

BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of:

COMMISSION REVIEW OF NUMERIC DOCKET NO. 080407-EG  
CONSERVATION GOALS (FLORIDA  
POWER & LIGHT COMPANY).

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COMMISSION REVIEW OF NUMERIC DOCKET NO. 080408-EG  
CONSERVATION GOALS (PROGRESS  
ENERGY FLORIDA, INC.).

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COMMISSION REVIEW OF NUMERIC DOCKET NO. 080409-EG  
CONSERVATION GOALS (TAMPA  
ELECTRIC COMPANY).

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COMMISSION REVIEW OF NUMERIC DOCKET NO. 080410-EG  
CONSERVATION GOALS (GULF  
POWER COMPANY).

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COMMISSION REVIEW OF NUMERIC DOCKET NO. 080411-EG  
CONSERVATION GOALS (FLORIDA  
PUBLIC UTILITIES COMPANY).

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COMMISSION REVIEW OF NUMERIC DOCKET NO. 080412-EG  
CONSERVATION GOALS (ORLANDO  
UTILITIES COMMISSION).

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COMMISSION REVIEW OF NUMERIC DOCKET NO. 080413-EG  
CONSERVATION GOALS (JEA).

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VOLUME 7

Pages 1404 through 1631

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FLORIDA PUBLIC SERVICE COMMISSION



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5  
6 DATE: Thursday, August 13, 2009  
7  
8 TIME: Commenced at 9:30 a.m.  
9  
10 PLACE: Betty Easley Conference Center  
Room 148  
4075 Esplanade Way  
Tallahassee, Florida  
11  
12 REPORTED BY: LINDA BOLES, RPR, CRR  
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15 PARTICIPATING: (As heretofore noted.)  
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## P R O C E E D I N G S

(Transcript follows in sequence from  
Volume 6.)

**CHAIRMAN CARTER:** I'd like to call this hearing to order. Good morning to everyone. I hope everybody had their Wheaties this morning. I had an extra bowl myself, so.

Let's see. Staff, are there any preliminary matters?

**MS. FLEMING:** Chairman, I'm not aware of any preliminary matters.

**CHAIRMAN CARTER:** Okay. Then who's on first? Mr. Cavros, call your next witness.

**MR. CAVROS:** Good morning, Mr. Chairman. I'd like to call Mr. Wilson, John Wilson, to the stand.

**CHAIRMAN CARTER:** John Wilson.

**MS. FLEMING:** Mr. Chairman, if I may.

**CHAIRMAN CARTER:** Yes, ma'am.

**MS. FLEMING:** Looking at our order of witnesses, there's a Mr. Cavanagh that was listed prior to this that was stipulated and excused. I would suggest we move in --

**CHAIRMAN CARTER:** Okay. Let's do that then. Who's moving in Mr. Cavanagh?

**MR. CAVROS:** I move in Mr. Cavanagh.

1                   **CHAIRMAN CARTER:** Okay. The prefiled  
2 testimony of the witness will be inserted into the  
3 record as though read.

4                   Are there any exhibits for Mr. Cavanagh?

5                   **MS. FLEMING:** There doesn't appear to be any.

6                   **CHAIRMAN CARTER:** Okay. Without objection,  
7 show it done.

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1 **Please state your name and business address.**

2 A. Ralph Cavanagh, 111 Sutter St., 20th floor, San Francisco, CA 94104.

3 **Q. On whose behalf are you testifying?**

4 A. I am testifying on behalf of the Natural Resources Defense Council ("NRDC")  
5 and the Southern Alliance for Clean Energy.

6 **Q. Mr. Cavanagh, by whom are you employed and in what capacity?**

7 A. I am a Senior Attorney and Co-Director of the Energy Program at NRDC, which  
8 is a national non-profit environmental organization with more than 650,000 members.  
9 Since 1970 our lawyers, scientists and other environmental specialists have been working  
10 to protect the world's natural resources and improve the quality of the human  
11 environment.

12 **Q. Please summarize your qualifications.**

13 A. I am a graduate of Yale College and Yale Law School, and I joined NRDC in  
14 1979. I am a member of the faculty of the University of Idaho's Utility Executive  
15 Course, and I have been a Visiting Professor of Law at Stanford and UC Berkeley (Boalt  
16 Hall). From 1993-2003, I served as a member of the U.S. Secretary of Energy's  
17 Advisory Board. My current board memberships include the Bonneville Environmental  
18 Foundation, the Center for Energy Efficiency and Renewable Technologies, the  
19 California Clean Energy Fund, and the Northwest Energy Coalition. I have received the  
20 Heinz Award for Public Policy (1996) and the Bonneville Power Administration's Award  
21 for Exceptional Public Service (1986).

22

1 **Q. Why have NRDC and SACE intervened in this proceeding?**

2 A. NRDC and SACE applaud Florida's efforts in passing the 2008 Energy Act (HB  
3 7135), which amended the Florida Energy Efficiency and Conservation Act ("FEECA").  
4 Through its amendments, the legislature recognized the extraordinary potential for  
5 increasing energy efficiency in Florida and the tremendous benefits that will accrue to the  
6 State from doing so. NRDC and SACE have intervened in order to help ensure that the  
7 promise of this bill is achieved by setting strong energy efficiency goals and providing  
8 the framework that will encourage Florida's utilities to dramatically increase their cost-  
9 effective energy efficiency accomplishments. Our members are utility customers who  
10 place a high value on a clean and healthy environment, and our interest is in maximizing  
11 utility investments in cost-effective energy efficiency, which is both the cleanest and  
12 cheapest resource to meet customers' needs. Energy efficiency is the most cost-effective  
13 way to reduce greenhouse gas emissions and other pollutants associated with power  
14 generation, while also strengthening our economy, improving our energy security and  
15 reducing costs for consumers. All of these benefits were explicitly recognized by the  
16 legislature in its amendments to FEECA.<sup>1</sup>

17 **Q. What issues will you cover in your testimony?**

18 A. My testimony will focus on two issues. First, considering the recent amendments  
19 to FEECA, I will address which cost-effectiveness tests should be used in determining  
20 whether the elements of a utility's portfolio of energy efficiency programs are cost-  
21 effective. This is identified as issue 7 in the PSC Staff issues list. Second, I will address  
22 whether it is appropriate to provide performance-based incentives to utilities that achieve

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<sup>1</sup> Fla. Stat. § 377.601 (2008).

1 significant levels of cost-effective energy efficiency savings. This is identified as issue 6  
2 in the PSC Staff issues list.

3 I. COST-EFFECTIVENESS TESTS FOR ENERGY EFFICIENCY MEASURES

4 **Q. Which cost-effectiveness tests do you believe are required by amendments**  
5 **made to FEECA in the 2008 Energy Act?**

6 A. The legislature required that the PSC “evaluate the full technical potential of all  
7 available demand-side and supply-side conservation and energy efficiency measures” and  
8 then set goals using two cost-effectiveness tests, articulated in amended sections 366.82  
9 (3)(a) and 3(b).<sup>2</sup> First, in section 3(a), the legislature required the “Participant Test”  
10 when it required the PSC to consider “the costs and benefits to customers participating in  
11 the measure.”

12 Second, in section 3(b), the legislature required the Total Resource Cost (“TRC”)  
13 Test. This is readily apparent from the language of the amendment. Section 3(b)  
14 mandates that the PSC consider “[t]he costs and benefits to the general body of ratepayers  
15 as a whole, including utility incentives and participant contributions.” TRC is the cost-  
16 effectiveness test that focuses on the “general body of ratepayers as a whole.” It does this  
17 by considering the total costs of an energy-efficient measure, no matter who pays for it,  
18 as well as the cost of implementing the efficiency program, and comparing that to the  
19 benefit the measure provides to the participant and all the utility’s customers including  
20 avoided generation, transmission, distribution, and environmental costs.<sup>3</sup> In addition,  
21 TRC, unlike several of the other tests, includes both utility incentives and participant

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<sup>2</sup> Fla. Stat. 366.82 (3) (2008).

<sup>3</sup> For a general discussion of the TRC test and what costs and benefits are included in its calculation, see *National Action Plan for Energy Efficiency*, July 2006, pp. 6-22 and 6-23.  
[www.epa.gov/cleanenergy/energy-programs/napee/resources/action-plan.html](http://www.epa.gov/cleanenergy/energy-programs/napee/resources/action-plan.html).

1 contributions. It does this by considering the total cost of the measure regardless of how  
2 that cost may be divided between the utility and participants. The PSC Cost-  
3 Effectiveness Manual defines the TRC to be “based on the total costs of the program,  
4 including both the participants' and the utility's costs.”<sup>4</sup> Indeed, the TRC test used to be  
5 called the “All Ratepayers Test.” The TRC test is clearly the best and only proper  
6 interpretation of the law’s requirement.

7 **Q. Does the legislative history of the 2008 Energy Act support your**  
8 **interpretation?**

9 A. It does. I am aware of two Legislative reports, both of which confirm this view.  
10 As described in the testimony of John D. Wilson, these reports are the Florida House of  
11 Representatives’ 2008 Legislative Session End of Session Report and the House of  
12 Representatives Staff Analysis of HB 7135 for the Committee on Energy and the  
13 Environment & Natural Resources Council. Both of these reports paraphrase the  
14 language of 3(a) and 3(b) and explain, in parenthesis, the respective tests that language  
15 describes. For 3(a) it is the “(Participants test)” and for 3(b) it is “(similar to a Total  
16 Resource Cost test or TRC test but including the costs of incentives).” As I have noted,  
17 the TRC test as traditionally applied includes the costs of incentives, although the  
18 incentive cost is typically not separately broken out from the rest of the costs of  
19 implementing the efficiency program; rather, the incentive as well as the participant  
20 contribution are both included as part of the total measure cost.

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<sup>4</sup> Cost Effectiveness Manual for Demand Side Management and Self Service Wheeling Proposals at 5.

1 **Q. Is use of the Rate Impact Measure test (RIM) to evaluate cost-effectiveness**  
2 **consistent with the 2008 Energy Act?**

3 A. No, it is not. The RIM test is not consistent with either of the tests required by the  
4 legislature. As its name implies, the RIM test addresses the impact of energy efficiency  
5 programs on utility rates. Nowhere in the amendments is there any discussion concerning  
6 impacts on rates. Moreover, RIM is incompatible with the language of both 3(a) and  
7 3(b). Rather than focus on participants, as required by 3(a), or the “general body of  
8 ratepayers as a whole,” as required by 3(b), RIM focuses exclusively on rates and  
9 particularly on potential impacts to non-participants. RIM is further inconsistent with  
10 3(b) because it excludes both the participants’ contributions and the participants’ benefits,  
11 which come in the form of reduced energy expenditures and lower energy bills.

12 Even if the language were not as clear as it is, the amendment should be read in  
13 the context of the legislature’s effort to effect a change in the way Florida’s utilities and  
14 the PSC have evaluated energy efficiency measures in the past so that Florida can start  
15 taking advantage of cost-effective energy efficiency opportunities. The use of the RIM  
16 test in the past has significantly constrained investments in energy efficiency, leaving  
17 significant cost-effective opportunities untapped. Viewed in this context, the amendment  
18 makes perfect sense, because switching from the RIM test to the TRC test is absolutely  
19 critical if Florida is going to make sustained progress on energy efficiency.

1 **Q. Are you familiar with the arguments presented by some of the utilities for**  
2 **why they believe the RIM test is more consistent with the FEECA amendments than**  
3 **the TRC test?**

4 A. Yes, and I do not find them to be in the least bit convincing. First, Mr. Steve Sim,  
5 of Florida Power and Light, and Mr. James Dean, argue that TRC is not consistent with  
6 the amended section 3(b) because it “disregards incentives paid to customers.”<sup>5</sup> This is  
7 simply not correct. As the PSC’s Cost Effectiveness Manual indicates, TRC includes the  
8 “total costs of the program, including both the participants’ and the utility’s costs.”<sup>6</sup> Mr.  
9 Sim and Mr. Dean are correct that when applying the TRC test it is not necessary to  
10 separately distinguish what portion of a measure cost is paid for by the utility incentive  
11 versus the participant. Because both are added together as part of the total cost, there is  
12 no need to separate them out. As the Cost Effectiveness Manual indicates, “[a]ll  
13 equipment costs, installation, operation and maintenance, and administration costs, no  
14 matter who pays for them, are included in” the TRC test.

15 As I noted previously, the RIM test cannot be reconciled with section 3(b)  
16 because it fails to include the participant contribution, as the legislature explicitly  
17 requires. Mr. Sim attempts to get around this problem by suggesting that the Participant  
18 Test can satisfy not only section 3(a) but also the “participant contribution” requirement  
19 in section 3(b), while RIM satisfies the other elements of 3(b).<sup>7</sup> Mr. Sim goes on to argue  
20 that if the Participant Test and TRC test are both used then participant contributions will  
21 be “double count[ed].” This assertion makes no sense. Mr. Sim has improperly

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<sup>5</sup> Testimony of James W. Dean at 23; see also Testimony of Steve R. Sim at 24.

<sup>6</sup> Cost Effectiveness Manual for Demand Side Management and Self Service Wheeling Proposals at 5.

<sup>7</sup> Sim Testimony at 24.

1 collapsed and intermingled the two separate cost-effectiveness tests required. Clearly,  
2 the legislature has required that the PSC consider the Participant test in section 3(a) and  
3 then, as a single, separate and independent test, the TRC test in section 3(b). Moreover,  
4 the fact that participant contributions figure in both tests is not double counting, because  
5 each test reveals cost-effectiveness from a different perspective (and in any event, the  
6 legislature has made the decision to apply them both). The TRC test evaluates efficiency  
7 programs from the perspective of all utility customers, and the Participant test adopts the  
8 perspective of customers participating in the efficiency programs; both provide valuable  
9 insight in designing, and evaluating whether to authorize, efficiency programs.

10 **Q. From a policy perspective, is the TRC or RIM test preferable?**

11 A. The TRC test is by far the superior test from a policy perspective. The PSC's  
12 objective should be to minimize the total cost to customers of receiving reliable energy  
13 services. The TRC test is the only cost-effectiveness test that takes this perspective; it  
14 evaluates efficiency from the perspective of all customers and includes the total costs  
15 (including both program and incremental measure costs) and benefits to customers.

16 By focusing on short-term rate impacts only, the RIM test eliminates numerous  
17 highly cost-effective efficiency measures that, if adopted, will reduce customers' energy  
18 bills, lower overall energy costs, and, by avoiding the cost of new generation, may also  
19 reduce rates over the long term. As Bob Trapp of the PSC explained in a presentation to  
20 the Florida Legislature last year, under the RIM test "[p]rograms with relatively higher  
21 kWh reductions will result in higher revenue losses and reduce the potential to be cost-  
22 effective under RIM."<sup>8</sup> As this correctly indicates, use of the RIM test discourages

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<sup>8</sup> See Exhibit JDW 7 (attached to testimony of John D. Wilson).

1 adoption of most energy efficiency measures. Indeed, defenders of the RIM test are  
2 driven to a logical absurdity: a utility must reject even energy efficiency programs that  
3 deliver savings at no cost whenever the utility's marginal costs of generation dip below  
4 its retail rates.<sup>9</sup>

5       It makes far more sense from a policy perspective to focus not on *rates* but on  
6 total utility *bills*. After all, are customers really worse off if, for a constant level of  
7 service, their rates go up but their bills go down? Both our economy and environment are  
8 better off when total energy bills and total energy sales are reduced through cost-effective  
9 energy efficiency. The best test to determine whether an energy efficiency measure will  
10 achieve this result is TRC, which appropriately considers the total costs and total benefits  
11 of energy efficiency measures.

12 **Q. But isn't the RIM test needed to protect nonparticipants in energy efficiency**  
13 **programs?**

14 A. That is not an argument for withholding investment in energy efficiency; it's an  
15 argument for ensuring that opportunities to participate in efficiency programs are widely  
16 available. If, for example, Florida utilities were pursuing all cost-effective efficiency  
17 resources throughout their systems, then few if any customers would not be in a position  
18 to benefit within a reasonable time period. Nonparticipant equity only becomes an issue  
19 when all a utility is offering is minimal opportunities to participate in its efficiency  
20 programs; the remedy lies in substantially expanding the scope of the effort, not  
21 retrenching. Moreover, the PSC's objective should be to minimize the total cost to all

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<sup>9</sup> This reflects the fact that, whenever marginal costs of generation are lower than retail rates, even a kilowatt-hour saved at no cost reduces utility revenues more than it avoids in generation costs, resulting in a potentially minute but negative short-term rate impact. The RIM test elevates short-term adverse impacts on utility revenues above both short- and long-term reductions in customers' bills.

1 customers of receiving reliable energy services. Just as the PSC does not make  
2 investments in supply-side resources hinge on the impact on “non-participants” in load  
3 growth, it should not make investments in cost-effective demand-side resources depend  
4 on having no impact on any customer.

5  
6 **Q. But won't there be substantial numbers of nonparticipants, particularly low-**  
7 **income households, no matter how a program is designed?**

8 A. That issue figured prominently in the design of the Hood River Conservation  
9 Project, the most exhaustive test of energy efficiency potential ever conducted. In a  
10 demographically representative Northwest county in the mid-1980s, more than 90% of  
11 eligible households accepted utilities' invitations to contribute to a county-wide  
12 conservation resource, and participants were less wealthy, on average, than  
13 nonparticipants.<sup>10</sup> I helped design this project, which realized its goal of offering the  
14 region's utilities a blueprint for marketing energy efficiency effectively to diverse  
15 constituencies. After Hood River, utilities should not be questioning the feasibility of  
16 high participation rates. Moreover, in the ensuing two decades, utilities across the United  
17 States have accumulated a wealth of experience in targeting efficiency programs  
18 specifically to low-income customers and communities. I am sure that Florida's utilities  
19 would indignantly reject any suggestion that they could not sustain a leadership record on  
20 this score.

21 The potential universe of participants in utility-sponsored energy efficiency  
22 programs is substantially larger than that of nonparticipants. Under a properly structured  
23 schedule of efficiency program offerings, whether one is a participant would generally be

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<sup>10</sup> See Cavanagh and Hirsh, The Nation's Conservation Capital, Amicus Journal (1987), p. 38.

1 a matter of personal choice; no one would be excluded by virtue of income, for example,  
2 and all major uses of electricity would be covered. At that point, a no-losers test becomes  
3 a "hardly-any-winners" test; energy efficiency programs are withheld from the many to  
4 avoid any impact on the few. And the system as a whole pays higher than necessary  
5 power bills. There is no perfect justice under any energy efficiency (or power plant)  
6 investment regime, but substituting widespread participation for no-losers tests is a  
7 distinct improvement from an equity standpoint. And of course there are no  
8 "nonparticipants" in the many systemwide benefits associated with cost-effective  
9 efficiency, which helps assure resource adequacy and reliable service for all while  
10 reducing environmental damage that all would find unwelcome.

11 **Q. Should steps be taken to assist low-income households in participating in**  
12 **energy efficiency programs?**

13 A. Absolutely. Florida utilities should make sure to design programs that will reach  
14 out to and provide additional assistance to those households. Importantly, these programs  
15 can be designed such that, even when additional assistance is provided, the programs  
16 remain cost-effective.

17 It is also useful to bear in mind that since use of the RIM test drastically reduces  
18 investments in cost-effective efficiency, low income households will suffer even more as  
19 they will, over the long run, end up paying even higher energy bills when increasing  
20 demand forces utilities to add additional expensive new capacity to the system. In  
21 contrast, under well-run programs using the TRC test, all households from low-income to  
22 well-off can lower their electricity bills even if there may be a slight near-term increase in  
23 rates.

1 **Q. How do you respond to Mr. Dean's testimony concerning past decisions of**  
2 **the PSC in which it relied on the RIM test to set energy efficiency goals?**

3 A. I believe the past decisions discussed by Mr. Dean are of very little relevance to  
4 the questions now before the PSC because those decisions were made prior to passage of  
5 the FEECA amendments in the 2008 Energy Act.<sup>11</sup> Prior to these amendments, the  
6 Commission had considerably more discretion to select the cost-effectiveness test it  
7 found most appropriate at the time. The PSC is now operating in a significantly different  
8 legal framework because the Florida legislature has, for the first time, provided the  
9 Commission explicit direction as to the cost-effectiveness tests it must use. To the extent  
10 that the past decisions endorsing the RIM test are relevant at all, it is to show the context  
11 within which the Florida legislature acted. And as I explained previously, this context  
12 supports my reading of the statute. Indeed, if, as Mr. Dean contends, the amendments  
13 require continued use of the RIM test, one would have to wonder why the legislature  
14 acted at all.

15 **Q. Is the utility's decision to set goals using the RIM test the only problem with**  
16 **the potential study completed by the utilities?**

17 A. No. Using the RIM test is one of the key problems but there are other serious  
18 problems with the potential study as well. I have reviewed the testimony of Phil  
19 Mosenthal and William Steinhurst and it is clear that the analysis of economic and  
20 achievable efficiency potential contains significant additional problems, such as the  
21 omission of any efficiency measures that have a pay-back of less than two years. These  
22 flaws are substantial and in many cases obvious and, in order to set strong goals and meet

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<sup>11</sup> Dean Testimony at 6.

1 the law's requirement, the PSC must both require use of the TRC test and correct these  
2 errors.

3 II. THE NEED FOR INCENTIVES TO UTILITIES FOR ENERGY EFFICIENCY

4 **Q. Do you believe that it would be appropriate to create performance-based**  
5 **incentives to encourage Florida Utilities to achieve significant levels of customer-**  
6 **owned and utility-owned energy efficiency?**

7 A. Yes, performance-based incentives are needed to help Florida capture all cost-  
8 effective efficiency savings and the accompanying economic and environmental benefits.  
9 But performance-based incentives should only be adopted if the PSC first sets strong  
10 efficiency goals. At present, the utilities have proposed goals of between zero and just  
11 over 0.1 percent of sales per year. These goals are appallingly low and their achievement  
12 would not merit payment of any reward.<sup>12</sup> However, if the PSC were to adopt more  
13 aggressive goals on the order of those recommended by Mr. Steinhurst and Mr.  
14 Mosenthal, I believe that it would be appropriate to establish an incentive that will allow  
15 utilities an opportunity to share in the net benefits that cost-effective efficiency programs  
16 provide customers and, in the process, encourage the utilities to excel at delivering  
17 energy efficiency programs that lower customer bills.

18 In fact, the extremely low goals proposed by the seven utilities shows that under  
19 the existing utility regulatory structure, the utilities have strong disincentives to support

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<sup>12</sup> The following two reports by the American Council for an Energy-Efficiency Economy (ACEEE), show that the top states generally achieve savings of more than 1% of sales each year. Nadel, S., *Energy Efficiency Resource Standards: Experience and Recommendations*, ACEEE Report E063, March 2006. Kushler, M. et al, *Meeting Aggressive New State Goals for Utility-Sector Energy Efficiency: Examining Key Factors Associated with High Savings*, ACEEE Report E091, March 2009. See also N. Hopper, G. Barbose, C. Goldman and Jeff Schlegel, *Energy Efficiency as a Preferred Resource: Evidence from Utility Resource Plans in the Western United States and Canada* (Lawrence Berkeley Laboratory, LBNL-1023E, September 2008) (reviewing energy efficiency targets for major California, Northwest and Western utilities, all of which are well above the Florida utilities' proposed goals).

1 energy efficiency. The PSC's current regulatory regime creates two primary  
2 disincentives, which, perversely, financially harm utilities that lower customer bills  
3 through efficiency investments. First, traditional ratemaking ties utilities' recovery of  
4 authorized fixed costs to sales, such that efficiency programs that reduce sales jeopardize  
5 the utilities' financial health. Second, by investing in efficiency programs that reduce  
6 sales, a utility foregoes an opportunity to invest in supply-side resources and earn its  
7 rate of return on that capital investment. Under this structure, the PSC effectively  
8 penalizes utilities for saving customers money through energy efficiency.

9 The PSC can and should eliminate these disincentives, and create a positive  
10 incentive, for the utilities to capture all cost-effective efficiency savings. The incentive  
11 structure under which the utilities operate (meaning the collective impact of the  
12 incentives and disincentives they face) is a matter of utmost importance, because it guides  
13 the utilities' decision-making and ultimately their impact on society and the environment.  
14 Indeed, I believe that one of the fundamental goals of the Commission should be to create  
15 an appropriate incentive structure to help align the utilities' decisions and investments  
16 with the public interest. As regulated entities, the utilities' incentive structure is  
17 determined by the Commission. The goal should be to establish an incentive system  
18 under which the utilities benefit the most when they minimize the life-cycle cost of  
19 reliable service for customers. Two decades ago, the National Association of Regulatory  
20 Utility Commissioners (NARUC) urged its members to "ensure that the successful  
21 implementation of a utility's least-cost [investment and procurement] plan is its most  
22 profitable course of action."<sup>13</sup> The resolution framed the term "least-cost" over an

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<sup>13</sup> NARUC, *Profits and Progress Through Least-Cost Planning*, at 57 (November 1989) (from Resolution in Support of Incentives for Electric Utility Least-Cost Planning, adopted July 27, 1989).

1 extended time horizon. Congress endorsed NARUC's objective in the National Energy  
2 Policy Act of 1992, for both electric and gas utilities, although the final decision remains  
3 with state regulators.<sup>14</sup> All regulation creates financial incentives and disincentives for  
4 the utilities, so the question is not *if* the PSC should provide incentives, but how to *align*  
5 the utilities' incentives with customer interests and the goals of providing affordable,  
6 reliable, and environmentally sensitive energy services.

7       Ultimately, the PSC should decouple utility revenues from sales to eliminate the  
8 first disincentive, and I understand that the PSC has begun to look into decoupling and I  
9 urge it to continue doing so. Revenue decoupling uses small, regular rate true-ups to  
10 enable utilities to recover their authorized fixed cost revenues (no more and no less) when  
11 actual sales deviate from forecasts, while continuing to serve customers with volumetric  
12 rates that provide an incentive for them to use energy more efficiently. This is an  
13 essential policy that must be adopted to unlock the full potential for cost-effective  
14 efficiency savings.

15       Revenue decoupling is necessary, but not sufficient, to truly succeed with  
16 efficiency. I also strongly urge the PSC to adopt a performance-based incentive  
17 mechanism to make energy efficiency a core part of the utilities' business model, level  
18 the playing field with competing supply-side investments, and encourage the utilities to  
19 meet or exceed energy saving goals. In order to align utility shareholder and customer  
20 interests, the performance-based incentive mechanism should give the utilities an  
21 opportunity to retain a portion of the net economic benefits their efficiency programs  
22 provide to customers. This type of mechanism, often known as a "shared savings"

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<sup>14</sup> See 16 USC section 2621 (d)(8).

1 incentive, creates a “win-win” opportunity by encouraging utilities to maximize the net  
2 benefits customers receive. Incentives have been used effectively in numerous states  
3 around the country including Minnesota, California, and Ohio.<sup>15</sup>

4 I would not recommend that the PSC determine a performance-based incentive  
5 mechanism as part of this proceeding. Here, the PSC should focus on setting robust  
6 energy efficiency goals. Once those goals are in place, I suggest the PSC undertake a  
7 separate proceeding to determine the incentive mechanism. By combining aggressive  
8 energy saving goals with revenue decoupling and performance-based incentives for  
9 energy efficiency, the PSC can enable utilities to become full partners in this effort to  
10 reap the tremendous environmental and economic benefits of increasing our energy  
11 efficiency.

12 **Q. Does this conclude your testimony?**

13 **A. Yes.**

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<sup>15</sup> For a detailed discussion of energy efficiency incentive mechanisms, see National Action Plan for Energy Efficiency, *Aligning Utility Incentives with Investments in Energy Efficiency*, November 2007, [www.epa.gov/RDEE/documents/incentives.pdf](http://www.epa.gov/RDEE/documents/incentives.pdf).

1                   **CHAIRMAN CARTER:** Thank you. You may proceed.

2                   **JOHN WILSON**

3 was called as a witness on behalf of NRDC and SACE and,  
4 having been duly sworn, testified as follows:

5                   **DIRECT EXAMINATION**

6 **BY MR. CAVROS:**

7                   **Q.** Please state your name and business address  
8 for the record, please.

9                   **A.** My name is John D. Wilson. My business  
10 address is 34 Wall Street, Suite 607, Asheville, North  
11 Carolina.

12                   **Q.** And have you, have you been sworn in?

13                   **A.** Yes, I have.

14                   **Q.** And have you prepared and caused to be filed  
15 38 pages of prefiled direct testimony and Exhibits JDW-1  
16 to JDW-6?

17                   **A.** Yes.

18                   **Q.** Okay. And do you have any changes or  
19 revisions to your direct testimony or exhibits?

20                   **A.** Yes, I do. In my direct testimony on Page 2,  
21 Line 3 should have been -- was inadvertently left in the  
22 testimony and should be removed.

23                   **Q.** And I apologize. I forgot -- I left out one  
24 exhibit of yours, JDW-7. Have you prepared and caused  
25 to be filed JDW-7 as well?

1           **A.**    Yes, I have.

2           **Q.**    Thank you.  And if I asked you the same  
3 questions contained in your prefiled direct testimony  
4 and exhibits, would your answer be the same?

5           **A.**    Yes.

6                   **MR. CAVROS:**  I would ask that Mr. Wilson's  
7 prefiled direct testimony be entered into the record as  
8 though read.

9                   **CHAIRMAN CARTER:**  The prefiled testimony of  
10 the witness will be inserted into the record as though  
11 read.

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1 Q. Please state your name, business address, and employer.

2 A. My name is John D. Wilson. I am Director of Research for Southern Alliance for Clean Energy, 34  
3 Wall Street, Suite 607, Asheville, North Carolina.

4 Q. Please state briefly your education, background and experience.

5 A. I graduated from Rice University in 1990 with a Bachelor of Arts degree in physics and history. I  
6 received a Masters in Public Policy Degree from the John F. Kennedy School of Government at Harvard  
7 University in 1992 with an emphasis in energy and environmental policy and economic and analytic  
8 methods. Since 1992, I have worked in the private, non-profit and public sectors on a wide range of  
9 public policy issues, usually related to energy, environmental and planning topics.

10 I became the Director of Research for the Southern Alliance for Clean Energy in 2007. I have  
11 participated in North Carolina Climate Action Plan Advisory Group and the South Carolina Climate,  
12 Energy & Commerce Advisory Committee as an alternate for Dr. Stephen A. Smith, Executive Director of  
13 SACE. I have also served as a member of various technical work groups dealing with energy supply and  
14 efficiency issues. I am the senior staff member responsible for our energy efficiency program advocacy,  
15 as well as being responsible for work in other program areas.

16 I have testified before the South Carolina Public Service Commission in the Duke Energy  
17 Carolinas Save-a-Watt proceeding. I have also prefiled testimony with the North Carolina Utilities  
18 Commission in the Duke Energy Carolinas Save-a-Watt proceeding which I anticipate delivering in late  
19 August 2009. I have also appeared before the Florida Public Service Commission and its staff in  
20 workshops, and presented to the Board of the Tennessee Valley Authority.

21 I have testified before the legislatures of Florida, North Carolina and Texas, the Texas Natural  
22 Resource Conservation Commission, and the U.S. Environmental Protection Agency on numerous  
23 occasions. I have served on numerous state and local government advisory committees dealing with  
24 environmental regulation and local planning issues in Texas. I have been an invited speaker to a wide

1 variety of academic, industry and government conferences on a number of energy, environmental and  
2 planning related topics.

3 ~~A copy of my resume is attached as Wilson Exhibit 1.~~

4 **Q. On whose behalf are you testifying in this case?**

5 A. I am testifying on behalf of Natural Resources Defense Council and Southern Alliance for Clean  
6 Energy (NRDC and SACE).

7 **Q. What topics and issues will you cover in your testimony?**

8 A. In my testimony, I will cover several topics and issues. First, I will discuss how the interests of  
9 SACE and NRDC are consistent with the Legislative intent that is being fulfilled through these  
10 proceedings. Second, I will demonstrate that the impact of Florida's utilities on energy efficiency has  
11 fallen short of national leadership status from a broad perspective consistent with mainstream views on  
12 what constitutes national leadership on energy efficiency. Third, I will testify to matters relating to the  
13 issue of which cost-effectiveness tests should be considered by the Commission in this proceeding.  
14 Fourth, I will testify to the issue related to avoided capacity cost. Fifth, I will testify to the issue  
15 regarding whether the Commission should authorize financial incentives to utilities in this proceeding.  
16 Sixth, I will testify to the issue regarding whether the Commission should require addition of demand-  
17 side renewable energy goals to the FEECA process. Seventh, I will testify regarding the technical  
18 potential study and certain adjustments that we would recommend to the Commission.

