

FLORIDA PUBLIC SERVICE COMMISSION

Fletcher Building  
101 East Gaines Street  
Tallahassee, Florida 32399-0850

MEMORANDUM

MAY 4, 1995

TO : DIRECTOR, DIVISION OF RECORDS AND REPORTING *RS*

FROM : *JS* DIVISION OF ELECTRIC AND GAS [SHINE, FUTRELL, HAFF, *MSH* JDJ]  
*JB* TAYLOR, BALLINGER] *TB*  
DIVISION OF LEGAL SERVICES [PALECKI] *R for MAP*

RE : DOCKET NOS. 941170-EG, 941171-EG, 941172-EG, 941173-EG -  
APPROVAL OF DEMAND SIDE MANAGEMENT PLAN OF FLORIDA POWER  
AND LIGHT COMPANY, FLORIDA POWER CORPORATION, GULF POWER  
COMPANY, AND TAMPA ELECTRIC COMPANY.

AGENDA: 5/16/95 - REGULAR AGENDA  
PROPOSED AGENCY ACTION (EXCEPT FOR ISSUE 5) - INTERESTED  
PERSONS MAY PARTICIPATE

CRITICAL DATES: NONE

SPECIAL INSTRUCTIONS: I:\PSC\EAG\WP\941170.RCM

CASE BACKGROUND

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 to reduce and control the growth rates of weather sensitive peak demand. In Order No. PSC-94-1313-FOF-EG issued October 25, 1994, the Commission set numeric demand-side management (DSM) goals for the four largest investor-owned electric utilities (IOU). Rule 25-17.0021(4), Florida Administrative Code, states that within 90 days of a final order establishing goals, each utility shall submit a DSM plan designed to meet the utility's goals. Each IOU filed its DSM plan following extensions granted by the prehearing officer.

DOCUMENT NUMBER-DATE

04390 MAY-4 95

FPSC-RECORDS/REPORTING

**PLAN APPROVAL ISSUES**

**ISSUE 1:** Should Florida Power and Light Company's Demand-Side Management plan be approved, including approval for cost recovery?

**RECOMMENDATION:** Yes, the plan should be approved, including approval for cost recovery, except for the following: (1) FP&L's Heating Ventilating and Air Conditioning (HVAC), Business Custom Incentive, Commercial/Industrial Load Control, and General Service Load Management programs should be set for hearing as discussed in Issue 5; and (2) FP&L should be required to file an updated monitoring plan identifying the specific approaches implemented for each program within 180 days of the final order to ensure compliance with the requirements of Rule 25-17.0021, Florida Administrative Code. Research and Development program spending should be capped at the amounts identified in Attachment 1. If the Commission denies staff's recommendation in Issue 5, staff would still recommend that FP&L's C/I Load Control program not be approved at this time because recent discovery responses remain to be analyzed. [Shine]

**STAFF ANALYSIS:** FP&L's proposed DSM plan contains 26 programs, including six residential programs; nine commercial/industrial programs; and nine research and development programs. FP&L has also described its continuing cogeneration activities, the expenses of which are recovered through the Energy Conservation Cost Recovery Clause, and a Green Pricing concept program.

In Order No. 22176, issued November 14, 1989, 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 FBECA statute?
2. Is each component program directly monitorable and yield measurable results?
3. Is each component program cost-effective?

Staff has reviewed FP&L's plan and believes the conservation programs meet the Commission's three-pronged test with the exception of FP&L's HVAC, Business Custom Incentive, C/I Load Control, and General Service Load Control programs. These C/I programs are discussed in Issue 5. If the Commission denies staff's recommendation in Issue 5, staff would still recommend that FP&L's C/I Load Control program not be approved because staff is still analyzing recent discovery responses. FP&L's plan also contains Research and Development programs, a Green Pricing

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program, and a cogeneration program which, while not directly measurable, are specifically identified in FEECA. A summary of each of these programs is contained in Attachment 1. Staff recommends that the research and development programs be approved and the expenditures capped at the level shown in Attachment 1. A table showing each program's RIM value and contribution towards FP&L's goal is contained in Attachment 2.

FP&L's proposed methodology for measuring actual kW and kWh savings achieved for each program is much too general. Staff proposes that the Company file a more detailed methodology within six months of the order approving the programs. FP&L should provide a specific methodology for each program that is approved. At least a general time-frame for conducting the measurement of savings should be identified, along with the estimated frequency of measurement (such as quarterly, yearly, every five years, etc.). Also, a detailed methodology of savings evaluation (such as pre- and post-billing analysis, enhanced metering, engineering studies, etc.) and an estimate of the costs should be indicated for each program to insure that measurement costs do not reverse the program's cost-effectiveness. Staff will review the methodology FP&L will file and bring any deficiencies to the attention of the Commission as needed. Also, parties who believe any deficiencies exist can petition the Commission to correct them. Otherwise, no further Commission involvement is necessary.

#### GREEN PRICING

Based on the preliminary information submitted in response to Order No. PSC-1313-POF-EG, issued 10/25/94, FP&L's green pricing program appears to adequately address the development of alternate funding sources to promote the installation of renewable technologies. FP&L will purchase photovoltaic modules to be located at powerplants or substations. Staff recommends approval of the green pricing administrative program costs which will be subject to ongoing review in the ECCR clause. These costs should be separately identified as a line item in FP&L's ECCR filings. This program should contribute toward the commercialization of renewable technologies that may become economically viable more quickly than they otherwise would be.

Solar water heating is not part of the green pricing program at this time. FP&L's petition proposes to discontinue the residential solar water heating rebate program, and move the program over to the research and development area in an effort to identify technology improvements and market segments that could potentially help the program pass a RIM test. Staff agrees with these proposed program modifications.

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LOW INCOME

Based on the preliminary information submitted in response to Order No. PSC-1313-FOF-EG, FP&L's analysis of DSM program availability, saturation, and benefits to residential low income customers appears to be adequate. Additionally, because all of the proposed programs in FP&L's DSM plan pass the RIM test, they reduce rate impacts for all customers, including those with low income.

FP&L originally petitioned to discontinue the HELP program in Docket No. 900091-EG on the basis that it was not projected to be cost effective. In Order No. 23560, issued 10/2/90, the Commission denied FP&L's petition to discontinue the HELP program, and ordered the Company to "consider changes to the program to enhance its implementation and cost-effectiveness." FP&L responded by filing a petition to combine the HELP program with the Duct Testing program which was subsequently approved by the Commission in Order No. 25258, issued 10/28/91.

FP&L is again petitioning to discontinue the HELP program, which is currently combined with the Duct Testing program. The HELP program includes the following low cost measures: water heater insulation wraps, hot water pipe insulation, faucet restrictors, low flow showerheads, door sweeps, caulking and weatherstripping. Approximately 22% of the customers participating in the HELP program are low income. Staff recommends that the Commission approve FP&L's request to discontinue the HELP program. Discontinuance may remove one program from consideration by those in the low income bracket, however, FP&L structured its DSM programs in order to achieve its goals in a cost-effective manner.

To facilitate continuing low income participation, FP&L will target public agencies and governmental housing authorities for program education and implementation of its residential DSM programs. FP&L is investigating the potential for qualifying public agencies or housing authorities to install certain measures as participating contractors.

FP&L also performed an analysis assessing the availability and saturation of its residential conservation programs to low income customers whose annual incomes are less than \$20,000. The Company found that significant numbers of low income customers are participating in most of its residential DSM programs. The low income sector comprises about 14% of FP&L's customer base, while low income customers comprise about 20% of the participants in all of FP&L's conservation programs.

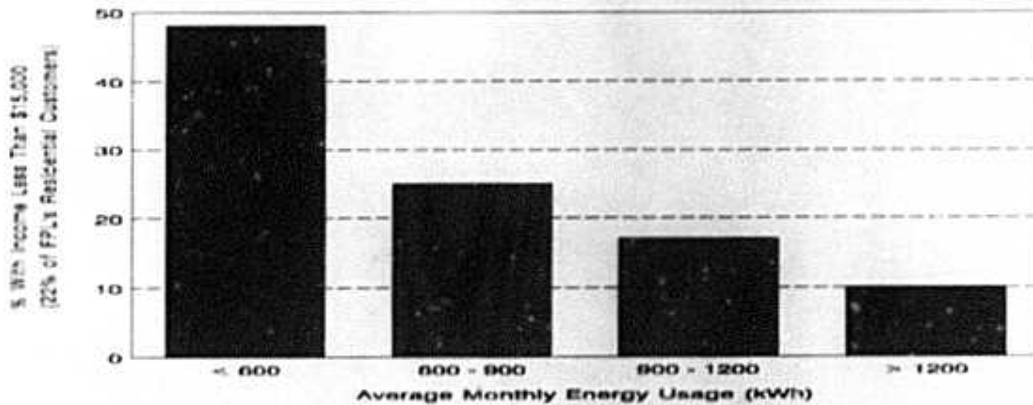
It is important to note that not all low income customers are low users of electricity. As shown in Figure 1, approximately 48%

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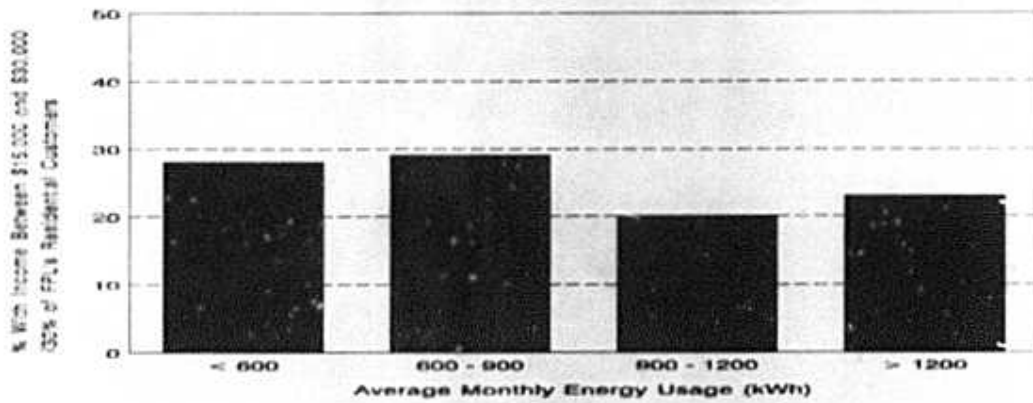
of FP&L's customers with incomes less than \$15,000 consume on average less than 600 kwh per month. Many use a great deal more electricity due to lifestyle and behavioral choices, in addition to the impacts of old inefficient appliances and dwellings.

