billing period in which:

1. the Customer's load is controlled, or
2. the Customer is billed pursuant to the Continuity of Service Provision.

(Continued on Sheet No. 8.682)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 8.681)

PROVISIONS FOR ENERGY USE DURING CONTROL PERIODS:

Customers notified of a load control event should not exceed their Firm Demand during periods when the Company is controlling load. However, electricity will be made available during control periods if the Customer's failure to meet its Firm Demand is a result of one of the following conditions:

1. Force Majeure events (see Definitions) which can be demonstrated to the satisfaction of the Company, or
2. maintenance of generation equipment necessary for the implementation of load control which is performed at a pre-arranged time and date mutually agreeable to the Company and the Customer (See Special Provisions), or
3. adding firm load that was not previously non-firm load to the Customer's facility, or
4. an event affecting local, state or national security, or
5. an event whose nature requires that space launch activities be placed in the critical mode (requiring a closed-loop configuration of FPL's transmission system) as designated and documented by the NASA Test Director at Kennedy Space Center and/or the USAF Range Safety Officer at Cape Canaveral Air Force Station.

The Customer's energy use (in excess of the Firm Demand) for the conditions listed above will be billed pursuant to the Continuity of Service Provision. For periods during which power under the Continuity of Service Provision is no longer available, the Customer will be billed, in addition to the normal charges provided hereunder, the greater of the Company's As-Available Energy cost, or the most expensive energy (calculated on a cents per kilowatt-hour basis) that FPL is purchasing or selling during that period, less the applicable class fuel charge. As-Available Energy cost is the cost calculated for Schedule COG-1 in accordance with FPSC Rule 25-17.0825, F.A.C.

If the Company determines that the Customer has utilized one or more of the exceptions above in an excessive manner, the Company will terminate service under this rider as described in TERM OF SERVICE.

If the Customer exceeds the Firm Demand during a period when the Company is controlling load for any reason other than those specified above, then the Customer will be:

1. billed a $4.75 charge per kW of excess kW for the prior sixty (60) months or the number of months the Customer has been billed under this rider, whichever is less, and
2. billed a penalty charge of $1.00 per kW of excess kW for each month of rebilling.

Excess kW for rebilling and penalty charges is determined by taking the difference between the Customer's kWh usage during the load control period divided by the number of hours in the load control period and the Customer's "Firm Demand". The Customer will not be rebilled or penalized twice for the same excess kW in the calculation described above.

(Continued on Sheet No. 8.683)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 8.682)

TERM OF SERVICE:

During the first year of service under this rider, the Customer will determine whether or not this rider is appropriate for the Customer and may request to exit the program subject to the Provisions for Early Termination. It is intended that the Company will continue to provide and the Customer will continue to take service under this rider for the life of the generating unit which has been avoided by the rider. There is, however, a five-year termination notice provision which will allow either the Customer or the Company to terminate service under this rider should there be circumstances under which the termination of the Customer's participation or the Company's offering of this rider is desired.

Service under this rider shall continue, subject to Limitation of Availability, until terminated by either the Company or the Customer upon written notice given at least five (5) years prior to termination.

The Company may terminate service under this rider at any time for the Customer's failure to comply with the terms and conditions of this rider or the Commercial Industrial Demand Reduction Agreement. Prior to any such termination, the Company shall notify the Customer at least ninety (90) days in advance and describe the Customer's failure to comply. The Company may then terminate service under this rider at the end of the 90-day notice period unless the Customer takes measures necessary to eliminate, to the Company's satisfaction, the compliance deficiencies described by the Company. Notwithstanding the foregoing, if, at any time during the 90-day period, the Customer either refuses or fails to initiate and pursue corrective action, the Company shall be entitled to suspend forthwith the monthly credits under this rider and bill the Customer under the otherwise applicable firm service rate schedule.

PROVISIONS FOR EARLY TERMINATION:

Termination of this rider, with less than five (5) years' written notice, for which the Customer would qualify, may be permitted if it can be shown that such termination is in the best interests of the Customer, the Company and the Company's other customers.

If the Customer no longer wishes to receive electric service in any form from the Company, or decides to cogenerate to serve all of the previously Utility Controlled Demand and to take interruptible standby service from the Company, the Customer may terminate the Commercial Industrial Demand Reduction Agreement by giving at least thirty (30) days' advance written notice to the Company.

If service under this rider is terminated for any reason, the Customer will not be rebilled as specified in Charges for Early Termination if:

a. it has been demonstrated to the satisfaction of the Company that the impact of such transfer of service on the economic cost-effectiveness of the Company's Commercial Industrial Demand Reduction Rider is in the best interests of the Customer, the Company and the Company's other customers, or
b. the Customer is required to terminate this rider as a result of Commission Rule 25-6.0438, F.A.C., or a Commission decision pursuant to this rule, or
c. the termination of service under this rider is the result of either the Customer's ceasing operations at its facility (without continuing or establishing similar operations elsewhere in the Company's service area), or a decision by the Customer to cogenerate to serve all of the previously utility controlled load and to take interruptible standby service from the Company, or
d. any other Customer(s) with demand reduction equivalent to, or greater than, that of the existing Customer(s) agree(s) to take service under this rider and the MW demand reduction commitment to the Company's Generation Expansion Plan has been met and the new replacement Customer(s) has (have) the equipment installed and is (are) available to perform load control, or
e. FPL determines that the Customer's MW reduction is no longer needed in accordance with the FPL Numeric Commercial/Industrial Conservation Goals.

(Continued on Sheet No. 8.684)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 8.683)

In the event the Customer pays the Charges for Early Termination because no replacement Customer(s) is (are) available as specified in paragraph d. above, but the replacement Customer(s) does(do) become available within 12 months from the date of termination of service under this rider or FPL later determines that there is no need for the MW reduction in accordance with the FPL Numeric Commercial/Industrial Conservation Goals, then the Customer will be refunded all or part of the rebilling and penalty in proportion to the amount of MW obtained to replace the lost capacity less the additional cost incurred by the Company to serve those MW during any load control periods which may occur before the replacement Customer(s) became available.

Charges for Early Termination:

In the event that:

a) service is terminated by the Company for any reason(s) specified in this section, or

b) there is a termination of the Customer's existing service and, within twelve (12) months of such termination of service, the Company receives a request to re-establish service of similar character under a firm service or a curtailable service rate schedule, or under this rider with a shift from non-firm load to firm service,

   i) at a different location in the Company's service area, or

   ii) under a different name or different ownership, or

   iii) under other circumstances whose effect would be to increase firm demand on the Company's system without the requisite five (5) years' advance written notice, or

c) the Customer transfers the controllable portion of the Customer's load to "Firm Demand" or to a firm or a curtailable service rate schedule without providing at least five (5) years' advance written notice,

then the Customer will be:

1. rebilled $ 4.75 per kW of Utility Controlled Demand for the shorter of (a) the most recent prior sixty (60) months during which the Customer was billed for service under this rider, or (b) the number of months the Customer has been billed under this rider, and

2. billed a penalty charge of $1.00 per kW of Utility Controlled Demand times the number of months rebilled in No. 1 above.

SPECIAL PROVISIONS:

1. Control of the Customer's load shall be accomplished through the Company's load management systems by use of control circuits connected directly to the Customer's switching equipment or the Customer's load may be controlled by use of an energy management system where the firm demand level can be established or modified only by means of joint access by the Customer and the Company.

2. The Customer shall grant the Company reasonable access for installing, maintaining, inspecting, testing and/or removing Company-owned load control equipment.

3. It shall be the responsibility of the Customer to determine that all electrical equipment to be controlled is in good repair and working condition. The Company will not be responsible for the repair, maintenance or replacement of the Customer's electrical equipment.

4. The Company is not required to install load control equipment if the installation cannot be economically justified.

5. Credits under this rider will commence after the installation, inspection and successful testing of the load control equipment.

6. Maintenance of equipment (including generators) necessary for the implementation of load control will not be scheduled during periods where the Company projects that it would not be able to withstand the loss of its largest unit and continue to serve firm service customers.

(Continued on Sheet No. 8.685)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 8684)

CONTINUITY OF SERVICE PROVISION:

In order to minimize the frequency and duration of interruptions, the Company will attempt to obtain reasonably available additional capacity and/or energy during periods for which interruptions may be requested. The Company's obligation in this regard is no different than its obligation in general to purchase power to serve its Customers during a capacity shortage; in other words, the Company is not obligated to account for, or otherwise reflect in its generation planning and construction, the possibility of providing capacity and/or energy under this Continuity of Service Provision. Any non-firm customers so electing to receive capacity and/or energy which enable(s) the Company to continue service to the Customer's non-firm loads during these periods will be subject to the additional charges set forth below.

In the event a Customer elects not to have its non-firm load interrupted pursuant to this Rider, the Customer shall pay, in addition to the normal charges provided hereunder, a charge reflecting the additional costs incurred by the Company in continuing to provide service, less the applicable class fuel charge for the period during which the load would otherwise have been controlled (see Sheet No. 8.030). This incremental charge shall apply to the customer's non-firm load for all consumption above the Customer's Firm Demand during the time in which the non-firm load would otherwise have been controlled. If, for any reason during such period, this capacity and/or energy is (are) no longer available or cannot be accommodated by the Company's system, the terms of this Special Provision will cease to apply and interruptions will be required for the remainder of such period unless energy use is for one of the conditions outlined under "Provisions for Energy Use During Control Periods".

Any customer served under this rider may elect to minimize the interruptions through the procedure described above. The initial election must be made in the Commercial Industrial Demand Reduction Agreement. Any adjustment or change to the election must be provided to the Company with at least 24 hours' written notice (not including holidays and weekends) and must be by mutual agreement, in writing, between the Customer and the Company. In such case, the written notice will replace any prior election with regard to this Continuity of Service Provision.

