

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

Petition for Approval of )  
Numeric Conservation Goals by )  
Florida Power & Light Company )

Docket No. 130199-EI

Filed: September 30, 2014

**FLORIDA POWER & LIGHT COMPANY'S POST-HEARING BRIEF**

Florida Power & Light Company ("FPL" or the "Company"), pursuant to Order No. PSC-14-0356-PHO-EU, hereby files with the Florida Public Service Commission ("FPSC" or "Commission") its post-hearing statement of issues, positions, and brief ("Post-Hearing Brief") in the above-referenced docket, and states:

**I. SUMMARY OF ARGUMENT**

Through the Florida Energy Efficiency and Conservation Act ("FEECA"), the Florida Legislature has emphasized the importance of utilizing the "most efficient and cost-effective demand-side renewable energy systems and conservation systems..." *See* § 366.81, Fla. Stat. (2013).<sup>1</sup> Cost-effectiveness is a prevailing purpose and consideration throughout Sections 366.81 and 366.82, Florida Statutes. Within this framework, the Commission is directed by the legislature to adopt "appropriate goals." *See* § 366.82(2), Fla. Stat.

The Commission has a long and consistent history of implementing FEECA in a manner that (i) minimizes rate impacts on all customers by relying primarily on the Rate Impact Measure ("RIM") cost-effectiveness preliminary screening test, (ii) does not ask customers to pay incentives to "free rider" participants, and (iii) does not ask customers to pay for more Demand Side Management ("DSM") than can be used beneficially within the utility's recent resource planning process. Tr. 92-93 (Deason). This approach has served FPL's customers well for

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<sup>1</sup> All references to the Florida Statutes are to the 2013 Florida Statutes.

decades – FPL has achieved significant cumulative DSM savings while keeping electric rates low for all of its customers.<sup>2</sup> Tr. 93 (Deason).

In 2009, the Commission experimented with another approach: it used the Total Resource Cost (“TRC”) preliminary screening test to set FPL’s goals; it set goals that were “unconstrained” by FPL’s actual need for new resources as identified in FPL’s planning process; and it further increased FPL’s goals by including certain measures that customers could be expected to adopt on their own without an incentive payment. *See* Docket No. 080407-EG, Order No. PSC-09-0855-FOF-EG, pp. 15-16. When the electric rate impact to customers from this approach was subsequently recognized in the course of reviewing FPL’s DSM Plan to implement the goals, the Commission decided the impact was too great. *See* Docket No. 100155-EG, Order No. PSC-11-0346-PAA-EG, pp. 4-5. Accordingly, the Commission required FPL to continue implementing DSM programs that had been determined to be cost-effective in previous DSM proceedings. *Id.*; *see also* Tr. 93 (Deason). This recent history supports turning away from 2009’s failed experiment and returning to the fundamental rate impact and resource need considerations that have supported this Commission’s successful implementation of FEECA over decades.

The record in this proceeding shows that FPL’s proposed DSM goals are fully consistent with these fundamental considerations. FPL’s proposed goals minimize rate impacts to its customers and avoid cross subsidies between non-participants and participants, while meeting FPL’s resource needs through 2025. Tr. 366 (Sim); *see also* Ex. 15. These proposed goals are based on measures that passed the RIM economic screening test, avoid the payment of incentives

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<sup>2</sup> FPL’s DSM achievements are not just a function of its size. As shown on Exhibit 18, FPL’s peak load represents only 2% of the national peak, but FPL has achieved 7% of the nation’s DSM, including 9% of the nation’s energy efficiency.

to potential “free rider” participants, and reflect FPL’s resource planning process. *See* Tr. 306-08 (Sim); *see also* Tr. 124 (Deason) (recommending that the approved level of DSM goals reflect these factors). In fact, FPL followed a rigorous, six-step analytical Integrated Resource Planning (“IRP”) process similar to the process it has used in past DSM goal-setting proceedings. Tr. 314-17 (Sim). FPL utilized current forecasts and assumptions that appropriately reflected FPL’s specific resource needs and system costs. *See* Tr. 311 (Sim). Such an approach ensures that DSM decisions are based both on the individual utility’s specific resource needs and the economics of DSM resource additions to that particular utility system – consistent with how decisions on generation resources are made. *Id.*

Several factors have significantly affected the cost-effectiveness of DSM measures, and ultimately, FPL’s proposed level of DSM goals since the last DSM goals proceeding.<sup>3</sup> For example, current forecasted fuel costs are lower, current projected carbon dioxide emission compliance costs are lower, and FPL’s generating system is more fuel-efficient. Tr. 309, 370-77 (Sim). Additionally, the amount of energy efficiency projected to be delivered by federal and state codes and standards over the 10-year goals period has increased. Tr. 308, 371-72 (Sim); Tr. 198-200 (Koch). Each of these factors greatly benefits customers, but at the same time reduces the availability and cost-effectiveness of utility DSM options. Tr. 309 (Sim).

FPL’s testimony and analyses presented in this docket demonstrate that FPL’s proposed cumulative goal of 337 MW (Summer) for the 2015-2024 DSM goals period is the right level of DSM for FPL’s customers. The resource plan that includes the RIM-based 337 MW portfolio of

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<sup>3</sup> FEECA goals are not required – nor should they be expected – to necessarily increase year over year. Their absolute level will and should change as considerations of cost-effectiveness, technology, and other economic factors change with time. The end objective is certainly not to have ever-increasing conservation goal levels without regard to cost and electric rates. Rather, the objective is to have appropriate, cost-effective goals. *See* Tr. 94, 121 (Deason).

DSM is projected to result in the lowest levelized system average electric rates of all the resource plans analyzed and the lowest annual electric rates of any of the DSM-based resource plans analyzed. Tr. 307, 366 (Sim); Ex. 15. Additionally, the proposed goals avoid cross-subsidization of DSM program participants by customers who do not participate. *Id.*

Two intervenors proposed alternative levels of DSM goals for FPL in this docket – the Southern Alliance for Clean Energy (“SACE”) and the Sierra Club. As summarized by former Commission Chairman Deason, their recommended alternative goals are “inappropriate, unnecessary, contrary to Florida statutes and rules, and not adequately substantiated by the evidence presented.” Tr. 1231 (Deason). The witnesses for these intervenors did not perform Florida-specific economic evaluations that meet the criteria of Section 366.82, Fla. Stat., nor did they attempt to comply with Rule 25-17.0021, Fla. Admin. Code. Rather, each recommended an arbitrary gigawatt-hour savings target of 1% of total electric sales that would significantly and unnecessarily increase electric rates for all FPL customers and increase bills for non-participating customers. *See* Tr. 1013-14 (Mims) (presenting SACE’s proposal) and Tr. 1191 (Woolf) (presenting Sierra Club’s proposal); *see also* Tr. 1426-37 (Sim) (presenting the increase in electric rates and non-participants’ bills that would result).<sup>4</sup> FPL calculated that the average non-participating customer’s electric bills would increase by a total of \$586-\$681 versus a supply-only resource plan over the ten-year DSM goals term if the intervenors’ proposed goals were adopted. Tr. 1432 (Sim).

With respect to FPL’s current DSM Solar Pilot Programs, the cost-effectiveness analyses presented in this docket demonstrate that these programs remain uneconomic and should be

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<sup>4</sup> To further illustrate the magnitude of the rate increases that would result from the intervenors’ proposed DSM goals, FPL calculated the one-time additional cost that would be required in 2024 to bring the levelized system average electric rate of FPL’s proposed RIM 337 MW goals up to the levelized system average electric rate of the intervenors’ proposed goals. For SACE’s proposed goals that cost would be \$18.7 billion, and for Sierra Club’s proposed goals the cost would be \$16.3 billion. Tr. 1429 (Sim).

allowed to expire at the end of their current terms this year. Tr. 213-18 (Koch). These rebate-based Pilot Programs constitute a concentrated cross-subsidy of a small number of customers who receive rebates to install their own systems, by the vast majority of customers who do not. Tr. 1298 (Koch). The rationale offered by witnesses on behalf of the Environmental Defense Fund (“EDF”), SACE, and Sierra Club to continue these uneconomic programs was weak at best, and essentially relied on the argument that photovoltaic (“PV”)-based DSM applications should be evaluated or “valued” differently than all other DSM measures. As demonstrated by FPL Witness Koch, an FPL research & development-based PV effort that evaluates and gathers data on different types of PV applications in Florida, including demand-side systems, would be consistent with FEECA and more valuable to all of FPL’s customers than an extension of the current, highly-subsidized, Pilot Programs. Tr. 1298-99 (Koch); Tr. 1379 (Sim).

As discussed in more detail below, the record overwhelmingly supports approval of FPL’s proposed DSM goals. FPL’s proposed goals comply with the requirements of Section 366.82, Fla. Stat., comply with Rule 25-17.0021, Fla. Admin. Code., and will result in the lowest levelized average electric rates for the benefit of *all* of FPL’s customers – DSM program participants and non-participants of every income level. Indeed, there is no record evidence challenging FPL’s conclusion that its proposed goals will result in the lowest levelized average electric rates, only arguments that customer impacts should be gauged differently. The Commission has consistently recognized that *rate impacts* are a fundamental consideration in setting DSM goals. *See, e.g.*, Docket No. 930548-EG, Order No. PSC-94-1313-FOF-EG, p. 22; *see also* Docket No. 080407-EG, Order No. PSC-09-0855-FOF-EG, pp. 15, 26. Accordingly, FPL’s proposed DSM goals should be approved.