19 **I. ENERGY EFFICIENCY OBJECTIVES ARTICULATED IN THE 2008 ENERGY ACT**

20 **Q. Why have SACE and NRDC devoted substantial resources to intervene in this proceeding?**

21 A. The 2008 Florida Legislature placed great emphasis on reducing statewide energy use in the  
22 2008 Energy Act. It did so by enhancing existing goals and policies directed towards encouraging energy  
23 savings, and by establishing new standards and directives. These changes were part of a broader set of  
24 policies whose objective, in large part, is to reduce atmospheric carbon dioxide, the chief global

1 warming pollutant. Several of the most important goals, policies, standards and directives direct the  
2 Commission to make changes to how the FEECA goals are established.

3 The 2008 Energy Act renews and enhances the goals in the State Comprehensive Plan as it  
4 relates to energy, including FLA. STAT. § 187.201(11)(a) (2008), as follows:

5 *Goal.*--Florida shall reduce its energy requirements through enhanced conservation and  
6 efficiency measures in all end-use sectors and shall reduce atmospheric carbon dioxide by  
7 promoting an increased use of renewable energy resources and low-carbon-emitting electric  
8 power plants.

9 Seven policies to implement this goal are of particular relevance to this proceeding, and can be found in  
10 an updated Section 187.201(11)(b), as follows:

- 11 1. Continue to reduce per capita energy consumption.
- 12 2. Encourage and provide incentives for consumer and producer energy conservation and  
13 establish acceptable energy performance standards for buildings and energy consuming items.
- 14 3. Reduce the need for new power plants by encouraging end-use efficiency, reducing peak  
15 demand, and using cost-effective alternatives.
- 16 4. Increase the efficient use of energy in design and operation of buildings, public utility  
17 systems, and other infrastructure and related equipment.
- 18 5. Promote the development and application of solar energy technologies and passive solar  
19 design techniques.
- 20 6. Provide information on energy conservation through active media campaigns.
- 21 7. Promote the use and development of renewable energy resources and low-carbon-emitting  
22 electric power plants.

23 I would draw the Commission's attention to note that a clear distinction is made between a policy to  
24 generally reduce per capital energy consumption and a policy to reduce the need for new power plants.

1 Evidently the Florida Legislature is well aware of the distinction between energy savings and capacity  
2 savings.

3 Of course, it is evident from a plain reading of the State Comprehensive Plan that it is intended  
4 to be a “direction-setting document” and shall only be reasonably applied where otherwise specifically  
5 authorized by law.<sup>1</sup> Since the Florida Energy Efficiency and Conservation Act (FEECA statute) does  
6 specifically authorize actions consistent with the State Comprehensive Plan, the plan’s direction to  
7 “reduce [Florida’s] energy requirements” provides overall guidance in interpreting the FEECA statute, as  
8 revised in the 2008 Energy Act.

9 The three most important substantive revisions to the FEECA statute in the 2008 Energy Act are  
10 the establishment of a statutory cost-effectiveness test for the FEECA goal setting process, the explicit  
11 authorization of financial incentives to utilities for successfully reducing the growth of electricity  
12 demand, and the addition of demand-side renewable energy resource goals to the FEECA process.  
13 The most important procedural revision to the FEECA statute is to establish the Florida Energy and  
14 Climate Commission, as a single government entity with a specific focus on energy and climate change,  
15 as a party to the proceedings. In the legislation establishing the Commission, the Legislature found  
16 significant value to Florida consumers, which comes from investments that reduce greenhouse gas  
17 emissions and stated that it is the policy of Florida to:

18 (a) Develop and promote the effective use of energy in the state, discourage all forms of energy  
19 waste, and recognize and address the potential of global climate change wherever possible.

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<sup>1</sup> FLA. STAT. § 187.101.

1 (b) Play a leading role in developing and instituting energy management programs aimed at  
2 promoting energy conservation, energy security, and the reduction of greenhouse gas  
3 emissions.<sup>2</sup>

4 Again, as statements of intent and policy, it is necessary to look for supporting changes to procedure  
5 and standards. Evidently, the Florida Legislature understood that effective FEECA goals are essential to  
6 the reduction of greenhouse gas emissions, and it therefore directed that that the Florida Energy and  
7 Climate Commission "shall promote energy conservation in all energy use sectors throughout the  
8 state."<sup>3</sup>

9 NRDC and SACE advocate for the reduction of greenhouse gas emissions, and share a history of  
10 advocating for energy conservation in the interests of reducing air pollution and protecting consumers  
11 from unnecessary, risky and costly energy choices. The perspective we intend to bring to this  
12 proceeding is widely reflected across Florida law, as discussed above, and crystallized neatly in a single  
13 policy statement:

14 It is the policy of the State of Florida to:

15 (j) Consider, in its decisionmaking, the social, economic, and environmental impacts of energy-  
16 related activities, including the whole-life-cycle impacts of any potential energy use choices, so  
17 that detrimental effects of these activities are understood and minimized.<sup>4</sup>

18 It is our opinion that the goals proposed by the FEECA utilities and the testimony supporting those goals  
19 fall short of meeting statutory requirements and we join these proceedings to offer the Commission an  
20 alternative perspective that better meets the expressed Legislative intent and policies of the State of  
21 Florida.

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<sup>2</sup> FLA. STAT. § 377.601 (2008).

<sup>3</sup> FLA. STAT. § 377.703(i).

<sup>4</sup> FLA. STAT. §377.601(j).

1 **II. HISTORICAL ENERGY EFFICIENCY ACHIEVEMENTS OF FEECA UTILITIES**

2 **Q. Do you agree with witnesses for the FEECA utilities that their historic energy efficiency**  
3 **achievements meet the expectations of Florida law, as amended by the 2008 Energy Act?**

4 **A.** No, I do not. The witnesses for the seven FEECA utilities have made varying claims about how  
5 effective their historic programs have been. In the interests of brevity, I will offer a brief contrast to the  
6 testimony of John Haney on behalf of FPL.

7 Mr. Haney represents FPL to be “*the industry leader in DSM performance.*”<sup>5</sup> Mr. Haney provides  
8 a variety of selective statistics to back up his claim, carefully focusing on cumulative demand reduction  
9 measured by avoided capacity, rather than energy savings, with the sole exception of a claim to be #4 in  
10 cumulative energy reduction from energy efficiency and, later, briefly mentioning that its cumulative  
11 program impacts are 46,646 GWh of energy savings.

12 The heavy focus on capacity savings, and avoided power plants, contrasts with the passing  
13 references to energy savings and the total lack of any reference to greenhouse gas emission reductions.  
14 Mr. Haney’s testimony does not reflect a balanced assessment of FPL’s historic or future performance  
15 with respect to the full policy and Legislative intent discussion above.

16 From a national perspective, the standard for measuring leadership on energy efficiency is  
17 energy savings. The most authoritative statement on the benefits of energy efficiency is presented in  
18 the *National Action Plan for Energy Efficiency (NAPEE)*.<sup>6</sup> A review of its statement on the “Benefits of  
19 Energy Efficiency” reveals numerous references to energy savings and cost savings, but only a brief  
20 reference to reducing peak demand without putting it in a quantitative context.

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<sup>5</sup> Testimony of John Haney (“Haney Test.”), p. 6 (emphasis added).

<sup>6</sup> U.S. Department of Energy and U.S. Environmental Protection Agency, “National Action Plan for Energy Efficiency,” July 2006, p. ES-4.

1 The NAPEE statement describes three characteristics of "well-designed energy efficiency  
2 programs," which it asserts:

- 3 • "can provide opportunities for customers of all types to adopt energy savings measures that can  
4 improve their comfort and level of service, while reducing their energy bills,"
- 5 • "are saving energy at an average cost of about one-half of the typical cost of new power  
6 source," and
- 7 • "are delivering annual energy savings on the order of 1 percent of electricity . . . sales."

8 These three criteria provide a useful national reference standard to determine whether or not any of the  
9 FEECA utilities can claim to be a "national leader" on energy efficiency.

10 **Q. Do any of the FEECA utilities demonstrate all three of the characteristics of "well-designed  
11 energy efficiency programs?"**

12 **A.** No, they generally meet the first characteristic, may meet the second characteristic, but fall  
13 short of meeting the third.

14 Regarding the first characteristic, I would agree that most or all of the FEECA utilities offer  
15 "opportunities for customers of all types." This is a notable accomplishment, as many utilities across the  
16 southeast offer few programs and often to only selected customer classes.

17 **Q. Do the FEECA utilities demonstrate that the cost-effectiveness of their programs is in line with  
18 a "well-designed energy efficiency program?"**

19 No, the FEECA utilities have not testified as to the average cost of their existing energy efficiency  
20 programs. According to independent sources such as Lazard, new gas plants are averaging 8 cents per  
21 kWh and new nuclear plants are forecast to cost 10 to 14 cents per kWh on a levelized basis. Based on  
22 the NAPEE criteria and my general review of relevant publications, I would look to a well-designed  
23 energy efficiency program in Florida to be utilizing measures with costs of 0 to 5 cents per kWh, with  
24 average costs of less than 4 cents per kWh.

1 In the absence of utility testimony on this topic, I referred to a study that compared the cost-  
2 effectiveness of various utility-led energy efficiency programs by Summit Blue Consulting.<sup>7</sup> The study  
3 found that the "Median Cost of Conserved Energy (First Year) is 17 cents/kWh," but "[a]ssuming a 10-15  
4 year average DSM measure lifetime, cost of lifetime energy savings is generally 2 cents or less."  
5 NRDC/SACE Witness Mosenthal testifies to similar cost data. The data presented in this study appear to  
6 indicate that Progress Energy Florida, Gulf Power, and FPL have costs that are significantly higher than  
7 most other utilities included in the study. TECO's unit costs appear to be above average, but within the  
8 range of most other utilities. The study indicates, in an apparent reference to Florida utilities (and  
9 perhaps Duke Indiana as well) that "Some organizations focus on demand savings over energy savings,  
10 which often leads to higher costs of conserved energy."<sup>8</sup>

11 The Summit Blue study later characterizes all four Florida utilities as high cost, low energy  
12 savings utilities relative to other utilities in the study. However, some of the detail data indicate more  
13 favorable results in terms of cost-effectiveness. The commercial and industrial cost-effectiveness for  
14 TECO and FPL is quite similar to other utilities studied (Gulf Power, however, is a high-cost outlier).

15 On the other hand, in one recent public presentation, Susan Clark claimed that FPL's program  
16 costs are less than 1 cent per kWh energy savings.<sup>9</sup> Furthermore, the data used by Summit Blue are  
17 derived from Energy Information Administration Form 861 data, which I consider to be somewhat  
18 problematic for this type of analysis. (I will discuss issues with these data later in my testimony.)  
19 Therefore, I am uncertain whether FEECA utilities are saving energy at an average cost of no more than  
20 one-half of the typical cost of new power source.

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<sup>7</sup> Randy Gunn, "Benchmarking 2005 DSM Results," Summit Blue Consulting LLC, February 8, 2007.

<sup>8</sup> Gunn, p. 6.

<sup>9</sup> Susan Clark, "Overview of Florida's Energy Efficiency & Conservation Efforts & Goal Setting Process," presentation to Tampa Mayor's Citizen/TECO Energy Conservation Task Force, April 13, 2009.

1 Q. Do the FEECA utilities demonstrate that the annual energy savings of their programs is in line  
2 with a “well-designed energy efficiency program?”

3 A. No, the FEECA utilities have not demonstrated that they are delivering annual energy savings on  
4 the order of 1 percent of electricity sales. In particular, FPL’s assertion that it is a “national leader” is not  
5 accurate when viewed from this perspective.

6 In comparison, NRDC/SACE Witness Mosenthal testifies regarding energy efficiency programs  
7 that have operated for many years with annual impacts on the order of 1 percent of electricity sales. In  
8 one case, Efficiency Vermont, the program administrator ramped-up from 1 percent to 2.5 percent in a  
9 mere two year timeframe.

10 Q. What evidence refutes FPL’s claim to be a “national leader” with respect to operating energy  
11 efficiency programs that have a large impact on reducing energy consumption by its customers?

12 A. While the cumulative impact that FPL reports for its historic achievements may be of national  
13 significance, a review of the data provided in Mr. Haney’s testimony and FPL’s most recent resource plan  
14 demonstrate that its current and proposed efforts do not establish FPL as a national leader in partnering  
15 with its customers to reduce energy consumption.

16 From 2000 to 2008, FPL reported that its programs achieved energy savings of 1,718 GWh.<sup>10</sup>  
17 The energy savings impacts of FPL energy efficiency programs implemented during this time period was  
18 approximately 0.2 percent of annual sales during this period. The annual energy savings impacts for FPL  
19 relative to historic sales are presented in Exhibit JDW-1.

20 Mr. Haney testifies that FPL has achieved 46,646 GWh of energy savings. I did not find a clear  
21 explanation of what this figure represents, but based on the 1,718 GWh annual energy savings impact of  
22 FPL programs from 2000 to 2008, I would assume that this is the cumulative energy savings since “FPL

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<sup>10</sup> Haney Test., Exhibits JRH-8 and JRH-9.

1 began offering DSM programs in the late 1970s.” This suggests that the impact of FPL programs over  
 2 this period has been an average of 1,500 GWh in annual energy savings.

3 Mr. Haney also testifies that the cumulative energy efficiency impacts of FPL programs is 3,976  
 4 GWh in 2008.<sup>11</sup> Deducting the net increase in annual energy savings from 2000 to 2008 of 1,718 GWh,  
 5 this indicates that 2,258 GWh of current program impacts are derived from programs that occurred  
 6 before 2000.

	Energy Savings	Source
Impacts of all FPL programs, cumulative in 2008	3,976 GWh	(JRH-1)
- Limited to programs offered in 2000 – 2008	1,718 GWh	(JDW-1)
- Remainder, due to programs offered prior to 2000	2,258 GWh	(calculated)

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8 This suggests an average measure life for FPL energy efficiency programs of approximately 12  
 9 years. Thus, while Mr. Haney may be correct in stating that FPL ranks 12<sup>th</sup> of 43 utilities reporting  
 10 energy efficiency, his exhibit appears to rely on energy efficiency investments made over 12 years ago  
 11 for approximately half of the performance reported by FPL.

12 The proposed 2010-2019 goals for FPL are 60 percent lower than their historic impacts, a drop  
 13 to annual energy savings of 0.08 percent of FPL forecast sales for the same years. In comparison to the  
 14 1,718 GWh impacts for 2000 to 2008, FPL proposes to achieve 770 GWh for 2010 to 2018. The annual  
 15 energy savings goals for FPL relative to forecast sales are presented in Exhibit JDW-2.

16 In summary, FPL has not met the criteria set forward in the NAPEE discussion to be recognized  
 17 as operating a “well-designed” energy efficiency program.

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<sup>11</sup> Haney Test., Exhibit JRH-1.

1 Q. What evidence supports your claim that none of the FEECA utilities have demonstrated that  
2 they are delivering annual energy savings on the order of 1 percent of electricity sales?

3 A. To compare all the FEECA utilities with their peers across the country, I rely upon data from the  
4 Energy Information Administration (EIA). I have personally compiled a database that incorporates data  
5 from forms EIA-861 and EIA-923 (and predecessor forms) for several recent years. I believe these to be  
6 the same data that Mr. Haney uses.<sup>12</sup> Our database also includes custom modifications to allow linkages  
7 among utilities that share holding companies, a very limited number of data recessions in cases of very  
8 obvious data entry error, attribution of multi-state utility data to each state within the utility's service  
9 territory where the utility does not report data at the state level, and the addition of energy efficiency  
10 program impacts reported by state or third-party administered programs such as Efficiency Vermont. I  
11 have conducted numerous informal verifications of the data in the EIA database against utility reported  
12 data, such as official state energy efficiency performance reports.

13 In general, the EIA data can be relied upon to provide useful information regarding annual  
14 energy efficiency program impacts in terms of reduced retail sales (energy savings, GWh), demand  
15 reduction (capacity savings delivered, MW), and demand response (reduction in required reserve  
16 margin, MW). The latter two terms are conveniently aggregated for purposes of demonstrating overall  
17 capacity impacts (MW). However, I have discovered a number of instances in which utilities that  
18 operate energy efficiency programs fail to report impacts to the EIA, or report data that appear to be  
19 inconsistent with data they report in other locations. In a few instances, I have deleted obvious  
20 instances of data entry error where the utility appeared to report data using the wrong units, resulting  
21 in program impacts that were obviously 1,000 times greater than they were likely to be. In each case,  
22 these were for utilities much smaller than the FEECA utilities.

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<sup>12</sup> Haney Test., Exhibit JRH-3.

1 In the aggregate, I prefer to rely on data assembled from state sources when possible.<sup>13</sup> For  
2 example, SACE recently released a report that compared the 50 states and the District of Columbia on  
3 energy efficiency program impacts.<sup>14</sup> To compile these state-by-state impact data, I relied on a report  
4 from American Council for an Energy-Efficient Economy (ACEEE) which included data for several states  
5 that was assembled from original sources at the state level. For the states that were not covered, I  
6 relied upon the database described above. I also compared the ACEEE data to my database, and found  
7 that the results were similar for a number of states, but that the ACEEE data indicated significantly  
8 greater impacts than my database in several cases. I attribute the discrepancy to some utilities failing to  
9 properly complete form EIA-861.

10 The EIA data can also be relied upon to provide useful information regarding utility sales, fuel  
11 consumption, and other topics. To the extent that the EIA data vary from other published data (e.g.,  
12 utility resource plans), the variance can be attributed to slightly different definitions or reporting year  
13 coverage.

14 However, other aspects of the EIA data are far more problematic. In my experience, cumulative  
15 energy savings data for particular utilities are often inconsistently reported from year to year. Efforts to  
16 systematically reconcile the reported annual energy savings with year-to-year cumulative annual energy  
17 savings data often produce illogical results. Based on my efforts last year, I abandoned efforts to  
18 assemble data similar to those presented by Mr. Haney with respect to energy savings.<sup>15</sup> Although I  
19 have not made similar efforts to investigate the historical consistency of capacity savings data, it is my  
20 impression that the cumulative capacity savings data in the EIA database do not present the same

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<sup>13</sup> Testimony of NRDC/SACE witnesses Mosenthal and Steinhurst cite various data relating to specific efficiency program impacts that I would consider to be more authoritative than the nationwide analysis I present here.

<sup>14</sup> Exhibit JDW-3.

<sup>15</sup> Haney Test., Exhibit JRH-3.

1 difficulties as the cumulative energy savings data due to the need to ensure appropriate system  
2 capacity.

3 Another aspect of the EIA data that are particularly problematic are the energy efficiency cost  
4 data. Utilities are very inconsistent in how they report data in form EIA-861 with respect to cost. As a  
5 result, I and others who have an interest in benchmarking the costs of utility energy efficiency programs  
6 find it necessary to compile such data from a variety of sources, which may include form EIA-861 but  
7 only on a case-by-case basis.

8 Based on this experience, the most useful application of the EIA data in the energy efficiency  
9 field is to demonstrate the range of utility accomplishments across the country based on a snapshot of  
10 annual impacts of currently operating programs. For example, although I would not rely on EIA data to  
11 conclusively demonstrate that FPL is “#1” or “#2” with respect to its strong performance in capacity  
12 savings (MW) relative to other utilities, it is reasonable for FPL to use the capacity savings data to  
13 substantiate a general claim to national leadership in this particular component of energy efficiency  
14 performance.

15 In the report I referred to above, SACE concluded that “None of the Largest Southeast Utilities  
16 Lead on Energy Efficiency.”<sup>16</sup> This analysis was conducted at the utility level, with data disaggregated by  
17 state based on relative sales (which does not affect any of the FEECA utilities). Of the 75 utilities  
18 analyzed, FPL is the highest ranking utility from the Southeast, but ranks only 31<sup>st</sup> nationally for 2007  
19 program impacts in terms of annual savings. FPL’s impact is about 1/10<sup>th</sup> the annual impact of the  
20 leading utilities in California and New England, and far less than utilities from other regions of the  
21 country.

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<sup>16</sup> Exhibit JDW-3, p. 12.

1 In fact, FPL's annual energy savings impact of 2.0 kWh per MWh retail electric sales is less than  
2 aggregate impacts of energy efficiency programs in 20 states, considering the efforts of all utilities and  
3 state/third-party efficiency programs included in our database or ACEEE reported data, even those  
4 utilities with no reported energy efficiency program impacts. The states that exceed FPL's annual  
5 program impact on a relative basis (measured in kWh energy saved per MWh retail electric sales) are:

- 6 • Arizona (4.1)
- 7 • California (9)
- 8 • Colorado (2.9)
- 9 • Connecticut (13)
- 10 • Idaho (4.2)
- 11 • Iowa (7)
- 12 • Maine (8.5)
- 13 • Massachusetts (9)
- 14 • Minnesota (7)
- 15 • Montana (2.8)
- 16 • Nevada (6)
- 17 • New Hampshire (6.8)
- 18 • New Jersey (3)
- 19 • New York (7)
- 20 • Oregon (9)
- 21 • Rhode Island (8)
- 22 • Utah (2.6)
- 23 • Vermont (18)

1 • Washington (7)

2 • Wisconsin (7)

3 The other six FEECA utilities reported lower energy efficiency program impacts to EIA in 2007. Using the  
4 same units, the impacts are as follows:

5 • FPL (2.0)

6 • Progress Energy Florida (1.3)

7 • Gulf Power (1.1)

8 • Tampa Electric (1.1)

9 • JEA (1.0)

10 • OUC (Did not report energy efficiency program impacts)

11 • FPUC (0.7)

12 The utility-specific data underlying the graph discussed below are provided as Exhibit JDW-4. Because  
13 FPUC is not one of the 150 largest utilities, I calculated its program impact directly from my database for  
14 this testimony.

15 Across the Southeast, few utilities have demonstrated that they are delivering annual energy  
16 savings on the order of 1 percent of electricity sales, based on data available through 2007. The two  
17 most notable exceptions happen to be in Florida, according to the database I described above, but are  
18 not included in Exhibit JDW-4 because, like FPUC, they are not among the 150 largest utilities. The two  
19 Southeast utilities that have achieved energy savings impacts on the order of 1 percent of electricity  
20 sales are Gainesville Regional Utilities and the Reedy Creek Improvement District (which provides energy  
21 services to Walt Disney World).

22 It is also notable that one major Southeast utility has committed to goals on a similar scale.  
23 NRDC, SACE and other organizations that had intervened in Duke Energy Carolina's Save-a-Watt

1 proceedings recently agreed to support a modified proposal that includes, among other significant  
2 changes, a commitment to achieve energy savings of 0.75 percent of sales by 2013 and a target of 1  
3 percent of sales by 2015.<sup>17</sup>

4 **Q. Do low electric rates inhibit Florida and the rest of the Southeast from achieving higher energy**  
5 **efficiency impacts?**

6 A. No, in the report I referred to earlier, SACE concluded that, "Energy Efficiency Impacts Are Large  
7 in Some States Where Rates Are Comparable to the Southeast."<sup>18</sup> This analysis suggests that annual  
8 energy savings are three to five times greater than Florida in six states with rates are *lower* than Florida.

9 **Q. Do you agree with FEECA utilities witnesses that programs to achieve peak reduction are**  
10 **important?**

11 A. Yes, Mr. Haney and other FEECA utility witnesses appropriately point to significant  
12 accomplishments in terms of programs to reduce peak demand. I have no doubt that these programs  
13 are successful and represent industry leadership in one component of their energy efficiency programs.

14 I would further agree that the success of FEECA utilities in peak reduction, compared to energy  
15 savings, is a logical reflection of the past policy of the Florida Public Service Commission to utilize the  
16 RIM test. The RIM test selectively favors programs that have the effect of reducing peak demand levels  
17 over programs that are more effective at reducing overall energy savings.

18 The bias of the RIM test towards peak saving programs is because the RIM test requires that the  
19 system cost savings achieved by a measure must exceed the sum of the program cost and the lost  
20 revenues. Programs that focus on peak reduction result in smaller amount of lost revenues than  
21 programs that significantly reduces overall energy consumption.

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<sup>17</sup> North Carolina Utilities Commission, Docket E-7 Sub 831; South Carolina Public Service Commission, Docket 2007-358-E.

<sup>18</sup> Exhibit JDW-3.

1           Because most utility customers in Florida pay fixed rates regardless of marginal energy costs, a  
2 large share of electricity demand occurs at times when avoided costs are lower than rates. During those  
3 hours, even virtually cost-free programs are unlikely to be considered cost-effective programs when  
4 evaluated using the RIM test. For example, simply encouraging dimming of unnecessary parking lot  
5 lights late at night would probably fail the RIM test. Until Commission policy is revised to emphasize the  
6 TRC test, Florida utilities will continue to avoid programs that substantially reduce energy use during off-  
7 peak hours, regardless of program cost.

8           The Florida emphasis on peak reduction is rather unusual. According to utility self-reported data  
9 made available via the Energy Information Administration, Florida stands out as relatively strong in  
10 terms of peak reduction, but with modest overall energy savings, compared to other regions of the  
11 country.

12 **Q. Does FPL misrepresent its accomplishments in testimony?**

13 A. No, Mr. Haney's testimony is very carefully written to avoid false statements, albeit selectively.  
14 However, in public documents I have reviewed, other utility speakers are somewhat less careful in their  
15 representations. For example, in the presentation discussed above, Susan Clark stated that "Florida  
16 ranks 2<sup>nd</sup> among states in Energy Efficiency and Demand Response." Throughout her presentation, Ms.  
17 Clark varies in her representation between claims of impressive energy savings and peak reduction  
18 impacts. In my opinion, FPL sometimes encourages its audiences to form an impression that is not fully  
19 supported by actual performance data.

20 **III. COST-EFFECTIVENESS PROVISIONS IN THE 2008 ENERGY ACT'S AMENDMENTS TO FEECA**

21 **Q. Earlier in your testimony, you referred to the three most important substantive revisions to**  
22 **the FEECA statute in the 2008 Energy Act. Can you please point to the statutory revisions that**  
23 **establish a statutory cost-effectiveness test for the FEECA process?**

1 A. The 2008 Energy Act establishes criteria that the Commission is required to consider when  
2 establishing the goals.<sup>19</sup> Previously the only standard applied to the adoption of goals was that they be  
3 "appropriate,"<sup>20</sup> which left the Commission wide latitude to exercise its discretion as an expert tribunal  
4 and to weigh and interpret Legislative intent. In establishing goals, the Legislature now requires that the  
5 Commission consider:

6 a) The costs and benefits to customers participating in the measure.

7 b) The costs and benefits to the general body of ratepayers as a whole, including utility  
8 incentives and participant contributions.

9 c) The need for incentives to promote both customer-owned and utility-owned energy efficiency  
10 and demand-side renewable energy systems.

11 d) The costs imposed by state and federal regulations on the emission of greenhouse gases.<sup>21</sup>

12 As Mr. Cavanagh, Mr. Steinhurst, and Mr. Mosenthal testify, there can be little doubt that the plain  
13 language of section 3(a) refers to the Participant Cost Test (PCT) and of section 3(b) refers to the Total  
14 Resource Cost (TRC) test.

15 **Q. Is there evidence in the Legislative record that indicates that the PCT test is the basis for**  
16 **Section 366.82(3)(a)?**

17 A. Yes, two Legislative reports indicate that Section 366.82(3)(a) refers to the PCT test.<sup>22</sup>

18 **Q. Is there evidence in the Legislative record that indicates that the FEECA utilities have applied**  
19 **the PCT test in a manner that is not supported by Section 366.82(3)(a)?**

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<sup>19</sup> FLA. STAT. § 366.82(3) (2008).

<sup>20</sup> FLA. STAT. § 366.82(2).

<sup>21</sup> FLA. STAT. § 366.82(3) (2008).

<sup>22</sup> Exhibits JDW-5 and JDW-6.

1 A. Yes, in the House of Representatives Staff Analysis of HB 7135 for the Committee on Energy and  
2 the Environment & Natural Resources Council,<sup>23</sup> the staff explains that the Participant test, "Benefits  
3 include incentives that are paid by the utility to the customers . . . ." NRDC/SACE Witness Mosenthal  
4 testifies that the FEECA utilities applied the PCT by screening out measures that fail *without* any  
5 incentive. The failure to include the incentive paid by the utility to the customers is not consistent with  
6 the available evidence in the Legislative record.

7 **Q. Is there evidence in the Legislative record that indicates that the TRC test is the basis for**  
8 **Section 366.82(3)(b)?**

9 A. Yes, two Legislative reports indicate that Section 366.82(3)(b) refers to the TRC test.<sup>24</sup> The  
10 Florida House of Representatives' 2008 Legislative Session End of Session Report summarizes the new  
11 Section 366.82(3) as follows:

12 Revises the Florida Energy Efficiency and Conservation Act (FEECA), to explicitly allow efficiency  
13 and conservation investments across generation, transmission, and distribution as well as  
14 efficiencies within the user base; to encourage the development of demand-side renewable  
15 energy; and to provide criteria the Public Service Commission (PSC) is to consider when  
16 evaluating proposed conservation and efficiency measures. The criteria the PSC is required to  
17 consider include the following:

- 18 • The costs and benefits to customers participating in the measure (Participants test).  
19 • The costs and benefits to the general body of ratepayers as a whole, including both utility  
20 incentives and participant contributions (similar to a Total Resource Cost test or TRC test but  
21 including the costs of incentives)

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<sup>23</sup> Exhibit JDW-6, p. 22.

<sup>24</sup> Exhibits JDW-5 and JDW-6.

- 1           • The need for incentives to promote both customer-owned and utility-owned energy  
2           efficiency and renewable energy systems.

- 3           • The costs imposed by state and federal regulations on the emissions of greenhouse gases.<sup>25</sup>

4   As the second bullet indicates, this report confirms that the language of section 3(b) refers to the TRC  
5   test. Almost identical language is included in the House of Representatives Staff Analysis of HB 7135 for  
6   the Committee on Energy and the Environment & Natural Resources Council.<sup>26</sup> The staff evidently had a  
7   clear understanding of the distinction between the RIM and TRC tests, as the staff analysis also includes  
8   a clear discussion of the two tests.

9           It appears to me from the legislative history that the Legislature may have been under the  
10   impression that the TRC test did not include utility incentives. To the extent that this is correct, the  
11   Legislature (or the authors of the summaries) was under a misimpression. As testified by Mr. Cavanagh,  
12   the TRC test does include incentives paid to customers as those incentive payments are a component of  
13   the cost of the efficiency measure, which includes both the participant's contribution and the incentive  
14   provided by the utility. In addition, as Mr. Cavanagh testifies, the TRC test is completely consistent with  
15   the actual text of section 3(b) because it does consider both "utility incentives and participant  
16   contributions."

17   **Q.     Is there evidence in the legislative record that indicates how a misunderstanding arose**  
18   **regarding the way in which utility incentives are considered in the Total Resource Cost test?**

19   A.     Yes, the staff analysis indicates that, "Unlike the RIM test, however, incentives and decreased  
20   revenues are not included as costs in the TRC; instead, these factors are treated as transfer payments

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<sup>25</sup> My Testimony, Exhibit JDW-5, p. 57.

<sup>26</sup> My Testimony, Exhibit JDW-6, p. 22.

1 among ratepayers.”<sup>27</sup> This language appears to be based on a presentation by Bob Trapp, staff to the  
 2 Commission, which is Exhibit JDW-7.

3 The confusion arises because in the TRC test (unlike the Utility Cost Test), any utility incentive  
 4 paid to the customer is not counted as a utility cost. Mr. Trapp correctly represented that the utility  
 5 incentive is not explicitly considered as a utility cost (as it is in the Utility Cost Test). If it were, this  
 6 amount would be double-counted.