RULES AND REGULATIONS:

Service under this rider is subject to orders of governmental bodies having jurisdiction and to the currently effective "General Rules and Regulations for Electric Service" on file with the Florida Public Service Commission. In case of conflict between any provision(s) of this rider and said "General Rules and Regulations for Electric Service", the provision(s) of this rider shall apply.

DEFINITIONS:

Generating Capacity Emergency:

A Generating Capacity Emergency exists when any one of the electric utilities in the state of Florida has inadequate generating capability, including purchased power, to supply its firm load obligations.

Force Majeure:

Force Majeure for the purposes of this rider means causes not within the reasonable control of the Customer affected and not caused by the negligence or lack of due diligence of the Customer. Such events or circumstances may include acts of God, strikes, lockouts or other labor disputes or difficulties, wars, blockades, insurrections, riots, environmental constraints lawfully imposed by Federal, State, or local governmental bodies, explosions, fires, floods, lightning, wind, accidents to equipment or machinery, or similar occurrences.

FLORIDA POWER & LIGHT COMPANY

COMMERCIAL INDUSTRIAL DEMAND REDUCTION RIDER
CUSTOMER REQUEST FOR APPROVAL

TO: FPL MARKETING
FAX: (305) 552-2482

FROM: Name: _____ Date Sent :_____
Service Address: _____ Time Sent:_____
Account No.: _____
Fax No.: _____

REQUEST FOR APPROVAL TO:

☐ CONDUCT MAINTENANCE ON EQUIPMENT

☐ Generator ☐ Control Circuit Wiring
☐ Switch Gear ☐ Other

FROM _____ TO _____
(Date/Time) (Date/Time)

☐ CHANGE CONTINUITY OF SERVICE (COSP) PROVISION FROM "NO" TO "YES"

☐ CHANGE CONTINUITY OF SERVICE (COSP) PROVISION FROM "YES" TO "NO"

_____ _____ _____
Customer's Signature Date Time

APPROVALS:

FPL Marketing _____ _____ _____
Date Time

FPL TOP _____ _____ _____
Date Time

TO: _____ _____ _____
Customer Name Date Time

FPL APPROVAL TO CHANGE:

☐ YES
☐ NO Remarks: _____

_____ _____ _____
FPL Marketing Authorization Date Time

FLORIDA POWER & LIGHT COMPANY

COMMERCIAL INDUSTRIAL DEMAND REDUCTION RIDER AGREEMENT

This Agreement is made this _____ day of _____, _____, by and between _____ (hereinafter called the "Customer"), located at _____ _____ in _____, Florida, and FLORIDA POWER & LIGHT COMPANY, a corporation organized under the laws of the State of Florida (hereinafter called the "Company").

WITNESSETH

For and in consideration of the mutual covenants and agreements expressed herein, the Company and the Customer agree as follows:

1. The Company agrees to furnish and the Customer agrees to take electric service subject to the terms and conditions of the Company's Commercial Industrial Demand Reduction Rider ("Rider CDR") as currently approved or as may be modified from time to time by the Florida Public Service Commission ("Commission"). The Customer understands and agrees that, whenever reference is made in this Agreement to Rider CDR, both parties intend to refer to Rider CDR as it may be modified from time to time. A copy of the Company's presently approved Rider CDR is attached hereto as Exhibit A, and Rider CDR is hereby made an integral part of this Agreement.

2. Service under Rider CDR shall continue, subject to Limitation of Availability, until terminated by either the Company or the Customer upon written notice given at least five (5) years prior to termination.

3. Service under Rider CDR will be subject to determinations made under Commission Rules 25-17.0021(4), F.A.C. Goals for Electric Utilities and 25-6.0438, F.A.C., Non-Firm Service -Terms and Conditions, or any other Commission determination(s).

4. The Customer agrees to not exceed a usage level of _____kW ("Firm Demand") during the periods when the Company is controlling the Customer's service. If the Customer chooses to operate backup generation equipment in parallel with FPL, the Customer shall enter into an interconnection agreement with the Company prior to operating such equipment in parallel with the Company's electrical system. The "Firm Demand" level (as applicable) shall not be exceeded during periods when the Company is controlling load. Upon mutual agreement of the Company and the Customer, the Customer's "Firm Demand" may be subsequently raised or lowered, so long as the change in the " Firm Demand" level is not a result of a transfer of load from the controllable portion of the Customer's load. The Customer shall notify the Company, in writing, at least ninety (90) days prior to adding firm load.

5. Prior to the Customer's receipt of service under Rider CDR, the Customer must provide the Company access at any reasonable time to inspect any and all of the Customer's load control equipment, and must also have received approval from the Company that the load control equipment is satisfactory to effect control of the Customer's load. The Customer shall be responsible for meeting any applicable electrical code standards and legal requirements pertaining to the installation, maintenance and repair of the load control equipment. It is expressly understood that the initial approval and later inspections by the Company are not for the purpose of, and the Customer is not to rely upon any such inspection(s) for, determining whether the load control equipment has been adequately maintained or is in compliance with any applicable electrical code standards or legal requirements.

(Continued on Sheet No. 9.496)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 9.495)

6. The Customer agrees to be responsible for the determination that all electrical equipment to be controlled is in good repair and working condition. The Company shall not be responsible for the repair, maintenance or replacement of the Customer's equipment.

7. Within two (2) years of this Agreement, the Customer agrees to perform the necessary changes to allow control of a portion of the Customer's load. Should the Customer fail to complete the above work by the above-specified date, or should the Customer fail to begin taking service under Rider CDR during that year, this Agreement shall become null and void unless otherwise agreed by the Company.

8. Upon completion of the installation of the load control equipment, a test of this equipment will be conducted. Testing will be conducted outside of the Controllable Rating Periods, at a mutually agreeable time and date. Written notice of the test shall be provided to the Company at least five (5) business days in advance of the date of the test, and the Company shall be afforded the opportunity to witness the test. The test of the load control equipment will consist of a period of load control of not less than one hour. Effective upon the completion of the testing of the load control equipment, the Customer will agree to a "Firm Demand". Service under Rider CDR cannot commence prior to the installation of load control equipment and the successful completion of the test.

9. In order to minimize the frequency and duration of interruptions under the Commercial Industrial Demand Reduction Rider, the Company will attempt to obtain reasonably available additional capacity and/or energy under the Continuity of Service Provision in Rider CDR. The Customer elects/does not elect to continue taking service under the Continuity of Service Provision. Service will be provided only if capacity and/or energy can be obtained by the Company and can be transmitted and distributed to non-firm Customers without any impairment of the Company's system or service to firm Customers. The Customer may countermand the election specified above by providing written notice to the Company pursuant to the guidelines set forth in Rider CDR. The Company's obligations under this Section 9 are subject to the terms and conditions specifically set forth in Rider CDR.

10. The Company may terminate this Agreement at any time if the Customer's load control equipment fails to permit the Company to effect control of the Customer's load. Prior to any such termination, the Company shall notify the Customer at least ninety (90) days in advance and describe the failure or malfunction of the Customer's load control equipment. The Company may then terminate this Agreement at the end of the 90-day notice period unless the Customer takes measures necessary to remedy, to the Company's satisfaction, the deficiencies in the load control equipment. Notwithstanding the foregoing, if at any time during the 90-day period, the Customer either refuses or fails to initiate and pursue corrective action, the Company shall be entitled to suspend forthwith the monthly credit under Rider CDR, bill the Customer under the otherwise applicable firm service rate schedule, and to apply the rebilling and penalty provisions enumerated under "Charges for Early Termination" in Rider CDR.

11. The Customer agrees that the Company will not be liable for any damages or injuries that may occur as a result of control of electric service pursuant to the terms of Rider CDR by remote control or otherwise.

12. This Agreement supersedes all previous agreements and representations, either written or oral, heretofore made between the Company and the Customer with respect to matters herein contained.

13. This Agreement may not be assigned by the Customer without the prior written consent of the Company. The Customer shall, at a minimum, provide to the Company a copy of the articles of incorporation or partnership agreement of the proposed assignee, and a copy of such assignee's most recent annual report at the time an assignment is requested.

14. This Agreement is subject to the Company's "General Rules and Regulations for Electric Service" and the Rules of the Commission.

(Continued on Sheet No. 9.497)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 9.496)

IN WITNESS WHEREOF, the Customer and the Company have caused this Agreement to be duly executed as of the day and year first above written.

CUSTOMER (private)

Company:_____

Signed:_____

Name:_____

Title:_____

CUSTOMER (public)

Governmental Entity:_____

Signed:_____

Name:_____

Title:_____

FLORIDA POWER & LIGHT COMPANY

Signed:_____

Name:_____

Title:_____

Attest:

By:_____
Clerk/Deputy Clerk

Program Name: Commercial/Industrial Demand Reduction Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %
2000	2,784,654	2,375,814	0	0.000%
2001	2,843,151	2,434,311	5,502	0.226%
2002	2,899,792	2,485,449	5,502	0.443%
2003	2,954,324	2,534,479	5,502	0.651%
2004	3,006,844	2,581,497	5,502	0.853%
2005	3,058,303	2,627,454	5,502	1.047%
2006	3,108,423	2,672,072	4,585	1.201%
2007	3,159,830	2,718,894	4,585	1.349%
2008	3,211,625	2,766,105	4,585	1.492%
2009	3,268,829	2,818,723	3,210	1.578%

Note: Column a - The total summer kw demand reduction of capability of C/I customers with loads greater than 200 kw.