## II. ISSUES AND POSITIONS

### A. Technical Potential

**Issue 1:** Are the Company's proposed goals based on 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.?

**FPL:** \*Yes. The 2014 Technical Potential Study reflects an update to the 2009 Technical Potential Study that was approved by the Commission in the last DSM goals-setting docket. The FEECA Utilities worked jointly to develop the update methodology and accepted input from other parties. It required extensive iterative analytical work and continuous collaboration to ensure that it was comprehensive and resulted in a thorough and wide-ranging reassessment of conservation and efficiency measures.\*

FEECA 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." Section 366.82(3), Fla. Stat. The Technical Potential ("TP") analysis is the first in a series of steps in the DSM goals development process. Its purpose is to identify the theoretical limit to reducing summer and winter electric peak demand and energy. Tr. 201 (Koch). The TP assumes every identified potential end-use measure is installed everywhere it is "technically" feasible to do so from an engineering standpoint regardless of cost, customer acceptance, or any other real-world constraints (such as product availability, contractor/vendor capacity, cost-effectiveness, and customer preferences). *Id.* Therefore, the TP in no way reflects the MW and GWh savings that are actually achievable through real-world voluntary utility programs. *Id.*

FPL Witness Koch testified that, pursuant to the consensus reached with Staff and other parties on June 17, 2013, FPL worked with the other FEECA utilities to update the TP study conducted for the 2009 DSM goals docket. Tr. 201-02 (Koch). Other interested parties such as SACE were given the opportunity to provide input. Tr. 1309 (Koch). The update included a

thorough and wide-ranging reassessment of conservation and efficiency measures, and resulted in the addition of 25 new measures. Tr. 203, 1309 (Koch); *see also* Ex. 19. It required extensive iterative analytical work and continuous collaboration among the FEECA utilities to ensure it was comprehensive. Tr. 202-04 (Koch); *see also* Ex. 20. As a result, the TP update provided an adequate assessment of the full technical potential of all measures. Tr. 204 (Koch).

Importantly, the TP study reflected the impact of government-mandated energy efficiency codes and standards and the large amounts of energy efficiency being delivered to FPL's customers through these means. For example, new codes and standards eliminated about 1,700 MW and 4,200 GWh of technical potential from the TP study update. Ex. 21; *see also* Tr. 254 (Koch). Witness Woolf, testifying on behalf of Sierra Club, agreed with this impact conceptually, stating “[i]t is true that increasing building codes and standards will make it more difficult to achieve DSM savings over time.” Tr. 1187 (Woolf).

Both Witnesses Mims and Woolf, on behalf of SACE and Sierra Club, respectively, argued that an entirely new TP study should have been performed. Tr. 1013 (Mims); Tr. 1153 (Woolf). But an update was appropriate in light of the relatively short time since the 2009 TP study had been prepared, as well as the Commission's acceptance of that study in the 2009 DSM goals proceeding. Tr. 201-02, 1308 (Koch). Additionally, it would have required substantial time and expense to perform a full, new study. *Id.* For these reasons, the FEECA utilities agreed, and ultimately were directed, to include an “update” of the 2009 TP study in their testimony. *See* Docket No. 130199-EI, Order No. PSC-13-1386-PCO-EI, Attachment A. No party sought reconsideration of that order. Moreover, in the end, the updating process resulted in a thorough and adequate assessment of the technical potential of DSM measures. *See* Tr. 202-04 (Koch); Ex. 20, 21.

SACE and Sierra Club also re-raised arguments that were made in the 2009 DSM goals docket about the 2009 TP study. *See* Tr. 1003-04 (Mims) and Tr. 1156-57(Woolf) (each referencing 2009 intervenor testimony). However, the 2009 study was thoroughly debated and then accepted by the Commission. Tr. 1309 (Koch). Indeed, the Commission in Order No PSC-09-0855-FOF-EG, at page 8, characterized the study as “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.” These intervenors are simply seeking another “bite” at the 2009 TP study, and such attempts should be rejected.

No party presented evidence that specific, technically feasible measures, with Florida-measurable demand and energy savings impacts, were omitted and should have been included. In fact, SACE and Sierra Club ultimately side-stepped the entire topic by proposing DSM GWh goals that rely on no Florida TP study at all, but rather reflect arbitrary percentages of electric sales. *See* Tr. 1013-14 (Mims) (recommending .75% increasing to 1% of retail sales for energy efficiency goals) and Tr. 1191 (Woolf) (recommending 1% of retail sales by 2019 for energy efficiency goals). The record therefore supports a finding that the TP study presented by FPL, based upon the 2009 TP study approved by the Commission, is adequate.

### **B. Cost-Effectiveness Tests**

**Issue 2:**        **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.?**

**FPL:**            \*Yes. In developing its proposed DSM goals, FPL used the Participant screening test to analyze the potential cost-effectiveness of DSM measures. The Participant screening test fully accounts for all potential benefits and costs that are received and/or incurred by a potential participant in a DSM measure. Only those



measures that pass the Participant screening test have been included in FPL's proposed goals.\*

FPL utilized the Participant screening test, among other preliminary economic screening tests, in its economic evaluation of DSM measures. Tr. 323 (Sim). The purpose of the Participant test is to determine if it makes economic sense for an individual customer to participate in a specific DSM measure. *Id.* The Participant test accounts for all potential benefits from participating in a DSM measure and also accounts for all the potential costs that would be incurred by a customer who chooses to participate. Tr. 326 (Sim).

Every DSM measure identified in the TP study was evaluated along two screening paths – one examined measures using the Participant and RIM screening tests, and the other examined measures using the Participant and TRC screening tests. Tr. 329-31 (Sim). The steps along each of these “paths” are depicted on Exhibit 6. (Each path also utilized a years-to-payback screening criterion as the final step, as discussed below in Section C, “Consideration of Free Riders.”) Only measures that passed both the Participant test and RIM test, or the Participant test and TRC test, were carried forward to the subsequent steps and to determining Achievable Potential. Tr. 394-95 (Sim).

Sierra Club's questioning at the hearing indicated a mistaken presumption that use of the RIM test somehow eliminated all the DSM measures that had passed the Participant test along the RIM screening path. *See* Tr. 394-95. However, it is evident on the face of Exhibit 6 that this was not the case. Of the 850 measures analyzed, 152 measures passed *both* the Participant and RIM tests and were carried forward in the analysis. Similarly, 510 measures passed *both* the Participant and TRC tests and were carried forward in the analysis. *See* Ex. 6.

Because FPL's proposed goals reflect DSM measures that passed the Participant test, and because the Participant test accounts for all the benefits as well as all the costs that accrue to

participants in a DSM measure, FPL's proposed DSM goals adequately reflect the costs and benefits to customers participating in DSM measures.

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

**FPL:** \*Yes. FPL's proposed goals reflect measures that passed the RIM screening test, using updated forecasts and FPL system-specific assumptions. The RIM test accounts for all the benefits and costs that are received or incurred by all utility customers, both participants and non-participants alike. The TRC test, on the other hand, omits incentive payments made to DSM program participants – which are costs recovered from all customers – and omits the impact of unrecovered revenue requirements on electric rates of all customers. FPL's specific cost assumptions were shown to be reasonable. Non-energy benefits are clearly too speculative to include in cost-effectiveness screening.\*

*a. System Forecasts and Assumptions*

FPL Witness Dr. Sim testified that FPL updated a number of key forecasts and assumptions in late 2013 for FPL's 2014 resource planning work, including FPL's DSM Goals analyses. Tr. 311 (Sim). These forecasts and assumptions are consistent with those used for FPL's 2014 Ten Year Site Plan. *Id.* Compared to forecasts and assumptions used in the 2009 DSM Goals analyses, current forecasts and assumptions have changed greatly, impacting the cost-effectiveness of DSM measures for customers on FPL's system. Tr. 309 (Sim). The primary drivers reducing the cost-effectiveness of DSM (whether evaluated under the RIM screening test or the TRC screening test) include the following:

- Lower forecasted fuel costs: Natural gas prices are currently forecast to be approximately only 50% of what they were forecast to be in 2009. Lower fuel costs result in lower potential fuel savings benefits from the kWh reductions of DSM measures, causing fewer DSM measures to pass economic screening and lower incentive payments for surviving measures. Tr. 372-73 (Sim).

- Increased FPL generating system efficiency: Due to FPL's investment decisions, FPL's heat rate has improved by 20% over the years 2001-2012, and it is projected to continue to improve. Like lower fuel costs, greater generating efficiency serves to lower marginal fuel costs that DSM kWh reductions can remove, thus lowering a DSM kWh benefit, reducing the number of passing measures, and reducing the incentive payments available for surviving measures. Tr. 373-74 (Sim).
- Lower CO<sub>2</sub> compliance costs: Compliance cost forecasts were significantly higher in 2009 than they are currently. (This topic is discussed further below under Issue 5.) Lower compliance costs result in lower compliance cost savings benefits from the kWh reduction of DSM measures. Once again, this results in fewer measures passing the economic screening and lower incentive payments for surviving measures. Tr. 375 (Sim).
- Changes in projected firm gas transportation volumes and costs: Due to the firm gas transportation volume that has been committed to in association with the new gas pipeline, the incremental natural gas needed for new combined cycle ("CC") units after the 2017 and 2020 pipeline additions has decreased. Also, the incremental volumes will not be needed as soon after the new CC capacity goes in service, and the cost of the additional firm gas transportation has decreased from 2009 projections. These changes reduce the gas transportation avoidance/deferral benefits of DSM when DSM kW savings avoid or defer a new CC unit. Tr. 376 (Sim).

Obviously, each of these factors has greatly benefited FPL's customers, and will continue to benefit them, through lower fuel and emission costs. Tr. 309, 376 (Sim). Nonetheless, these

factors lower the economic competitiveness of DSM options versus Supply options, which, in turn, leads to lower DSM Achievable Potential values. *Id.*

***b. Preliminary Economic Screening Tests***

FPL evaluated DSM measures utilizing the RIM preliminary economic screening test as well as the TRC preliminary economic screening test (in addition to the Participant test discussed above, and a years-to-payback screening test to account for free riders discussed below). *See* Tr. 323 (Sim). FPL screened individual measures using each of these tests against its next planned generation addition (i.e., the soonest addition that could be avoided or deferred by DSM) – a 2019 combined cycle unit.<sup>5</sup> The intent of the RIM and TRC tests is to provide preliminary information with which to judge whether it might be potentially economically beneficial for FPL’s customers if FPL were to offer the DSM measure being evaluated, but as discussed below, only the RIM test ensures that measures are beneficial for *all* customers. *Id.*

The RIM and TRC tests both fully account for all potential DSM-related benefits. In fact, these two tests provide an identical calculation of potential benefits for a specific DSM measure. Tr. 326 (Sim). However, as discussed above, the potential benefits have decreased for DSM resources on FPL’s system.

