State of Florida

Public Service Commission

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

DATE: October 15, 2009

TO: Office of Commission Clerk (Cole)

FROM: Office of Strategic Analysis and Governmental Affairs (Brown, Clemence, Crawford, Ellis, Garl, Gilbert, Graves, Harlow, Lewis, Marr, Matthews)
Division of Economic Regulation (Dowds, Higgins)
Office of the General Counsel (Fleming, Sayler)

RE: Docket No. 080407-EG – Commission review of numeric conservation goals (Florida Power & Light Company).

Docket No. 080408-EG – Commission review of numeric conservation goals (Progress Energy Florida, Inc.).

Docket No. 080409-EG – Commission review of numeric conservation goals (Tampa Electric Company).

Docket No. 080410-EG – Commission review of numeric conservation goals (Gulf Power Company).

Docket No. 080411-EG – Commission review of numeric conservation goals (Florida Public Utilities Company).

Docket No. 080412-EG – Commission review of numeric conservation goals (Orlando Utilities Commission).

Docket No. 080413-EG – Commission review of numeric conservation goals (JEA).

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COMMISSION CLERK

AGENDA: 10/27/09 – Regular Agenda – Post-Hearing Decision – Participation is Limited to Commissioners and Staff

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Carter

CRITICAL DATES: Pursuant to Section 366.82(6) F.S., the Commission must review conservation goals at least every five years. New conservation goals must be set by January 1, 2010.

SPECIAL INSTRUCTIONS: Take up Issues 4 and 8 together

FILE NAME AND LOCATION: S:\PSC\SGA\WP\080407.RCM.DOC

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Case Background

Sections 366.80 through 366.85, and 403.519, Florida Statutes (F.S.), are known collectively as the Florida Energy Efficiency and Conservation Act (FEECA). Section 366.82(2), F.S., requires the Commission to adopt appropriate goals designed to increase the conservation of expensive resources, such as petroleum fuels, to reduce and control the growth rates of electric consumption and weather-sensitive peak demand. Pursuant to Section 366.82(6), F.S., the Commission must review the conservation goals of each utility subject to FEECA at least every five years. The seven utilities subject to FEECA are Florida Power & Light Company (FPL), Progress Energy Florida, Inc. (PEF), Tampa Electric Company (TECO), Gulf Power Company (Gulf), Florida Public Utilities Company (FPUC), Orlando Utilities Commission (OUC), and JEA (referred to collectively as the FEECA utilities). DSM goals were last established for the FEECA utilities in August 2004 (Docket Nos. 040029-EG through 040035-EG). Therefore, new goals must be established by January 2010.

In preparation for the new goals proceeding, the Commission conducted a series of workshops exploring energy efficiency initiatives and the requirements of the FEECA statutes. The first workshop, held on November 29, 2007, explored how the Commission could encourage additional energy efficiency and conservation. A second workshop held on April 25, 2008, examined how the costs and benefits of utility-sponsored energy efficiency and demand-side programs should be evaluated.

In 2008, the Legislature amended Section 366.82, F.S. such that when goals are established, the Commission is required to: (1) evaluate the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems, (2) establish goals to encourage the development of demand-side renewable energy systems, and (3) allow efficiency investments across generation, transmission, and distribution as well as efficiencies within the user base. The Legislature also authorized the Commission to allow an investor-owned electric utility (IOU)an additional return on equity of up to 50 basis points for exceeding 20 percent of their annual load-growth through energy efficiency and conservation measures and may authorize financial penalties for those utilities that fail to meet their goals. The additional return on equity shall be established by the Commission through a limited proceeding. Finally, the amendments to Section 366.82, F.S., provided funds for the Commission to obtain professional consulting services if needed. These statutes are implemented by existing Rules 25-17.001 through 25-17.0015, Florida Administrative Code (F.A.C.).

The Commission held a third workshop on June 4, 2008, focused on appropriate methodologies for collecting information for a technical potential study. On June 26, 2008, seven dockets (080407-EG through 080413-EG) were established and represent the fourth time that the Commission will set numeric conservation goals for each of the FEECA utilities companies. On November 3, 2008, the Commission held a fourth workshop on the development of demand-side and supply-side conservation and efficiency goals, including demand-side renewable energy systems. The results of the Technical Potential Study, conducted by the consulting firm ITRON on behalf of the seven FEECA utilities were presented at a fifth Commission workshop held on December 15, 2008.

On November 13, 2008, the Commission staff contracted with GDS Associates, Inc. (GDS) to provide independent technical consulting and expert witness services during the conservation goal-setting proceeding. GDS is a multi-service engineering and management consulting firm, headquartered in Marietta, Georgia, with offices in Alabama, Texas, Maine, New Hampshire, Wisconsin, and Virginia. The firm has a broad array of management, strategic, and programmatic consulting expertise and specializes in energy, energy efficiency, water and utility planning issues. GDS was retained to review and critique the overall goals proposed by each utility, provide expert testimony and recommendations on alternative goals, where warranted. As an independent consultant, GDS was neither a separate party nor a representative of the Staff. As such, they did not file post-hearing position statements or briefs.

By Order No. PSC-08-0816-PCO-EG, issued December 18, 2008, these dockets were consolidated for purposes of hearing and controlling dates were established. By Order No. PSC-09-0152-PCO, issued March 12, 2009, the controlling dates were revised, requiring the utilities to file direct testimony and exhibits on June 1, 2009. FPUC requested, and was granted, an extension of time to file its direct testimony on June 4, 2009.

The Natural Resources Defense Council and the Southern Alliance for Clean Energy (NRDC/SACE) were granted leave to intervene by the Commission on January 9, 2009.[1] The Florida Solar Coalition (FSC) was granted leave to intervene on January 27, 2009.[2] The Commission acknowledged the intervention of the Florida Energy and Climate Commission (FECC) on March 11, 2009.[3] The Florida Industrial Power Users Group (FIPUG) was granted leave to intervene on July 15, 2009.[4]

The Commission held an evidentiary hearing on August 10, 11, 12, and 13, 2009. This recommendation addresses each of the FEECA utilities' petitions for approval of its numeric conservation goals. The Commission has jurisdiction over this matter pursuant to Sections 366.80 through 366.82, F.S.

On August 28, 2009, the FECC filed post-hearing comments in the proceeding. While the FECC took no position on any issues, the FECC concluded in its post-hearing comments that:

> The PSC should approve a level of goals for each utility that satisfies the utility's resource needs and results in reasonably achievable lower rates for all electric customers. As called for in the recent legislation, the PSC should also take into account environmental compliance costs that are almost a certainty over this goals-planning horizon. In this regard, the FECC supports a reasonably achievable level of DSM Goals based on measures that pass the E-RIM and Participants Tests to achieve the least-cost strategy for the general body of ratepayers. Additionally, the FECC believes that coupling cost-effective measures that satisfy E-RIM with solar measures that do not satisfy E-RIM will increase the customer take rate of solar applications at the lowest possible cost.

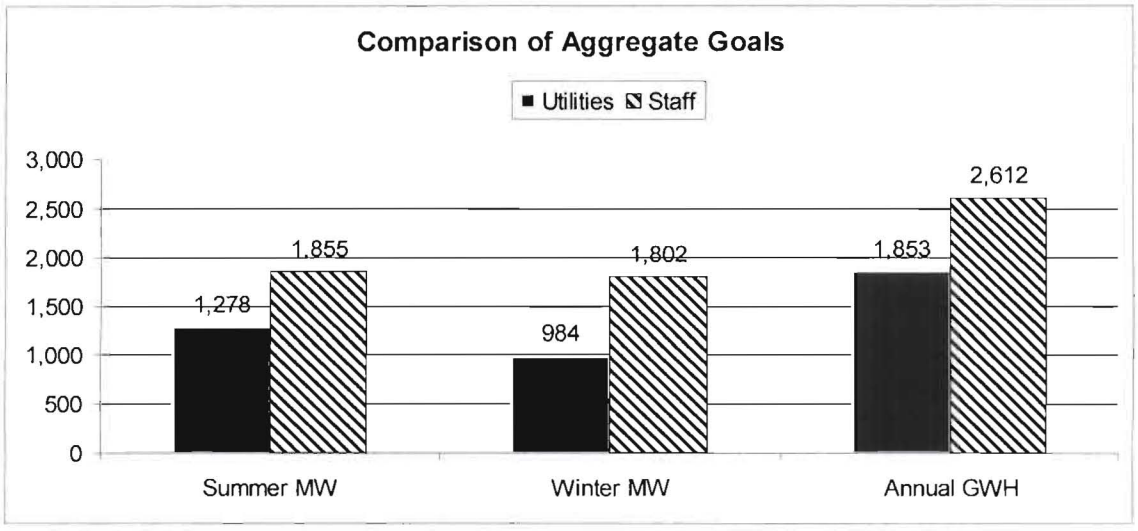
[1] Order No. PSC-09-0027-PCO-EG, issued January 9, 2009 (NRDC/SACE).
[2] Order No. PSC-09-0062-PCO-EG, issued January 27, 2009 (FSC).
[3] Order No. PSC-09-0150-PCO-EG, issued March 11, 2009 (FECC).
[4] Order No. PSC-09-0500-PCO-EG, issued July 15, 2009 (FIPUG).

EXECUTIVE SUMMARY

The benefits and costs of utility energy efficiency programs have been traditionally analyzed from multiple perspectives. This gives the Commission a complete picture of the impacts of energy efficiency programs. The three tests the Commission relies upon in its energy efficiency decision making are: (1) the Participants Test, (2) the Rate Impact Measure Test (RIM), and (3) the Total Resource Cost Test (TRC). Staff recommends that the Commission continue to rely on the information from all three tests, at a minimum, in analyzing the cost-effectiveness of energy efficiency programs. The Commission should not rely on a single test to the exclusion of the information provided by the other tests.

Recommended Numeric Goals

In establishing goals, the Commission is to consider the benefits and costs of the utilities' efforts to meet the goals and the implications on all ratepayers, not just those participating in energy efficiency programs. In reviewing the analyses conducted by the utilities and the positions of the intervenors, staff has crafted a recommendation that attempts to balance the need to further encourage energy efficiency with careful consideration of the impact on rates for all customers. Staff recommends that the Commission reject the numeric energy efficiency goals proposed by the utilities and intervenors for the reasons described below. Staff recommends that energy efficiency goals be set at the levels projected in the utilities' 2009 Ten-Year Site Plan (TYSP) projections. Continuing the momentum of successful programs to contribute energy and consumption reductions appears to be a sound strategy. Establishing goals at the levels projected in the Ten-Year Site Plans will also minimize any additional rate impacts to customers. Finally, goals established at the Ten-Year Site Plan projections provides a rational means of setting goals above the zero level proposed by OUC, JEA, and FPUC. In aggregate, the demand and energy savings from Staff's proposed goals will collectively exceed the goals proposed by the FEECA utilities and is shown below:



These goals were included as the cost-effective level of energy efficiency used by the Commission to grant the need for additional generating facilities, including the nuclear units needed by FPL and PEF. The utilities should review the results of the analyses of all energy efficiency measures and determine whether any measures should be incorporated into existing programs, or whether new programs should be offered to customers.

The Florida Legislature established the Commission with a primary mission to set fair, just, and reasonable rates for IOUs that are not discriminatory to customers.[5] Thus, an overarching concern in the instant dockets is the effect that utility sponsored conservation programs will have on the rates charged to all customers. Since 1980, the Legislature has also expressed its strong desire that cost-effective energy efficiency be utilized as a tool in meeting the growth in customer demand for electricity. Section 366.81, F.S., states ". . . that it is critical to utilize the most efficient and cost-effective demand-side renewable energy systems and conservation systems . . . ." In order to meet this policy direction, the Commission has developed cost-effectiveness tests to analyze energy efficiency programs including their effect on rates.

Additional Recommended Measures

When customers implement conservation measures on their own, customer bills for participants can be reduced and costs to non-participating customers can be minimized. The goals proposed by NRDC/SACE and GDS include such measures which typically have large energy savings directly benefiting the participating customer. However, in order to avoid "free-riders," participating customers should not be subsidized by other ratepayers. Therefore, Staff is recommending that the IOUs expand their education programs to include measures that were screened out due to a two-year payback criteria and some measures that pass the TRC Test. These measures were found to provide immediate savings to customers, indicating that customers should be willing to implement such measures on their own. Education programs can be delivered with minimal cross-subsidization by non-participants, yet have the potential to result in large savings. Although the education programs recommended will not count towards the Commission-approved goals, educating the public about measures that will reduce the customers' energy bills is a good balance between the costs and benefits to customers participating in the measure as well as the costs and benefits to the general body of ratepayers as a whole. Such an education program would be consistent with the Legislature's desire to achieve additional energy savings while being mindful of the costs imposed on all customers.

Demand-side renewables were not found to be cost-effective in the analyses conducted by the utilities. Despite these results, staff is recommending that the IOUs develop and offer pilot programs in order to encourage such resources in response to the additional emphasis the Legislature placed on demand-side renewables. These programs should complement the Solar Rebate Program established by the Legislature and implemented by the Florida Energy and Climate Commission. A utility funded program will help to maintain the momentum of the Legislature's efforts and enhance the attractiveness to customers for installation of demand-side renewables. Keeping in mind the need to minimize the rate impacts to all customers, staff recommends the cost for these programs be limited to 5 percent of the utilities' five year average

[5] Sections 366.03, .366.04, 366.041, 366.05, and 366.06, F.S.

for costs recovered through the Energy Conservation Cost Recovery clause (ECCR). The recommended adder is less than what was proposed by GDS (10 percent of historic ECCR expenditures) and FSC (1 percent of total annual revenues).

Parties' Proposed Goals

Staff has concerns with the analyses conducted by the utilities, particularly with respect to the inconsistent inclusion of costs for unregulated greenhouse gas emissions and the use of inconsistent cost estimates. Section 366.82(3)(d), F.S., requires the Commission to take into consideration "the costs imposed by state and federal regulations on the emission of greenhouse gases." The regulation of these emissions are currently being debated in Congress and it is unclear if and when such regulations will be enacted. Finally, greenhouse gas emission regulations would have consistent cost implications on the utilities, yet in their analyses, the utilities developed differing cost estimates. FPL, PEF, TECO, and Gulf included a cost estimate for carbon dioxide, a greenhouse gas, in their analyses. While the cost estimate was intended to represent the cost of potential national legislation, each utility used a different value which varied by over 100 percent between utilities. Conversely, OUC, JEA, and FPUC contend that Section 366.82(3)(d), F.S., does not require an estimate of future greenhouse gas emission costs, only existing costs imposed by State or Federal law. Because of this wide variation in the estimation of greenhouse gas effects, staff recommends that the goals proposed by the FEECA utilities can not be relied upon.

Staff is also concerned with the proposed goals recommended by the intervenors because they ignored specific requirements of the revised statutes and did not rely on Florida-specific data. The proposed goals of these parties would also result in a substantial increase in energy efficiency program costs imposed on all customers, mainly from the inclusion of energy savings associated with free riders in the proposed goals. The resulting programs and incentives to meet these goals could increase the utilities' Energy Conservation Cost Recovery clause factor by more than 700 percent. Also, if these savings were realized, recovery of fixed costs would be reduced. The resulting energy savings would reduce revenues by an amount greater than 150 basis points as early as 2014. Such an impact on a utility's earnings could trigger a request for a base rate increase in the near future. In addition, intervenors recommended goals without regard to any cost-effectiveness consideration, but merely proposed a percentage of sales as the goal.

Discussion of Issues

Issue 1: Did the Company provide an adequate assessment of the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems, pursuant to Section 366.82(3), F.S.?

Recommendation: Yes. The seven FEECA utilities and NRDC/SACE (the Collaborative) retained the consulting firm ITRON to perform a technical potential study. The ITRON study identified 58,616 GWhs of annual energy, 14,375 MWs of summer system peak demand, and 8,883 MWs of winter system peak demand as the statewide technical potential of demand-side conservation and energy efficiency measures for Florida. A supply-side technical potential was not calculated. (Clemence)

Positions of the Parties:

FPL: Yes. The Collaborative developed a comprehensive list of DSM and demand-side renewable energy measures to ensure all measures were adequately addressed. Itron then calculated the technical potential for energy savings and demand reduction in FPL's service territory. This process ensured a thorough assessment of the full technical potential available.

PEF: Yes. Through the work of a collaborative team comprised of the collective "FEECA utilities," SACE/NRDC, and Itron, PEF provided an adequate assessment of the full technical potential pursuant to the Section 366.82(3), F.S.

TECO: Yes. Through the work of a collaborative team comprised of Florida Power and Light Company, Progress Energy Florida, Inc., Tampa Electric Company, Gulf Power Company, Florida Public Utilities, Jacksonville Electric Authority, Orlando Utilities Commission (collectively "FEECA utilities"), SACE/NRDC and Itron, Tampa Electric provided an adequate assessment of the full Technical Potential pursuant to the Section 366.82(3), F.S.

Gulf: Yes. Through the Itron study, Gulf has performed an adequate assessment of the full technical potential of all available demand-side conservation and energy measures, including demand-side renewables. An assessment of supply-side conservation and efficiency measures is more appropriately considered in a separate proceeding following the conclusion of the goal-setting process.

FPUC: Yes. The study performed by Itron adequately assessed the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. The scope of work and assessment techniques were vetted by the Collaborative. Itron utilized state-of-the-art models to determine the full technical potential of available measures.

JEA/OUC: Yes. Itron's study adequately assessed the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. The scope of work and assessment

techniques were vetted by the Collaborative. Itron utilized state-of-the-art models to determine the full technical potential of available measures.

FECC: FECC has no specific position at this time.

FIPUG: No position.

FSC: No for the five FEECA IOUs; no position with regard to OUC and JEA.

NRDC/SACE: No. The analysis does not comply with Section 366.82(3), F.S. because it fails to consider "the full technical potential of *all* available demand-side and supply-side conservation and efficiency measures." Florida's full technical potential for efficiency measures should be increased by at least 8 percent, from 34 percent to 42 percent statewide.

Staff Analysis:

PARTIES' ARGUMENTS

FPL contends that the Technical Potential Study employed an iterative process that began with a list of measures that were provided within its original request for proposal (RFP). (FPL BR 15) PEF states that the study focuses on measures that will work in Florida, have the greatest potential impact, and have a realistic possibility for adoption. (PEF BR 8) TECO argues that using the collaborative process allowed each member to draw upon the collective judgment of the group, which would insure the ultimate proposals were the product of a rigorous and orderly process. (TECO BR 7) Gulf asserts that NRDC/SACE were able to submit additional measures to be considered for analysis in the technical potential. (Gulf BR 8) FPUC argues that the study provides an adequate assessment of the technical potential. (FPUC BR 3) JEA/OUC argues that the study used measures and assessment techniques that were fully vetted through the collaborative process. (JEA/OUC BR 5) The FEECA utilities contend that the study commissioned by the Collaborative satisfies Section 366.82(3), F.S.

NRDC/SACE argues that the study did not provide an adequate assessment of the technical potential. NRDC/SACE states that the technical potential does not consider the full technical potential of all available demand- and supply-side efficiency measures. (NRDC/SACE BR) FSC argues that ranking measure savings by the use of "stacking" by the Collaborative is incorrect. (FSC BR 2) FSC also criticizes the study for omitting solar hybrid systems. (FSC BR 3) FIPUG's brief and the comments filed by the FECC did not specifically address this issue.

ANALYSIS

Process

For the current goal setting proceeding, the seven FEECA utilities invited NRDC/SACE to form a Collaborative to conduct an assessment of the technical potential for energy and peak demand savings from energy efficiency, demand response, and customer-scale renewable energy in their service territories. (EXH 2)[6] The Collaborative then developed a request for proposal to conduct the study. The proposals were evaluated and the ITRON team was selected by the Collaborative to conduct the Technical Potential Study. (EXH 2)[7]

Witness Rufo, Director in the Consulting and Analysis Group at ITRON, stated that the technical potential is a theoretical construct that represents an upper limit of energy efficiency. Technical potential is what is technically feasible, regardless of cost, customer acceptance, or normal replacement schedules. (TR 904) The Technical Potential Study was conducted for each utility and then combined to create a statewide technical potential. (EXH 2)

According to the testimony of witness Rufo, the Collaborative's first step was to identify and select the energy efficiency, demand response, and solar photovoltaic (PV) measures to be analyzed. (TR 903) The energy efficiency measures were developed with the FEECA utilities, ITRON, and NRDC/SACE, all proposing measures. (TR 903) Once a master list was developed, ITRON conducted assessments of data availability and measure specific modeling issues. (TR 878) Demand response measures were identified using a combination of literature reviews of current programs, and discussions within the Collaborative. (TR 903) The PV measures were identified by explicitly considering six characteristics specific to PV electrical systems. (TR 903) The six characteristics are: (1) PV material type, (2) energy storage, (3) tracking versus fixed, (4) array mounting design, (5) host sites, and (6) on- versus off-grid systems. (TR 878-879)

The ITRON assessment of the full technical potential included 257 unique energy efficiency measures, seven demand response programs, and three unique PV measures. Included in the energy efficiency list were 61 residential measures, 78 commercial measures, and 118 industrial measures. The demand response list included five residential, and two commercial/industrial measures. The PV list included one residential (roof top application) and two commercial measures (one rooftop application and one parking lot application). (TR 879-880)

Some of the 257 measures, such as Seasonal Energy Efficiency Ratio (SEER) 19 central air conditioners, hybrid desiccant-direct expansion cooling systems, and heat pump water heaters are likely to face supply constraints in the near future. (TR 880) The energy efficiency list also includes some end-use specific renewable measures, e.g., solar water heating and PV-powered pool pumps. (TR 880) Staff believes that the list studied provided an adequate assessment of the available energy efficiency measures. While some measures may have obstacles to overcome, it is appropriate to include them in the technical potential.

[6] Technical Potential for Electric Energy and Peak Demand Savings in Florida, Final Report, pp. 1-1.
[7] Technical Potential for Electric Energy and Peak Demand Savings in Florida, Final Report, pp. 1-1 – 1-2.

As a point of reference, the ITRON analysis shows that the technical potential of baseline consumption is 34.1 percent of annual energy, 42.5 percent of summer system peak, and 28.2 percent of winter system peak. The table below shows the results of the Statewide Technical Potential Report. (EXH 41) Baseline energy is the total electricity sales for the FEECA utilities in 2007. (EXH 2)[8]

Sector	Annual Energy			Summer System Peak			Winter System Peak		
	Base line (2007)	Technical Potential		Base line (2007)	Technical Potential		Base line (2007)	Technical Potential	
	(GWh)	(GWh)	(%)	(MW)	(MW)	(%)	(MW)	(MW)	(%)
Residential	94,745	36,584	38.6%	22,263	10,032	45.1%	22,728	6,461	28.4%
Commercial	65,051	19,924	30.6%	9,840	4,079	41.5%	7,490	2,206	29.5%
Industrial	11,877	2,108	17.7%	1,721	265	12.8%	1,289	217	17.5%
Total	171,672	58,616	34.1%	33,825	14,375	42.5%	31,508	8,883	28.2%

Response to Parties

NRDC/SACE witnesses Mosenthal and Wilson testified that the Technical Potential Study underestimates the potential in several areas. Witness Mosenthal testified that the study underestimated potential by not including such measures as net-zero electricity buildings and future advancements in energy efficiency technology. (TR 1319) NRDC/SACE witness Wilson testified that the potential study left out four end-use sectors: (1) agriculture, (2) transportation, communication, and utilities, (3) construction, and (4) outdoor/street lighting. Witness Wilson testified that potential from these sectors is approximately 10 percent of retail sales. (TR 1453-1454) Witness Wilson agreed that there are issues with data on these end-use sectors, but disagrees that the technical potential for these areas should have been set at zero. (TR 1454) NRDC/SACE argues that the technical potential should have included other measures and should be increased by at least 8 percent, but their goals are not based on their technical potential or the technical potential proposed by ITRON. Rather, NRDC/SACE recommends a goal of 1 percent of sales. (TR 1142) Staff believes that the goals proposed by NRDC/SACE are not based on any Florida-specific study and have not shown how their goals can be achieved.

Staff witness Spellman also testified that the Technical Potential Study underestimated savings in Florida. (TR 1481) Witness Spellman testified that the study does not include several energy efficiency measures, underestimates market penetration, and underestimates the kWh savings from measures. (TR 1497-1498) Witness Spellman also testified to his concern that measures left off the Technical Potential Study also have an impact on the economic and achievable potential. (TR 1498) The complete list of measures not included for the residential sector are: smart strips/phantom load switch, second refrigerator turn-in, light emitting diode (LED) lighting, programmable thermostats, second freezer turn-in, and tree shading. (TR 1500-1501) The complete list of commercial measures not included in the study can be found in hearing Exhibit 93. Witness Rufo testified that the measures identified by witness Spellman were not included because the savings are included in other measures, have very high levels of free-ridership, or are naturally occurring. (TR 1025) Witness Spellman did not provide information to show how the excluded measures would lead to savings in Florida. Staff believes

[8] Technical Potential for Electric Energy and Peak Demand Savings in Florida, Final Report, pp. 3-14.

the study provided by the Collaborative has done an adequate job of identifying available conservation measures.

The FSC questioned ITRON on their use of "stacking" in the Technical Potential Study. (TR 1076) Stacking is a means to understand the interaction between available measures to make sure that savings are not double counted. (TR 1076) Witness Rufo testified that the use of "stacking" is an accepted practice to eliminate double counting that could occur if the measures were not stacked. (TR 1076) Staff believes that the use of "stacking" is useful and justified. It is a means to ensure that the savings from a program are not counted if they would be offset by the savings in a different measure.

None of the parties offered any alternatives that were Florida-specific. They only showed that other states showed greater potential. They were unable to show how savings in other states could be achieved in Florida. Witness Rufo testified that criticisms of the ITRON data and modeling methods by NRDC/SACE and the staff witness are either without merit, inaccurate, or insignificant. (TR 1046) Witness Rufo further testified that the baseline and measure data used in the Technical Potential Study reflect the best available data given the time and resources available. (TR 1022)

A supply-side technical potential was not completed. This is discussed is greater detail in Issue 12.