Column b - The total summer kw demand reduction capability of eligible C/I customers.

Column c - The annual number of participants in the program expressed in summer kw demand reduction.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	0	0.00	0.00	0	0	0
2001	48	1.00	1.00	262,005	5,502	5,502
2002	48	1.00	1.00	262,005	5,502	5,502
2003	48	1.00	1.00	262,005	5,502	5,502
2004	48	1.00	1.00	262,005	5,502	5,502
2005	48	1.00	1.00	262,005	5,502	5,502
2006	48	1.00	1.00	218,338	4,585	4,585
2007	48	1.00	1.00	218,338	4,585	4,585
2008	48	1.00	1.00	218,338	4,585	4,585
2009	48	1.00	1.00	152,836	3,210	3,210

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	0	0.00	0.00	0	0	0
2001	51	1.07	1.07	281,787	5,908	5,908
2002	51	1.07	1.07	281,787	5,908	5,908
2003	51	1.07	1.07	281,787	5,908	5,908
2004	51	1.07	1.07	281,787	5,908	5,908
2005	51	1.07	1.07	281,787	5,908	5,908
2006	51	1.07	1.07	234,822	4,923	4,923
2007	51	1.07	1.07	234,822	4,923	4,923
2008	51	1.07	1.07	234,822	4,923	4,923
2009	51	1.07	1.07	164,376	3,446	3,446

BUSINESS ENERGY EVALUATION

Program Description

The Business Energy Evaluation program is designed to encourage energy efficiency in commercial and industrial facilities by identifying DSM opportunities and providing recommendations to the customer. Energy efficiency encompasses analysis of all energy sources and customer energy-related productivity. Customer eligibility in FPL's other commercial and industrial programs will be determined and participation promoted through the evaluation.

The are no substantive changes to the existing Program.

The Business Energy Evaluation program will:

- Provide for different levels of evaluation complexity (there can be less complex and more complex levels).
- Allow for cost sharing of more complex evaluations by the customer and FPL. The standard level field evaluations will still be free.
- Allow for evaluations without an on-site visit. This could be accomplished via phone or Internet.
- Perform evaluations based on the needs of our commercial and industrial customers rather than having a goal.

FPL plans to make commercial and industrial customers aware of this program through advertising, trade allies, such as architects, engineers and educational systems. In addition, customers will have direct contact with FPL personnel.

Description of Program Administration

All commercial and industrial customers are eligible for this program whether they have existing facilities or are planning, expanding or renovating facilities in FPL's service territory. Customers are eligible for as many evaluations as necessary to encourage implementation of recommendations.

The program will be free of charge to eligible customers for standard level evaluations. For more complex evaluations, the customer and FPL may share in the cost. While on-site visits are encouraged, they are not necessary as long as the customer's evaluation needs are met.

It will be recommended to the customer that the evaluation be used as a tool to examine energy efficient opportunities in the customer's facility and to determine eligibility in all of FPL's other commercial and industrial DSM programs. However, in cases where the customer wants to focus on the implementation of one technology at a time, the evaluation is a less effective tool. Therefore, while the Business Energy Evaluation is encouraged, it is not a requirement for eligibility in the other FPL commercial and industrial programs. The eligibility requirements for the other programs will be determined consistent with their program guidelines.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, and application assumptions.

Projected Participation and Savings

Electric demand and energy savings from implementing the Business Energy Evaluation recommendations will occur, but they will not be directly claimed through the Business Energy Evaluation program. Instead, some savings will be claimed through FPL's other commercial and

industrial incentive programs. There should also be additional savings resulting from recommendations identified in the evaluation that are not addressed by FPL's programs.

Based on historical participation and current FPL program offerings, it is estimated that 5,000 evaluations will be performed per year. The actual participation will be market driven.

Cost-Effectiveness Analysis

Since FPL does not project savings for this program, a cost-effectiveness analysis is not directly performed for this program. Cost-effectiveness has been shown for other programs served by this program, and that approach avoids double counting benefits or attempting to quantify benefits beyond other programs.

The costs to administer the program are ultimately reflected in electric rates to the customer through the Energy Conservation Cost Recovery clause. Therefore, to reduce upward pressure on electric rates, all efforts will be made to keep the program costs to a minimum.

Program Monitoring and Evaluation

This program will be evaluated annually by the number of evaluations performed and the cost per evaluation. It will be indirectly evaluated for its effectiveness in providing leads for FPL's other commercial and industrial programs. A computerized database will be used to track and record the effectiveness of the evaluations.

Program Name: Business Energy Evaluation Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	430,477	430,477	5,000	1.2%
2001	439,520	439,520	5,000	2.3%
2002	448,276	448,276	5,000	3.3%
2003	456,706	456,706	5,000	4.4%
2004	464,825	464,825	5,000	5.4%
2005	472,780	472,780	5,000	6.3%
2006	480,528	480,528	5,000	7.3%
2007	488,475	488,475	5,000	8.2%
2008	496,482	496,482	5,000	9.1%
2009	505,325	505,325	5,000	9.9%

Note: Column a - The total number of commercial and industrial customers.
Column b - The total number of eligible commercial and industrial customers.
Column c - The annual number of participants in the program.
* Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	N/A	N/A	N/A	N/A	N/A	N/A
2001	N/A	N/A	N/A	N/A	N/A	N/A
2002	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A
2004	N/A	N/A	N/A	N/A	N/A	N/A
2005	N/A	N/A	N/A	N/A	N/A	N/A
2006	N/A	N/A	N/A	N/A	N/A	N/A
2007	N/A	N/A	N/A	N/A	N/A	N/A
2008	N/A	N/A	N/A	N/A	N/A	N/A
2009	N/A	N/A	N/A	N/A	N/A	N/A

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	N/A	N/A	N/A	N/A	N/A	N/A
2001	N/A	N/A	N/A	N/A	N/A	N/A
2002	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A
2004	N/A	N/A	N/A	N/A	N/A	N/A
2005	N/A	N/A	N/A	N/A	N/A	N/A
2006	N/A	N/A	N/A	N/A	N/A	N/A
2007	N/A	N/A	N/A	N/A	N/A	N/A
2008	N/A	N/A	N/A	N/A	N/A	N/A
2009	N/A	N/A	N/A	N/A	N/A	N/A

COGENERATION AND SMALL POWER PRODUCTION

Program Description

FPL's Cogeneration and Small Power Production program was established in order to implement and execute FPL's obligations to facilities defined as Qualifying Facilities ("QFs") under the Public Utility Regulatory Policies Act of 1978 ("PURPA") and Florida Public Service Commission rules. A QF may be classified as either a cogeneration facility ("Cogenerator") or a small power production facility ("SPP"). A Cogenerator is a facility which produces electric energy and forms of useful thermal energy (such as heat or steam) used for industrial, commercial, heating or cooling purposes, through the sequential use of energy. A SPP facility is one which is less than 80 MW and that produces electric energy using, as a primary source of fuel, biomass, waste, renewable resources or any combination thereof.

The Federal Energy Commission ("FERC") has adopted rules 18 CFR 292.01 et.al., which guide the states in their implementation of PURPA. The State of Florida has also enacted legislation relating to cogeneration and small power production facilities (F.S. §366.051 and §366.80 - 366.85). The FPSC has implemented these various mandates through the adoption of rules relating to the purchase of power and energy from QFs (F.A.C. Sections 25-17.080 et. al.).

The objectives of FPL's Cogeneration and Small power Production program are to comply with all regulatory requirements and applicable law relating to the purchase of energy and capacity from Cogenerators and SPPs; interconnect as necessary to accomplish purchases, sales, operation in parallel; transmit energy and capacity to another utility for purchase by that utility; and assist customers in the evaluation of potential cogeneration applications, including self-generation while minimizing costs to FPL's ratepayers and shareholders.

Description of Program Administration

FPL's Cogeneration and Small Power Production Program is intended to facilitate the installation of Cogenerators and SPPs and the administration of contracts with such facilities. The administration of FPL's program to comply with all regulatory requirements and applicable laws relating to the purchase of energy and capacity from Cogenerators and SPPs, includes activities associated with:

- interconnection,
- installation, inspection, calibration and maintenance of meters,
- administration of power billing and accounting processes,
- FPSC reporting,
- Contract negotiation,
- contract administration, including legal expenses resulting from litigation,
- facility inspections and audits,
- communications,
- operating coordination, and
- problem resolution.

Utility payments for as-available energy made to qualifying facilities pursuant to the utility's tariff are recoverable by the utility through the Commission's periodic review of fuel and purchased power. Utility payments to QFs for firm capacity and energy are also recoverable with FPSC approval. Pursuant to FPSC approval, FPL has recovered cogeneration and small power production program through its Energy Conservation Cost Recovery clause (ECCR) for years. In 1995, the FPSC approved the most recent version of FPL's Cogeneration and Small Power Production program as part of FPL's DSM plan.

Cost-Effectiveness Analysis

Since FPL does not project demand and energy savings for this program, a cost-effectiveness analysis is not directly performed for this program. The costs to administer the program are ultimately reflected in electric rates to the customer through the Energy Conservation Cost Recovery clause. Therefore, to reduce upward pressure on electric rates, all efforts will be made to keep the program costs to a minimum while at the same time protecting the welfare of all FPL ratepayers.

COMMERCIAL/INDUSTRIAL LOAD CONTROL

Program Description

The Commercial/Industrial Load Control (CILC) program is designed to reduce peak demand by controlling customer loads of 200 kw or greater during periods of extreme demand or capacity shortages. The permanent CILC program began in November 1990 after a multi-year trial project.

FPL makes eligible commercial and industrial customers aware of this program through direct contact with their FPL Account Managers.