While both tests include identical benefits, only the RIM test accounts for all of the relevant DSM-related costs that will be incurred by a utility’s customers (both DSM participants and non-participants). *Id.* The TRC screening test omits the incentive payments made to DSM program participants – costs that are recovered from all of the utility’s customers. As explained by FPL Witness Dr. Sim, FPL paid approximately \$190 million in DSM incentives during 2013,

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<sup>5</sup> In the subsequent system analyses, FPL determined that it would nonetheless need to add generation to its system in 2019 to meet resource needs because there was insufficient Achievable Potential DSM. Nonetheless, in the preliminary economic screening, FPL gave DSM resources the benefit of competing against the 2019 CC unit. *See* Tr. 444-45 (Sim).

which are recovered from all customers through the Energy Conservation Cost Recovery (“ECCR”) Clause. Tr. 327 (Sim). These incentive payments represent approximately 78% of FPL’s total DSM expenditures in 2013. Obviously, incentives represent a substantial cost impact to customers and should not be disregarded in the DSM goal-setting process. *Id.* Additionally, the TRC test omits the economic impact of unrecovered revenue requirements on the utility’s electric rates. Tr. 327 (Sim). Finally, the TRC test includes participants’ out-of-pocket costs for participating in the DSM measure. These participant costs are not recovered from the general body of utility customers (and are already captured in the Participant test). Thus, the TRC screening test does not appropriately assess the cost impacts of DSM measures on the general body of customers. Tr. 327-28 (Sim).

Sierra Club’s witness Mr. Woolf criticized FPL’s calculation of unrecovered revenue requirements in the RIM screening test. First Mr. Woolf claimed utilities should exclude the impact of DSM on the variable costs for the system. *See* Tr. 1134 (Woolf). As explained by FPL Witness Dr. Sim, such an approach would not accurately account for all cost impacts of DSM. For example, there are several fuel cost impacts from DSM measures. Some will lower the utility system’s fuel costs and some will increase the utility system’s fuel costs. In the RIM test, the net effect of these fuel cost impacts from DSM is reflected. To exclude the fuel-based revenues on the cost side of the ledger while including the net fuel savings on the system on the benefit side of the ledger would incorrectly understate the impact of DSM on electric rates. Tr. 1399-1400 (Sim). Mr. Woolf also argued that, due to regulatory lag, the amount of unrecovered revenue requirements reflected in FPL’s cost-effectiveness tests was overstated. Tr. 1135 (Woolf). Again, this claim overlooks the impact on components of customers’ bills that are adjusted annually. Lowering the number of GWh over which costs addressed in clauses

(capacity clause, environmental clause, etc.) are recovered results in higher cents/kWh charges for each of these clauses, thus raising electric rates for all customers. Ex. 143 (p. 4).<sup>6</sup>

Only the combination of the Participant and RIM screening tests correctly reflects all of the economic impacts, both benefits and costs, which are incurred by participants and by all of a utility's customers when DSM measures are implemented. Thus, use of these two tests meets the statutory criteria included in Section 366.82(3)(b) to consider "the costs and benefits to the general body of rate payers as a whole, including utility incentives and participant contributions." Because FPL's proposed DSM goals reflect measures that pass both the Participant and RIM screening tests, FPL's proposed DSM goals adequately reflect the costs and benefits to the general body of customers as required by statute.<sup>7</sup>

*c. Non-Energy Benefits*

Both SACE and Sierra Club presented testimony that "non-energy benefits" somehow should be reflected in the cost-effectiveness calculations. See Tr. 1009 (Mims 47) and Tr. 1147 (Woolf). No explanation was provided for how such benefits should be calculated, with the exception of Mr. Woolf's suggestion that the goals be increased by "inherently inexact" percentage adders to reflect such benefits. Tr. 1147 (Woolf). These suggestions were easily rebutted by FPL Witnesses Deason and Sim.

Mr. Deason explained that the concept of adding non-energy benefits, or "externalities" as they are also called, "seeks to add benefits that are external to the traditional bounds of

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<sup>6</sup> It is important to note that regardless of Mr. Woolf's arguments, FPL's levelized average electric rate comparison supporting its proposed DSM goals (see Ex. 13) does not rely on any forecast of unrecovered revenue requirements. Ex. 143, p. 4.

<sup>7</sup> Importantly, the costs and benefits to the general body of customers is also assessed by FPL in the subsequent system analysis stage of IRP work and reflected in FPL's proposed DSM goals. In that stage, various DSM portfolios and a supply-only portfolio were analyzed to determine which would be the best portfolio for FPL's customers. FPL's proposed goals reflect the RIM 337 MW portfolio, which results in the lowest levelized average electric system rate for all customers. This step in the analysis is discussed in more detail below under Issues 8 and 9.

ratemaking and beyond the way Florida has interpreted its regulatory jurisdiction.” Tr. 1256-57 (Deason). Several intervenors made similar arguments for the inclusion of externalities in the 1994 DSM goal-setting proceeding. The Commission rejected the use of the concept, noting the benefits were either non-quantifiable or else not quantified in the record. Tr. 1257 (Deason). To FPL’s knowledge, externalities have never been recognized by the Commission in DSM goal-setting proceedings. Furthermore, inclusion of such benefits or costs would be inconsistent with the way the Commission sets rates for supply-side resource options. Tr. 1259 (Deason).

As Dr. Sim testified, there are numerous reasons why an attempt to include non-energy benefits would be a “bad idea” including:

- Adding non-energy benefits is an obvious attempt to artificially make the cost-effectiveness of DSM appear better than it really is;
- Making non-cost-effective DSM appear to be cost-effective through the inclusion of non-energy benefits will result in unnecessary increases in electric rates if the non-cost-effective DSM measures are implemented;
- Even if one wanted to try to account for non-energy benefits, it would be impossible to place an accurate cost value on such benefits (Mr. Woolf, for Sierra Club, seemed to agree, stating at Tr. 1146 that “there is some uncertainty regarding the magnitude of some participant non-energy benefits”); and
- Once one starts down the path of trying to identify what impact to society will count as a “non-energy benefit,” it will be impossible to know where the correct place is to draw the line.

Tr. 1392-94 (Sim). Additionally, use of non-energy benefits as suggested by SACE and Sierra Club appears to be entirely one-sided, with various benefits counting only on the DSM side of

the ledger. Examples of non-energy benefits on the supply side of the ledger might include employment impacts, property tax impacts, economic development benefits from lower electric rates, etc. Tr. 1394 (Sim). The Commission should reject this unquantifiable, lopsided recommendation.

*d. DSM Cost Assumptions*

SACE's and Sierra Club's witnesses claimed generally that FPL's DSM costs were inflated. See Tr. 990 (Mims) and Tr. 1176 (Woolf). Witness Mims, on behalf of SACE, relied on a single benchmarking study produced by Lawrence Berkley National Laboratory ("LBNL") as the support for her assertions. Tr. 992 (Mims). The LBNL's primary comparative metric is the so-called levelized Cost of Saved Energy (CSE). *Id.*; see also Tr. 1299 (Koch). FPL Witness Koch explained the many problems associated with this metric. First, the CSE omits demand savings, arguably the most important benefit of all DSM programs, including energy efficiency programs. Second, it ignores the impact of lost revenues. For these two reasons, CSE is not a complete or valid metric or compare DSM programs or portfolios. Tr. 1300-03 (Koch). The third deficiency is with the LBNL's execution of the study itself, which suffers from many of the typical problems inherent in DSM benchmarking, as well as major data integrity problems that render its results meaningless and unusable. *Id.* The LBNL study included data that was inconsistent, suffered from missing data, and attempted to compare dissimilar program portfolios between states. Tr. 1304-05 (Koch).

Mr. Woolf, on behalf of Sierra Club, similarly used a CSE calculation to argue that Florida utilities are more expensive than his calculated national average and to contrast the Florida utilities. Tr. 1176 (Woolf); see also Tr. 1306 (Koch). The deficiencies inherent with any CSE calculation (i.e., omitting demand savings and ignoring lost revenues) apply equally to his



information. Tr. 1306 (Koch). Mr. Woolf also asserted that all of the FEECA utilities could provide DSM at the same cost – specifically, at the same cost as Duke Energy Florida and/or Tampa Electric Co. Tr. 1176 (Woolf). Clearly this assertion cannot withstand scrutiny. As explained by FPL Witness Koch, differences among the utilities’ customer bases, whether each is summer or winter peaking, level of DSM Goals, etc., all warrant different types of programs that will naturally have different cost structures. Tr. 1306-07 (Koch).

At hearing, certain of FPL’s administrative and measure cost assumptions were questioned.<sup>8</sup> SACE was unable through lengthy cross examination to achieve anything in this regard, other than to ask an inappropriate witness to confirm the existence of measure codes and dollar figures contained in a spreadsheet. *See* Tr. 409 (Sim) (“[t]hat’s what the column says...These inputs were prepared under Mr. Koch’s supervision. If there are questions regarding admin costs or cost of measure[s], he would have been the more appropriate witness to address these. I use these as inputs.”). The basis for FPL’s figures could have been asked of Witness Koch, but was not.

FPL has a long track record of effectively controlling costs across the organization, including with respect to its DSM programs. Tr. 1307 (Koch). The Commission’s audit staff conducts extensive annual audits of DSM costs in conjunction with the annual ECCR clause proceedings. *Id.* The Commission reviews FPL’s costs as part of approving FPL’s ECCR factors each year, and those costs have consistently been approved for recovery. *Id.* In addition, in May 2013, the Commission’s audit staff completed an “Administrative Efficiency” review of the DSM programs for the four largest FEECA utilities. While there were some modest process

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<sup>8</sup> SACE’s Witness Mims took the position that administrative costs should be excluded in their entirety from the FEECA utilities’ cost-effectiveness calculations. Tr. 994 (Mims). Clearly such an approach would not comply with the Commission’s definitions of the cost-effectiveness tests, found in the Cost Effectiveness Manual incorporated into Rule 25-17.008, Fla. Admin. Code. (*see* Docket No. 891324-EU, Order No. 24745, p. 14, listing “Utility Program Costs” as costs that are included in the RIM and TRC tests).

enhancement suggestions, this review resulted in no findings. *Id.* FPL's DSM costs are therefore reasonable both as a general matter, and for use as inputs to its DSM cost-effectiveness screening tests.