7 The Total Resource Cost can be calculated in either of two ways:

8 
$$\text{Administrative Costs} + \text{Measure Costs}$$

9 or

10 
$$\text{Administrative Costs} + \text{Utility Incentive} + \text{Participant Contribution}$$

11 Since the standard interpretation of the TRC test does include consideration of all participant costs,  
 12 including “utility incentives and participant contributions,” it appears to me that the legislative intent  
 13 behind the clarification to the TRC test was to correct a deficiency in the test that does not actually exist.  
 14 In the alternative, if one were to interpret the language to require that the Total Resource Cost should  
 15 be modified by adding the “utility incentives and participant contributions,” the resulting Total Resource  
 16 Cost would be:

17 
$$\text{Administrative Costs} + \text{Measure Costs} + \text{Utility Incentive} + \text{Participant Contribution}$$

18 or

19 
$$\text{Administrative Costs} + 2 \times (\text{Utility Incentive} + \text{Participant Contribution})$$

20 which double-counts both the utility incentive and the participant contribution, a result that makes no  
 21 sense.

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<sup>27</sup> Exhibit JDW-6, p. 21.

1 **Q. Is there any other statutory indication that the overall cost-effectiveness framework is**  
2 **intended to be a TRC-like test rather than a RIM test, in addition to a correct application of the**  
3 **Participant Cost Test?**

4 A. Yes, in the context of instructions regarding participation in these proceedings, the Florida  
5 Energy and Climate Commission is directed to analyze "policy options that can be implemented to  
6 achieve a least-cost strategy."<sup>28</sup> The TRC test is the appropriate framework for minimizing total energy  
7 costs, while the RIM test emphasizes low rates. I defer to Mr. Cavanagh, Mr. Steinhurst and Mr.  
8 Mosenthal for further testimony regarding the difference between the TRC and RIM Test.

9 **Q. Is there any evidence in the record that the Legislature was concerned about the key issues**  
10 **addressed by the RIM test?**

11 A. No. Mr. Cavanagh testifies that a purpose of the RIM test is to consider the financial impacts of  
12 energy efficiency programs in terms of lost revenues and, consequently, on the rates of non-  
13 participants. In my review of the new statutory language and legislative history relating to the FEECA  
14 goals, I see nothing to suggest that the PSC should focus on lost revenues, electricity rates, or impacts to  
15 non-participants and, accordingly, nothing to suggest that the PSC should employ the RIM test in the  
16 FEECA goal-setting process.

17 **Q. Taken as a whole, then, what cost-effectiveness test should apply in these proceedings?**

18 A. Florida law now requires the Commission to consider the TRC test, and does not require or  
19 authorize the use of the RIM test for the purpose of setting energy efficiency or demand-side renewable  
20 energy goals for the FEECA utilities.

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<sup>28</sup> FLA. STAT. § 366.82(5)(b).

1 **IV. ISSUE RELATED TO AVOIDED CAPACITY COST**

2 **Q. How have the utilities compared nuclear power with energy efficiency in resource planning**  
3 **studies?**

4 A. Neither FPL nor Progress Energy Florida appear to have conducted any analysis in which the  
5 benefit of energy efficiency was valued, in part, based on the avoided capacity cost associated with the  
6 forecast need to add an additional nuclear unit. There are two possible explanations for this.

7 First, I have asked a number of experts in Florida utility regulatory law about this matter, and  
8 have been told on occasion that the avoided capacity cost methodology specifically excludes  
9 consideration of nuclear power as an avoidable unit. However, I have not been able to document this  
10 with a Commission proceeding.

11 Second, the timing and process by which recent nuclear power plants have been considered and  
12 approved has not afforded a procedural opportunity for such an analysis. At the time of the prior FEECA  
13 proceeding, neither FPL nor Progress Energy Florida's Ten-Year Site Plans indicated the possibility that  
14 additional nuclear capacity might be added.<sup>29</sup> Yet in 2008, the FPSC approved the Determination of  
15 Need for two nuclear units in Levy County. Considering the timing of the initial announcement and  
16 Commission approval, neither FPL nor PEF appear to have presented a nuclear power plant as an  
17 "avoidable unit" for purposes of calculating avoided capacity costs in a FEECA goal setting proceeding.

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<sup>29</sup> The current goals were approved on August 9, 2004. The first recent mention of a possible application for a new nuclear unit appears in the Commission report, "A Review of Florida Electric Utility 2005 Ten-Year Site Plans," December 2005. "PEF has recently announced that it is pursuing two licenses for new nuclear plants with an in-service date as early as 2015. In a recent press release, PEF stated, 'We have made it clear that we will keep the option open to build new nuclear generation. Keeping a balanced generation mix ensures reliability and price stability for our customers, and affirms our commitment to the environment.' While not a formal part of this year's review, the Commission will closely monitor the progress of the announced nuclear facilities in future *Ten-Year Site Plans*." A review of this document indicates that no other nuclear facilities were anticipated at the time it was published.

1           Neither did the procedural opportunity to establish the avoided capacity cost of nuclear power  
2 arise in need determination proceedings. In the FPL proceeding, FPL Witness Brandt testified, "While  
3 FPL does not have approved DSM goals for 2015 through 2019, FPL estimates that it will implement a  
4 total of approximately 1,899 MW of additional DSM programs at the generator from August, 2006  
5 through August, 2020," and that, "FPL has estimated for this time frame that it will continue to  
6 implement DSM at a rate that is consistent with its plans and accomplishments through 2014."<sup>30</sup> In  
7 other words, no specific cost-effectiveness analysis of energy efficiency measures was conducted as part  
8 of the need determination study, rather FPL relied on findings dating from a study that occurred well  
9 over a year before its nuclear power plant plans were introduced into a Ten-Year Site Plan.

10           In summary, either by rule, practice or merely coincidence of schedule, the most expensive  
11 power plant investments in recent Florida history proceeded to approval without being directly  
12 compared to energy efficiency in a resource planning framework exhibiting the least-cost planning  
13 framework briefly described in the testimony of NRDC/SACE Witness Mosenthal.

14 **V. The 2008 ENERGY ACT AND FINANCIAL INCENTIVES TO UTILITIES**

15 **Q. Earlier in your testimony, you referred to the three most important substantive revisions to**  
16 **the FEECA statute in the 2008 Energy Act. Can you please point to the statutory revisions authorize**  
17 **financial incentives to utilities for successfully reducing the growth of electricity demand?**

18 **A.** The 2008 Energy Act authorizes the Commission to establish a performance-based financial  
19 reward system for utilities, depending on whether they exceed their goals (rewards) or fail to meet their  
20 goals (penalties) in Section 366.82(8). The financial reward is capped at an additional return on equity of  
21 50 basis points in Section 366.82(9).

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<sup>30</sup> FPL, "Direct Testimony & Exhibits of C. Dennis Brandt," Docket No 070650-EI, October 16, 2007, p. 27.

1           The FEECA utilities have indicated their view that the specific issues related to this financial  
2 incentive should be deferred to a subsequent proceeding. I agree with this approach, with the caveat  
3 that incentives are only appropriate if linked to the achievement of strong goals. In addition, I  
4 encourage the Commission to establish and support a process that can lead to a consensus framework  
5 among interested parties to establish an appropriate system taking into consideration Florida-specific  
6 circumstances as well as best practices from across the country.

7 **VI. 2008 ENERGY ACT AND THE ADDITION OF DEMAND-SIDE RENEWABLE ENERGY**

8 **Q. Earlier in your testimony, you referred to the three most important substantive revisions to**  
9 **the FEECA statute in the 2008 Energy Act. Can you please point to the statutory revisions that require**  
10 **addition of demand-side renewable energy to the FEECA process?**

11 A. The 2008 Energy Act replaced “development of cogeneration” with “development of demand-  
12 side renewable energy systems.”<sup>31</sup> The commission is “specifically” directed to include goals to  
13 “encourage development of demand-side renewable energy resources.” As discussed above, the 2008  
14 Energy Act explicitly recognized that incentives would be required to promote the development of such  
15 systems.

16 A review of the language related to the goals for demand-side renewable energy in the FEECA  
17 statute does not indicate any language that suggests that the Legislature expected that the Commission  
18 might establish a “zero” goal. For example, it appears that a non-zero goal is presumed in the discussion  
19 of the financial incentive and penalty system for utility performance previously discussed, as it is difficult  
20 to describe a financial reward/penalty system for exceeding or failing to meet a goal of “zero.”

21 NRDC/SACE Witness Steinhurst provides testimony as to how the Commission might consider  
22 the evidence regarding an appropriate demand-side renewable energy goal.

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<sup>31</sup> FLA. STAT. § 366.82(2) (2008).

1 **VII. THE TECHNICAL POTENTIAL STUDY**

2 **Q. Did you participate in the technical potential study as a representative of SACE to the**  
3 **Collaborative?**

4 A. Yes, I was assigned the lead role for my organization. In addition, on several occasions I was  
5 authorized to speak on behalf of both organizations.

6 **Q. What is your overall impression of the technical potential study?**

7 A. Overall, the technical potential study was conducted in a professional and thorough manner.  
8 The collaboration between utilities and our organizations was generally productive and communications  
9 were effective for the most part.

10 **Q. Are there shortcomings to the technical potential study that the Commission should take into**  
11 **account in the FEECA goals proceeding?**

12 A. Yes, there are two types of shortcomings in the study. First, the study omitted several end user  
13 sectors from analysis due to a lack of sufficient data or information regarding potential efficiency  
14 measures. This was a reasonable decision, but the decision to effectively represent these sectors as  
15 without any efficiency opportunities is not the best choice that could have been made.

16 Second, it is my opinion that the consultants erred in omitting several efficiency measures from the  
17 study. These measures met the criteria for inclusion in the study but were overlooked or discarded in  
18 the interests of time, or for some other reason.

19 **Q. Which end user sectors were excluded from study?**

20 A. The technical potential study did not consider four end-use sectors: agriculture; transportation,  
21 communications and utilities (TCU); construction; and outdoor/street lighting. The reasons for not  
22 including each sector and the share of total electric sales by the FEECA utilities are described below.

End-use sector excluded from study	Reason for excluding end-use sector	Percent of total electric sales by the FEECA utilities to sector
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End-use sector excluded from study	Reason for excluding end-use sector	Percent of total electric sales by the FEECA utilities to sector
Agriculture	Lack of primary research on end-use baselines and efficiency opportunities	2 %
Construction	Temporary load (note: with ongoing activity, temporary site activities are <i>continuous with respect to operator and utility providing electric service</i> )	1 %
Outdoor / street lighting	Represented as already saturated with efficient equipment (e.g., LED traffic signals, pulse-start metal halide lamps)	1 %
Transportation, communications and utilities (TCU)	Lack of primary research on end-use baselines and efficiency opportunities	7 %
<b>TOTAL</b>		<b>10 %</b>

1 Source: Statewide Technical Potential Study, p. 2-2.

2 According to the statewide technical potential report, the out-of-scope sectors accounted for just over  
3 10 percent of total annual electric sales by the FEECA utilities.

4 **Q. Do you agree with the decision to exclude these end-use sectors from the technical potential  
5 study?**

6 A. I agree that where there was insufficient data to study an end-use sector, then it would not have  
7 been a useful exercise to apply the detailed study methods to those sectors. I disagree with the overall  
8 method of effectively assuming no potential for energy efficiency in these end-use sectors.

9 I do not agree that there was or should have been insufficient data to examine two excluded end-use  
10 sectors: water and wastewater utilities and outdoor/street lighting. It is my general understanding that  
11 there is substantial experience with energy efficiency programs in the water and wastewater utility  
12 sector.

13 The study indicates that the outdoor and street lighting markets "are already saturated with  
14 efficient equipment," referring to metal halide or high-pressure sodium lamps. This conclusion is drawn

1 based on a draft 2004 US Department of Energy study.<sup>32</sup> However, this appears to be a  
2 misinterpretation of the US DOE study, which refers to “an overall decline in outdoor-type fixture  
3 shipments . . . result[ing] from market saturation.” In any event, the source data informing this  
4 discussion date to 2001 and do not include any data specific to Florida or the Southeast. For this reason,  
5 I do not see any evidence in the technical potential study to substantiate the claim that Florida’s  
6 outdoor and street lighting markets are “saturated with efficient equipment.” Examining the  
7 replacement of existing lighting with high efficiency lighting should have been included in the study.

8 In addition, the study did not consider LED traffic signals. The technical potential study suggests  
9 that this decision was made on the basis of “revised federal efficiency standards which require all new  
10 traffic signals to meet LED-equivalent performance criteria.” However, this standard for new signals  
11 does not appear to require upgrades to existing signals; promoting the replacement of existing signals  
12 with new LED-equivalent traffic signals is a measure that should have been included in the study.

13 According to the statewide technical potential report, the out-of-scope sectors accounted for  
14 just over 10 percent of total annual electric sales by the FEECA utilities. The study effectively assumes  
15 that there is no technical potential for energy efficiency measures for end-uses representing 10 percent  
16 of total electric demand, a conclusion that is not supported by the methodology.

17 **Q. Rather than assuming no efficiency opportunities in those end user sectors, what other  
18 estimate of efficiency opportunities could the consultants have offered for each sector?**

19 **A.** Rather than zero, a better proxy for the technical potential for energy efficiency in the four  
20 excluded end-use sectors would be the statewide industrial technical potential. (Of course, this proxy  
21 method is not necessary for the outdoor and street lighting, traffic signal, wastewater utility, and water

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<sup>32</sup> U.S. Department of Energy, “Draft Technical Support Document - Energy Efficiency Program for Commercial and Industrial Equipment: High-Intensity Discharge Lamps, Analysis of Potential Savings,” Docket #: EE-DET-03-001, 2004.

1 supply utility end use sectors, which should have been studied directly.) According to the technical  
 2 potential study, "The total technical potential for energy savings in the industrial sector of the FEECA  
 3 utilities is estimated to be approximately 2,108 GWh, which equates to 18 percent of current baseline  
 4 industrial electricity consumption."<sup>33</sup>

5 Applying this 18 percent value as the proxy technical potential, and making use of the total  
 6 statewide sales for 2007 by the FEECA utilities (171,672 GWh),<sup>34</sup> the excluded end-use sectors could  
 7 have offered an additional technical potential of about 3,400 GWh, as summarized below.

End-use sector excluded from study	Percent of total electric sales by the FEECA utilities to sector	Calculated Technical Potential Applying 18% Proxy Value
Agriculture	2 %	618 GWh
Construction	1 %	309 GWh
Outdoor / street lighting	1 %	309 GWh
Transportation, communications and utilities (TCU)	7 %	2,163 GWh
<b>TOTAL</b>	<b>10 %</b>	<b>3,399 GWh</b>

8

9 **Q. Were there any end-use technologies that appear to have been omitted from the study?**

10 A. Yes, it appears that the technical potential study failed to examine small commercial HVAC  
 11 systems. A review of the commercial measures list indicates that the cooling technologies examined in  
 12 the study are 500 ton units (measures 300, 301, 340-342), 10 ton units (measures 320 – 323), and single-  
 13 room 1 ton units (measures 360, 361).

14 The small office and small retail market is frequently served by equipment similar to that offered  
 15 to the residential market. I and other SACE staff have observed such installations on frequent occasions,

<sup>33</sup> Statewide Technical Potential Study, p. 3-44.

<sup>34</sup> Statewide Technical Potential Study, p. ES-2.

1 and have confirmed the practice in conversation with building industry experts and other energy  
2 research personnel.

3 I expected that the data necessary to adjust the technical potential study would be included in  
4 the commercial on-site survey that was assigned to KEMA. However, the survey data were not used in  
5 the technical potential study and I am not aware that its findings have been submitted to the  
6 Collaborative, nor has Itron updated the study (e.g., measure saturation inputs) with the survey data.<sup>35</sup>  
7 For this reason, I am unable to provide even a rough estimate of the energy used by residential-type  
8 HVAC systems in the commercial sector.

9 **Q. What criteria did the study adopt for including energy efficiency measures in the study?**

10 A. Based on Itron's professional judgment, the final measure list included measures that it  
11 considered to be commercially available in the Florida market from more than one commercial source,  
12 or measures for which authoritative reports were available from disciplined studies by third-party  
13 evaluators. Quite reasonably, claims substantiated only by the manufacturer or other commercially-  
14 interested parties were considered to be unreliable. Furthermore, required data would need to be  
15 available for the measure, including measure costs, measure savings, measure saturation, and measure  
16 feasibility.<sup>36</sup>

17 **Q. Do you agree with how these criteria were applied to exclude efficiency measures from the**  
18 **study?**

19 A. While we were generally satisfied with the decisions to include or exclude measures from the  
20 technical potential study, the following four energy efficiency measures appeared to meet the criteria  
21 established by Itron for further study.

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<sup>35</sup> Statewide Technical Potential Study, p. 3-30.

<sup>36</sup> Itron Scope of Work, pp. 1-3, table 1-1, May 30, 2008.

Energy Efficiency Measure Overlooked	Sector
Building Commissioning, Re/Retro-Commissioning	Commercial
High Efficiency Air-Source Heat Pump – 19 SEER	Residential
Variable-Speed Pool Pumps	Commercial
LED Luminaries	Residential and Commercial

1

2 **Q. What evidence supports your assertion that the study should have considered building**  
3 **commissioning-re/retro-commissioning as meeting the criteria for inclusion in the technical potential**  
4 **study?**

5 A. NRDC and SACE requested that building commissioning, re-commissioning, and retro-  
6 commissioning (hereafter, commissioning) be included in the commercial measure list. Consideration of  
7 commissioning was not supported in the Collaborative; our impression was that since commissioning is  
8 an activity that occurs during new construction, this was considered an opportunity for building codes. I  
9 disagree with that perspective, since utilities are uniquely positioned to partner with building managers  
10 to encourage high-quality commissioning activities since they are in frequent communication with the  
11 building during establishment of new electric service.

12 Regarding re-commissioning, Itron indicated that it would be represented in the commercial  
13 measure list via the chiller and DX tune-up measures and the air handler optimization measure.<sup>37</sup>  
14 Furthermore, EMS optimization is listed among the commercial measures.

15 However, it is not evident that the technical potential study measures list does actually encompass  
16 the entire commissioning concept. For example, the ENERGY STAR Building Upgrade Manual identifies  
17 nine categories of “retrocommissioning opportunities commonly found during a building walk-through.  
18 Their presence indicates potential problems that can be identified and fixed through a  
19 retrocommissioning project:

- 20 • Systems that simultaneously heat and cool, such as constant and variable air volume reheat

<sup>37</sup>Michael Ting, e-mail dated September 15, 2008.

- 1 • Economizers, which often need repair or adjustment—potential problems include frozen
- 2 dampers, broken or disconnected linkages, malfunctioning actuators and sensors, and improper
- 3 control settings
- 4 • Pumps with throttled discharges
- 5 • Equipment or lighting that is on when it may not need to be
- 6 • Improper building pressurization (either negative or positive), that is, doors that stand open or
- 7 are difficult to get open
- 8 • Equipment or piping that is hot or cold when it should not be; unusual flow noises at valves or
- 9 mechanical noises
- 10 • Short cycling of equipment
- 11 • Variable-frequency drives that operate at unnecessarily high speeds
- 12 • Variable-frequency drives that operate at a constant speed even though the load being served
- 13 should vary<sup>38</sup>

14 The widespread availability of these practices is demonstrated by the recent release of the US EPA Rapid  
15 Deployment Energy Efficiency Toolkit, which “provides detailed program design and implementation  
16 guides for **10 broadly applicable energy efficiency programs.**”(emphasis added) One of the ten  
17 programs cited is “Retro-commissioning” for “Commercial/Government/Schools.”<sup>39</sup>

18 Furthermore, according to FMI, consultants for the National Energy Management Institute  
19 (NEMI), the retro-commissioning market of \$175 million is approximately one and a half times larger in  
20 annual revenues than the new commissioning market of \$114 million. National and international firms

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<sup>38</sup> US Environmental Protection Agency, *Energy Star Building Upgrade Manual*, Office of Air and Radiation, 2008 Edition, p. 5-7.

<sup>39</sup> US Environmental Protection Agency, *Rapid Deployment Energy Efficiency Toolkit*, May 20, 2009, [http://www.epa.gov/cleanenergy/energy-resources/ee\\_toolkit.html](http://www.epa.gov/cleanenergy/energy-resources/ee_toolkit.html).

1 in the controls business, such as Johnson Controls and Honeywell, offer equipment and services. While  
 2 neither commissioning nor retro-commissioning are fully implemented, the shortfall appears to be far  
 3 worse with respect to the potential market opportunity for retro-commissioning services, which is  
 4 estimated to be nearly 50 to 100 times greater than new commissioning.<sup>40</sup>

5 In our recommendation to consider commissioning practices in the technical potential study, we  
 6 cited sources of information including the Energy Systems Laboratory of Texas A&M University, National  
 7 Association of Energy Service Companies, and Energy Service Coalition. In particular, Lawrence Berkeley  
 8 National Laboratories reports median whole-building energy savings of 15 percent for existing  
 9 buildings.<sup>41</sup>

10 I applied this 15 percent measure effectiveness to the commercial sector energy demand,  
 11 deducting the technical potential for energy savings from the three commissioning related measures  
 12 described above, to obtain a technical potential estimate for building commissioning that would be in  
 13 addition to the amount reported in the technical potential study. The total potential, based on the 15  
 14 percent measure effectiveness, is 9,758 GWh. Accounting for the three measures, the total statewide  
 15 potential for building commissioning that does not appear to be addressed by Itron is 9,248 GWh.

(GWh)	Statewide	FPL	PEF	Gulf	TECO	OUC	JEA	FPUC
Commercial Energy Use	65,051	34,320	11,544	3,783	8,660	3,038	3,381	325
Commissioning potential	9,758	5,148	1,732	567	1,299	456	507	49
305 - Chiller Tuneup	115	64	20	7	12	6	4	1
307 - EMS Optimization	71	40	13	4	8	4	3	0
403 - Air Handler Optimization	324	173	57	20	41	16	16	2

<sup>40</sup> Southeast Region Building Commissioning Association and NEMI-National Energy Management Institute, 2002 report with FMI, [www.bcxa.org/southeast/pdf/feb2002retrocommissioning.pdf](http://www.bcxa.org/southeast/pdf/feb2002retrocommissioning.pdf).

<sup>41</sup> Evan Mills et al., "The Cost-Effectiveness of Commercial-Buildings Commissioning: A Meta-Analysis of Energy and Non-Energy Impacts in Existing Buildings and New Construction in the United States," Lawrence Berkeley National Laboratory, December 2005.

(GWh)	Statewide	FPL	PEF	Gulf	TECO	OUC	JEA	FPUC
Total Overlooked Potential	9,248	4,871	1,641	536	1,238	431	485	46

1

2 This omission is non-trivial in magnitude, and is likely to affect the economic and achievable  
3 potential study results at a significant level. According to the same LBNL study, median commissioning  
4 costs of 27 cents per square foot resulted in payback times of 0.7 years. NRDC/SACE Witness Mosenthal  
5 discusses why the short payback period should not disqualify this measure from consideration in the  
6 achievable potential. He discusses why this type of measure is ideal for a utility-led efficiency program  
7 to encourage and assist with, even if the utility offers minimal financial incentives to the building  
8 manager.

9 **Q. What evidence supports your assertion that the study should have considered additional high**  
10 **efficiency air-source heat pump measures as meeting the criteria for inclusion in the technical**  
11 **potential study?**

12 A. Air-source heat pumps with a 19 SEER (or 18+ SEER) rating appear to be available in the market  
13 from Carrier (Infinity), Trane, Friedrich, Fujitsu, Samsung and Lennox according to market inquiries  
14 conducted by SACE staff. Although NRDC and SACE recommended that this measure be studied by  
15 Itron, no air-source heat pump above a 17 SEER rating was included in the residential measure list and  
16 no explanation for its omission was offered.

17 The additional measure savings that can be attributed to a 19 SEER unit as compared to the 17  
18 SEER unit included in the technical potential study is a straightforward calculation based on the SEER  
19 standard definition and the potential savings data reported by Itron for the 17 SEER unit. Considering  
20 the wide availability of 19 SEER units from multiple manufacturers, other required measure data should  
21 be feasible to acquire for modeling purposes.

1 **Q. What evidence supports your assertion that the study should have considered variable-speed**  
2 **pool pumps as meeting the criteria for inclusion as a commercial measure in the technical potential**  
3 **study?**

4 A. Residential applications of this measure were considered by the study, but the measure was not  
5 included for commercial pools such as lodgings. (Therefore, Itron had access to measure cost and  
6 performance data for the relevant equipment.) According to the Florida Swimming Pool Association,  
7 there are over 37,000 public and commercial swimming pools and over 1 million residential pools.<sup>42</sup> The  
8 residential pool category includes pools at small apartment and condominium units which would be  
9 classified as commercial electricity customers for purposes of the technical potential study.

10 Using the Itron measure savings data for residential pools and some simple assumptions, it is  
11 straightforward to calculate an estimated technical potential for this measure.

12 **Q. What evidence supports your assertion that the study should have considered LED luminaries**  
13 **as meeting the criteria for inclusion in the technical potential study?**

14 A. Itron initially agreed that one type of LED luminary, replacements for downlighting applications,  
15 could be included in the study. According to Itron, from a technical potential perspective, these sources  
16 compete with Compact Fluorescent Lights (CFLs) for more or less the same amount of unit savings  
17 relative to the incandescent bulbs they replace. In addition to substantial direct savings in electricity,  
18 LEDs reduce electricity use by cooling systems through a lower heat load. Itron noted that for economic  
19 and achievable potential, the presumed difference in lifecycle costs between CFL and LED downlights  
20 may produce significantly different adoption forecasts. Itron advised us that the schedule constraints  
21 would be likely to preclude the inclusion of LED luminary lights in the technical potential study, but that  
22 Itron would attempt to gather further cost data development for the economic and achievable potential

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<sup>42</sup> Jennifer Hatfield, Florida Swimming Pool Association, private communication with SACE staff, June 30, 2009.

1 forecasts.<sup>43</sup> Subsequent to this communication, we have not received any further information regarding  
 2 this measure.

3 LED lighting is being promoted by the US Department of Energy in its five-year solid state  
 4 lighting commercialization support program, which will be complete during the time period covered by  
 5 the FEECA goals. Some of the major firms in the LED lighting market, as cited by the Lighting Research  
 6 Center at Rensselaer Polytechnic Institute, include Cree, Sylvania, Philips, and Lightolier. According to  
 7 the Pacific Northwest National Laboratories, LED output per watt in the past 5 years has improved by 35  
 8 percent per year while the cost per lumen has decreased 20 percent per year; costs per LED lumen "...  
 9 are predicted to drop to \$3/klm by 2015, which will make solid state lighting less expensive than  
 10 compact fluorescents on a first-cost basis."

11 However, since LED luminary lamps are primarily an opportunity for lifetime cost savings, and  
 12 not additional energy savings, I do not recommend any adjustment to the technical potential study  
 13 results for this measure.

14 **Q. Rather than assuming no efficiency potential from the measures you have described, what**  
 15 **level of efficiency potential might the Commission reasonably assume could be attributed to each**  
 16 **measure?**

17 **A.** Based on the limited data we have been able to accumulate, the Commission might reasonably  
 18 assume 10,596 GWh additional technical potential from the four measures that we believe should have  
 19 contributed additional energy savings to the technical potential study.

Energy Efficiency Measure Overlooked	Estimated Additional Statewide Energy Savings Potential (GWh)
Building Commissioning - Commercial	9,248

<sup>43</sup> Michael Ting, e-mail dated September 15, 2008.

Energy Efficiency Measure Overlooked	Estimated Additional Statewide Energy Savings Potential (GWh)
High Efficiency Air-Source Heat Pump – 19 SEER – Residential	689
Variable-Speed Pool Pumps - Commercial	660
LED Luminaries – Residential/Commercial	Do not recommend additional technical potential.
<b>Total</b>	<b>10,596</b>

1 **Q. By what amount might the Commission reasonably adjust the findings of the technical**  
2 **potential study to account for the excluded sectors and additional measures that you have shown**  
3 **meet the study criteria?**

4 A. A reasonable estimate of the additional technical potential that the Commission might  
5 reasonably add to the findings of the technical potential study is 12,700 GWh, including 3,400 GWh  
6 savings from the excluded end-use sectors and 10,600 GWh from the overlooked measures, of potential  
7 energy savings.<sup>44</sup> This represents an increase of approximately 8 percent, or a total statewide technical  
8 potential of 42 percent rather than the 34 percent reported by Itron.

9 I have not performed a similar analysis for potential load reduction (MW) savings because the  
10 necessary load shapes, etc. were not available to SACE at the time that this research was conducted.

11 **Q. What is the general conclusion of NRDC and SACE and its recommendation to the**  
12 **Commission?**

13 A. Based upon my testimony and that of the other NRDC-SACE witnesses, it appears that the FEECA  
14 utilities have substantially underestimated the opportunity for cost-effective energy efficiency in the  
15 public interest. Our testimony describes several problems that lead to this underestimate, but the most  
16 substantial problems are an underestimate of the technical potential by at least 8 percent, the improper

<sup>44</sup> Figures rounded from calculated values.

1 use of the Participant Cost Test, the use of the RIM test in the face of clear direction from the Legislature  
2 to the contrary, and the imposition of an additional reverse cost-effectiveness test in the form of  
3 excluding the most cost-effective measures with less than a 2 year payback from proposed goals.

4 The Commission should reject the FEECA utilities' proposed goals and adopt the interim  
5 percentage savings recommended by NRDC-SACE witness Steinhurst in this testimony. The Commission  
6 should direct further study to address the several errors and missed opportunities in this study as  
7 recommended by NRDC-SACE witnesses. The Commission should clearly direct that the FEECA utilities  
8 adopt the cost-effectiveness tests and analytic perspective directed by statute, as explained in testimony  
9 by NRDC-SACE witnesses. The Commission should adopt goals for demand-side renewable energy  
10 taking into consideration the several policies and broad direction indicating that the Legislature has  
11 found that some significant level of renewable energy development should be pursued through the  
12 FEECA process, as I and other NRDC-SACE witnesses have testified. The Commission should not close  
13 this docket, or alternatively it should open a new docket, in the interest of resolving the issues that  
14 cannot be fully addressed at this time.

15 **Q. Does this conclude your testimony?**

16 **A. Yes, it does.**

1 **BY MR. CAVROS:**

2 Q. Mr. Wilson, have you prepared a summary of  
3 your testimony?

4 A. Yes, I have.

5 Q. Would you please read your summary?

6 A. Thank you. Good morning, Commissioners.

7 Thank you for the opportunity to testify and participate  
8 in this proceeding on behalf of NRDC and SACE.

9 The primary theme of my testimony is that in  
10 order to truly reach for national leadership status on  
11 energy efficiency, the FEECA utilities need to pursue  
12 energy savings with the same vigor and passion as they  
13 have pursued peak reduction.

14 Florida is the only southeast state with  
15 energy efficiency programs operating at a significant  
16 level of statewide impact. Florida is to be commended  
17 for sustaining these programs in spite of a historic,  
18 historical regional bias against energy efficiency.

19 Commissioners, in this proceeding you have the  
20 opportunity to lead this state. You can join states as  
21 diverse as Arizona and Idaho, whose energy savings  
22 achievements are three times those of Florida. You can  
23 set goals at a level similar to the recent achievements  
24 of Gainesville Regional Utilities, whose relative  
25 savings are four to five times greater than the recent

1 impacts of the four large investor-owned utilities in  
2 this proceeding.

3 Reaching for national leadership as our  
4 organizations advocate would mean increasing efforts by  
5 at least that much. NRDC and SACE are here because  
6 parts of our organizational missions are to protect  
7 consumers from unnecessary, risky and costly energy  
8 choices, and to advocate for the reduction of greenhouse  
9 gas emissions and air pollution. Energy efficiency is  
10 widely acknowledged to be the lowest cost energy  
11 resource and is available at less than half the cost of  
12 a new power plant. Quite simply, energy efficiency is  
13 the link between a pro-consumer energy policy and a  
14 comprehensive solution to global warming.

15 As discussed in my testimony, I believe the  
16 Florida Legislature has made this connection. New  
17 policies affecting many aspects of state authority were  
18 enacted, and the FEECA statute appropriately received  
19 review and revision in furtherance of new state policy.  
20 NRDC and SACE recommend a strong and appropriate  
21 response to the legislation passed in 2008.