Description of Program Administration

The CILC Program is available to existing CILC customers that allow FPL to control 200 kw or more of their load. Customers may participate by allowing FPL to control directly selected switch gear in the customer's facility or to transfer the load to the customer's standby generator.

The customer receives service under a lower rate in return for allowing FPL to control its load. The incentive is the difference between their prior rate and the CILC rate. The customer begins service on the CILC rate after successfully demonstrating its load can be reduced to the contracted Firm Demand during a one hour load control test conducted and monitored by FPL.

FPL provides advance notification of load control events via an FPL provided printer/alarm. Compliance with contracted Firm Demands is verified after each event on an individual customer basis. The causes of exceeding Firm Demand are investigated to determine if they meet allowed exclusions to the penalty or if they are to be penalized. A "Continuity of Service Provision" is available which allows customers to continue using power during load control events when power is available from non-FPL providers. Customers are allowed to exit CILC

under certain conditions but will be penalized for returning to Firm Service without meeting those conditions.

Current Program Status

Pursuant to Order No. PSC-96-0468-FOF-EG, issued April 4, 1996, in Docket No. 960130-EG, the PSC granted FPL's request to limit the availability of its Commercial Industrial Load Control (CILC) program to existing customers and those which had entered into a CILC agreement as of March 19, 1996. Subsequently, on March 10, 1999, the Commission issued Order No. PSC-99-0505-PCO-EG in which it required customers under contract to take CILC service but not yet on the rate to initiate CILC service by December 31, 2000. Any customer who is not taking service under the CILC rate by December 31, 2000 will no longer be eligible for the CILC rate. FPL informed its customers of the December 31, 2000, deadline by letter. Although this program will continue after December 31, 2000, it will only be available for customers participating in it prior to December 31, 2000.

OFF PEAK BATTERY CHARGING PROGRAM

Current Program Status

When FPL originally filed the Off Peak Battery Charging Program as part of its demand side management portfolio, it was based on the assumption that without significant technological innovation, the primary market for this program was golf facilities. Based on this assumption, there was a clearly defined and limited target market. As FPL has penetrated this market, participation has slowly declined as eligible and interested customers have participated. Over the last two years, 1998 and 1999, annual participation has been approximately 150 kw.

Proposed Program Termination

While there are still potentially additional program participants, primarily from customer growth, the recent level of participation does not justify a full-scale DSM program and its associated administrative costs. For these reasons, FPL is requesting that upon approval of this Plan the Off Peak Battery Charging Program be terminated. All future applications related to this technology will be evaluated as part of the Business Custom Incentive Program.

SECTION IV - RESEARCH & DEVELOPMENT EFFORTS

FPL's DSM Plan contains research and development activities in addition to established programs. Historically, FPL has pursued DSM research and development activities through, not only a research program, Conservation Research and Development, but also individual research projects.

A. Research Overview

FPL's continuing research efforts include activities within and beyond FPL's DSM Plan. Within the plan FPL has one (1) research program and five (5) individual research and development projects. FPL's research program is its existing Conservation Research and Development Program, which FPL is proposing to continue. FPL's research and development projects include the following previously approved projects: Cool Communities and Commercial/Industrial New Construction. FPL is proposing the following new research and development projects:

- Green Energy,
- Photovoltaic, Research, Development and Education , and
- Low Income Weatherization Retrofit.

Outside of FPL's DSM Plan, FPL is actively pursuing its Commercial/Industrial Real Time Pricing research effort. Finally, FPL is proposing to terminate the Residential Thermal Energy Storage Project.

Historically, FPL has performed extensive DSM research and development, and FPL will continue such activities under this plan. Such efforts are an integral part of FPL's strategy to achieve the goals established for FPL in the recent conservation goals proceeding. These efforts

will examine a wide variety of technologies, building on prior FPL research, where applicable, and expanding the research to new and promising technologies as they emerge.

B. Detailed Research Program and Project Descriptions

Conservation Research and Development (CRD) Program

FPL currently has an approved Conservation Research and Development Program. This program was originally approved by the Commission in November of 1990 as part of FPL's DSM Plan for the 90's. It has been updated several times since then, and FPL proposes to continue to use the very successful tool. The CRD Program has been used by FPL to research, and where appropriate, develop emerging DSM technologies. FPL has researched a wide variety of technologies under the CRD Program, and from that research it has been able to develop several new programs such as the Commercial/Industrial Building Envelope, Business On Call and Residential New Construction programs. FPL regularly reports in its true-up and projection filings for its ECCR clause the activities within the CRD Program.

The CRD Program has worked, serving FPL's customers well. It allows FPL to research emerging conservation technologies without always creating extensive research projects. Through CRD FPL can investigate new technologies and determine whether they should be incorporated into a program, further researched as a research project, or abandoned. If FPL is to continue to stay abreast of emerging DSM technologies and develop new programs, the CRD Program needs to be continued.

As part of this DSM Plan, FPL seeks to extend its CRD program beginning with the approval of this Plan and extending through December 31, 2002 with a spending cap of $1,500,000 for the period. The Commission has previously extended FPL's CRD program through its approval of FPL's DSM Plan, Order No. PSC-98-1609-FOF-EG. FPL seeks to remove annual spending caps

to increase its flexibility in making research and development expenditures without having to come to the Commission for intermediate changes. Aside from the proposed changes to the spending cap amount and period, FPL proposes no substantive change to the CRD Program.

Existing Research and Development Projects

The following are active research projects previously approved by the Commission and will continue as part of FPL's prior DSM Plans.

Cool Communities

Project Need and Objective

Cool Communities is a concept developed by American Forests to demonstrate the extent to which strategic tree planting and surface color lightening can cool ambient air temperature and impact energy consumption. Seven geographically diverse communities, including Miami-Dade County, Florida, were selected as model communities for this effort. Miami-Dade County is the only model community in a humid, tropical region.

American Forests designed guidelines for evaluating conditions in the model communities. At the local level, Cool Communities Local Advisory Committees were established in each of the model communities. The Local Advisory Committees were charged with the responsibility of implementing these guidelines in their respective communities. The South Miami Cool Communities Local Advisory Committee, which is chaired by the Metro-Dade Department of Environmental Resource Management, has included representatives from the Florida Division of Forestry, Metro-Dade Parks and Recreation, Dade County Public Schools, Florida International University's Environmental Studies and Architecture Departments, FPL, American Society of Landscape Architects, Fairchild Tropical Gardens, Roofing associations, Interfaith Coalition for Andrew Recovery Effort, and Trees For South Dade.

FPL has undertaken a research project to quantify the energy saving potential of cooling homes by lightening roof color and shading with strategically planted trees. This study will provide information to FPL and American Forests on average energy savings and suitable markets aimed at tree planting measures and light colored roof measures.

FPL's research project scientifically examines the energy and demand impact of Cool Communities in the context of Florida's conservation regulations, e.g. goals and approved methodologies, and in the context of FPL's accepted approach to demand-side management (DSM) evaluation. If the tree-planting and color-lightening fail cost effectiveness testing from the utility perspective, then FPL will recommend alternative mechanisms for promoting these measures in instances when they are still cost effective from the customer perspective. It is the objective of FPL to determine the true energy and demand impact of the Cool Communities Program, thereby enabling an informed decision on whether or not to financially support the program beyond the research stage.

Description of Research Plan

The Cool Communities research project consists of data gathering, statistical regression analysis, and economic evaluation. The project was envisioned to have three phases:

1) The objective of Phase I is to measure energy savings from light colored roofs and tree shade using readily available data. This will determine if aerial photographs, mail surveys, and utility billing information from customers in the two American Forests study groups are sufficient to develop estimates of demand and energy savings. Conclusions from Phase I are expected in January 2000.

2) Phase II is intended to assess the added value of gathering on-site information about the existing condition of roof color and tree shading at homes in the study group. The on-site

measurements will supplement the mail survey and billing data analysis. This phase will also determine the necessity for a large scale load research data collection effort in Phase III. Conclusions from Phase II are expected in January 2000.

3) Phase III of the project is the load research phase. FPL decided to move slowly into this potentially expensive portion of the study. The purpose of this phase is to use load research metering techniques if necessary in order to develop statistically valid savings estimates. This phase will begin in January 2000. Results from the first step of this phase are expected in March 2001.

The Cool communities R&D project began with Phase I in south Florida where the American Forests study groups were located. During Phase II, FPL decided to expand the research design with the addition of a control group randomly selected from among all FPL customers. Phase III will focus on the measures which showed the most potential in Phases I and II. Preliminary results indicate light colored roofs save approximately twice as much energy as shade from new trees. However, The data collected in Phases I and II were not sufficient to estimate the relative energy saving potential of different roof materials. Since previous research from other sources suggests white tile and white metal roofs are far superior to white, asphalt shingle roofs at reflecting the heat from the sun, an appropriate first step for Phase III is to assess the relative benefits of various roof materials in use in Florida.

FPL and FSEC have designed a research plan to simultaneously monitor energy use, electrical demand, and weather conditions at six identical new homes with different roof materials. The roof types to be studied are: dark asphalt shingle, white asphalt shingle, white metal, white concrete tile, white barrel tile, and red Spanish S-shaped tile. This information is needed to estimate the energy saving potential of changing the roof material and changing the shape of the

roof tiles. As they become available, FPL will share research findings with interested local, state, and federal agencies.

Project Schedule and Cost

The total budget for the FPL's Cool Communities Research Project is $550,000. By the end of 1999, project expenditures will have reached about $350,000. For the year 2000, Phase III will begin when FPL plans to start a small-scale metered research project involving the simultaneous monitoring of six homes with different roof types. The cost of this step of Phase III is expected to be about $50,000 which includes $35,000 for data collection and analysis by the Florida solar Energy Center (FSEC). FPL anticipates the Cool Communities Research Project will be completed March 2001.