CONCLUSION

Based on the record, staff believes that the Collaborative has provided an adequate assessment of the technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems, pursuant to Section 366.82(3), F.S. The study finds that there are 58,626 GWhs of technical annual energy potential, 14,375 MWs of technical summer system peak, and 8,883 MWs of potential for winter system peak.

Issue 2: Did the Company provide an adequate assessment of the achievable potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems?

Recommendation: Yes. Each FEECA utility utilized the Technical Potential Study performed by ITRON to develop a statewide achievable potential for energy efficiency and conservation. In coordination with ITRON, the FEECA utilities disclosed the necessary information and analysis required by statute. (Crawford)

Positions:

FPL: Yes. FPL performed cost-effectiveness analyses to determine which conservation, efficiency, and demand-side renewable measures should be included in the achievable potential analysis and to determine appropriate incentive levels. Itron then calculated FPL's achievable potential with its industry-leading DSM ASSYST model.

PEF: Yes. Through a rigorous and comprehensive evaluation process aimed at providing the highest E-Rate Impact Measure ("E-RIM")-based cost-effective level of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems, PEF conducted and has provided an adequate assessment of DSM achievable potential.

TECO: Yes. Through a rigorous and comprehensive evaluation process aimed at providing the highest Enhanced Rate Impact Measure ("E-RIM")-based cost-effective level of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems, Tampa Electric conducted and has provided an adequate assessment of DSM Achievable Potential.

Gulf: Yes. Through the Itron study, Gulf has performed an adequate assessment of the achievable potential of all available demand-side conservation and efficiency measures and demand-side renewable energy systems. An assessment of supply-side conservation and efficiency measures is more appropriately considered in a separate proceeding following the conclusion of the goal-setting process.

FPUC: Itron's study adequately assessed the full achievable potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. The scope of work and assessment techniques were vetted by the Collaborative. Itron utilized state-of-the-art models to determine the full achievable potential of available measures.

JEA/OUC: Itron's study adequately assessed the full achievable potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. The scope of work and assessment techniques were vetted by the Collaborative. Itron utilized state-of-the-art models to determine the full achievable potential of available measures.

FECC: FECC has no specific position at this time.

FIPUG: No position.

FSC: No for the five FEECA IOUs; no position with regard to OUC and JEA.

NRDC/SACE: No. The flaws in the technical analysis were carried forward into the achievable analysis. The achievable analysis arbitrarily eliminates all measures with a payback period (excluding incentives) of less than two years and utilities unreasonably limited success of future programs to levels of success achieved by utilities in the past.

Staff Analysis:

PARTIES' ARGUMENTS

Each of the FEECA utilities agreed that an adequate assessment of achievable potential was provided. The FEECA utilities that addressed the supply-side options likewise agreed that it was better addressed through a separate proceeding. (FPL BR 17-23, 37; PEF BR 20; TECO BR 32, 35; Gulf BR 9-11; FPUC BR 6-8; JEA/OUC BR 8-10, 20)

FSC, in its post-hearing brief, found the assessment insufficient for the five IOUs. FSC took no position on the municipal utilities, however, due to programs and policies already in place. FSC's objection in the case of the IOUs mainly related to problems they had with the cost-effectiveness testing used in the process, which is addressed in Issues 4 and 8. FSC cited specific policies in their taking no position on the municipal utilities. (FSC BR 3-6)

NRDC/SACE, in its post-hearing brief, argued that the achievable potential was insufficient across the board. At the core of its objection was an opposition to the two-year payback screen discussed at length below. NRDC/SACE also cited opposition to the cost-effectiveness testing discussed more fully in Issues 4 and 8. (NRDC/SACE BR 16-25)

ANALYSIS

Following the development of the DSM technical potential, discussed in Issue 1, three steps were used to develop the achievable potential: initial cost-effectiveness screening, determination of incentive levels, and development of achievable potential for six separate scenarios. Discussion of each step follows. FPUC, JEA, and OUC did not use this process and are discussed separately.

Initial Cost-Effectiveness Screening

During this phase of the process, FPL, PEF, TECO, and Gulf applied three cost-effectiveness tests to each measure: Enhanced Rate Impact Measure Test (E-RIM), Enhanced Total Resource Cost Test (E-TRC), and the Participants Test. Each of these tests is discussed in detail in either Issue 3 (Participants Test) or Issue 4 (E-RIM and E-TRC). During this phase of the testing, utilities also determined whether measures should be eliminated due to a payback period of less than two years.

Two-Year Payback

Rule 25-17.0021(3), F.A.C., reads, in part:

> Each utility's projection shall reflect consideration of overlapping measures, rebound effects, ***free riders***, interactions with building codes and appliance efficiency standards, and the utility's latest monitoring and evaluation of conservation programs and measures. (Emphasis added)

In order to meet the requirements of this section, as part of the measure screening process, the four generating IOUs removed certain measures from their considered programs because of participant "payback" periods of less than two years. Savings realized from such measures exceeded their costs within two years, according to utility analysis. These savings result from reduced kWh usage and, resultantly, a lower bill. The costs of such measures are up-front capital costs, where they exist, of installing or beginning the measure. Measures must both pass the Participants Test and have a payback of two years or less without any incentives to be removed during this step. The Commission initially recognized a two-year payback period to address the free-ridership issue following the 1994 DSM goals hearing. By Order No. PSC-94-1313-FOF-EG,[9] the Commission initially approved FPL's use of the two-year payback period, and it has been used consistently ever since. (TR 1236-1238)

The free-ridership issue is often confused with that of naturally occuring DSM. While naturally occurring DSM and free-ridership are related issues, they are not interchangeable terms. "Naturally occurring" DSM is energy and demand savings measures that will be implemented by customers during the time period in question regardless of incentives. Naturally occurring DSM includes changes from the result of building codes, customer purchases, customer desires for environmentally conscious purchasing regardless of costs, and various other measures that may or may not be economical for the consumer over the life of the DSM measure. Naturally occurring DSM would occur with or without utility incentives and is generally considered to be part of the baseline scenario. For example, customers who purchase compact

[9] Order No. PSC-94-1313-FOF-EG, issued October 25, 1994, Docket No. 93-0548-EG, In re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section 111) by Florida Power and Light Company; Docket No. 93-0549-EG, In re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section 111) by Florida Power Corporation; Docket No. 93-0550-EG, In re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section 111) by Gulf Power Company; Docket No. 93-0551-EG, In re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section 111) by Tampa Electric Company.

florescent light bulbs, or CFLs, whether or not incentives are in place for their purchase, result in naturally occurring DSM.

Free-riders are customers who receive incentives for measures they would have installed even without the incentives. Rule 25-17.0021(3), F.A.C., specifically calls for the Commission to address free-riders during the goal setting process. Using the example stated above, if customers received a utility incentive to purchase a CFL, they become free-riders. In this example, the money being spent by the utility on the incentive, which is ultimately paid for by the customers, is not actually incenting energy efficiency; rather, it is simply rewarding existing behavior. Because CFLs offer savings to the customer very quickly, in a period under two years, customers already have an incentive to purchase them, and a further incentive is not the most effective use of limited customer money for DSM. In order to maximize the cost-effectiveness of customer money for DSM, the Commission adopted Rule 25-17.0021(3), F.A.C., to minimize the subsidization of naturally occurring DSM. When utilities provide financial incentives to naturally occurring DSM, they create free-riders.

The two-year payback period was agreed to by the Collaborative as a means of addressing the free-ridership issue. (EXH 2, BSP 435) In his testimony, FPL witness Dean describes the rationale for the two-year period. He notes that estimates of the annual return on investment required to spur purchase of energy efficiency measures range from approximately 26 percent, which represents a payback period of just under four years, to over 100 percent, which represents a payback period less than a year. He notes that most studies place the annual return on investment necessary to incent purchase in the 40 to 60 percent range. A 50 percent figure, which represents a payback of exactly two years, is squarely in the middle of that range. (TR 1236-1238)

The two-year payback criterion eliminates a substantial amount of energy savings from demand-side measures. For an illustrative example, the following chart, based on Exhibit 106, demonstrates the amount of energy savings GDS proposed to be added back to the E-TRC achievable scenario:

Utility	(A) Maximum Achievable E-TRC (GWh)*	(B) E-TRC + 2-year payback measures (GWh)*	(C) Amount excluded due to 2-year screen (GWh) (B-A)	(D) Percent excluded due to 2-year screen (C/B)
FPL	2177.0	12066.9	9889.9	82.0%
PEF	1584.5	4689.8	3105.3	66.2%
TECO	310.3	1939.9	1629.6	84.0%
Gulf	251.4	1279.9	1028.5	80.4%
FPUC	138.5	1070.7	932.2	87.1%
JEA	78.8	511.2	432.4	84.6%
OUC	12.9	59.2	46.3	78.2%
Total	4553.4	21617.6	17064.2	78.9%

*(EXH 106, pp. 2-7; EXH 173, p. 1)

It is important to note that these savings are based on an E-TRC portfolio. The two-year payback screen tends to focus on kWh savings, which has a greater impact on E-TRC scores than E-RIM scores. Because many measures with short payback are excluded by an E-RIM screen, due to its greater emphasis on demand savings than energy savings, the amount excluded from an E-RIM portfolio would inevitably be significantly lower. Measures with short paybacks tend to have lower upfront capital costs, be better developed, more widespread, and easier to implement than measures with long paybacks. These measures with short paybacks often have higher levels of lost revenues for utilities due to high energy savings (kWh).

Significantly, even though the utilities do not incent measures with a payback period of less than two years, customers are still free to adopt such measures and realize the resultant financial savings the measures represent. The two-year screen does not remove the measures from adoption; it merely means that utilities do not provide incentives for measures that already provide more savings than they cost within a two-year period. In a sense, the two-year period means that the measures have an inherent financial incentive. After two years or less, the measures begin to represent a net savings in cost for the customers. These measures represent a large potential for energy savings among the ratepayers. In order to allow the greatest number of customers to benefit from this potential, staff is recommending, in Issue 9, that the FEECA utilities create a public information campaign intended to promote such measures.

It is also important to note that the adoption of such measures does result in real lost revenues for the utility. If every customer were to adopt every measure with a two-year payback on their own, the utility would face a real loss of income. Utilities could initiate a rate case if this revenue loss is substantial. Further incenting of these measures raises the likelihood of a revenue loss that could necessitate a rate case, and thus, potentially higher rates for the general body of ratepayers.

Incentive Levels

The second step in the process for the four generating IOUs was to establish proper incentive levels. DSM measures needed to pass the Participants Test, as well as the E-RIM or E-TRC tests. As a result, incentive levels for measures that did not pass the Participants Test during the initial cost-effectiveness screening (without incentives) were adjusted until the measures passed. Following this action, E-RIM and E-TRC were re-run using costs that included the resulting incentive. Some measures that could not pass the Participants Test cost-effectiveness screening without incentives were removed from the achievable potential at this stage. Because measures were required to pass the Participants Test as well as E-RIM or E-TRC, incentives added to measures to allow them to be cost-effective for customers rendered some measures no longer cost-effective under either the E-RIM or E-TRC tests.

Scenario Analysis

In the third step of the process, the four generating IOUs analyzed measures that passed cost-effectiveness screening with incentives, in order to develop six scenarios for achievable potential. The four generating IOUs developed low, mid, and high incentive scenarios for both E-RIM and E-TRC. From these six scenarios, the generating utilities developed their achievable

potential. (TR 97-101, 353-361, 504-518, 623-628) This achievable potential formed the basis of the goals proposed by the utilities in the next step of the overall process.

Other FEECA Utilities

FPUC, OUC, and JEA allowed ITRON to develop the achievable potential for them. ITRON followed a similar process in developing the achievable potential for the three small utilities that the generating IOUs did in making their calculations. In each of these three cases, ITRON found no DSM measures that passed the E-RIM Test. As a result, the achievable potential for each of these three utilities is zero in all categories. These utilities are all smaller than the generating IOUs, with fewer customers, and as a result, administrative costs and program development tend to render measures less cost-effective than they are for the generating IOUs.

Demand-Side Renewable Energy Systems

The Collaborative analyzed a small range of renewable energy systems in their analysis of achievable potential. (EXH 2).[10] These measures were confined to geothermal heat pumps, solar water heaters, and small photovoltaic (PV) systems. These renewable energy systems were subjected to the same range of cost-effectiveness testing as the DSM measures discussed above. The generating IOUs found that some geothermal heat pumps did pass the cost-effectiveness tests and were included in the achievable potential. PEF also included some solar thermal measures in its achievable potential. (EXH 3, BSP 988) No FEECA utility found that Solar PV measures passed the economic screening and thus should be included in the achievable potential. Renewable energy systems were subject to the same analysis as conventional energy efficiency measures and either were incorporated into or excluded from achievable potential by the same standards. (EXH 2)[11]

Supply-Side Conservation and Efficiency Measures

FEECA utilities did not develop supply-side conservation or efficiency measures to the same degree that they did demand-side measures. Generating utilities made note of their ongoing or planned efficiency and savings projects, but did not subject supply-side measures to the same analysis, nor did they develop the extensive lists of measures, that were examined by ITRON for demand-side savings. Supply-side measures require substantially different analytical methods than do demand-side systems and provide results that are difficult to combine with DSM goals. Supply-side efficiencies and conservation, rendered properly, would result either in less fuel being required or less loss along the transmission and distribution network. Therefore, such measures are better addressed separately from demand-side measures where their options can be better explored.

[10] Technical Potential for Electric Energy and Peak Demand Savings in Florida, Final Report, pp. A1 – A27.
[11] Technical Potential for Electric Energy and Peak Demand Savings in Florida, Final Report, pp. ES5 – ES 6.

Achievable Potential

The following table demonstrates the total achievable potential for the FEECA utilities in the State of Florida. Due to the process of developing achievable potential from technical potential, these amounts are significantly reduced from those detailed in Issue 1.

	Annual Energy			Summer System Peak			Winter System Peak		
	Base line (2007)*	Achievable Potential**		Base line (2007)*	Achievable Potential**		Base line (2007)*	Achievable Potential**	
Sector	(GWh)	(GWh)	(%)	(MW)	(MW)	(%)	(MW)	(MW)	(%)
Residential	94,745	988	1.0%	22,263	451	2.0%	22,728	359	1.6%
Commercial	65,051	1613	2.5%	9,840	503	5.1%	7,490	93	1.2%
Industrial	11,877	74	0.6%	1,721	9	0.5%	1,289	8	0.6%
Total	171,672	2675	1.6%	33,825	963	2.9%	31,508	460	1.5%

*EXH 41, pp. 3-14; **EXH 67, p. 1

Response to Intervenors

Each of the FEECA utilities agreed that ITRON had provided an adequate assessment of achievable potential. FECC and FIPUG took no position on this issue. FSC, in its post-hearing brief, found the assessment insufficient for the five IOUs, while taking no position on the municipal utilities. NRDC/SACE, in its post-hearing brief, argued that the achievable potential was insufficient across the board.

FSC's position on Issue 2 was part of a broad objection to Issues 2 through 8. Its in-depth discussion of why it found that the assessment was inadequate spoke to cost-effectiveness testing and program design, neither of which is properly within the scope of Issue 2. (FSC BR 3-6) FSC's primary objection is addressed in Issues 4 and 8. FSC took no position on the municipal utilities due to programs in place at both. FSC notes that JEA's portfolio-based approach results in the inclusion of solar water heating and PV. (TR 837-838) Likewise, FSC sees OUC's programs that combine solar water heating and PV as sparing the company from FSC's objection. (TR 805-806)

NRDC/SACE's assertion that the achievable potential study was inadequate related, primarily, to two reasons. First, they argued that "flaws" in the Technical Potential Study were carried forward into the achievable potential. As discussed in Issue 1, staff recommends that ITRON's Technical Potential study met the requirements of Florida rules and statutes. (TR 1317-1318)

Second, NRDC/SACE objected to the two-year payback screen because it creates a "reverse-cost-effectiveness" test by removing the most cost-effective measures. (NRDC/SACE BR) While this is undoubtedly true, the measures with the highest number of free-riders are inevitably going to be the most cost-effective due to simple economics, and this is inherent to the problem of free-riders. NRDC/SACE also argues that the utilities admit "they lack any actual data or analysis showing the adoption patterns of free-riders." (NRDC/SACE BR) This argument seems to be contradicted by FPL witness Dean, who refers to the academic literature in his testimony. (TR 1237) NRDC/SACE's brief notes that witness Dean's testimony, as well as

that of witnesses Bryant, Masiello, and Haney, but discounts their findings because they did not conduct original research. (TR 289) NRDC/SACE did not provide any reasons to discount the research conducted by utility witnesses.

Significantly, however, NRDC/SACE does not offer an alternate way to address free-ridership. The closest NRDC/SACE comes to offering an alternative is to argue that free-riders are more appropriately addressed at the program level. (TR 1330-1331) Whatever the merits are of this approach, Rule 25-17.0021, F.A.C., requires free-riders to be addressed during the goals hearing. The Commission is bound by the demands of its rules, and cannot simply choose to defer the decision to a separate hearing. It is also important to note that the Collaborative, of which NRDC/SACE was a member, agreed to the two-year period, though NRDC/SACE disputes their agreeing to the exclusion (EXH 142-146). By Order No. PSC-94-1313-FOF-EG,[12] the Commission initially adopted the two-year payback period, and it has been used consistently ever since. (TR 1886)

ITRON's analysis has identified numerous measures with payback periods under two years. These measures should be easily implemented by utility customers, as their short payback periods return savings that exceed their capital requirements very quickly. NRDC/SACE is correct in identifying these measures as carrying potential for substantial energy and demand savings. As a result, Commission staff is recommending in Issue 9 that the FEECA utilities better inform their customers about the significant benefits these measures carry. As part of the proceedings, each utility identified measures with the greatest savings potential that had payback periods less than two years. Rather than provide financial incentives for measures that already offer real and rapid economic benefits in short order, the FEECA utilities should ensure customers are aware of the benefits these measures offer them in order to reduce their own bills and delay the need for additional generation resources.

CONCLUSION

Each of the FEECA utilities, with the aid of ITRON, performed an adequate analysis of the demand-side conservation and efficiency measures, including demand-side renewable energy systems. The FEECA utilities did not provide an analysis of supply-side measures. Staff agrees, however, that methods appropriate to analyze demand-side measures are not well-suited to weighing supply-side measures. As a result, supply-side measures are best addressed in a separate proceeding, as is discussed in Issue 11. Staff also recommends that the FEECA utilities place a priority on better informing their customers about demand-side measures with payback periods of less than two years. These measures were appropriately removed from the achievable potential due to the requirement that the Commission address free-ridership. Nevertheless, the substantial savings potentially offered by these measures, as well as the benefits that they offer to

[12] Order No. PSC-94-1313-FOF-EG, issued October 25, 1994, Docket No. 93-0548-EG, In re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section 111) by Florida Power and Light Company; Docket No. 93-0549-EG, In re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section 111) by Florida Power Corporation; Docket No. 93-0550-EG, In re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section 111) by Gulf Power Company; Docket No. 93-0551-EG, In re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section 111) by Tampa Electric Company.

ratepayers, provide a justification for encouraging their adoption and ensuring that the public is properly informed about their benefits. Because these measures already offer rapid economic benefits to consumers, the key to expanding their use is not incentives, but better public information.

Issue 3: Do the Company's proposed goals adequately reflect the costs and benefits to customers participating in the measure, pursuant to Section 366.82(3)(a), F.S?

Recommendation: Yes. The utilities properly used the Participants Test in the screening of measures in order to determine the costs and benefits to customers that participate in DSM programs. (Matthews)

Positions:

FPL: Yes. FPL used the Participant Test in its economic screening process. The Participant Test includes all relevant DSM-related costs and benefits for a customer participating in a DSM program. Measures which are not cost-effective to the participating customer are therefore not reflected in FPL's proposed DSM goals.

PEF: Yes. PEF utilized the Participants' Test as delineated in Rule 25-17.008, F.A.C., to adequately reflect the costs and benefits to customers participating in a DSM measure thereby adhering to the requirement of Section 366.82(3)(a), F.S.

TECO: Yes. Tampa Electric utilized the Participants' Test, as delineated in Rule 25-17.008, F.A.C., to adequately reflect the costs and benefits to customers participating in a DSM measure, thereby adhering to the requirement of Section 366.82(3)(a), F.S.

Gulf: Yes. The measures included in the development of Gulf's goals reflect the costs and benefits to the participating customers. This is accomplished by performing the Participant Test and requiring that all measures included in the goals pass this test.

FPUC: Yes. FPUC's proposed goals are based on achievable potential developed based on Itron's cost-effectiveness evaluation, which included consideration of the costs and benefits to customers participating in the measures through use of the Participant Test.

JEA/OUC: Yes. The proposed goals of JEA and OUC are based on achievable potential developed based on Itron's cost-effectiveness evaluations, which included consideration of the costs and benefits to customers participating in the measures through use of the Participant Test.

FECC: FECC has no specific position at this time.

FIPUG: In answering this question, the Commission must balance the goal of conservation with the impact of the cost of conservation programs on rates. The Commission must not overlook rate impact when conservation goals and programs are evaluated.

FSC: No for the five FEECA IOUs; no position with regard to OUC and JEA.

NRDC/SACE: Yes.

Staff Analysis:

PARTIES' ARGUMENTS

All parties, except FSC, agree that the Participants Test captures all of the relevant costs and benefits for customers who elect to participate in a DSM measure. The parties further agree that the requirements of Section 366.82(3)(a), F.S., are reflected in the proposed goals because all included measures pass the Participants Test. (FPL BR 23; PEF BR 20; TECO BR 33; Gulf BR 11; FPUC BR 8; OUC/JEA BR 10; FIPUG BR 4)

FSC argues that the goals for FPL, PEF, TECO, Gulf, and FPUC do not adequately reflect the costs and benefits to customers participating in the measures pursuant to Section 366.82(3)(a), F.S. (FSC BR 4) FSC appears to take issue with the techniques employed by the IOUs in calculating the energy savings and incentives for solar measures and argues that these flawed calculations cause solar measures to fail the Participants Test. In its analysis, FSC explains how the impact of "stacking" increases the necessary incentive and lowers the energy savings attributed to solar technologies, thereby increasing the likelihood that these measures will fail the Participants Test. (FSC BR 5) FSC has no position regarding OUC and JEA. (FSC BR 4)

ANALYSIS

The goals for energy savings and demand reduction proposed by the utilities are based on measures which all pass the Participants Test. The Participants Test is designed to determine if a customer's choice to participate in a measure is an economically sound one. (TR 83) The costs and benefits to the participating customer are captured in the calculations of this test, and therefore the requirements of Section 366.82(3)(a), F.S., are adequately reflected in the utilities' goals. (TR 85)

Section 366.82(3)(a), F.S., requires that the Commission take into consideration the costs and benefits to customers participating in any measure to be included in a utility's DSM program. In addition, Rule 25-17.008, F.A.C., incorporates the Commission's Cost Effectiveness Manual.[13] The Cost Effectiveness Manual requires the application of the Participants Test in order to determine the cost-effectiveness of conservation programs by measuring the impact of the program on the participating customers. The customers' benefits of participation in programs may include bill reductions, incentives, and tax credits. Customer's costs may include bill increases, equipment and materials, and operations and maintenance. (FPSC Cost Effectiveness Manual)

Although FSC expresses its opinion that the inputs to the Participants Test are flawed, it agrees with the application of this test in general, along with the E-TRC Test. (FSC BR 2) However, FSC offers no alternative inputs to those of the utilities, nor does it provide any alternative to the results obtained from the application of the Participants Test. The FSC questioned ITRON on their use of "stacking" in the Technical Potential Study. (FSC BR 3)

[13] Florida Public Service Commission Cost Effectiveness Manual for Demand Side Management Programs and Self-Service Wheeling Proposals, effective July 17, 1991.

Stacking is a means to understand the interaction between available measures to make sure that savings are not double counted. (TR 1076) Witness Rufo testified that the use of "stacking" is an accepted practice to eliminate double counting that could occur if the measures were not stacked. (TR 1076) Staff believes that "stacking" is useful and justified. It is a means to ensure that the savings from a program are not counted if they would be offset by the savings in a different measure.

CONCLUSION

Based on the record, staff believes that the utilities correctly calculated the costs and benefits to the customers participating in the energy saving and demand reduction measures included in their goals by utilizing the Participants Test. The goals proposed by the utilities adequately reflect these costs and benefits, pursuant to Section 366.82(3)(a), F.S.

Issue 4: Do the Company's proposed goals adequately reflect the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant pursuant to Section 366.82(3)(b), F.S.?

Recommendation: Yes. Staff believes that the Participants Test, RIM Test, and TRC Test should all be used to set goals. (Ellis, Graves)

Positions:

FPL: Yes. The E-RIM Test utilized by FPL includes all relevant DSM-related benefits and costs that will be incurred by the utility and all of its customers – both participants and non-participants. Accordingly, the achievable potential calculated and the resulting goals proposed reflect those measures which are cost-effective to all customers.

PEF: Yes. The E-RIM Test manages the inclusion of utility incentives and other utility costs that creates a benefit for all ratepayers while protecting all ratepayers, both participants and non-participants, from rates that would otherwise be higher in the absence of the DSM program. The Participants' Test was also utilized to adequately reflect participant contributions.

TECO: Yes. Tampa Electric utilized the cost-effectiveness methodologies as delineated in Rule 25-17.008, F.A.C., to adequately reflect the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions. Accomplishing this objective is best achieved through the use of the E-RIM and Participants' cost-effectiveness tests.

Gulf: Yes. Measures passing the E-RIM Test reflect the costs and benefits to Gulf's general body of ratepayers as a whole, including utility incentives. By only including measures that also pass the Participant Test, Gulf's proposed goals adequately consider participant contributions as a component of overall customer impact.

FPUC: Yes. FPUC's proposed goals are based on achievable potential developed based on Itron's cost-effectiveness evaluation, which included consideration of the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions, through use of the RIM and Participant tests.