22 The heart of the legislative changes to the  
23 FEECA statute is to establish the first statutory  
24 standards by which the Commission would evaluate the  
25 energy conservation goals established in this docket.

1 The available legislative history for these new  
2 standards unambiguously and explicitly reference with  
3 respect to Section 3A the Participant Test and with  
4 respect to Section 3B the Total Resource Cost Test. In  
5 addition to an explicit requirement to consider the  
6 benefits of energy efficiency, it is also clear that  
7 those standards call for a focus on costs, not rates, in  
8 this proceeding.

9           Commissioners, it has been an honor and a  
10 pleasure to have the opportunity to serve the public  
11 interest of Floridians by participating in this  
12 proceeding over the past year, and I had been hopeful  
13 that our participation in the Collaborative would fully  
14 resolve many of the issues before you today. I'm aware  
15 that other witnesses have represented what NRDC and  
16 SACE's positions have been in the Collaborative. We  
17 have a different view of that, and I'm happy to discuss  
18 that at an appropriate time.

19           Thank you, and I look forward to your  
20 questions.

21           **MR. CAVROS:** I tender Mr. Wilson for  
22 cross-examination.

23           **CHAIRMAN CARTER:** Ms. Kaufman, do you have any  
24 questions?

25           **MS. KAUFMAN:** I do not, Mr. Chairman. Thank

1 you.

2 **CHAIRMAN CARTER:** Ms. Brownless?

3 **MS. BROWNLESS:** No, sir.

4 **MR. BEASLEY:** Mr. Chairman, we had  
5 cross-examination for Mr. Wilson, but we also took his  
6 deposition, which is part of the record. I think the  
7 concerns that we have regarding his testimony are  
8 adequately covered in his deposition, and so to move  
9 things along we'll simply commend this for your reading  
10 and waive cross-examination.

11 **CHAIRMAN CARTER:** Okay. Staff?

12 **MS. FLEMING:** No questions.

13 **CHAIRMAN CARTER:** Commissioners? Okay.  
14 Exhibits?

15 **MR. CAVROS:** I'd like to move --

16 **CHAIRMAN CARTER:** Mark for identification  
17 Exhibits Numbers 80 through 86. Are there any  
18 objections?

19 Without objection, show it done.

20 (Exhibits 80 through 86 marked for  
21 identification and admitted into the record.)

22 Anything further for this witness from any of  
23 the parties?

24 Thank you, Mr. Wilson.

25 **THE WITNESS:** Thank you very much.

1                   **CHAIRMAN CARTER:** Call your next witness.

2                   Staff, you're recognized.

3                   **MR. SAYLER:** Mr. Chairman, staff would call  
4                   Mr. Spellman and Ms. Guidry to the stand.

5                   **CHAIRMAN CARTER:** Okay. Let's give Chris an  
6                   opportunity to set up both microphones.

7                   **MR. SAYLER:** And while he's doing that, we  
8                   have two handouts to pass out.

9                   **CHAIRMAN CARTER:** Okay. Well, we'll just kind  
10                  of hold in place while you guys are passing out the  
11                  handouts and give the panel an opportunity to get set up  
12                  here.

13                  Have Mr. Spellman and Ms. Guidry been sworn?

14                  **MR. SAYLER:** No, Mr. Chairman. If you would  
15                  swear them in at the appropriate time.

16                  **CHAIRMAN CARTER:** Okay. We'll do that. Let's  
17                  let staff pass out the exhibits first and then we'll  
18                  swear in the witnesses and we'll proceed further. Thank  
19                  you.

20                  **MR. SAYLER:** For your information,  
21                  Commissioners, we are passing around two exhibits -- or,  
22                  excuse me, one exhibit, which we will enter into the  
23                  record at the appropriate time. And the other one is  
24                  just the first errata sheet that was filed with  
25                  Mr. Spellman's testimony on August 7th. It was just --

1 it's already in your notebooks and, but I just figured  
2 to pass it around for your convenience should you need  
3 it.

4 **CHAIRMAN CARTER:** Mr. Sayler, the one you  
5 wanted to use for, a number for, is that the, the larger  
6 document here?

7 **MR. SAYLER:** Yes, sir. And at the top  
8 right-hand corner there's a number for an exhibit.

9 **CHAIRMAN CARTER:** Okay. Let's make that,  
10 Commissioners, for your records, that will be Exhibit  
11 Number 171. 171.

12 **MR. SAYLER:** And I would suggest a title,  
13 Spellman Second Errata Sheet.

14 **CHAIRMAN CARTER:** Okay.

15 (Exhibit 171 marked for identification.)

16 **MS. BROWNLESS:** Excuse me, Commissioner.

17 **CHAIRMAN CARTER:** Yes, ma'am.

18 **MS. BROWNLESS:** The one -- Exhibit 171 is the  
19 composite exhibit of both papers that were handed out?

20 **CHAIRMAN CARTER:** No. No.

21 **MS. BROWNLESS:** It's just this one?

22 **CHAIRMAN CARTER:** It's the larger document.

23 **MS. BROWNLESS:** Thank you, sir.

24 **CHAIRMAN CARTER:** Is that correct, Mr. Sayler,  
25 just the larger document?

1                   **MR. SAYLER:** Yes, sir. Just the document  
2 that's already marked with a cover sheet for an exhibit.  
3 The other document is already in the record.

4                   **CHAIRMAN CARTER:** Okay. Let's hang on a  
5 second, everybody.

6                   **MS. BROWNLESS:** Thank you, Mr. Sayler.

7                   **CHAIRMAN CARTER:** No problem. Let me make  
8 sure we're all on the same page here. Anyone else has  
9 any questions about the documents or anything like that  
10 before I swear in the witnesses?

11                   (Witnesses sworn.)

12                   Thank you. Please be seated. You may  
13 proceed.

14                   **RICHARD F. SPELLMAN**

15                   **AND**

16                   **CAROLINE GUIDRY**

17 were called as witnesses on behalf of the Florida Public  
18 Service Commission staff and, having been duly sworn,  
19 testified as follows:

20                   **DIRECT EXAMINATION**

21 **BY MR. SAYLER:**

22                   **Q.** Mr. Spellman, would you please state your name  
23 and business address for the record.

24                   **A.** (By Mr. Spellman) Richard F. Spellman, and my  
25 business address is at GDS Associates, 1850 Parkway

1 Place, Suite 800, Marietta, Georgia.

2 Q. And by whom are you employed, Mr. Spellman,  
3 and in what capacity?

4 A. I'm employed by GDS Associates, and I'm the  
5 President of the company.

6 Q. Ms. Guidry, would you please state your name  
7 and business address for the record?

8 A. (By Ms. Guidry) Yes. It's Caroline Guidry.  
9 My business address is GDS Associates, 1850 Parkway  
10 Place, Suite 800, Marietta, Georgia.

11 Q. And by whom are you employed and in what  
12 capacity?

13 A. I'm employed by GDS as an Engineer.

14 Q. Mr. Spellman, have you prefiled direct  
15 testimony in this docket consisting of 78 pages?

16 A. (By Mr. Spellman) Yes, I have.

17 Q. Did you supply an errata sheet to your  
18 original prefiled direct testimony?

19 A. Yes, I did.

20 Q. And that was the one provided to the parties  
21 in October -- or, excuse me, August 7th, 2009?

22 A. Correct.

23 **MR. SAYLER:** Commissioners, that was that  
24 first sheet, the thinner sheet.

25 **CHAIRMAN CARTER:** For the parties -- hang on a

1 second. For the parties, that's the two-pager.

2 Everyone has it? Okay.

3 **BY MR. SAYLER:**

4 Q. All right. Do you have any additional changes  
5 or corrections to your testimony at this time?

6 A. Yes, I do have a second errata.

7 Q. All right.

8 **MR. SAYLER:** And that was passed around,  
9 Commissioners, marked as Exhibit 171.

10 **BY MR. SAYLER:**

11 Q. And would you provide a very short explanation  
12 of that?

13 A. Yes, I can. The revisions were made to  
14 correct an error found in the Excel spreadsheets used to  
15 estimate the achievable potential within the residential  
16 sector for the measures that were screened out by the  
17 Collaborative based upon the two-year payback criteria.  
18 The revisions we're making affect only the residential  
19 sector, specifically the multifamily sector, and not the  
20 commercial industrial sector. Correction of this error  
21 lowers the GDS recommended goals for all seven of the  
22 FEECA utilities.

23 Q. Thank you, Mr. Spellman.

24 **MR. SAYLER:** Mr. Chairman, we ask that the  
25 prefiled direct testimony of Richard F. Spellman and

1 Caroline Guidry be inserted into the record as though  
2 read.

3 **CHAIRMAN CARTER:** The prefiled testimony of  
4 the witnesses will be inserted into the record as though  
5 read.

6 **BY MR. SAYLER:**

7 **Q.** Mr. Spellman, did you also file Exhibit  
8 Numbers RFS-1 through RFS-23 with your testimony?

9 **A.** Yes. Yes, I did.

10 **Q.** Do you have any changes or corrections to  
11 those exhibits?

12 **A.** I do. The second errata contains changes to  
13 Exhibit RFS-20 and Exhibit RFS-21.

14 **Q.** Thank you.

15 **MR. SAYLER:** Mr. Chairman, Witnesses Spellman  
16 and Guidry have exhibits -- their exhibits have been  
17 identified as Numbers 87 through 109 on the  
18 Comprehensive Exhibit List.

19 **CHAIRMAN CARTER:** For the record,  
20 Commissioners, and for the parties, Exhibits Number 87  
21 through 109 for identification purposes.

22 (Exhibits 87 through 109 marked for  
23 identification.)

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 1.0 QUALIFICATIONS

2 Q: Mr. Spellman, please state your name, position and business addresses.

3 A: My name is Richard F. Spellman and I am the President of GDS Associates, Inc. (GDS),  
4 an engineering and management consulting firm. My business address is Suite 800, 1850  
5 Parkway Place, Marietta, Georgia 30067.6  
7 Q: Please describe GDS Associates, Inc.8 A: GDS is an engineering and management consulting firm with over 170 employees in the  
9 United States (U.S.). GDS specializes in energy supply and energy efficiency planning  
10 and analysis issues with clients in the U.S. and Canada. Our services include:

- 11 (1) energy efficiency, renewable energy and demand response program design,
- 
- 12 implementation and evaluation;
- 
- 13 (2) integrated resource planning;
- 
- 14 (3) electric generation, transmission and distribution system planning;
- 
- 15 (4) wholesale and retail rate studies; and
- 
- 16 (5) other planning and implementation projects for electric and natural gas utilities
- 
- 17 and government agencies.

18 In addition to providing energy efficiency program planning and evaluation services,  
19 GDS is implementing energy efficiency and demand response programs for clients in  
20 several states.  
21  
22  
23  
24  
25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 Q: Are these government or utility clients?

2 A: Both. GDS provides engineering and energy consulting services to electric and natural  
3 gas utilities, government agencies, non-profit organizations, commercial organizations,  
4 other consulting firms, and homeowners.

5  
6 Q: Please state your educational background and work experience.

7 A: My educational background and work experience are provided in my resume, which is  
8 attached as Exhibit RFS-1.

9  
10 Q: Please summarize your work experience in the area of energy efficiency.

11 A: During my sixteen years at GDS, I have managed several large-scale consulting projects  
12 for GDS clients relating to the design, implementation and evaluation of energy  
13 efficiency and demand response programs. I have completed over thirty-six energy  
14 efficiency potential studies across the U.S., and I have completed numerous program  
15 evaluation and market assessment studies (including end-use metering studies, mail and  
16 phone surveys, internet-based surveys, in-depth interviews, focus groups, etc.). I have  
17 completed impact and process evaluations of energy efficiency, demand response and  
18 load management programs. I have testified on energy efficiency potential studies and  
19 other related planning issues before state regulatory commissions in Connecticut,  
20 Georgia, Maine, New Hampshire, New Mexico, North Carolina, Texas, Utah, and  
21 Vermont. My clients include electric and natural gas utilities, government agencies, non-  
22 profit organizations, and other commercial businesses.

23

24

25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 Before joining GDS in 1993, I was the Manager of Marketing and Product Development  
2 at Central Maine Power Company (CMP) where I managed the design and  
3 implementation of CMP's energy efficiency and demand response programs (with a  
4 budget of over \$26 million annually). I served as the chairman of the New England  
5 Power Pool DSM Planning Committee in 1991 and 1992, and I serve on the Board of  
6 Directors of the Association of Energy Services Professionals (AESP). My education  
7 includes a BA degree with distinction in Math/Economics from Dartmouth College  
8 (graduated cum laude and with distinction) and an MBA from the Thomas College  
9 Graduate School of Business. I am a graduate of the University of Michigan Graduate  
10 School of Business Administration Management II Program, the Electric Council of New  
11 England Skills of Utility Management Program, and I am a member of the Association of  
12 Energy Services Professionals.

13  
14 Q. Mr. Spellman, please explain the portion of your panel's testimony for which you have  
15 responsibility.

16 A. I have the responsibility for all issues relating to the selection of cost effectiveness tests  
17 for Florida and for all issues relating to recommendations for energy efficiency goals for  
18 the seven FEECA utilities and other policy recommendations. In addition, Caroline  
19 Guidry and I are jointly responsible for the portion of the testimony relating to the review  
20 and analysis by GDS of the energy efficiency technical, economic, and achievable  
21 potential estimates developed by the seven FEECA utilities.<sup>1</sup>

22  
23  
24 <sup>1</sup> Utilities subject to FEECA include Florida Power & Light Company, Progress Energy Florida, Inc., Tampa  
25 Electric Company, Gulf Power Company, Florida Public Utilities Company, JEA, and OUC.

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 Q. Ms. Guidry, please state your name, title and business address.

2 A. My name is Caroline Guidry and I am employed by GDS as an Engineer. My business  
3 address is 1850 Parkway Place, Suite 800, Marietta, GA 30067.  
4

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

6 A. As an Engineer in the Energy Efficiency/Renewable Energy department, I have assisted  
7 with data collection, analyses, report writing, and development of presentations all related  
8 to energy efficiency potential studies, demand-side management program planning, and  
9 DSM policies in general. I have worked with both utilities and public service  
10 commissions from both the potential assessment and program development perspectives.  
11

12 Q: Please state your educational background and work experience.

13 A: My educational background and work experience are provided in my resume, which is  
14 attached as Exhibit RFS-2.  
15

16 Q. Please explain the portion of your panel's testimony for which you are responsible.

17 A. Along with Mr. Spellman, I am responsible for the portion of the testimony addressing  
18 GDS' technical review and analysis of the energy efficiency technical, economic, and  
19 achievable potential estimates developed by the seven FEECA utilities. This portion of  
20 the testimony is contained in Part 5.0 of the testimony.  
21  
22  
23  
24  
25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 2.0 INTRODUCTION

2 Q. What is the purpose of your testimony?

3 A. The purpose of the testimony is to provide:

- 4 ● the results of the GDS review and assessment of the technical, economic, and
- 5 achievable potential studies performed by Itron for the seven FEECA utilities;
- 6 ● recommendations on the energy efficiency cost-effectiveness tests that are
- 7 consistent with the revised FEECA statute and should be utilized in this
- 8 proceeding to establish new conservation goals for the FEECA utilities;
- 9 ● recommendations for revisions to the energy efficiency goals proposed by
- 10 each of the FEECA utilities; and
- 11 ● policy recommendations pertaining to the implementation of the changes to
- 12 the FEECA statutes made in the 2008 legislative session, including the need for
- 13 utility performance incentives or penalties relating to demand-side management
- 14 (DSM) goals, the treatment of efficiency investments across generation,
- 15 transmission, and distribution systems, and an appropriate mechanism for
- 16 increasing the development of demand-side renewable energy resources.

17  
18 Q. Are you sponsoring any exhibits?19 A. Yes, I am sponsoring Exhibits Nos. RFS-1 through RFS-23, which are attached to the  
20 testimony.

21

22 Q. Please summarize the recommendations contained in your testimony.

23 A. In the testimony, I recommend that the energy efficiency goals for each FEECA utility be  
24 based upon an estimate of the maximum achievable cost-effective potential determined

25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 with the use of the E-TRC Test (an Enhanced Total Resource Cost Test) and the  
2 Participant Test as the primary cost-effectiveness tests. The E-TRC Test should include a  
3 monetary value for greenhouse gas (GHG) emissions based on the latest estimates of the  
4 future price of GHG allowances published by the U.S. Congressional Budget Office. The  
5 E-TRC Test is the correct primary test because it considers (a) costs and benefits to  
6 customers participating in conservation measures; (b) costs and benefits to the general  
7 body of ratepayers as a whole, including utility incentives and participant contributions;  
8 and (c) costs and benefits of avoided power plant emissions. The Participant Test is also  
9 needed because it determines whether an energy efficiency measure is cost-effective from  
10 the Participant's viewpoint.

11  
12 With regard to the technical, economic and achievable potential studies submitted by the  
13 utilities in this proceeding, GDS concludes that the estimates of achievable energy  
14 efficiency potential developed in these studies are understated based on the following  
15 findings:

- 16 • The studies exclude several cost-effective energy efficiency measures.
- 17 • The utilities have eliminated many cost-effective measures within the  
18 residential and commercial sectors based on a two-year minimum payback  
19 requirement without considering the actual market barriers and low market  
20 saturations of many of these energy efficiency measures.
- 21 • The energy efficiency portfolio optimization program used by some of the  
22 FEECA utilities overly constrains the DSM program potential by limiting the  
23 application of energy efficiency measures to incremental increases in electric  
24 demand only.

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1           • The baseline annual kilowatt-hour (kWh) sales estimates developed for the  
2 study are consistently low when compared to actual kWh sales, which also limits  
3 the savings potential in each utility and market sector.

4           • The market penetration projections developed for the 10-year planning period  
5 are conservative and do not adequately reflect aggressive marketing and  
6 successful program implementation plans.

7 GDS recommends specific numeric conservation goals for each of the seven FEECA  
8 utilities, which are summarized in the following table. The recommended goals are lower  
9 than those I calculated using the E-TRC Test and adjusted for deficiencies and errors in  
10 the potential studies. Recognizing that the higher goals represent a significant cultural  
11 and economic change for the FEECA utilities, I am recommending that for the first five  
12 years the conservation goals be set at 50 percent of my calculated goals. This five-year  
13 transition period affords the utilities time to plan, design and implement new, more  
14 comprehensive programs to support the much higher level of goals. The end of the  
15 transition period will coincide with the next five-year goal setting proceeding. In that  
16 proceeding, the Commission can assess whether there is a need to continue the transition  
17 period.

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

**Table 1: GDS Proposed Energy Efficiency Goals for 2014**

Utility	Winter MW Savings (2014)	Summer MW Savings (2014)	Cumulative Annual GWh Savings (2014)	2014 Winter MW Savings Goal as Percent of 2014 Forecast System Peak	2014 Summer MW Savings Goal as Percent of 2014 Forecast System Peak	2014 GWh Savings Goal as Percent of 2014 Forecast Annual GWh Sales
FPL	680.5	1,233.5	3,128.0	3.4%	5.5%	2.9%
PEF	379.4	347.7	1147.8	3.5%	3.4%	2.7%
TECO	127.2	178.6	466.7	2.4%	3.7%	2.1%
Gulf	61.4	83.7	301.9	2.0%	2.6%	2.0%
JEA	8.9	77	264.9	0.3%	2.4%	1.8%
OUC	1.9	39.2	120.1	0.2%	2.9%	1.8%
FPUC	0.8	3.3	14.2	0.4%	1.8%	1.5%

In addition, we provide recommendations on a number of policy issues. Although we conclude that the development of more aggressive conservation goals will not have a significant rate impact, we describe a rate impact cap mechanism that the Commission may choose to implement. We also conclude in the testimony that while the Commission is authorized to develop a performance incentive mechanism for those utilities that exceed their annual targets, this should be developed in a separate proceeding with input from all interested stakeholders. The revised FEECA statute allows the Commission to consider efficiency investments in generation, transmission and distribution systems. However, since the utilities have not performed technical potential analyses of the specific efficiency improvements available, I recommend that this issue also be handled in a separate proceeding when the necessary analysis has been completed.

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 Finally, in order to further encourage the continued research and development of  
2 demand-side renewable systems in Florida, I recommend that the FEECA utilities be  
3 required to establish demand-side renewable programs that target solar thermal and solar  
4 photovoltaic measures that were not found to be cost-effective in this proceeding. I  
5 recommend that the Commission authorize annual recovery through the ECCR for these  
6 program equal to 10 percent of each IOU's five-year average of ECCR expenses for  
7 2004-2008.

8 3.0 PURPOSE AND INTENT OF THE FEECA STATUTE

9 Q. Please describe the purpose of the Florida Energy Efficiency and Conservation Act  
10 (FEECA).

11 A. The Florida Legislature has directed the Florida Public Service Commission  
12 (Commission) to adopt appropriate goals for increasing the efficiency of energy  
13 consumption and increasing the development of demand-side renewable energy systems.  
14 Specifically, the FEECA legislation directs the Commission to establish energy  
15 efficiency goals for each FEECA utility to:

- 16 • Increase the conservation of expensive resources, such as petroleum fuels;
- 17 • Reduce and control the growth rates of electric consumption;
- 18 • Reduce the growth rates of weather-sensitive peak demand; and
- 19 • Encourage development of demand-side renewable energy resources.

20  
21 Q. Is information on the legislative intent provided in the FEECA statute?

22 A. Yes. Section 366.81, Florida Statutes (F.S.), provides the intent of this legislation, as  
23 follows:  
24  
25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1           366.81 Legislative findings and intent.--The Legislature finds and  
2           declares that it is critical to utilize the most efficient and cost-effective  
3           demand-side renewable energy systems and conservation systems in order  
4           to protect the health, prosperity, and general welfare of the state and its  
5           citizens. Reduction in, and control of, the growth rates of electric  
6           consumption and of weather-sensitive peak demand are of particular  
7           importance. The Legislature further finds that the Florida Public Service  
8           Commission is the appropriate agency to adopt goals and approve plans  
9           related to the promotion of demand-side renewable energy systems and the  
10          conservation of electric energy and natural gas usage. The Legislature  
11          directs the commission to develop and adopt overall goals and authorizes  
12          the commission to require each utility to develop plans and implement  
13          programs for increasing energy efficiency and conservation and demand-  
14          side renewable energy systems within its service area, subject to the  
15          approval of the commission.

16  
17 Q.       What changes to the FEECA statute did the Florida Legislature make in the 2008  
18       legislative session?

19 A.       The 2008 Florida Legislature enacted several amendments to the FEECA statutes, the  
20       most significant of which are summarized as follows:

21       In developing the FEECA goals, the Commission is directed by Section 366.82, F.S., to:

- 22           • Consider costs and benefits to customers participating in conservation  
23           measures;
- 24           • Consider the costs and benefits to the general body of ratepayers as a whole,

25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 including utility incentives and participant contributions;

- 2 • Consider the need for incentives to promote both customer-owned and utility-
- 3 owned energy efficiency and demand-side renewable energy systems;
- 4 • Consider costs imposed by state and federal regulations on the emission of
- 5 GHGs; and
- 6 • Evaluate the technical potential of all demand-side and supply-side energy
- 7 conservation measures, including demand-side renewable energy systems.
- 8

9 In addition, the Commission is permitted by Section 366.82 F.S., to:

- 10 • Allow efficiency investments across generation, transmission, and distribution
- 11 as well as efficiencies within the user base; and
- 12 • Authorize financial rewards or penalties for those utilities over which it has
- 13 rate-setting authority for exceeding or failing to meet the goals, respectively.
- 14

15 Q. What impact do these changes have on the conservation goal-setting process which is the

16 subject of this proceeding?

17 A. By amending Section 366.82, F.S., in 2008, the Florida Legislature has directed the

18 Commission to place increased emphasis on the level of energy efficiency goals in order

19 to reduce and control the growth rates of electric consumption. The changes give the

20 Commission broader authority to maximize the achievement of energy efficiency in

21 Florida.

22 4.0 CURRENT AND HISTORICAL FLORIDA ENERGY EFFICIENCY AND LOAD

23 MANAGEMENT PROGRAMS

24

25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 Q. Have the FEECA utilities' energy efficiency and load management programs been  
2 successful in the past?

3 A. Yes, however, in the past, more focus has been placed on kilowatt (kW) savings than on  
4 kilowatt-hour (kWh) savings.

5  
6 Q. How have the FEECA utilities historically ranked in the nation in terms of absolute kW  
7 savings from load management programs in the past?

8 A. In 2007, based on incremental annual kW savings from load management programs  
9 reported by each utility in the U.S. Energy Information Administration (EIA) Form 861  
10 Database, out of the 192 utilities reporting absolute savings of over zero kW, the FEECA  
11 utilities received the following ranks:

- 12 • Progress Energy Florida, Inc. (formerly Florida Power Corp.): 2
- 13 • Florida Power & Light Company: 5
- 14 • Gulf Power Company: 39
- 15 • Tampa Electric Company: 70
- 16 • Florida Public Utilities Company: Not Reported
- 17 • JEA: Not Reported
- 18 • OUC: Not Reported

19 A graphical representation of all of the reporting utilities and the rank of the FEECA  
20 utilities according to absolute kW savings reported for years 2005, 2006, and 2007 can be  
21 found in Exhibit RFS-3. This exhibit also contains a listing of the top 20 utilities for  
22 these three years.

23  
24  
25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 Q. In the past, how have the FEECA utilities historically ranked in the nation in terms of  
2 relative load management kW savings as a percentage of summer peak loads?

3 A. In 2007, based on cumulative annual kW savings from load management programs as a  
4 percentage of summer peak loads reported by each utility in the U.S. EIA Form 861  
5 Database, out of the 192 utilities reporting annual effects of over zero kW, the FEECA  
6 utilities received the following ranks:

- 7 • Progress Energy Florida, Inc. (Florida Power Corp.): 38
- 8 • Florida Power & Light Company: 124
- 9 • Gulf Power Company: 141
- 10 • Tampa Electric Company: 180
- 11 • Florida Public Utilities Company: Not Reported
- 12 • JEA: Not Reported
- 13 • OUC: Not Reported

14 A graphical representation of all of the reporting utilities and the rank of the FEECA  
15 utilities according to relative cumulative kW savings as a percentage of summer peak  
16 load reported for years 2005, 2006, and 2007 can be found in Exhibit RFS-4. This exhibit  
17 also contains a listing of the top 20 utilities for these three years. In ranking utilities on  
18 their energy efficiency and load management achievements, it is important to consider  
19 the magnitude of the kWh and kW savings in proportion to each utility's annual kWh  
20 sales and peak load, and not just on the level of kW savings alone.

21  
22 Q. How have the FEECA utilities historically ranked in the nation in terms of energy  
23 efficiency program savings in the past?

24 A. In 2007, based on incremental annual kWh savings from energy efficiency programs  
25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 reported by each utility in the U.S. EIA Form 861 Database, out of the 279 utilities  
2 reporting incremental savings of over zero kWh, none of the FEECA utilities scored in  
3 the top 100 electric utilities. The FEECA utilities received the following ranks for 2007:

- 4 • Florida Power & Light Company: 107
- 5 • Progress Energy Florida, Inc. (Florida Power Corp.): 133
- 6 • Gulf Power Company: 146
- 7 • JEA: 154
- 8 • Tampa Electric Company: 158
- 9 • Florida Public Utilities Company: 177
- 10 • OUC: Not Reported

11 A graphical representation of all of the reporting utilities and the rank of the FEECA  
12 utilities according to annual incremental kWh savings reported as a percentage of total  
13 sales for years 2005, 2006, and 2007 can be found in Exhibit RFS-5. This exhibit also  
14 contains a listing of the top 20 utilities for these three years.

15  
16 Q. Have other electric utilities in Florida implemented energy efficiency programs?

17 A. Yes. According to the U.S. EIA Form 861 Database, seven other Florida electric utilities,  
18 in addition to the FEECA utilities, have reported kWh savings from energy efficiency  
19 programs. Exhibit RFS-6 shows the reported incremental kWh savings as a percentage of  
20 total retail sales for years 2005, 2006, and 2007 for all of the Florida utilities that reported  
21 energy efficiency savings for those years.

22  
23 Q. How do the energy efficiency program savings of the non-FEECA utilities in Florida  
24 compare to the Florida FEECA utility energy efficiency program savings?

25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 A. The top three “non-FEECA” electric utilities in Florida reporting savings in 2007 –  
2 Reedy Creek Improvement District (Reedy Creek), Gainesville Regional Utilities (GRU),  
3 and City of Tallahassee (Tallahassee) – achieved annual kWh savings of 0.98 percent,  
4 0.76 percent, and 0.34 percent, respectively, of total 2007 kWh sales. FPL, which is the  
5 highest ranking FEECA utility, achieved incremental annual kWh savings as a percent of  
6 retail kWh sales in 2007 of only 0.20 percent, which is significantly less than the savings  
7 achieved by Reedy Creek, GRU, and Tallahassee. As shown on Exhibit RFS-6, out of  
8 the total 13 utilities reporting energy efficiency programs savings in Florida for 2007, the  
9 FEECA utilities are ranked as follows:

- 10 • Florida Power & Light Company: 4
- 11 • Progress Energy Florida, Inc.(Florida Power Corp.): 6
- 12 • Gulf Power Company: 7
- 13 • JEA: 8
- 14 • Tampa Electric Company: 9
- 15 • Florida Public Utilities Company: 11
- 16 • OUC: Not Reported

17 This comparison of kWh savings data for Florida electric utilities raises the question of  
18 why the seven FEECA utilities do not achieve annual kWh savings as high as that  
19 achieved by Reedy Creek, GRU, or Tallahassee. Furthermore, the 0.76 percent of annual  
20 kWh sales saved in just one year (2007) by GRU is as high as what some of the FEECA  
21 utilities propose to save over a 10-year period.

22  
23 Q. Why is it important for Florida’s electric utilities to increase the level of energy  
24 efficiency and conservation?  
25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 A. The following factors make aggressive implementation of electric energy efficiency  
2 programs imperative for the State of Florida:

- 3 • According to the Florida Reliability Coordinating Council, Inc.'s (FRCC)  
4 2009 Regional Load and Resource Plan,<sup>2</sup> consumption of electricity in Florida  
5 (as measured by growth in net energy for load) is expected to experience an  
6 average annual compound growth rate of 1.8 percent over the period from  
7 2009 to 2018. Energy efficiency programs can help reduce the demand for  
8 electricity at a levelized cost per lifetime kWh saved that is much less  
9 expensive than building and operating a new nuclear power plant or power  
10 plant fueled with clean coal. A main objective of FEECA is to decrease the  
11 rate of growth in electricity consumption. Implementation of aggressive  
12 energy efficiency programs can help meet this objective.
- 13 • Having more energy efficiency resources in the utilities' energy resource  
14 plans provides a more diversified, less costly and less risky mix of energy  
15 resources.
- 16 • Investing more in cost-effective energy efficiency can help reduce Florida's  
17 consumption of fossil fuels. This is a key objective of the FEECA statute.
- 18 • Investing more in cost-effective energy efficiency can help Florida increase its  
19 energy independence and make the state less reliant on outside sources of  
20 energy supply.
- 21 • Investing more in cost-effective energy efficiency can help reduce emissions

22 \_\_\_\_\_  
23 <sup>2</sup> Florida Reliability Coordination Council, Inc.'s (FRCC) 2009 Regional Load and Resource Plan (July 2009), page  
24 1. Available at:

[https://www.frcc.com/Planning/Shared%20Documents/Load%20and%20Resource%20Plans/2009%20LRP\\_Web.pdf](https://www.frcc.com/Planning/Shared%20Documents/Load%20and%20Resource%20Plans/2009%20LRP_Web.pdf)

25 <sup>1</sup>

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 of SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>, and particulates in Florida. Unlike coal and gas-fired  
2 plants, energy efficiency investments do not produce carbon dioxide, a major  
3 greenhouse gas.

- 4 • Investing more in cost-effective energy efficiency can help increase “green”  
5 jobs in the State of Florida.

6 5.0 EVALUATION OF POTENTIAL STUDIES

7 Q. Has GDS reviewed the potential studies completed by the seven FEECA utilities?

8 A. Yes. GDS has reviewed the technical potential studies for all seven FEECA utilities as  
9 well as the statewide technical potential report. GDS has also reviewed the methodology  
10 and results of the economic and achievable potential studies, which are described in the  
11 testimonies filed by witnesses for each utility.