FIGURE 1

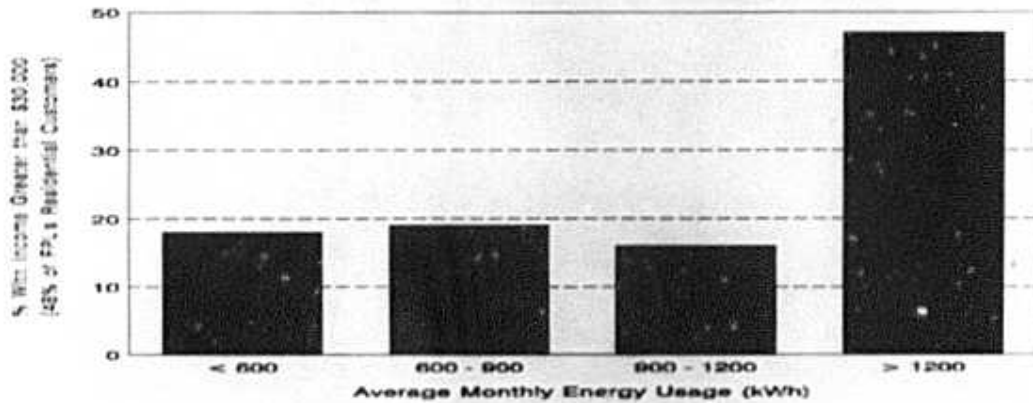
FLORIDA POWER AND LIGHT COMPANY - Residential Monthly Energy Usage  
Annual Household Income Less than \$15,000



Annual Household Income Between \$15,000 and \$30,000



Annual Household Income Greater than \$30,000



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**ISSUE 2:** Should Florida Power Corporation's Demand-Side Management plan be approved, including approval for cost recovery?

**RECOMMENDATION:** Yes, the plan should be approved, including approval for cost recovery, except for the following: (1) FPC's Innovation Incentive and Commercial Energy Management programs should be set for hearing as discussed in Issue 5; (2) FPC's existing interruptible and curtailable tariffs should be closed to new customers, as of the date of the Commission's vote, because the tariffs are not cost-effective; and (3) FPC should be required to file an updated monitoring plan identifying the specific approaches implemented for each program within 180 days of the final order to ensure compliance with the requirements of Rule 25-17.0021, Florida Administrative Code. [Haff]

**STAFF ANALYSIS:** FPC's proposed DSM plan contains four residential programs, nine commercial and industrial (C/I) programs, and one research and development program. These DSM programs are designed to minimize free riders, minimize rate impacts, and meet the Commission-prescribed DSM goals. In addition, FPC has described its continuing cogeneration activities, the expenses of which are recovered through the Energy Conservation Cost Recovery Clause.

In Order No. 22176, issued November 14, 1989, 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 yield measurable results?
3. Is each component program cost-effective?

Staff has reviewed FPC's plan and believes the conservation programs meet the Commission's three-pronged test with the exception of FPC's Innovation Incentive and Commercial Energy Management programs. These programs are discussed in Issue 5. In addition, FPC's plan contains a research and development program with an \$800,000 annual cap; and a cogeneration program which, while not directly measurable, are specifically identified in FEECA. A summary of these programs is contained in Attachment 3. A table showing each program's RIM value and contribution toward FPC's goal is contained in Attachment 4. Staff notes that while FPC is the only utility with a residential decoupling mechanism, its plan still relies heavily on traditional load management to achieve its residential goal.

FPC has provided a brief description of its monitoring and evaluation plans for each of the programs in its DSM plan. FPC's proposed methodology for measuring actual kW and kWh savings achieved for each program, however, is much too general. Staff proposes that the Company file a more detailed methodology within six months of the order approving the programs. FPC should provide a specific methodology for each program that is approved. At least a general time frame for conducting the measurement of savings should be stated along with the estimated frequency of measurement (such as quarterly, yearly, every five years, etc.). Also, a detailed methodology of savings evaluation (such as pre- and post-billing analysis, enhanced metering, engineering studies, etc.) and an estimate of the costs should be indicated for each program to insure that measurement costs do not reverse the program's cost-effectiveness. Staff will review the methodology to be filed by FPC and bring any deficiencies to the attention of the Commission as needed. Also, parties who believe any deficiencies exist can petition the Commission to correct them. Otherwise, no further Commission involvement is necessary.

#### INTERRUPTIBLE AND CURTAILABLE LOAD

FPC's Interruptible and Curtailable service tariffs should be closed to new participants because they are not cost-effective. Pursuant to the stipulation in FPC's last retail rate case (Docket No. 910890-EI), interruptible and curtailable service are considered to be DSM programs. The level of credit paid to participants, which is collected through the ECCR clause, was also set in the stipulation. At the time these credits were set, the two programs were cost-effective; this is no longer the case. Pursuant to the stipulation, however, FPC cannot modify the credit levels paid until the next rate case. Staff recommends that these two tariffs be closed to new customers as of the date of the Commission vote. Only customers taking service under either the IS-1, IST-1, CS-1, or CST-1 rate schedules as of the date of the Commission vote should be allowed to continue service under these tariffs.

#### GREEN PRICING

FPC's plan includes an investigation into Green Pricing and also addresses other sources for renewable funding. FPC plans to perform a Green Fund survey of its customers during the third quarter of 1995 to determine the market's interest in the concept. Additionally, FPC is currently investigating other funding sources for renewable measures. FPC proposes that the initial costs associated with Green Fund surveys and evaluation of the Green Pricing concept be recovered through the Energy Conservation Cost Recovery Clause. Staff believes that FPC is taking reasonable



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action on Green Pricing in response to the Commission's DSM Goals order, and recommends approval of FPC's proposal. Staff recommends approval of the green pricing administrative program costs which will be subject to ongoing review in the ECCR clause. These costs should be separately identified as a line item in FPC's ECCR filings.

#### LOW INCOME

FPC's plan adequately addresses the low-income segment, and FPC continues to investigate methods to assist low-income customers. Several of FPC's programs address the special needs of low-income customers. There is no income barrier for participation in the Home Energy Check program and Residential Energy management programs, as they are offered at no customer cost. An additional benefit of the Home Energy Check is that it allows FPC to work with other relief agencies as an extension of DSM services. The Home Energy Improvement program assists low-income customers with substantial up-front capital costs by offering zero-interest loans with installment billing. FPC continues to work with the Department of Community Affairs, the Florida Client Council, and the Legal Environmental Assistance Foundation (LEAF) to discuss ways to facilitate low-income participation in DSM programs. FPC worked with LEAF in the design of its DSM plan.

FPC is involved with low-income assistance outside of its DSM programs. Examples include an average billing plan, donations from other FPC ratepayers to assist low-income customers in paying energy bills, and assisting with dissemination of information through involvement with social service agencies. Staff believes that FPC is aware of the special needs of its low-income customers. The correlation between energy use and household income for FPC's customers is similar to that discussed in issue 1 for FP&L.

**ISSUE 3:** Should Tampa Electric Company's Demand-Side Management plan be approved, including approval for cost recovery?

**RECOMMENDATION:** The plan should be approved, including approval for cost recovery, except for the following: (1) TECO's Commercial/Industrial Load Management, and Conservation Value programs should be set for hearing as discussed in Issue 5; (2) TECO's Commercial Measures Research and Development program should be limited to three years with a cap of \$450,000 over the period, and a final report on research results should be filed at the end of the period; and (3) TECO should be required to file an updated monitoring plan identifying the specific approaches implemented for each program within 180 days of the final order to ensure compliance with the requirements of Rule 25-17.0021, Florida Administrative Code. [Futrell]

**STAFF ANALYSIS:** TECO's proposed DSM plan was filed on February 6, 1995, and contains 16 programs, including seven residential programs; seven commercial/industrial programs; one research and development program; and a homebuilder awareness program. In addition, TECO has described its continuing cogeneration activities, the expenses of which are recovered through the Energy Conservation Cost Recovery Clause.