Commercial/Industrial New Construction Research Project

Project Objective

The objective of this project is to identify cost-effective conservation opportunities in the commercial/industrial new construction market. If cost-effective opportunities are identified, the results of this effort may be used to design a new construction program (and other market intervention strategies), with the ultimate goal being to reduce building demand and energy use beyond that required by the Florida Energy Efficiency Code.

Project Description

FPL's Commercial New Construction Research Project is evaluating the impacts of potential measures, both individually and collectively. This evaluation will reveal which measures and groups of measures are viable for a possible program, and second, if these measures or groups of measures are cost-effective using the Commission approved methodology. Initially, an investigation of past and current new construction programs and projects is being performed, with successes and issues identified to assist in formulating a general direction for FPL's future efforts. The next step is the evaluation of potential measures includes (1) simulations of measures and their interactions by building type within Florida's three climate zones, and (2) field monitoring of actual installations. In addition, actual commercial buildings are being investigated through both energy surveys and a review of the original building design plans to assess the relationship between their actual performance and the operation predicted by the original design. This will facilitate the determination of the program's potential impacts. Building commissioning is being evaluated as a means of further assuring measure performance and quality of construction. Commissioning is a systematic process beginning in the design phase and continuing for at least one year after project completion to ensure that all building systems perform interactively according to the documented design intent and the owner's operational needs. It is believed that commissioning may lead to improved performance of

building systems. All simulations and field monitoring take into consideration the various commercial building types and the different Florida climate zones. Finally, the project may result in a recommended program design for future implementation.

Current Status

FPL originally envisioned that it would take some 30 months to conduct the Commercial/Industrial New Construction Research Project. However, FPL encountered delays in the project due to the selection of the contractor to perform the work and the negotiation of a contract that would allow FPL to terminate the Project at any point FPL determined that the Project was not cost-effective (One of the requirements in the order approving the Project was that "Florida Power & Light Company terminate the Commercial/Industrial (CI) New Construction research project if it is determined not to be cost-effective."). Consequently, in June 1999, FPL requested and was subsequently granted approval by the FPSC to extend the Project through December 2000, without any change to the approved expenditure cap of $1,525,000. FPL stills anticipates completing the Project within the approved budget and time frame.

Residential Thermal Energy Storage Project

Project Description

This research project was originally approved in FPL's Demand Side Management Plan of the 90's. The intent of the effort was to determine the technical feasibility and residential customer acceptance of utilizing thermal energy storage space conditioning equipment. It was thought that this equipment could potentially remove customers' space cooling loads from FPL's summer peak demand periods. When this project was proposed, there were several prototype systems being developed by the major air conditioning equipment manufactures.

Current Status and Proposed Termination

After the initial product development efforts, the air conditioning manufactures moved away from this technology. Over the last several years, FPL has continued to monitor current developments, but it now does not see this technology having sufficient support to develop a market-ready, customer viable product. For these reasons, FPL is requesting that upon approval of this Plan the Residential Thermal Energy Storage Project be terminated. FPL will continue to monitor this technology through its Conservation Research and Development (CRD) Program.

FPL has spent approximately $227,300 of an approved project budget of $413,400.

Proposed Research and Development Projects

Green Energy Project

Project Technology

FPL has recently finished an R&D project addressing customer acceptance of green energy where donations were used as the funding mechanism for the purchase and installation of utility grid connected photovoltaic (PV) systems. This project raised in excess of $89,500 and a 10.1 kW (dc) PV system has been constructed at FPL's Martin power plant site.

In an attempt to determine the customer acceptance of green pricing rates, FPL proposes to investigate and, if determined by FPL to be feasible, to design and implement a Green Energy Program.

Project Description

Under this program FPL would purchase electric energy generated from new renewable resources including solar-powered technologies, biomass energy, landfill methane, wind energy, low impact hydroelectric energy and/or other renewable resources. The Program would offer to meet all or part of a customer's load with generation from new renewable resources, with the remaining portion of that load being served by the Company's conventional supply. Participants will be residential (and possibly commercial) customers. Participants in this Program will be charged an additional charge calculated to recover no more than the incremental costs of this Program. Incremental costs are the sum of:

- Green Energy Program administration costs (program administration costs are the administrative costs associated with the delivery of the program; they would include but not be limited to personnel costs, marketing and promotion costs, materials and supplies, start-up costs and office costs for the new renewable energy) and

- the excess of total power production costs for new renewable energy (expressed in cents per kWh) over and above normally applicable charges (i.e., the fuel, purchased power capacity and energy, conservation, environmental cost recovery, and basic energy charges) which would have been charged by FPL for delivery of an equivalent amount of energy from conventional power supply resources.

Project Development and Analysis

The first step in the development of this Program will consist of research into customer acceptance of the concept as well as the availability of new renewable energy in Florida. As part of the Stipulation agreed to with the Legal Environmental Assistance Foundation (LEAF) in the most recent Goals Docket, FPL will provide LEAF and its consultants a timely opportunity to review and comment upon FPL's research and program design plans and procedures. However, FPL retains final control over the content and conduct of the research and program design.

First, FPL will conduct consumer research to determine:

- The preferences of its customers for new renewable energy.
- Customer willingness to pay the incremental costs associated with new renewable energy.
- The amounts of new renewable energy customers are willing to purchase and the acceptance of blended rate offerings.

Specifically, the consumer research will build upon the key lessons from FPL's just completed green energy research project and will determine customer preferences regarding energy offerings linked to renewable sources, including the perceived benefits and costs of these technologies.

The second step will be research to determine:

- The availability of new renewable energy sources and supplies within Florida (their availability by season, day of week, time of day, etc.)
- The terms and conditions, including prices and contract lengths, pursuant to which FPL may obtain the resources for the program participants
- The regulatory issues that may arise in offering a Green Energy Program.

FPL anticipates the total development and analysis phase of the project will be for a period of at least 36 months as follows:

- Evaluate Renewable Sources/ Terms & Conditions/ Regulatory Issues — 6 Months
- Customer Research — 6 Months
- Program Development — 18 Months
- Program Roll Out — 6 Months

Program Design

If FPL's research shows that a sufficient number of customers are willing to pay the incremental costs associated with new renewable energy, under terms and conditions that correspond favorably with the availability and terms and conditions pursuant to which FPL can purchase new renewable energy and that there are no regulatory impediments, FPL will proceed with the design and implementation of the Green Energy Program.

The design of the Green Energy Program will contain marketing, public education and evaluation components. FPL will attempt to include the maximum amount of PV's in the mix of options for customers, consistent with the results of the market and new product research.

Program implementation will commence with an initial offering. If the response to the initial offering reflects reasonable participation levels, consistent with those estimated by the market research, FPL will continue and expand the Program, so long as it remains viable. Viability is that sufficient numbers of customers are willing to pay the incremental costs associated with new renewable energy under terms and conditions that correspond favorably with the terms and conditions that FPL can purchase these resources. If the program is continued and expanded, FPL will have the goal of obtaining 10,000 participants by the end of 2003. When the Program reaches 10,000 participants, FPL will include at least 150 kW of PVs in its resource mix for customers in this Program. FPL will add PVs to its resource mix proportional to the 10,000 participant goal prior to reaching this goal if feasible. If the Program exceeds 10,000 participants, FPL will add PVs to its resource mix to maintain a ratio of at least .015 kW per participant.

Attachment I

Green Energy Project

Stage I Establish Research Parameters and Concepts Objectives: **Costs**

Gather preliminary data; establish availability of renewable energy sources in Florida; avoid duplication of existing work and findings; and define more specific research objective and scope for project.

1) Literature Search
2) Industry Search
3) Research Institute Work Search (EEI, FSEC, U of F, prior FPL R&D etc...) **$75,000**

Stage II Technical Evaluation Objectives:
(Only Required If Renewable Resources are Available)

Identify Feasibility, Risk and Operating Factors

1) Determine availability of new projects
2) Develop cost analysis
3) Develop contract terms and conditions **$100,000**

Stage III Market Segment Research Objectives:

1) Conduct Focus Groups among FPL customers
2) Conduct Quantitative analysis to determine cost-effective market segments and confirm sales potential **$175,000**

Q.

R. Stage IV Develop Program Objectives:

1) Develop and Execute Marketing Plan
2) Develop Program Collateral Materials
3) Advertise Program to FPL customers
4) Develop renewable energy accounting system
5) Revise billing system to accommodate Green Energy Pricing **$350,000**

Total Project Cost **$700,000**

Photovoltaic Research, Development and Education Project

Technology

Photovoltaic (PV) roof-tile systems are a relatively new technology which directly replaces existing roofing materials such as shingles and standing-rib roofing with photovoltaic materials which provide the same water proofing characteristics that conventional roofing materials. This proposed project is consistent with the Federal Government's Million Solar Roofs initiative. However, based on FPL's research to date, a primary hurdle to the physical installation of photovoltaic (PV) systems, whether roofing materials or flat plate collectors, is the lack of awareness, understanding and acceptance by local building officials. For the most part, these officials are unclear about how these systems work and how to address these systems as part of the building permitting and inspection process. This creates market barriers toward the use of this technology.

Project Description

The proposed R&D project will work with homebuilders to install five to ten PV roof systems in new single family homes. Each roof system will be approximately 2 kW (dc) each, resulting in 10 to 20 kW (dc) of PV arrays in total.

Project Monitoring and Analysis

FPL will monitor the installations to:

- 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 energy capabilities of roof tile PV systems.