12  
13 Q. What methodological requirements should be utilized in the potential studies used as a  
14 basis to set goals for the FEECA utilities?

15 A. The potential studies should reflect the primary objectives of FEECA which are to: (1)  
16 reduce the growth rates of Florida’s weather-sensitive peak demand, (2) reduce and  
17 control the overall growth in electricity consumption, and (3) reduce consumption of  
18 scarce fossil fuels. Additionally, pursuant to Section 366.82, F.S., the Commission, in  
19 developing the goals, should also evaluate the technical potential of all demand-side and  
20 supply-side energy conservation measures, including demand-side renewable energy  
21 systems. Because of the nature of the objectives and the audience, the potential studies  
22 should be thorough, reflect the environment and market of the service territory, be  
23 accurate in their approximations of technical potential savings and market potential, and  
24 be transparent so that technically oriented and non-technically oriented stakeholders may  
25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 see the assumptions, methodology, and supporting documentation behind the final  
2 numbers.

3  
4 Q. Is it important for technical and achievable potential studies to include a comprehensive  
5 list of energy efficiency measures and technologies?

6 A. Yes. In order for these potential studies to provide meaningful and complete information  
7 on energy efficiency potential, the studies should contain detailed information on energy  
8 efficiency measures and the size of target markets. Specifically, the studies should  
9 include a comprehensive range of existing and emerging energy efficiency, demand  
10 response, and renewable measures and technologies. They should also provide evidence  
11 of and support for all assumptions relating to measure costs, measure savings and  
12 measure useful lives. The documentation and support for the underlying assumptions is  
13 just as important as those assumptions.

14  
15 Q. Do the energy efficiency potential studies need to provide detailed information on the  
16 methodology used to develop the estimates and documentation of all assumptions,  
17 including measure costs, measure savings, measure useful lives, and measure penetration  
18 rates?

19 A. Yes. The studies should provide clear information on the methodology used to develop  
20 the energy efficiency potential estimates as well as detailed documentation of all  
21 underlying assumptions and data used to develop the energy efficiency potential  
22 estimates. Without proper documentation of methods and references, the validity of the  
23 data and assumptions used cannot be verified.

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 The studies should also be tailored to the users of the studies which includes: (1) the  
2 Commission, which has ultimate authority over the target setting; (2) the utilities, which  
3 will be proposing achievable goals based on these studies; (3) the public, which is  
4 indirectly involved both as customers of the utility and as prospective program  
5 participants; and (4) other interested stakeholders (public interest and environmental  
6 organizations).

7  
8 Q. Do service area-specific factors impact potential studies?

9 A. Yes. Many factors can impact the savings results of energy efficiency programs;  
10 therefore, it is necessary to use Florida-specific data wherever possible so that the  
11 estimates reflect actual potential for service areas in Florida. The development of these  
12 energy efficiency potential estimates requires special attention in order to tailor the study  
13 to a specific service area.

14  
15 Q. What service area-specific factors impacting potential studies should the Commission  
16 ensure are accounted for when setting targets based on the studies?

17 A. Service area specific factors include appliance saturation data, the mix of single-family  
18 versus multi-family housing units, heating and cooling degree days, avoided costs for  
19 electricity, retail electric rates, availability of alternative fuels, the degree to which energy  
20 efficient appliances are already installed and other economic and demographic  
21 characteristics of the service area including localized equipment and installation costs.  
22 These factors can affect a measure's savings potential and cost-effectiveness.

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 Q. In addition to the service area-specific factors mentioned above, what regulations should  
2 the Commission ensure are accounted for in the potential studies when setting targets  
3 based on those studies?

4 A. National, state and local building codes, national and state appliance efficiency standards,  
5 and other energy efficiency regulations all contribute to energy savings and greatly  
6 impact the calculated potential energy savings available through utility run energy  
7 efficiency programs. Higher appliance and building standards can lead to less calculated  
8 potential attributable to energy efficiency programs due to the smaller differences in  
9 energy consumption between minimum standard equipment codes (the baseline) and high  
10 efficiency equipment. Higher and more stringent standards lead to overall energy  
11 efficiency improvements and lower energy needs of customers. Such standards should  
12 carefully be accounted for in energy efficiency potential studies so that the potential for  
13 additional energy savings through energy efficiency programs is not overstated or  
14 double-counted.

15  
16 Q. Should potential studies include federal and state incentive programs?

17 A. Yes. Studies of energy efficiency potential also should to take into account existing  
18 governmental incentives and programs as well as federal and state tax credits for energy  
19 efficiency measures in order to ensure that the proper utility and participant equipment  
20 costs are reflected in the cost-effectiveness tests.

21  
22 Q. Have you reviewed the technical potential studies performed by Itron for the FEECA  
23 utilities?

24 A. Yes, we have reviewed the technical potential studies for all seven of the FEECA utilities  
25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 and we have reviewed the statewide energy efficiency potential study. Ms. Guidry had  
2 lead responsibility for this review.

3  
4 Q. How did you approach the review of the technical potential studies?

5 A. The assessment process used by GDS included an examination of all aspects of the  
6 technical potential study from individual data points to the published electricity savings  
7 potential. The GDS assessment was designed to both verify and validate the equations,  
8 calculations, and methodology used to estimate the energy efficiency technical potential  
9 and the data and data sources used as inputs into the study. GDS examined the following  
10 five components of the studies:

11 (1) The equations and techniques used by Itron to determine the unadjusted and  
12 adjusted energy and peak demand savings were examined to verify that the  
13 equations produced the published results based upon the input assumptions and  
14 data provided in the technical potential studies.

15  
16 (2) GDS assessed whether or not the objectives of the study could be met with the  
17 methodologies used by Itron to estimate the technical potential. This process  
18 included a review of the completeness of the sectors, subsectors, and energy  
19 efficiency measures studied.

20  
21 (3) GDS tested whether the results could be reproduced with the given methodology  
22 and data points provided in each report and supporting appendices.

23  
24 (4) GDS reviewed the data points and data sources used as inputs into the study to  
25

1 determine the credibility of the source and the appropriateness of the data used  
2 given the assumptions and conditions of the source and its compatibility with the  
3 Florida electric service territory.

4  
5 (5) Lastly, GDS assessed the final results of estimated technical potential in order to  
6 determine if the electricity savings estimates appropriately reflect the upper-limits  
7 of potential and if the utility-specific and statewide results were comparable with  
8 results of similar studies and assessments.

9  
10 Q. What are your findings regarding the technical potential studies?

11 A. GDS has specific findings relating to additional cost-effective measures that should have  
12 been included in the technical potential studies. We also found calculations and data that  
13 need to be corrected, addressed, or documented. Below is a summary of our key findings  
14 pertaining to the technical potential studies:

- 15 • The technical potential studies exclude many important energy efficiency  
16 measures. Section 366.82, F.S., directs the Commission to evaluate the  
17 technical potential of all demand-side and supply-side energy conservation  
18 measures, including demand-side renewable energy systems. Thus, the  
19 technical potential studies fail to meet the requirements of the statute. The  
20 specific measures that were excluded are discussed later in this testimony;
- 21 • Documentation for weather normalization adjustment factors used in the  
22 technical potential studies was not provided in the studies;
- 23 • Documentation of sources for baseline saturation data was not provided in the  
24 technical potential studies;

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

- 1 • The technical potential studies did not include energy efficiency potential
- 2 estimates for the new construction market for the residential and commercial
- 3 market sectors;
- 4 • The latest market assessment data collected by KEMA in the 2009 FEECA
- 5 utility commercial baseline studies was not integrated into the technical,
- 6 economic, or achievable potential studies;
- 7 • GDS was not able to replicate the estimates of technical potential savings
- 8 provided by the FEECA utilities based upon the documentation provided; and
- 9 • Market sector kWh baseline estimates for nearly all of the utility estimates fall
- 10 short of actual historical kWh sales as compared to the utility specific 10 year
- 11 site plans filed in 2009.<sup>3</sup>

12  
13 Q. How do these technical potential study findings impact the economic and achievable  
14 studies?

15 A. The findings listed above can have a significant impact on the economic and achievable  
16 potential studies. Measures that are excluded from the technical potential study are also  
17 not considered in the economic or achievable studies, which limits the ultimate economic  
18 and achievable potential kWh savings estimates. Also, any uncertainties in the technical  
19 potential estimates resulting from lack of documentation regarding weather normalization  
20 factors or baselines saturations lead to uncertainties in the economic and achievable  
21 studies as well. Additionally, if the latest market assessment data is not incorporated into  
22 the technical potential study, then the economic and achievable estimates are also

23  
24 <sup>3</sup> Note: FPUC is not required to file 10 year site plans; therefore, the baselines for FPUC could not be verified  
25 against historical sales data.

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1 hindered by the use of older data. Finally, the fact that the baselines in the technical  
2 potential studies underestimate actual kWh sales limits the estimated energy available for  
3 saving through energy efficiency efforts.

4  
5 Q. Based on your review, what additional issues have you found in the economic and  
6 achievable potential studies filed by the FEECA utilities?

7 A. GDS also conducted a thorough review of the methodology and calculations used by the  
8 FEECA utilities to estimate the achievable cost-effective potential. Based on this  
9 detailed review, we have determined that there are several factors that have caused the  
10 utilities' estimates of achievable energy efficiency potential to be understated, including  
11 the following:

- 12 • Market penetration projections for many measures appear to be too low;
- 13 • The list of energy efficiency measures considered is incomplete;
- 14 • Some utilities limit the amount of DSM savings potential to supplanting  
15 incremental growth in electric demand only;
- 16 • Some utilities used an incorrect optimization methodology to select a cost  
17 effective portfolio of energy efficiency measures;
- 18 • Minimum measure payback requirements were inappropriately applied to the  
19 residential and small commercial market sectors, resulting in the elimination  
20 of many cost effective energy efficiency measures; and
- 21 • Neither the Rate Impact Measure (RIM) nor the E-RIM Tests should have  
22 been used to determine if energy efficiency measures are cost effective.

23 These issues will be addressed individually in the following testimony.  
24  
25

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1 Q. What are your concerns regarding the market penetration estimates?

2 A. In the early years of the forecast, the models that produce the projections of future market  
3 penetration of energy efficiency measures are constrained to what Florida utilities have  
4 been able to achieve in the past when the RIM Test was used to determine cost-  
5 effectiveness. It is not appropriate to constrain future estimates of market penetration to  
6 the achievements made in the past in Florida when the RIM Test prevented many energy  
7 efficiency programs from being implemented. This constraint underestimates the actual  
8 potential achievable in a particular market. In addition, because the list of energy  
9 efficiency measures is incomplete, the technical and achievable potential studies do not  
10 adequately address all of the customer market segments, and thus, do not ensure that  
11 every customer is provided an opportunity to lower electric consumption through utility  
12 sponsored energy efficiency programs.

13  
14 Q. Why do you conclude that the list of energy efficiency measures considered in the  
15 Technical Potential Study is incomplete?

16 A. In our assessment of the Florida Technical Potential Study, we compared the list of  
17 residential and commercial measures contained in the study with those found in other  
18 recent technical potential studies. The following measures applicable to the residential  
19 sector were not included in the Florida study:

- 20 • Smart strips/phantom load switch
- 21 • Second refrigerator turn-in
- 22 • Light emitting diode (LED) lighting
- 23 • Programmable thermostats
- 24 • Second freezer turn-in

25

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- Tree shading

1  
2 The above six items could contribute to a rather large percentage of the technical  
3 potential. For example, as shown in Exhibit RFS-7, these listed measures account for  
4 19.6 percent of the residential maximum achievable cost-effective potential according to  
5 a 2009 study conducted in New Hampshire. These are common, commercially available  
6 measures that are minimally affected by climate and could be applicable to the Florida  
7 residential energy market. We believe that these measures should have been included in  
8 the Florida technical potential study in order to meet the FEECA statute requirements to  
9 consider all energy efficiency measures.

10  
11 The list of commercial measures found in other technical potential studies, but not  
12 assessed in the Florida study, is extensive. The measures contained in Exhibit RFS-7  
13 may not break into the current list of top twenty energy saving measures. However, their  
14 cumulative potential savings could be substantial and merit consideration. We believe  
15 the missing commercial energy efficiency measures are applicable in many types of  
16 commercial buildings and should have been included in the Florida Technical Potential  
17 Study. There are four building types that consume 60 percent of the electricity sold to the  
18 commercial sector in Florida. The following table provides a list of energy efficiency  
19 measures that are likely to be applicable in these building types and that were not  
20 included in the studies conducted by the seven FEECA utilities:

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**Table 2: Recommend List of Additional Commercial Measures**

Building Type	Percentage of Total Annual Energy Consumption <sup>4</sup>	Measures Likely to be Applicable in Building Type & Not Considered in Current FL Study -
Office	21%	Energy Star Compliant Single-Door Refrigerator Vending Miser for Non-Refrigerated Machines Specialty Lighting Integrated Building Design Energy Efficient Windows
Restaurant	18%	Specialty Lighting High Efficiency Steamer High Efficiency Holding Cabinet Demand Ventilation Control Induction Cook-tops Refrigeration Economizer Commercial Reach-In Cooler Commercial Reach-In Freezer Commercial Ice-Maker Zero-Energy Doors – Coolers Zero-Energy Doors – Freezers Door Heater Controls Discuss Compressor Scroll Compressor Floating Heat Pressure Control
Retail	12%	Vending Miser for Non-Refrigerated Machines Specialty Lighting
Lodging	9%	Pools – pumps, temperature controls, etc. High Efficiency Hot Tubs/Spas

Q. Do the current achievable studies place any unnecessary constraints on the amount of DSM savings potential?

A. Yes. Some of the utilities have limited the application of energy efficiency measures only to incremental new electric loads and have not allowed energy efficiency measures to displace current electric load. This also understates the DSM achievable potential.

Q. What are your concerns regarding the resource optimization model used to select cost-effective DSM measures for inclusion in the achievable estimate?

A. Some of the FEECA utilities have used a linear programming model approach to determine the optimal level of investments in energy efficiency. In these instances, the

<sup>4</sup> Technical Potential for Electric Energy and Peak Demand Savings in Florida – Final Report. Figure 3-12 on Pg. 3-21.

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1 objective function should be to develop a least cost energy resource plan that minimizes  
2 the sum of utility and participant costs for supply-side and demand-side resources.  
3 However, some of the FEECA utilities minimized the costs of demand-side investments  
4 only (according to testimony provided by the utilities), which does not result in a least  
5 cost energy resource plan for customers.

6  
7 Q. Do you believe it is necessary that a two-year minimum payback requirement be  
8 implemented for all customer sectors?

9 A. No. The utilities eliminated all energy efficiency measures that have a payback to the  
10 participant (before incentives) of two years or less for all customer sectors. According to  
11 the testimony of several utility witnesses, the purpose of the minimum measure payback  
12 requirement of two years is to avoid "free ridership." A free rider is an energy program  
13 participant who would have implemented the program measure or practice in the absence  
14 of the program.

15  
16 We do not believe it is appropriate to impose this constraint in the residential sector or  
17 small commercial customer market segment where customers are typically not energy  
18 efficiency or financial experts. Customers in these residential and small commercial  
19 markets face multiple market barriers relating to adoption of energy efficiency measures,  
20 such as (but not limited to):

- 21 • Transaction costs;
- 22 • Lack of program funding;
- 23 • Lack of information about energy efficient technologies;
- 24 • Lack of time to install energy efficiency measures;

25

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- 1           • Lack of time to learn about energy efficiency measures; and
- 2           • Concern about the performance of energy efficient technologies.

3           There are many energy efficiency measures with a payback less than two years that have  
4           low market penetration in Florida in residential and small commercial market segments.  
5           According to appendices attached to the utility-specific technical potential study reports,  
6           for the measures with a payback of less than two years, the average commercial market  
7           saturation is 37 percent. For residential measures with a payback of two years or less, the  
8           average market saturation is only 25 percent.<sup>5</sup> Thus, it is clear that even using the  
9           FEECA utilities-specific data, many energy efficiency measures in the residential and  
10          small commercial markets having a payback of less than two years have relatively low  
11          market penetration to date in Florida.

12  
13          In addition to the FEECA utilities-specific data, GDS reviewed other recent U.S. studies  
14          for information on this topic. These studies demonstrated that residential and small  
15          commercial customers will not install many of these measures in the absence of a well-  
16          designed energy efficiency program.<sup>6</sup> Furthermore, the FEECA statute requires that “[i]n  
17          developing the goals, the commission shall evaluate the full technical potential of all  
18          available demand-side and supply-side conservation and efficiency measures, including  
19          demand-side renewable energy systems.” Section 366.82(3), F.S. The removal of cost

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20  
21          <sup>5</sup> The average market saturations were estimated by averaging 1 minus the “Incomplete Factor” for all measures  
22          within a market sector that have a payback period of two years or less. Incomplete Factors are defined as 1-Measure  
23          Saturation. All of the data was obtained from the utility-specific technical potential study reports Appendices B and  
24          C. Appendix C was used to determine the measures with a payback period of two years or less, and Appendix B was  
25          used to obtain the “Incomplete Factors” for the desired measures.

26          <sup>6</sup> See “National Action Plan for Energy Efficiency” report published in July 2006. This plan was developed by more  
27          than 50 leading organizations in pursuit of energy savings and environmental benefits through electric and natural  
28          gas energy efficiency. This report notes that current underinvestment in energy efficiency is due to a number of  
29          well-recognized barriers, including some of the regulatory policies that govern electric and natural gas utilities.

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1 effective measures for the residential and small commercial customer classes is not  
2 consistent with the requirement in the FEECA statute for the Commission to evaluate the  
3 full technical potential of all available energy efficiency measures.  
4

5 Q. Please provide an example of a measure with a payback period of less than two years that  
6 has a low market penetration rate.

7 A. A good example of a measure having low penetration in the U.S. is the compact  
8 fluorescent light bulb (CFL) that has a payback to the customer of less than two years.  
9 According to data from the Consortium for Energy Efficiency, “[a]bout 85 percent of  
10 residential lighting energy is used by incandescent light sources” in the United States.<sup>7</sup>  
11

12 Q. Have residential CFL lighting programs experienced high free-ridership rates across the  
13 U.S.?

14 A. No. GDS has conducted a survey of utilities and organizations across the United States  
15 to determine the impact of free-ridership with respect to CFL lighting. The results of the  
16 survey are provided in Exhibit RFS-8. As shown in this exhibit, all of the residential  
17 lighting programs examined by GDS experienced very low free-ridership rates.  
18

19 Q. Can you provide examples of residential measures that were omitted from the estimates  
20 of achievable potential because they had a payback of two years or less?

21 A. Yes. PEF, for example, screened out the following residential sector measures that have a  
22 payback of two years or less:  
23

24 <sup>7</sup> Data provided on the Consortium for Energy Efficiency Residential Lighting Fact Sheet, available at  
25 [www.cee1.org/resrc/facts/res-lt-fx.pdf](http://www.cee1.org/resrc/facts/res-lt-fx.pdf).

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- 1 • Air conditioner maintenance
- 2 • Electronically commutated motors (ECM's)
- 3 • Testing of proper refrigerant charging and airflow for central air
- 4 conditioning systems
- 5 • Proper sizing of HVAC systems
- 6 • Compact fluorescent lightbulbs
- 7 • T-8 lighting
- 8 • Low flow showerheads, faucet aerators, water heater blankets
- 9 • Heat traps
- 10 • High efficiency pool pumps
- 11 • High efficiency clothes washers
- 12 • Energy Star TV's, DVD players, VCR's, cable set-top boxes, desk-top
- 13 PC's, lap top PC's,
- 14 • High efficiency windows with sunscreens

15 Q. Can you provide examples of commercial sector measures that were omitted from the  
16 estimates of achievable potential because they had a payback of two years of less?

17 A. Yes. FPL, for example, screened out such measures as premium T-8 lighting, high-bay T-  
18 five lighting, metal halide lighting, hard-wired 18 watt CFLs, aerosol duct sealing,  
19 variable speed drives for chiller pumps and towers, air handler optimization, and heat  
20 traps to name just a few measures. All of these energy efficiency measures have  
21 incomplete factors of over 60 percent and have payback periods of two years or less. FPL  
22 screened out several hundred energy efficiency measures (across all 11 commercial  
23 market segments), most of which have very high incomplete factors.

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1 For the reasons stated above for the residential and small commercial markets, we  
2 conclude that the FEECA utilities' achievable potential studies currently underestimate  
3 the actual achievable potential because of the unnecessary constraint imposed by the two-  
4 year minimum payback requirement. However, we believe the two-year payback  
5 constraint makes sense for the large commercial/industrial market because these  
6 customers often possess the knowledge and expertise to identify and implement cost-  
7 effective energy savings measures without incentives.  
8

9 Q. Why do you conclude that neither the RIM Test nor the E-RIM Test should be used to  
10 determine cost-effectiveness in the economic and achievable studies?

11 A. Both the RIM and the E-RIM cost-effectiveness tests screen out many measures that  
12 demonstrate energy savings potential and that cost far less than new power supply  
13 resources on a cost per lifetime kWh saved basis. Screening out measures using the RIM  
14 or E-RIM Tests significantly reduces both the economic and achievable kWh savings  
15 estimates. This issue is discussed in greater detail later in this testimony.  
16

17 Q. How do the FEECA utilities estimates of technical, economic, and achievable potential  
18 compare to studies conducted by states other than Florida, non-profits, and other utilities  
19 across the country?

20 A. GDS collected the results from 20 potential studies ranging from an assessment of the  
21 entire United States, states in other regions of the U.S., and other states in the Southeast.  
22 Most of these studies have estimated the potential savings over a planning horizon of 10  
23 years. Comparatively, the FEECA utilities studies project savings as a percentage of  
24 annual kWh sales that are much lower than other recent studies. On average, the  
25

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1 technical potential estimated by the FEECA utilities is 19 percent of annual kWh sales in  
2 2019, which is seven percent lower than the other studies reported. The FEECA utilities  
3 project that the achievable cost-effective potential is only 0.62 percent of annual kWh  
4 sales in 2019, which is nearly 12 percent below other recent studies in both the southeast  
5 region and the U.S., and almost 0.4 percent below what other electric utilities in Florida  
6 have saved in the year 2008 alone. The achievable cost effective potential savings of  
7 0.62 percent by 2019 estimated by the FEECA utilities is by far the lowest estimate of  
8 achievable potential of any of the recent studies examined by GDS. A table comparing  
9 all of the studies to the FEECA utilities potential estimates is presented in Exhibit RFS-9.  
10

11 Q. What are your final remarks on the technical, economic, and achievable potential studies?

12 A. The studies of technical, economic and achievable potential completed for the seven  
13 FEECA utilities are voluminous and complex. It takes days to read all of the studies,  
14 technical appendices, and the supporting testimony by utilities' witnesses. It takes  
15 additional days to review the underlying calculations of kWh and kW potential savings,  
16 and to review all of the supporting references that provide detailed information on energy  
17 efficiency measure costs, measure electricity savings and measure useful lives. The  
18 modeling effort completed by Itron and the FEECA utilities provides the Commission  
19 with a starting point from which to develop new energy efficiency goals that are based  
20 upon the revised FEECA statute, goals that will consider all energy efficiency measures,  
21 and will utilize the most efficient and cost-effective demand-side renewable energy  
22 systems and conservation systems. However, because of the problems and deficiencies  
23 noted in the above discussion, these studies fall short of the requirements of the FEECA  
24 statute and The estimates of achievable cost effective potential exclude many cost-

25

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1 effective and proven energy efficiency measures -- measures that have a levelized cost  
2 per lifetime kWh saved less than 2.5 cents per kWh saved.<sup>8</sup> As explained later in the  
3 testimony, GDS has developed energy efficiency goals for the FEECA utilities that  
4 address the deficiencies listed above for the technical, economic, and achievable studies.

5 6.0 DETERMINATION OF COSTS AND BENEFITS OF CONSERVATION

6 Q. What approach should the Commission consider in determining the costs and benefits of  
7 the conservation goals that is consistent with the revised FEECA statute?

8 A. The FEECA statutes provide the Commission with much flexibility when setting DSM  
9 goals. In declaring its intent, the Florida Legislature stated in Section 366.81, F.S.:

10  
11 The Legislature further finds and declares that ss. 366.80-366.85 and  
12 403.519 are to be liberally construed in order to meet the complex  
13 problems of reducing and controlling the growth rates of electric  
14 consumption and reducing the growth rates of weather sensitive peak  
15 demand; increasing the overall efficiency and cost-effectiveness of  
16 electricity and natural gas production and use; encouraging further  
17 development of demand-side renewable energy systems; and conserving  
18 expensive resources, particularly petroleum fuels.

19  
20 Because the Legislature requires these FEECA statutes to be liberally construed, the  
21 Commission is authorized to set aggressive yet achievable energy efficiency goals and to

22  
23 <sup>8</sup> Using the levelized cost per kWh saved provided in the appendices of the utility specific technical potential reports  
24 and averaging only those measures with a two-year payback period or less, the commercial measure average  
25 levelized cost is 2.4 cents per kWh saved and the residential measure average levelized cost is 2.4 cents per kWh  
saved.

1 ensure that customers will see real savings on their electric bills.

2  
3 Q. Does the revised FEECA statute require that the Commission consider the cost and  
4 benefits of energy efficiency to participants and to utility customers?

5 A. Yes. The Legislature found and declared that it is critical to utilize the most efficient and  
6 cost-effective demand-side renewable energy systems and conservation systems in order  
7 to protect the health, prosperity, and general welfare of the state and its citizens.  
8 Amendments to the FEECA statutes made during the 2008 legislative session provide  
9 guidance on what is to be considered cost-effective. The 2008 amendments clearly  
10 outline the costs and benefits that must be considered when determining cost-  
11 effectiveness and setting conservation goals. These costs and benefits include those  
12 incurred by all participating customers and the costs and benefits to the general body of  
13 ratepayers, including utility incentives and participant contributions. The Commission  
14 must also consider the need for incentives to promote both customer-owned and utility-  
15 owned energy efficiency and demand-side renewable energy systems. Finally, the  
16 Commission must consider costs imposed by state and federal regulations on the  
17 emission of greenhouse gases.

18 7.0 NATIONAL ACTION PLAN FOR ENERGY EFFICIENCY

19 Q. Are there any regional or national efforts underway that could provide useful information  
20 to the Commission as it develops updated energy efficiency goals for the FEECA  
21 utilities?

22 A. Yes. The National Action Plan for Energy Efficiency (NAPEE) is a private-public  
23 initiative begun in the fall of 2005 to create a sustainable, aggressive national  
24 commitment to energy efficiency through the collaborative efforts of gas and electric  
25

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1 utilities, utility regulators, and other partner organizations. According to the U.S.  
2 Environmental Protection Agency (EPA) web site, such a national commitment to energy  
3 efficiency can take advantage of large opportunities in U.S. homes, buildings, and  
4 schools to reduce energy use, save billions on customer energy bills, and reduce the need  
5 for new power supplies. The first NAPEE report was released in July 2006 and served as  
6 a call to action to bring diverse stakeholders in the U.S. together at the national, regional,  
7 state, or utility level, as appropriate, and foster the discussions, decision-making, and  
8 commitments necessary to take investment in energy efficiency to a new level.

9  
10 Q. Has the NAPEE produced any reports that contain information on cost-effectiveness tests  
11 for energy efficiency programs that would be useful to the Commission as it develops  
12 new goals for the FEECA utilities?

13 A. Yes. In November of 2008, the NAPEE released its report on cost-effectiveness tests for  
14 energy efficiency measures and programs.<sup>9</sup> According to this report, “the most common  
15 primary measurement of energy efficiency cost-effectiveness used by state public utility  
16 commissions is the Total Resource Cost Test (TRC), followed closely by the Societal  
17 Cost Test (SC).” A positive TRC result indicates that the program will produce a net  
18 reduction in energy costs in the utility service territory over the lifetime of the program.

19  
20 <sup>9</sup> National Action Plan for Energy Efficiency, “Understanding the Cost-effectiveness of Energy Efficiency  
21 Programs: Best Practices, Technical Methods and Emerging Issues for Policy Makers”, November 2008. This paper,  
22 *Understanding Cost-Effectiveness of Energy Efficiency Programs*, is provided to assist utility regulators, gas and  
23 electric utilities, and others in meeting the 10 implementation goals of the National Action Plan for Energy  
24 Efficiency’s Vision to achieve all cost-effective energy efficiency by 2025. This report reviews the issues and  
25 approaches involved in considering and adopting cost-effectiveness tests for energy efficiency, including discussing  
each perspective represented by the five standard cost-effectiveness tests and clarifying key terms. The intended  
audience for the report is any stakeholder interested in learning more about how to evaluate energy efficiency  
through the use of cost-effectiveness tests. All stakeholders, including public utility commissions, city councils, and  
utilities, can use this report to understand the key issues and terminology, as well as the various perspectives each  
cost-effectiveness test provides, and how the cost-effectiveness tests can be implemented to capture additional  
energy efficiency. Page ES-2.

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1 A summary of results on the cost-effectiveness tests used in each state is provided in  
2 Exhibit RFS-10.

3  
4 Q. Out of the 15 states that report a primary cost-effectiveness test, how many states use the  
5 Total Resource Cost or Societal Cost Test as a primary cost-effectiveness test?

6 A. As shown in Exhibit RFS-10, the NAPEE report identifies that 11 out of the 15 reporting  
7 states utilize/rely upon either the TRC or SC Test as a primary cost-effectiveness test.

8  
9 Q. How many states use the RIM Test as a primary cost-effectiveness test?

10 A. According to the NAPEE study, Florida is the only state to use the Rate Impact Measure  
11 (RIM) Test as a primary cost-effectiveness screening test.<sup>10</sup>

12  
13 Q. Does the National Action Plan's November 2008 cost-effectiveness report provide  
14 information on the impacts of using the RIM Test as a primary cost-effectiveness test?

15 A. Yes, the report states that, "reliance on the RIM Test has limited energy efficiency  
16 investment, as it is the most restrictive of the five cost-effectiveness tests."<sup>11</sup>

17 8.0 MAJOR COST-EFFECTIVENESS TESTS

18 Q. What are the major cost-effectiveness tests typically used to quantify the costs and  
19 benefits of energy efficiency programs or measures?

20 A. There are five major cost-effectiveness tests that quantify the benefits and costs of energy  
21 efficiency programs or measures from various perspectives. These five cost-

22  
23 \_\_\_\_\_  
<sup>10</sup> *Ibid*

24 <sup>11</sup> *Ibid.*

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1 effectiveness tests are: the Participant Test, the Program Administrator Cost (PAC) Test,  
2 the Total Resource Cost (TRC) Test, the Societal Cost (SC) Test, and the Ratepayer  
3 Impact Measures (RIM) Test.  
4

5 Q. Please describe the Participant Test.

6 A. The Participant Test is used to measure the quantifiable benefits and costs to the customer  
7 as a result of participating in a program. It does not account for any unquantifiable  
8 benefits which may result from improved energy efficient behaviors. It is limited to  
9 customer cash flows only in the context of participation incentives, bill reductions, and  
10 direct costs incurred. In the past, the Participant Test has been used in Florida to ensure  
11 that a program is cost-effective to the participating customer; otherwise, the participant  
12 would not participate. The Florida utilities also use the Participant Test to identify and  
13 eliminate energy efficiency measures with a short payback period that consumers likely  
14 could be doing anyway. These customers are called "free riders." There is also no  
15 consideration for costs associated with imposed state and federal environmental  
16 regulations.  
17

18 Q. Please describe the Program Administrator Cost Test.

19 A. The PAC Test is designed to calculate the costs and benefits of a demand-side  
20 management program as a resource option based on only the costs and benefits incurred  
21 by the utility. This test excludes any net costs incurred by the participant. The PAC Test  
22 has not historically been part of the FEECA goal setting process, and I do not recommend  
23 that it be included now as a criterion for determining cost-effectiveness.  
24  
25

1 Q. Please describe the Total Resource Cost Test.

2 A. The TRC Test measures the overall economic efficiency of a DSM program. It measures  
3 the net costs of a DSM program based on total program costs – utility costs and customer  
4 incurred costs. This test provides an “apples to apples” comparison of the costs of  
5 demand-side and supply-side resources on a level playing field. This test is applicable to  
6 all types of DSM programs – conservation as well as load management and other demand  
7 response programs. Regardless of the type of DSM program, the TRC Test measures the  
8 net direct economic impacts that the program has over the entire service area of the  
9 utility. It is essentially a test to determine the net costs that program participants and the  
10 utility would incur in order to implement a specific DSM program.