In Order No. 22176, issued November 14, 1989, 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 yield measurable results?
3. Is each component program cost-effective?

Staff has reviewed TECO's plan and believes the conservation programs meet the Commission's three-pronged test with the exception of Commercial/Industrial Load Management, and Conservation Value programs. These programs are discussed in Issue 5. In addition, TECO's plan contains a research and development program and a cogeneration program which, while not directly measurable, are specifically identified in FEECA. A summary of all of these programs is contained in Attachment 5. A table showing each programs RIM value and contribution towards TECO's goal is contained in Attachment 6.

TECO has provided a brief description of its monitoring and evaluation plans for each of the programs in its DSM plan. TECO's

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proposed methodology for measuring actual kW and kWh savings achieved for each program, however, is much too general. Staff proposes that the Company file a more detailed methodology within six months of the order approving the programs. TECO should provide a specific methodology for each program that is approved. At least a general time frame for conducting the measurement of savings should be identified, along with the estimated frequency of measurement (such as quarterly, yearly, every five years, etc.). Also, a detailed methodology of savings evaluation (such as pre- and post-billing analysis, enhanced metering, engineering studies, etc.), and an estimate of the costs, should be indicated for each program, to insure that measurement costs do not reverse the program's cost-effectiveness. Staff will review the methodology to be filed by TECO and bring any deficiencies to the attention of the Commission as needed. Also, parties who believe any deficiencies exist can petition the Commission to correct them. Otherwise, no further Commission involvement is necessary.

#### COMMERCIAL MEASURES RESEARCH AND DEVELOPMENT PROGRAM

Research on the potential of different DSM measures will be conducted under this program and is discussed in more detail in Attachment 5. TECO estimates program costs at \$150,000 per year, and has requested a five year period with continuation based on annual review of results by the Commission. Traditionally, the Commission has limited the time frame and placed spending limits on research programs. Utilities should conduct timely, focused research efforts in order to determine the feasibility of including a DSM measure in a utility program. Staff believes TECO's research program should likewise be limited, in this case to three years with a total spending cap of \$450,000. TECO should also provide a detailed report on the results of its research efforts.

#### GREEN PRICING

Based on the preliminary information submitted in response to Order No. PSC-94-1313-FOF-EG, TECO's green pricing program appears to adequately address the development of alternate funding sources to promote the installation of renewable technologies. TECO proposes to survey its ratepayers in order to help determine interest in Green Pricing and to identify specific areas of solar and renewable technologies which TECO's customers would most support. TECO plans to utilize data from a University of Florida Energy Extension Service survey on green pricing in connection with its own planned survey. Staff recommends approval of the green pricing administrative program costs which will be subject to ongoing review in the ECCR clause. These costs should be separately identified as a line item in TECO's ECCR filings.

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LOW INCOME

Based on the preliminary information submitted in response to Order No. PSC-94-1313-FOF-EG, TECO's analysis of DSM program availability, saturation, and benefits to the residential low-income customers appears to be adequate. Staff believes TECO is making appropriate efforts to address the special needs of its low-income ratepayers. A Social Service Advisor was established in the company to directly assist low-income ratepayers and to interface with social service agencies in order to better coordinate efforts in assisting low-income customers. In addition, TECO has estimated DSM program participation by low-income customers using data from a recent appliance saturation survey. The correlation between energy use and household income for TECO's customers is similar to that discussed in issue 1 for FP&L.

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**ISSUE 4:** Should Gulf Power Company's Demand-Side Management plan be approved, including approval for cost recovery?

**RECOMMENDATION:** Yes, the plan should be approved, including approval for cost recovery, except for the following: (1) Gulf's Transtext program should not be approved unless Gulf makes the changes discussed in the staff analysis, and (2) Gulf should be required to file an updated monitoring plan identifying the specific approaches implemented for each program within 180 days of the final order to ensure compliance with the requirements of Rule 25-17.0021 Florida Administrative Code. Gulf did not propose any C/I programs that were applicable to the discussion in Issue 5. [Taylor/Ballinger]

**STAFF ANALYSIS:** Gulf's proposed DSM Plan was filed on February 22, 1995, and contains: five Residential programs, three Commercial/Industrial programs, two Conservation Demonstration and Development Programs, in addition to Gulf's existing six conservation programs. The energy conservation achieved by the six existing programs will not be counted toward achievement of the conservation goals that were established by Order No. PSC-94-1313-FOF-EG.

In Order No. 22176, issued November 14, 1989, 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 yield measurable results?
3. Is each component program cost-effective?

Staff has reviewed Gulf's plan and believes the conservation programs, including the six existing programs, meet the Commission's three-pronged test with the exception of the Transtext program. In addition, Gulf's plan contains a research and development program which, while not directly measurable, is specifically identified in FEECA. A summary of each of these programs is contained in Attachment 7. A table showing each programs RIM value and contribution towards Gulf's goal is contained in Attachment 8.

Gulf has provided a brief description of its monitoring and evaluation plans for each of the programs in its DSM plan. Gulf's proposed methodology for measuring actual kW and kWh savings achieved for each program, however, is much too general. Staff

proposes that the Company file a more detailed methodology within six months of the order approving the programs. Gulf should provide a specific methodology for each program, new and existing, that is approved. At least a general time frame for conducting the measurement of savings should be stated along with the estimated frequency of measurement (such as quarterly, yearly, every five years, etc.). Also, a detailed methodology of savings evaluation (such as pre- and post-billing analysis, enhanced metering, engineering studies, etc.) and an estimate of the costs should be indicated for each program to insure that measurement costs do not reverse the program's cost-effectiveness. Staff will review the methodology to be filed by Gulf and bring any deficiencies to the attention of the Commission as needed. Also, parties who believe any deficiencies exist can petition the Commission to correct them. Otherwise, no further Commission involvement is necessary.

#### TRANSTEXT PROGRAM

Among the many assumptions needed to calculate a conservation program's costs and benefits are the kW savings per customer and the cost and timing of the utility's next avoidable electric generating unit. When costs equal benefits, the accuracy of the many assumptions become critical. There is no margin for error. When costs equal benefits, the risk of assumption error is transferred to the non-participating customers.

The equipment used for the Transtext program is manufactured by a company that is one-third owned by the Southern Company. Each Transtext installation is expected to cost \$750. The participating Transtext customer pays \$450, which is amortized over 20 years. Gulf is proposing that the remaining \$300 be collected from all customers through the energy conservation cost recovery (ECCR) clause. Although proposed to be made available to all residential customers, the added \$7.50 per month metering/signaling/O&M charge causes the Transtext program to be targeted toward higher use customers. That is, to break even, a participating Transtext customer would have to set major appliances to be curtailed to at least save \$7.50 per month. This means that lower use customers will pay part of the Transtext program costs and not receive a commensurate benefit, if almost any of the many assumptions are incorrect. This is not anything new as most DSM programs pass costs along to all ratepayers. As proposed, however, Gulf's program is too close to call, and the program is too large to be approved with a cost/benefit ratio of 1.0.

Gulf conducted a two year experiment with the Transtext Advanced Energy Management system conducted in Gulf Breeze, Florida. This is a somewhat upscale community on Highway 98 across the bay from Pensacola. The community is surrounded by water.

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Customers were selected on a volunteer basis, which introduces some unknown bias in the experiment. The experiment consisted of three set cost periods, plus a fourth very high cost period based on system capacity shortfalls. Rates were below the average rate in the P1 and P2 off-peak periods and above the system average in the P3 shoulder load period and the P4 capacity shortfall period. With Transtext, the customer can set major appliances, such as the water heater, air-conditioning, heating, or pool pump to be automatically curtailed as prices increase. The curtailment signal is sent through the house wiring relays controlling each appliance. Peak period P4 prices were in effect for 53 hours in 1992 and 64 hours in 1993, or about one percent of the year. Based on this experiment, Gulf assumed a 2.0 kW savings per participating customer.

Gulf also filed an analysis of Direct Load Control (DLC) in its program filing as required by Order No. PSC-94-1486-FOF-EG. Since Gulf had no experience in DLC, it modelled a DLC program after Tampa Electric Company's (TECO's) filing using the data and assumptions utilized by TECO in the conservation goals docket. The pertinent assumptions were the installation costs, \$396/customer, and peak load reduction, 1.22 kW. Gulf concluded that a DLC program was not cost effective for controlling summer loads. Since Transtext and DLC control virtually the same appliances, staff questions why the per customer demand reductions would not be similar for both Transtext and a less costly DLC program. In other words, it appears that Gulf can achieve the same results in a less costly manner.

Staff is also bothered by the assumption that the individual major appliance interrupting relays will last 20 years on the average. These relays will be called upon to interrupt high amperages causing arcing and burning. The relays may be sealed, but are not vacuum relays which extinguish arcing. Gulf reports no significant relay failure during the two year experiment. Again, this is a key assumption, which, if in error, may result in the non-participating customers subsidizing the Transtext participant.

Another key assumption is that without the Transtext program, Gulf will need to add a peaking unit in 1998. Staff is uncertain whether this is still a valid assumption and notes that if the unit is needed say just one or two years later, costs to the non-participating customers will exceed benefits. There are numerous other assumptions needed to predict costs and benefits, which may swing the cost-benefit ratio either way. We point to the savings per customer and the timing of the avoided peaking unit because of the close call Gulf is asking us to make.