*e. Conclusion*

In sum, FPL's cost-effectiveness screening steps rely upon updated forecasts as well as benefit and cost figures that are both reasonable and specific to FPL's system. FPL's proposed goals reflect measures that pass the RIM test, which means the complete set of benefits and costs were considered – not just the subset that is considered in the TRC test. FPL's proposed goals therefore accurately, and adequately, reflect the costs and benefits to the general body of customers as contemplated by statute.

**Issue 4: Do the Company's proposed goals adequately reflect the need for incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems, pursuant to Section 366.82, F.S.?**

**FPL:** \*Yes. Incentives for participating customers are reflected in FPL's proposed goals because they are included and considered in the Participant and RIM screening tests. There is no need to establish incentives for utilities in this proceeding.\*

As discussed above in Issues 2 and 3, all of the benefits and costs of incentives paid to customers to promote energy efficiency and demand-side renewables are reflected in the Participant test and the RIM test (but not the TRC test). Because FPL's proposed goals reflect measures that pass both the Participant and RIM tests, these considerations are adequately reflected in FPL's proposed DSM goals.

FPL did not propose incentives for utilities for the promotion of energy efficiency and demand-side renewable systems, even though incentives are currently authorized by statute. Witness Mims on behalf of SACE suggested the Commission address utility incentives through the adoption of a rule. Tr. 1023 (Mims). Witness Woolf for Sierra Club suggested the issue be

addressed in a separate revenue decoupling docket. Tr. 1215 (Woolf). FPL's proposed DSM goals fully comply with the language and intent of FEECA and Rule 25-17.0021, are consistent with this Commission's precedent, embody good public policy as testified to extensively by Witness Deason, and will result in the lowest levelized average electric rates for customers. Accordingly, FPL's position is that such incentives are not needed at this time.

**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.?**

**FPL:** \*Yes. FPL accounted for forecasted CO<sub>2</sub> compliance costs in a sensitivity analysis. The CO<sub>2</sub> cost forecast is a reasonable "composite" forecast based on separate forecasts from FPL and Duke Energy Florida. Forecasted CO<sub>2</sub> compliance costs are lower than they were in 2009, and current compliance costs are zero. FPL's sensitivity analysis demonstrated that the number of measures passing, and the resulting Achievable Potential, changed only slightly when CO<sub>2</sub> compliance costs were included. Accordingly, FPL's proposed goals adequately reflect these forecasted costs. It would be premature to attempt to reflect some impact associated with the EPA's draft Clean Power Plan. \*

In compliance with Order No. PSC-13-0386-PCO-EU, FPL performed a base case economic analysis of DSM measures assuming no CO<sub>2</sub> compliance costs ("w/o CO<sub>2</sub>"), but also performed a sensitivity analysis in which CO<sub>2</sub> costs were included ("w/CO<sub>2</sub>"). The CO<sub>2</sub> cost forecast used was a "composite" CO<sub>2</sub> cost forecast based on separate forecasts from FPL and Duke Energy Florida. Tr. 337 (Sim). The creation of a composite CO<sub>2</sub> forecast allowed both utilities to utilize a consistent CO<sub>2</sub> compliance cost forecast in the DSM Goals analyses as directed in Order No. PSC-13-0386-PCO-EU, Attachment A.

As shown in Exhibit 6, the number of measures passing the RIM test and the TRC test changed only minimally when CO<sub>2</sub> costs were included. From the "starting point" of 850 DSM measures, 120 measures survived the RIM screening path and 300 measures survived the TRC screening path using the w/o CO<sub>2</sub> cost assumption. Tr. 332 (Sim); Ex. 6. When CO<sub>2</sub> costs were

included, 124 measures survived the RIM screening path and 301 measures survived the TRC screening path. *Id.*

All four lists of measures were carried forward to the determination of a maximum incentive payment and achievable potential. In the end, there was very little difference in the respective Achievable Potential MW values between the RIM set with and without CO<sub>2</sub>, and the TRC set with and without CO<sub>2</sub>. Tr. 345-46 (Sim). The achievable potential values “w/o CO<sub>2</sub>” were 526 MW (RIM screening path) and 576 MW (TRC screening path), while the “w/CO<sub>2</sub>” were 508 MW (RIM screening path) and 577 MW (TRC screening path). *Id.* Due to these similarities, and the instruction provided by PSC-13-0386-PCO-EU to use a “w/o CO<sub>2</sub>” assumption as a base case for proposing DSM Goals, FPL used the DSM measures that survived the “w/o CO<sub>2</sub>” screening in all remaining analyses. *Id.*

Sierra Club’s Witness Woolf claimed FPL’s results were “counter-intuitive” and stated generally that “properly accounting for GHG regulatory compliance costs would increase the number of DSM measures included in the economic potential and the achievable potential.” Tr. 1143 (Woolf). Once again, this witness’s testimony ignored or overlooked the fact that there are CO<sub>2</sub> cost impacts, as well as CO<sub>2</sub> benefits, from avoiding efficient generation with DSM. *See, e.g.,* Tr. 1370-72 (Sim). In addition, this witness’s position overlooks the fact that there are significant differences in utility systems. For example, FPL’s annual system CO<sub>2</sub> emissions are projected to *decrease* by approximately 13% over the 2015 to 2025 time frame, despite significant growth in customer load. Tr. 1381 (Sim). Clearly, the CO<sub>2</sub> compliance cost impacts

of DSM measures on FPL's system will be different than the impacts on a system with increasing CO<sub>2</sub> emissions.<sup>9</sup>

Additionally, certain intervenors attempted at hearing to demonstrate that the Environmental Protection Agency's ("EPA's") draft "Clean Power Plan" supports higher CO<sub>2</sub> cost assumptions, and presumably higher DSM goals. These arguments fail primarily because they ignore that the Clean Power Plan is still in preliminary, proposed form, still subject to industry comment and revision, still subject to potential litigation, and still requires action by the Florida Department of Environmental Protection to determine how it will be implemented in Florida. *See* Tr. 1521 (Borsch); *see also* Tr. 1477-78 (Chairman Graham, stating "[t]here's many opportunities for this thing to be, for lack of a better term, tweaked.") In sum, it is "too early to tell" what effect the EPA's proposed rules might have on future CO<sub>2</sub> compliance cost projections. Tr. 454 (Sim). Moreover, for FPL specifically, there may not be substantial (if any) incremental compliance costs because FPL is projected to meet the proposed emission targets in the Clean Power Plan assuming implementation of its current resource plan, including the RIM 337 MW DSM goals. As Dr. Sim testified, "with no changes to the resource plan we've presented in this docket, [FPL] will be at or within a percent of two of the 2020 target and [FPL] will be considerably under the 2030 target." Tr. 456 (Sim). FPL's proposed goals therefore adequately reflect costs imposed for the emission of greenhouse gasses as contemplated by statute.

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<sup>9</sup> This projection is a direct result of FPL's successful on-going efforts to improve efficiency, and lower costs, in generating electricity using clean natural gas and in increasing the portion of its total electricity generation that comes from emission-free nuclear power. Not only have these efforts resulted in low emissions, but in low costs and low electric rates as well. These are great results for FPL's customers. However, lower emissions, costs, and electric rates for the FPL system also serve to explain why the trend of declining DSM cost-effectiveness seen across the U.S. is heightened for FPL. Tr. 1381 (Sim).

**Issue 6: What cost-effectiveness test or tests should the Commission use to set goals, pursuant to Section 366.82, F.S.?**

**FPL:** \*The Commission should use the RIM test in setting DSM goals, consistent with its historic policy and rationale. The RIM test accounts for all costs and benefits, ensuring that the passing measures result in a net benefit for the general body of customers and avoiding customer cross-subsidization. FPL's proposed DSM goals minimize rate impacts and avoid cross subsidies between non-participants and participants because they are based on measures that passed the RIM test and because they reflect FPL's resource planning process.\*

The record in this docket demonstrates that use of the RIM preliminary economic screening test is the best policy choice for all of FPL's customers – both participants and non-participants, at every income level. That is because, as discussed in detail under Issue 3, the RIM screening test accounts both for the cost of incentives paid to program participants *and* the upward pressure on rates from unrecovered revenue requirements.<sup>10</sup> Incentives paid to program participants are a cost of administering the program and are passed on to the general body of customers through the ECCR clause. Tr. 100-01 (Deason). Lost revenues also put upward pressure on rates for the general body of customers. Tr. 101 (Deason). Both of these extremely important considerations/ramifications are ignored by the TRC test. *Id.* Simply put, “the TRC test is ill equipped to consider the impacts on the general body of customers as a whole, as the statute requires.” Tr. 1235 (Deason).

As the Commission has recognized, the use of the TRC test to set goals could result in cross subsidies between customers and could disproportionately impact low-income customers. Tr. 101 (Deason). In Order No. PSC-94-1313-FOF-EG, the Commission stated:

We will set overall conservation goals for each utility based on measures that pass both the Participant and RIM tests... We find that goals based on measures that pass TRC but not RIM would result in increased rates and would cause customers who do not participate in a utility DSM measure to subsidize customers who do participate. (p. 22)

Later in that same order, the Commission explained:

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<sup>10</sup> “Unrecovered revenue requirements” is a more precise term for “lost revenues,” which is occasionally used in testimony and Commission orders cited herein.

All customers, including low-income customers, should benefit from RIM-based DSM programs. This is because RIM-based programs ensure that both participating and non-participating customers benefit from utility-sponsored conservation programs. Additional generating capacity is deferred and the rates paid by low-income customers are less than they otherwise would be. (p. 45)

SACE and Sierra Club generally acknowledged that cross-subsidies should be avoided where possible. However, beyond that mere acknowledgement, their witnesses were dismissive of cross-subsidization concerns. Tr. 1239 (Deason). SACE's Witness Mims claimed that with a large number of DSM participants "there would be fewer non-participants, making the RIM argument of cross subsidization and the argument that it protects of [sic] non-participants irrelevant." Tr. 985 (Mims). Similarly, Sierra Club's Witness Woolf testified "[i]f a large portion of customers participate in DSM programs, then the Commission and other stakeholders should be willing to accept relatively higher rate impacts because . . . few customers will experience bill increases." Tr. 1139-40 (Woolf). In reality, the "solution" of more DSM participation would only heighten the problem. As explained by Witness Deason, as the proportion of non-participants declines, the burden of cross-subsidization falls more and more heavily on those who remain. Tr. 1240 (Deason).