JEA/OUC: Yes. The proposed goals of JEA and OUC are based on achievable potential developed based on Itron's cost-effectiveness evaluation, which included consideration of the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions, through use of the RIM and Participant tests.

FECC: FECC has no specific position at this time.

FIPUG: In answering this question, the Commission must balance the goal of conservation with the impact of the cost of conservation programs on rates. The Commission must not overlook rate impact when conservation goals and programs are evaluated.

FSC: No for the five FEECA IOUs; no position for OUC and JEA.

NRDC/SACE: No. All seven utilities relied on RIM, which is inconsistent with 366.82(3)(b). First, RIM focuses exclusively on rates and non-participants. Second, RIM does not include either participants' contributions or benefits. Efficiency goals must be based on the TRC Test, which satisfies the language of 366.82(3)(b), F.S.

Staff Analysis:

PARTIES' ARGUMENTS

The FEECA utilities agree that Section 366.82, F.S., does not specify or require a single cost-effectiveness test, but that a combination of two tests is sufficient to meet the requirements, specifically the RIM and Participants Tests. The TRC Test is considered by the utilities to be insufficient to meet the statute, and goals based upon it would have an upward pressure on rates. They also agree that their analysis was comprehensive, including effects from a variety of sources, such as building codes, overlapping measures, appliance standards, and other sources. Four of the seven FEECA utilities filed "enhanced" versions of the RIM and TRC tests, referenced as E-RIM and E-TRC. These tests included benefits from avoided carbon compliance costs. Discussion regarding the appropriateness of including these costs is discussed in Issue 5. (FPL BR 23-24; PEF BR 7-11; TECO BR 10-13; Gulf BR 12-14; JEA/OUC BR 11-12; FPUC BR 9-10)

NRDC/SACE asserts that the language found in Section 366.82(3)(b), F.S., clearly describes the TRC Test. NRDC/SACE argues that the TRC Test is the cost-effectiveness test that focuses on the "general body of ratepayers as a whole." NRDC/SACE further elaborate that the TRC Test, unlike the RIM Test, includes both "utility incentives and participant contributions." In addition, a flaw in the calculation of benefits is the denial of value for reduced demand until the in-service date of the avoided unit. Also, the possibility of avoiding units that are already approved but have not yet finished construction should be considered. Finally, NRDC/SACE contends that administrative costs allocated to measures were unreasonable and caused an inappropriate reduction of the goals. (NRDC/SACE BR 27-32)

FIPUG suggests that the Commission primarily consider the final impact on customers, and that any goals should not present an undue rate impact upon customers. FIPUG contends that the Commission should continue to give significant weight to the RIM Test. FIPUG asserts, however, that the test should be performed consistently and uniformly between utilities. (FIPUG BR 4-6)

FSC asserts that the analysis done by the investor-owned utilities was insufficient, and that the reduction of savings associated with solar measures was reduced by inappropriately considering the impacts of other measures. FSC supports the E-TRC and Participants Tests, and

further suggests that measures should be considered in combination or on a portfolio basis. (FSC BR 4-6)

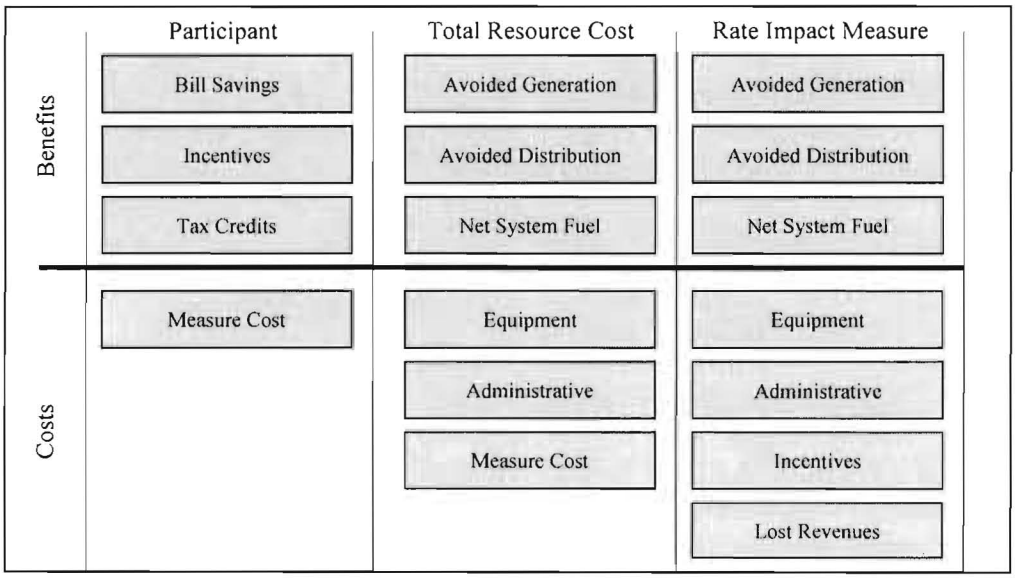
ANALYSIS

Cost-Effectiveness Calculations

This issue relates to the determination of whether the utilities' proposed goals adequately reflect the proper values for costs and benefits to the general body of ratepayers as a whole. As such, the method for calculating the components of all three cost-effectiveness tests must be analyzed. Staff will therefore analyze if the parties properly conducted their cost-effectiveness analysis according to the Commission's established rules.

Rule 25-17.008, F.A.C., and the "Cost Effectiveness Manual for Demand Side Management Programs and Self Service Wheeling Proposals" (Manual) were adopted as part of the implementation of Section 366.82, F.S., prior to the recent amendments. Rule 25-17.008(3), F.A.C., directs the Commission to evaluate the cost-effectivness of conservation and direct load control programs utilizing the following three tests: (1) the Participants Test, (2) the Total Resource Cost Test (TRC), (3) the Rate Impact Measure Test (RIM). Figure 4-1 below provides an illustration of the costs and benefits evaluated under each test.

Figure 4-1 – Summary of Cost Effectiveness Test Components



For purposes of determining cost-effectiveness, each test discussed above assesses a program's benefits against its costs. If a program's benefits are greater than the costs, the program is considered cost-effective. While the basic evaluation process for each test is the same, the costs and benefits considered within each test vary.

Discussed below are the various components of the cost-effectiveness analysis required for the Participants, TRC, and RIM tests. All three of these tests have historically been used by the Commission in analyzing individual measures and programs.

The Participants Test reflects only the view of the ratepayer installing the measure, and the associated costs and bill impact. If the Participants Test has a value of 1.0 or greater, it means that the benefits of participation, from reduced bills, are greater than the costs of participation over the period.

The TRC Test determines the total benefit to society as a whole of any individual program. Also, the measure cost to the participant is included in the TRC and Participants Tests as the same value. (TR 217) For utility costs, the TRC Test considers the equipment and administrative costs associated with the program, but does not include utility incentive payments. (TR 572) As a result, the TRC Test tends to favor measures with higher associated energy savings than demand.

The RIM Test is an equity test, between participants and non-participants, with a RIM value of 1.0 or greater showing that rates will not increase for non-participants greater than they would have in a supply-side only addition. The RIM and TRC tests share several common components. As detailed above in Figure 4-1, the RIM and TRC tests share a common numerator, with benefits being: avoided generation and distribution costs, along with net system fuel savings. (TR 217-218) However, they differ in the denominator, in which the RIM Test includes lost revenues (i.e. participant bill savings), and the TRC does not. (TR 399) As a result, the RIM Test tends to favor measures with higher associated capacity savings than energy. Combined, the RIM and Participants tests approximate the TRC Test.

To determine the results of any of the three cost-effectiveness tests discussed above, several values must be determined. The first is the associated demand and energy savings, which is used as an input in the next two components. The next input would be cost, which includes utility equipment, administrative expenses, lost revenues, and the participant's contribution depending upon the test. Finally, the benefits are calculated using the amount of energy and demand savings, times the avoided cost of generation, distribution, and system fuel for the RIM and TRC tests, or in the case of participants, in lower bill amounts, in addition to any incentives or applicable tax credits. These are discussed in more detail below.

Associated Demand and Energy Savings

The effectiveness of a measure, its associated energy and demand savings, is limited by its ability to be implemented economically. Therefore, it is important to determine the savings associated with each measure, incorporating overlapping measures, rebound effect, and other limitations. The FEECA utilities used the approach of developing a technical potential for all applicable measures, as required by Section 366.82(3), F.S. (TR 191) To determine the savings, each measure is compared to a baseline state, and a comparison is done between the demand and energy usage with and without the measure. This baseline state varied by customer type. Residential customers were broken down into single family and multi-family homes, while commercial customers were analyzed using 17 building types. Industrial customers were analyzed based upon facility type. Vintage is also a component, as there may be different costs and benefits associated with a measure dependent upon the location, being new construction or a retrofit to an existing structure. (TR 1035-1036) The utilities then could approximate the associated demand and energy savings of any individual measure.

To represent the overlapping effects of individual measures, ITRON assumed that the most cost-effective measures would be installed first, after which incremental measures would occur, based upon a 'supply curve.' (TR 1003-1004) FSC contends that this method is improper, as it reduces the cost-effectiveness of some measures by decreasing the savings associated with them, while not acknowledging that the measures would not always be installed in the order described by ITRON. While this reduced almost all measures associated demand and energy savings, this represents a reasonable assumption on the utilities part to prevent double-counting.

FPL has suggested that this methodology will not be used in final program design. (TR 259-261) This would be considered inappropriate to establish goals given a reduced value, and then to use the full value when claiming credit against the goals per installation. The purpose of the supply curve is to account for lower cost measures installed before the considered measure. (TR 1003-1004) Unless verification was done that no other measures are or would be installed, crediting the full value of an individual measure towards meeting a goal or establishing a program should not be allowed.

Costs

Utility Equipment

Utility equipment includes items installed as measures, or as a requirement for participation in a measure. An example of equipment installed as a measure includes compact florescent bulbs distributed during energy audits, or more complicated items such as load management devices on pool pumps or water heaters. Equipment cost is considered in the RIM and TRC tests. The equipment costs were gathered by ITRON and then applied to the measures developed to appropriately consider its costs. (TR 194-195)

Utility Administration

Administrative costs represents the amount of materials and time the utility's staff would be required to work in order to advertise programs, determine eligibility, and verify equipment installation to the program's standards. (TR 572) These costs must be considered, as without sufficient advertising funds, a program might not receive a high participation rate. Additionally, without proper verification of equipment, the utility may be paying rebates for equipment that is not performing to the full expectations of the utility. Administrative costs are considered in the RIM and TRC tests.

Incentives

Incentives are considered as both a benefit and a cost, depending upon the test type utilized. While also considered an expense to the FEECA utility, incentives typically represent a savings to the customer, in exchange for participation within a measure. The participant's cost is reduced by an amount equal to the incentive level, which reduces the equivalent payback period of the measure. Some programs do not require expenditures, and are represented as credits on a customer's account for providing a service, such as allowing the utility to install and operate load management devices. These credits are assumed to compensate the participant for the inconvenience related to inability to use the equipment during high demand periods. Incentives are considered as a benefit under the Participants Test. Under the RIM Test, customer incentives

are considered as a utility cost that is recovered through the Energy Conservation Cost Recovery clause. (TR 434) Utility incentives are not considered under the TRC Test. (TR 435)

Unrecovered Revenue Requirements

Unrecovered revenues, or 'lost revenues,' are those base rate revenues that would not be collected as a result of a measure's energy and demand savings. As base rate revenues represent fixed costs, a sufficient reduction in base rate revenues can result in the utility having to enter into a rate case to increase rates to compensate for lower customer sales. In terms of cost-effectiveness tests, the RIM Test is the sole test that considers lost revenues, and hence the potential impact upon base rates of all customers (participants and non-participants). (TR 399)

Measure Costs

The measure cost is the cost to the participant of any equipment or services required by the installation of the measure. (TR 432) As such, it is only considered in the TRC and Participants tests as a cost. Staff believes that the utilities properly calculated the measure costs to participants.

Benefits

Avoided Generation Capital and O&M

To determine the value of avoided capacity, the FEECA utilities had to select an avoided unit. (TR 184) The size, timing, and technology type of the unit is determined by analyzing each utility's load forecast assuming no additional DSM measures are implemented. Units which are already under construction, or have received a determination of need are included in the forecast, but are not considered avoidable. (TR 423) This analysis, therefore, is not representative of any planned units, but of those units which would be needed if not for demand-side management savings.

Once a unit has been selected as the avoided unit, the value of either eliminating the need for the unit's construction, or delaying the unit can be calculated. These values are then used in various cost-effectiveness tests, as outlined by the Commission's Manual adopted in Rule 25-17.008(3), F.A.C. This avoided cost, as well as the others described below, would be included as a benefit in proportion to the amount of winter and/or summer demand savings attributed to each measure. Staff believes that the FEECA utilities properly selected their avoided units using the modeling method described above, and applied the avoided capacity costs in determining their proposed goals. This is included as a benefit, in the same amount, for the RIM and TRC tests.

Net System Fuel Impacts

While the avoided unit methodology may be appropriate to represent the savings associated with the effectiveness of measures to reduce demand, it is insufficient to represent energy savings. As a result, the Commission's Manual directs utilities to address energy savings by calculating the net system fuel impact of reduced energy consumption. (TR 188) This value can be positive or negative, depending on the efficiency of the avoided unit and the efficiency of the existing system. Net system fuel impact is a component of the RIM and TRC tests.

FIPUG has raised concerns regarding the calculation of avoided energy costs, which are represented by net system fuel impacts. (FIPUG BR 11-12) FIPUG details the projected 2009 fuel costs filed in the 2008 fuel docket. (EXH 148; EXH 155; EXH 160) FIPUG then asked witnesses from PEF, TECO, and Gulf to compare these costs to actual 2009 values. (TR 396, 544-545, 648) Staff does not find this comparison appropriate, as the difference in projected and actual fuel costs is addressed in the fuel docket.

A component of the net system fuel impact is environmental costs related to energy. The Commission's Manual includes as an avoided cost benefit, the costs associated with existing environmental regulations. These costs include the capital costs for installing environmental compliance equipment, as well as related operations and maintenance. (TR 1233) Also, the costs of emission credits as necessary were included for the primary regulated emissions, SO_X and NO_X. These environmental costs are currently recovered through the Environmental Cost Recovery clause. Staff believes that the FEECA Utilities properly applied the avoided environmental costs in determining their proposed goals.

The appropriateness of the inclusion of projected costs of pending carbon legislation will be discussed in Issue 5, but it has a general effect on the avoided cost of energy, as it is associated with the net system fuel impact.

Avoided Distribution Capital and O&M

As required by the Commission's Cost Effectiveness Manual, the avoided costs associated with distribution requirements, including both, capital as well as operations and maintenance expenses, should be accounted for in the benefits of a demand-side management measure. No party objected to the FEECA utilities' method of applying this benefit to the cost-effectiveness tests.

Participant's Bill Savings

Participants in DSM programs are expected to have a reduction in their demand and energy usage, corresponding to the savings associated with the measure which generally translates to lower bills. A participant's bill savings is an estimate of the non-fuel energy component of the participating customer's bill. Such benefits are included in the Participants Test only. This value is similar to the lost revenues in the RIM Test.

Tax Credits

In determining the benefits for a participant, any tax credits or government incentives should be included in the cost calculation. This is especially important in the case of renewable energy systems, such as solar thermal water heaters or photovoltaic systems, which both qualify for a federal tax credit. In addition, participating customers also can receive rebates from the state of Florida, though in recent years the funds for this program have been insufficient to meet demand, so some utilities elected not to include it in their cost-effectiveness analysis. (TR 432, 696) Tax credits are considered a benefit in the Participants Test only.

Required Cost-Effectiveness Test

The utilities applied the Commission's Rules properly in developing values for the costs and benefits of the measures analyzed. The demand and energy savings associated with the measures have been properly accounted.

Historically, the Commission has established goals based on the RIM and Participants tests. Recent amendments to Section 366.82, F.S., however, provide greater specificity as to what and who the Commission must consider when establishing DSM goals. The recent amendments are as follows:

> (3) In developing the goals, the commission shall evaluate the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. In establishing the goals, the commission shall take into consideration:
> (a) The costs and benefits to customers participating in the measure.
> (b) The costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions.

Subsections (a) and (b) are the primary focus of staff's analysis for determining the appropriate cost-effectiveness test or tests for consideration in this docket.

Appropriate Test for Section 366.82(3)(a), F.S.

As discussed in Issue 3, Section 366.82(3)(a), F.S., requires the Commission to consider "[t]he costs and benefits to customers participating in the measure." All parties agree that the Participants Test satisfies the requirements of Section 366.82(3)(a), F.S. NRDC/SACE asserts that "[t]here is no debate among the parties that section 3(a) requires application of the 'Participant Test.'" (NRDC/SACE BR 5)

All parties agree that the Participants Test should be used when establishing goals. Witness Sim testified that the Participants Test includes all of the relevant DSM-related costs and benefits that will be incurred or realized by a customer who may participate in a DSM program. (TR 85-86) As described in Rule 25-17.008, F.A.C., the Participants Test measures the impact of the program on the participating customers. Based on the evidence in the record, as well as existing Commission Rules, staff believes that the Participants Test must be considered when establishing DSM goals in order to satisfy Section 366.82(3)(a), F.S.

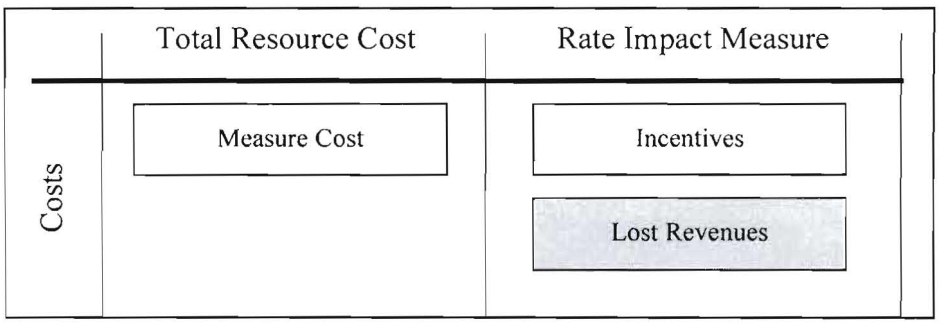
Appropriate Test for Section 366.82(3)(b), F.S.

Section 366.82(3)(b), F.S., requires the Commission to consider "[t]he costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions." Both the RIM and the TRC Tests address costs and benefits beyond those associated solely with the program participant.

It should first be noted that the RIM and TRC tests both consider benefits associated with avoiding supply side generation, i.e., power plants, transmission, and distribution. The RIM and TRC tests also consider costs associated with additional supplies and costs associated with the utilities cost to offer the program. Both of these points are illustrated in Figure 4-1 above.

While some similarities exist between the two tests, it is the differences that are significant in determining which one, if not both, complies with Section 366.82(3)(b), F.S., and should be used to establish goals. Table 2 below, which is an excerpt from Figure 4-1, focuses on the differences in costs between the two tests.

Table 2: Difference Between RIM and TRC Tests



The RIM Test, as described in Rule 25-17.008, F.A.C., is an indirect measure of the impact on all customer rates caused by the program. Witness Dean testified that the RIM Test is referred to as the "no losers" test because it ensures that all customers benefit, those who participate in a program and those who do not. (TR 2036-2037)

As illustrated in Table 2 above, the RIM Test considers utility offered incentives which are specifically required in Section 366.82(3)(b), F.S. Utility offered incentives are recovered through the Energy Conservation Cost Recovery clause and are a cost borne by all ratepayers. (TR 1926) Therefore, a customer participating in a program, which is incentivized by the utility, receives a benefit which is assessed in the Participants Test but incurs a cost on the general body of ratepayers. (TR 2036-2037) The TRC Test does not consider costs associated with utility incentives. (TR 1926-1927)

The RIM Test also considers unrecovered revenues from reduced sales, again illustrated above. (TR 2070) Witness Sim testified that not accounting for lost revenues would put upward pressure on rates. (TR 167) While not an immediate rate impact, lost revenues represent a real cost of a program. Moreover, a reduction in sales, if substantial enough, may cause a utility to request a rate increase in order to ensure the financial health of the company. (TR 590-591) As discussed in Issue 7, lost revenues can be significant if the goals are set too aggressively. (TR

2037-2038) In such an event the affect on the general body of ratepayers would be increased rates. (EXH 4) The TRC Test does not consider costs associated with lost revenues. The omission of lost revenues results in a potential transfer of wealth or cross subsidization between participating customers and non-participating customers. (TR 1820)

The TRC Test, as described in Rule 25-17.008, F.A.C., measures the net costs of a demand-side management program as a resource option based on the total costs of the program, including both the participants' and the utility's costs. The consideration of costs incurred by the participant is specifically required in Section 366.82(3)(b), F.S. Because the TRC Test excludes lost revenues, a measure that is cost-effective under the TRC Test would be less revenue intensive than a utility's next planned supply-side resource addition. However, the rate impact may be greater due to the reduced sales. (TR 1300-1301)

Section 366.82(7), F.S., states that the Commission can modify plans and programs if they would have an undue impact on the costs passed on to customers. Staff believes that the Legislature intended the Commission to be conscious of the impact on rates of any programs evaluated to meet goals. Because the RIM Test includes lost revenues as a cost, measures with significant energy (kWh) savings are more likely to fail because utilities' sales are based on energy consumption. Such measures are more likely to pass the TRC Test. (TR 403) Such measures are also likely to fall into the two-year payback category. (TR 403) As discussed in Issue 9, staff believes that such measures should be included in a utility's education program.

CONCLUSION

While all parties agree that the Participants Test is required by Section 366.82(3)(a), F.S., the same consensus does not exist when determining the appropriate test or tests for Section 366.82(3)(b), F.S. The seven FEECA utilities believe that the E-RIM Test satisfies the requirements of the statute while NRDC/SACE and FSC believe the E-TRC Test satisfies the requirements. Staff would note that the amended language did not explicitly identify a particular test that must be used to set goals. Based on the analysis above, staff believes that consideration of both the RIM and TRC tests is necessary to fulfill the requirements of Section 366.82(3)(b), F.S. By having RIM and TRC results, the Commission can evaluate the most cost-effective way to balance the goals of deferring capacity and capturing energy savings while minimizing rate impacts to all customers.

Issue 5: Do the Company's proposed goals adequately reflect the costs imposed by state and federal regulations on the emission of greenhouse gases, pursuant to Section 366.82(3)(d), F.S?

Recommendation: No. The FEECA utilities, in analyzing DSM measures for this proceeding, went beyond requirements of the statute by including potential CO_2 emission costs. The utilities' projections of potential CO_2 costs varied by over 100 percent, and, therefore, should not be relied upon in this goal setting process. (Garl)

Positions:

FPL: Yes. FPL enhanced both the original RIM and original TRC tests by creating the E-RIM and E-TRC tests, to specifically account for future environmental compliance costs associated with greenhouse gases and other emissions. The E-RIM test provides the basis for FPL's proposed goals.

PEF: Yes. The E-RIM test includes carbon costs as a benefit that increases DSM potential.

TECO: Yes. Tampa Electric utilized a mid-range cost of CO_2 mitigation compliance taken from recently proposed national carbon legislation throughout its DSM goals evaluation process. This is consistent with need determination practice where the cost of CO_2 is integral to the analysis and puts demand-side evaluations on a more level playing field with supply-side options.

Gulf: Yes. Although there are currently no state or federal regulations governing the emission of greenhouse gases, assumptions for CO_2 cost avoidance have been considered as a benefit in Gulf Power's evaluation of all measures.

FPUC: Because no federal or state regulations currently impose costs on GHG emissions, it is not appropriate to establish DSM goals based on speculation as to what costs may be imposed in the future. For informational purposes, however, Itron performed analyses utilizing different CO_2 allowance costs.

JEA/OUC: Because no federal or state regulations currently impose costs on GHG emissions, it is not appropriate to establish DSM goals based on speculation as to what costs may be imposed in the future. For informational purposes, however, Itron performed analyses utilizing different CO_2 allowance costs.

FECC: FECC has no specific position at this time.

FIPUG: No position.

FSC: No position.

NRDC/SACE: No. As more fully explained in the testimony of Dr. William Steinhurst, the Companies all used projections of the costs of carbon dioxide emissions that were on the extreme low end of the spectrum of potential costs.

Staff Analysis:

PARTIES' ARGUMENTS

FPL and TECO argue that recent proceedings on new supply-side resources, i.e. new generating units, have routinely included anticipated costs associated with CO_2 in analyzing generation alternatives. (FPL BR 25; TECO BR 33) They contend that demand-side measures can only be compared on a "level playing field" by, likewise, including consideration of CO_2 in comparison calculations. (FPL BR 25; TECO BR 33) FPL, PEF, and TECO contend that, by including the cost of CO_2 emissions in cost-effectiveness tests, they complied with FEECA as amended by HB 7135. (FPL BR 8-9; PEF BR 5; TECO BR 10-11)

FPUC, OUC, and JEA believe it is premature to include CO_2 costs in cost-effectiveness tests since there currently is no state or federal regulation of this greenhouse gas. (FPUC BR 10; OUC/JEA BR 12) However, for information purposes, the calculations also included CO_2 costs.

NRDC/SACE contends that the utilities used carbon costs at the low end of the spectrum which artificially limited the number of measures considered. (NRDC/SACE BR)

Other parties do not address the issue.

ANALYSIS

When establishing conservation goals, Section 366.82(3)(d), F.S., requires the Commission to consider the costs imposed by state and federal regulations on the emission of greenhouse gases. The statute does not define "greenhouse gases," nor require the Commission to consider projected costs that may be imposed. However, in considering this requirement, the utilities viewed CO_2 as one of the generally accepted greenhouse gases, along with others, such as methane, but the only one appearing close to being regulated. (EXH 4)

Several attempts have been made in recent years to establish federal legislation regulating greenhouse gases. Most recently, the American Clean Energy and Security Act, House Resolution (H.R. 2454), often referred to as the Waxman-Markey Bill or the "cap and trade" bill, already has been passed by the U.S. House of Representatives. U.S. Senate debate on the bill is currently underway. While passage of this bill appears imminent, even if it fails, there appears to be enough interest in Congress to eventually adopt some regulation of CO_2, so sensitivities need to be run.