These questions arise because the cost-benefit ratio is so

close to unity, i.e., costs equals benefits, and therefore there is little or no room for error. Gulf is projecting Transtext to account for approximately 75% of its summer and 103% of its winter residential demand goal. None of the other utilities have a residential program of such magnitude and similar RIM value. The consequence of error will be that non-participants will not receive benefits they will pay for through the ECCR clause.

Although staff is recommending Gulf's Transtext program be rejected as proposed, we believe the Commission should tell Gulf what changes may be made to receive approval. The Commission can only approve or reject programs proposed by utilities to meet their goals, and cannot modify or propose programs unless the utility fails to meet its goals. Staff recommends informing Gulf of at least one way, but not the only way, that changes could be made to obtain approval. This will prevent Gulf from having to submit program change after program change until it stumbles on a version that the Commission will approve. The recommended change is for all the program costs to be recovered from participants in the high cost periods. This cost can be trued-up, with interest, if Gulf so proposes. With program costs paid by the Transtext participants, the risk of assumption uncertainties are not transferred to the lower use non-participating customers. The participants will have higher P3 and P4 peak period costs, which they can avoid or minimize paying, by setting their controlled appliances to be curtailed, or by implementing more traditional conservation measures. Of course, a DLC program may be the more cost-effective alternative.

#### GREEN PRICING

Gulf's Project Share program generates approximately \$100,000 annually through a bill check-off system to pay the electric bill of needy families. Gulf believes that it can implement a similar check-off system for the Solar for Schools Pilot Program. For each installation Gulf will provide \$35,000 towards the program, which will supplement the dollars needed for the installation of the solar equipment at each participating school.

Gulf will also continue to work with the Florida Solar Energy Industries Association to promote solar energy in Gulf's service territory. In addition, Gulf has a memorandum of understanding with the Florida Department of Community Affairs (DCA) that establishes a collaborative effort with DCA to identify and pursue actions necessary to ensure sustainability of cost effective solar programs which meet Gulf's and DCA's common objectives. Staff recommends approval of the green pricing administrative program costs which will be subject to ongoing review in the ECCR clause. These costs should be separately identified as a line item in Gulf's ECCR



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filings.

LOW INCOME

Gulf presently has in effect a check-off procedure on the customer's utility bill wherein the customer can donate money for needy families to pay their electric bills. Gulf acts as a conduit for the money and distributes all monies received directly to the Salvation Army. Approximately \$100,000 per year is received through this program. In addition Gulf plans to (1) offer targeted energy education programs and literature to assist low income customers in energy conservation, (2) strengthen the relationship between Gulf and low income service providers, (3) promote Gulf's free services (such as energy audits) through the low income service providers, (4) continue to be responsive to the individual needs of customers and (5) match participant lists with geodemographic database information. The correlation between energy use and household income for Gulf's customers is similar to that discussed in issue 1 for FP&L.

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**ISSUE 5:** Should FP&L's, FPC's, and TECO's commercial/industrial (C/I) programs identified in issue nos. 1, 2, and 3 be set for hearing?

**RECOMMENDATION:** Yes. These C/I programs may increase both kilowatts and kilowatt-hours and, hence, may be more correctly classified as load building or load retention programs. Because of this potential, the Commission should suspend increased ECCR cost recovery for incremental program participants until either: (1) other methods of cost recovery for these programs are explored or (2) it is determined that these types of programs are, indeed, conservation programs. A September 5, 1995 hearing date has been reserved for these purposes.

**STAFF ANALYSIS:** Competition between the electric and gas utilities in the C/I sector has been and will continue to be fierce. This is because this market segment: 1) is a major revenue source and 2) may be "at risk" of switching from one supplier to another or leaving the system entirely. The degree of being "at risk" varies from customer to customer.

Demand and energy savings estimates vary, depending upon base case assumptions, for many C/I programs. If the utility markets one of these DSM programs to a customer who is not "at risk", the traditional RIM analysis properly weighs the corresponding program benefits and costs. In this instance, kilowatts and/or kilowatt-hours will likely be saved. However, if the DSM program is marketed to a customer who is "at-risk", the consumption of electricity may increase, not decrease, from what might otherwise have occurred if the DSM programs were not offered. In these instances, the RIM test no longer provides the complete answer because the RIM test assumes an all-electric world with average customer data as the base case. This outcome is clearly not conservation nor the intent of the ECCR clause, which is to provide rapid recovery for cost-effective conservation program costs. The ECCR clause is not intended to provide the utility assistance in load building or load retention. For these fundamental reasons, a new approach to cost recovery may be necessary.

The utilities take the position that if a program passes the RIM test, its costs should be recovered through the ECCR clause. Staff believes there is more to this issue than passing the RIM test. While the C/I programs raised in this issue may pass the RIM test, they may also increase both kilowatt and kilowatt-hour consumption which is contrary to the FEBCA. This issue is not just a gas versus electric issue. For example, an electric lawnmower program would probably pass the RIM test yet increase both kilowatt and kilowatt-hour consumption. Is this a conservation program whose costs should be recovered through the ECCR or base rates? It

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is questions like these that would be the issues of the recommended hearing.

In the interim, staff proposes to conduct workshops, with both the gas and electric industries participating. Staff will encourage natural gas utilities to "step up to the plate" with real world examples of how various C/I programs have been used for competitive electric load building purposes. The purpose of the workshop will be to ferret out an answer to the question "did kW and kWh increase because of the DSM program?" The workshops will be used to focus the issues and to avoid becoming embroiled in an endless electric versus gas debate using average data or some speculative fuel cycle philosophy. After all, sometimes electric is the best choice for a particular customer, and at other times, gas may be the best alternative.

If the Commission accepts staff's recommendation, the part of the Commission's order addressing this issue will not be issued as proposed agency action, since the matter is simply being set for hearing, and no decision which affects substantial interests is being made at this time.

**GOAL ACHIEVEMENT ISSUES**

**ISSUE 6:** Should Tampa Electric Company be permitted to count the demand and energy savings from incremental customers who choose interruptible service (IS) over the Commercial/Industrial (C/I) Load Management Program toward its C/I DSM goal?

**RECOMMENDATION:** No. If the Commission approves TECO's C/I Load Management Program, TECO should not be permitted to count savings from incremental IS customers toward its C/I goals. (Futrell)

**STAFF ANALYSIS:** FEECA mandates the Commission to adopt conservation goals, and requires each utility to develop plans and programs to meet the overall goals within its service area. It is staff's opinion that only savings from programs identified in a utility's DSM plan should count toward that utility's goals. In the description of its Commercial/Industrial Load Management program TECO states:

Incrementally, customers who qualify and select service under the IS interruptible rates over participation in the C/I Load Management program, will be counted toward the summer and winter commercial MW goals under this program.

Pursuant to the stipulation in TECO's last rate case, recovery of TECO's IS rate credit was not allowed through the ECCR clause, and is therefore not a program. In TECO's goal setting docket, (930551-EG) no potential savings from its interruptible rate customers was identified and included in its goals. Now TECO is requesting that savings from a non-DSM program be counted toward its C/I goal. This should not be permitted as only savings from programs identified in a utility's DSM plan should count toward that utility's goals.

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**ISSUE 7:** Should Florida Power Corporation be permitted to count demand and energy savings from one market segment towards the goals of another market segment?

**RECOMMENDATION:** A decision on this issue is premature because FPC projects that it will achieve both its residential and commercial/industrial goals. (Haff)

**STAFF ANALYSIS:** FPC requested approval to allow up to 15% of any excess savings in the residential market segment to be applied to the commercial/industrial market segment, or vice versa, to insure goal achievement in both market segments. A decision on this issue is premature because FPC projects that it will achieve both its residential and commercial/industrial goals.

**OTHER ISSUES**

**ISSUE 8:** Should Florida Power and Light Company, Florida Power Corporation, Gulf Power Company, and Tampa Electric Company be required to submit detailed program participation standards?

**RECOMMENDATION:** Yes. The four investor-owned utilities should file program participation standards within 30 days of the issuance of the order in the DSM plan dockets. These standards should be administratively approved.

**STAFF ANALYSIS:** Each utility's program standards should clearly state the Company's requirements for participation in the programs, customer eligibility requirements, details on how rebates or incentives will be processed, technical specifications on equipment eligibility, and necessary reporting requirements. Staff requests that it be allowed to administratively approve these program participation standards if they conform to the description of the programs contained in each utility's DSM plan.

**ISSUE 9:** What should be the effective date of the tariff modifications that correspond to the utilities' DSM plans?

**RECOMMENDATION:** The tariff revisions should become effective the date the order becomes final.

**STAFF ANALYSIS:** If the Commission votes to approve the proposed tariff modifications, staff recommends that they become effective the date the order becomes final.

**ISSUE 10:** Should these dockets be closed?

**RECOMMENDATION:** No. These dockets should remain open until after a formal hearing has been held as discussed in Issue 5. If staff's recommendation in issue 5 is not approved, the dockets should be closed if no person whose substantial interests are affected files a timely objection.