- Collect data to assess the homeowner's financial benefit of PV roof tile systems.

FPL will develop and conduct educational workshops for the building departments that are active in FPL's service territory. These workshops will incorporate the results of the above-described FPL PV roof tile research project. The workshops will have the following objectives:

- Understanding of the various types of PV systems and supplemental systems
- General education on the design, construction and installation of PV systems
- Develop an understanding of the performance and reliability of PV systems
- PV perspectives of the various stakeholders including the Federal and State government, utilities, builders

To make these workshops relevant to the intended audience, FPL will seek participation by industry experts, such as the Florida Solar Energy Center, for the design and implementation of these events.

FPL anticipates the total development and analysis phase of the project will be for a period of at least 34-36 months, outlined as follows:

- Site Selection/Installation/Customer Research 6-8 Months
- Monitoring/Workshops for Building Officials 24 Months
- Analysis and Report 4 Months

Cost Effectiveness

Based on the outcome of the monitoring portion of the research project, the cost effectiveness of the potential Photovoltaic Research, Development and Education Initiative would be determined using the Commission approved cost-effectiveness methodology. If the proposed program can

be shown to be cost-effective under the Participant and RIM tests, the research program results may be utilized for the development of a system-wide Photovoltaic Research and Development Initiative and presented to the Commission for approval.

Attachment I

Photovoltaic Research, Development and Education Project

Stage I Establish Research Parameters and Concepts Objectives:	**Costs**
Gather preliminary data; establish working relationship with local homebuilders; avoid duplication of existing work and findings; and define more specific research objective and scope for project.	
1) Literature Search 2) Industry Search 3) Research Institute Work Search (EEI, FSEC, U of F, prior FPL R&D etc...)	**$55,000**
Stage II Technical Evaluation Objectives:	
Identify Feasibility, Risk and Operating Factors	
1) Install systems on 5-10 homes with approximately 2 kW (dc) systems 2) Monitor homes to determine system output, power quality and consumption 3) Determine legislative and regulatory barriers to develop program **4)** Develop cost evaluation of systems	**$145,000**
Stage III Market Segment Research Objectives:	
1) Conduct Focus Groups among FPL customers 2) Conduct Quantitative analysis to determine cost-effective market segments and confirm sales potential	**$125,000**
S. Stage IV PV Workshops Objectives:	
1) Conduct Building Official Workshops	**$ 46,000**
T. Stage V Analysis Objectives:	
1) Evaluate data from homes 2) Develop cost evaluation 3) Determine program viability to meet customer cost expectations	**$100,000**
Total Project Cost	**$471,000**

Low Income Weatherization Retrofit Project

Project Description

The proposed R&D will investigate cost-effective methods of increasing the energy efficiency of FPL's low income customers. The research project will address the needs of low income housing retrofits by providing monetary incentives to housing authorities (both weatherization agency providers, WAPS, and non-weatherization agency providers, non-WAPS) for individual homes they are retrofitting. These incentives will be used by the housing authorities to leverage their funds to increase the overall energy efficiency of homes they are retrofitting. FPL either will conduct a home energy survey, train housing authority employees to perform FPL home energy surveys, accept the NEAT audit (as supplemented to capture water heating recommendations not included in the NEAT audit), or approve similar FPL approved audits conducted by weatherization providers to determine the need for energy efficient retrofit measures for each home. FPL will design the project so as to minimize extra work for the retrofit housing authorities. The following energy end uses will be addressed as part of each audit:

- HVAC system,
- duct system,
- ceiling insulation,
- water heating,
- lighting, and
- reduced air infiltration.

The maximum potential incentive per home will reflect the incentives applicable to the DSM measures approved in FPL's new DSM Plan, plus incentives totaling a maximum $300 per home for the following additional measures:

- HVAC maintenance - ($30)
- High efficiency window/wall HVAC – ($115 maximum)
- Duct system test cost - ($30)
- Reduced air infiltration - ($50)
- Water heating wrap - ($25)
- Lighting - ($50)

FPL will conduct this pilot program initially in six counties, with a minimum of 6 participating WAPs and 6 participating non-WAPs.

FPL anticipates the total development and analysis phase of the project will be for a period of at least 32 to 36 months, outlined as follows:

Site Selection/Installation	6-8 months
Monitoring	18 months
Analysis	4 months
Final Report and Recommendation	4 months

A total cost for the project is projected to be $317,000. A breakdown of costs is shown on Attachment I.

Project Monitoring and Analysis

FPL will monitor the demand and energy impacts of this pilot in order to determine its cost-effectiveness and the proper vehicle for a full-scale program, if appropriate.

Cost Effectiveness

When at least 500 homes have been retrofitted, FPL will assess the cost-effectiveness of a potential program. During the assessment of cost-effectiveness, FPL will continue the Project. If FPL determines that a full-scale program is cost-effective, it will continue the Project while approval of a full-scale program is pending. If FPL determines that a full-scale program cannot be offered cost-effectively, then FPL will terminate the Project.

Attachment I

Low Income Weatherization Retrofit Project

	Costs
Research Plan Development, Review, and Modification 1) Research consultant selection 2) Research Plan development 3) Work Plan updates	$40,000
Customer Selection 1) Agency selection and coordination 2) Customer selection and screening 3) Measure installation	$185,000
Evaluation 1) Installation of metering equipment 2) Data collection 3) Removal of metering equipment	$90,000
Analysis and Reporting 1) Energy/Demand impact analysis 2) Cost-Effectiveness analysis 3) Final recommendations 4) Reporting	$60,000
Total Project R&D Cost	$375,000

SECTION V - SUMMARY

The Commission established RIM based DSM goals for FPL. FPL's DSM Plan is designed to achieve these DSM goals. FPL's DSM Plan includes all currently identified cost-effective achievable potential under the Participants and RIM tests. It also envisions additional savings that may be achieved from additional cost-effective DSM potential to be found through FPL's research efforts. To realize those additional savings, FPL's DSM Plan includes research and development activities that will build on prior efforts, examine specific technologies and allow FPL to research emerging technologies.

All of the existing FPL DSM programs will be continued in some fashion, except for the Off Peak Battery Charging Program. Most programs have been enhanced by building on prior experience and the results of FPL's end-use monitoring and evaluation efforts. Many of the modifications should enhance customer participation. FPL is also proposing one new program.

FPL's research efforts will continue to be a key part of the overall DSM Plan. FPL proposes to continue its successful CRD program. In addition, two (2) current R&D projects will be continued, and three (3) additional R&D projects will be introduced. Outside the Plan, FPL will continue its Commercial/Industrial Real Time Pricing experiment.

FPL's DSM Plan is a well balanced, comprehensive plan that captures all presently known achievable potential that is cost-effective under the Participants and RIM tests and lays the groundwork for finding more potential. It should achieve all of FPL's conservation goals as approved by the Commission. In doing so it will capture significant amounts of DSM and help to keep customers' rates low.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Approval of demand-side management plan of Florida Power & Light Company.	DOCKET NO. 991788-EG ORDER NO. PSC-00-0915-PAA-EG ISSUED: May 8, 2000

The following Commissioners participated in the disposition of this matter:

JOE GARCIA, Chairman
J. TERRY DEASON
SUSAN F. CLARK
E. LEON JACOBS, JR.
LILA A. JABER

NOTICE OF PROPOSED AGENCY ACTION
ORDER APPROVING DEMAND-SIDE MANAGEMENT PLAN

BY THE COMMISSION:

NOTICE is hereby given by the Florida Public Service Commission that the action discussed herein is preliminary in nature and will become final unless a person whose interests are substantially affected files a petition for a formal proceeding, pursuant to Rule 25-22.029, Florida Administrative Code.

The Florida Energy Efficiency and Conservation Act (FEECA), Chapter 366.82, Florida Statutes, requires the Commission to adopt goals to reduce and control the growth rates of electric consumption and weather sensitive peak demand. By Order No. PSC-99-1942-FOF-EG, issued October 1, 1999, the Commission set numeric conservation goals for each of the four largest investor-owned electric utilities.

Prior to the adoption of numeric goals for Florida Power & Light Company (FPL), the Commission approved the Joint Motion to Approve a Stipulation by FPL and the Legal Environmental Assistance Foundation (LEAF) (Order No. PSC-99-1412-S-EG, issued July 23, 1999 in Docket No. 971004-EG). In the stipulation, LEAF agreed to withdraw from the goal-setting docket and to take no position on FPL's numeric goals. In return, FPL agreed to investigate, and, if feasible, develop various energy-efficiency measures, such as low income weatherization assistance and green pricing.

Rule 25-17.0021(4), Florida Administrative Code, requires that, within 90 days of a final Commission order establishing goals, each utility shall submit a demand-side management (DSM) plan designed to meet the utility's goals. On December 29, 1999, FPL timely filed its DSM Plan. FPL requests approval of its DSM Plan, including approval for cost recovery.

FPL's proposed DSM Plan contains 21 programs, including six residential programs, nine commercial/industrial (C/I) programs, and six research and development (R&D) programs. FPL proposes to continue all existing programs, except for the C/I Off Peak Battery program and the Thermal Energy Storage R&D program. FPL has proposed one new program, the C/I Demand Reduction program. The Plan also includes three new R&D programs: the Green Energy R&D program; Photovoltaic Research, Development and Education R&D program; and, the Low Income Weatherization Retrofit R&D program. A summary of each of these programs is included in Attachment A.