Staff believes the IOUs tried to go above and beyond the statute, although they missed the mark due to lack of CO_2 pricing continuity. One might argue convincingly that it is appropriate to include potential costs associated with CO_2 emissions as a sensitivity in calculating the cost-effectiveness of DSM measures, just as potential CO_2 costs were analyzed as sensitivities to see how plans would change in determining cost-effectiveness of new generating

units during need determination proceedings. Fuel costs, however, remained the primary driver. (For example, see Order No. PSC-08-0518-FOF-EI, pp. 11-13, 19)[14]

Each utility's calculation of measure cost-effectiveness employed modified versions of the RIM and the TRC tests that added the cost impact of CO_2 to the calculations. The revised tests are referred to as the E-RIM and E-TRC Tests. Staff noted, however, that the utilities used difference sources to establish the cost of CO_2 emissions, thereby employing different values in their cost-effectiveness testing. The various projected CO_2 costs varied by over 100 percent from lowest to highest, as shown in Table 5-1 below. In addition to the variation in projected CO_2 emission costs, the utilities did not provide achievable potential based on a CO_2 cost of zero ($0.00). The projected CO_2 costs were analyzed only at the economic potential level of the study. As such, comparisons could not be made between utilities. FPL's goals could not be determined if, for example, TECO's CO_2 costs were imposed. Other regulated gases, sulfur dioxide (SOx) and nitrous oxides (NOx), are already regulated by federal statute. The costs associated with the SOx and NOx emissions are already included in the standard RIM and TRC tests.

Table 5-1 Carbon Cost ($/Ton CO_2) Forecasts by Utility

Year	Florida Power & Light Company	Progress Energy Florida, Inc.	Tampa Electric Company	Gulf Power Company
2010	-	-	-	-
2011	-	-	-	-
2012	-	-	-	-
2013	$14	-	-	-
2014	$16	-	$38	$20
2015	$17	$22	$40	$23
2016	$19	$24	$42	$24
2017	$21	$26	$44	$25
2018	$23	$28	$46	$27
2019	$25	$30	$49	$29

Sources: EXH 1; EXH 2, BSP 58; EXH 2, BSP170; Floyd TR 634; EXH 2, BSP 425

In addition to the variation in projected CO_2 emission costs, the utilities did not provide achievable potential based on a CO_2 cost of zero ($0.00). The projected CO_2 costs were analyzed only at the economic potential level of the study.

NRDC/SACE took exception to the CO_2 emission costs used, claiming they were at the low end of the cost spectrum; however, NRDC/SACE offered no alternative CO_2 cost structure that it found more acceptable.

[14] Issued August 12, 2008, in Docket No. 080148-EI, In re: Petition for determination of need for Levy Units 1 and 2 nuclear power plants, by Progress Energy Florida, Inc.

CONCLUSION

The FEECA utilities, in analyzing DSM measures for this proceeding, went beyond requirements of the statute by including potential CO_2 emission costs. Staff concurs with FPUC, JEA, and OUC that it is premature to include CO_2 costs in cost-effectiveness tests since there currently is no state or federal regulation of this greenhouse gas. CO_2 emission costs are speculative at this time. Staff believes the IOUs tried to go above and beyond the statute, although they missed the mark due to lack of CO_2 pricing continuity. The resulting variance of projected costs from various sources should not be relied upon in this proceeding other than as a sensitivity test to determine the robustness of the cost-effective analysis.

Issue 6: Should the Commission establish incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems?

Recommendation: No. Increasing rates in order to provide incentives to utilities is more appropriately addressed in a future limited scope proceeding as provided for in Section 366.82(9), F.S. Customers are already eligible to receive incentives through existing DSM programs. (Lewis)

Positions:

FPL: There is no need to establish incentives in this proceeding. Consideration of incentives, based on the goals that are established in this proceeding, would be more appropriately addressed in the plan phase of this docket or otherwise in a subsequent proceeding.

PEF: Utility incentives can provide the Commission a useful tool to address a utility's performance and financial impacts to meet future goals. If the Commission seeks to prescribe goals based on any test other than the recently modified E-RIM, the issues of goals and incentives would become inseparable, and an immediate consideration of incentives would become necessary

TECO: No, not in this proceeding. If the Commission deems utility incentives to be appropriate, the evaluation and potential establishment should be conducted in a separate proceeding.

Gulf: Not at this time. The establishment of incentives, if necessary, should take place in a separate proceeding.

FPUC: No. FPUC has comprehensively analyzed customer-owned energy efficiency and demand-side measures and none were found to be cost-effective. Utility-owned energy efficiency and renewable energy systems are supply-side issues that are not applicable to FPUC as a non-generating utility.

JEA/OUC: No. Incentives to utilities involving rate of return are not relevant to municipal utilities. As part of this Docket, JEA and OUC have comprehensively analyzed customer-owned energy efficiency and demand-side measures and none were found to be cost-effective. Utility-owned energy efficiency and renewable energy systems are supply-side issues.

FECC: FECC has no specific position at this time.

FIPUG: The answer to this question depends on the type and amount of any such incentives and the incentives impact on rates.

FSC: Yes.

NRDC/SACE: Yes. Incentives are needed. If the Commission adopts more aggressive goals it would be appropriate, in a future proceeding, to establish performance-based incentives allowing utilities to benefit from cost-effective efficiency programs while concurrently encouraging the utilities to excel at delivering energy efficiency programs that lower customer bills.

Staff Analysis:

PARTIES' ARGUMENTS

FPL, PEF, TECO, and Gulf take the position that incentives do not need to be established at this time, but rather should be evaluated and established, if necessary, through a separate proceeding. (FPL BR 26; PEF BR 21; TECO BR 33; Gulf BR 15-16) FPUC argues that utility-owned energy efficiency and renewable energy systems are supply-side issues that are not applicable to it as a non-generating utility. (FPUC BR 11) Both OUC and JEA argue that, as municipal utilities not subject to rate-of-return regulation, the issue of incentives is not relevant to them. (OUC/JEA BR 13) FECC provided no specific position on the issue of incentives. According to FIPUG, the type and amount of incentives and their impact on rates should determine whether incentives are established. FIPUG provided no additional comments on the issue of incentives for utilities in its brief or direct testimony. (FIPUG BR 5) FSC argues incentives should be established but offers no supporting comments in its brief and did not file testimony. (FSC BR 4) NRDC/SACE argues incentives are needed, particularly if the Commission adopts more aggressive goals, and should be established in a future proceeding, but provide no additional comments on this issue. (NRDC/SACE BR)

ANALYSIS

Section 366.82(3)(c), F.S., requires the Commission to evaluate the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. In establishing the goals, the statute requires the Commission to consider whether incentives are needed to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems.

In addition, Section 366.82(9), F.S., authorizes the Commission to allow an investor-owned electric utility an additional return on equity of up to 50 basis points for exceeding 20 percent of their annual load-growth through energy efficiency and conservation measures. The statute further states that the Commission shall establish such additional return on equity through a limited proceeding. This provision clearly allows the Commission to award an incentive based upon a utility's performance and specifies the procedural mechanism for doing so.

FPL witness Haney testified that there is no need to establish incentives in this proceeding as appropriate consideration of incentives, based on the goals that are established in this proceeding, could occur in the plan phase of this docket or otherwise in a subsequent proceeding. (TR 261)

PEF witness Masiello testified that the traditional application of the Commission's RIM cost-effectiveness modeling has undergone a modification in this docket with the inclusion of carbon costs, acceptance of a smaller buffer above RIM 1.0, and the inclusion of innovative

projects that would not have ordinarily qualified under traditional RIM. PEF believes that these changes from traditional RIM warrant consideration of an incentive, and therefore PEF would support a Commission evaluation of utility incentives based on the outcome of this goals docket. (TR 372)

Witness Bryant testified that TECO is generally supportive of the Commission adopting strategic incentives to promote energy efficiency and demand-side renewable energy systems. TECO believes that financially rewarding utilities that exceed their goals may be a useful tool to address a utility's performance as it strives to meet future DSM goals. In light of the recent legislation and potential modifications to cost-effectiveness modeling, TECO expects to explore financial rewards for DSM performance at the appropriate time. (TR 525)

According to Gulf witness Floyd, the Commission's historic preference for relying on the combination of the RIM and Participants Test in the evaluation and approval of utility conservation programs has provided the necessary structure to ensure that the interests of all stakeholders are balanced. Gulf believes that, in practice, these tests have provided incentives to customers through the payment of rebates, to the utility by balancing the impacts of avoided cost benefits against revenue impacts, and to the general body of customers by preventing cross subsidization between DSM program participants and non-participants. If, in establishing Gulf's goals, the Commission were to change its policy and establish goals which disturb the appropriate balance between the interests of all stakeholders, Gulf believes that the Commission should consider a utility incentive mechanism as a potential remedy. (TR 634)

FPUC witness Eysie testified that no customer-owned energy efficiency or demand-side measures were found to be cost-effective and that utility-owned energy efficiency and renewable energy systems are supply-side issues that are not applicable to FPUC as it is a non-generating utility. (TR 769-770)

While NRDC/SACE believes the Commission should establish an incentive that will allow utilities an opportunity to share in the net benefits that cost-effective efficiency programs provide customers, it does not recommend that the Commission determine a performance-based incentive mechanism as part of this proceeding. (TR 1425) NRDC/SACE witness Wilson agrees with the FEECA utilities that the issue of financial incentives should be deferred to a subsequent proceeding, with the caveat that incentives are only appropriate if linked to the achievement of strong goals. Witness Wilson also encourages the Commission to establish and support a process that can lead to consensus framework among interested parties to establish an appropriate system taking into consideration Florida-specific circumstances as well as best practices from across the country. (TR 1452)

None of the parties favor establishing incentives as part of this proceeding, with the exception of FSC, who filed no supporting comments and did not file testimony. (TR 261, 372, 525, 634, 1425, 1452) In addition, staff witness Spellman recommended that if the Commission believes that at some point incentives are necessary and appropriate, then the specific mechanism can be developed, in accordance with the FEECA statutes, in a separate proceeding, but not at this time. (TR 1545) There is limited discussion in the record regarding the need for performance incentives or penalties, or analysis of how they should be structured. (TR 1545) Staff agrees with witness Spellman that a more appropriate course of action is to address the

issue of incentives in a future proceeding when the necessary analysis has been done and all interested stakeholders can participate. (TR 1546)

Section 366.82(8), F.S., states:

> The commission may authorize financial rewards for those utilities over which it has rate setting authority that exceed their goals and may authorize financial penalties for those utilities that fail to meet their goals, including, but not limited to, the sharing of generation, transmission, and distribution cost savings associated with conservation, energy efficiency, and demand-side renewable energy systems additions.

An IOU may choose to petition the Commission for an additional return on equity based upon its performance at any time the company believes such an incentive to be warranted. The Commission, on its own motion, may initiate a proceeding to penalize a utility for failing to meet its goals.

Staff believes establishing incentives during this proceeding would unnecessarily increase costs to ratepayers at a time when consumers are already facing financial challenges. Increasing rates in order to provide incentives to utilities is more appropriately addressed in a future proceeding after utilities have demonstrated and the Commission has evaluated their performance.

With regard to customer-owned energy-efficiency and demand-side renewable energy systems, incentives are typically provided through each DSM program. Staff evaluates each program proposed by a utility prior to making a recommendation to the Commission as to whether it should be approved. Part of staff's evaluation process includes an analysis of the cost-effectiveness tests performed by the utility, including the appropriateness of any incentives the utility proposes to offer to customers taking advantage of a particular program as well as the cost and benefits to all customers. Therefore, in staff's view, a mechanism for providing customers with incentives is already in place and the Commission should continue to make decisions about customer incentives on an individual program basis. Staff does not believe it is necessary to establish additional incentives for customers at this time as doing so would result in higher rates for all customers.

CONCLUSION

Staff does not believe that incentives should be established at this time to promote energy efficiency and demand-side renewable energy systems. The Commission has met the requirements of Section 366.82(3)(c), F.S., by considering, during this proceeding, whether incentives are needed to promote energy efficiency and demand-side renewable energy systems. Staff believes that the Commission will be in a better position to determine whether incentives are needed after it reviews the utilities' progress in reaching the goals established in these dockets. The Commission may establish, through a limited proceeding, a financial reward or penalty for a rate-regulated utility based upon the utility's performance in accordance with Sections 366.82(8) and (9), F.S. Utility customers are already eligible to receive incentives through existing DSM programs, and are not harmed by considering additional incentives in a

separate proceeding. Consequently, staff believes it is appropriate for the Commission to defer establishing additional incentives in this docket.

Issue 7: In setting goals, what consideration should the Commission give to the impact on rates?

Recommendation: The Commission should give substantial consideration to the impact on rates when setting conservation goals. The legislative intent for public utility regulation is protection of the public welfare. Ensuring reasonable rates, among other issues, is an integral part of that protection. (Marr)

Positions:

FPL: The Commission must consider the impact on rates caused by DSM goals and should continue to set DSM goals which minimize rate impacts and avoid cross subsidization. FPL's proposed goals will result in lowest levelized system average electric rate, and will help avoid subsidization of participants by non-participants.

PEF: The Commission should give serious consideration to such rate impacts as it did in Order No. PSC-04-0769-PAA-EG. In doing so, the Commission should use the E-RIM Test as the threshold measure for evaluation as the E-RIM Test reasonably balances the interests of all stakeholders.

TECO: The Commission should give significant consideration to the rate impact of the goals it sets in this proceeding consistent with Chapter 366, F.S., including FEECA. The use of the E-RIM and Participants' tests remains the best methodology for selecting optimal DSM goals that do not impose undue upward pressure on rates or cross-subsidizations between customer groups.

Gulf: The Commission should give serious consideration to the rate impacts of DSM goals in this proceeding.

FPUC: The Commission should give serious consideration to the impact on rates in setting DSM goals.

JEA/OUC: The Commission must consider the impact on rates as a primary determinant in setting goals. For municipal utilities over which the Commission has no ratemaking authority, the Commission should reject DSM measures that fail the RIM Test.

FECC: FECC has no specific position at this time.

FIPUG: Electricity is a very large part of industrial customers' variable overhead. The Commission must carefully weigh the encouragement of conservation programs against their rate impact. In these stressful financial times, the Commission must give strong consideration to any rate impact which will result from approval of conservation programs.

FSC: For the FEECA IOUs the Commission should consider the rate impact of DSM goals as one of many factors in setting goals. However, rate impact should not be

the sole controlling factor in setting DSM goals. FSC takes no position on this issue with regard to OUC or JEA.

NRDC/SACE: The Commission is legally precluded from its previous practice of considering impacts on rates through application of the RIM Test because of 2008 FEECA amendments, directing the Commission to consider "[t]he costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions." § 366.82(3)(b), F.S.

Staff Analysis:

PARTIES' ARGUMENTS

The four generating IOUs agree the impact on rates should be considered in the goal setting process. (FPL BR 26-27; PEF BR 21; TECO BR 36; GULF BR 16) FPUC, JEA, and OUC believe the Commission must continue to consider the impact on rates as a primary determinant in setting goals under FEECA. (FPUC BR 11; OUC/JEA BR 13-15)

FIPUG claims that it is important that rate impact not be overlooked when conservation goals are set and programs are evaluated. (FIPUG BR 5) FSC believes there are also other factors to be considered by the Commission when setting energy efficiency and conservation goals for the public utilities. (FSC BR 4)

NRDC/SACE contends that consideration of the impact on rates does not belong in the goal setting process because of the 2008 FEECA amendments. (NRDC/SACE BR) Further, NRDC/SACE contends customers are more interested in their monthly utility bills than in rates and would benefit most if energy efficiency programs are widely available. (NRDC/SACE BR 10, 12-13)

ANALYSIS

As specified in Section 366.01, F.S., the regulation of public utilities is declared to be in the public interest. Chapter 366 is to be liberally construed for the protection of the public welfare. Several sections within the Chapter, Sections 366.03, 366.041, and 366.05, F.S., refer to the powers of the Commission and setting rates that are fair, just, and reasonable. The 2008 legislative changes to FEECA did not change the Commission's responsibility to set such rates.

Under FEECA, the Commission is charged with setting goals and approving plans related to the promotion of cost-effective demand-side renewable energy systems and the conservation of electric energy. The 2008 changes to FEECA specified the Commission is to take into consideration the costs and benefits of ratepayers as a whole, in addition to the cost and benefits to customers participating in a measure. FEECA makes it clear that the Commission must consider the economic impact to all, both participants and non-participants. This can only be done by ensuring rates to all are fair, just, and reasonable.

When setting DSM goals there are two basic components to a rate impact: Energy Conservation Cost Recovery and base rates. As discussed in Issue 4, the costs to implement a

DSM Program consist of administrative, equipment, and incentive payments to the participants. These costs are recovered by the utility through the Energy Conservation Cost Recovery clause. Cost recovery is reviewed on an annual basis when true-up numbers are confirmed. When approved, the utility allocates that expense to its general body of ratepayers and rates immediately go up for all ratepayers until that cost is recovered. When new DSM programs are implemented or incentive payments to participants are increased, the cost of implementing the program will directly lead to an increase in rates as these costs are recovered.

Base rates are established by the Commission in a rate case. Between rate cases, the Commission monitors the company's Return on Equity (ROE) within a range of reasonable return + or – 1 percent or 100 basis points. If the ROE of a utility exceeds the 100 basis point range, the Commission can initiate a rate case to adjust rates downward. If the ROE falls below the 100 basis point range, the utility may file a petition with the Commission for a rate increase.

Energy saving DSM programs can have an impact on a utility's base rates. Utilities have a fixed cost of providing safe, reliable service. When revenues go down because fewer kWh were consumed, the utility may have to make up the difference by requesting an increase in rates in order to maintain a reasonable ROE.

The following chart demonstrates the impact on ROE that would result from the proposed goals of FPL, PEF, TECO, Gulf, NRDC/SACE, GDS, and staff. Witness Dean testified that $58.24 was the average approved rate per MWh for FPL, PEF, TECO, and Gulf. Staff used this figure along with the estimated revenue requirement per 100 basis points that was provided by the utilities. For a complete copy of the chart for the years 2010 to 2019, please refer to Attachment 1. (EXH 130; EXH 180)

Table 7-1 Basis Point Impact of Proposed Residential and C/I Goals

	FPL				PEF			
Year	**UTILITY**	**FSC/ GDS**	**NRDC/ SACE**	**STAFF**	**UTILITY**	**FSC/ GDS**	**NRDC/ SACE**	**STAFF**
2014	17.5	91.3	193.1	34.9	32.3	111.9	174.7	26.9

	TECO				Gulf			
	UTILITY	**FSC/ GDS**	**NRDC/ SACE**	**STAFF**	**UTILITY**	**FSC/ GDS**	**NRDC/ SACE**	**STAFF**
2014	18.2	79.6	173.6	14.9	34.4	148.3	309.8	45.0

Sources: Staff calculations from EXH 31; EXH 40; EXH 53; EXH 54; TR 770; TR 794-795; TR 829; EXH 79; EXH 170; EXH 171; EXH 2, BSP 927-930,935-938, 943-956, 961-968

The data suggests that if the goals proposed by NRDC/SACE or GDS are approved, the lost revenues associated with DSM alone would drive the authorized ROE below the 100 basis point level by 2014 for most utilities.

NRDC/SACE is alone in its position that rate impact should not be considered in the goal setting process. (TR 1449) NRDC/SACE witness Wilson testified that in his review of the new statutory language and the legislative history relating to the FEECA goals, he saw nothing to suggest that the Commission should focus on lost revenues, electricity rates, or impacts to non-participants. (TR 1449) As demonstrated by the above chart, the goals proposed by

NRDC/SACE could cause significant reductions in ROE that may lead each IOU to petition for a base rate increase prior to 2014.

It should be noted that the goals suggested by NRDC/SACE and GDS include free-riders or measures with less than a two-year payback. (NRDC/SACE BR 2-3) The rate impact of the goals suggested by GDS are less because of the recommended "phase in" approach. (TR 1482) As discussed in Issue 2, staff recommends that the two-year payback screen is appropriate for addressing free-riders.

The downturn of the present economy, coupled with soaring unemployment, make rates and the monthly utility bill ever more important to utility customers. When speaking about customers who participate in a utility program and receive an incentive, witness Dean testified that utility customers generally will use less energy and even though rates are higher for everyone, program participants purchase less energy and thus are net beneficiaries of the program because their lower consumption lowers their total bill. (TR 2036) Witness Dean further testified that these costs disproportionately fall upon those who are unable to participate in programs. (TR 2036) Similarly, JEA witness Vento testified that customers such as renters who do not or cannot implement a DSM measure and therefore have no corresponding benefit of reduced consumption to offset the rate increase and will be subject to increased utility bills. (TR 2000)

Witness Pollock also recognized the importance of conservation in lowering utility bills as all consumers "face challenging economic times." Witness Pollock testified that the importance of pursuing conservation programs must be balanced against their cost and impact of that cost on ratepayers. (TR 1297) Witness Pollock further testified that consideration of rate impacts in the evaluation of conservation programs helps to minimize both rates and costs for ratepayers. (TR 1299) Finally, PEF witness Masiello testified that the Commission should also balance the needs of all stakeholders and minimize any adverse impacts to customers. (TR 387)

Those who do not or cannot participate in an incentive program will not see their monthly utility bill go down unless they directly decrease their consumption of electricity. If that is not possible, non-participants could actually see an increase in the monthly utility bill. Since participation in DSM programs is voluntary and the Commission is unable to control the amount of electricity each household consumes, it should ensure the lowest possible overall rates to meet the needs of all consumers.

CONCLUSION

As provided in Section 366.04, F.S., the Commission is given ". . . jurisdiction to regulate and supervise each public utility with respect to its rates and service." In past FEECA proceedings, the impact on rates has been a primary consideration of the Commission when establishing conservation goals and approving programs of the public utilities. The 2008 legislative changes to FEECA did not diminish the importance of rate impact when establishing goals for the utilities.

Witness Dean testified that over the many years and numerous FEECA proceedings the Commission has steadfastly maintained that DSM goals be established that minimize rate impacts, minimize cross-subsidies between customers, and integrates with utility-identified

capacity needs. (TR 1212) Witness Dean further testified that with the current economic circumstances, sensitivity to rate impacts is more important than ever. (TR 1214)

Staff believes current economic conditions require sensitivity to rate impacts and affirms that the Commission should place a high priority on the impact on rates when setting energy efficiency and conservation goals for the FEECA utilities. Staff also believes the utilities should utilize low cost education programs to teach customers how to reduce electricity consumption, as discussed in Issue 9.

Issue 8: What cost-effectiveness test or tests should the Commission use to set goals, pursuant to Section 366.82, F.S.?

Recommendation: As discussed in Issue 4, staff believes that the Participants Test, RIM Test, and TRC Test should all be used to set goals. (Graves)

Positions:

FPL: A combination of the E-RIM and Participant test is consistent with the Commission's obligation to set just and reasonable rates, meets the specific requirements of FEECA, and includes all relevant costs and benefits for both participants and non-participants. The E-TRC Test achieves none of these objectives.

PEF: The E-RIM Test is the threshold measure that should be used in Florida as it reasonably balances the interests of all stakeholders.

TECO: The Commission should use the E-RIM Ttest in conjunction with the Participants' Test to establish DSM goals. These tests allow the accomplishment of significant DSM development without placing undue upward pressure on rates or causing cross-subsidization among participants and non-participants. It also insures consideration of greenhouse gas mitigation in the goals setting process.

Gulf: A combination of the E-RIM and the Participant tests should be used to set goals pursuant to Section 366.82, F.S. This combination of tests provides a reasonable balance between participating and non-participating customer benefits and provides downward pressure on overall electric rates while still supporting significant conservation activities.

FPUC: In general, the Commission should use, as a threshold, the results of the RIM Test as the basis for setting DSM goals. If the results of the RIM test indicate a DSM measure may be cost-effective, then it should also be required to pass both the TRC and Participants tests.

JEA/OUC: The Commission should use the RIM and Participant tests because they fulfill the obligation to consider the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions. RIM is particularly appropriate for municipal utilities over which the Commission has no ratemaking authority.

FECC: FECC has no specific position at this time.

FIPUG: Regardless of which test the Commission approves, it should encourage conservation programs that strike a balance between benefits and costs. Significant weight should be given to the RIM Test. In the use of this test, the Commission should ensure that all utilities are conducting the test in the same way.

FSC: The Commission should use the Total Resource Cost (TRC) Test, adjusted to include the avoided cost of greenhouse gas (GHG) emissions, and the Participant Test as proposed in witness Spellman's testimony for the five FEECA IOUs. No position for OUC and JEA.

NRDC/SACE: TRC Test and Participant Test to set goals. TRC Test is the only cost-effectiveness test that evaluates efficiency from the perspective of all customers and includes total costs (including both program and incremental measure costs) and benefits to customers. TRC is mandated by the amended FEECA Statute and appropriate policy.