**STAFF ANALYSIS:** Since staff has recommended certain issues for a formal hearing, these dockets should remain open. If the Commission denies staff's recommendation in Issue 5 and if no substantially affected person files a timely request for a Section 120.57, Florida Statutes, hearing within 21 days, no further action will be required and these four dockets should be closed.

## ATTACHMENT 1 - FP&L

**NOTE:** All programs in Attachment 1 contribute toward FP&L's goals, and the costs are to be recovered through the ECCR clause. The Cogeneration & Small Power Production program, however, will not contribute toward FP&L's goals. \* - Indicates program discussed in Issue 5.

### RESIDENTIAL PROGRAMS - FP&L

**Conservation Service Audit:** This program provides a free walk through energy audit, a computer generated Class A audit, and a customer assisted energy audit. Program serves as a vehicle to introduce customers to FP&L's conservation incentive DSM programs.

**Building Envelope Program:** The objective of this program is to encourage the installation of: ceiling insulation up to R-30, window treatments such as solar film, and high efficiency replacement windows. Incentives range from \$346 to \$348 per kw.

**Duct System Testing and Repair:** The objective of this program is identification and repair of air leaks in air conditioning duct systems. FP&L is petitioning to discontinue the HELP program which was previously combined with the duct program because it is not cost-effective. This program consists of low cost conservation measures such as weatherstripping and water heater tank wraps.

**Air Conditioning Program:** The objective of this program is to induce customers to purchase higher Seasonal Energy Efficiency Ratio (SEER) central heat pumps, central air conditioning equipment, and window/wall units. Incentives range from \$336 to \$384 per kw.

**Load Management Program:** The objective of this program is to install direct load control equipment on central air conditioners, central electric space heaters, electric water heaters, and swimming pool pumps. Monthly incentives are \$6.00 to \$9.00 for air conditioners, \$2.00 to \$4.00 for electric space heaters, \$3.50 for water heaters, and \$3.50 for swimming pool pumps.

**Heat Recovery Water Heating:** The objective of this program is to encourage customers to purchase heat recovery units. Solar water heaters are proposed to be phased out of this program and treated as a research and development project. Incentives will average \$509.00 per summer kW.

### COMMERCIAL/INDUSTRIAL PROGRAMS - FP&L

**Business Energy Evaluation:** The objective of this program is to identify opportunities for demand and energy reduction in commercial and industrial facilities. Program offers free walk-

through evaluations, with cost sharing for more complex evaluations.

**Building Envelope:** The objective of this program is to encourage customers to increase the efficiency of buildings through the installation of cost-effective high-efficiency building envelope measures such as window treatments and roof/ceiling insulation. Incentives will be capped an average incentive of \$483.00 kw.

**Efficient Lighting:** The objective of this program is to encourage customers to install cost-effective replacement lighting measures. Incentives range from \$20.00 to \$250.00 per kw.

**Efficient Motors:** The objective of this program is to encourage customers to install high efficiency three phase motors rather than standard efficiency motors. Incentives average \$250.00 per kw.

**Off Peak Battery Charging Program:** The objective of this program is to encourage the installation of control systems that will restrict a customer's battery charging of golf carts, electric vehicles, or material handling equipment to off-peak periods. Incentives will not exceed \$57 per kw.

**\* Heating, Ventilating, and Air Conditioning:** Program combines the following four previously approved programs; Water Cooler Chiller Retrofit, C/I Thermal Energy Storage, Air Cooled Chiller Enhancement, and High Efficiency DX HVAC. Program provides various levels of incentives to encourage the installation of high efficiency HVAC equipment.

**\* Business Custom Incentive:** Program encourages the implementation of unique energy conservation measures or projects not covered by other FP&L programs to reduce or shift demand to off-peak periods. FP&L proposes to eliminate the current incentive cap of \$250.00 per kw and determine rebates based on a case-by-case analysis using the RIM cost-effectiveness test

**\* C/I Load Control:** Program is designed to reduce peak demand by allowing FP&L to directly control or switch load to the customer's standby generator for loads 200 kw or greater. Incentive is a discounted rate from the firm rate. Staff is currently analyzing the tariff sheets and evaluating program cost-effectiveness.

**\* General Service Load Management:** The objective of this program is to install load control equipment on Direct Expansion (DX) central air conditioners. Monthly incentives are \$2.00 per ton of air conditioning equipment controlled.

#### **RESEARCH & DEVELOPMENT PROJECTS - FP&L**

The following are active research projects, including their original expenditure caps as previously approved by the Commission:



Hot Water Storage-evaluate kw and kwh impacts of heating water in off peak periods. (\$225,000)

Residential Thermal Energy Storage-determine technical feasibility of producing ice during off-peak which is used for air conditioning. (\$413,400)

Residential New Home Construction-identify and investigate cost-effective activities which exceed Florida's building code. (\$5,900,000)

C/I Dehumidification-evaluate the demand and energy impacts of recent federal standards increasing the outside air requirement for ventilation. (\$750,000)

The following are proposed research projects, including proposed expenditure caps:

Residential Heat Pump Water Heating-establish actual kw and kwh savings, and evaluate current reliability of the improved heat pump technology. (\$456,660)

Demand Load Control Trial Project-trial project applying to 120 middle to large commercial/industrial customers. Monthly incentives are \$1.00 kw for process control, and \$2.00 per ton of air conditioning load. (\$566,000)

Cool Communities-Dade county has been selected by American Forests and the DOE to evaluate the impact of strategic tree planting and surface color lightening on energy consumption. (\$550,000)

Residential Solar Water Heating-FP&L will provide up to 100 installations to identify technology improvements and market segments which could potentially help the program pass a RIM test. If the results fail to meet any of FP&L's criteria, the research project will be discontinued with no further ECCR funding. (\$789,200)

Conservation Research and Development Program: This program is intended to serve as an umbrella program to research developing technologies for possible inclusion in future DSM programs. If and when research on a particular technology progresses to the point that a trial project is warranted, the company will petition the Commission separately for approval of that trial project. FP&L is requesting approval for a three year period with a cumulative spending cap of \$3,600,000.

Florida Coordinating Group (FCG) Research: DSM measures categorized by the Commission as R&D in the goals hearing are being evaluated by the FCG Energy Conservation Committee with participation and funding from other electric utilities. (\$50,000)

**OTHER PROGRAMS - FP&L**

**Green Pricing:** Customers voluntarily contribute to a fund used to purchase renewable generating technologies. FP&L will purchase photovoltaic modules to be located at powerplants or substations.

**Cogeneration & Small Power Production:** The objective of this program is to identify and encourage cost-effective qualifying facility projects, and assist customers in the evaluation of potential cogeneration and self generation applications.  
(\$1,084,000 per year)

ATTACHMENT 2 - FP&L

RESIDENTIAL PROGRAMS (FP&L) (2003)							
	Total Summer Reduction (MW)	Contribution to Goal (%)	Total Winter Reduction (MW)	Contribution to Goal (%)	Total Energy Reduction (GWH)	Contribution to Goal (%)	RIM Value
DSM Program							
Air Conditioning	168.00	18.77	1.00	0.13	455.00	44.17	1.09
Building Envelope	83.00	9.27	59.00	7.71	197.00	19.13	1.20
On Call	372.00	41.56	350.00	45.75	15.00	1.46	1.43
Duct Repair	133.00	14.86	251.00	32.81	212.00	20.58	1.22
Water Heating HRU	6.00	0.67	1.00	0.13	18.00	1.75	1.03
Residential Conservation Service	0.00	0.00	0.00	0.00	0.00	0.00	N/A
R & D Efforts	133.00	14.86	105.00	13.73	133.00	12.91	N/A
TOTAL	895.00	100.00	767.00	100.26	1030.00	100.00	
COMMERCIAL/INDUSTRIAL PROGRAMS (FP&L) (2003)							
	Total Summer Reduction (MW)	Contribution to Goal (%)	Total Winter Reduction (MW)	Contribution to Goal (%)	Total Energy Reduction (GWH)	Contribution to Goal (%)	RIM Value
DSM Program							
HVAC	191.10	30.72	9.40	3.84	325.30	39.10	1.13
Building Envelope	68.20	10.96	7.80	3.18	106.60	12.81	1.31
Lighting	102.00	16.40	58.40	23.84	462.40	55.58	1.08
C/I Load Control	137.00	22.03	137.00	55.92	12.90	1.55	1.36
Off-Peak Battery Charging	7.10	1.14	1.60	0.65	0.00	0.00	1.77
GS Load Control	28.70	4.61	0.00	0.00	0.80	0.10	1.80
Motors	4.30	0.69	4.30	1.76	12.00	1.44	1.13
Refrigeration Bus Custom Incentive	1.63	0.26	1.50	0.61	13.30	1.60	1.09
Business Energy Evaluation	0.00	0.00	0.00	0.00	0.00	0.00	N/A
R & D Efforts	81.00	13.02	24.00	9.80	0.00	0.00	N/A
TOTAL	621.03	99.54	244.00	99.59	933.30	112.18	

### ATTACHMENT 3 - FPC

**NOTE:** All programs in Attachment 3 contribute toward FPC's goals, and the costs are to be recovered through the ECCR clause, except as follows. The C/I interruptible, curtailable service, and cogeneration programs do not count toward goals, however, costs for existing participants are recovered through ECCR. \* - Indicates program discussed in Issue 5.