Both Witnesses Mims and Woolf also claimed that cross-subsidies are endemic to regulated electric utilities, implying that it is acceptable to promote cross-subsidies when setting conservation goals. *See* Tr. 980-81 (Mims) and Tr. 1132 (Woolf). But this is merely a thinly veiled excuse to engage in an activity that has negative consequences for customers. Tr. 1240 (Deason). Regulation in Florida goes to great lengths to set rates which are fair, just, and reasonable and which do not foster cross-subsidies between customers. This is apparent in both the nature of and the extent to which costs are recognized in rates, as well as in the structure of the rates themselves. *Id.* The Commission has rules dealing with cost of service studies and

many years of precedent to ensure that rates are set equitably and on a non-discriminatory basis. The Commission also has a policy of requiring cost causers to pay their fair share of the costs they place on the system, especially when they engage in actions or choose options which, if not specifically recognized, would cause rates for the general body of customers to increase. All of this is done to minimize cross-subsidies to the greatest extent possible. Tr. 1240-41 (Deason). Indeed, it is the goal of regulation to prevent cross-subsidies whenever possible and the Florida Commission makes every reasonable effort to do so. Tr. 1242 (Deason).

It would be a bad and defeatist public policy to intentionally engage in an action that knowingly results in cross-subsidies, simply because it is impossible to eliminate *all* instances of cross-subsidization. Adopting the intervenors' logic for setting DSM goals based on the TRC test would do just that. "Setting conservation goals on the TRC test *will* result in a greater level of lost revenues, *will* result in a greater likelihood of a rate case (along with the increased uncertainty, increased regulatory costs, and increased workload requirements of a rate case), and *will* result in cross-subsidies between participants and non-participants." Tr. 1243 (Deason) (emphasis in original). The intervenors in this case cannot dispute these fundamental facts, so they vainly attempt to sidestep them.

### C. Consideration of Free Riders

**Issue 7:**        **Do the Company's proposed goals appropriately reflect consideration of free riders?**

**FPL:**            \*Yes. FPL applied a two-year payback screening criterion to each measure that passed the prior economic screening steps. This approach is a reasonable tool to comply with Rule 25-17.0021 and to help protect FPL's general body of customers from paying incentives to program participants that would already be economically motivated to adopt DSM measures without incentives. Many inexpensive measures with quick payback periods are promoted in other ways.\*



Rule 25-17.0021(3), Florida Administrative Code, requires FEECA utilities to propose goals that account for free riders. The term “free riders” refers to the fact that many cost-effective conservation measures will be undertaken on a customer’s own volition, without the need for promotion or incentive provided by the customer’s utility company. Tr. 103 (Deason). For example, a customer may decide to install more efficient lighting even though there are no utility incentives offered for that measure. Tr. 104 (Deason). Customers make the economic decision to invest in such measures because it quickly benefits them economically. However, if such customers also receive a utility incentive, those customers become “free riders” because they would have installed the measures even without the incentives. *Id.*

The two-year payback criterion was first used by the Commission in the 1994 goal-setting proceeding. Tr. 1249 (Deason). It was adopted as a means to account for free riders, as required by Rule 25-17.0021, and it has been consistently used since 1994 with the exception of the last goal-setting proceeding. *Id.* FPL utilized the two-year payback screen in the final step of its preliminary economic screening. Tr. 331 (Sim). For each DSM measure that has survived the first three screening steps, a calculation was made to see if a participant’s incremental out-of-pocket costs will be fully recovered from bill savings and, if applicable, tax savings, in two years or less without any incentive payment from the utility. *Id.* Those DSM measures for which the participant’s costs are not fully recovered in two years without an incentive payment survive this final step in the screening process. *Id.*

Accounting for free riders is not only required by rule, but helps ensure DSM financial resources are used in the most efficient manner. *See* Tr. 104 (Deason). Indeed, deviation from this principle is one of the reasons why the rate impacts of the 2009 DSM goals were deemed to be too great. The 2009 goals included savings from measures that had been screened out by the

two-year payback criterion, and therefore contained a level of DSM savings that could be more efficiently achieved by customers acting in their own best economic interest, instead of through additional costs being imposed on the general body of customers. Tr. 115-16 (Deason). The impact of this decision was very significant. In fact, for the total residential GWh goal of 1,695.3 set by the Commission for FPL in 2009, 905.0 or 53% was attributable to DSM measures that were added as a consequence of the Commission's partial rejection of the traditional two-year payback criterion to avoid free riders. Tr. 116 (Deason). This decision was later revisited when the Commission determined that the rate impacts of the DSM goals order were too great. *See* Docket No. 100155-EG, Order No. 11-0346-PAA-EG.

Witnesses Mims and Woolf, on behalf of SACE and Sierra Club, respectively, criticized the FEECA utilities' use of the two year payback criterion. Witness Woolf's position was that the criterion mistakenly assumes that customers know and understand the economic concept of payback periods. Tr. 1159 (Woolf); *see also* Tr. 1250 (Deason). His position insults FPL's customers, as he apparently wants the Commission and FPL to assume that customers are incapable of understanding this straightforward concept. Witness Mims claimed the two-year payback criterion is incorrect because it assumes there is a 100% penetration for all measures with a payback of two years or less. *See* Tr. 1001 (Mims); *see also* Tr. 1250 (Deason). However, the two-year payback was never intended to be a bright-line, 100% accurate predictor of customer actions and choices under all circumstances. Tr. 1251 (Deason). Rather, it is used as a reasonable point of differentiation to predict where customers are more likely to adopt a measure, based on its own inherent economic attractiveness, without additional incentives and costs imposed on the general body of customers. *Id.* In reality, some customers will not adopt a measure regardless of its payback, while others will adopt measures with paybacks longer than

two years. Notwithstanding those outliers, two years has been used as a reasonable point of differentiation. *Id.* As explained by Witness Deason, for those customers who are not motivated by economics or choose not to participate for other more basic reasons, it is unlikely that offering incentives is going to change their views. Tr. 1252 (Deason).

There is no evidence in this proceeding indicating that offering incentives for cheap, “low hanging fruit” measures that fail the two-year payback criterion would increase customer adoption and DSM savings. In fact, the evidence presented demonstrates that these types of measures are already being implemented without burdening the general body of customers to support them with incentive payments that, by definition, result in no additional kW or kWh reductions. Witness Deason testified as follows:

Home Depot, which claims to be the world’s largest seller of light bulbs, tracked sales of energy efficient bulbs across the entire country. The Home Depot ranking has the Miami/Ft. Lauderdale/West Palm Beach market and the Orlando market in the top ten nationally in energy efficient bulb consumption per capita. These high rankings were accomplished without utility sponsored incentives and are even more impressive when you consider that FPL’s rates are below the national average. This indicates that incentives are not needed to get customers to adopt energy efficient bulbs, presumably due to the bulb’s inherent economic attractiveness. It further indicates that when incentives are offered for measures with paybacks of two years or less there could be material free rider impacts.

Tr. 1253 (Deason). Additionally, FPL Witness Koch testified that these types of measures are already explained to customers through energy surveys and other educational channels. *See* Tr. 275, 287-88, 1353 (Koch).

Ultimately, the question before the Commission is whether the two-year payback criterion is a reasonable tool for the Commission to use in making the differentiation, mandated by Rule 25-17.0021(3), between customers that will likely take action on their own and those that likely will need additional economic incentives to do so. The evidence in this case and the Commission’s historical DSM decisions (including the consequences of its decision to “waive”

the two year payback for certain measures in 2009) support the reasonableness of the two year payback as a tool to comply with Rule 25-17.0021(3) and its continued use in this docket.

**D. Achievable Potential and Numeric Conservation Goals**

**Issue 8:           What residential summer and winter megawatt (MW) and annual Gigawatt-hour (GWh) goals should be established for the period 2015-2024?**

**FPL:**           \*The Commission should approve FPL’s proposed goals. FPL’s goals (i) reflect FPL’s resource planning process, as required by rule; (ii) reflect all costs and benefits to participants and the general body of customers, as required by statute; (iii) account for free riders, as required by rule; (iv) result in the lowest levelized average electric rates for all customers; and (v) avoid cross-subsidization of participants by non-participants. Additionally, FPL’s goals properly reflect the evolving role for utilities in offering energy efficiency and diminishing cost-effectiveness results. Intervenors’ proposed goals are arbitrary, devoid of analytical support, and fail to comply with Florida law.\*

**Issue 9:           What commercial/industrial summer and winter megawatt (MW) and annual Gigawatt hour (GWh) goals should be established for the period 2015-2024?**

**FPL:**           \*The Commission should approve FPL’s proposed goals. FPL’s goals (i) reflect FPL’s resource planning process, as required by rule; (ii) reflect all costs and benefits to participants and the general body of customers, as required by statute; (iii) account for free riders, as required by rule; (iv) result in the lowest levelized average electric rates for all customers; and (v) avoid cross-subsidization of participants by non-participants. Additionally, FPL’s goals properly reflect the evolving role for utilities in offering energy efficiency and diminishing cost-effectiveness results. Intervenors’ proposed goals are arbitrary, devoid of analytical support, and fail to comply with Florida law.\*

FPL’s proposed DSM goals are the only proposed goals in this docket that comply with Florida law, including the applicable provisions of FEECA, the Commission’s DSM Goals rule, (Rule 25-17.0021), and the historical policy considerations that have served FPL’s customers so well for so long, with impressive DSM achievements *and* low electric rates. *See* Tr. 93 (Deason). As discussed in detail above under other issues, FPL’s proposed goals are based on measures that pass the Participant and RIM test, satisfying the criteria found in Section 366.82(3)(a) and (b), Florida Statutes. FPL’s proposed goals also reflect measures that pass a

two-year payback screening criterion, reasonably accounting for free riders as required by Rule 25-17.0021(3), Florida Administrative Code. Finally, FPL's proposed goals reflect FPL's most recent planning process, also as required by Rule 25-17.0021(3), Florida Administrative Code.