In Order No. 22176, issued November 14, 1989 in Docket No. 890737-PU, the Commission stated that conservation programs will be judged by the following criteria:

1. Does each component program advance the policy objectives set forth in Rule 25-17.001 and the FEECA statute?

2. Is each component program directly monitorable and does it yield measurable results?

3. Is each component program cost-effective?

We have reviewed FPL's Plan and believe that the DSM programs meet the Commission's three-pronged test. The resulting demand and energy savings also appear to meet the numeric goals set by the Commission in Order No. PSC-99-1942-FOF-EG. FPL's Plan also includes six R&D programs and a cogeneration program, which, while not directly measurable, are specifically identified in FEECA. The proposed R&D programs appear to meet the requirements of the stipulation between FPL and LEAF.

FPL's Plan includes slightly increased incentives in three residential and three C/I programs. Specifics on the proposed incentive increases are discussed in Attachment A, pages 10 through 13. We had some concern about these increased incentives, given the general trend toward lower avoided costs, and several petitions filed by FPL in 1997 which reduced program incentives. Further, each of the six programs marginally passes the RIM test. This increases the potential that these programs will not benefit the general body of ratepayers if FPL's assumptions in its cost effectiveness tests prove to be incorrect over time.

We reviewed the incentive levels proposed in FPL's 1995 DSM Plan, and as expected (due to declining avoided costs), found the current proposed incentives to be lower than those approved in 1995. However, a combination of factors has allowed FPL to offer higher incentives than those offered in 1997. FPL's avoided units used in the analysis were two combined cycle units, rather than combustion turbines. All else being equal, this change would lead to lower cost effectiveness due to the higher efficiency of the combined cycle units. However, several offsetting factors are assumed in FPL's analysis, including an annual charge for obtaining firm gas supply, and a reduction in lost revenue. These assumptions have the net effect of increasing cost effectiveness. We have reviewed these assumptions and found them to be reasonable and agree that the increase in cost effectiveness of these six programs has allowed FPL to slightly increase program incentives compared to 1997.

Our concerns about the marginal cost effectiveness of these programs is further reduced by FPL's requirement that all DSM programs have a payback period greater than two years for participating consumers. This reduces the possibility of free riders in each program, adding assurance that the projected savings occur as a result of the DSM program. However, FPL shall closely monitor the cost effectiveness ratios of the programs and petition for changes if necessary.

FPL has proposed several additional changes to its C/I DSM programs, including: 1) discontinuing the Off Peak Battery Charging Program; 2) adding General Service Demand customers to the Business On Call program; 3) closing the CILC program to new participants; and, 4) adding the C/I Demand Reduction program.

FPL intends to terminate the Off Peak Battery Charging Program because participation in this program has reached a near saturation point. Therefore, the potential savings from the program will not offset administrative costs. Eligible customers who are interested in participating in the program will be offered an incentive under the Business Custom Incentive Program. The Business Custom Incentive program is an existing "catch-all" program for C/I cost-effective efficiency measures which are not included in other FPL programs. Eligible DSM measures must reduce or shift at least 25 kW during peak hours, have verifiable demand and energy savings, and pass RIM.

FPL has proposed increasing the participant base for the Business On Call Program. This program currently offers incentives to General Service customers for the direct control of customers' direct expansion, central air conditioners. FPL plans to add General Service Demand customers to the program. FPL has proposed no changes to the existing incentive structure.

FPL also plans to close the C/I Load Control (CILC) program to new participants after December 31, 2000, as approved by Order No. PSC-99-0505-PCO-EG, issued March 10, 1999 in Docket No. 990002-EG. The CILC

program reduces peak demand by allowing FPL to directly control customer loads of 200 kW or greater during peak periods. In return, participating customers receive service under a reduced rate.

FPL's Plan includes one new C/I DSM program, the C/I Demand Reduction Program. This program is similar to the CILC program in that it is designed to reduce peak demand by allowing the direct control of customer loads of 200 kW or greater during periods of extreme demand or capacity shortages. Under the new program, participants contract for a firm demand level which may not be exceeded during capacity shortage periods. In return, participants receive a monthly credit of $4.75 per kW based upon the difference between firm demand and total demand. Participants must provide a five-year termination notice to discontinue service under this rider. The program will be offered to customers no longer eligible for the CILC program. The new program has a reduced incentive structure relative to the CILC program.

We have several concerns about FPL's proposed C/I Demand Reduction program. Total costs of the program are projected to be $15.0 million over the ten year Plan period, with total projected benefits of $16.9 million. Given how infrequently FPL exercised the CILC load control program within the last five years, we believe that there is a potential for this program to be used to provide credits to C/I customers with little benefit to the general body of ratepayers.

FPL's analysis determined that the program is marginally cost effective, with a RIM value of 1.13. Unlike the other IOUs, FPL's cost effectiveness analysis is based on a combined cycle avoided unit. Combined cycle units are typically dispatched as base load units, while load management programs such as the C/I Demand Reduction program are only activated during capacity shortage situations. By letter dated January 6, 2000, FPL indicates that in the last five years, customers were interrupted an average of 1.6 times per year for an average 3.2 hours per interruption under the CILC program. Therefore we believe that a load management program is much more likely to avoid or defer a peaking unit, such as a combustion turbine, rather than a combined cycle unit. However, with such low usage, a peaking unit might not even be avoided. We will hold a series of meetings or workshops with the utilities to discuss this issue. As a sensitivity, Commission staff requested a cost effectiveness analysis for the C/I Demand Reduction program using a 2003 combustion turbine as the avoided unit. FPL's analysis shows that the program remains cost effective using a combustion turbine as the avoided unit, with a RIM value of 2.14.

Similar to the CILC program, the C/I Demand Reduction program includes a special provision for space launch activities which provides power to NASA and the U.S. Air Force Range during launch periods, even if FPL has declared a control period for other program participants. If the control of load is in the hands of the customer, the participating customers could provide no kW reductions while receiving credits at the expense of the general body of ratepayers. We also question the use of specific customer exemptions while paying a credit based on average costs. If the program is to substitute for a generating unit that otherwise was to be built, this special provision may be unnecessary.

Despite these concerns, we approve the proposed C/I Demand Reduction program. Although FPL has agreed to increase capacity reserves to 20% by the summer of 2004, FPL will experience tighter capacity reserve margins in the near future. FPL's 1999 Ten-Year Site Plan reports a summer 2000 reserve margin of 15.4%. Participation in the C/I Demand Reduction program will help ease these short term capacity concerns in the near term. FPL's Plan, as currently proposed, will not meet FPL's demand goals without the C/I Demand Reduction program. In addition, we note that the credits are reduced approximately 15% per kW relative to the rate offered under the CILC program. However, FPL shall monitor the program's cost effectiveness closely to ensure that the program provides benefits to the general body of ratepayers. FPL shall petition for the appropriate changes to the program, including deletion, should the program prove to be non cost-effective.

FPL has also proposed discontinuing one R&D program and adding three additional R&D programs. FPL plans to terminate the Residential Thermal Energy Storage Project. The goal of this project was to determine the technical feasibility and cost effectiveness of using thermal energy storage to displace residential space cooling loads. At the time this project was developed, several manufacturers had prototype thermal energy storage systems under development. Since that time, manufacturers have moved away from this technology. FPL has spent approximately $227,300 of the approved $413,400 budget.

The three new R&D projects contained in FPL's Plan were developed partially in response to FPL's stipulation with LEAF. These projects include: the Green Energy Project; the Photovoltaic Research, Development and Education Project; and, the Low Income Weatherization Retrofit Project. The budgets of each project shall be capped at FPL's expected costs. Specific costs for each project are discussed below.

The goal of the Green Energy Project is to investigate customer acceptance of a green pricing program and develop a Green Energy Program if such a program is found to be feasible. As part of the stipulation with LEAF, FPL will provide LEAF a timely opportunity to comment on FPL's research results, program design plans, and procedures. FPL expects initial project development time to be at least three years, with a budget of $700,000. Program participants will pay an additional fee designed to recover incremental costs, including program administration costs and incremental power production costs.

Under the proposed Photovoltaic, Research, Development and Education Project FPL will analyze the feasibility of a program to replace existing roofing materials with photovoltaic (PV) materials. The project will assist homeowners in installing five to ten PV roof systems in new single family homes. FPL will analyze the impact on FPL's system, relevant demand and energy data, the homeowners' financial benefit, and the durability of the technology. FPL also plans to hold workshops reporting the results to contractors. FPL expects that the development and analysis phase of the project will take at least three years, with total project costs estimated at $471,000.

FPL intends to analyze the cost-effectiveness of retrofitting the homes of low income customers with higher efficiency energy equipment in the Low Income Weatherization Project. The program will provide monetary incentives to the appropriate housing authorities to increase the overall energy efficiency of homes which are being retrofitted. Incentives will be based on the incentives available in other FPL residential DSM programs for similar DSM measures, plus an additional $300 per home for various other efficiency measures. FPL expects the development and analysis phase of the program to last 36 months, with a total expenditure of $375,000.

Upon consideration, we hereby approve FPL's Demand Side Management Plan. Attachment A, attached hereto and incorporated herein by reference, contains a description of each program. FPL shall file program standards that clearly state the requirements for participation in the programs, customer eligibility requirements, details on how rebates or incentives will be processed, technical specifications on equipment eligibility, and necessary reporting requirements. If these program participation standards conform to the description of the programs contained in FPL's DSM Plan, they shall be approved administratively.