Staff Analysis:

PARTIES' ARGUMENTS

The FEECA utilities agree that Section 366.82, F.S., does not specify or require a single cost-effectiveness test, but that a combination of two tests is sufficient to meet the requirements, specifically the RIM and Participants Tests. The TRC Test is considered by the utilities to be insufficient to meet the statute, and goals based upon it would have an upward pressure on rates. They also agree that their analysis was comprehensive, including effects from a variety of sources, such as building codes, overlapping measures, appliance standards, and other sources. Four of the seven FEECA utilities filed "enhanced" version of the RIM and TRC tests, referenced as E-Rim and E-TRC. These tests included benefits from avoided carbon compliance costs. Discussion regarding the appropriateness of including these costs is discussed in Issue 5. (FPL BR 23-24; PEF BR 7-11; TECO BR 10-13; Gulf BR 12-14; JEA/OUC BR 11-12; FPUC BR 9-10)

NRDC/SACE asserts that the language found in Section 366.82(3)(b), F.S., clearly describes the TRC Test. NRDC/SACE argues that the TRC Test is the cost-effectiveness test that focuses on the "general body of ratepayers as a whole." NRDC/SACE further elaborate that the TRC Test, unlike the RIM Test, includes both "utility incentives and participant contributions." (NRDC/SACE BR 5-9) In addition, a flaw in the calculation of benefits is the denial of value for reduced demand until the in-service date of the avoided unit. Also, the possibility of avoiding units that are already approved but have not yet finished construction should be considered. Finally, NRDC/SACE contends that administrative costs allocated to measures were unreasonable and caused an inappropriate reduction of the goals. (NRDC/SACE BR 28-29)

FIPUG contends that the Commission should continue to give significant weight to the RIM Test. FIPUG asserts, however, that the test should be performed consistently and uniformly between utilities. (FIPUG BR 4-6)

FSC asserts that the analysis done by the investor-owned utilities was insufficient, and that the reduction of savings associated with solar measures was reduced by inappropriately considering the impacts of other measures. FSC supports the E-TRC and Participants Tests, and further suggests that measures should be considered in combination or on a portfolio basis. (FSC BR 4-6)

ANALYSIS

As Issues 4 and 8 are largely interrelated, staff has included its analysis related to the appropriate cost-effectiveness test or tests for use by the Commission to set goals in Issue 4.

Issue 9: What residential summer and winter megawatt (MW) and annual Gigawatt-hour (GWh) goals should be established for the period 2010-2019?

Recommendation: The Commission should reject the residential goals proposed by the utilities, NRDC/SACE, FSC, and GDS for the various reasons discussed below. Staff recommends that residential goals be approved based on the FEECA utilities continuing to offer their existing programs consistent with their 2009 Ten-Year Site Plans and existing programs. In addition, the utilities should be required to expand their educational programs to include measures that failed the two-year payback screening and measures offering significant savings potential that passed the TRC Test, but failed the RIM Test. (Garl, Lewis, Ellis, Graves, Matthews)

Positions:

FPL: The Commission should adopt FPL's proposed residential summer and winter MW and annual GWh goals. These goals will contribute to the most cost-effective resource plan on FPL's system, result in the lowest levelized system average electric rate, and will help avoid subsidization of participants by non-participants.

PEF: PEF's annual goals are listed in the table below. The cumulative effect of these goals through 2019 would be a summer MW reduction of 323 MW, a winter reduction of 463 MW, and cumulative energy savings of 488 GWh.

TECO: The cumulative effect of these goals through 2019 would be a summer MW reduction of 33.3 MW, a winter reduction of 28.5 MW and cumulative energy savings of 59.0 GWh.

Gulf: The cumulative effect of these goals through 2019 would be a summer peak demand reduction of 47 MW, a winter peak demand reduction of 39.2 MW and annual energy reduction of 86.8 GWh.

FPUC: Itron's analysis indicated that there is no achievable potential for residential efficiency for FPUC based on the RIM and Participant tests. Accordingly, the DSM goals for FPUC should be established as zero through the current evaluation period ending in 2019.

JEA/OUC: Itron's analysis indicated that there are no cost-effective measures residential efficiency for JEA or OUC based on the RIM and Participant tests. Accordingly, the DSM goals for JEA and OUC should remain at zero through the current evaluation period ending in 2019.

FECC: FECC has no specific position at this time.

FIPUG: The Commission should set goals that balance the importance of pursing conservation programs against their cost and the impact of that cost on rates.

FSC: FSC supports the methodology and transitional goals developed by Richard Spellman on behalf of the PSC Staff as stated in Exhibit 171 for the FEECA IOUs. FSC takes no position on establishing residential goals for OUC and JEA.

NRDC/SACE: We recommend that the Commission set interim savings goals of not less than 1.0 percent per year on an interim basis while the flaws in the potential studies conducted by the companies are corrected. In addition, we recommend a three year phase-in period. See Exhibit 170 for NRDC/SACE goal tables.

Staff Analysis:

PARTIES' ARGUMENTS

The FEECA utilities and FIPUG contend that goals should be set using the Participant and RIM tests. (FPL BR 31-34; PEF BR 11-13; TECO BR 14-16; Gulf BR 1-2; FPUC BR 13-14; OUC/JEA BR 17-18; FIPUG BR 7-9)

NRDC/SACE argues that Section 366.82(3), F.S., requires use of the TRC test to establish cost-effectiveness for candidate conservation measures. (NRDC/SACE BR 5-6) NRDC/SACE also finds fault with the two-year payback screen, arguing that significant potential savings are wrongly eliminated from consideration. (NRDC/SACE BR 18) Rather than proposing goals based on its TRC argument, NRDC/SACE instead proposed goals based on 1 percent of sales, because this methodology has been used by other states. (TR 1087)

The testimony prepared by staff's consultant, GDS, suggests the TRC test should be used to determine cost-effectiveness. (TR 1532) In addition, GDS argues that measures screened out by the two-year payback criteria should be put back into goals. (TR 1539) FSC has adopted the position of GDS.

The parties' proposed goals are contained in Tables 9-2 through 9-8.

ANALYSIS

NRDC/SACE's argument that Section 366.82(3), F.S., requires the use of the TRC Test to establish cost-effectiveness for candidate conservation measures was not persuasive. As discussed in Issue 8, no specific test is mentioned in the statute. Staff views use of all three cost-effectiveness tests as providing important information.

NRDC/SACE's contention that the two-year payback screen wrongly removes significant potential savings is not followed by any other means of addressing free-ridership. As discussed in Issue 2, staff believes the two-year payback screen is an appropriate procedure for elimination of free-riders.

NRDC/SACE, rather than proposing goals based on their TRC argument, instead proposed goals based on an arbitrarily selected 1 percent of sales. The only rationale given for this procedure was because this methodology has been used by other states. This rationale, supporting these proposed goals is not persuasive. Further detracting from NRDC/SACE's argument, nothing in its study is Florida-specific. (TR 1153) Overall, NRDC/SACE's proposed

goals fail to comply with the statute requirement for consideration of impact to the general body of ratepayers[15] and the Commission rule to consider free-riders.[16]

GDS's suggestion that the TRC Test should be used to determine cost-effectiveness is contradicted by their observation that the RIM Test indicates whether electric rates may go up if an energy efficiency program is implemented. (TR 1527) Staff believes all three cost-effectiveness tests, RIM, TRC, and Participants Test, should continue to be used, as discussed in Issue 8. GDS's criticism of the two-year payback, like NRDC/SACE's argument, also lacks an alternative method of addressing free-riders. As discussed in Issue 2, staff views this screening as appropriate to eliminate free-ridership. Also, numerous technical errors in the GDS report were identified at the hearing, further diminishing credibility of GDS's proposed goals.

Both NRDC/SACE and GDS's proposed goals fail to consider the impact those goals would have on rates. First, since the goals proposed by both NRDC/SACE and GDS are a product of the TRC Test, no consideration was given to subsidization of participants by non-participants for the measures. More importantly, the proposed goals of these parties would result in a substantial increase in energy efficiency program costs imposed on all customers. The resulting programs and incentives to meet those goals could increase the utilities' Energy Conservation Cost Recovery clause factor by more than 700 percent. (TR 1822-1823) Also, if these savings were realized, recovery of fixed costs would be reduced, thereby providing justification for a base rate increase. As discussed in Issue 7, the resulting energy savings would reduce utility revenues by an amount greater than 150 basis points as early as 2014. Such an impact on a utility's earnings could trigger a request for a base rate increase in the near future. Furthermore, NRDC/SACE's recommended goals without regard to any cost-effectiveness consideration, but merely proposed an arbitrarily selected percentage of sales as the goal. Finally, NRDC/SACE did not use Florida-specific data in their analysis.

Staff's assessment is that the goals proposed by NRDC/SACE and GDS should be rejected. Their disregard for Commission rules addressing free-riders (Issue 2), their reliance on a cost-effectiveness test that ignores cross-subsidization of participants by non-participants (Issues 4 and 8), and the numerous technical errors make their proposed goals questionable. The upward pressure on rates, however, produced by NRDC/SACE and GDS's proposed goals is justification enough to reject their proposals. FSC adopted the methodology and transitional goals developed by GDS, and should also be rejected.

Staff also believes the goals proposed by FPL, PEF, TECO, and Gulf should be rejected by the Commission for uncertainty caused by inconsistent calculations. While these generating IOUs based their proposals on Florida-specific details, they went over and above the requirements of the statute. Section 366.82(3)(d), F.S., requires the Commission to take into consideration, "[t]he costs imposed by state and federal regulations on the emission of greenhouse gases." (Emphasis added) As discussed in Issue 5, there are no currently imposed regulations regarding greenhouse gases. Nonetheless, the utilities used projections of emission costs in their goal-setting calculations. While the CO_2 cost estimate was supposed to represent the cost of potential national legislation, each utility used a different value which varied by over 100 percent between utilities. Staff also noted that no goals or achievable potential data provided

[15] Section 366.82(3)(b), F.S.
[16] Rule 25-17.0021(3), F.A.C.

was based on a zero-dollar cost for CO_2. The resulting proposed goals, therefore, cannot be relied upon.

FPUC, OUC, and JEA noted that no cost for CO_2 emissions should be applied to the goal-setting effort, because no regulation of this greenhouse gas currently exists. Staff agrees. Each of these three utilities proposes that their conservation goals should be set at zero. However, staff believes such a position does not make sense for two reasons: (1) all three utilities indicate they plan to continue their current programs, and (2) their current programs have allowed all three utilities to consistently achieve seasonal peak and annual consumption savings over the past four years.

Since all proposals offered contain some faults, staff recommends the Commission establish goals based on the FEECA utilities' current programs until the next goal-setting proceeding in 2014. Following this route provides many advantages:

1. Continuation of current programs, as shown in 2009 Ten-Year Site Plans, would minimize impact on customer rates, i.e. there would be no immediate change in rates:

    a. The current economic situation in both Florida and the nation, has left many utility customers in strained financial conditions. Imposition of higher electric rates, even for the purpose of supporting energy efficiency and conservation, would aggravate those customers' financial challenges;

    b. Goals set at the Ten-Year Site Plan level would minimize administrative costs ultimately passed on to customers. Current programs have already undergone cost-effectiveness testing calculations, been shown to comply with current regulatory guidance, and have been approved by the Commission. Any modifications to existing programs or new program offerings based on the addition of any measures analyzed by the utilities in these dockets would have a minimal impact on costs to customers;

2. The same DSM savings have been used in recent need determinations:

    a. Staff also noted that several utilities' recent need determinations, such as for FPL and PEF's proposed nuclear plants, also projected DSM savings similar to their Ten-Year Site Plans. This is not surprising since the need determination statute requires consideration of whether conservation measures are utilized to the extent reasonably available;[17]

3. There may be only moderate long-term rate impacts:

    a. The primary long-term impact would likely be the result of the utilities' lost revenues from lower energy sales;

4. Continues the existing momentum for these programs:

[17] Section 403.519(4), F.S.

a. Utility personnel and private contractors are familiar with the existing programs, and utility advertising has created a level of knowledge of the programs among customers;

b. Continuing existing programs would preclude the necessity of the initial effort and cost of "up front" advertising to establish knowledge of new programs among a utility's customers;

5. Continuing existing programs provides a rational means of setting goals above the zero level proposed by OUC, JEA, and FPUC:

   a. Goals set at the average achieved savings over the past four years should not impact rates because the utilities have committed to continuation of the current program offerings; and

6. Greater aggregate demand and energy savings are projected compared to most utility proposals:

   a. Staff compared the FEECA utilities' proposed goals with the utilities' current projections of demand and energy savings. Staff observed that Ten-Year Site Plan projections would provide peak demand and annual consumption savings at the same or higher levels than the goals proposed by the utilities;

   b. Staff believes goals set at these levels are a realistic approach for this proceeding.

JEA, OUC, and FPUC propose that the Commission set its goals at zero for the period 2010-2019. (TR 763, 786-787, 794, 828-829) FPUC is proposing zero goals for the first time, after having non-zero goals in previous proceedings. (TR 770) JEA and OUC argue that the Commission should ensure there is no impact to rates, which is particularly appropriate for municipal utilities over which the Commission has no ratemaking authority. (TR 791) However, staff notes that since goals were last reset in 2005, each of the municipals has voluntarily offered DSM programs to customers across all customer classes and that these programs have achieved both seasonal peak demand and energy savings. (TR 787) Each municipal utility and FPUC has indicated that they will voluntarily maintain and continue to offer DSM programs to its customers. (EXH 2; EXH 58; TR 795; OUC BR 4)

According to ITRON's analysis, no DSM measures passed the RIM Test for JEA, OUC, or FPUC. ITRON, therefore, estimated that there was no achievable potential for residential energy efficiency based on the RIM Test. (TR 766-767, 790, 824-825; EXH 73). Section 366.82, F.S. does not dictate which cost-effectiveness test must be used to establish DSM goals. (TR 1949) Staff bases its recommended goals on the municipal utilities' and FPUC's own achievements over the past four years. (TR 787; EXH 3) Staff notes that each municipal utility and FPUC has indicated that it will continue to offer conservation programs to its customers. (TR 771, 795, 821; EXH 58; OUC BR 4) Therefore, staff believes that each is capable of continuing demand and energy savings of at least the same levels each has already achieved. Staff's recommended goals are based on the mathematical average of the demand and energy savings

each has achieved over the past four years. Staff believes it is appropriate to encourage JEA, OUC, and FPUC to continue their existing DSM programs and to set conservation goals at a level that has been demonstrated to be achievable based upon the municipal utilities' own achievements and forecasts. (EXH 2, BSP 704; EXH 3, BSP 1079-1080; TR 771, 821-822)

Witnesses for the municipal utilities testified that annual bills for their residential customers would increase substantially by 2019 based on the goals proposed by NRDC/SACE, and GDS (TR 830, 1930-1933, 1951-1954) In contrast, the goals proposed by staff can be expected to have a significantly smaller, if any, impact on rates. Furthermore, staff notes that as the Commission does not have rate-setting authority over municipal utilities, they are not subject to financial rewards or penalties based upon their performance in reaching the goals.

Section 366.82(2), F.S., requires the Commission to adopt goals ". . . designed to increase the conservation of expensive resources, such as petroleum fuels, to reduce and control the growth rates of electric consumption, to reduce the growth rates of weather-sensitive peak demand." Increasing conservation and control of growth rates suggests the need for at least moderately aggressive conservation goals. Setting the municipal utilities' and FPUC's goals at zero, especially since each has consistently achieved demand and energy savings for the past four years, appears to miss the spirit and intent of the statute. Staff sees the challenge as setting a goal that does not impact customer's bills. Setting the goals at some point above zero would clearly meet the statutory requirement to increase conservation and control growth rates. Making those goals achievable without modifying existing DSM programs would not impact existing rates. Since the municipal utilities are not subject to rewards and penalties for exceeding or failing to meet goals, rates would not be impacted by this provision. Staff, therefore, believes that setting goals at the average achieved level in the last four years is a reasonable means of satisfying the intent of the statute, while precluding an impact on rates.

Staff's recommended residential goals are shown in the tables below for each FEECA utility along with goals proposed by NRDC/SACE, FSC, and GDS.

Florida Power & Light (FPL)

Table 9-1 Proposed Residential Conservation Goals for FPL

	Summer MW				Winter MW				Annual GWh			
	FPL	FSC/ GDS	NRDC/ SACE	STAFF	FPL	FSC/ GDS	NRDC/ SACE	STAFF	FPL	FSC/ GDS	NRDC/ SACE	STAFF
2010	26.6	94.8	51.0	64.0	24.6	66.2	57.0	41.0	33.1	212.0	170.0	94.0
2011	26.6	95.2	105.0	68.0	24.6	66.6	119.0	49.0	33.1	213.2	347.0	98.0
2012	26.3	98.4	164.0	71.0	24.7	68.6	188.0	51.0	32.8	220.0	532.0	100.0
2013	26.2	99.7	166.0	75.0	24.7	69.7	192.0	52.0	32.7	223.2	530.0	105.0
2014	26.2	110.8	200.0	79.0	24.7	77.4	225.0	54.0	32.7	247.8	534.0	108.0
2015	26.2	223.3	194.0	82.0	24.7	156.0	228.0	58.0	32.7	499.6	541.0	107.0
2016	26.2	236.6	203.0	81.0	24.7	165.2	231.0	58.0	32.7	529.4	563.0	108.0
2017	26.2	245.5	213.0	82.0	24.7	171.6	240.0	58.0	32.7	549.4	580.0	108.0
2018	26.2	265.7	228.0	27.0	24.7	185.6	252.0	53.0	32.7	594.6	617.0	108.0
2019	26.6	277.3	268.0	69.9	24.6	193.7	295.0	52.7	33.1	620.3	637.0	104.0
Total	263.3	1,747.3	1792.0	698.9	246.7	1,220.6	2027.0	526.7	328.3	3,909.5	5051.0	1040.0

Sources: EXH 31; EXH 171; EXH 79; EXH 170; EXH 2, BSP 927-930

Progress Energy Florida, Inc. (PEF)

Table 9-2 Proposed Residential Conservation Goals for PEF

	Summer MW				Winter MW				Annual GWh			
	PEF	FSC/ GDS	NRDC/ SACE	STAFF	PEF	FSC/ GDS	NRDC/ SACE	STAFF	PEF	FSC/ GDS	NRDC/ SACE	STAFF
2010	24.6	42.2	28.0	33.0	37.7	57.4	39.0	61.0	40.2	129.3	65.0	30.0
2011	25.9	42.5	58.0	36.0	41.6	57.8	82.0	60.0	42.7	130.0	135.0	30.0
2012	27.9	43.8	91.0	37.0	43.2	59.6	130.0	62.0	46.3	134.2	215.0	30.0
2013	29.3	44.4	96.0	36.0	44.3	60.5	136.0	62.0	48.8	136.1	221.0	30.0
2014	30.6	49.4	196.0	34.0	45.4	67.1	128.0	61.0	51.2	151.1	225.0	30.0
2015	33.3	99.4	129.0	23.0	45.9	135.4	144.0	57.0	57.8	304.7	223.0	27.0
2016	43.3	105.4	132.0	25.0	58.5	143.4	146.0	46.0	54.9	322.8	234.0	27.0
2017	42.6	109.4	137.0	21.0	58.3	148.8	154.0	44.0	54.4	335.0	255.0	26.0
2018	39.2	118.4	141.0	19.0	55.2	161.1	158.0	42.0	47.5	362.6	267.0	25.0
2019	26.1	123.5	164.0	29.0	33.1	168.1	164.0	55.0	43.9	378.3	279.0	28.0
Total	322.8	778.4	1172.0	293.0	463.2	1059.2	1281.0	550.0	487.5	2384.1	2119.0	283.0

Sources: EXH 40; EXH 171; EXH 79; EXH 170; EXH 2, BSP 935-938

Tampa Electric Company (TECO)

Table 9-3 Proposed Residential Conservation Goals for TECO

	Summer MW				Winter MW				Annual GWh			
	TECO	FSC/ GDS	NRDC/ SACE	STAFF	TECO	FSC/ GDS	NRDC/ SACE	STAFF	TECO	FSC/ GDS	NRDC/ SACE	STAFF
2010	1.4	18.1	12.0	5.0	1.2	15.4	16.0	5.0	1.9	38.4	31.0	7.0
2011	2.1	18.1	25.0	5.0	1.9	15.4	33.0	6.0	3.6	38.6	64.0	8.0
2012	2.9	18.7	38.0	6.0	2.4	16.0	50.0	7.0	5.0	39.8	100.0	7.0
2013	3.5	19.0	39.0	6.0	3.0	16.2	52.0	7.0	6.3	40.4	104.0	7.0
2014	4.0	21.1	41.0	6.0	3.5	18.0	53.0	8.0	7.2	44.8	110.0	7.0
2015	4.3	42.6	43.0	7.0	3.5	36.2	57.0	7.0	7.7	90.4	115.0	7.0
2016	4.3	45.0	44.0	5.0	3.7	38.4	58.0	7.0	7.9	95.9	121.0	6.0
2017	3.9	46.8	43.0	7.0	3.4	39.8	61.0	7.0	7.2	99.4	128.0	6.0
2018	3.7	50.6	48.0	5.0	3.1	43.1	57.0	7.0	6.5	107.6	134.0	7.0
2019	3.2	52.8	50.0	5.0	2.8	45.0	58.0	7.0	5.7	112.3	141.0	7.0
Total	33.3	332.8	383.0	57.0	28.5	283.5	495.0	68.0	59.0	707.6	1,048.0	69.0

Sources: EXH 40; EXH 171; EXH 79; EXH 170; EXH 2, BSP 935-938

Gulf Power Company (Gulf)

Table 9-4 Proposed Residential Conservation Goals for Gulf

	Summer MW				Winter MW				Annual GWh			
	Gulf	FSC/ GDS	NRDC/ SACE	STAFF	Gulf	FSC/ GDS	NRDC/ SACE	STAFF	Gulf	FSC/ GDS	NRDC/ SACE	STAFF
2010	1.9	8.0	7.0	6.5	1.8	7.3	8.0	16.4	2.0	23.6	19.0	10.7
2011	2.8	8.0	16.0	6.4	2.5	7.3	18.0	16.2	4.0	23.8	42.0	10.5
2012	3.7	8.3	23.0	6.4	3.1	7.6	27.0	16.3	6.3	24.6	64.0	10.6
2013	4.5	8.4	24.0	6.7	3.7	7.7	29.0	17.8	8.2	24.8	68.0	11.6
2014	5.1	9.3	26.0	6.7	4.3	8.5	30.0	18.2	9.8	27.7	70.0	11.9
2015	5.7	18.8	26.0	6.7	4.6	17.2	30.0	18.2	11.0	55.7	74.0	11.9
2016	6.1	19.9	27.0	6.7	5.0	18.2	33.0	18.0	11.9	59.0	79.0	11.6
2017	6.1	20.7	29.0	6.7	5.0	18.9	35.0	18.0	12.1	61.3	85.0	11.6
2018	5.7	22.4	31.0	6.7	4.7	20.5	36.0	18.0	11.2	66.3	90.0	11.6
2019	5.4	23.3	33.0	6.7	4.5	21.3	37.0	18.0	10.3	69.1	96.0	11.6
Total	47.0	147.1	242.0	66.2	39.2	134.5	283.0	175.1	86.8	435.9	687.0	113.6

Sources: EXH 54; EXH 171; EXH 79; EXH 170; EXH 2, BSP 953-956

Florida Public Utilities Company (FPUC)

Table 9-5 Proposed Residential Conservation Goals for FPUC

	Summer MW				Winter MW				Annual GWh			
	FPUC	FSC/ GDS	NRDC/ SACE	STAFF	FPUC	FSC/ GDS	NRDC/ SACE	STAFF	FPUC	FSC/ GDS	NRDC/ SACE	STAFF
2010	0.0	0.4	*	0.12	0.0	0.1	*	0.26	0.0	1.5	*	0.30
2011	0.0	0.3	*	0.12	0.0	0.1	*	0.26	0.0	1.4	*	0.30
2012	0.0	0.4	*	0.12	0.0	0.1	*	0.26	0.0	1.5	*	0.30
2013	0.0	0.4	*	0.12	0.0	0.2	*	0.26	0.0	1.6	*	0.30
2014	0.0	0.4	*	0.12	0.0	0.1	*	0.26	0.0	1.7	*	0.30
2015	0.0	0.8	*	0.12	0.0	0.3	*	0.26	0.0	3.4	*	0.30
2016	0.0	0.9	*	0.12	0.0	0.3	*	0.26	0.0	3.7	*	0.30
2017	0.0	0.9	*	0.12	0.0	0.2	*	0.26	0.0	3.8	*	0.30
2018	0.0	1.0	*	0.12	0.0	0.4	*	0.26	0.0	4.1	*	0.30
2019	0.0	1.1	*	0.12	0.0	0.3	*	0.26	0.0	4.2	*	0.30
Total	0.0	6.6	*	1.20	0.0	2.1	*	2.60	0.0	26.9	*	3.00

Sources: FPUC BR 13; EXH 171; EXH 79; EXH 170; EXH 2, BSP 953-956
* NRDC/SACE does not offer specific numeric goals for FPUC. However, it does include FPUC in its recommendation to set goals based on 1 percent of its sales.