Substantial testimony and other evidence presented in this proceeding supports adherence to Florida's fundamental DSM policies and approaches, and therefore Commission approval of FPL's goals. It is important to recognize that such approval does not foreclose the opportunity to evaluate specific DSM program approaches, such as new or modified programs for low-income customers, in the subsequent DSM Plan approval phase. *See, e.g.*, Docket No. 930548-EG, Order No. PSC-94-1313-FOF-EG, p. 22 (stating “[a]lthough we are setting goals based solely on RIM measures, we encourage utilities to evaluate implementation of TRC measures...Utilities are free to file whatever portfolio of programs they wish, including TRC programs, in order to meet their goals”) (aff'd *Legal environmental Assistance Foundation Inc. v. Clark*, 668 So. 2d 982 (Fla. 1996).). At hearing, FPL committed to assessing what additional measures for low-income customers could be introduced as part of new or existing programs, for submittal in the DSM Plan. Tr. 1667.

***a. FPL's Achievable Potential***

After the preliminary economic screening, FPL determined the Achievable Potential (“AP”) for those measures that passed the RIM and TRC screening analyses. FPL used a combination of quantitative and qualitative information and FPL's market experience to develop the AP. Tr. 206 (Koch). The achievable Summer MW, Winter MW, and Annual GWh savings for each measure were developed by year, and then summed to determine total Summer MW, Winter MW and Annual GWh for the 2015-2024 period. *Id.* To assist with the AP estimates, FPL employed a proprietary modeling tool developed by ICF International, a leading third-party

implementer of DSM programs. *Id.* ICF has used this tool to estimate AP over many years and in numerous other jurisdictions. FPL employed the modeling tool on a measure-by-measure basis relying on a number of elements that reflect FPL's market experience. Thus, the AP values represent meaningful "real world" inputs of DSM annual potential that can be used in the rest of FPL's resource planning process. *Id.* None of the intervenors presented any alternative to FPL's determination of AP.

***b. FPL's Numeric Conservation Goals***

As contemplated by Rule 25-17.0021(3), FPL's proposed DSM goals are "based upon [FPL's] most recent planning process." The goals reflect FPL's planning process in two important ways: first, by relying on current demand, resource, and cost forecasts that feed into the preliminary economic screening tests, and second, by reflecting a subsequent detailed, complete system analysis of potential DSM additions. *See* Tr. 339 (Sim) (explaining only half of its resource planning process had been completed once the AP had been developed).

The final system analyses reflect the remaining considerations in FPL's resource planning process, not incorporated in prior steps: (i) FPL's resource needs over the 10-year goals-setting time period; (ii) analyses to determine the most economic DSM measures from among the DSM measures that survived the preliminary economic screenings; (iii) the creation of one or more DSM portfolios and "With DSM" resource plans, based on FPL's resource needs; (iv) system economic analyses involving resource plans with and without DSM portfolios; and (v) system non-economic analyses of these same resource plans. Tr. 340 (Sim). The development of multi-year resource plans is necessary if one is to capture and accurately compare all of the impacts that competing resource options with different capacity amounts, terms-of-service, heat rates, types of fuel, MW and GWh reduction impacts, and costs will have

on FPL's system. Tr. 343 (Sim). This sophisticated, multi-layered process is consistent with the manner in which FPL examines generation resource additions. *See* Tr. 318 (Sim).

FPL's resource needs reflect the adoption by FPL of a third reliability criterion – a 10% generation-only reserve margin (“GRM”) criterion. In FPL's 2014 Ten Year Site Plan, FPL introduced the minimum 10% GRM criterion and discussed the reasons the criterion was adopted.<sup>11</sup> Ex. 3. As discussed therein, FPL performed operational and resource planning evaluations and concluded that resource plans with identical total reserve margins, but different GRM values, are not equal in regard to system reliability. *Id.* A resource plan with a higher GRM value is projected to result in more MW being available to system operators on adverse peak load days, and in lower loss-of-load-probability (“LOLP”) values, than a resource plan with a lower GRM value, even though both resource plans have an identical total reserve margin. *Id.* Therefore, FPL has applied a minimum GRM criterion as a third reliability criterion in its resource planning process. *Id.*

Dr. Sim testified that five multi-year resource plans were evaluated by FPL: one that included a RIM-based portfolio of 337 MW of DSM; one that included a TRC-based portfolio of 337 MW of DSM; one that included the full amount of RIM Achievable Potential of 526 MW; one that included the full amount of TRC Achievable Potential of 576 MW; and one that included supply-side additions only. Tr. 344-52 (Sim); Ex. 11. Only the RIM 337 MW and TRC 337 MW plans comply with FPL's 10% GRM criterion. Tr. 348-50 (Sim). The RIM 526 MW and TRC 576 MW plans do not comply with FPL's GRM criterion, but were analyzed as sensitivity cases to evaluate the adoption of the “full” amounts of achievable potential on FPL's system. Tr. 350 (Sim).

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<sup>11</sup> FPL has been reporting the GRM metric annually in its Ten Year Site Plans since 2011. Ex. 3.

As explained by Dr. Sim, a number of economic analyses are conducted and the results of these analyses are brought together to determine the economic impact of these various resource plans:

- First, the P-MArea production costing model is used to develop projected annual fuel costs for the FPL system for each resource plan. Annual variable costs for the new generation additions and system emission levels are also developed using this model. Using the projected annual emissions, annual environmental compliance costs are then developed.
- Second, fixed costs (capital, fixed O&M, capital replacement, etc.) for the new generation additions in each resource plan are determined.
- Third, annual DSM administrative costs and incentive payments for the incremental DSM included in each resource plan are quantified in the process of developing the DSM portfolio using FPL's DSM linear programming (LP) optimization model.
- Fourth, a projection of "other" FPL system costs not affected by the resource plans was determined. (Examples of these "other" system costs include costs for existing generating units, existing transmission and distribution facilities, existing buildings, staff, etc.)
- Fifth, a projection of "other DSM costs" for the Supply Only and With DSM resource plans was developed. These "other DSM costs" include costs not directly tied to any individual DSM measure, but which will be incurred as part of a DSM portfolio. (Examples of such costs include energy surveys and on-going bill credits to existing load management participants.)



- Sixth, the impact of DSM energy efficiency measures in helping FPL address the Southeastern Florida generation-to-load imbalance was calculated. This consisted of projecting the extent to which the DSM energy efficiency measures in the DSM portfolio might potentially defer transmission expenditures that would otherwise be needed to bring electricity generated outside of the Southeastern Florida region into the region.
- Finally, the annual reductions to the GWh over which FPL recovers its costs were determined.

Tr. 352-54 (Sim). This information was then used to calculate a levelized system average electric rate for each resource plan. Tr. 354 (Sim). **The RIM 337 MW plan is projected to result in the lowest levelized system average electric rate of any of the “With DSM” plans – including the two that contained the full RIM Achievable Potential and full TRC Achievable Potential DSM amounts.** Tr. 355 (Sim); Ex. 12. Additionally, the RIM 337 MW plan avoids cross subsidization of customers.<sup>12</sup> *Id.*

The various resource plans also were evaluated from a non-economic perspective to examine system emissions and fossil fuel use. Dr. Sim testified that there were relatively small differences among the five resource plans in terms of system emissions and system fuel use. Tr. 367 (Sim). Exhibits 16 and 17 show that FPL’s generating system is projected to steadily lower FPL’s system air emissions over the 2015-2025 time frame despite continued customer growth. Additionally, projections of system oil and natural gas usage levels are decreasing despite customer growth. Tr. 368-69 (Sim). Therefore, FPL’s customers will benefit from projected

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<sup>12</sup> In the absence of the RIM 337 MW plan, the Supply only plan would avoid cross-subsidization because all customers “participate” when generation options are placed in service. However, the RIM 337 MW plan is projected to have an even lower system average electric rate than the Supply only plan, so it best avoids cross subsidization. Tr. 355 (Sim).

decreases in system emissions and fuel usage regardless of which resource plan is implemented.  
*Id.*

SACE and Sierra Club spent a lot of time at hearing pointing out in cross-examination that FPL's proposed DSM goals are lower than goals approved in previous years or in some respects are lower than other FEECA utilities' proposed goals. *See, e.g.*, Tr. 235-45, 250, 452-53. These intervenors' witnesses similarly devoted pages of prefiled testimony to the topic. *See, e.g.*, Tr. 1185 (Woolf). FPL does not dispute the fact that its goals are lower in comparison to prior years, and in fact, explained in detail in its direct testimony exactly why such results should be expected. *See* Tr. 309 (Sim) (summarizing that lower goals are the logical result of increasing federal and state codes and standards and decreasing system costs that are good for customers but negatively impact the cost-effectiveness of DSM); *see also* Tr. 192 (Koch). With respect to Sierra Club's meaningless comparisons to other electric utilities, FPL Witness Koch explained on cross examination as follows:

All of the utilities' needs and measures are different, and so their costs are different, their generation portfolios are different, what their growth rates are going to be, all of that is different. So it's actually not surprising there would be differences between the various utilities.

Tr. 250 (Koch). And in response to similar questioning from SACE, FPL Witness Dr. Sim provided the following explanation:

Again, I would say that no utility – no two utility systems are alike, and in FPL's case, in an era of declining cost-effectiveness of DSM, that situation is even more pronounced for FPL's system due to the great strides we've made in generating electricity more efficiently and more cost-effectively. Therefore, one would expect, all else equal, we would have lower goals than another utility.

Tr. 453 (Sim).

Both SACE and Sierra Club also attacked FPL's resource planning process, arguing on the one hand that it lacks "analytical rigor" (Tr. 969, Mims), and then somewhat contradictorily

that it is “unduly complex” (Tr. 1181, Woolf). Based on the number of incorrect and/or misleading statements in their testimony about FPL’s resource planning process, it appears that they simply do not understand it. Tr. 1398 (Sim). Indeed, FPL Witness Dr. Sim collected and corrected 37 inaccurate and/or misleading statements from these witnesses, as presented in Exhibit 143.