Based on the foregoing, it is therefore

ORDERED by the Florida Public Service Commission that Florida Power & Light Company's Demand-Side Management Plan, summarized in Attachment A to this Order, and incorporated by reference herein, is approved. It is further

ORDERED that Florida Power & Light Company shall file program standards which clearly state the requirements for participation in the programs, customer eligibility requirements, details on how rebates or incentives will be processed, technical specifications on equipment eligibility, and necessary reporting requirements. If these program participation standards conform to the description of the programs contained in Florida Power and Light Company's Demand-Side Management Plan, they shall be approved administratively. It is further

ORDERED that the provisions of this Order, issued as proposed agency action, shall become final and effective upon the issuance of a Consummating Order unless an appropriate petition, in the form provided by Rule 28-106.201, Florida Administrative Code, is received by the Director, Division of Records and Reporting, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on the date set forth in the "Notice of Further Proceedings" attached hereto. It is further

ORDERED that in the event this Order becomes final, this Docket shall be closed.

By ORDER of the Florida Public Service Commission this 8th day of May, 2000.

BLANCA S. BAYÓ, Director
Division of Records and Reporting

By: /s/ Kay Flynn
Kay Flynn, Chief
Bureau of Records
This is a facsimile copy. A signed copy of the order may be obtained by calling 1-850-413-6770.

(S E A L)

DMC

NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing that is available under Section 120.57, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing will be granted or result in the relief sought.

Mediation may be available on a case-by-case basis. If mediation is conducted, it does not affect a substantially interested person's right to a hearing.

The action proposed herein is preliminary in nature. Any person whose substantial interests are affected by the action proposed by this order may file a petition for a formal proceeding, in the form provided by Rule 28-106.201, Florida Administrative Code. This petition must be received by the Director, Division of Records and Reporting, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on May 29, 2000.

In the absence of such a petition, this order shall become final and effective upon the issuance of a Consummating Order.

Any objection or protest filed in this docket before the issuance date of this order is considered abandoned unless it satisfies the foregoing conditions and is renewed within the specified protest period.

RESIDENTIAL PROGRAMS

1. **Residential Conservation Service**: This is an existing energy audit program which currently offers walk-through and mail-in audits. The program will be expanded to include phone and Internet audits.

2. **Residential Building Envelope**: The Residential Building Envelope program is an existing program which offers incentives to residential customers to install energy efficient roof and ceiling insulation measures. FPL plans to increase the maximum incentive offered from $614 per kW to $626 per kW. FPL also plans to increase efforts to reach low income participants by targeting public agencies and governmental housing agencies with educational program materials.

3. **Duct System Testing and Repair Program**: This existing program performs on-site duct system tests for air leak identification. Incentives are offered for duct system repair. FPL has proposed increasing the incentive from $369 to $406 per kW, and included free tests for multi-family and manufactured homes in the program.

4. **Residential Air Conditioning Program**: This existing program offers incentives to customers to purchase higher efficiency heating, ventilating, and air conditioning (HVAC) equipment. FPL has

proposed several changes to the program, including: 1) increasing the minimum efficiency level of qualifying equipment from 11 to 11.5 SEER; 2) excluding window units; and, 3) increasing incentive levels from a range not exceeding $182 to $303 per kW of summer demand reduction to a range of $216 to $436 per kW of summer demand reduction.

5. **Residential Load Management Program**: This is an existing load management program in which direct load control equipment is installed on selected customer end-use equipment, allowing FPL to control these customer loads as needed. Qualifying end-use equipment includes central air conditioners, central electric space heaters, electric water heaters and swimming pool pumps. FPL has proposed no changes to this program.

6. **Residential New Construction Program (BuildSmart)**: BuildSmart is an existing program which encourages the design and construction of energy efficient homes. The program offers education to contractors on energy efficiency measures, construction design reviews and home inspections, and an energy rating system. FPL currently charges a fixed fee of $175 per participating home. FPL proposed to change the fee to a tiered structure in which higher efficiency homes will be charged a lower fee.

COMMERCIAL/INDUSTRIAL PROGRAMS

1. **Business Energy Evaluation**: This is a C/I audit program which offers free standard level energy evaluations. More detailed evaluations are offered for a fee. Participation in FPL's other C/I DSM programs is promoted through this program. FPL has proposed no substantive changes to this program.

2. **C/I HVAC Program**: This is an existing program which offers C/I customers financial incentives to upgrade to higher efficiency HVAC equipment. FPL has proposed several changes to the program regarding the minimal efficiency levels of qualifying equipment. FPL has also proposed increasing the maximum DX HVAC incentive from $77 to $100 per kW, and the maximum thermal storage incentive from $330 to $367 per kW.

3. **C/I Efficient Lighting Program**: The Efficient Lighting program offers C/I customers financial incentives to install high efficiency lighting measures at the time of replacement. FPL has proposed increasing the existing program's maximum incentive from $75 to $119 per kW.

4. **C/I Building Envelope Program**: This existing program offers financial incentives to C/I customers to install high-efficiency building envelope measures such as window treatments, roof/ceiling insulation and reflective roof coatings. FPL has proposed a change to the incentive structure from a range not exceeding $155 to $288 per kW of summer demand reduction to a range not exceeding $150 to $320 per kW.

5. **Business Custom Incentive Program**: This is an existing "catch-all" program for C/I cost-effective efficiency measures which are not included in other FPL programs. DSM measures must reduce or shift at least 25 kW during peak hours, have verifiable demand and energy savings, and pass RIM. FPL has proposed no changes to this program.

6. **Business On Call Program**: This is an existing program which offers incentives to General Service customers for the direct control of customers direct expansion, central air conditioners. FPL plans to add General Service Demand customers to the program. FPL has proposed no changes to the existing incentive structure.

7. **Cogeneration and Small Power Production**: This program is designed to facilitate FPL in complying with all regulatory requirements concerning qualifying facilities and small power producers. One role of the program is to assist customers in the evaluation of potential cogeneration projects, including self-generation. FPL does not project demand and energy savings from this program. Therefore a cost effectiveness analysis is not performed and demand and energy savings attributable to the program are not included in FPL's goals.

8. **C/I Load Control (CILC)**: The CILC program reduces peak demand by controlling customer loads of 200 kW or greater during peak periods. In return, participating customers receive service under a reduced rate. Pursuant to Order No. PSC-99-0505-PCO-EG, issued March 10, 1999, the program will not be offered to new participants after December 31, 2000.

9. **C/I Demand Reduction Program**: This is a new program designed to reduce peak demand by allowing the direct control of customer loads of 200 kW or greater during periods of extreme demand or capacity shortages. Participants contract for a firm demand level which may not be exceeded during capacity shortage periods. In return, participants receive a monthly credit of $4.75 per kW based upon the difference between firm demand and total demand. Participants must provide a five-year termination notice to discontinue service under this rider.

10. **Off Peak Battery Charging Program**: FPL plans to terminate this program and include potential participants in the Business Custom Incentive Program. This program offered incentives for the installation of direct control equipment on battery charging equipment. The primary target for this program was golf facilities and participation has reached a saturation level.

RESEARCH AND DEVELOPMENT PROGRAMS

1. **Conservation Research and Development Program**: This is an existing blanket research project under which new DSM technologies are analyzed. Several FPL DSM programs have emerged from the CRD program, including the C/I Building Envelop, Business On Call and Residential New Construction programs. FPL proposes extending the program through December 31, 2002, with a spending cap of $1,500,000. FPL also proposes removing annual spending caps to increase research flexibility.

2. **Cool Communities**: This is an existing program in which FPL is working with American Forests. FPL's role is to quantify energy saving potential of cooling homes in the Miami/Dade area by lightening roof color and tree planting. Total costs for the project are $550,000, with approximately $350,000 spent through 1999. FPL anticipates project completion by March 2001. FPL has proposed no changes to project costs.

3. **C/I New Construction**: The objective of this existing program is to evaluate the demand and energy savings potential in C/I new construction projects. FPL's ultimate goal is to develop a C/I new construction DSM program which will encourage C/I buildings to be more energy efficient than current building codes. FPL received Commission approval in June 1999, to extend the project through December 2000, with no changes to the approved expenditure cap of $1,525,000.

4. **Residential Thermal Energy Storage Project**: The intent of this program was to determine DSM potential for residential thermal energy storage space conditioning equipment. FPL proposes to terminate this program as air conditioning manufacturers have moved away from this technology. FPL has spent approximately $227,300 of the approved $413,400 spending cap on the program.

5. **Green Energy**: This is a new program under which FPL will investigate customer acceptance of a green pricing program and potentially develop a Green Energy Program. As part of the stipulation with LEAF, FPL will provide LEAF a timely opportunity to comment on FPL's research results, and program design plans and procedures. FPL expects initial project development time to be at least three years, with a budget of $700,000. Program participants will be charged an additional charge designed to recover incremental costs including program administration costs and incremental power production costs.

6. **Photovoltaic, Research, Development and Education**: FPL plans to analyze the feasibility of a program to replace existing roofing materials with photovoltaic materials which provide the same protection as standard roofing materials. This proposed project emerged partially as a result of FPL's stipulation with LEAF. The project will assist homeowners in installing five to ten PV roof systems in new single family

homes. FPL will analyze the impact on FPL's system, demand and energy data, homeowner's financial benefit, and durability of the technology. FPL also plans to hold workshops reporting the results to contractors. FPL expects that the development and analysis phase of the project will take at least three years, with total project costs estimated at $471,000.

7. **Low Income Weatherization Retrofit**: This proposed program will analyze cost-effective methods of retrofitting the homes of low income customers with higher efficiency energy equipment. The program will provide monetary incentives for housing authorities to increase the overall energy efficiency of homes which are to be retrofitted. Incentives will be based on the incentives available in other FPL residential DSM programs, plus an additional $300 per home for various other efficiency measures. FPL expects the development and analysis phase of the program to last 36 months, with a total expenditure of $375,000. This program is another offshoot of FPL's stipulation with LEAF.