### RESIDENTIAL PROGRAMS - FPC

**Home Energy Check:** Energy audit program that serves as foundation for all other DSM programs for residential customers. Company auditor examines home and makes recommendations on low-cost or no-cost energy-saving practices and measures. Level 1 audit is a "do-it-yourself" mail-in audit performed by the customer. Level 2 audit is a free walk-through inspection performed by an auditor; Level 3 audit is a paid (\$15) walk-through energy analysis performed by an auditor. This program is a consolidation of the previous Home Energy Check and Home Energy Analysis programs.

**Home Energy Improvement:** Umbrella efficiency program for existing homes. Combines thermal envelope efficiency improvements with upgraded equipment and appliances. Promotes energy-efficiency measures described below:

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

**Duct Leakage Test and Repair:** Promotes energy efficiency through improved duct system sealing. Program helps identify and reduce energy loss by measuring air leakage rate through the central duct system under controlled pressurization. Customer must have electric heating and centrally-ducted cooling system to participate; building must be capable of being pressurized. FPC pays incentive of up to \$25 per unit for duct leakage test; maximum of \$100 per unit is paid for duct repair.

**High Efficiency Electric Heat Pumps:** Pays financial incentive, not exceeding \$300 per unit, for purchase of high-efficiency electric heat pumps. Specific incentive based on minimum heating and/or cooling efficiency levels. Indoor air handler and outdoor condenser must both be replaced to qualify for this rebate.

**High-Efficiency Alternate Electric Water Heating:** Promotes installation of high-efficiency alternative electric water

heating equipment. Provides incentive of up to \$100 for each heat recovery unit and up to \$200 per unit for each dedicated heat pump water heater unit.

FPC encourages the adoption of several energy-efficiency measures through a supplemental incentive bonus up to \$50. Incentive is paid to a participant in FPC's high efficiency electric heat pump program who also implements the ceiling insulation upgrade, duct leakage repair, or both, within 90 days.

Home Energy Improvement program offers two financing options in lieu of rebates mentioned above: interest-free installment billing over a 12 month period (amount not to exceed \$500), and financing assistance through participating financial institutions and/or Federal programs.

**Residential New Construction:** Promotes energy-efficient new home construction. Provides more efficient cooling and heating consumption with improved comfort. Provides information, education, and advice to home builders and contractors on energy-related issues and efficiency measures. Promotes energy-efficient electric heat pumps and alternate electric water heating units with incentives that are identical to those offered in the Home Energy Improvement program for existing homes.

**Residential Energy Management:** Direct load control program that allows FPC to reduce peak demand. At its option, during peak periods, FPC can interrupt electric service to water heaters, central electric heating and/or cooling systems, or swimming pool pumps. Participation and incentives limited to customers who use at least 600 kWh per month. Customers receive monthly bill credit which is dependent on the interruption schedule and the devices subject to interruption. Maximum incentive is \$3 under Schedule A, \$13 under Schedule B, and \$6 under Schedule C.

#### **COMMERCIAL/INDUSTRIAL PROGRAMS - FPC**

**Business Energy Check:** Energy audit program that serves as foundation for all other DSM programs for existing C/I customers. Company auditor examines lighting, building envelope, HVAC system, and water heating system. Level 1 audit is a free walk-through inspection; Level 2 audit is a paid walk-through energy analysis whose cost is based on facility's average monthly energy use.

**Better Business:** Umbrella efficiency program for existing C/I buildings. Provides information, education, and advice on energy-related issues and efficiency measures. Promotes energy-efficiency measures described below:

**Interior Lighting:** Promotes installation of energy-efficient lighting fixtures. Utility conducts a lighting audit, provides information to the customer, and pays an incentive

not exceeding \$50 per kW reduced. Baseline for calculating incentives premised on the minimum efficiency level allowable by federal EPCAct laws and the Florida Building Code.

**HVAC Equipment:** Pays financial incentive, not to exceed \$100 per kW reduced, for the purchase of high-efficiency HVAC equipment such as packaged terminal heat pumps, water-cooled and air-cooled chillers, and unitary heat pumps and air conditioners. Baseline for calculating incentives premised on ARI Standard Test Rating Conditions.

**Motors:** Promotes installation of high-efficiency poly-phase motors. Incentives paid according to motor size on a per-horsepower basis, with larger motors receiving up to \$2 per horsepower.

**Heat Recovery Units:** Promotes installation of heat recovery units for domestic water heating applications. Provides incentives based on peak kW demand, up to a maximum of \$100 per kW reduced.

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

**Duct Leakage Test and Repair:** Promotes energy efficiency through improved duct system sealing. Program helps identify and reduce energy loss by measuring air leakage rate through the central duct system under controlled pressurization. Customer must have electric heating and centrally-ducted cooling system to participate; building must be capable of being pressurized. FPC pays incentive of up to \$25 per unit for duct leakage test; maximum of \$100 per unit is paid for duct repair.

**Window Film:** Provides incentive for a customer to install window film having a shading coefficient of 0.45 or less on an existing window with a shading coefficient of 0.84 or greater. Incentive paid on a per-square foot of installed film basis; maximum incentive is \$125 per customer. Facilities with multiple guest rooms (hotels, hospitals, etc.) are eligible for maximum incentive of \$50 per room.

The Better Business program also offers two financing options in lieu of incentives mentioned above: interest-free installment billing over a 12 month period (amount not to exceed \$500), and financing assistance through participating financial institutions and/or Federal programs.

**C/I New Construction:** Umbrella efficiency program for new C/I buildings. Provides information, education, and advice on energy-related issues and efficiency measures. Promotes energy-efficient HVAC equipment, motors, heat recovery units, and duct leakage test and repair. Incentive levels are nearly identical to those offered in the Better Business program (for existing buildings).

**Energy Monitor:** Provides consulting services to improve the O&M of building and process systems. FPC tailors its services to the needs of its C/I customer. No incentives are paid under this program. Rather, FPC charges a fee for four types of services: energy accounting, load monitoring, commissioning assistance, and energy project assistance. Program impacts will be site-specific.

**\* Innovation Incentive:** Catch-all program that subsidizes energy efficiency measures and equipment, resulting in substantial demand and energy savings. Encompasses measures not otherwise addressed by other DSM programs. To be eligible, projects must reduce or shift a minimum of 10 kW. Rebates based on the application's cost-effectiveness and will be limited to \$150 per kW reduced or shifted. Cost-effectiveness is evaluated on a case-by-case basis, and only those projects that are cost-effective (1.0 RIM) will be approved by FPC.

**\* Commercial Energy Management:** Direct load control program that reduces FPC's demand during peak or emergency conditions. Offered under the GSLM-2 tariff, energy management is available to all C/I customers with the GS-1, GST-1, GSD-1, and GSDT-1 tariffs. Program allows FPC to interrupt electric service to water heaters, central electric heating and/or cooling systems, or swimming pool pumps. Customers receive a monthly bill credit which is dependent on the interruption schedule and the devices subject to interruption. Maximum incentive is \$0.26/kW under Schedule A and \$0.56/kW under Schedule B.

**Standby Generation:** Demand control program that reduces FPC's demand based on indirect control of customer equipment. Different from the Energy Management program in that FPC will have no direct control of customer equipment. Offered under the GSLM-2 tariff, the program is available to all C/I and agricultural customers who have on-site generation and are willing to use this generation to reduce their demand on FPC's system at times when FPC deems it necessary. Monthly bill credit based on the customer's demonstrated ability to reduce its demand at FPC's request.

**Interruptible Service:** Direct load control program that reduces FPC's demand during peak or emergency conditions. Offered under the IS-1 and IST-1 tariffs, interruptible service is available to any non-residential customer willing to have their power interrupted. Monthly demand credit paid to customer based on level of billing demand.

**Curtailed Service:** Direct load control program that reduces FPC's demand during peak or emergency conditions. Offered under the CS-1 and CST-1 tariffs, curtailable service is available to any non-residential customer willing to have their power curtailed. The maximum demand curtailed will not exceed either 25 kW or 25% of the customer's average annual billing demand. Monthly demand credit paid to customer based on level of curtailable demand.

#### **OTHER PROGRAMS - FPC**

**Technology Development Program:** Program under which FPC will undertake certain development and demonstration projects which have promise to become cost effective conservation programs. Examples of potential projects include amorphous core transmission and distribution transformers, indoor air quality measures, thermal energy storage technologies, innovative metering techniques, and measures identified as research and development in the Conservation Goals Docket. FPC will provide a final report on each demonstration project or file and offer a permanent conservation program for each program investigated. Program expenses will not exceed \$800,000 annually.

**Cogeneration:** The objective of this program is to identify and encourage cost-effective qualifying facility projects and administer the power sales agreements between the utility and qualifying facilities.