Orlando Utilities Commission (OUC)

Table 9-6 Proposed Residential Conservation Goals for OUC

	Summer MW				Winter MW				Annual GWh			
	OUC	FSC/ GDS	NRDC/ SACE	STAFF	OUC	FSC/ GDS	NRDC/ SACE	STAFF	OUC	FSC/ GDS	NRDC/ SACE	STAFF
2010	0.0	4.1	2.0	0.5	0.0	0.0	0.0	0.2	0.0	10.0	6.0	1.8
2011	0.0	4.0	5.0	0.5	0.0	0.0	0.0	0.2	0.0	10.0	12.0	1.8
2012	0.0	4.3	8.0	0.5	0.0	0.0	1.0	0.2	0.0	10.4	18.0	1.8
2013	0.0	4.2	11.0	0.5	0.0	0.0	1.0	0.2	0.0	10.5	17.0	1.8
2014	0.0	4.8	13.0	0.5	0.0	0.0	1.0	0.2	0.0	11.7	27.0	1.8
2015	0.0	9.5	12.0	0.5	0.0	0.1	2.0	0.2	0.0	23.6	30.0	1.8
2016	0.0	10.2	13.0	0.5	0.0	0.1	2.0	0.2	0.0	24.9	31.0	1.8
2017	0.0	10.5	13.0	0.5	0.0	0.1	3.0	0.2	0.0	25.9	33.0	1.8
2018	0.0	11.4	14.0	0.5	0.0	0.1	3.0	0.2	0.0	28.0	35.0	1.8
2019	0.0	11.9	14.0	0.5	0.0	0.1	4.0	0.2	0.0	29.2	38.0	1.8
Total	0.0	74.9	105.0	5.0	0.0	0.5	17.0	2.0	0.0	184.2	257.0	18.0

Sources: TR 787, 790-791, 794-795; EXH 171; EXH 79; EXH 170; EXH 2, BSP 704, 961-964; EXH3, BSP 79-1080

JEA (formerly Jacksonville Electric Authority)

Table 9-7 Proposed Residential Conservation Goals for JEA

	Summer MW				Winter MW				Annual GWh			
	JEA	FSC/ GDS	NRDC/ SACE	STAFF	JEA	FSC/ GDS	NRDC/ SACE	STAFF	JEA	FSC/ GDS	NRDC/ SACE	STAFF
2010	0	8.6	5.0	2.0	0	0.7	3.0	1.6	0	23.7	14.0	6.9
2011	0	8.6	9.0	2.0	0	0.7	7.0	1.6	0	23.8	27.0	6.9
2012	0	8.9	16.0	2.0	0	0.7	11.0	1.6	0	24.5	43.0	6.9
2013	0	9.1	20.0	2.0	0	0.7	14.0	1.6	0	24.9	57.0	6.9
2014	0	10.0	22.0	2.0	0	0.8	14.0	1.6	0	27.7	60.0	6.9
2015	0	20.2	22.0	2.0	0	1.6	15.0	1.6	0	55.8	62.0	6.9
2016	0	21.5	25.0	2.0	0	1.7	16.0	1.6	0	59.0	64.0	6.9
2017	0	22.2	25.0	2.0	0	1.8	17.0	1.6	0	61.4	138.0	6.9
2018	0	24.1	26.0	2.0	0	1.9	19.0	1.6	0	66.3	73.0	6.9
2019	0	25.1	27.0	2.0	0	2.0	20.0	1.6	0	69.3	80.0	6.9
Total	0	158.3	197.0	20.3	0	12.6	136.0	15.5	0	436.4	618.0	69.0

Source: TR 829; EXH 171; EXH 79; EXH 170; EXH 2, BSP 754

Expanded Education Goals

Staff also notes that one of the biggest concerns raised by NRDC/SACE and GDS was the elimination of numerous measures, representing substantial MWh savings, because the measures had a payback period of less than two years. (NRDC/SACE BR 23-26; TR 1481) For example, during the economic potential screening process, FPL eliminated 197 measures from further consideration due to the less-than-two-year-payback criteria in the effort to address free-ridership. (TR 212) FPL witness Haney explained that free-riders are people who have a sufficient economic incentive to utilize an efficiency measure without any additional utility incentive. By the free-rider taking the utility incentive, the utility's general body of customers is paying that participant for something he/she would or should have done anyway - and not realizing any incremental energy and/or demand savings benefit. (TR 249-250)

While the utilities' rationale for eliminating these measures was initially persuasive, staff notes that removal of these measures represented a significant reduction of potential energy savings. An estimate of the savings lost by omitting these measures is only available at the Technical Potential level, so have not been refined by real-world constraints. As such, this data cannot be used in comparison with adopted measures. As discussed in Issue 2, the free-ridership screen eliminated a substantial (66 percent to 87 percent) of the achievable energy savings. Staff views this total as a compelling reason to recapture some of the savings by educating all FEECA utilities' customers on the potential electric bill reductions and short payback periods associated with these measures. In addition, while staff agrees with the utilities on use of the RIM (or E-RIM) Test, several intervenors argue that numerous measures offering significant savings were also eliminated from consideration for failing the E-RIM Test while passing the E-TRC Test. (TR 1443-1444, 1527) Staff, therefore, recommends that the Commission direct the utilities to

expand their educational programs to include measures that failed the two-year payback screening and measures offering significant savings that passed the TRC Test but failed the RIM Test. Rather than provide financial incentives for measures that already offer real and rapid economic benefits in short order, the FEECA utilities should ensure customers are aware of the benefits these measures offer them in order to reduce their own bills and delay the need for additional generation resources. The substantial savings potentially offered by these measures, as well as the benefits that they offer to ratepayers, provide a justification for encouraging their adoption and ensuring that the public is properly informed about their benefits. Because these measures already offer rapid economic benefits to consumers, the key to expanding their use is not incentives, but better public information.

Issue 10: What commercial/industrial summer and winter megawatt (MW) and annual Gigawatt hour (GWh) goals should be established for the period 2010-2019?

Recommendation: The Commission should reject the commercial/industrial goals proposed by the utilities, NRDC/SACE, FSC, and GDS for the various reasons discussed below. Staff recommends that commercial/industrial goals be approved based on the FEECA utilities continuing to offer their existing programs consistent with previous filings in the Ten-Year Site Plan and power plant need determinations. In addition, the utilities should be required to expand their educational programs to include measures that failed the two-year payback screening and measures offering significant saving potential that passed the TRC Test, but failed the RIM Test. (Garl, Lewis, Ellis, Graves, Matthews)

Positions:

FPL: The Commission should adopt FPL's proposed commercial/industrial summer and winter MW and annual GWh goals. These goals will contribute to the most cost-effective resource plan on FPL's system, result in the lowest levelized system average electric rate, and will help avoid subsidization of participants by non-participants. [See Table 10-1 below.]

PEF: PEF's annual goals are listed in the table below. The cumulative effect of these goals through 2019 would be a summer MW reduction of 198 MW, a winter reduction of 96 MW, and cumulative energy savings of 126 GWh.

TECO: The cumulative effect of these goals through 2019 would be a summer MW reduction of 48.5 MW, a winter reduction of 12.4 MW and cumulative energy savings of 142.7 GWh.

Gulf: The cumulative effect of these goals through 2019 would be a summer peak demand reduction of 21.9 MW, a winter peak demand reduction of 7 MW and annual energy reduction of 72.2 GWh.

FPUC: Itron's analysis indicated that there is no achievable potential for commercial/industrial energy efficiency for FPUC based on the RIM and Participant tests. Accordingly, the DSM goals for FPUC should be established at zero through the current evaluation period ending in 2019.

JEA/OUC: Itron's analysis indicated that there are no cost-effective measures for commercial/ industrial energy efficiency for JEA or OUC based on the RIM and Participant tests. Accordingly, the DSM goals for JEA and OUC should remain at zero through the current evaluation period ending in 2019. The Commission should reject the goals proposed by NRDC/SACE and GDS witnesses for the reasons discussed in Issue No. 9.

FECC: FECC has no specific position at this time.

FIPUG: The Commission should set goals that balance the importance of pursing conservation programs against their cost and the impact of that cost on rates.

FSC: FSC supports the methodology and transitional goals developed by Richard Spellman on behalf of the PSC Staff as stated in Exhibit 171 for the FEECA IOUs. FSC takes no position on establishing residential goals for OUC and JEA.

NRDC/SACE: We recommend that the Commission set interim savings goals of not less than 1.0 percent per year on an interim basis while the flaws in the potential studies conducted by the companies are corrected. In addition, we recommend a three year phase-in period. See Exhibit 170 for NRDC/SACE goal tables.

Staff Analysis:

PARTIES' ARGUMENTS

The FEECA utilities and FIPUG contend that goals should be set using the Participants and RIM tests. (FPL BR 34-35; PEF BR 11-13; TECO BR 14-16; Gulf BR 1-2; FPUC BR 14; OUC BR 18; FIPUG BR 7-9)

NRDC/SACE contends that Section 366.82(3), F.S., requires use of the TRC Test to establish cost-effectiveness for candidate conservation measures. (NRDC/SACE BR 5-6) NRDC/SACE also finds fault with the two-year payback screen, stating that significant potential savings are wrongly eliminated from consideration. (NRDC/SACE BR 16-19) Rather than proposing goals based on its TRC argument, NRDC/SACE instead proposed goals based on 1 percent of sales, because this methodology has been used by other states. (TR 1087)

The testimony prepared by staff's consultant, GDS, suggests the TRC test should be used to determine cost-effectiveness. (TR 1532) In addition, GDS argues that measures screened out by the two-year payback criteria should be put back into goals. (TR 1539)

The parties' proposed goals are contained in Tables 9-2 through 9-8.

ANALYSIS

Staff believes that the goals proposed by NRDC/SACE, FSC, GDS, and the utilities should be rejected. The rationale and analysis for staff's position on commercial and industrial goal is identical to that presented in Issue 9 above.

Staff recommended commercial/industrial goals are shown in the Tables 10-1 through 10-7 below for each FEECA utility along with goals proposed by NRDC/SACE, FSC, GDS, and staff.

Florida Power & Light (FPL)

Table 10-1 Proposed Commercial/Industrial Conservation Goals for FPL

	Summer MW				Winter MW				Annual GWh			
	FPL	FSC/ GDS	NRDC/ SACE	STAFF	FPL	FSC/ GDS	NRDC/ SACE	STAFF	FPL	FSC/ GDS	NRDC/ SACE	STAFF
2010	33.4	52.5	19.0	58.0	8.5	8.3	5.0	48.0	41.0	175.3	162.0	49.0
2011	33.4	52.8	39.0	49.0	8.5	8.3	10.0	20.0	41.4	176.2	341.0	52.0
2012	33.7	54.5	61.0	50.0	8.5	8.6	16.0	22.0	44.2	181.8	540.0	54.0
2013	33.8	55.3	62.0	51.0	8.6	8.7	16.0	22.0	45.2	184.5	554.0	58.0
2014	33.8	61.4	74.0	53.0	8.9	9.6	19.0	24.0	53.9	204.8	601.0	61.0
2015	33.8	123.7	73.0	52.0	9.0	19.5	19.0	24.0	54.6	413.0	626.0	60.0
2016	34.3	131.1	75.0	53.0	9.2	20.7	19.0	25.0	59.8	437.5	666.0	61.0
2017	34.7	136.1	80.0	53.0	9.6	21.4	20.0	24.0	63.3	454.1	700.0	61.0
2018	35.8	147.3	85.0	18.0	10.1	23.2	21.0	23.0	71.2	491.5	756.0	2.0
2019	36.6	153.6	100.0	48.6	10.2	24.2	25.0	25.8	75.3	512.8	800.0	50.9
Total	343.3	968.3	668.0	485.6	91.1	152.5	170.0	257.8	549.9	3231.5	5746.0	508.9

Sources: EXH 31; EXH 171; EXH 79; EXH 170; EXH 2, BSP 927-930

Progress Energy Florida, Inc. (PEF)

Table 10-2 Proposed Commercial/Industrial Conservation Goals for PEF

	Summer MW				Winter MW				Annual GWh			
	PEF	FSC/ GDS	NRDC/ SACE	STAFF	PEF	FSC/ GDS	NRDC/ SACE	STAFF	PEF	FSC/ GDS	NRDC/ SACE	STAFF
2010	8.77	14.60	8.00	22.00	4.74	2.00	1.00	29.00	10.42	60.40	52.00	18.00
2011	11.57	14.70	16.00	18.00	4.77	2.10	3.00	17.00	11.05	60.70	112.00	18.00
2012	21.46	15.10	26.00	20.00	10.80	2.10	3.00	17.00	12.00	62.70	172.00	18.00
2013	22.49	15.30	27.00	18.00	10.84	2.10	4.00	17.00	12.63	63.60	183.00	18.00
2014	23.27	17.10	27.00	18.00	10.87	2.40	4.00	17.00	13.26	70.60	180.00	18.00
2015	23.52	34.40	28.00	7.00	10.96	4.80	4.00	16.00	14.96	142.30	177.00	16.00
2016	24.04	36.40	29.00	7.00	10.92	5.10	4.00	6.00	14.21	150.80	177.00	16.00
2017	23.01	37.80	30.00	7.00	10.91	5.20	5.00	6.00	14.08	156.40	194.00	15.00
2018	21.46	40.90	32.00	6.00	10.82	5.70	4.00	6.00	12.31	169.40	200.00	15.00
2019	18.24	42.70	36.00	14.00	10.77	6.00	5.00	6.00	11.37	176.70	206.00	17.00
Total	197.83	269.00	259.00	137.00	96.40	37.50	37.00	137.00	126.29	1113.60	1653.00	169.00

Sources: EXH 40; EXH 171; EXH 79; EXH 170; EXH 2, BSP 927-930

Tampa Electric Company (TECO)

Table 10-3 Proposed Commercial/Industrial Conservation Goals for TECO

	Summer MW				Winter MW				Annual GWh			
	TECO	FSC/ GDS	NRDC/ SACE	STAFF	TECO	FSC/ GDS	NRDC/ SACE	STAFF	TECO	FSC/ GDS	NRDC/ SACE	STAFF
2010	2.7	7.1	3.0	6.0	0.9	1.3	1.0	5.0	6.3	31.7	31.0	7.0
2011	3.9	7.2	7.0	6.0	1.0	1.4	2.0	5.0	9.8	31.9	63.0	7.0
2012	4.3	7.4	10.0	6.0	1.2	1.4	3.0	5.0	13.0	32.8	97.0	7.0
2013	5.2	7.5	10.0	7.0	1.3	1.4	3.0	6.0	15.0	33.4	101.0	6.0
2014	5.3	8.3	11.0	6.0	1.2	1.6	3.0	5.0	16.2	37.0	104.0	6.0
2015	5.5	16.8	12.0	3.0	1.3	3.2	3.0	4.0	16.9	74.7	108.0	4.0
2016	5.7	17.9	12.0	2.0	1.4	3.3	4.0	1.0	17.0	79.1	112.0	5.0
2017	5.3	18.4	11.0	1.0	1.4	3.5	3.0	0.0	16.7	82.2	116.0	4.0
2018	5.5	20.0	13.0	2.0	1.4	3.8	4.0	2.0	16.2	88.8	119.0	3.0
2019	5.1	20.9	13.0	2.0	1.3	4.0	3.0	2.0	15.6	92.8	123.0	3.0
Total	48.5	131.5	102.0	41.0	12.4	24.9	29.0	35.0	142.7	584.4	974.0	52.0

Sources: EXH 31; EXH 171; EXH 79; EXH 170; EXH 2, BSP 927-930

Gulf Power Company (Gulf)

Table 10-4 Proposed Commercial/Industrial Conservation Goals for Gulf

	Summer MW				Winter MW				Annual GWh			
	Gulf	FSC/ GDS	NRDC/ SACE	STAFF	Gulf	FSC/ GDS	NRDC/ SACE	STAFF	Gulf	FSC/ GDS	NRDC/ SACE	STAFF
2010	1.2	4.9	3.0	1.8	0.5	1.6	1.0	1.0	2.7	24.7	21.0	4.4
2011	1.6	4.9	6.0	1.8	0.5	1.6	3.0	1.0	4.6	24.9	43.0	4.4
2012	1.9	5.1	9.0	1.8	0.6	1.7	3.0	1.0	6.1	25.7	66.0	4.4
2013	2.2	5.1	9.0	1.8	0.7	1.7	4.0	1.0	7.3	26.0	69.0	4.4
2014	2.4	5.7	10.0	1.8	0.7	1.8	5.0	1.0	8.0	28.9	70.0	4.4
2015	2.5	11.5	10.0	1.8	0.8	3.8	4.0	1.0	8.5	58.3	72.0	4.4
2016	2.6	12.2	11.0	1.8	0.8	4.0	4.0	1.0	8.9	61.8	75.0	4.4
2017	2.6	12.7	11.0	1.8	0.8	4.2	5.0	1.0	9.0	64.1	80.0	4.4
2018	2.5	13.7	12.0	1.8	0.8	4.4	5.0	1.0	8.8	69.4	85.0	4.4
2019	2.4	0.0	13.0	1.8	0.8	0.0	6.0	1.0	8.3	72.4	89.0	4.4
Total	21.9	75.8	94.0	18.0	7.0	24.8	40.0	10.0	72.2	456.2	670.0	44.0

Sources: EXH 31; EXH 171; EXH 79; EXH 170; EXH 2, BSP 927-930

Florida Public Utilities Company (FPUC)

Table 10-5 Proposed Commercial/Industrial Conservation Goals for FPUC

	Summer MW				Winter MW				Annual GWh			
	FPUC	FSC/ GDS	NRDC/ SACE	STAFF	FPUC	FSC/ GDS	NRDC/ SACE	STAFF	FPUC	FSC/ GDS	NRDC/ SACE	STAFF
2010	0.0	0.3	*	0.1	0.0	0.0	*	0.1	0.0	1.2	*	0.3
2011	0.0	0.2	*	0.1	0.0	1.0	*	0.1	0.0	1.2	*	0.3
2012	0.0	0.3	*	0.1	0.0	0.0	*	0.1	0.0	1.3	*	0.3
2013	0.0	0.3	*	0.1	0.0	1.0	*	0.1	0.0	1.2	*	0.3
2014	0.0	0.3	*	0.1	0.0	0.0	*	0.1	0.0	1.4	*	0.3
2015	0.0	0.6	*	0.1	0.0	1.0	*	0.1	0.0	2.8	*	0.3
2016	0.0	0.6	*	0.1	0.0	1.0	*	0.1	0.0	3.0	*	0.3
2017	0.0	0.7	*	0.1	0.0	1.0	*	0.1	0.0	3.2	*	0.3
2018	0.0	0.8	*	0.1	0.0	1.0	*	0.1	0.0	3.3	*	0.3
2019	0.0	0.7	*	0.1	0.0	1.0	*	0.1	0.0	3.5	*	0.3
Total	0.0	4.8	*	1.1	0.0	7.0	*	0.7	0.0	22.1	*	3.2

Sources: EXH 31; EXH 171; EXH 79; EXH 170; EXH 2, BSP 927-930
NRDC/SACE does not offer specific numeric goals for FPUC. However, it does include FPUC in its recommendation to set goals based on 1 percent of its sales.

Orlando Utilities Commission (OUC)

Table 10-6 Proposed Commercial/Industrial Conservation Goals for OUC

	Summer MW				Winter MW				Annual GWh			
	OUC	FSC/ GDS	NRDC/ SACE	STAFF	OUC	FSC/ GDS	NRDC/ SACE	STAFF	OUC	FSC/ GDS	NRDC/ SACE	STAFF
2010	0.0	1.8	1.0	0.7	0.0	0.4	3.0	0.7	0.0	9.0	10.0	1.8
2011	0.0	1.9	1.0	0.7	0.0	0.3	6.0	0.7	0.0	9.1	19.0	1.8
2012	0.0	1.9	3.0	0.7	0.0	0.4	10.0	0.7	0.0	9.4	30.0	1.8
2013	0.0	2.0	4.0	0.7	0.0	0.4	14.0	0.7	0.0	9.5	42.0	1.8
2014	0.0	2.1	3.0	0.7	0.0	0.4	15.0	0.7	0.0	10.6	44.0	1.8
2015	0.0	4.4	4.0	0.7	0.0	0.8	15.0	0.7	0.0	21.3	46.0	1.8
2016	0.0	4.6	5.0	0.7	0.0	0.9	16.0	0.7	0.0	22.6	47.0	1.8
2017	0.0	4.8	4.0	0.7	0.0	1.0	17.0	0.7	0.0	23.4	49.0	1.8
2018	0.0	5.1	5.0	0.7	0.0	1.0	18.0	0.7	0.0	25.4	50.0	1.8
2019	0.0	5.4	4.0	0.7	0.0	1.0	18.0	0.7	0.0	26.5	52.0	1.8
Total	0.0	34.0	34.0	7.0	0.0	6.6	132.0	7.0	0.0	166.8	389.0	18.0

Sources: TR 787, 790-791, 794-795; EXH 31; EXH 171; EXH 79; EXH 170; EXH 2, BSP 704, 961-964

JEA (formerly Jacksonville Electric Authority)

Table 10-7 Proposed Commercial/Industrial Conservation Goals for JEA

	Summer MW				Winter MW				Annual GWh			
	JEA	FSC/ GDS	NRDC/ SACE	STAFF	JEA	FSC/ GDS	NRDC/ SACE	STAFF	JEA	FSC/ GDS	NRDC/ SACE	STAFF
2010	0	5.2	3.0	2.4	0	0.9	4.0	1.4	0	24.3	18.0	22.1
2011	0	5.2	5.0	2.4	0	1.0	9.0	1.4	0	24.4	37.0	22.1
2012	0	5.3	8.0	2.4	0	1.0	13.0	1.4	0	25.2	56.0	22.1
2013	0	5.5	11.0	2.4	0	1.0	17.0	1.4	0	25.5	77.0	22.1
2014	0	6.0	12.0	2.4	0	1.0	19.0	1.4	0	28.4	79.0	22.1
2015	0	12.2	13.0	2.4	0	2.3	18.0	1.4	0	57.2	82.0	22.1
2016	0	13.0	13.0	2.4	0	2.3	20.0	1.4	0	60.6	86.0	22.1
2017	0	13.4	14.0	2.4	0	2.4	21.0	1.4	0	62.9	89.0	22.1
2018	0	14.5	14.0	2.4	0	2.7	24.0	1.4	0	68.1	94.0	22.1
2019	0	15.1	15.0	2.4	0	2.7	25.0	1.4	0	71.0	97.0	22.1
Total	0	95.4	108.0	24.0	0	17.3	170.0	14.3	0	447.6	715.0	221.0

Source: TR 829; EXH 171; EXH 79; EXH 170; EXH 2, BSP 754

Issue 11: In addition to the MW and GWh goals established in Issues 9 and 10, should the Commission establish separate goals for demand-side renewable energy systems?

Recommendation: The Commission can meet the requirements of Section 366.82(2), F.S., while protecting ratepayers by requiring the IOUs to offer demand-side renewable programs that do not otherwise pass any of the cost-effectiveness tests, subject to an expenditure cap. Utilities should be required to file pilot programs focusing on encouraging solar water heating and solar PV technologies in the DSM program approval proceeding. Expenditures should be capped at 5 percent of the average annual recovery through the Energy Conservation Cost Recovery clause for the previous five years. Annual expenditures of 5 percent would result in total support for programs designed to encourage solar of approximately $12.2 million per year for the IOUs. (Harlow)

Positions:

FPL: No. The technical potential and achievable potential for demand-side renewable energy systems have been addressed in the comprehensive process detailed in FPL's response to Issue 1 and Issue 2 above, and is therefore reflected within FPL's proposed goals.

PEF: No. Since demand-side renewables are included in PEF's overall DSM goals, a separate goal is not required.

TECO: No. Tampa Electric evaluated demand-side renewable energy systems in its overall DSM goals evaluation process; therefore, no separate goals are necessary. This is consistent with the approach taken by the other FEECA utilities.

Gulf: No. Demand-side renewables should be evaluated and included in Gulf's DSM plan based on the same criteria already established for traditional end-use energy efficiency measures. Since Gulf Power evaluated demand-side renewable energy systems in its overall DSM goals evaluation process, a separate goal is unnecessary.

FPUC: No. The Commission should not establish separate goals for demand-side renewable energy systems. Goals should promote cost-effective DSM without bias toward any particular technology.

JEA/OUC: No. The Commission should not establish separate goals for demand-side renewable energy systems. Goals should promote cost-effective DSM without bias toward any particular technology.

FECC: FECC has no specific position at this time.

FIPUG: No.

FSC: As required by §§ 366.81 and 366.82 F.S., FEECA IOU's must establish demand-side renewable programs focusing on solar energy systems for both residential

and commercial customer classes. In order to meet this statutory mandate, the Commission should authorize recovery of 1% of each FEECA IOU's annual retail sales revenue for the year ending 2008 for the next five years.

NRDC/SACE: Yes. Given FEECA policy goals, the Commission should prioritize this because of the long-term market transformation benefits of this demand-side renewable technology. A separate goal would ensure that the utilities and Commission attend to this legislative policy goal and provide a forum for continuous improvement in that area.

Staff Analysis:

PARTIES' ARGUMENTS

All seven FEECA utilities take the position that the Commission should not establish separate goals for demand-side renewable energy systems. FPL believes that the FEECA amendments, in particular, Section 366.82(3), F.S., ". . . require the Commission to consider renewable energy systems in the DSM goal setting process." (FPL BR 35) FPL contends that this statutory requirement was met because ITRON and FPL evaluated these resources in this goal setting process. (FPL BR 35-36) FPL, PEF, TECO, and Gulf contends that demand-side renewable resources were evaluated as a part of the DSM goals analysis and these measures were not found to be cost-effective; therefore, a separate goal is not necessary. (FPL BR 35-36; PEF BR 22; TECO BR 10, 30-31; Gulf BR 21-22) Gulf asserts that demand-side renewables should be evaluated with the same methodology that is used to evaluate energy efficiency measures. (Gulf BR 21) PEF currently offers demand-side renewable programs and is developing new initiatives. (TR 348, 377-378, 443-444) FPL notes that it will consider demand-side renewable measures in the program development stage. (FPL BR 37) Gulf is currently evaluating a pilot solar thermal water heating program. (Gulf BR 22)

FPUC, OUC, and JEA contend that, in setting goals, there should not be a bias toward any particular resource. Otherwise, FPUC, OUC, and JEA state that goals could be set without appropriate consideration of costs and benefits to the participants and customers as a whole as required by Section 366.82(a) and (b), F.S. (FPUC BR 15; JEA/OUC BR 19) In addition, JEA and OUC argue that as municipal utilities, they cannot recover costs for demand-side renewable programs through the Energy Conservation Cost Recovery clause. (JEA/OUC BR 20) JEA and OUC also note that both companies offer demand-side renewable programs. (JEA/OUC BR 19) In its position, FIPUG agrees with the utilities that separate goals should not be set for demand-side renewable energy systems. (FIPUG BR 11) FIPUG did not provide support for this position in its brief.