11  
12 Q. Please describe the Societal Cost Test.

13 A. The SC Test follows the same structure as the TRC Test except that it is the only test that  
14 attempts to quantify the societal costs and benefits of a DSM program. In general, the SC  
15 Test assesses the changes in total resource costs and benefits – direct and indirect – to  
16 society as a whole as opposed to limiting the impacts to the service territory alone. The  
17 SC Test is similar to the TRC Test with the addition of consideration of the costs and  
18 benefits of externalities. States using the SC Test have typically attempted to include the  
19 costs and benefits associated with such social concerns as air quality, health, etc. These  
20 costs and benefits of externalities can be extremely difficult to quantify.

21  
22 The SC Test has not historically been part of the FEECA goal setting process. While I do  
23 not recommend that it be included now as a criterion for determining cost-effectiveness,  
24 as discussed later in my testimony, I am recommending that an estimate of the likely  
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costs of greenhouse gases (GHG) based on pending legislation be included as part of an Enhanced TRC (E-TRC) Test. This concept has been proposed by several of the FEECA utilities, including FPL, TECO, Gulf, and PEF, which have included the avoided cost of GHG emissions as part of an Enhanced TRC (E-TRC) and an Enhanced RIM (E-RIM) cost-effectiveness testing in their base case of achievable potential. The cost of compliance with SO<sub>2</sub> and NO<sub>x</sub> emissions are already included in the standard TRC and RIM Tests, since there are existing regulations associated with these GHGs. The utilities have also added a cost for CO<sub>2</sub> emissions even though there are no current CO<sub>2</sub> emissions regulations in effect.

Q. Please describe the Rate Impact Measure Test.

A. The Rate Impact Measure (RIM) Test provides information on whether rates will increase or decrease due to the implementation of an energy efficiency program. This test does not determine if a demand-side energy efficiency measure is less expensive than a supply-side measure. The RIM Test only indicates the direction and magnitude of the expected change in customer rate levels. This test is a measure of equity or fairness and is not a measure of economic efficiency. Furthermore, the RIM Test does not consider participant costs. For these reasons, this test cannot be used to determine if an energy efficiency measure or program is less expensive than a supply-side resource. As a result, I do not believe it is appropriate to use the RIM Test to screen energy efficiency programs because this test is not consistent with the requirements of the revised FEECA statute regarding cost-effectiveness.

The benefit and cost components accounted for in each of the five cost-effectiveness tests

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1 are summarized in a table provided as Exhibit RFS-11.

2  
3 Q. What cost-effectiveness test or tests have been relied on by this Commission in the past in  
4 approving DSM goals?

5 A. In the past, the Commission required the FEECA utilities to provide the results of three  
6 tests, the RIM, TRC, and Participant Tests, as part of the cost-effectiveness methodology.  
7 Utilities have also been allowed to provide information on externalities in a SC Test but  
8 have not done so in previous goal setting dockets. In practice, the Commission has relied  
9 on the RIM and the Participant Tests as the primary tests in approving DSM goals for the  
10 FEECA utilities. However, the Commission has not mandated the exclusive use of the  
11 RIM Test. In fact, the Commission has encouraged utilities to evaluate implementation of  
12 energy efficiency measures that pass the TRC Test when it is found that the savings are  
13 large and the rate impacts are small.<sup>12</sup>

14  
15 Q. Have you conducted a survey to assess the benefit/cost tests currently being used by other  
16 public service commissions to determine cost-effectiveness?

17 A. Yes, GDS conducted a survey of all state utility regulatory agencies, including  
18 Washington, D.C., between November 2008 and January 2009. The results of the GDS  
19 survey can be found in Exhibit RFS-12.

20  
21 Q. How is the GDS Survey different from the survey presented in the NAPEE report  
22

23  
24 <sup>12</sup> Order No. PSC-94-1313-FOF-EG, issued October 25, 1994 in Docket Nos. 93-0548-EG, 93-0549-EG, 93-0550-  
25 EG, and 93-0551-EG, In re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section III)

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1 (Exhibit RFS-10)?

2 A. The NAPEE report was published in November 2008 with the research on the cost-  
3 effectiveness tests used in each state originally gathered throughout 2007 and compiled  
4 by the Regulatory Assistance Project (RAP) in early 2008. The information in the  
5 spreadsheet that RAP provided for NAPEE was considered up-to-date as of early May  
6 2008.

7  
8 According to the RAP, the focus of their study was to report the tests codified or  
9 memorialized in statutes, regulations, and commission rules/orders with some  
10 clarification requested in telephone interviews with a few state commissions. The RAP  
11 study did not go into any depth regarding the cost-effectiveness tests used in practice  
12 regardless of, or in the absence of, codified rules, regulations and statutes.

13  
14 The GDS survey was initiated in 2007 and is updated periodically, with the most recent  
15 comprehensive update occurring in June 2009. For purposes of the survey, we  
16 determined a test to be 'required' if there is a statute, law, regulation, rule or commission  
17 order indicating a particular test that must be met before a DSM measure or program  
18 would be considered.

19  
20 The GDS survey also went further to determine which tests were given the most weight  
21 in final evaluations by each state's commission regardless of the state's regulations,  
22 laws, commission orders and rules (or lack thereof). This particular piece of information  
23 was gathered in lengthy telephone interviews and through mail and email surveys. This  
24 gives rise to the two tables in Exhibit RFS-12. The first table displays the required tests  
25

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1 considered in each state based on regulations, orders, and rules. The second table  
2 displays all the tests reported to be used in practice, regardless of whether rules exist.  
3 This is important as it illustrates actual practice and future trends in the usage of cost-  
4 effectiveness tests to evaluate DSM measures and programs.  
5

6 Q. What are the findings of the GDS survey?

7 A. The GDS survey found that the TRC Test or the SC Test, a TRC Test derivative, are the  
8 most commonly prescribed tests. For the purpose of this survey, "primary" test as used  
9 in Table 2 of Exhibit RFS-12, means that programs or measures absolutely must pass this  
10 test in order to be considered a cost-effective demand-side resource. As shown in Table 2  
11 of Exhibit RFS-12, the TRC Test is accepted as the primary test, in practice, by 12 states  
12 (including Rhode Island)<sup>13</sup> and is codified into Commission rules in nine of these states  
13 (including Rhode Island). Twenty-seven states (including Rhode Island) report or  
14 consider the TRC Test in practice when evaluating the costs and benefits of demand-side  
15 measures and programs. The TRC Test is implemented as a required test, by commission  
16 rules and orders in California, Colorado, Illinois, Massachusetts, Missouri, New  
17 Hampshire, New Mexico, New York, and Rhode Island. The states of Delaware,  
18 Pennsylvania, and Washington use the TRC Test as a primary test in practice despite it  
19 not being specified in their respective commission's rules and orders.  
20

21 The SC Test is established in commission regulations and orders as the primary benefit-  
22 cost test in Arizona, Iowa, Maine, Minnesota, Montana, Oregon, Vermont, and  
23

---

24 <sup>13</sup> The Rhode Island RICET cost-effectiveness test is similar to the TRC test as defined by the California Standard  
25 Practice Manual, except that it only includes electric resource savings.

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1 Wisconsin. The SC Test is used as the primary test in practice in New Jersey, despite it  
2 not being specified in any commission rules or orders. In summary, of 28 states that have  
3 indicated a primary test used in practice, 20 (including Rhode Island) rely on the TRC  
4 Test or the SC Test.

5  
6 Only Florida and the District of Columbia (DC) use the RIM Test as a primary screening  
7 test in their commission rules and orders. Both the NAPEE and GDS surveys show this  
8 to be the case.

9  
10 There are a small number of states where the Program Administrator Cost (PAC) Test is  
11 mandated as the primary test – Connecticut, Oregon (alongside the Societal Test), Utah,  
12 and Texas. The PAC Test is considered or reported in practice in 18 states despite it not  
13 being specified in any commission rules or orders.

14  
15 There are 22 states that do not mandate, by law, the use of any benefit-cost tests to  
16 evaluate the cost-effectiveness of energy efficiency programs. Of these 22 states, there  
17 are nine that do not consider, even in practice, any tests at all. These include Alabama,  
18 Alaska, Louisiana, Mississippi, Nebraska, Ohio, South Carolina, Tennessee, and West  
19 Virginia. Thirteen state agencies continue to carry out cost-effectiveness tests on their  
20 utilities' programs, despite the lack of any law or commission rule requiring them to do  
21 so. These states include Delaware, Idaho, Kentucky, Maryland, Michigan, New Jersey,  
22 North Carolina, North Dakota, Oklahoma, Pennsylvania, South Dakota, Washington, and  
23 Wyoming. Of these aforementioned states, North Dakota, Oklahoma, South Dakota, and  
24  
25

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1 Wyoming consider the results of the RIM Test as the primary determinate of cost-  
2 effectiveness in practice, despite the absence of any Commission regulations.

3  
4 There are 14 states that consider or report almost all of the cost-effectiveness tests (4 or 5  
5 out of the tests listed in the California Standard Practice Manual). Of these 14, eight give  
6 nearly equal weight to all the tests in practice. These states include Arkansas, Georgia,  
7 Hawaii, Indiana, Kansas, Kentucky, North Carolina, and Virginia. The states of Kentucky  
8 and North Carolina consider all cost-effectiveness tests equally in practice despite not  
9 having a law or commission order to that effect.

10 9.0 BASIS FOR RECOMMENDATION OF COST-EFFECTIVENESS TESTS

11 Q. Do you believe that the tests currently used by the FEECA utilities to determine cost-  
12 effectiveness are consistent with the intent of the FEECA statutes?

13 A. No. All of the FEECA utilities have developed their energy efficiency goals based on  
14 the RIM or E-RIM Test and the Participant Test as the applicable cost-effectiveness tests.  
15 As my testimony discusses in detail, the RIM or E-RIM Tests are not appropriate as  
16 primary tests because they are not tests of economic efficiency. Neither RIM nor E-RIM  
17 utilize the most efficient and cost-effective demand-side renewable energy systems and  
18 conservation systems in order to protect the health, prosperity, and general welfare of the  
19 state and its citizens. In fact, the application of the RIM or E-RIM Test will result in : (1)  
20 utility energy resource plans where the total present value of participant and utility costs  
21 is greater than energy resource plans based upon the E-TRC Test; and (2) under-  
22 investment in numerous energy efficiency measures that are less expensive than supply-  
23 side alternatives. While energy resource plans based upon the RIM or E-RIM Test may  
24 result in lower average electric rates, the present value of the sum of participant and  
25

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1 utility costs for energy resource plans based upon the RIM or E-RIM Test are  
2 significantly higher than plans based upon the E-TRC Test.

3  
4 According to the November 2008 National Action Plan for Energy Efficiency Report  
5 titled *Understanding the Cost-effectiveness of Energy Efficiency Programs: Best*  
6 *Practices, Technical Methods and Emerging Issues for Policy Makers:*

7  
8 the most common primary measurement of energy efficiency cost-  
9 effectiveness is the Total Resource Cost (TRC) test, followed  
10 closely by the Societal Cost Test (SCT). A positive TRC result  
11 indicates that the program will produce a net reduction in energy  
12 costs in the utility service territory over the lifetime of the  
13 program. The distributional tests (PCT, PACT, and RIM) are then  
14 used to indicate how different stakeholders are affected.  
15 Historically, reliance on the RIM Test has limited energy  
16 efficiency investment, as it is the most restrictive of the five cost-  
17 effectiveness tests.<sup>14</sup>

18  
19 Since the RIM Test tends to limit investment in energy efficiency programs, the  
20 RIM Test is not consistent with the FEECA statute as amended by the Legislature  
21 in 2008.

22  
23 <sup>14</sup> National Action Plan for Energy Efficiency, "Understanding the Cost-effectiveness of Energy Efficiency  
24 Programs: Best Practices, Technical Methods and Emerging Issues for Policy Makers", November 2008. This paper,  
25 *Understanding Cost-Effectiveness of Energy Efficiency Programs*, is provided to assist utility regulators, gas and  
electric utilities, and others in meeting the 10 implementation goals of the National Action Plan for Energy  
Efficiency's Vision to achieve all cost-effective energy efficiency by 2025.

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1 Q. Which cost-effectiveness test or tests do you believe the Commission should consider in  
2 establishing conservation goals which are consistent with the revised statute?

3 A. The Commission should select a cost-effectiveness test or tests that will help address the  
4 FEECA objective of reducing the growth rate of electric consumption. Therefore, I  
5 recommend that the Commission adopt the E-TRC and Participant Tests as the tests that  
6 all energy efficiency and load management programs must pass. The E-TRC Test should  
7 explicitly include the avoided costs of greenhouse gas emissions as a utility benefit of  
8 energy savings. I also recommend that a two-year minimum payback be required for  
9 measures offered to the large commercial and industrial markets but not for residential or  
10 small commercial.

11  
12 Q. Please explain the E-TRC Test and how it differs from the traditional TRC Test.

13 A. The enhanced Total Resource Cost (E-TRC) Test includes as a benefit the avoided costs  
14 of regulatory fines associated with the reduction in greenhouse gas emissions due to the  
15 energy savings. Traditionally, the TRC Test does not account for environmental  
16 externalities; however, the revised FEECA statute directs the Commission to consider the  
17 costs imposed by state and federal regulations on the emission of GHGs. The E-TRC  
18 Test satisfies this requirement.

19  
20 Q. If Congress has not yet adopted GHG regulation, why do you recommend that the cost of  
21 GHG emissions be included in the cost-effectiveness screening?

22 A. According to Section 366.82(3)(d), F.S., the Commission must consider "the cost  
23 imposed by state and federal regulations on the emission of greenhouse gases" when  
24 establishing goals. This format for including the avoided costs of GHG emission as part  
25

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1 of the E-TRC Test addresses this requirement. Although the laws have not yet been  
2 enacted, proposed legislation is in place and one version has been passed by the U.S.  
3 House of Representatives as of July 1, 2009. Therefore, the goals established for the  
4 FEECA utilities should reflect the most current expectations of the federal regulatory  
5 legislative intent. This will allow the utilities to be prepared for future regulations by  
6 already accounting for and conducting programs aimed at conserving energy and  
7 reducing emissions.

8  
9 Q. Have any other states or jurisdictions included GHG costs in a cost-effectiveness test  
10 screening process?

11 A. Yes. The report issued in November 2008 by the National Action Plan for Energy  
12 Efficiency, which I referenced earlier in my testimony, includes several examples of  
13 states that currently account for the benefits of avoided environmental emissions resulting  
14 from energy efficiency programs.

15  
16 California includes a forecast of GHG values in the avoided costs  
17 used to perform the cost-effectiveness tests and Oregon requires  
18 that future GHG compliance costs be explicitly considered in  
19 utility resource planning. Several utilities, including Idaho Power,  
20 PacifiCorp, and Public Service Company of Colorado, include  
21 GHG emissions and costs when evaluating supply- and demand-  
22 side options, including energy efficiency, in their IRP process.<sup>15</sup>

23  
24 <sup>15</sup> National Action Plan for Energy Efficiency. "Understanding Cost-Effectiveness of Energy Efficiency Programs:  
25 Best Practices, Technical Methods, and Emerging Issues for Policy-Makers." November 2008, Page 4-12.

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1  
2 According to a literature search conducted by GDS in June 2009, 11 states address  
3 environmental externalities in their DSM cost-effectiveness testing. Exhibit RFS-13  
4 presents a summary of the environmental externalities addressed by states in their cost-  
5 effectiveness analyses. Thus, precedence exists for including the benefits of avoided  
6 emissions in benefit/cost tests for energy efficiency programs.

7  
8 Q. What dollar amount do you recommend to reflect the anticipated cost of GHG emissions?

9 A. The National Action Plan for Energy Efficiency in the report – “Understanding Cost-  
10 Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and  
11 Emerging Issues for Policy-Makers” – recommends that the quantity of avoided Carbon  
12 Dioxide (CO<sub>2</sub>) emissions be assigned an economic value based on projected market value  
13 and added to the net benefits of the energy efficiency measures. For a formal cost-  
14 effectiveness evaluation, the marginal emission rates for the particular utility should be  
15 used to more accurately reflect the changes in emissions resulting from energy efficiency  
16 programs.<sup>16</sup> It is my recommendation that the Commission assign a monetary value (for  
17 example, on a dollars per metric ton emitted basis) for GHG emissions. This rate can  
18 then be included as a benefit (i.e., an avoided cost) in an E-TRC Test. The avoided cost  
19 values for power plant emission savings can be based on the load shape of the energy  
20 efficiency savings for the particular utility. This same methodology could be applied to a  
21 variety of pollutant emissions or environmental regulations.

22  
23  
24 <sup>16</sup> National Action Plan for Energy Efficiency. “Understanding Cost-Effectiveness of Energy Efficiency Programs:  
Best Practices, Technical Methods, and Emerging Issues for Policy-Makers.” November 2008, Page 4-12.

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1 I recommend that the FEECA utilities assign a price for GHG emissions based upon the  
 2 latest estimates for the future price of GHG allowances per metric ton as published by the  
 3 U.S. Congressional Budget Office (CBO). According to the CBO Cost Estimate for H.R.  
 4 2454 – American Clean Energy and Security Act of 2009,<sup>17</sup> the projected prices of GHG  
 5 allowances are on the order of \$15 per metric ton in 2011 and escalate to \$26 per metric  
 6 ton in 2019. These estimates are comparable to monetary values currently assigned to  
 7 CO<sub>2</sub> emissions by several of the FEECA utilities.

8  
 9 Q. Why do you recommend that the Enhanced Total Resource Cost (E-TRC) Test and the  
 10 Participant Test be used as the primary economic tests?

11 A. I recommend that the E-TRC Test be a primary cost-effectiveness test because it is a test  
 12 of economic efficiency and it puts supply-side and demand-side resources on a level  
 13 playing field. Its main strength is that it considers the total costs and benefits of energy  
 14 efficiency measures, including utility and participant costs and benefits. It also includes  
 15 state and federal regulatory fines as avoided costs, and, unlike the RIM Test, the E-TRC  
 16 Test is a test of overall economic efficiency. Furthermore, in the 2004 FEECA Goals  
 17 Dockets, the TRC Test was considered because the Commission ordered that energy  
 18 savings programs that did not have significant impact on rates should be included in the  
 19 goals of the FEECA utilities. In addition to the E-TRC Test, energy efficiency programs  
 20 should also pass the Participant Test in order to ensure that program participants are  
 21 better off economically when they implement energy efficiency measures.

22  
 23 \_\_\_\_\_  
 24 <sup>17</sup> Congressional Budget Office Cost Estimate for H.R. 2454, Pg. 13.  
 <<http://www.cbo.gov/ftpdocs/102xx/doc10262/hr2454.pdf>>

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1  
2 Q. Will the use of the E-TRC Test and Participant Test as primary cost-effectiveness tests  
3 allow Florida utilities to implement aggressive energy efficiency programs?

4 A. Yes. GDS recommends that the Commission set goals to implement energy efficiency  
5 programs that pass the E-TRC and Participant Tests and that have minimal long-term rate  
6 impacts that fall within a range acceptable to the Commission. Additionally, GDS  
7 recommends that programs be made available to all customers so that every customer is  
8 provided with an opportunity to lower electric consumption through utility-sponsored  
9 energy efficiency programs. Finally, following this recommendation would ensure that  
10 aggressive, yet attainable, cost-effective energy savings are being achieved.

11  
12 Q. Specifically, what aspects of the E-TRC Test are consistent with the revised FEECA  
13 statute?

14 A. According to Section 366.81, F.S., it is the intent that "The Legislature finds and declares  
15 that it is critical to utilize the most efficient and cost-effective demand-side renewable  
16 energy systems and conservation systems ...." In this context, the E-TRC Test can be  
17 used as a general resource portfolio planning tool, comparing DSM programs against  
18 supply-side resources in order to assess the cost-effectives of various planning options.  
19 As mentioned previously, the E-TRC Test can be amended to include the impacts of costs  
20 imposed by state and federal regulations on GHG, which is consistent with Section  
21 366.82(3)(d) F.S. If energy efficiency programs can help avoid GHG regulatory costs,  
22 these savings can be reflected as avoided costs by the utility for using energy efficiency  
23 as a resource for meeting regulatory rules, thus avoiding penalties for non-compliance.  
24 The E-TRC Test also allows for the assessment of costs and benefits to participants and  
25

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1 ratepayers as a whole which is a requirement as stated in Sections 366.82(3)(a) and (b),  
2 F.S.

3  
4 Q. Why is it your recommendation that the RIM or E-RIM Test not be used as the primary  
5 economic assessment tool?

6 A. The RIM Test is not an appropriate "primary" cost-effectiveness test for Florida. It is an  
7 "extreme" test for a first screen because, as noted by the November 2008 report of the  
8 National Action Plan for Energy Efficiency. It will prematurely screen out energy  
9 efficiency measures that can save significant amounts of electricity and can lower  
10 customer electric bills. The RIM Test is not a test of economic efficiency. It only  
11 indicates whether electric rates may go up if an energy efficiency measure or program is  
12 implemented. Unlike the E-TRC Test, the RIM Test fails to consider the impact on  
13 participants' electric bills. Additionally, the inclusion of lost revenues as an actual "cost"  
14 in the RIM Test is not a common accounting practice for any other electric investment  
15 and thus places an unfair penalty on energy efficiency. Further, policies and mechanisms  
16 exist that allow utilities to recover some or all of their actual and/or perceived costs of  
17 conducting energy efficiency programs. Last, load building programs pass the RIM Test.  
18 Since a key objective of FEECA is to reduce the growth rate of electric consumption (not  
19 increase the growth rate), selection of the RIM Test is inconsistent with the goals of  
20 FEECA.

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1 Q. Do the FEECA utilities apply the Rate Impact Measure test to supply side investments?

2 A. No. The RIM Test is uniquely applied to DSM measures and is not considered for any  
3 supply-side investments, providing an unfair playing field for comparing utility  
4 investments. As noted above, load building programs pass the RIM Test, but energy  
5 efficiency programs typically do not, which sends the wrong message regarding the  
6 economics of energy efficiency.

7 10.0 LONG TERM RATE IMPACTS OF ENERGY EFFICIENCY PROGRAMS AND  
8 RECOMMENDATIONS CONCERNING RATE IMPACTS

9 Q. Do you think that the long term rate impacts of conservation are important?

10 A. Yes. It is important to be mindful of the rate impact on each customer's ultimate bill to  
11 ensure that the utility is not imposing any unnecessary burden on their customers. It is  
12 important that the customer continues to receive quality and reliable service at a  
13 reasonable and manageable price.

14  
15 Q. What elements of conducting energy efficiency programs contribute to rate impacts and  
16 how are they transferred to the rate payers?

17 A. There are two particular components of energy efficiency programs that tend to impact  
18 rates: (1) utility-incurred program costs, including financial incentives paid to  
19 participants and administrative program costs for energy efficiency programs; and (2) lost  
20 revenues. In Florida, incentives paid to the customers and other utility-incurred program  
21 costs ultimately flow through the Energy Conservation Cost Recovery (ECCR) clause  
22 and are passed on to all ratepayers following an annual evaluation. Lost revenues, on the  
23 other hand, are evaluated during a rate case proceeding and may lead to adjustments to  
24 base rates.

25

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1 Lost revenues should be considered separately from other direct program costs recouped  
2 in the cost-recovery clause. This is because there are a myriad of possible causes  
3 affecting total sales, which may or may not be under the control of the utility. These  
4 causes can include everything from the utility-sponsored efficiency programs in question  
5 to the weather or the economy. All of these causes can contribute to actual sales  
6 diverging from forecasted sales. The aggregated effect of these causes can fall in either  
7 direction, over or under the forecast, without knowing specifically which cause affected  
8 sales in a particular direction and by what magnitude. These perceived losses or finds are  
9 assessed with each rate case and used to adjust the future customer rates in order to  
10 minimize further over- or under-recoveries resulting from unanticipated revenue  
11 adjustments in both directions.

12  
13 Q. In establishing new conservation goals under the revised statute, how can the  
14 Commission increase the level of conservation while, at the same time, mitigate the rate  
15 impact on customers of the utilities?

16 A. The ultimate goal of the FEECA statutes is to implement successful energy efficiency  
17 programs that can reduce the growth rate of electric consumption. The utilities have the  
18 responsibility to their customers and investors to comply with the FEECA statutes. This  
19 can be accomplished by selecting energy efficiency measures that pass the E-TRC and  
20 Participant Tests. The Commission could limit the rate impacts of energy efficiency by  
21 placing a rate impact cap on a utility's portfolio of proposed energy efficiency programs.  
22 For example, the Commission could direct utilities in Florida to achieve 100 percent of  
23 the maximum achievable E-TRC cost-effective potential for energy efficiency in their  
24 service territories, so long as the long term impact on overall electric rates remains within  
25

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1 a range that is acceptable to the Commission over the period that energy efficiency goals  
2 are set.

3  
4 Q. Can you explain how a rate impact cap mechanism could be developed if the  
5 Commission decides that one is warranted in order to limit the rate impact of DSM  
6 programs?

7 A. If implemented, the rate impact cap would apply to the DSM portfolio for the period for  
8 which goals are set. The selection of the appropriate rate impact cap would, of course, be  
9 a policy decision for the Commission. Such a cap could be set at a level of one to two  
10 percent over current rates. This level should allow the FEECA utilities to set aggressive  
11 savings goals to attain an average annual level of energy efficiency savings on par with  
12 those achieved by the top 20 electric energy efficient utilities in the United States.  
13 According to the U.S. EIA Form 861 database, these top twenty electric utilities saved on  
14 average over one percent of their annual retail kWh sales in 2007 (See Exhibit RFS-14).  
15 However, for the reasons discussed below in my testimony, I do not find that a rate  
16 impact cap is necessary at this time.

17  
18 Q. Have you examined the long term rate impacts due to aggressive implementation of  
19 energy efficiency programs in other states?

20 A. Yes. I have examined reports from the National Action Plan for Energy Efficiency  
21 (NAPEE),<sup>18</sup> Lawrence Berkeley Laboratory (LBNL),<sup>19</sup> and other technical reports  
22

23 <sup>18</sup> See "National Action Plan for Energy Efficiency" report published in July 2006.

24 <sup>19</sup> Cappers, Peters. *Financial Analysis of Incentive Mechanisms to Promote Energy Efficiency: Case Study of*  
*Prototypical Southwest Utility*. Lawrence Berkeley National Laboratories: 2009. Paper : LBNL, 1598E.  
<<http://www.repositories.cdlib.org/lgnl-1599E>>

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1 relating to the impacts on electric rates due to decreased sales and increased program  
2 costs. According to the NAPEE, increases in overall bills resulting from energy  
3 efficiency are unlikely. In fact, the NAPEE estimates that bills, on average, will be  
4 reduced by 2.9 percent over a 10-year period due to energy efficiency programs even if  
5 there is a slight rate increase. This assessment was conducted under several different  
6 forecasts and utility operational scenarios. This report, which was issued in July 2006,  
7 can be found on the website of the U.S. Environmental Protection Agency.<sup>20</sup>

8  
9 In addition, the LBNL published a report in March 2009 which estimates the long term  
10 rate impacts of implementing moderate, significant, and aggressive energy efficiency  
11 programs. This LBNL study found that the long-term rate impacts from implementation  
12 of energy efficiency programs are less than one percent for programs that would reduce  
13 annual kWh sales by 10 percent over 10 years. The study definitions of these scenarios  
14 and their levelized cost rate impacts as compared to a base case with no energy efficiency  
15 are described below.

- 16 • Moderate Energy Efficiency scenario (which is defined as saving 0.5 percent per  
17 year of the incremental annual retail electric sales) demonstrates a levelized rate  
18 impact of 0.14 percent over a 20-year planning period.
- 19 • Significant Energy Efficiency scenario (which is defined as saving 1.0 percent per  
20 year of the incremental annual retail electric sales) demonstrates a levelized rate  
21 impact of 0.83 percent over a 20-year planning period.

22  
23  
24 <sup>20</sup> ([http://www.epa.gov/solar/documents/Business\\_case\\_for\\_EE\\_final.pdf](http://www.epa.gov/solar/documents/Business_case_for_EE_final.pdf))

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- 1           • Aggressive Energy Efficiency scenario (which is defined as saving 2.0 percent per  
2           year of the incremental annual retail electric sales) demonstrates a levelized rate  
3           impact of 3.28 percent over a 20-year planning period.

4           Exhibit RFS-15 contains an excerpt from the LBNL study graphically representing the  
5           impact on electric rates from various levels of aggressiveness of energy efficiency  
6           programming.<sup>21</sup>

7  
8           Q.    What are the estimated rate impacts of moving from the use of the RIM/Participant Tests  
9           to the E-TRC/Participant Tests as the primary tests in Florida?

10          A.    I do not know specifically for each of the seven FEECA utilities. However, based on the  
11          information I have, I do not believe the rate impacts would be significant. First, the  
12          national studies I have examined from the NAPEE and the LBNL indicate that the long-  
13          term rate impacts from energy efficiency programs are less than one percent over the  
14          long-term due to aggressive implementation of energy efficiency programs. Second,  
15          according to information provided in the testimony of FPL Witness Sim, the long-term  
16          rate impact on FPL ratepayers of moving from the E-RIM scenario to the E-TRC scenario  
17          produces electric rates that are only 0.4 percent higher over the period for which energy  
18          efficiency goals are being established. In my professional judgment, these long-term rate  
19          impacts are negligible. There is no particular need for the Commission to set a rate  
20          impact cap given these reported minimal energy efficiency rate impacts.

21  
22  
23  
24           <sup>21</sup> LBNL Report, Technical Appendix B and Technical Appendix E.

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1 Q. Would you please explain how the rate impacts of new generation facilities and electric  
2 grid operations compare to the rate impacts of investments in energy efficiency?

3 A. One way to examine the impact of energy efficiency programs on rates and customer bills  
4 is to compare the rate impacts resulting from energy efficiency programs to the rate  
5 impacts of supply-side alternatives. Supply-side investments can increase electric rates  
6 by 10 percent or more. Below are examples of rate increases that are expected in Florida  
7 and Georgia relating to electric utility operations:

8 1. In Georgia, the 2 new nuclear units proposed for the Vogtle site are projected to  
9 increase electric rates by more than 12 percent when these units come on line in  
10 2016.<sup>22</sup>

11 2. In Florida, both PEF and FPL are constructing new nuclear units scheduled to be  
12 come on line during the period 2016 through 2020.<sup>23</sup> Pursuant to Section 366.93,  
13 F.S., these utilities are recovering certain costs on an annual basis during the  
14 pendency of the construction process through a nuclear cost recovery clause. The  
15 amounts approved to be recovered by these utilities in 2009 are \$220,529,243 for  
16 FPL and \$418,311,136 for PEF.<sup>24</sup>

17  
18  
19  
20 <sup>22</sup> The Georgia Power Company web site states the following: "While the Georgia PSC will determine the final rate  
21 impacts, the company estimates the typical Georgia Power residential customer, using 1,000 kilowatt-hours a month,  
22 would see a base rate increase of approximately \$12 per month in 2018, when both units are fully operational. The  
23 rate impact is expected to decline over time." The Georgia Public Service Commission web site indicates that the  
24 current electric bill for a customer using 1,000 kWh a month is \$93.65.

<sup>23</sup> Order Nos. PSC-08-0518-FOF-EI, issued August 12, 2008 in Docket No. 080148-EI, In re: Petition for  
determination of need for Levy Units 1 and 2 nuclear power plants, by Progress Energy Florida, Inc., and PSC-08-  
0237-FOF-EI, issued on April 11, 2008 in Docket No. 070650-EI, In re: Petition to determine need for Turkey Point  
Nuclear Units 6 and 7 electrical power plant, by Florida Power & Light Company.

<sup>24</sup> Order No. PSC-08-0749-FOF-EI, issued November 12, 2008 in Docket No. 080009-EI, In re: Nuclear cost  
recovery clause.