Finally, SACE and Sierra Club attempted to redirect the conversation away from electric rates and rate impacts and toward total costs and electric bills – presumably, a hypothetical “average bill” that ignores the fact that there are discrete groups of participants and non-participants.<sup>13</sup> See Tr. 1402 (Sim). The Commission rejected a similar argument when it denied in part a request for reconsideration of its 1994 DSM Goals order, stating as follows:

LEAF construes the term “cost” as meaning “bills” when the more plausible contextual interpretation is that “cost” means “rates”. There has been no Commission failure to consider bill impact. We have chosen to keep rates lower for all customers, lowering bills for nonparticipants and participants.

Docket No. 930458-EG, Order No. 95-0075-FOF-EG, pp. 10-11. As further supported by Witness Deason’s testimony, “passing costs onto customers” is typically understood in Florida to refer to doing so via increases in rates. Tr. 1245 (Deason). Therefore it would be incorrect, as Mr. Woolf did, to rely on the references to “costs passed onto customers” in Section 366.82 to consider total revenue requirements or cost impacts over rate impacts. See Tr. 1138 (Woolf). Furthermore, according to Witness Deason, focusing solely on overall costs ignores Section 366.81, Florida Statutes, which clearly uses the terminology of “rate or rate structure” in giving direction to the Commission to set conservation goals in a non-discriminatory way. Tr. 1244 (Deason).

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<sup>13</sup> SACE Witness Mims ultimately admitted on cross examination that rates are important to customers. Tr. 1034-37 (Mims).

FPL Witness Dr. Sim also explained why a focus on costs or revenue requirements is analytically incorrect:

It should be noted that when only Supply options (i.e., power plants or power purchases) are the resources in question, the determination of what resource to add can be made on the basis of lowest total system costs. In cases addressing only Supply options, the outcome when viewing results from the lowest total cost perspective is the same as when viewing results from the lowest average electric rate perspective. This is because the number of gigawatt-hours (GWh) over which the costs are recovered from customers does not change. Consequently, when only Supply options are being analyzed, the results of an economic analysis indicate simultaneously the most economical Supply option from both a total cost and an electric rate perspective.

However, when DSM options are being analyzed, as is the case in this docket, one cannot examine only projected system costs. This is because the number of GWh over which these costs are recovered from customers will change due to the GWh reduction aspect of DSM options. If the utility's costs are recovered over fewer GWh, the result is upward pressure on the utility's electric rates that are charged to all customers. Therefore, when analyzing DSM options, one must specifically calculate electric rates in order to determine which resource option, Supply or DSM, is the most economic resource option to add.

Tr. 312-13 (Sim). For these reasons, Dr. Sim's agreement on cross examination that certain resource plans with more DSM would have lower Cumulative Present Value of Revenue Requirements is of no consequence. Tr. 1487 (Sim) (stating "the revenue requirements will be lower under the SACE plan than under the FPL plan...However, as shown in the analysis, the electric rate impact and the costs or the bills for non-participants will be significantly higher under the SACE plan.")

***c. Intervenors' Proposed Numeric Conservation Goals***

Ultimately, no intervenor offered an alternative set of goals that would come even close to meeting the required elements of FEECA or Rule 25-17.0021, Florida Administrative Code. Instead, SACE and Sierra Club recommended that the Commission abandon its statutory obligations, rules, and successful historical rationale and precedent and impose arbitrary DSM

energy efficiency goals at a level equal to or ramping up to 1% of sales. *See* Tr. 1013-14 (Mims) and Tr. 1191 (Woolf). Witness Woolf on behalf of Sierra Club also assigned a demand-reduction goal based on a ratio of prior DSM savings to his proposed 1% of sales energy efficiency savings. Tr. 1194 (Woolf). As summed up by FPL Witness Deason, the intervenors' proposed goals do not:

- rely on a cost-effectiveness test;
- address system reliability;
- place demand-side and supply-side resources on a level playing field;
- keep rates low and minimize cross-subsidies; or
- address free riders.

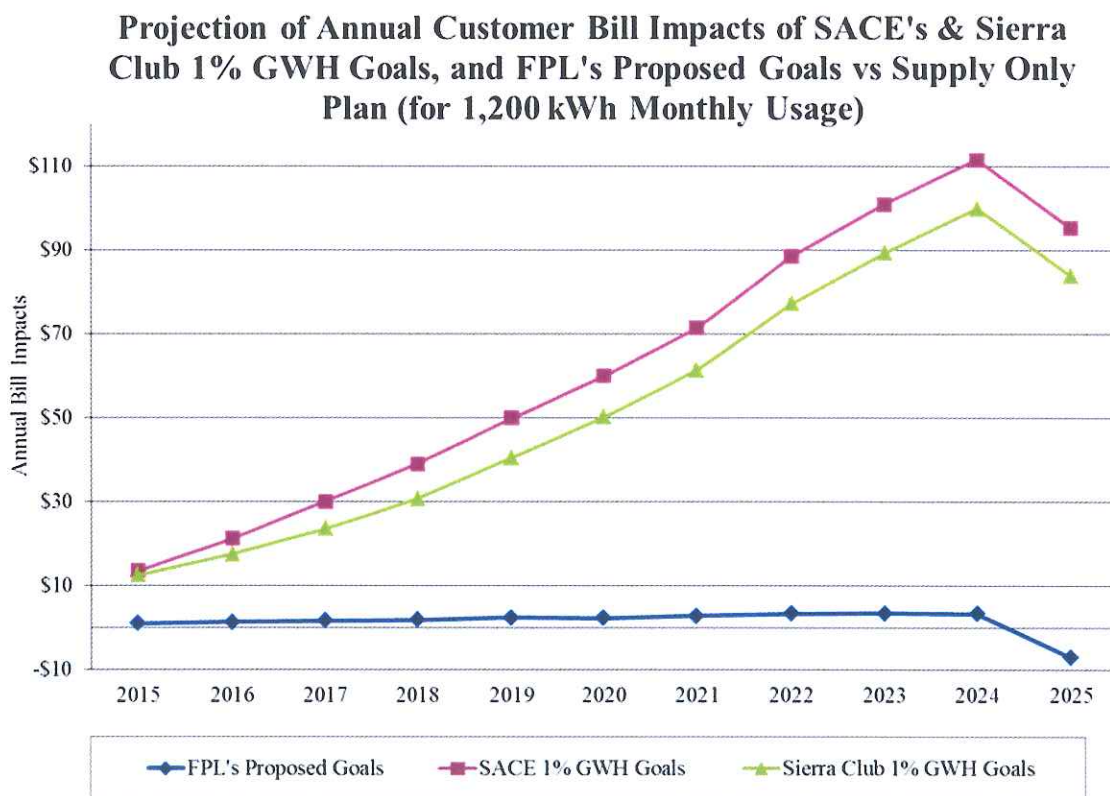
Tr. 1261 (Deason). Instead, it appears that the intervenors' mission was "to pressure the Commission into embarking on an unprecedented path that would inappropriately and arbitrarily increase DSM goals." Tr. 1272 (Deason). Their recommendations would be inimical to Florida's electric customers and should be soundly rejected.

The primary support Witnesses Mims and Woolf offer for their proposed, arbitrarily high goals is that, summarizing, other "leading states" are achieving similar or more amounts of DSM savings. *See* Tr. 1012 (Mims) and Tr. 1190-91 (Woolf). What is noticeably absent from their testimony is any discussion of the electric rates in the states they categorize as "leading states." Exhibit 150, presented by Witness Deason, shows that most of these "leading states" have electric rates higher than the national average, and much higher than Florida in general and FPL in particular. Tr. 1263 (Deason).

Neither SACE nor Sierra Club quantified the rate impacts associated with their proposed DSM Goals. Sierra Club Witness Woolf opined, with no analytical support, that his proposed

goals would have rate impacts “not much higher” than FPL’s proposed goals. Tr. 1196 (Woolf). FPL Witness Dr. Sim did quantify economic impact on customers from the intervenors proposed goals. Those impacts are summarized on Exhibits 148 and 149. As demonstrated therein, SACE’s and Sierra Club’s proposed goals will result in higher rates for all customers.

Because SACE and Sierra Club prefer to discuss bill impacts over rate impacts, Dr. Sim also quantified bill impacts for customers who cannot or choose not to participate in DSM programs. The intervenors’ proposed goals would result in bills that are higher, and generally increasingly higher over time, for 1,200 kWh of monthly usage, compared to either the Supply Only plan or FPL’s proposed RIM 337 MW plan. Tr. 1430-31 (Sim); Ex. 148, 149. The annual bill impacts at the 1,200 kWh usage level are shown on Exhibits 148 and 149, and below:



In regard to the *cumulative* bill impact for such a customer over the 2015-2025 time period, the Sierra Club 1% GWh goal recommendation is projected to result in an increase of approximately \$586 in such customers' bills when compared to FPL's supply only resource plan. Tr. 1432 (Sim). Similarly, the SACE 1% GWh goal recommendation is projected to result in a cumulative increase of approximately \$681 in such customers' bills when compared to the supply only resource plan. *Id.* FPL does not believe that there is any valid reason why customers should be asked to pay substantially more for electricity simply in order to meet an arbitrary "percent of sales" DSM goal.

*d. Conclusion*

It is clear that an IRP approach, such as the IRP process FPL utilizes, is by far the best approach to use when making resource decisions for a utility's customers. Tr. 1445 (Sim). It requires analysis of the timing and magnitude of resource needs, plus analysis of the capacity and energy impacts that competing resource options will have on the utility system from both an economic and non-economic perspective. *Id.* FPL's proposed DSM goals are the result of careful, detailed analyses and should be approved. The intervenors' arbitrary, one-size-fits-all recommendations would fail to comply with Florida law, would have massive customer rate and bill impacts, and should be rejected.