## RESIDENTIAL PROGRAMS (FPC) (2003)

	Total Summer Reduction	Contribution to Goal	Total Winter Reduction	Contribution to Goal	Total Energy Reduction	Contribution to Goal	RIM Value
DSM Program	(MW)	(%)	(MW)	(%)	(GWH)	(%)	
Home Energy Check	6.82	2.74	7.24	1.50	26.76	14.54	N/A
Home Energy Improvement	55.35	22.23	102.15	21.15	111.09	60.38	1.39
Residential New Construction	29.25	11.75	32.90	6.81	39.17	21.29	1.60
Residential Energy Management	157.12	63.10	314.23	65.06	0.00	0.00	1.25
Technology Development	0.46	0.18	26.48	5.48	6.98	3.79	N/A
<b>TOTAL</b>	<b>249.00</b>	<b>119.14</b>	<b>483.00</b>	<b>100.00</b>	<b>184.00</b>	<b>100.00</b>	

## COMMERCIAL/INDUSTRIAL PROGRAMS (FPC) (2003)

	Total Summer Reduction	Contribution to Goal	Total Winter Reduction	Contribution to Goal	Total Energy Reduction	Contribution to Goal	RIM Value
DSM Program	(MW)	(%)	(MW)	(%)	(GWH)	(%)	
Business Energy Check	5.00	5.15	5.00	7.81	22.49	6.69	N/A
Better Business	56.47	58.13	34.10	53.28	216.42	64.41	1.01
C/I New Construction	2.17	2.23	2.52	3.94	6.85	2.04	1.05
Energy Monitor	9.38	9.66	4.18	6.53	35.72	10.63	1.00
Innovation Incentive	6.20	6.38	6.20	9.69	16.00	4.76	N/A
Commercial Energy Management	8.75	9.01	0.81	1.27	0.00	0.00	1.20
Standby Generation	9.17	9.44	9.17	14.33	1.08	0.32	1.23
Technology Development	0.00	0.00	2.02	3.16	37.44	11.14	N/A
<b>TOTAL</b>	<b>97.14</b>	<b>115.64</b>	<b>64.00</b>	<b>100.00</b>	<b>336.00</b>	<b>100.00</b>	

## ATTACHMENT 5 - TECO

**NOTE:** All programs in Attachment 5 contribute toward TECO's goals, and the costs are to be recovered through the ECCR clause. The Home Builder Awareness, Commercial Measures Research & Development, and Cogeneration programs, however, will not contribute towards TECO's goals. \* - Indicates program discussed in Issue 5.

### RESIDENTIAL PROGRAMS - TECO

**Alternate Audit (Free):** Free walk-through audit offered to all residential customers. This program is designed to save demand and energy by increasing customer awareness of available conservation measures which can reduce their energy use.

**Mail-In Energy Audit:** Customers are supplied with an energy data collection form which the customer completes and returns for analysis. Energy conservation recommendations are made based on form responses. There is no charge to the customer.

**Residential Conservation Service (ECS) Audit:** Comprehensive energy audit where specific data on the structure of the residence and the customer's lifestyle is collected. The data is then entered into a computer program which calculates installation cost, investment payback period and estimated energy savings of available conservation programs. The charge for the audit is \$15.00.

**Ceiling Insulation:** Program to reduce demand and energy by decreasing the load on residential air conditioning and heating equipment. Customers must add a minimum of R-11 insulation in order to qualify for the incentive of \$100.00 in the form of a certificate which the customers may apply to the total cost of installing ceiling insulation.

**Duct Repair:** This program identifies demand and energy savings opportunities in HVAC equipment by inspecting air distribution system losses with a blower door test. The customer receives an assessment of any problems discovered during the inspection and, will receive a certificate equal to 75 percent of the total repair up to a maximum of \$200 to be used towards repairs performed by an approved HVAC contractor. The cost to the customer for the blower door test will be \$25.

**Heating and Cooling:** This targets reducing the rate of growth in peak demand (particularly winter) and energy in the company's service area by increasing the saturation of high efficiency heat pumps and/or central air conditioning (without oil or resistance heat) in single family dwellings. An incentive of \$75 per qualifying unit is paid to participating dealers. The customer receives \$350 for a unit with an SEER of 11.0, and \$750 for a unit with an SEER of 13.0.

**Prime Time Load Management:** Prime Time is a residential load management program designed to control summer and winter peak demand loads. Certain selected appliances such as air conditioners, water heaters and pool pumps are controlled by a radio signal from TECO's system dispatchers. Except during emergencies, appliances are only interrupted during peak hours. Participants receive a monthly credit on their electric bill based on the appliances selected for load control and the type of interruption. The credit for central heating and cooling appliances is \$12.00 per month for a continuous 3-hour interruption and \$6.00 per month for summer cycle interruption. Hot water heaters and swimming pool pumps are \$4.00 and \$3.00 per month, respectively.

#### **COMMERCIAL/INDUSTRIAL PROGRAMS (TECO)**

**C/I Audit-Free:** A conservation program designed to reduce demand and energy consumption by increasing customer awareness of energy use in their facilities. Recommendations are based on the replacement of less efficient equipment and systems or modifications to operations to enhance the customer's overall efficiency. Recommendations are primarily standardized and encourage the customer to implement measures that, if cost-effective, move the customer beyond the efficiency level typically installed in the marketplace. C/I customers on firm rates are eligible.

**Mail-In C/I Audit:** The customer is supplied with a data collection form which the customer completes and returns to TECO or its agent for analysis. Results are then submitted to the customer for review and implementation. There is no charge to the customer.

**Comprehensive C/I Audit-Paid:** A more detailed audit which may involve monitoring of specific equipment within a customer's facility to determine its electric usage with respect to time of operation. Based on the results, recommended changes to save energy on equipment and/or operation are made. Charges to the customer range from \$15.00 to \$75.00 depending on rate class.

**Commercial Indoor Lighting:** This incentive program for existing facilities is designed to encourage investment in more efficient fluorescent lighting technology within conditioned space. The customer receives a \$.16 per watt incentive by achieving a minimum of 1 KW in lighting reduction from any lighting source retrofitted with more efficient fluorescent lighting system (ballast and lamps).

**\* C/I Load Management:** Monthly credits are paid based on duration of interruption, for control of specified end-use equipment. Large loads, such as walk-in freezers, are interrupted for up to three hours, and Commercial air conditioning equipment is cycled during summer control periods. The credit for large loads interrupted up

to three continuous hours is \$3.00/kW/month. Cycled air conditioning equipment is given a \$1.00/kW/month credit.

**Commercial Standby Generator:** Program designed to utilize the on-site generation of C/I facilities in order to reduce weather sensitive peak demand. Participating customers are given an hour notice to start their generators and arrange for orderly transfer of load. The standby generators are metered to determine the average portion of customer load served by the generators when called on by TECO. Participants receive a monthly credit of \$3.00 per kW.

**\* Conservation Value:** An incentive program designed to encourage investment in C/I measures which will substantially reduce or shift demand but which have limited application within the C/I sector and are consequently not covered under other conservation programs. To be approved, the measure must have a minimum summer and winter demand savings of 5 kw. The maximum incentive is \$225 per kw for measures which reduce summer peak only, \$150 per kw for measures which reduce winter peak only and \$275/kw for measures which reduce both.

#### **OTHER PROGRAMS (TECO)**

**Home Builder Awareness:** The objective of this program is to improve construction techniques used on air distribution systems (ADS) in new residential structures. The program will involve field demonstrations at construction sites, classroom instruction, and the evaluation of new construction techniques applied to residences and their ADS. A \$100 incentive will be offered to contractors to perform a blower door test and repair any ADS leakage found in the builder's model homes. TECO is requesting approval for three years with costs estimated at \$22,000 per year, however total costs will not exceed \$66,000.

**Commercial Measures Research & Development:** This program will 1) Continue the field efficiency testing portion of the DSM R&D program which is scheduled to end May 1995. This program allowed TECO to collect and analyze data of commercial DSM measures; 2) Fund TECO participation in the Energy Technology Assessment Committee (ETAC) of the FCG; and 3) Fund the planned evaluation of the measures designated as R&D by the Commission in Docket No. 930551-EG. Program costs are estimated at \$150,000 per year. TECO has requested a five year period with continuation based on annual review of results by the Commission.

**Cogeneration:** Program to encourage cogeneration by providing assistance to commercial/industrial customers in the development of cost effective cogeneration alternatives to help meet and offset base load energy and peak load demands.