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1           3. In March 2009, FPL filed with the Commission to increase its base electric rates  
2           by 31 percent.<sup>25</sup>

3           Conversely, aggressive implementation of energy efficiency programs, which may result  
4           in a slight rate increase over the long term are accompanied by opportunities for all  
5           customers to partake in energy efficiency activities that can help to reduce their overall  
6           consumption and consequently reduce their electric bills.

7  
8   Q.   How do you ensure that all customers of the FEECA utilities have the opportunity to  
9       participate in energy efficiency or demand response programs?

10   A.   Energy efficiency programs should be designed to include measures that will allow as  
11       many customers as possible to participate over the period that the FEECA goals are in  
12       effect. Measures such as high-efficiency lighting, high-efficiency residential appliances,  
13       insulation, air sealing and duct sealing are widely applicable across many market  
14       segments. Emerging energy efficiency technologies, such as LED lighting, will also be  
15       widely available to many market segments. While not every energy efficiency measure  
16       will be applicable to every electric customer, the broad array of technologies available

17  
18   <sup>25</sup> According to a March 18, 2009 news release on FPL's web site, this general base rate increase will support capital  
investments for the following:

19   • Strengthening the transmission and distribution system to enhance its reliable operation day to day and during  
extreme weather conditions.

20   • Advanced meters and other "smart grid" technology that will give customers more information and control over  
21   their energy usage in the future while enhancing the company's ability to manage the system more efficiently and to  
predict and act on potential reliability issues before they occur.

22   • Existing fossil fuel power generation facilities to enhance their efficient and reliable operation and to lower fuel  
costs for customers.

23   • Existing nuclear power generation facilities to ensure reliable performance over their lifetimes, which have  
24   recently been extended by an additional 20 years.

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1 makes it highly likely that as many customers as possible will have the opportunity to  
2 adopt some energy efficiency measures. The FEECA utilities can address these equity  
3 concerns by offering a comprehensive list of energy efficiency measures and educational  
4 materials available to all electric customers as part of their program plans. Designing  
5 programs to offer a broad array of energy efficiency measures across market segments  
6 will help to control the rate of growth of electric consumption, a key objective of the  
7 FEECA statute.

8 11.0 THE DETERMINATION OF NUMERIC kW AND kWh GOALS

9 Q. Does the FEECA statute provide the Commission with the flexibility to set aggressive but  
10 achievable energy efficiency goals?

11 A. Yes. Due to the flexibility inherent in the FEECA legislation, the Commission is  
12 authorized to set aggressive, achievable, energy efficiency goals, helping to ensure that  
13 customers will see real savings on their electric bills. The technical and achievable  
14 potential studies required by the FEECA statutes should have been conducted with the  
15 primary purpose of determining and implementing the maximum achievable cost-  
16 effective energy savings potential based on the cost-effective perspectives listed in the  
17 statute.

18  
19 Q. Have any studies or surveys been conducted to assess best practice goal-setting methods  
20 in use?

21 A. Yes, in December of 2008 GDS conducted a survey of 12 state government organizations  
22 or utilities across the U.S. that oversee successful, cost-effective energy efficiency  
23 programs. The survey was designed to capture the methodology and inputs used by these  
24  
25

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1 organizations to transform potential studies into concrete energy efficiency savings goals  
2 or targets.

3 Q. What were the conclusions of the GDS survey?

4 A. Out of the 10 survey responses, all organizations set some form of savings targets and six  
5 were set by a state government regulatory body. Based on the survey results, the  
6 following conclusions were made:

- 7 • Savings targets are based on the results of energy efficiency potential studies.
- 8 • Targets are generally expressed in terms of absolute peak demand (kW) and  
9 energy (kWh) savings.
- 10 • The theoretical basis for setting target values included targets based on a  
11 consensus of multiple stakeholders, targets based on past precedent, or targets  
12 determined as a percentage of economic or maximum achievable potential.
- 13 • None of the energy efficiency organizations included in the survey used the  
14 RIM Test as a cost-effectiveness test.

15  
16 Q. Please provide examples of the savings targets set by other organizations as determined  
17 by the GDS survey.

18 A. A complete list of the targets set by the organizations surveyed is described in Exhibit  
19 RFS-16.

20  
21 Q. According to their goals, what percentage of forecasted annual kWh sales are the FEECA  
22 utilities proposing to meet?

23 A. Based on the 10-year goals provided in each utility's testimony and on forecast  
24 projections of annual kWh sales contained in each utility's 2009 10-year site plan, the  
25

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1 energy efficiency savings targets (kWh savings as a percent of forecast 2019 kWh sales)  
2 are as follows:

- 3 • Florida Power & Light Company: 0.74 percent
- 4 • Gulf Power Company: 1.06 percent
- 5 • Progress Energy of Florida, Inc.: 1.50 percent
- 6 • Tampa Electric Company: 0.19 percent
- 7 • JEA: 0.00 percent
- 8 • Florida Public Utilities Company: 0.00 percent
- 9 • OUC: 0.00 percent

10 GDS notes that three of the FEECA utilities have set a goal of 0.0 percent for their target  
11 for savings from energy efficiency programs as a percent of forecast 2019 kWh sales.

12  
13 Q. How do these proposed kWh savings goals compare to the actual kWh savings exhibited  
14 by the top 20 energy efficiency utilities in the U.S. and with the other electric utilities in  
15 Florida?

16 A. According to the EIA Form 861 Database, the top 20 utilities nationwide running the  
17 most successful energy efficiency programs are achieving average annual kWh savings as  
18 a percentage of sales of 1.79 percent per year (Exhibit RFS-17). The leading FEECA  
19 utility, PEF, is proposing cumulative annual savings as a percent of 2019 sales of 1.50  
20 percent over the entire 10-year planning period. The proposed savings goals from the  
21 FEECA utilities fall far below the annual achievements of the top 20 electric utilities  
22 conducting successful energy efficiency programs and fall short of actual achievements  
23 in 2007 by other electric utilities in Florida. Even if the FEECA utilities were to realize  
24 their proposed goals, they would be saving less than 1/10 of the savings realized through  
25

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1 successful energy efficiency programs as reported by the top 20 electric utilities for the  
2 year 2007 in the EIA Form 861 Database.

3 Q. What kWh savings have other utilities in the Southeast achieved?

4 A. The following electric utilities in the Southeast have experienced incremental annual  
5 kWh savings much higher than the FEECA utilities are proposing. The following electric  
6 utilities located in the Southeast had significant kWh savings achievements in 2007  
7 installations of energy efficiency equipment in 2007:

- 8 • Laurens Electric Cooperative, Inc. (South Carolina): 1.26 percent of annual  
9 2007 kWh sales
- 10 • Austin Energy (Austin, Texas): 117,649,000 kWh saved or 1.02 percent of  
11 2007 sales
- 12 • Gainesville Regional Utilities (Gainesville, Florida): 14, 327,000 kWh saved  
13 or 0.75 percent of 2007 sales
- 14 • City of Tallahassee, Florida: 9,465,000 kWh saved or 0.34 percent of 2007  
15 sales

16  
17 Their energy efficiency savings data, described as a percent of kWh sales or kW peak  
18 demand, are provided in Exhibit RFS-18 and Exhibit RFS-19. All data in these exhibits  
19 were provided in the U.S. EIA Form 861 Database. Additionally, listed in Exhibits RFS-  
20 18 and RFS-19 are data for 2005, 2006, and 2007 for the top 20 energy efficiency  
21 utilities. On average, these top 20 energy efficiency utilities save over one percent of  
22 their annual kWh sales every year, year after year.

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1 Q. Do you believe the energy efficiency savings goals proposed by the seven FEECA  
2 utilities are aggressive yet achievable goals for energy efficiency?

3 A. No, while achievable because the goals are overly conservative, they are not aggressive.

4 Q. What approach should the Commission consider in setting aggressive achievable savings  
5 goals consistent with the revised statute?

6 A. The goals should be based on the achievable potential as determined by the E-TRC and  
7 Participant Tests. It is correct to apply the two-year payback requirement to the selection  
8 of energy efficiency measures for large commercial and industrial sectors as outlined in  
9 my testimony, but not for the residential and small commercial sectors. GDS has  
10 developed revised energy efficiency goals that address the issues discussed in the  
11 testimony.

12

13 Q. How were these goals developed?

14 A. GDS developed revised kWh savings goals for each FEECA utility by making the  
15 following adjustments to the kWh savings goals proposed by these utilities:

16 • The starting point for the development of revised goals was the achievable  
17 cost effective potential based upon economic screening using the E-TRC and  
18 the Participant Tests as provided by the utilities and estimated by Itron.

19 • GDS made adjustments to add in energy efficiency measures for the  
20 residential and small commercial sectors that were eliminated due to the two-  
21 year payback constraint that was applied by the FEECA utilities. GDS  
22 utilized the measure data provided in the appendices of the utility specific  
23 technical potential reports to estimate the additional achievable savings  
24 potential of these measures.

25

- 1 • GDS made adjustments to allow for higher market penetrations due to
- 2 implementation of more aggressive marketing and education strategies.
- 3 • GDS made adjustments to account for some of the energy efficiency measures
- 4 that were excluded from the original technical potential analyses as identified
- 5 earlier in this testimony.
- 6

7 Q. How were the revised energy efficiency goals developed by GDS for summer peak  
8 savings?

9 A. For each utility, GDS calculated a ratio of summer peak kW savings to the annual kWh  
10 savings for each market sector (residential, commercial and industrial, and all sectors)  
11 based on the E-TRC achievable potential estimates provided by each utility. GDS then  
12 applied these ratios to the annual kWh savings goals I developed for each of the next 10  
13 years to obtain the energy efficiency goal for summer peak savings for each year from  
14 2010 to 2019.

15  
16 Q. How were the revised energy efficiency goals developed by GDS for winter peak  
17 savings?

18 A. For each utility, GDS calculated a ratio of winter peak kW savings to the annual kWh  
19 savings for each market sector (residential, commercial and industrial, and all sectors)  
20 based on the E-TRC achievable potential estimates provided by each utility. GDS then  
21 applied these ratios to the annual kWh savings goals I developed for each of the next ten  
22 years to obtain the energy efficiency goal for winter peak savings for each year from  
23 2010 to 2019. Table 6 below provides the summer and winter peak to annual kWh  
24 savings ratios calculated by GDS and used to determine summer and winter peak savings  
25

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goals for the seven FEECA utilities.

Table 3: Peak Savings to Annual kWh Savings Ratios by FEECA Utility (Calculated Using TRC/E-TRC Maximum Achievable Potential as Identified in Utility Specific Testimony and Exhibits)

Summer Peak Savings-to-kWh Savings Ratios - TRC Test Calculated								
Utility	FPL	GULF	PROGRESS	TECO	JEA	ORLANDO	FPUC	TOTAL
Residential	0.0004469	0.0003375	0.0003265	0.0004704	0.0003628	0.0004063	0.0002432	0.0003770
Commercial and Industrial	0.0002997	0.0001975	0.0002415	0.0002250	0.0002131	0.0002041	0.0002182	0.0002734
Total	0.0003531	0.0002830	0.0003063	0.0003309	0.0002830	0.0002778	0.0002282	0.0003276
Winter Peak Savings-to-Energy Ratios - TRC Test Calculated								
Utility	FPL	GULF	PROGRESS	TECO	JEA	ORLANDO**	FPUC	TOTAL
Residential	0.0003122	0.0003086	0.0004443	0.0004007	0.0000289	0.0000007	0.0000778	0.0003718
Commercial and Industrial	0.0000472	0.0000647	0.0000337	0.0000425	0.0000387	0.0000397	0.0000321	0.0000447
Total	0.0001434	0.0002137	0.0003465	0.0001972	0.0000341	0.0000227	0.0000503	0.0002159

\*\* Used TRC-M Scenario to Calculate Peak to Energy Ratio

Q. Why are the goals recommended by GDS more appropriate in terms of the intent of the FEECA statutes than the goals proposed by the utilities?

A. The intent of the revised FEECA statutes is to set aggressive, achievable savings goals. The goals proposed by the utilities, while achievable, are not aggressive as discussed in this testimony. In fact, three of the seven FEECA utilities proposed goals of "zero" savings for energy efficiency over the next 10 years. The goals recommended by GDS are more aggressive than the utility proposed goals in that they strive for higher savings, which is still achievable for a variety of reasons. The GDS goals are also conservative estimates of the economic and achievable potential for each utility for the following reasons:

- The original maximum achievable (TRC or E-TRC Test) estimates upon which the revised goals were built are based on baselines sector annual kWh sales estimates that are lower than historical kWh sales data. Because the

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1 annual kWh sales baselines used in the utility studies are lower than actual  
2 annual kWh sales, energy efficiency savings are under-estimated.

- 3 • For FPL maximum achievable (TRC or E-TRC Test) estimates upon which  
4 the revised goals were built were estimated using a linear programming model  
5 run with an incorrect optimization function that caused projections of energy  
6 efficiency savings to be too low.
- 7 • Not all of the measures that were identified as “missing” from the utility  
8 studies were added back by GDS into revised goals estimates.

9  
10 Q. Do you recommend that the Commission adopt a transition period to phase in the  
11 conservation goals you have developed?

12 A. Yes. The goals developed using the procedure described above are substantially higher  
13 than the present or utility-proposed conservation goals and represent a significant cultural  
14 and economic change for the seven FEECA utilities. The utilities will need time to plan,  
15 design and implement new, more comprehensive energy efficiency programs in order to  
16 ramp up to a much higher level of energy efficiency program activity. This will include  
17 increased emphasis on program design and marketing in order to address the challenges  
18 of customer awareness and acceptance of the need for and benefit of energy conservation.  
19 Thus, I recommend that for the first five years (2010 to 2014) the conservation goals  
20 should be set at 50 percent of the achievable cost-effective potential based upon the E-  
21 TRC and Participant Tests and the adjustments made by GDS. This transition period will  
22 provide the FEECA utilities sufficient time to adapt to the requirements of the new  
23 FEECA statute and to develop the infrastructure to support the much higher level of  
24 program activity over the next five years. The end of the five-year transition period  
25

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1 coincides with the next FEECA goal setting proceeding, during which the Commission  
2 can assess whether there is a need to continue a transition adjustment.

3  
4 While I believe a transition to the more aggressive goals of 50 percent over five years is  
5 adequate, the setting of a transition period and the level of magnitude of temporary  
6 reduction in the goals would be a policy decision for the Commission to make based on  
7 many factors that will be discussed during this proceeding.

8  
9 Q. What specific goals are you recommending in this proceeding?

10 A. My recommended goals for 2014, which incorporate the transition period adjustment, are  
11 summarized in Table 4 below. The year 2014 represents the last year of the  
12 recommended transition period. Table 5 provides the utilities' proposed goals for 2014  
13 for comparative purposes. I believe these goals represent aggressive, yet achievable  
14 savings targets for each FEECA utility.

15 **Table 4: GDS Recommended Goals for 2014**

Utility	Winter MW Savings (2014)	Summer MW Savings (2014)	Cumulative Annual GWh Savings (2014)
FPL	680.5	1,233.5	3,128.0
PEF	379.4	347.7	1147.8
TECO	127.2	178.6	466.7
Gulf	61.4	83.7	301.9
JEA	8.9	77	264.9
OUC	1.9	39.2	120.1
FPUC	0.8	3.3	14.2

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1  
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11

Utility	Winter MW Savings (2014)	Summer MW Savings (2014)	Cumulative Annual GWh Savings (2014)
FPL	166.3	300.0	390.1
PEF	254.15	225.88	288.49
TECO	17.6	35.3	84.3
Gulf	18.4	27.3	59.0
JEA	0	0	0
OUC	0	0	0
FPUC	0	0	0

12 Exhibit RFS-20 contains the goals I calculated without the transition period adjustment  
13 for the years 2010 through 2019. Exhibit RFS-21 provides my recommended goals for  
14 the years 2010-2019, which include the transition period adjustment through 2014.  
15 Exhibit RFS-21 also contains the FEECA utilities' proposed goals for the years 2010  
16 through 2019 for comparative purposes.

17 12.0 RECOMMENDATIONS ON COST-RECOVERY AND INCENTIVES

18 Q. Do you believe the revisions to FEECA authorize the Commission to reward an investor-  
19 owned electric utility for exceeding its goals or to penalize a utility for failing to meet its  
20 goals?

21 A. Yes. Sections 366.82(8) and (9), F.S., explicitly authorize the Commission to reward or  
22 penalize an investor-owned utility. Taken together, I believe these sections allow the  
23 Commission to reward or penalize a company by either increasing or decreasing the  
24  
25

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1 company's authorized return on equity up to 50 basis points. According to Section  
2 366.82(9), F.S., such reward or penalty could only be applied after a limited proceeding.

3 Q. What kind of cost-recovery or incentive mechanisms is currently in practice under the  
4 Commission?

5 A. The Commission already has a partial revenue decoupling method in place whereby 53  
6 percent - 69 percent of utility costs are recovered through an annually evaluated cost  
7 recovery clause. The costs recovered through this clause include fuel costs, purchased  
8 power costs, costs of complying with governmentally mandated environmental programs  
9 and standards, costs of new nuclear power plants, and costs associated with encouraging  
10 energy conservation.

11  
12 Q. Are you recommending any additional incentive mechanisms at this time?

13 A. No. If the Commission believes that at some point incentives are necessary and  
14 appropriate, then the specific mechanism can be developed, in accordance with the  
15 FEECA statutes, in a separate proceeding, but not at this time.

16  
17 The FEECA statutes state that the Commission may authorize performance incentives for  
18 those utilities that meet or exceed their annual targets and enforce penalties for those that  
19 do not. The proposed incentive structures are an additional return on investment of up to  
20 50-basis points for saving over 20 percent of the annual load growth through energy  
21 efficiency and conservation measures. It is my recommendation that the Commission  
22 utilize its authority in this matter to further develop a performance-based incentive  
23 structure - comprised of both rewards and penalties - as a way to incite willing and  
24 successful utility participation in energy efficiency programs. However, the record in this  
25

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1 proceeding does not contain any discussion of the need for a performance incentive or  
2 penalty or any analysis of how it should be structured. At this time, I recommend that  
3 issues relating to this topic be addressed in a future proceeding when the necessary  
4 analysis has been done and all interested stakeholders can participate.

5 13.0 EFFICIENCY INVESTMENTS ACROSS GENERATION TRANSMISSION AND  
6 DISTRIBUTION

7 Q. Do you have any recommendations regarding how the Commission should address  
8 efficiency investments across generation, transmission, and distribution facilities as stated  
9 in Section 366.82(2), F.S.?

10 A. The final charge of Section 366.82(2), F.S., is a bit different from traditional conservation  
11 measures. Efficiency investments in generation, transmission, and distribution result in  
12 savings of fuel (BTUs), increased capability of facilities (kW), and savings of O&M  
13 expenditures, not reductions in kW or kWhs. If the Commission were to consider  
14 investments in generation, transmission, or distribution efficiency improvements as part  
15 of the DSM goals proceeding, one would first have to establish kW and kWh equivalent  
16 values for each improvement. In the alternative, the Commission could set separate goals  
17 for say a percentage improvement to be obtained in each category. However, since the  
18 utilities have not performed a technical potential analysis of the generation, transmission,  
19 or distribution improvements available, such goals would be arbitrary. At this time, I  
20 recommend that all issues relating to efficiency investments across generation,  
21 transmission, and distribution facilities be handled in a separate, future proceeding.

22 14.0 ENERGY AUDITS AND GOALS

23 Q. Do you recommend that additional goals be set for energy audits?

24 A. No.

25

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1 Q. Why are separate energy audit goals unnecessary at this time?

2 A. Currently, the seven FEECA utilities are mandated to offer free or nominal energy audits  
3 to all of their customers. As long as the FEECA utilities continue to actively market this  
4 service and fulfill all of the audit requests, there is no need to set additional goals for this  
5 service.

6  
7 Q. What are your recommendations on counting the savings resulting from these energy  
8 audits?

9 A. I recommend that savings not be counted unless an action is taken either by the  
10 auditor/utility or the customer themselves. For example, if the auditor installs three CFLs  
11 while performing the audit, then the savings attributed to the installation of the CFLs may  
12 be counted towards the utility's energy saving efforts. Savings can also be counted if the  
13 customers take action. However, the savings associated with the customer-installed  
14 efficiency measures should be counted towards the savings of the particular program  
15 through which they obtained the measure. In other words, if the auditor recommends that  
16 a customer install a high-efficiency appliance, and the customer heeds the advice, the  
17 savings associated with the high-efficiency appliance should be counted as savings  
18 associated with the utility's high efficiency appliance program and not the energy audit  
19 service.

20 15.0 DEMAND-SIDE RENEWABLE ENERGY RESOURCES RECOMMENDATIONS

21 Q. What changes to the FEECA statute did the Florida Legislature make in the 2008  
22 legislative session regarding the Commission's ability to encourage the development of  
23 demand-side renewable energy resources?

24 A. Section 366.82(2), F.S., was amended to allow the Commission authority over adopting  
25

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1 appropriate goals for increasing the development of demand-side renewable energy  
2 resources.

3  
4 Q. How are demand-side renewable energy resources defined?

5 A. Section 366.82(1)(b), F.S., defines demand-side renewable energy as “a system located  
6 on a customer’s premises generating thermal or electric energy using Florida renewable  
7 energy resources and primarily intended to offset all or a part of the customer’s electricity  
8 requirements provided such system does not exceed 2 megawatts.”

9  
10 Q. Do you believe that the revisions to the FEECA statutes allow the Commission to set  
11 separate goals for demand-side renewable energy systems?

12 A. Yes, I think the legislation clearly requires the Commission to focus some specific  
13 attention on demand-side renewable energy resources as part of its goal setting process.  
14 Solar water heating and solar photovoltaic (PV) are the two principal demand-side  
15 renewable technologies with the most potential, although solar water heating appears to  
16 be a more established technology and is currently closer to becoming cost-effective for  
17 both individuals and utility programs. If the FEECA utilities’ proposed kW and kWh  
18 goals include cost-effective demand-side renewable energy measures, such as solar water  
19 heaters and residential and commercial solar PV systems, then the goals would encourage  
20 the development of these types of facilities and separate goals for renewable energy  
21 systems may not be necessary

22  
23 However, if the proposed kW and kWh goals do not include demand-side renewable  
24 energy resource measures because they are not cost-effective, then the Commission  
25

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1 should consider setting separate goals to encourage the development of these renewable  
2 resources utilizing a-cost cap.

3  
4 Q. After reviewing the FEECA utilities' testimony with regard to demand-side renewable  
5 energy systems, what do you recommend?

6 A. The demand-side renewable measures such as solar water heating and solar PV did not  
7 pass the cost-effectiveness tests for any utility. However, Mr. John Masiello, witness for  
8 PEF, states in his direct testimony that PEF intends to file for Commission approval  
9 enhancements to an existing solar program and new solar programs for residential and  
10 commercial customers. The programs proposed by Mr. Masiello would have the effect of  
11 encouraging the installation of solar technologies by: (1) improving the financial  
12 viability of solar for potential participants; (2) complementing existing federal and state  
13 rebates and incentives; and (3) protecting PEF's ratepayers by limiting annual  
14 participation.

15  
16 The Commission can satisfy the statutory requirement to encourage the development of  
17 demand-side renewable systems by requiring each FEECA IOU to establish demand-side  
18 renewable programs and recover a limited amount annually through the Energy  
19 Conservation Cost Recovery (ECCR) clause. These programs should target solar thermal  
20 and solar PV measures that were not found to be cost-effective at this time. The demand-  
21 side renewable programs should be designated as research and development programs  
22 (R&D) in order to allow for recovery through the ECCR clause. However, because the  
23 measures included in these programs were not found to be cost-effective and were  
24 excluded from the development of numeric goals, the energy and demand savings from  
25

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1 these R&D programs should not count towards FEECA IOUs' numeric goals.

2  
3 Q. Why do you recommend ratepayer support for demand-side renewable systems that have  
4 not been found to be cost-effective?

5 A. It is important that research and development continue for solar thermal and solar PV  
6 systems because of their potential for more efficient energy production, the  
7 environmental benefits, and the conservation of non-renewable petroleum fuels. By  
8 continuing to provide some level of financial support for these emerging technologies,  
9 costs should decrease over time. If fiscal support for the development of solar  
10 technologies is restricted, then research and development of these technologies may be  
11 stymied.

12  
13 Q. What amount of funding do you recommend that each IOU commit to the renewable  
14 R&D programs?

15 A. The Commission should authorize annual recovery through the ECCR clause for  
16 demand-side renewable programs equal to 10 percent of each IOU's five-year average of  
17 ECCR expenses for 2004-2008. Similar to the proposal of Mr. Masiello, 10 percent of  
18 each IOUs five-year average of ECCR expenses would provide the IOUs with flexibility  
19 to design programs that will complement existing incentives and rebates in order to  
20 maximize participation, and provide ratepayer protection by limiting annual expenditures.  
21 The following table illustrates the dollar amount that each IOU would dedicate to  
22 demand-side renewable programs under my proposal:

**Table 6: Recommended Expenditures for Demand-Side Renewable R&D Programs**

UTILITY	GDS Recommended Annual Expenditures
FPL	\$15,536,870
PEF	\$6,467,592
TECO	\$1,531,018
Gulf	\$900,338
FPUC	\$47,233

I recommend that this dollar amount remain constant each year until new conservation goals are established in five years. At that time, the need for and the design of the overall program would be reevaluated. The Commission may, of course, wish to choose a different amount to dedicate each year to demand-side renewable programs. Exhibit RFS-22 provides the dollar amounts under the scenarios of two percent, five percent, and 10 percent of the five-year average of ECCR expenditures. Exhibit RFS-23 illustrates the impact of these scenarios on the five-year average ECCR factor for each IOU.

Q. How should the funds be used in the renewable R&D programs?

A. The funds should be used as one-time rebates for demand-side renewable energy system. The specific programs established by the utilities should be structured to supplement existing programs offered by the Florida Energy and Climate Commission (FECC) and the federal government through tax incentives. Currently, the FECC offers rebates for solar water heating installations of \$500 for residential systems, and commercial

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 customers may receive \$15 per 1,000 Btu up to a maximum of \$5,000. Rebates for solar  
2 photovoltaic installations are offered at \$4 per watt with a maximum rebate of \$20,000  
3 for residential customers and \$100,000 for commercial customers. The FECC also offers  
4 \$100 for solar swimming pool heating systems. The federal government offers a 30  
5 percent tax credit for residential solar electric installations. The demand-side renewable  
6 utility programs would, in essence, be used to "sweeten the pot" for customers in order to  
7 further encourage the installation of demand-side renewable systems.

8  
9 Q. What are you recommending for the FEECA municipal and cooperative utilities in terms  
10 of renewable R&D programs?

11 A. The Commission does not have ratemaking jurisdiction over the municipal and rural  
12 electric cooperative utilities; however, it does have authority to approve conservation  
13 goals pursuant to the FEECA statutes. Given this FEECA authority, the Commission  
14 should direct JEA and OUC to implement an R&D program to encourage demand-side  
15 renewable systems similar to the program outlined above for the IOUs. These utilities  
16 are subject to the same FEECA statutes as the IOUs and should be developing programs  
17 to encourage demand-side renewable system. Further, their customers are eligible for the  
18 same rebates from the FECC and federal tax incentives. They should, likewise, have the  
19 same additional incentive that would be applicable to the customers of the IOUs.

20 16.0 SUMMARY OF TESTIMONY

21 Q. Please summarize your testimony.

22 A. After an extensive review of the FEECA statutes and the methodologies used by the  
23 utilities to conduct the technical, economic, and potential studies used to develop their  
24 proposed goals, I have concluded that the proposed goals by each utility are overly  
25

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN and CAROLINE GUIDRY

1 conservative and therefore do not satisfy the intent of the FEECA legislation which  
2 describes goals and "aggressive and achievable." My final conclusions regarding the  
3 process used by the FEECA utilities to develop their goals are summarized below:

- 4 • The technical potential basic methodology is sound in that there are no errors in  
5 the calculations developed by Itron.
- 6 • Several policy and methodology decisions made by the FEECA utilities have  
7 contributed to the overly conservative estimates of technical, economic, and  
8 achievable potential.
- 9 • The RIM Test should no longer be used as a cost-effectiveness test in Florida  
10 because it is not consistent with the intent of the amended FEECA statute. The  
11 use of the RIM Test has contributed to three FEECA utilities setting goals of  
12 "zero" savings from energy efficiency programs over the next decade. This  
13 clearly contrary to the amended FEECA statute.
- 14 • Estimates of achievable potential provided by the utilities are consistently lower  
15 than achievable potential estimates developed by other utilities and non-profit  
16 organizations in the Southeast (based on achievable potential as a percent of kWh  
17 sales).

18 For all the reasons set forth in this testimony, I recommend that the Commission adopt  
19 the goals that GDS developed and presented in the testimony and exhibits attached for  
20 each of the FEECA utilities.

21 Q. Does this conclude your testimony?

22 A. Yes, it does.

23

24

25

## BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Commission review of numeric conservation goals (Florida Power & Light Company).	DOCKET NO. 080407-EG
In re: Commission review of numeric conservation goals (Progress Energy Florida, Inc.).	DOCKET NO. 080408-EG
In re: Commission review of numeric conservation goals (Tampa Electric Company).	DOCKET NO. 080409-EG
In re: Commission review of numeric conservation goals (Gulf Power Company).	DOCKET NO. 080410-EG
In re: Commission review of numeric conservation goals (Florida Public Utilities Company).	DOCKET NO. 080411-EG
In re: Commission review of numeric conservation goals (Orlando Utilities Commission).	DOCKET NO. 080412-EG
In re: Commission review of numeric conservation goals (JEA).	DOCKET NO. 080413-EG
	DATED: AUGUST 7, 2009

ERRATA SHEET**DIRECT TESTIMONY OF RICHARD F. SPELLMAN AND CAROLINE GUIDRY**

<u>Page</u>	<u>Line</u>	<u>Correction</u>							
8	5-6	Replace the values in Table 1 for FPL with the following values: <table border="1" data-bbox="393 1534 1434 1572"> <tr> <td>FPL</td> <td>669.4</td> <td>1,172.3</td> <td>2,927.1</td> <td>3.3%</td> <td>5.2%</td> <td>2.7%</td> </tr> </table>	FPL	669.4	1,172.3	2,927.1	3.3%	5.2%	2.7%
FPL	669.4	1,172.3	2,927.1	3.3%	5.2%	2.7%			
55	21	Insert "National" after "Berkeley"							
57	4	Strike "Exhibit RFS-15" and insert "Exhibit RFS-14"							
59	2	Strike "by 31 percent"							
63	19-20	Strike "Exhibits RFS-18 and RFS-19" and insert "Exhibit RFS-17"							

## ERRATA SHEET

DIRECT TESTIMONY OF RICHARD F. SPELLMAN AND CAROLINE GUIDRY

DOCKET NOS. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG,  
080413-EG

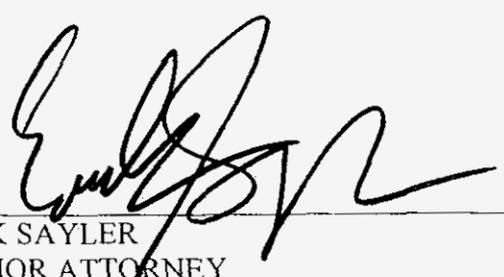
PAGE 2

Replace the values in Table 4 for FPL with the following values:

68 17

FPL	669.4	1,172.3	2,927.1
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70 7

Strike "clause" and insert "clauses";  
and strike "this clause" and insert "these clauses"Respectfully submitted this 7<sup>th</sup> day of August, 2009.