The record also shows that FPL's customers will benefit from significant increases in energy efficiency and demand reduction delivered by increasing federal and state codes and standards over the next ten years. *See, e.g.,* Tr. 198-99 (Koch). It would be inaccurate and improper to view FPL's proposed goals in isolation and conclude that they represent a decreasing level of attention to DSM, without recognizing the significant level of energy efficiency that will result from more aggressive codes and standards during that period (as well as the increasing

efficiency with which FPL generates electricity). FPL Witness Koch testified that in terms of the summer peak, the cumulative impact from codes and standards, based on savings beginning in 2005 and extending through 2014, is estimated at approximately 1,700 MW. Tr. 198 (Koch). By 2024, the impact from codes and standards is projected to increase by an approximate additional 1,800 MW for a cumulative savings of 3,500 MW. Tr. 199 (Koch). Thus, the cumulative impact from codes and standards is expected to more than double during the current goal-setting period (2015 to 2024), thereby reducing the growth in FPL's summer peak by almost 30%. *Id.* Customers are also projected to realize significant energy efficiency savings – about 5,500 GWh from codes and standards. Tr. 252 (Koch). In total, FPL's customers are projected to receive *more* total energy efficiency in the upcoming 10-year period from the combination of FPL's proposed goals and codes and standards than they were projected to receive in the last DSM goals proceeding ordering higher FPL goals. Tr. 310 (Sim).

#### **E. Demand-Side Renewable Goals**

**Issue 10: What goals, if any, should be established for increasing the development of demand-side renewable energy systems, pursuant to Section 366.82(2), F.S.?**

**FPL:** \*Goals of zero should be established for demand-side renewable energy systems because such systems are not cost-effective for FPL's customers. Setting goals at zero would be consistent with past Commission practice of setting DSM goals at zero for FEECA utilities when no DSM measures are cost-effective. A goal level of zero would best protect the general body of customers and minimize cross-subsidies between participants and non-participants.\*

**Issue 11: Should the Company's existing Solar Pilot Programs be extended and, if so, should any modifications be made to them?**

**FPL:** \*No, FPL's existing Solar Pilot Programs should be allowed to expire at the end of 2014 consistent with their program terms. These pilot programs continue to fail the RIM and TRC tests. In addition to being demonstrably cost-ineffective, they result in significant, concentrated cross subsidies for the relatively few customers who install solar systems by all of FPL's 4.7 million customers. FPL believes that its customers can be better served by pursuing PV through other applications.\*



FPL is a long-time proponent of renewables, including solar. FPL owns and operates 110 MW of solar generation in Florida and has three decades of experience in evaluating, testing and implementing various forms of solar energy applications as discussed in FPL's 2014 Ten Year Site Plan. Tr. 212 (Koch). This experience has demonstrated that there are certain approaches that can be more or less effective in encouraging solar development, and FPL believes that everyone will benefit in the long run from choosing more effective options. *Id.*

Consistent with the direction provided by the Commission in the last DSM goals-setting docket, FPL has undertaken several Solar Pilots for a period that is to expire at the end of 2014. FPL Witness Koch testified that from their launch through year-end 2013, there were a total of about 4,000 installations under FPL's Solar Pilots. Tr. 213 (Koch). All of FPL's customers (through the ECCR) paid a total of about \$30 million for the Solar Pilots during this period – an average of approximately \$7,500 per installation. *Id.* The Solar Pilots have run long enough to fully understand their performance and results. Based on actual data obtained over the pilot period, all of the Solar Pilots are demonstrably not cost-effective: they do not pass either RIM or TRC. Therefore, those rebates are not justifiable from the perspective of FPL's non-participating customers and are not an equitable way to encourage demand-side solar development. Tr. 218 (Koch). The lack of cost-effectiveness of these pilots unfairly places higher rate and bill impacts on non-participating customers, many of whom do not have the resources or any practical incentive to incur the substantial financial outlay to participate in solar pilot programs.<sup>14</sup> *Id.* No

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<sup>14</sup> For example, through year-end 2013 approximately 950 DSM PV systems were installed – a miniscule fraction of FPL's total customer base. Those 950 systems received rebates totaling approximately \$15.8 million, an average of about \$16,500 per system. FPL learns little from those pilots, other than confirming that people will rush to get in line for giveaways. Tr. 1298 (Koch).

compelling evidence was presented supporting the continuation of these uneconomic, highly-subsidized programs.

Intervenor Witnesses Fine on behalf of EDF,<sup>15</sup> Rabago on behalf of SACE, and to a lesser extent Woolf on behalf of Sierra Club argue that the DSM PV Pilot programs should be evaluated differently than all other DSM measures, using “value of solar” (VOS) calculations. Tr. 1361 (Sim). The recent Minnesota VOS calculation approach was repeatedly pointed to by these witnesses as a model for the type of VOS calculation approach that Florida should use. *Id.* As explained by FPL Witness Dr. Sim, such an approach is fundamentally flawed for DSM-based PV applications.

First, the Minnesota VOS approach is not a true cost-effectiveness test that attempts to weigh the costs and benefits of the PV measure. Rather, the Minnesota VOS approach only examines the benefit side of the ledger. Tr. 1368 (Sim). It does not account for a utility’s administrative costs, nor does it provide a projection of what direction electric rates and costs will be driven for implementation of the PV measure. *Id.* Such evaluations are misplaced in a DSM goals-setting docket focused on cost-effectiveness. As explained extensively by Dr. Sim, it is an “incomplete and one-sided” quantification of the measure’s benefits. Tr. 1369 (Sim). Moreover, no party attempted to conduct an evaluation of FPL’s Solar Pilot Programs using this method or presented evidence that use of such a method supported continuation of FPL’s Solar Pilot Programs.

In light of the foregoing, demand-side renewable goals of zero are appropriate. The law does not require the pursuit of demand side renewable energy at any cost, but rather, encourages the adoption of “cost-effective” demand-side renewable energy systems. *See* § 366.81, Fla. Stat.

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<sup>15</sup> It was demonstrated at hearing that Dr. Fine was willing to mischaracterize certain studies in support of his aggressive solar positions. *See* Tr. 955-56.

As explained by Witness Deason, demand-side renewable goals of zero are both permissible and preferred when the programs are not cost-effective. Tr. 1268 (Deason). A goal level of zero would best protect the general body of customers and minimize cross-subsidies between participants and non-participants. *Id.* It would also be consistent with the manner in which the Commission has set DSM goals for certain FEECA utilities in the past, when no DSM measures are found to be cost-effective, in the context of a statute encouraging the adoption of cost-effective DSM. Tr. 1268-69 (Deason).

Witness Deason testified that if, in exercising its discretion to regulate in the public interest the Commission decides that solar generation should be more aggressively pursued, it should do so in a way that continues to take into account the relative cost-effectiveness of solar generation alternatives and seeks to minimize cross-subsidies among customer groups. Tr. 1270 (Deason). Specifically, he recommended that the Commission focus on those alternatives that are most economic relative to the range of available solar alternatives and that do not increase subsidies between participants and non-participants. *Id.*

FPL Witness Dr. Sim testified that utility scale solar, for example, is more cost-effective than rooftop solar. He explained that for utility scale solar, “you get more megawatts [of installed PV capacity] per dollar spent, and for each megawatt you put in, you get 40 percent more output of the unit. So clearly it is more economical to go with utility scale than it is in regard to the PV pilot programs.” Tr. 1497 (Sim). Additionally, utility scale solar is “becoming a lot more competitive than it has in the past and it’s nearing parity with combined cycle.” Tr. 1496 (Sim). Furthermore, because such a project would be utility owned and operated for the benefit of all customers, it would not create subsidies between participants and non-participants. Tr. 1270 (Deason).

Another option that would avoid customer cross-subsidies was presented by FPL Witness Koch. Witness Koch explained the basic construct of an expanded Research and Development (“R&D”) effort that would benefit all customers. *See* Tr. 1296-99 (Koch). If the Commission directed FPL to pursue it, this initiative would gather data from a range of PV installations across the spectrum of applications located on select circuits throughout FPL’s service territory. Tr. 1296-97, 1326-26 (Koch). Such installations would be metered and instrumented to gather information on issues such as the following:

- impacts of PV installations on the transmission and distribution network based on the size of the PV installations, their location and loading conditions on the network;
- energy output characteristics of different PV installations based on factors such as location, size and configuration;
- differences in customer electric consumption patterns based on whether PV is located behind the customer’s meter vs. grid-connected; and
- effects of locational diversity for PV installations.

Tr. 1297 (Koch). FPL would gather data from existing PV installations and may include a limited number of targeted additional PV installations at appropriate locations around the FPL service territory. *Id.* To ensure that the full range of locations and types of application are covered, FPL expects that it would need to install several distributed PV systems of varying size throughout the service territory, relying either on utility property or leases with customers for the necessary access. *Id.* All installations would be used to collect data on both the level of electric output that can be expected from different types of installations and the impacts (positive and negative) that the installations have on the electric grid. *Id.* FPL would submit the exact scope

and parameters of such a Solar R&D project for Commission approval during the DSM Plan phase, subsequent to this goal-setting proceeding. *Id.*

In sum, the existing Solar Pilots have run long enough to make it abundantly clear that they are not cost-effective and are not becoming so. The intervenor witnesses do not seriously dispute this evidence, urging instead that the Commission leave the Solar Pilots in place while engaging in a snipe hunt for speculative and theoretical “value of solar” benefits that might make the programs appear cost-effective. The Commission should not indulge the intervenors’ flight of fancy, at the expense of burdening the general body of FPL customers with further, expensive cross-subsidies to the tiny fraction who participate in the Solar Pilots. Setting FPL’s goals for demand side renewable energy systems at zero would appropriately protect against those cross-subsidies. Attention should be focused instead on solar applications such as utility-scale PV facilities that are more economical than customer-owned rooftop applications and will become cost-effective more quickly. If the Commission feels that some form of continued promotion of demand side renewable energy systems is warranted, then FPL’s proposed expansion of R&D activities will provide much more benefit to customers than the Solar Pilots, in the form of real-world data about the impact that different types of PV systems will have on FPL’s electric system.

### **III. CONCLUSION**

For all of the foregoing reasons, based upon Florida law and the evidentiary record in this proceeding, FPL requests that the Commission approve its proposed DSM Goals for the years 2015-2024 and to allow the existing Solar Pilots to expire at the end of 2014 as planned. There is no evidentiary support for an alternative level of DSM goals that complies with FEECA and the Commission’s DSM Goals rule, or that fully considers impacts to all of FPL’s customers,

participants and non-participants alike. Accordingly, the record strongly supports approval of FPL's proposed goals, consistent with FPL's positions stated in this Post-Hearing Brief.

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I HEREBY CERTIFY that a true and correct copy of FPL's Post-Hearing Brief was served by electronic delivery this 30th day of September, 2014 to the following:

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