In its position, NRDC/SACE states that a separate goal for demand-side renewable energy systems would meet a policy goal in FEECA. NRDC/SACE believes that a separate goal could result in long-term benefits due to encouraging the development of the renewable industry in Florida. NRDC/SACE did not provide a discussion of this position in its brief. NRDC/SACE also did not provide specific recommended goals or a methodology for setting goals for demand-side renewables. (NRDC/SACE BR)

FSC contends that Section 366.82, F.S., requires the Commission to establish separate goals for demand-side renewables. (FSC BR 7-9) FSC recommends that to meet this statutory obligation, the Commission should require the FEECA IOUs to offer solar PV and solar water heating rebate programs to both residential and commercial customers. (FSC BR 11) Further, FSC states that the Commission should authorize each IOU to recover up to 1 percent of annual retail sales revenue (based on 2008 revenues) to fund rebates for the next five years. FSC suggests a rebate of $2 per watt for PV systems with a capacity up to 50 kW. (FSC BR 11-12) FSC contends that the Commission should establish a performance-based incentive program for PV systems with a capacity greater than 50 kW. (FSC BR 12) FSC recommends that incentives be reduced over the five years to account for market development and any resulting reduction in PV prices. (FSC BR 12) FSC does not take a position with respect to OUC and JEA, which each currently have programs to encourage customers to install solar resources. (FSC BR 10-11)

ANALYSIS

HB 7135 made several changes to the language of Section 366.82, F.S., to address demand-side renewables. First, HB 7135 defined "demand-side renewable energy" as a system located on a customer's premises using Florida renewable energy resources with a capacity that does not exceed 2 MWs. (See Section 366.82(1)(b), F.S.) The system must be designed to offset part or all of a customer's energy needs. Section 366.82(2), F.S., was also revised. The entire text of Section 366.82(2), F.S., follows, with the HB 7135 revisions underlined.

> The Commission shall adopt appropriate goals for increasing the efficiency of energy consumption and increasing the development of demand-side renewable energy systems, specifically including goals designed to increase the conservation of expensive resources, such as petroleum fuels, to reduce and control the growth rates of electric consumption, to reduce the growth rates of weather-sensitive peak demand, and to encourage development of demand-side renewable energy resources. The Commission may allow efficiency investments across generation, transmission, and distribution as well as efficiencies within the user base.

Because of the revisions to the statute, staff requested that the utilities address demand-side renewables in their cost-effectiveness analyses. As discussed in Issue 1, the first step in the utilities' cost-effectiveness analysis for demand-side renewables was the Technical Potential Study performed by ITRON. Witness Rufo testified that ITRON estimated the technical potential for one residential rooftop PV system, one commercial rooftop PV system, one commercial ground-mounted PV system, and solar domestic hot water heaters. (TR 879, 996) Witness Rufo testified that ITRON did not estimate the achievable potential for PV systems "due to the fact that PV measures did not pass the cost-effectiveness criteria established by the FEECA utilities for purposes of this study, i.e. TRC, RIM, and/or the Participants Test." (TR 893-894) Witness Rufo further testified that incentive levels were not calculated for solar measures (for JEA and OUC) because these measures did not pass RIM or TRC without incentives. (TR 1001-1002)

FPL, TECO, Gulf, FPUC, OUC, and JEA did not include savings from solar measures toward their goals because no solar measures were found to be cost-effective. (TR 198, 316-317, 514, 802, 893-894) However, PEF, OUC, and JEA have existing solar programs. (TR 348, 369,

477-483, 803-804, 837-838) PEF currently offers two solar programs. PEF's Solar Water Heater with EnergyWise program combines a demand-response program with a rebate for solar water heaters. PEF's SolarWise for Schools program allows interested customers to donate their monthly credits from participating in a load control program to support the installation of PV systems in schools. (TR 348, 369, 477-483) Witness Masiello testified that PEF has also developed new solar initiatives that will possibly be included in PEF's DSM program filing. (TR 443-444) Witness Masiello further testified that a separate goal for demand-side renewables is not needed because PEF included these resources in its goals. (TR 369)

Staff believes that the revisions to Section 366.82(2), F.S., clearly require the Commission to set goals to increase the development of demand-side renewable energy systems. As indicated above, the Section states that the "Commission shall adopt appropriate goals for increasing the efficiency of energy consumption and increasing the development of demand-side renewable energy systems . . . ." (Emphasis added) Staff believes that in making these revisions to Section 366.82(2), F.S., the Legislature has placed additional emphasis on encouraging renewable energy systems. FSC and NRDC/SACE argue that HB 7135 requires goals for these resources. Witness Spellman testified that "the legislation clearly requires the Commission to focus some specific attention on demand-side renewable energy resources as part of its goal setting process." (TR 1548-1549)

As discussed above, none of the demand-side renewable resources were found to be cost-effective under any test in the utilities' analyses. (TR 893-894) In the past, the Commission has set goals equal to zero in cases where no DSM programs were found to be cost-effective, for example, for JEA and OUC. (TR 786-787, 794, 799, 820-821, 828, 833) Therefore, based purely on the cost-effectiveness test results, the Commission has the option to set goals equal to zero for demand-side renewable resources. However, staff notes that by amending FEECA, the Legislature placed added emphasis on demand-side renewable resources. (TR 1287) The Legislature has also recently placed emphasis on these resources by funding solar rebates through the Florida Energy and Climate Commission. Therefore, to meet the intent of the statute, while protecting ratepayers, staff agrees with witness Spellman that the Commission should consider setting separate goals to encourage the development of these renewable resources using a cost-cap. (TR 1548-1549)

Witness Spellman testified that the Commission can meet the requirements of Section 366.82(2), F.S., by requiring the IOUs to offer demand-side renewable research and development programs. (TR 1549, 1563) Witness Spellman also recommends that OUC and JEA be required to offer demand-side renewable programs, but recognizes that the Commission does not have ratemaking authority over these utilities. (TR 1552) In order to protect the IOUs' ratepayers, utilities would be allowed to recover a specified amount of expenses through the Energy Conservation Cost Recovery clause. (TR 1549-1551, 1563) Witness Spellman does not advocate specific demand or energy savings goals for demand-side renewables. Witness Spellman suggests that these programs should focus on solar PV and solar water heating technologies, and does not believe that the demand and energy savings resulting from these programs should be counted toward a utility's DSM goals. (TR 1549–1550)

Witness Spellman recommends that expenditures on these solar programs should be capped at 10 percent of each IOU's five-year average of Energy Conservation Cost Recovery

expenses for 2004 through 2008. These dollar amounts should be constant over the five year period until goals are reset. (TR 1550-1551, 1563, 1621) Witness Spellman recommends that the funds be used for up-front rebates on solar PV and solar water heating technologies for both residential and commercial customers. (TR 1551-1552)

Witness Spellman acknowledges that none of the solar PV and solar thermal technologies included in the ITRON study and utility cost-effectiveness analyses were found to be cost-effective. (TR 1549, 1628) However, witness Spellman testified that research and development programs on these technologies will provide benefits "because of their potential for more efficient energy production, the environmental benefits, and the conservation of non-renewable petroleum fuels." (TR 1550) Witness Spellman believes that support for these technologies could result in lower costs over time. (TR 1550)

In its brief, FSC also recommends that the Commission should require the four largest IOUs to spend a specified annual amount on solar PV and solar thermal water heating programs. NRDC/SACE agree with FSC's position. (FSC BR 10-11; NRDC/SACE BR) FSC suggests that solar water heaters and PV systems under 50 kW in capacity should receive an up-front rebate, while financial support to larger PV systems up to 2 MW should be performance-based. FSC recommends a rebate of $2 per watt for residential and commercial PV systems up to 50 kW in capacity. FSC suggests that annual support should continue for five years, and decrease every year to account for market development and reductions in technology costs. FSC takes no position on requiring programs for FPUC, JEA, and OUC. (FSC BR 10-11)

Table 11-1 represents the annual expenditures on solar PV and solar thermal water heating programs recommended by GDS, FSC, and staff, along with the estimated monthly rate impact for a representative residential consumer. (TR 1550-1551; EXH 108; EXH 109; FSC BR 11)

Table 11-1 - Recommended Annual Solar Expenditures and Estimated Rate Impact*

Utility	GDS Annual Expenses	GDS Monthly Residential Rate Impact** ($/month)	FSC Annual Expenses***	FSC Monthly Residential Rate Impact** ($/month)	Staff Annual Expenses	Staff Monthly Residential Rate Impact** ($/month)
FPL	$15,536,870	$0.18	$113,000,000	$1.28	$7,768,435	$0.09
Gulf	$900,338	$0.09	$10,800,000	$1.09	$450,169	$0.05
PEF	$6,467,592	$0.19	$40,000,000	$1.18	$3,233,796	$0.10
TECO	$1,531,018	$0.10	$19,800,000	$1.28	$765,509	$0.05
FPUC	$47,233	$0.07	$0	$0.00	$23,616	$0.04
Total	$24,483,051		$183,600,000		$12,241,525	

* Sources: TR 1551; EXH 108; EXH 109; FSC BR 11
**Representative residential customer based on 1,200 kWhs per month usage.
*** FSC recommends that expenditures should decrease each year to account for solar market development and cost decreases. (FSC BR 12)

Staff agrees with witness Spellman, FSC, and NRDC/SACE that in order to meet the intent of Section 366.82(2), F.S., the IOUs should be required to offer programs that focus on encouraging solar water heating and solar PV technologies. In order to protect ratepayers, staff also agrees that there should be an expense cap on these programs. There is nothing in the record to support setting goals based on a specified demand or energy level. (TR 1621) Further, the record does not address programs for other types of demand-side renewable measures in addition to solar measures.

Staff believes annual expenditures should be capped at 5 percent of the average of the previous five years' Energy Conservation Cost Recovery expenditures. Staff's recommended annual expenditures and estimated rate impact are shown above in Table 11-1. Annual expenditures of 5 percent would result in total support for programs designed to encourage solar of approximately $12.2 million per year for the IOUs. Staff notes that the state solar rebate program received $5.0 million in general revenue funds in 2008 and $14.4 million in federal stimulus funds in 2009. (TR 2092-2093) Staff's recommended utility funding level is consistent with the 2009 funding level for the state solar rebate program. Staff agrees with FSC that if state funding is maintained at the current level, the additional utility funding will result in an increase in market development. (FSC BR 9; TR 1622-1623) Staff further agrees with FSC that if state funding is reduced, the utility funding, at a minimum will maintain the pool of vendors and installers for solar technologies. (FSC BR 9; TR 844-845, TR 1622-1623; EXH 4, p. 225)

For a reference point, staff considered the existing state rebates on solar water heaters and PV systems. The FECC offers a rebate of $500 per residential solar water heater and up to

$5,000 per commercial water heater based on $15 per 1,000 Btu. PV rebates consist of $4 per watt up to $20,000 for residential systems (capacity 5 kW) and up to $100,000 for larger systems installed by commercial customers. (TR 1551-1552) Setting aside administrative costs, total expenditures of $12.2 million could be used, for example, to match the state rebate of $500 for 24,400 residential water heaters per year. The utilities used $3,850 as an estimate of the cost of a 40 gallon residential water heater. (TR 996) A residential customer's total cost for a solar water heater could be reduced to $1,695 by combining the state rebate with a matching grant by the IOU and the 30 percent federal tax credit. In the absence of funding for the state rebate, the cost of a residential water heater would be reduced from $3,850 to $2,195.

Staff's recommended expenditures of 5 percent of recent Energy Conservation Cost Recovery expenditures will result in a rate impact ranging from 3.7 to 9.5 cents per month for a typical 1,200 kWh monthly residential bill. Staff agrees with witness Dean that increasing rates is troubling, especially given current economic conditions. (TR 1228-1229) However, staff notes that the proposed rate impact is relatively small, and will meet the requirements of Section 366.82(2), F.S., for the Commission to adopt goals designed to encourage the development of demand-side renewable resources. Staff also believes there will be long-term benefits for Florida's consumers associated with enhanced fuel diversity and encouraging the development of a solar market in Florida.

Staff believes the IOUs should be required to file programs designed to encourage demand-side renewable resources in the DSM program approval proceeding. In designing these programs, each utility should evaluate opportunities to take advantage of cost-saving opportunities unique to that utility, for example, by combining the programs with other offered programs. Staff believes that combining measures into a single program, such as PEF's Solar Water Heater with EnergyWise program, can result in administrative cost savings. Staff notes that PEF has found a way to reduce the rate impact of solar water heater rebates by combining these rebates with a demand response program. (TR 348, 429-430) Customers that receive the solar water heater rebates are required to participate in the demand response program. According to witness Masiello, the Solar Water Heater with EnergyWise program is cost-effective due to offsetting the cost of the solar rebates with the benefit from the demand response program. (TR 461-462)

Staff applauds PEF's innovative SolarWise for Schools program, which allows interested customers to donate their monthly credits from participating in a load control program to support the installation of PV systems in schools. This program provides support for solar resources, with the added educational benefit of placing these facilities on schools, while providing customers with the opportunity to support these community projects. (TR 477-483) Staff believes expenditures on PEF's SolarWise for Schools and similar utility programs that allow for voluntary customer support should count toward a utility's obligation in order to minimize rate impact. Utilities should also take federal tax credits and state rebates into account when designing these programs.

CONCLUSION

Staff believes that the revisions to Section 366.82(2), F.S., require the Commission to establish goals for demand-side renewable energy systems. None of these resources were found to be cost-effective in the utilities' analyses. However, the Commission can meet the intent of the Legislature to place added emphasis on these resources, while protecting ratepayers from undue rate increases by requiring the IOUs to offer renewable programs subject to an expenditure cap. Staff recommends that the IOUs be required to file pilot programs focusing on encouraging solar water heating and solar PV technologies in the DSM program approval proceeding. Expenditures allowed for recovery should be limited to 5 percent of the average annual recovery through the Energy Conservation Cost Recovery clause in the previous five years. Utilities should be encouraged to design programs that take advantage of unique cost-saving opportunities, such as combining measures in a single program, or providing interested customers with the option to provide voluntary support.

Issue 12: In addition to the MW and GWh goals established in Issues 9 and 10, should the Commission establish additional goals for efficiency improvements in generation, transmission, and distribution?

Recommendation: No. Since the IOUs did not provide a technical potential of supply-side efficiency measures, goals for generation, transmission, and distribution cannot established at this time. However, efficiency improvements for generation, transmission, and distribution are continually reviewed through the utilities' planning processes in an attempt to reduce the cost of providing electrical service to their customers. (Garl)

Positions:

FPL: Not at this time. According to Rule 25-17.001 F.A.C., "general goals and methods for increasing the overall efficiency of the bulk electric power system are an ongoing part of the practice of every well managed electric utility's programs." If such additional goals are desired, they should be considered in a subsequent proceeding.

PEF: No. PEF continuously identifies and evaluates conservation and efficiency improvement opportunities throughout its transmission and distribution resources, as guided in Rule 25-17.001(e) F.A.C.

TECO: No. Tampa Electric believes the Commission should consider goals for efficiency improvement in generation, transmission, and distribution in a separate proceeding.

Gulf: Not at this time. This matter should be considered in a separate proceeding following the conclusion of the current goal-setting process.

FPUC: No position. FPUC is not a generating utility.

JEA/OUC: No. Efficiency improvements in generation, transmission, and distribution are supply-side issues which are more appropriately addressed in the utilities' resource planning processes.

FECC: FECC has no specific position at this time.

FIPUG: No.

FSC: Not at this time. Goals should be established for efficiency improvements in generation, transmission and distribution in a separate proceeding after the FEECA IOUs have had an opportunity to perform a technical potential study of these types of technologies. No position with regard to this issue for OUC and JEA.

NRDC/SACE: Yes. Increasing generating plant efficiency, reducing transmission and distribution losses benefit customers and the environment. We recommend that

the Commission set a date certain by which the companies will perform technical economic and potential studies for efficiency improvements at their existing plants and in their existing transmission and distribution systems.

Staff Analysis:

PARTIES' ARGUMENTS

Staff agrees with all IOUs that goals need not be established for generation, transmission, and distribution in this proceeding. (FPL BR 37; PEF BR 22; TECO BR 35) Gulf expands the discussion arguing that guidelines have not been developed that would provide a methodical approach to identifying, quantifying, and proposing goals for supply-side conservation and energy efficiency measures. (Gulf BR 22-23) OUC and JEA both offered only that efficiency improvements in generation, transmission, and distribution are supply-side issues which are more appropriately addressed in the utilities' resource planning processes, thereby seeming to imply that such goal-setting has no place in a DSM goal-setting proceeding. (OUC/JEA BR 20) FPUC, a non-generating IOU, took no position. (FPUC BR 15)

FSC's position suggests that the IOUs should conduct technical potential studies of efficiencies in generation, transmission, and distribution. Afterwards, the Commission should establish efficiency improvement goals in a separate proceeding. FSC took no position on the issue as it pertains to the two municipal utilities. (FSC BR 12)

NDRE/SACE went a step further, arguing that increasing generating plant efficiency and reducing transmission and distribution losses benefit customers and the environment. They recommend that the Commission set a date certain by which the companies will perform technical economic and potential studies for efficiency improvements at their existing facilities. However, they did not specifically suggest the Commission should set goals in these areas. (NRDC/SACE BR)

FIPUG's position is simply "No." (FIPUG BR 9)

ANALYSIS

State legislative direction states, "[t]he commission may allow efficiency investments across generation, transmission, and distribution . . . ." (Section 366.82(2), F.S.) Section 366.82(3), is more affirmative stating: "[i]n developing the goals, the commission **shall** evaluate the full technical potential of all available demand-side and supply-side conservation and efficiency measures . . . ." (Emphasis added) The FEECA utilities performed no technical potential study of supply-side measures for this docket. (TR 519-520, 629) Staff noted, however, that the potential for supply-side improvements is an inherent element of the annual Ten-Year Site Plan submitted by each FEECA utility. Supply-side efficiency and conservation is also analyzed in every need determination for new sources of generation. In addition, efficiency improvements in generation, transmission, and distribution tend to reduce the potential savings available via demand-side management programs.

Staff believes that the utilities' motivation to deliver electric service to their customers in the most economically efficient means possible makes efficiency improvements in generation, transmission, and distribution a naturally occurring result of their operation. In the case of the five IOUs, such efficiency is inextricably tied to their efforts to make a profit. The two municipal utilities, while not driven by a profit motive per se, must still provide electrical service as efficiently and inexpensively as possible. Rule 25-17.001, F.A.C., supports his proposition because the rule states: ". . . general goals and methods for increasing the overall efficiency of the bulk electric power system of Florida are broadly stated since these methods are an ongoing part of the practice of every well-managed electric utility's programs and shall be continued."

Despite NRDC/SACE's observation that customers and the environment will benefit from facility efficiencies, they offer no evidence that utilities are not routinely seeking those efficiencies. FSC, in arguing that the Commission should set goals in this area, likewise offers nothing to suggest such action is warranted.

CONCLUSION

Efficiency improvements for generation, transmission, and distribution are continually reviewed through the utilities' planning processes in an attempt to reduce the cost of providing electrical service to their customers. With no evidence to suggest efficiency improvements in generation, transmission, and distribution are not occurring, staff recommends that the Commission not set goals in these areas as part of this proceeding.

Issue 13: In addition to the MW and GWh goals established in Issues 9 and 10, should the Commission establish separate goals for residential and commercial/industrial customer participation in utility energy audit programs for the period 2010-2019?

Recommendation: No. Separate goals for customer participation in energy audit programs are unnecessary and could be duplicative. (Matthews)

Positions:

FPL: Specific goals for customer participation in audit programs are unnecessary, but FPL would not oppose reasonably achievable energy audit goals. This issue should be considered, if at all, in a subsequent proceeding.

PEF: No. PEF's DSM program requires energy audit participation prior to the installation of DSM measures. PEF meets the needs of its diverse customers by offering multiple audit options. While specific measures are designed and directed for individual customer segments, the process, procedures and objectives are developed as a cohesive collection which ensure cost effective synergies.

TECO: No. The Commission should not establish separate goals for residential and commercial/industrial customer participation in utility energy audit programs. FEECA utilities are required to offer, promote and perform audits for all customers. Resources utilized to achieve audit performance goals are better allocated to specific programs with greater potential for demand and energy savings.

Gulf: No. Energy audits are an important component of achieving the proposed goals through customer education regarding both general and program-specific actions customers can take to reduce energy usage and, therefore, should be included as part of the overall DSM goals.

FPUC: No. Energy audits are performed as a result of customer interest in such audits, and the utility cannot dictate that customers have interest in receiving energy audits. Utilities should be allowed the flexibility to integrate energy audits into conservation programs as appropriate.

JEA/OUC: No. Energy audits are performed as a result of customer interest in such audits, and the utility cannot dictate that customers have interest in receiving energy audits. Utilities should be allowed the flexibility to integrate energy audits into conservation programs as appropriate.

FECC: FECC has no specific position at this time.

FIPUG: No.

FSC: No with regard to the FEECA IOUs; no position with regard to JEA and OUC.

NRDC/SACE: Yes. The technologies and human resources required for a useful audit of dwellings differs significantly for these sectors, therefore, goals should be set separately. Furthermore, audits should not be limited to measures that pass only the RIM Test while promoting measures with payback periods of less than two years.

Staff Analysis:

PARTIES' ARGUMENTS

The FEECA utilities, FIPUG, and FSC all agree that separate goals for energy audits are not necessary. (FPL BR 37; PEF BR 22; TECO BR 35; Gulf BR 23; FPUC BR 15; OUC/JEA BR 20; FIPUG BR 9; FSC BR 12)

NRDC/SACE asserts that separate goals for residential and commercial/industrial customer participation in utility energy audit programs should be established by the Commission. (NRDC/SACE BR)

ANALYSIS

The position stated in the brief from NRDC/SACE does not put forth a clear reason for its position. NRDC/SACE's understanding of the issue appears to be a question of whether the goals for audits should be separated into those for residential customers and those for commercial/industrial customers, not whether goals for energy audits should exist at all. (NRDC/SACE BR)

Section 366.82(11), F.S., mandates that the Commission require utilities to offer energy audits and to report the actual results as well as the difference, if any, between the actual and projected results. The statute is implemented by Rule 25-17.003, F.A.C., which specifies the minimum requirements for performing energy audits as well as the types of audits that utilities offer to customers, and also details the requirements for record keeping regarding the customer's energy use prior to and following the audit. The utility can thereby ascertain whether the customer actually reduced his energy usage subsequent to the audit.

Witness Steinhurst testified that utility energy audit programs by themselves do not provide any direct demand reduction and energy savings. In order to conserve energy, the customer must implement some form of an energy saving measure. (TR 1126) Witness Masiello testified that most if not all utilities require that an audit be performed before a customer can participate in DSM programs administered by the utility. (TR 370) This requirement means that having separate goals for audits would be duplicative, because the energy savings and demand reduction following the audits would be attributed to the individual measures that were recommended and implemented as a result of the audit, and therefore would already be counted towards savings goals. Witness Spellman testified that savings associated with energy saving measures installed by customers following a utility audit should be counted towards the savings of the particular program through which they obtained the measure and not the energy audit service. (TR 1547) Witness Bryant testified that this is the method typically used to account for these savings. (TR 522)

CONCLUSION

The energy conservation achieved through customer education is included in the overall DSM goals and should be credited to the specific program into which the customer enrolls. In order to avoid duplication of demand reduction and energy savings, staff recommends that no separate goals for participation in utility energy audit programs should be established.

Issue 14: What action, if any, should the Commission take in this proceeding to encourage the efficient use of cogeneration?

Recommendation: No additional action is needed. The Commission has appropriately implemented legislative policy to encourage the development and compensation requirements of cogeneration. (Gilbert)

Positions:

FPL: No actions are necessary to encourage the efficient use of cogeneration in this proceeding. Cogeneration systems must be evaluated on a site-specific, case-by-case basis, which does not lend itself to the goals-setting process. Nonetheless, FPL will continue to evaluate and assess cogeneration options.

PEF: No such action is needed in this proceeding.

TECO: No such action(s) is(are) needed. These consolidated proceedings were commenced to set overall DSM goals for the FEECA utilities and not as scoped proceedings to focus on promoting cogeneration. This is evidenced by the fact that many key participants in cogeneration are not parties to this proceeding.

Gulf: No such action is necessary.

FPUC: No position.

JEA/OUC: No position.

FECC: FECC has no specific position at this time.

FIPUG: The Commission should remove barriers to the efficient use of cogeneration. Where the customer cannot construct its own transmission lines, the customer may put cogenerated energy on the grid at the utility's hourly energy cost. This cost is much lower than average fuel cost and does not encourage cogeneration.

FSC: No position.

NRDC/SACE: We believe that the Commission should encourage the efficient use of cogeneration.

Staff Analysis:

PARTIES' ARGUMENTS

FPL, PEF, Gulf, and TECO argue that no further action is needed concerning cogeneration due to the 2008 Legislative changes that were made to the FEECA statutes. Further, the Commission has addressed cogeneration in the Rules of Procedure. (FPL BR 38-39; PEF BR 23; TECO BR 36; Gulf BR 24))

FPUC, OUC, and JEA took no position on the issue of cogeneration. (FPUC BR 16; JEA/OUC BR 21))

NRDC/SACE and FIPUG contend that there are barriers to the cogeneration process due to the unfair compensation rates afforded cogenerators by rule. (FIPUB BR 10-12; NRDC/SACE BR)

Other parties are silent on the issue.

ANALYSIS

The Legislature recognizes the benefits of cogeneration in Section 366.051, F.S., where utility companies are required to purchase all electricity offered for sale by the cogenerator as outlined in Rule 25-17.082, F.A.C. The Commission periodically establishes rates for cogeneration equal to the utilities full avoided cost as guidelines for the purchase of energy. Rule 25-17.015, F.A.C., also allows each utility to recover its costs for energy conservation through cost recovery.

The FEECA utilities agree that the Commission need not take action regarding cogeneration in this goal setting proceeding. The 2008 Florida Legislature removed the term "cogeneration" from the FEECA statute, Section 366.82(2) F.S., replacing it with "demand side renewable energy systems." (TR 1293) The utilities contend that cogeneration is not to be considered part of the FEECA ten-year goal setting process. The utilities also contend that cogeneration systems must be evaluated on a site-specific, case-by-case basis, which does not lend itself to the FEECA DSM goals-setting process. (EXH 4) The FEECA proceedings were commenced to set overall DSM goals for the FEECA utilities and not scoped as proceedings to focus on promoting cogeneration. (TR 540-542)

The FIPUG representatives believe there are barriers to the cogeneration process by Commission Rule, which prevent industrial customers from full compensation for electricity generated by their cogeneration process. The cogeneration owner also believes it is a disadvantage if it operates facilities at two or more different locations and cannot construct its own transmission lines to those locations. FIPUG contends cogenerator repayment at the utility's average fuel cost is much lower than the utility rate and that the reimbursement rate does not encourage cogeneration. (TR 162) The Legislature addressed the transmission and compensation issue of cogenerators in Section 366.051, F.S. The Commission has established "Conservation and Self-service Wheeling Cost" in Rule 25-17.008 F.A.C., "Energy Conservation Cost Recovery" in Rule 25-17.015 F.A.C., and "The Utility's Obligation to Purchase" in Rule 25-17.082 F.A.C. Staff believes what FIPUG is requesting is a rule amendment, allowing the cogenerator to recoup for power generated at a higher rate than currently allowed.