RESIDENTIAL PROGRAMS (TECO) (2003)							
	Total Summer Reduction	Contribution to Goal	Total Winter Reduction	Contribution to Goal	Total Energy Reduction	Contribution to Goal	RIM Value
DSM Program	(MW)	(%)	(MW)	(%)	(GWH)	(%)	
Alternate Audit	2.40	2.38	5.40	1.70	19.98	10.57	0.70
Mail-in Audit	3.59	3.55	8.13	2.56	29.88	15.81	1.00
RCS Audit	0.02	0.02	0.05	0.01	0.17	0.09	0.60
Heat & Cool Level 1	7.56	7.48	110.05	34.61	40.61	21.43	1.30
Heat & Cool Level 2	1.12	1.11	6.72	2.11	4.17	2.21	1.10
Ceiling Insulation	2.13	2.11	15.41	4.84	19.10	10.11	1.30
Duct Repair	34.83	34.48	31.51	9.91	76.67	40.56	1.60
Load Management	58.56	57.98	143.52	45.13	0.00	0.00	1.20
<b>TOTAL</b>	<b>110.20</b>	<b>109.11</b>	<b>320.78</b>	<b>100.87</b>	<b>190.56</b>	<b>100.83</b>	
COMMERCIAL/INDUSTRIAL PROGRAMS (TECO) (2003)							
	Total Summer Reduction	Contribution to Goal	Total Winter Reduction	Contribution to Goal	Total Energy Reduction	Contribution to Goal	RIM Value
DSM Program	(MW)	(%)	(MW)	(%)	(GWH)	(%)	
Conservation Value	16.10	24.77	5.93	25.80	90.03	30.83	1.40
Free C/I Audit	0.63	0.97	0.47	2.06	2.69	0.92	0.50
Comprehensive C/I Audit	0.01	0.02	0.01	0.04	0.06	0.02	0.10
C/I Mail-in Audit	0.22	0.34	0.18	0.80	0.93	0.32	0.80
C/I Load Management (cyclic)	0.66	1.01	0.00	0.00	0.00	0.00	1.10
C/I Load Management (extended)	3.17	4.88	2.23	9.71	0.00	0.00	2.40
Indoor Lighting	50.87	78.26	17.62	76.60	201.01	68.84	1.20
Standby Generator	14.91	22.93	14.25	61.96	1.46	0.50	2.70
<b>TOTAL</b>	<b>86.57</b>	<b>133.17</b>	<b>40.70</b>	<b>176.97</b>	<b>296.18</b>	<b>101.43</b>	

## ATTACHMENT 7 - Gulf

**NOTE:** All programs in Attachment 7 contribute toward Gulf's goals, and the costs are to be recovered through the ECCR clause, except as follows. The C/I Real Time Pricing Pilot program will count toward goals, however, costs will not be recovered through ECCR pursuant to Commission order.

### RESIDENTIAL PROGRAMS - Gulf

**Advanced Energy Management Program:** The AEM system allows the customer to control more precisely the amount of electricity purchased for various selected loads within the house whether it be heating, cooling water heating or other. The various components of the AEM system installed at Gulf, provide constant communication between customer and utility. The AEM is based upon three set cost periods, plus a fourth very high cost period based on system capacity shortfalls (P1, P2, P3 & P4). Rates are below the average rate in the P1 and P2 off-peak periods and above the system average in the P3 shoulder load period and the P4 capacity shortfall period. In times of extreme peak load conditions the AEM system allows a critical price signal communication from Gulf to the customer's premise at least a half hour before the highest rate goes into effect. The customer's thermostat and relay system can be programmed to react to these price signals.

**In Concert With The Environment:** The objective of this program is to make 8th and 9th grade science students, in Gulf's service area, aware of how everyday energy use impacts the environment and how using energy wisely increases environmental quality. Program materials include a video, an introductory presentation to launch student participation, complete lesson plans, an energy survey, and student handbooks. Participants in the program become energy experts in three easy steps. First, students become energy investigators, seeking real life data on their homes and family transportation and recycling habits. Next, they analyze the information through a sophisticated, "hands-on" software program that generates a personal plan using graphs to illustrate energy savings and environmental benefits on each student's research. Finally, students become energy experts by discussing the material in class and presenting their plans for saving energy and preserving natural resources to their families.

**Duct Leakage Repair:** The objective of the Duct Leakage Program is to provide Gulf's customers a means to identify house air duct leakage and recommend repairs that can reduce customer kWh energy usage and kW demand.

**Good Cents Environmental Home Program:** The objective of the Good Cents Environmental Home Program is to provide Gulf's customers

with guidance concerning energy and environmental efficiency in new construction. The program promotes energy-efficient and environmentally sensitive home construction techniques by evaluating over 500 components in six categories of design and construction practices. The categories are: 1) Energy Efficiency, 2) Building Design, 3) Construction Practices, 4) Building Materials, 5) Water Efficiency, and 6) Ecological Planning. The Good Cents Environmental Home will need to meet standards that exceed the present building codes.

**Residential Geothermal Heat Pump Program:** The objective of the Geothermal Heat Pump Program is to reduce the demand and energy requirements of new and existing residential customers through the promotion and installation of advanced and emerging geothermal systems. Standard air source heat pumps utilize the outside air to provide the heat needed to make the system work while geothermal heat pumps utilize constant temperature water to provide the heat. The water is contained in a closed loop system of pipes that are buried beneath the earth in the yards of the customers homes.

#### **COMMERCIAL/INDUSTRIAL PROGRAMS - Gulf**

**Real Time Pricing Pilot Program:** This program was approved by the Commission in Order No. PSC-95-0256-FOF-EI, Docket No. 941102-EI dated February 23, 1995. Gulf's Real Time Pricing (RTP) Pilot Program provides large industrial/commercial customers with hourly kilowatt-hour energy prices. To be eligible for the RTP rate schedule, customers must have a maximum monthly demand of at least 2,000 kilowatts. Participation in the program is voluntary and is limited to a maximum of 12 customers.

RTP is a refinement of time-of-use (TOU) pricing, which has been in existence for many years. The purpose of TOU pricing is to encourage customers to shift usage from high cost on-peak hours to lower cost off-peak hours by setting prices that better reflect system cost during those periods. Under the RTP proposal, Gulf will transmit to customers by 4:00 P.M. a set of hourly prices that will be in effect for the following 24-hour period beginning at midnight. Customers then have an opportunity to take advantage of lower priced hours.

**Good Cents Building:** This program has been in effect for several years. What Gulf has done in this program filing is to modify the program to provide for increased standards for both HVAC efficiency and Thermal Envelope requirements above the Florida Energy Code. As in the past, the Good Cents standards for Gulf's average commercial building has been compared to the Florida Energy Code. One of the modifications to the present program is the addition of a Prescriptive Envelope Option. In addition there are HVAC SEER specific efficiency requirements (A/C or Heat Pump) that exceed the Florida Building Code. Only incremental savings of the modified version of the Good Cents Building Program over the existing Good

Cents Building Program are being included towards Gulf's goal achievements.

**Energy Efficiency Services Program:** This program is designed to offer advanced energy services to customers which would include comprehensive audits, design, construction and financing of energy conservation projects. The types of projects covered under this program would be demand reduction or efficiency improvement retrofits having a payback of no longer than ten years, such as lighting, HVAC retrofit and new technologies. The audit portion would be recovered through ECCR under Gulf's existing audit program. After that point the customer would be charged with the cost associated with the design and financing of the project. This program is limited to customers with a minimum of 500 kW demand. All costs associated with the energy efficiency project will be financed by Gulf and repayment of the loans will be based on the energy savings attained through the project. Gulf will bill the customer for the repayment monthly on the customer's electric bill.

#### **OTHER PROGRAMS - Gulf**

**The Efficiency Store - Residential Energy Education: & Commercial Technology Demonstration:** The objective of the Efficiency Store is to display and demonstrate those technologies that are designed to promote energy efficiency. The store will combine an Energy Education area with a Commercial Technology Demonstration area, customer bill-payment area, district marketing employee offices, an auditorium and a retail sales area. The design of the Energy Education area of the store allows display of full scale examples of actual wall sections, roof trusses and efficient HVAC equipment so that customers will be encouraged to repair their existing homes and to replace existing less energy efficient equipment. Gulf energy consultants will be on site to demonstrate energy saving technologies and equipment such as a leaking duct system along side a tight duct system will be available for a "hands-on" demonstration. Customers that are building new homes will be able to bring their plans in to have the energy consultants review and enter into a computer program which will let the customer know whether their new home meets the State of Florida's requirements for energy conservation.

The Commercial Technology Demonstration portion of the Efficiency Store will be available to show both new technologies as well as technologies already available for energy conservation. Technologies for demonstrations will include, but are not limited to, lighting, space conditioning, ventilation, cooking, heat recovery, water heating and renewable energy sources.



RESIDENTIAL PROGRAMS (Gulf) (2003)							
	Total Summer Reduction	Contribution to Goal	Total Winter Reduction	Contribution to Goal	Total Energy Reduction	Contribution to Goal	RIM Value
DSM Program	(MW)	(%)	(MW)	(%)	(GWH)	(%)	
In Concert With the Environment	8.40	6.46	6.30	4.47	11.93	21.30	0.96
Duct Leakage Repair	3.94	3.03	16.97	12.04	5.44	9.71	1.09
Good Cents Environmental Home	9.23	7.10	12.01	8.52	17.04	30.43	1.19
Geothermal Heat Pump	26.89	20.68	47.75	33.87	32.80	58.57	1.08
Residential Advanced Energy Management	99.38	76.45	145.50	103.19	57.87	103.34	1.03
<b>TOTAL</b>	<b>147.84</b>	<b>113.72</b>	<b>228.53</b>	<b>162.08</b>	<b>125.08</b>	<b>223.36</b>	
COMMERCIAL/INDUSTRIAL PROGRAMS (Gulf) (2003)							
	Total Summer Reduction	Contribution to Goal	Total Winter Reduction	Contribution to Goal	Total Energy Reduction	Contribution to Goal	RIM Value
DSM Program	(MW)	(%)	(MW)	(%)	(GWH)	(%)	
Real Time Pricing	15.06	62.75	9.06	82.36	-10.78	-119.78	2.23
C/I Good Cents Bldg.	8.33	34.71	11.03	100.27	20.94	232.67	1.09
Solar for Schools	0.32	1.33	0.32	2.91	0.69	7.67	1.02
<b>TOTAL</b>	<b>23.71</b>	<b>98.79</b>	<b>20.41</b>	<b>185.55</b>	<b>10.85</b>	<b>120.56</b>	