CONCLUSION

The Florida Legislature recognizes cogeneration in Section 366.051, F.S., and in 2008 removed the term "cogeneration" from the FEECA statutes, Section 366.82, F.S. Cogeneration is encouraged by the Commission as a conservation effort and evidenced in rule. Therefore,

neither the goals of FEECA requirements nor the compensation issues relating to cogeneration need be addressed in this proceeding.

Issue 15: Since the Commission has no rate-setting authority over OUC and JEA, can the Commission establish goals that puts upward pressure on their rates?

Recommendation: Staff recommends that the Commission has authority to adopt conservation goals for all electric utilities under the jurisdiction of FEECA. OUC and JEA come within the meaning of utility as defined by FEECA. Developing, establishing, and adopting conservation goals is a regulatory activity exclusively granted to the Commission by FEECA and is not ratemaking within the meaning of Chapter 366, F.S. Therefore, staff recommends that the Commission has the authority to develop, establish, and adopt conservation goals for OUC and JEA as required by Section 366.82, F.S. (Fleming, Sayler)

Positions:

FPL: FPL takes no position on this issue

PEF: No position.

TECO: No position.

Gulf: Gulf Power takes no position on this issue.

FPUC: No position.

JEA/OUC: No. For municipal utilities over which the Commission has no ratemaking authority, the Commission should reject DSM measures that put upward pressure on rates. Imposition of FEECA goals that place upward pressure on rates would undercut the independent ratemaking and local decision-making processes that are the hallmark of municipal utilities.

FECC: FECC has no specific position at this time.

FIPUG: No position.

FSC: No position.

NRDC/SACE: Yes. PSC precedent indicates that when the Commission engages in regulatory action that only has an incidental effect on a utility's rates, the Commission has not engaged in agency "rate setting." While the PSC cannot determine the overall revenue of a utility, it can adjust a utility's "rate structure."

Staff Analysis:

PARTIES' ARGUMENTS

OUC and JEA contend that for municipal utilities over which the Commission has no rate-setting authority, the Commission should reject DSM measures that put upward pressure on rates. OUC and JEA further assert that independent rate-setting and local governance provide the necessary latitude to make local decisions regarding the community's investment in energy efficiency that best suit local needs and values. (OUC/JEA BR 21) Furthermore, OUC and JEA

argue that the imposition of FEECA goals that would place upward pressure on rates would undercut the independent ratemaking and local decision-making processes. Finally, OUC and JEA assert that the Commission has recognized in prior FEECA goal-setting proceedings, that it is appropriate for the Commission to set goals based on the RIM Test to ensure no upward pressure on rates, but to defer to the municipal utilities' governing bodies to determine the level of investment in any non-RIM based measures. (OUC/JEA BR 22)

NRDC/SACE argues that PSC precedent indicates that when the Commission engages in regulatory action that only has an incidental effect on a utility's rates, the Commission has not engaged in agency "rate setting." While the Commission cannot determine the overall revenue of a municipal utility, it can adjust that utility's "rate structure." (NRDC/SACE Statement of Issues and Positions)

ANALYSIS

Under FEECA, the Commission has jurisdiction over OUC and JEA's conservation goals and plans. Section 366.81, F.S. (2008), states in pertinent part:

> The Legislature . . . finds that the Florida Public Service Commission is the appropriate agency to adopt goals and approve plans . . . . The Legislature directs the commission to develop and adopt overall goals and authorizes the commission to require each utility to develop plans and implement programs for increasing energy efficiency and conservation and demand-side renewable energy systems within its service area, subject to the approval of the commission. . . . The Legislature further finds and declares that ss. 366.80-366.85 and 403.519 [FEECA] are to be liberally construed . . . .

(Emphasis added)

For purposes of the FEECA statutes, Section 366.82(1)(a), F.S. (2008), defines a utility as being:

> "Utility" means any person or entity of whatever form which provides electricity or natural gas at retail to the public, specifically including municipalities or instrumentalities thereof . . . specifically excluding any municipality or instrumentality thereof, . . . providing electricity at retail to the public whose annual sales as of July 1, 1993, to end-use customers is less than 2,000 gigawatt hours.

(Emphasis added)[18] Section 366.82(2), F.S., provides "[t]he commission shall adopt appropriate goals for increasing the efficiency of energy consumption . . . ."

The Commission's statutory jurisdiction to set goals under FEECA is clear. The Legislature has required that the Commission develop, establish, and adopt appropriate

[18] The language of Section 366.82(1)(a), F.S., was amended in 1996 by the Legislature to exclude municipal electrics and Rural Cooperatives with annual sales less than 2,000 gigawatt hours. See s. 81, Ch. 96-321, Laws of Florida.

conservation goals for all utilities under the jurisdiction of FEECA. According to Section 366.82(1)(a), F.S., both OUC and JEA, as municipal utilities with sales exceeding 2,000 gigawatt hours, fall under the Commission's FEECA jurisdiction. Therefore, the Commission must adopt appropriate conservation goals for OUC and JEA pursuant to Section 366.82(2) and (3), F.S.

Furthermore, the Commission has previously addressed whether it is prohibited under FEECA from considering conservation programs, and by correlation, goals that would increase rates for municipal and cooperative electric utilities. In Order No. PSC-93-1305-FOF-EG, issued September 8, 1993, the Commission considered that question and determined that FEECA contains no such prohibition, but the Commission would, as a matter of policy, attempt to set conservation goals that would not result in rate increases for municipal utilities.[19]

Staff disagrees with OUC and JEA's assertion that, because it lacks ratemaking authority over these utilities, the Commission is prohibited from establishing goals that might put upward pressure on rates. Ratemaking for public utilities is governed under Sections 366.06 and 366.07, F.S. Pursuant to Section 366.02(2), F.S., municipal and cooperative electric utilities are specifically excluded from the definition of public utility, and thus, the Commission does not have ratemaking jurisdiction over these utilities. Staff believes that adopting conservation goals, or approving conservation programs, pursuant to FEECA, is not ratemaking within the meaning of Chapter 366, F.S. Staff believes that the setting of conservation goals under FEECA for municipal electric utilities, therefore, does not infringe upon the municipal electric utilities' governing boards' authority to set rates.

At this time, it would be difficult to ascertain what affect, if any, the staff's proposed conservation goals would actually have upon OUC and JEA's rates. Given the multitude of variables which also place upward and downward pressure on rates, staff believes that OUC and JEA's assertions that conservation goals alone would add upward pressure on rates is speculative at best. In the instant case, staff believes that the proposed conservation goals for OUC and JEA should not apply upward pressure on the rates of OUC and JEA's customers, especially considering that staff's recommended goals are based upon the conservation programs that OUC and JEA are currently implementing.

With regard to Order No. PSC-95-0461-FOF-EG, issued April 10, 1995, cited by OUC and JEA, the Commission stated:

> We believe that as a guiding principle, the RIM test is the appropriate test to rely upon at this time. The RIM test ensures that goals set using this criteria would result in rates lower than they otherwise would be. All the municipal and cooperative utilities, with the exception of Tallahassee, stipulated to cost-effective demand and energy savings under the RIM test. However, Tallahassee's stipulated

[19] See Order No. PSC-93-1305-FOF-EG, issued September 8, 1993, in Docket Nos. 930553-EG, 930554-EG, 930555-EG, 930556-EG, 930557-EG, 930558-EG, 930559-EG, 930560-EG, 930561-EG, 930562-EG, 930563-EG, 930564-EG, In re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section 111) by City of Gainesville, City of Jacksonville Electric Authority, Kissimmee Electric Authority, City of Lakeland, Ocala Electric Authority, Orlando Utilities Commission, City of Tallahassee, Clay Electric Cooperative, Lee County Electric Cooperative, Sumter Electric Cooperative, Talquin Electric Cooperative, Withlacoochee River Electric Cooperative (hereinafter, 1993 FEECA Municipal DSM Goals Proceedings), at 5.

> goals are higher than that cost-effective under RIM. . . . The Commission does not have rate setting authority over municipal and cooperative utilities. Therefore, we find it suitable to allow the governing bodies of these utilities the latitude to stipulate to the goals they deem appropriate regardless of cost-effectiveness.

Id. at 4-5 (Emphasis added) In 1995, the Commission recognized the RIM test as a "guiding principle" for setting goals for municipal and cooperative electric utilities, but the 2008 Legislative changes to FEECA have superseded this "guiding principle" consideration. The Commission is now required to establish goals for all FEECA utilities pursuant to the requirements of Section 366.82(3), F.S., as amended and discussed previously in this recommendation.

Moreover, the order cited by OUC and JEA is distinguishable from the instant case because the Commission did not "set goals" for OUC and JEA but merely approved stipulated goals for these two utilities. The stipulated goals resulted from a settlement between OUC and JEA and the Florida Department of Community Affairs (DCA).[20] Here, the goals being proposed for these utilities are not stipulated goals but are proposed goals following a full evidentiary hearing.

CONCLUSION

The Commission has the authority to adopt conservation goals for all electric utilities under the jurisdiction of FEECA. OUC and JEA come within the meaning of utility as defined by FEECA. Developing, establishing, and adopting conservation goals is a regulatory activity exclusively granted to the Commission by FEECA and is not ratemaking within the meaning of Chapter 366, F.S. Therefore, staff recommends that the Commission has the authority to develop, establish, and adopt conservation goals for OUC and JEA as required by Section 366.82, F.S.

[20] See Order No. PSC-95-0461-FOF-EG, issued April 10, 1995, In re: 1993 FEECA Municipal DSM Goals Proceedings. The DCA intervened in the 1993 DSM Goals Proceedings on behalf of the Governor of Florida. All the municipal and cooperative electric utilities who were parties to the 1993 DSM Goals Proceedings reached joint stipulations with DCA regarding conservation goals.

Issue 16: Should this docket be closed?

Recommendation: Yes. These dockets should be closed after the time for filing an appeal has run. Within 90 days of the issuance of the final order, each utility shall file, as needed, a demand side management plan designed to meet the utility's approved goals. (Fleming, Sayler)

Positions:

FPL: Yes.

PEF: Yes.

TECO: Yes.

Gulf: Yes.

FPUC: Yes.

JEA/OUC: Yes.

FECC: FECC has no specific position at this time.

FIPUG: No. The Commission should conduct an investigation to consider MLM and to audit how the utilities calculate avoided costs in determining cost-effectiveness and in determining the real-time hourly payments for cogenerated energy.

FSC: No position.

NRDC/SACE: No. The Commission should adopt interim energy efficiency goals recommended in response to Issues 8 and 9. Based on the evidence before the Commission, it is clear that it is possible to achieve at least one percent annual energy efficiency gains after a brief ramp up period.

Staff Analysis: Yes. These dockets should be closed after the time for filing an appeal has run. Within 90 days of the issuance of the final order, each utility shall file, as needed, a demand side management plan designed to meet the utility's approved goals.

Staff's Basis Point Calculation

Proposed Energy Goals (GWh)

	FPL				PEF				TECO				Gulf			
Year	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF
2010	74.1	556.1	332.0	143.0	50.6	189.7	117.0	48.0	8.2	70.1	62.0	14.0	4.0	48.3	40.0	6.4
2011	148.6	1,115.1	1,020.0	293.0	104.4	380.4	364.0	96.0	21.6	140.6	189.0	29.0	12.0	97.0	125.0	14.8
2012	225.6	1,692.0	2,092.0	447.0	162.7	577.3	751.0	144.0	39.6	213.2	386.0	43.0	24.6	147.3	255.0	25.5
2013	303.5	2,277.3	3,176.0	610.0	224.0	777.0	1,155.0	192.0	60.9	287.0	591.0	56.0	41.0	198.1	392.0	38.1
2014	390.1	2,927.1	4,311.0	779.0	288.5	998.7	1,560.0	240.0	84.3	368.8	805.0	69.0	60.6	254.7	532.0	52.3
2015	477.4	4,237.3	5,478.0	946.0	361.2	1,445.7	1,960.0	283.0	108.9	533.9	1,028.0	80.0	82.6	368.7	678.0	67.7
2016	569.9	5,625.4	6,707.0	1,115.0	430.3	1,919.3	2,371.0	326.0	133.8	708.9	1,261.0	91.0	106.4	489.5	832.0	84.0
2017	665.9	7,066.1	7,987.0	1,284.0	498.7	2,410.7	2,820.0	367.0	157.7	890.5	1,505.0	101.0	130.6	614.9	997.0	100.5
2018	769.8	8,625.3	9,360.0	1,394.0	558.6	2,942.7	3,287.0	407.0	180.4	1,086.9	1,758.0	111.0	153.0	750.6	1,172.0	116.1
2019	878.2	10,252.1	10,797.0	1,549.0	613.8	3,497.7	3,772.0	452.0	201.7	1,292.0	2,022.0	121.0	173.6	892.1	1,357.0	130.8

Rate Impacts of GDS Proposal (EXH. 130)		
	COL.	(17)
Average Base Rate	($/MWh)	$58.24

Lost Revenues ($000)

	FPL				PEF				TECO				Gulf			
Year	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF
2010	4,315.6	32,387.3	19,335.7	8,328.3	2,949.3	11,048.1	6,814.1	2,795.5	477.6	4,082.6	3,610.9	815.4	233.0	2,813.0	2,329.6	372.7
2011	8,654.5	64,943.4	59,404.8	17,064.3	6,077.3	22,154.5	21,199.4	5,591.0	1,258.0	8,188.5	11,007.4	1,689.0	698.9	5,649.3	7,280.0	862.0
2012	13,138.9	98,542.1	121,838.1	26,033.3	9,473.3	33,622.0	43,738.2	8,386.6	2,306.3	12,416.8	22,480.6	2,504.3	1,432.7	8,578.8	14,851.2	1,485.1
2013	17,675.8	132,630.0	184,970.2	35,526.4	13,048.1	45,252.5	67,267.2	11,182.1	3,546.8	16,714.9	34,419.8	3,261.4	2,387.8	11,537.3	22,830.1	2,218.9
2014	22,719.4	170,474.3	251,072.6	45,369.0	16,801.7	58,164.3	90,854.4	13,977.6	4,909.6	21,478.9	46,883.2	4,018.6	3,529.3	14,833.7	30,983.7	3,046.0
2015	27,803.8	246,780.4	319,038.7	55,095.0	21,037.5	84,197.6	114,150.4	16,481.9	6,342.3	31,094.3	59,870.7	4,659.2	4,810.6	21,473.1	39,486.7	3,942.8
2016	33,191.0	327,623.3	390,615.7	64,937.6	25,059.5	111,780.0	138,087.0	18,986.2	7,792.5	41,286.3	73,440.6	5,299.8	6,196.7	28,508.5	48,455.7	4,892.2
2017	38,782.0	411,529.7	465,162.9	74,780.2	29,045.5	140,399.2	164,236.8	21,374.1	9,184.4	51,862.7	87,651.2	5,882.2	7,606.1	35,811.8	58,065.3	5,853.1
2018	44,833.2	502,337.5	545,126.4	81,186.6	32,530.5	171,382.8	191,434.9	23,703.7	10,506.5	63,301.1	102,385.9	6,464.6	8,910.7	43,714.9	68,257.3	6,761.7
2019	51,146.4	597,082.3	628,817.3	90,213.8	35,748.3	203,706.0	219,681.3	26,324.5	11,747.0	75,246.1	117,761.3	7,047.0	10,110.5	51,955.9	79,031.7	7,617.8

Estimated 2010 Revenue Impact (EXH. 180)				
COL.	(34)	(35)	(36)	(37)
	Revenue Requirement ($000)			
Basis Points	FPL	PEF	TECO	Gulf
100	$130,000	$52,000	$27,000	$10,000
1	$1,300	$520	$270	$100

	Basis Point Impact of Proposed Goals															
	FPL				PEF				TECO				Gulf			
Year	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF
2010	3.3	24.9	14.9	6.4	5.7	21.2	13.1	5.4	1.8	15.1	13.4	3.0	2.3	28.1	23.3	3.7
2011	6.7	50.0	45.7	13.1	11.7	42.6	40.8	10.8	4.7	30.3	40.8	6.3	7.0	56.5	72.8	8.6
2012	10.1	75.8	93.7	20.0	18.2	64.7	84.1	16.1	8.5	46.0	83.3	9.3	14.3	85.8	148.5	14.9
2013	13.6	102.0	142.3	27.3	25.1	87.0	129.4	21.5	13.1	61.9	127.5	12.1	23.9	115.4	228.3	22.2
2014	17.5	131.1	193.1	34.9	32.3	111.9	174.7	26.9	18.2	79.6	173.6	14.9	35.3	148.3	309.8	30.5
2015	21.4	189.8	245.4	42.4	40.5	161.9	219.5	31.7	23.5	115.2	221.7	17.3	48.1	214.7	394.9	39.4
2016	25.5	252.0	300.5	50.0	48.2	215.0	265.6	36.5	28.9	152.9	272.0	19.6	62.0	285.1	484.6	48.9
2017	29.8	316.6	357.8	57.5	55.9	270.0	315.8	41.1	34.0	192.1	324.6	21.8	76.1	358.1	580.7	58.5
2018	34.5	386.4	419.3	62.5	62.6	329.6	368.1	45.6	38.9	234.4	379.2	23.9	89.1	437.1	682.6	67.6
2019	39.3	459.3	483.7	69.4	68.7	391.7	422.5	50.6	43.5	278.7	436.2	26.1	101.1	519.6	790.3	76.2

Staff's Basis Point Calculation

Proposed Energy Goals (GWh)

	FPL				PEF				TECO				Gulf			
COL.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Year	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF
2010	74.1	556.1	332.0	143.0	50.6	189.7	117.0	48.0	8.2	70.1	62.0	14.0	4.0	48.3	40.0	6.4
2011	148.6	1,115.1	1,020.0	293.0	104.4	380.4	364.0	96.0	21.6	140.6	189.0	29.0	12.0	97.0	125.0	14.8
2012	225.6	1,692.0	2,092.0	447.0	162.7	577.3	751.0	144.0	39.6	213.2	386.0	43.0	24.6	147.3	255.0	25.5
2013	303.5	2,277.3	3,176.0	610.0	224.0	777.0	1,155.0	192.0	60.9	287.0	591.0	56.0	41.0	198.1	392.0	38.1
2014	390.1	2,927.1	4,311.0	779.0	288.5	998.7	1,560.0	240.0	84.3	368.8	805.0	69.0	60.6	254.7	532.0	52.3
2015	477.4	4,237.3	5,478.0	946.0	361.2	1,445.7	1,960.0	283.0	108.9	533.9	1,028.0	80.0	82.6	368.7	678.0	67.7
2016	569.9	5,625.4	6,707.0	1,115.0	430.3	1,919.3	2,371.0	326.0	133.8	708.9	1,261.0	91.0	106.4	489.5	832.0	84.0
2017	665.9	7,066.1	7,987.0	1,284.0	498.7	2,410.7	2,820.0	367.0	157.7	890.5	1,505.0	101.0	130.6	614.9	997.0	100.5
2018	769.8	8,625.3	9,360.0	1,394.0	558.6	2,942.7	3,287.0	407.0	180.4	1,086.9	1,758.0	111.0	153.0	750.6	1,172.0	116.1
2019	878.2	10,252.1	10,797.0	1,549.0	613.8	3,497.7	3,772.0	452.0	201.7	1,292.0	2,022.0	121.0	173.6	892.1	1,357.0	130.8

Rate Impacts of GDS Proposal (EXH. 130)

	COL.	(17)
Average Base Rate	($/MWh)	$58.24

Lost Revenues ($000)

	FPL				PEF				TECO				Gulf			
COL.	-18 =(1)*(17)	-19 =(2)*(17)	-20 =(3)*(17)	-21 =(4)*(17)	-22 =(5)*(17)	(23) =(6)*(17)	(24) =(7)*(17)	(25) =(8)*(17)	(26) =(9)*(17)	(27) =(10)*(17)	-28 =(11)*(17)	-29 =(12)*(17)	(30) =(13)*(17)	(31) =(14)*(17)	(32) =(15)*(18)	(33) =(16)*(17)
Year	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF	UTILITY	FSC/ GDS	SACE/ NRDC	STAFF
2010	4,315.6	32,387.3	19,335.7	8,328.3	2,949.3	11,048.1	6,814.1	2,795.5	477.6	4,082.6	3,610.9	815.4	233.0	2,813.0	2,329.6	372.7
2011	8,654.5	64,943.4	59,404.8	17,064.3	6,077.3	22,154.5	21,199.4	5,591.0	1,258.0	8,188.5	11,007.4	1,689.0	698.9	5,649.3	7,280.0	862.0
2012	13,138.9	98,542.1	121,838.1	26,033.3	9,473.3	33,622.0	43,738.2	8,386.6	2,306.3	12,416.8	22,480.6	2,504.3	1,432.7	8,578.8	14,851.2	1,485.1
2013	17,675.8	132,630.0	184,970.2	35,526.4	13,048.1	45,252.5	67,267.2	11,182.1	3,546.8	16,714.9	34,419.8	3,261.4	2,387.8	11,537.3	22,830.1	2,218.9
2014	22,719.4	170,474.3	251,072.6	45,369.0	16,801.7	58,164.3	90,854.4	13,977.6	4,909.6	21,478.9	46,883.2	4,018.6	3,529.3	14,833.7	30,983.7	3,046.0
2015	27,803.8	246,780.4	319,038.7	55,095.0	21,037.5	84,197.6	114,150.4	16,481.9	6,342.3	31,094.3	59,870.7	4,659.2	4,810.6	21,473.1	39,486.7	3,942.8
2016	33,191.0	327,623.3	390,615.7	64,937.6	25,059.5	111,780.0	138,087.0	18,986.2	7,792.5	41,286.3	73,440.6	5,299.8	6,196.7	28,508.5	48,455.7	4,892.2

2017	38,782.0	411,529.7	465,162.9	74,780.2	29,045.5	140,399.2	164,236.8	21,374.1	9,184.4	51,862.7	87,651.2	5,882.2	7,606.1	35,811.8	58,065.3	5,853.1
2018	44,833.2	502,337.5	545,126.4	81,186.6	32,530.5	171,382.8	191,434.9	23,703.7	10,506.5	63,301.1	102,385.9	6,464.6	8,910.7	43,714.9	68,257.3	6,761.7
2019	51,146.4	597,082.3	628,817.3	90,213.8	35,748.3	203,706.0	219,681.3	26,324.5	11,747.0	75,246.1	117,761.3	7,047.0	10,110.5	51,955.9	79,031.7	7,617.8

Estimated 2010 Revenue Impact (EXH. 180)				
COL.	(34)	(35)	(36)	(37)
	Revenue Requirement ($000)			
Basis Points	**FPL**	**PEF**	**TECO**	**Gulf**
100	$130,000	$52,000	$27,000	$10,000
1	$1,300	$520	$270	$100

	Basis Point Impact of Proposed Goals															
	FPL				**PEF**				**TECO**				**Gulf**			
COL.	(38) =(18)/(34)	(39) =(19)/(34)	(40) =(20)/(34)	(41) =(21)/(34)	(42) =(22)/(35)	(43) =(23)/(35)	(44) =(24)/(35)	(45) =(25)/(35)	(46) =(26)/(36)	(47) =(27)/(36)	(48) =(28)/(36)	(49) =(29)/(36)	(50) =(30)/(37)	(51) =(31)/(37)	(52) =(32)/(37)	(53) =(33)/(37)
Year	**UTILITY**	**FSC/ GDS**	**SACE/ NRDC**	**STAFF**	**UTILITY**	**FSC/ GDS**	**SACE/ NRDC**	**STAFF**	**UTILITY**	**FSC/ GDS**	**SACE/ NRDC**	**STAFF**	**UTILITY**	**FSC/ GDS**	**SACE/ NRDC**	**STAFF**
2010	3.3	24.9	14.9	6.4	5.7	21.2	13.1	5.4	1.8	15.1	13.4	3.0	2.3	28.1	23.3	3.7
2011	6.7	50.0	45.7	13.1	11.7	42.6	40.8	10.8	4.7	30.3	40.8	6.3	7.0	56.5	72.8	8.6
2012	10.1	75.8	93.7	20.0	18.2	64.7	84.1	16.1	8.5	46.0	83.3	9.3	14.3	85.8	148.5	14.9
2013	13.6	102.0	142.3	27.3	25.1	87.0	129.4	21.5	13.1	61.9	127.5	12.1	23.9	115.4	228.3	22.2
2014	17.5	131.1	193.1	34.9	32.3	111.9	174.7	26.9	18.2	79.6	173.6	14.9	35.3	148.3	309.8	30.5
2015	21.4	189.8	245.4	42.4	40.5	161.9	219.5	31.7	23.5	115.2	221.7	17.3	48.1	214.7	394.9	39.4
2016	25.5	252.0	300.5	50.0	48.2	215.0	265.6	36.5	28.9	152.9	272.0	19.6	62.0	285.1	484.6	48.9
2017	29.8	316.6	357.8	57.5	55.9	270.0	315.8	41.1	34.0	192.1	324.6	21.8	76.1	358.1	580.7	58.5
2018	34.5	386.4	419.3	62.5	62.6	329.6	368.1	45.6	38.9	234.4	379.2	23.9	89.1	437.1	682.6	67.6
2019	39.3	459.3	483.7	69.4	68.7	391.7	422.5	50.6	43.5	278.7	436.2	26.1	101.1	519.6	790.3	76.2