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## BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Commission review of numeric conservation goals (Florida Power & Light Company).	DOCKET NO. 080407-EG
In re: Commission review of numeric conservation goals (Progress Energy Florida, Inc.).	DOCKET NO. 080408-EG
In re: Commission review of numeric conservation goals (Tampa Electric Company).	DOCKET NO. 080409-EG
In re: Commission review of numeric conservation goals (Gulf Power Company).	DOCKET NO. 080410-EG
In re: Commission review of numeric conservation goals (Florida Public Utilities Company).	DOCKET NO. 080411-EG
In re: Commission review of numeric conservation goals (Orlando Utilities Commission).	DOCKET NO. 080412-EG
In re: Commission review of numeric conservation goals (JEA).	DOCKET NO. 080413-EG
	DATED: AUGUST 12, 2009

SECOND ERRATA SHEET

## DIRECT TESTIMONY OF RICHARD F. SPELLMAN AND CAROLINE GUIDRY

<u>Page</u>	<u>Lines</u>	<u>Testimony Correction</u>
8	1-9	Strike " <b>Table 1: GDS Proposed Energy Efficiency Goals for 2014</b> " and replace with " <b>Table 1: GDS Proposed Energy Efficiency Goals for 2014 (Revised – August 10, 2009)</b> " – see below

## SECOND ERRATA SHEET

DIRECT TESTIMONY OF RICHARD F. SPELLMAN AND CAROLINE GUIDRY

DOCKET NOS. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG,  
080413-EG

PAGE 2

**Table 1: GDS Proposed Energy Efficiency Goals for 2014  
(Revised – August 10, 2009)**

Utility	Winter MW Savings (2014)	Summer MW Savings (2014)	Cumulative Annual GWh Savings (2014)	2014 Winter MW Savings Goal as percent of 2014 Forecast System Peak	2014 Summer MW Savings Goal as Percent of 2014 Forecast System Peak	2014 GWH Savings Goal as Percent of 2014 Forecast Annual GWh Sales
FPL	392.0	775.3	2,038.9	1.9%	3.5%	1.9%
PEF	313.1	299.1	998.7	2.9%	2.9%	2.3%
TECO	88.1	132.6	368.9	1.7%	2.7%	1.7%
Gulf	46.8	67.7	254.7	1.5%	2.1%	1.7%
JEA	8.6	72.4	252.4	0.3%	2.3%	1.7%
OUC	1.9	31.1	100.2	0.2%	2.3%	1.5%
FPUC	0.8	3.2	14.0	0.4%	1.7%	1.5%

<u>Page</u>	<u>Lines</u>	<u>Testimony Correction</u>
63	15-24	Strike "Table 4: GDS Recommended Goals for 2014" and replace with "Table 4: GDS Recommended Goals for 2014 (Revised – August 10, 2009)" – see below

**Table 4: GDS Recommended Goals for 2014  
(Revised – August 10, 2009)**

Utility	Winter MW Savings (2014)	Summer MW Savings (2014)	Cumulative Annual GWh Savings (2014)
FPL	392.0	775.3	2,038.9
PEF	313.1	299.1	998.7
TECO	88.1	132.6	368.9
Gulf	46.8	67.7	254.7
JEA	8.6	72.4	252.4
OUC	1.9	31.1	100.2
FPUC	0.8	3.2	14.0

## SECOND ERRATA SHEET

DIRECT TESTIMONY OF RICHARD F. SPELLMAN AND CAROLINE GUIDRY

DOCKET NOS. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG,  
080413-EG

PAGE 3

<u>Exhibit</u>	<u>Pages</u>	<u>Exhibit Correction</u>
RFS-20	1-7 of 7	Strike " <b>Exhibit RFS-20</b> " in its entirety and replace with " <b>Exhibit RFS-20 (Revised – August 10, 2009)</b> " – see Attachment A
RFS-21	1-7 of 7	Strike " <b>Exhibit RFS-21</b> " in its entirety and replace with " <b>Exhibit RFS-21 (Revised – August 10, 2009)</b> " – see Attachment B

Respectfully submitted this 12<sup>th</sup> day of August, 2009.



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1 BY MR. SAYLER:

2 Q. All right. Mr. Spellman, have you prepared a  
3 summary of your testimony?

4 A. Yes, I have.

5 CHAIRMAN CARTER: Have you, have you explained  
6 to Mr. Spellman the --

7 MR. SAYLER: Yes, sir. He is aware of the  
8 green means go, the red means stop, and I believe he's  
9 timed his, his opening statement appropriately.

10 CHAIRMAN CARTER: The amber means, the amber  
11 means you'll have two minutes and then -- okay?

12 MR. SPELLMAN: Okay. Good morning. Good  
13 morning, Chairman Carter and Commissioners. My name is  
14 Richard Spellman, and I'm the President of GDS  
15 Associates. Thank you for allowing Ms. Guidry and  
16 myself to testify before you on this very important  
17 matter.

18 As has been mentioned, GDS Associates was  
19 hired by the Public Service Commission staff to analyze  
20 the FEECA utilities' technical, economic and achievable  
21 potential studies, to provide an independent  
22 professional opinion on the appropriate  
23 cost-effectiveness test that should be used to establish  
24 conservation goals in this proceeding, and to develop  
25 specific energy efficiency goals based on our analysis.

1 Further, we were asked to opine on certain policy  
2 recommendations relating to the implementation of  
3 changes to the FEECA statutes.

4 Ms. Guidry and I have filed panel testimony.  
5 Ms. Guidry's responsibility is limited to cosponsoring  
6 the portion of the testimony addressing our technical  
7 review and analysis of the energy efficiency technical,  
8 economic and achievable potential estimates developed by  
9 the seven FEECA utilities. This is contained in Part 5  
10 of the testimony.

11 I have the responsibility for all  
12 recommendations and conclusions relating to the  
13 selection of cost-effectiveness tests for Florida, and  
14 for the recommendations for energy efficiency goals for  
15 the FEECA utilities and other policy recommendations.

16 In my testimony I recommend that the goals for  
17 each utility should be based upon the use of the E-TRC  
18 Test and Participant Test as the primary two  
19 cost-effectiveness tests.

20 The E-TRC Test is appropriate in this  
21 proceeding because it is a test of economic efficiency  
22 and it puts supply-side and demand-side resources on a  
23 level playing field.

24 In developing our recommended goals, we  
25 started with the utilities' potential studies and

1 adjusted them for certain deficiencies we found. The  
2 most significant adjustment was to add back the measures  
3 for the residential and small commercial sectors which  
4 were screened out by the utilities because they have a  
5 payback to the participant before incentives of two  
6 years or less.

7 We did not make this adjustment for the large  
8 commercial industrial sector. My research has shown  
9 that residential and small commercial customers will not  
10 install many of these measures in the absence of a  
11 well-designed energy efficiency program. This  
12 conclusion is supported by the low market saturation  
13 data contained in the utility's technical potential  
14 study reports.

15 We calculated goals which are certainly  
16 greater than those proposed by the FEECA utilities.  
17 However, I believe these goals are achievable and  
18 certainly in line with the conservation goals set for  
19 similar utilities across the nation. The Florida FEECA  
20 utilities have been successful in the past in achieving  
21 demand savings from load management programs. However,  
22 more could and should be done in the area of energy  
23 efficiency program savings. In fact, none of the FEECA  
24 utilities have scored in the top 100 utilities in this  
25 area for the year 2007.

1           Recognizing that these calculated goals  
2 represent a significant change for the FEECA utilities,  
3 I am recommending that for the first five years the  
4 conservation goals be set at 50 percent of the goals  
5 calculated by GDS. This transition period is reasonable  
6 and will afford the utilities adequate time to plan,  
7 design and implement new, more comprehensive programs  
8 that support the higher level of goals. The end of this  
9 five-year transition plan coincides with the next  
10 five-year goal setting proceeding.

11           I believe these recommended transition goals  
12 are aggressive but yet reasonably achievable without a  
13 significant rate impact on the customers. My findings  
14 are based on the results of reports of national studies  
15 which conclude that the long-term rate impacts from  
16 energy efficiency programs are slight. In fact, one  
17 study indicates that the rate impact is less than  
18 1 percent over a ten-year period for programs that would  
19 reduce annual kilowatt hour sales 1 percent per year  
20 each year over that time frame. My recommended savings  
21 goals are less than 1 percent per year for all of the  
22 FEECA utilities.

23           Exhibit 21 passed out today provides my  
24 recommended transition goals and the proposed goals for  
25 each utility. However, I do suggest in my testimony the

1 Commission could limit the rate impacts of energy  
2 efficiency by placing a rate impact cap on a utility's  
3 portfolio of energy efficiency programs. Such a cap  
4 could be set at 1 or 2 percent over current rates,  
5 although the appropriate rate impact cap would be a  
6 policy decision for the Commission.

7 I also recommend that the Commission should  
8 establish a research and development program in order to  
9 further encourage the development of demand-side  
10 renewable systems. My proposal is to authorize annual  
11 recovery of some amount through the energy conservation  
12 cost recovery clause designated for demand-side  
13 renewable programs. I suggest that this amount would be  
14 10 percent of each IOU's five-year average of ECCR  
15 expenses. However, I provide in my testimony on  
16 Exhibit 22 what the annual dollar amount would be for  
17 each IOU if 2 percent, 5 percent or 10 percent were  
18 dedicated to demand-side renewable programs.

19 That concludes my summary.

20 **CHAIRMAN CARTER:** Thank you. Good timing.

21 **MR. SAYLER:** Mr. Chairman, the witnesses are  
22 tendered for cross.

23 **CHAIRMAN CARTER:** Okay.

24 You're ready? You may proceed.

25 **MR. GUYTON:** Mr. Chairman, we have several

1 documents that we're going to ask to be identified.  
2 We're just going to go ahead and pass them all out now  
3 for ease of reference.

4 **CHAIRMAN CARTER:** Okay. And we'll identify  
5 them as you make reference to them. We'll do it at that  
6 point in time. It'll make for an easier flow for us.  
7 Thank you.

8 Don't forget to leave one there for  
9 Commissioner Argenziano. Leave one here, please, ma'am.

10 **COMMISSIONER ARGENZIANO:** I can't hear you.

11 **CHAIRMAN CARTER:** I was telling her to make  
12 sure that she left one at your desk for you,  
13 Commissioner.

14 **COMMISSIONER ARGENZIANO:** Oh, thank you.

15 **CHAIRMAN CARTER:** Sometimes when they're  
16 passing out, Commissioner, they get, they get on a roll  
17 and they keep going, like on jet skis. I have to slow  
18 them down from time to time.

19 **CROSS EXAMINATION**

20 **BY MR. GUYTON:**

21 **Q.** Mr. Spellman, Ms. Guidry, welcome back to  
22 Tallahassee.

23 **A.** (By Mr. Spellman) Thank you very much.

24 **Q.** I'm Charlie Guyton. I represent Florida Power  
25 & Light Company. You may recall we had an earlier

1 conversation at deposition.

2 A. Correct.

3 Q. Do you have your deposition with you at the  
4 table there?

5 A. Yes, we do.

6 Q. Okay. All right. I'm not going to refer to  
7 it right now, but I just want to make sure that you have  
8 both your testimony and your deposition available to  
9 you.

10 Mr. Spellman, you filed 78 pages of testimony  
11 in this case; correct?

12 A. Correct.

13 Q. And out of those 78 pages, a little less than  
14 two pages describe how you developed your alternative  
15 DSM goals proposal; correct?

16 A. Yes.

17 Q. And those two pages begin at Page 64, Line 13,  
18 and they go through Page 66, Line 10; correct?

19 A. Yes.

20 Q. And then you have an exhibit, your Exhibit  
21 RFS-20 that shows each one of the four steps that you  
22 set forth on Pages 64 and 65 to develop your revised  
23 kilowatt hour or gigawatt hour goals; correct?

24 A. Yes.

25 Q. And just so that we kind of know the order of

1 magnitude, on your RFS-20 in this adjustment you, you  
2 started with FPL's ten-year gigawatt hour goals of 878  
3 gigawatt hours and you suggested that it ought to be  
4 adjusted upward to 9,180 gigawatt hours of achievable  
5 potential.

6 **A.** That's correct. And that would be before the  
7 transition period adjustment.

8 **Q.** All right. And you did that in, in four  
9 steps. And what I'd like to do is take you through each  
10 one of those steps.

11 **MR. GUYTON:** Mr. Chairman, the first document  
12 that we've handed out is, is multiple copies of Exhibit  
13 RFS-20, Page 1. It's this spreadsheet. We'd ask that  
14 that be identified.

15 **CHAIRMAN CARTER:** Commissioners, for your  
16 records, that would be Exhibit Number 172.

17 Title?

18 **MR. GUYTON:** RFS-20 As Revised.

19 (Exhibit 172 marked for identification.)

20 **CHAIRMAN CARTER:** Okay. You may proceed.

21 **BY MR. GUYTON:**

22 **Q.** Mr. Spellman, you've been handed what has been  
23 identified as Exhibit 172, and it consists of four  
24 pages. Is, is Page 1 of Exhibit 172 your original  
25 Exhibit RFS-20?

1           **A.**   Give me a moment.  I'm just double-checking  
2 here.

3           **Q.**   Yes, sir.

4           **A.**   Yes.

5           **Q.**   And that's the exhibit that you swore to as  
6 being true and correct in your deposition; correct?

7           **A.**   Correct.

8           **Q.**   Now is Page 2 of Exhibit 172 your first  
9 revision to RFS-20 which you submitted after your  
10 deposition?

11          **A.**   Yes.

12          **Q.**   Okay.  And is Page 3 of Exhibit 172 your  
13 second revision of RFS-20 that was submitted to the  
14 parties earlier this week on the first day of hearing?

15          **A.**   Yes.

16          **Q.**   And is Page 4 of RFS-20 or of Exhibit 172, is  
17 this a correct copy of what you've sworn to today as  
18 being your RFS-20?

19          **A.**   Give me -- give us a moment.

20          **Q.**   Yes, sir.

21          **A.**   According to our comparison, if we look at  
22 what was filed as our second errata sheet and if we go  
23 to Page 1 of 7, our numbers are slightly different from  
24 what's shown on your fourth page.

25          **Q.**   So I don't have your final here.  I have your

1 third revision, but I don't have your fourth revision.  
2 Is that accurate?

3 **A.** Okay. The fourth page is our second errata,  
4 the fourth page of what you're calling Exhibit --

5 **Q.** 172?

6 **A.** -- 172 is what was handed out this morning.

7 **Q.** Okay. Good.

8 **A.** And the third page was never filed to the best  
9 of my knowledge.

10 **Q.** Okay.

11 **MR. SAYLER:** If I may speak, Mr. Chairman.

12 **CHAIRMAN CARTER:** You're recognized.

13 **MR. SAYLER:** Over the weekend the witness  
14 found a slight calculation error, brought it to our  
15 attention, and proposed an errata sheet. And in an  
16 effort to speedily provide that revised information to  
17 the parties, Monday night we provided a revised Exhibit  
18 21, which is Page 3 of 4 in the handout in Exhibit 172  
19 which FP&L has provided.

20 And then that evening while I was preparing to  
21 get everything together to eventually file the second  
22 errata sheet, it was brought to my attention that there  
23 had been a calculation error in that Exhibit 3 of 4, and  
24 then I was able to, from the parties provided -- or the  
25 witnesses provided to me the corrected final version,

1 which is Page 4 of 4 and which is also in the errata  
2 sheet which was filed today. And I e-mailed that out to  
3 the parties about 8:30 p.m. Monday night and then  
4 provided a hard copy Tuesday morning. And then  
5 Wednesday morning caused to be filed with the Clerk's  
6 Office the witnesses' second errata sheet. So hopefully  
7 that clarifies kind of the migration of this particular  
8 exhibit.

9 **CHAIRMAN CARTER:** Does that meet with  
10 everyone's understanding, all the parties?

11 **MR. GUYTON:** Yes. Thank you.

12 **CHAIRMAN CARTER:** Okay. You may proceed,  
13 Mr. Guyton.

14 **BY MR. GUYTON:**

15 **Q.** Mr. Spellman, I've asked that 172 be prepared  
16 and handed out because it may just be easier, rather  
17 than trying to ask you to thumb back and forth between  
18 your testimony and your exhibits, just to work off this,  
19 this sheet. Feel free to, if I misdirect you to, to an  
20 exhibit, feel free to correct me.

21 But I want to go through the Commission -- for  
22 the Commission's benefit your four steps of your  
23 adjustment.

24 **A.** Okay.

25 **Q.** Step 1 of your goals estimate was to set forth

1 Itron's quantification of its E-TRC achievable potential  
2 for each utility; correct?

3 **A.** Correct. With the clarification that the case  
4 we used was the E-TRC high case, and in the spreadsheets  
5 that we got the tab was labeled maximum achievable on  
6 the spreadsheets we got from Itron.

7 **Q.** Okay. But when you attempted to do that on  
8 your original RFS-20, you misstated the value that Itron  
9 reported from my client, Florida Power & Light Company,  
10 and you provided 2999.1 gigawatt hours instead of  
11 2177.1; correct?

12 **A.** Correct.

13 **Q.** So right off the bat you overstated FPL's  
14 achievable potential under the Itron methodology by  
15 38 percent.

16 **A.** Right. And the reason for that was that  
17 the -- for all of the other FEECA utilities, the, the  
18 ETR -- or the E-TRC case and the goals matched, but for  
19 FPL my understanding was it didn't.

20 **Q.** All right. And you made a spreadsheet error  
21 in terms of bringing over the value that was reported  
22 both by Mr. Rufo and by Mr. Haney into your exhibit;  
23 correct?

24 **A.** For FPL only. Correct.

25 **Q.** All right. Now on that original spreadsheet

1 RFS-20, you also had an incorrect entry for Column 3,  
2 your Step 3, the market penetration for both the  
3 residential and commercial, did you not?

4 A. Well, maybe you can refresh my memory on that  
5 because --

6 Q. Sure. Sure. If you'd look at Page 1 of  
7 Exhibit 172.

8 A. Uh-huh.

9 Q. There you show a value for -- this is your  
10 original exhibit. You show a residential value of  
11 46.2 and a commercial industrial value for 83.7 under  
12 the column Step 3; correct?

13 A. Those -- well, that's correct. We do show  
14 those numbers. But that --

15 Q. And is that total 129.9 gigawatt hours?

16 A. Correct.

17 Q. Now if you go over to Page 4 of Exhibit 172,  
18 your exhibit now, now you show those values as being  
19 43.6 percent for residential and 4.1 percent for  
20 commercial; correct?

21 A. Okay. Which page?

22 Q. Page 4, your current exhibit.

23 A. And the percents you're referring to?

24 Q. Actually I'm referring to the values under  
25 Column 3. The residential value is now 43.6 percent --

1 43.6 gigawatt hours.

2 A. Oh, okay. That helps clarify.

3 Q. Yes. And the commercial industrial is  
4 4.1 gigawatt hours.

5 A. Correct.

6 Q. And would you accept, subject to check, that  
7 those add to 47.7 gigawatt hours?

8 A. Right. And I should explain here that that,  
9 that Step 3 that you've brought up, what we did was  
10 increase the penetration rates by 10 percent. So that  
11 if the E-TRC value changed for a utility, the market  
12 penetration correction would adjust as well.

13 Q. Okay.

14 A. So it wasn't -- we didn't change anything with  
15 the market penetration there. All we did was the --  
16 when we -- the correction was just 10 percent of the  
17 E-TRC gigawatt hours. So if the E-TRC gigawatt hours  
18 changed, the market penetration correction changed too.  
19 We didn't change any penetration rate there.

20 Q. Right. But because you had made this mistake  
21 in Step 1, it carried over to the mistake in Step 3?

22 A. Right. And I should explain. The -- I want  
23 to make it clear that we have accepted the results of  
24 the E-TRC maximum achievable potential study from all of  
25 the utilities. So we aren't -- we don't have a dispute

1 with that. That's where we start for our estimates for  
2 the goals. And so that we accept all of them, and what  
3 should have happened for every utility was we just  
4 transcribed the results from the Itron studies for the  
5 E-TRC case and put them into the spreadsheet, and for  
6 FP&L we had an error when we did that transfer of data.  
7 We have corrected that.

8 **Q.** And you've corrected that. But your original  
9 RFS-20 in your Step 3, you overstated the achievable  
10 potential in that adjustment by some 272 percent, did  
11 you not?

12 **A.** Subject to check.

13 **Q.** Okay. So right off the bat, the first two,  
14 two of your four steps you either overstated FPL's  
15 achievable potential by either 38 percent or  
16 272 percent.

17 **A.** Correct. But those are not significant and  
18 have not changed our results by a significant amount and  
19 it would not change our conclusions.

20 **Q.** All right. Well, let's look at your other,  
21 your other two steps. Now you've also made a change to  
22 Step 2, have you not?

23 **A.** Yes, we did.

24 **Q.** And in Step 2 you're adding back some but not  
25 all the measures that were screened out by the use of

1 the two-year payback criteria; correct?

2 A. Correct.

3 Q. Now after your deposition you found a  
4 spreadsheet error on the residential spreadsheet that  
5 quantified the values of the two-year payback measures;  
6 correct?

7 A. Correct.

8 Q. And in that error, when you meant to use a  
9 penetration rate for three or four residential measures  
10 of 60 percent, you used a penetration rate of 1,000  
11 percent, did you not?

12 A. The -- what I recall is that we had an  
13 opportunity to scour all of our spreadsheets, and what  
14 we found is that for, in one spreadsheet for, for the  
15 residential multifamily measures, I think it was for  
16 four measures, we had a sell (phonetic) reference area.  
17 So instead of referring to a penetration rate of  
18 60 percent, we had inadvertently referred to Year 10,  
19 which wasn't a penetration rate at all. And as soon as  
20 we found the error, we notified staff and corrected it.

21 Q. And the effect of that error was to increase  
22 the penetration rate to 1,000 percent, was it not?

23 A. Well, the effect of the error was to use a  
24 number of 10 instead of .6.

25 Q. Okay. And that correction alone reduced your

1 residential value from 8,033 gigawatt hours to 4,034  
2 gigawatt hours; correct?

3 A. Give me a moment to check that. The,  
4 certainly the ending point I guess is the 4,033. I'm  
5 assuming you're referring to Page 4 of Exhibit 172. The  
6 result there is 4,033 gigawatt hours.

7 Q. And Page 1 is your original exhibit, and it  
8 shows 8,033 for that same step; correct?

9 A. Correct.

10 Q. Okay. So you originally overstated the  
11 residential portion of your adjustment on Step 2 by  
12 100 percent.

13 A. I'd agree with that.

14 Q. Okay. Now, Mr. Spellman, that revised  
15 residential value in Step 2 of 4,034 gigawatt hours is  
16 still overstated, is it not?

17 A. I'm sorry. Can you repeat that question?

18 Q. Isn't the 4,033 gigawatt hour in your Step  
19 2 shown for the residential overstated?

20 A. If -- yes. And I would say it is because if  
21 we made a correction for the decay rate. We've learned  
22 during the process of the deposition that we had  
23 inadvertently used a decay rate that was too long. And  
24 if we updated the decay rates, the residential sector  
25 gigawatt hours listed in that column would come down.

1 We decided not to update that because that wasn't a  
2 formula error. That was a, I guess you'd call it a data  
3 issue, and we didn't feel it was appropriate to make  
4 that change after our testimony was filed. We felt  
5 that, you know, a formula correction was something that  
6 we did have to correct and we did have to notify all the  
7 parties.

8 We also -- but we did actually run the  
9 calculation to find out if we did correct the decay  
10 rate, this is a decay rate for housing to estimate how  
11 long homes in Florida will last, that the impact on the  
12 number would be very minor and insignificant, and we  
13 have those results. But we didn't, it does not change  
14 our conclusions and it does not significantly change the  
15 gigawatt hour number for residential.

16 Q. Let me make sure that the Commissioners  
17 understand what you're saying. You're aware as a result  
18 of your deposition that you had made another error in  
19 the spreadsheet and that you had used the wrong decay  
20 rate; correct?

21 A. Correct.

22 Q. And you ran the numbers to correct it, but you  
23 didn't provide that to the Commission.

24 A. That's correct.

25 Q. Okay. Now that's also overstated for -- that

1 value of 4,033 gigawatt hours is also overstated for  
2 another reason, is it not?

3 **A.** Give me a moment.

4 Not to my knowledge.

5 **Q.** Okay. When -- you used values out of the  
6 Itron achievable potential to develop the 4,033 gigawatt  
7 hour estimate for the measures that were excluded for  
8 the two-year payback; correct?

9 **A.** From the technical potential study. Correct.

10 **Q.** Yes. Now when Itron moved from its technical  
11 potential study to achievable potential estimates, it  
12 removed naturally occurring savings that were reflected  
13 in the technical potential values but are not reflected  
14 in the achievable potential values; correct?

15 **A.** Repeat that question.

16 **Q.** Sure. The technical potential savings in the  
17 Itron are gross values that include natural, naturally  
18 occurring, are they not?

19 **A.** Give me just a moment. Just a minute.

20 Let me answer it this way. What I understand  
21 is that in the technical potential study Itron included  
22 all the measures in their study, even if they had a  
23 payback of two years or less. When they went to the  
24 achievable, my understanding is they removed measures  
25 that had a payback of two years or less. So that's the

1 main difference -- my understanding is that's the main  
2 difference between the technical and the achievable, is  
3 that Itron removed measures that had a two-year payback  
4 or less to account for things that would happen anyway.

5 Q. I'm confident that you understand what I'm  
6 asking here. The values of the savings in the Itron  
7 technical potential included naturally occurring  
8 savings, did they not?

9 A. Well, they certainly included to the best of  
10 my knowledge what Itron and the collaborative considered  
11 were measures that would happen anyway in the absence of  
12 a program.

13 Q. Okay. And, and Itron refers to that as  
14 naturally occurring, does it not? You recall that, that  
15 statement by Mr. Rufo?

16 A. Well, unfortunately I don't. I did listen to  
17 Mr. Rufo's testimony.

18 Q. Okay. Fair enough. Do you have your  
19 deposition?

20 A. Yes, I do.

21 Q. Okay. Would you turn to Page 124, please.

22 A. Okay.

23 Q. And I asked you a question at Line 4, "That  
24 number that you quantified," and we're talking about the  
25 same number that we're talking about here, the 4033.8

1 number for residential, I asked you the question, "That  
2 number that you quantified, the value here doesn't  
3 include naturally occurring."

4 And what was your answer?

5 **A.** What I said was it would only include it if  
6 Itron had already reflected that in their estimate of  
7 technical potential savings.

8 **Q.** And then I asked you the question, "What's  
9 your understanding of the technical potential savings  
10 had naturally occurring been removed?"

11 What was your answer?

12 **A.** It says, "Well, according to this, the  
13 measures that had already been done have been removed,  
14 so the ones that have already been done and removed, I  
15 guess the question is going forward, I don't believe  
16 that Itron removed those from the technical potential."

17 **Q.** Now have you changed your belief since your  
18 deposition that you don't believe that naturally  
19 occurring was removed from the technical potential  
20 values by Itron?

21 **A.** No. I think that what I've said is that, you  
22 know, based upon all the testimony I've heard, that the  
23 technical potential study included all of the measures  
24 and the achievable potential study removed ones that had  
25 the two-year payback or less. And that's consistent

1 with my deposition.

2 Q. Okay. And what's your understanding about  
3 whether the achievable potential numbers that are  
4 reported by Itron, whether they include or exclude  
5 naturally occurring savings? And if you don't recall,  
6 that's fine.

7 A. Well, my, my understanding is that the  
8 technical potential study included measures that would  
9 happen in the absence of a program, and that the  
10 achievable potential study, what the Collaborative  
11 decided to do was use the two-year payback rule to  
12 remove things that would happen anyway. And that's one  
13 of the major differences between the technical and the  
14 achievable.

15 Q. Let's look at your Step 4, if we can. Now  
16 this is not a step that you've corrected in any of your  
17 corrected exhibits; correct?

18 A. That we -- correct.

19 Q. Okay. Now if you would go back to Page 1 of  
20 RFS-20, and I guess that's Page 4 of Exhibit 172 that I  
21 handed out to you. There you make a two-step  
22 adjustment. You add back 158.1 gigawatt hours to the  
23 residential and 906.6 gigawatt hours to the commercial  
24 industrial; correct?

25 A. Correct.

1           **Q.**   A total of 1,065 in round numbers gigawatt  
2 hours.

3           **A.**   Subject to check.

4           **Q.**   Okay. Now the Commissioners don't have the  
5 benefit of your Excel spreadsheet here, so they don't  
6 know how you developed that. So let's kind of take them  
7 through that.

8                       Correct me if I'm wrong, but what you did was  
9 you took the numbers shown in the first column of  
10 Exhibit 172, Page 4 of 4, or your RFS-20, Page 1, of  
11 2,007 gigawatt hour sales for Florida Power & Light  
12 Company, 105,414 gigawatt hours, and you multiplied it  
13 by two different factors. One was .5 for residential  
14 and the other was .86 for commercial.

15           **A.**   Give us a second to pull up that spreadsheet.

16           **Q.**   Yes, sir. That's fine.

17           **A.**   Okay. We have the spreadsheet open.

18           **Q.**   Okay. And I'm going to ask you if you would  
19 look to the tabbed document that I handed out to you and  
20 see if that is an accurate hard copy of the spreadsheets  
21 that you're looking at now that underlie the calculation  
22 of the adjustment of those two factors.

23           **A.**   Yes, it is.

24                       **MR. GUYTON:** Okay. Mr. Chairman, we'd ask  
25 that this tabbed document be marked as exhibit next in

1 order. Exhibit 173, I believe.

2 **CHAIRMAN CARTER:** Okay. Commissioners, for  
3 the record that will be Exhibit Number 173.

4 Short title?

5 **MR. GUYTON:** Step 4 Work Papers.

6 **CHAIRMAN CARTER:** Step 4 Work Papers.

7 Excellent. You may proceed.

8 (Exhibit 173 marked for identification.)

9 **BY MR. GUYTON:**

10 **Q.** Now you have a copy of what's been identified  
11 as Exhibit 173; correct?

12 **A.** Yes, I do.

13 **Q.** Okay. Now you have a bit of an advantage over  
14 the Commissioners because you have the Excel spreadsheet  
15 and they don't, but I'm going to, I'm going to try to  
16 frame questions for you and them at the same time. So  
17 bear me with a little bit, if you would.

18 What I've labeled as Tab 1, that is the  
19 calculation of the two factors that you applied to total  
20 2007 gigawatt hour sales; correct?

21 **A.** Correct. There were specific factors for each  
22 FEECA utility.

23 **Q.** And the factor for FPL on residential was .15?  
24 That's shown on the last column.

25 **A.** Correct.

1           **Q.**    And the factor for commercial industrial for  
2 FPL was .86, and that's shown in the last column.

3           **A.**    Correct.

4           **Q.**    Okay.  Now those factors don't appear anywhere  
5 in your testimony or exhibits, do they?

6           **A.**    Correct.

7           **Q.**    They're only shown on your work papers.

8           **A.**    Correct.

9           **Q.**    Okay.  Now FPL requested these work papers in  
10 discovery, did it not?

11          **A.**    Correct.

12          **Q.**    Okay.  And when you originally responded to  
13 discovery, you asked for several additional days to  
14 provide your work papers instead of filing them the same  
15 day as your testimony, and FPL agreed to that, did they  
16 not?

17          **A.**    Subject to check, yes.

18          **Q.**    Okay.  And then when you provided your work  
19 papers, you didn't include this work paper, did you?

20          **A.**    Correct.

21          **Q.**    And then you were asked to bring your work  
22 papers to deposition and you didn't bring your work  
23 papers to deposition, this paper, work paper to  
24 deposition either, did you?

25          **A.**    We had this work paper with us on our

1 computers at the deposition.

2 Q. But when I asked you for it, you didn't state  
3 that you had it. You stated that you would have to  
4 supplement the response, did you not?

5 A. Maybe you can show me in the deposition what  
6 we said.

7 Q. In the interest of time, I'll just -- the  
8 deposition is in the record. We'll just proceed.

9 A. Yeah. Now what I recall is we, we had our  
10 computers with us. The work paper wasn't on our hard  
11 drive, it was on our drive back in Marietta, you know,  
12 so we'd have to get onto the Internet, and we weren't  
13 able to do that, you know, expeditiously at the  
14 deposition. But my understanding is since that time it  
15 has been provided and you have it and you have provided  
16 it as an exhibit.

17 Q. So it was provided subsequently. I don't, I  
18 don't want to give the Commission the wrong impression.  
19 It was provided 11 days late on the third try.

20 A. I don't know how many days. But I think the  
21 good news is that we actually got the worksheet. And we  
22 never got the models from Itron. We never -- we asked  
23 for them and weren't provided to us. And I think we  
24 bent over backwards to provide all of the FEECA  
25 utilities any work paper that they asked us for.

1           **Q.** Well, let's, let's clarify that right now.  
2 You asked for the models, and those models were made  
3 available for you in Tallahassee because they were  
4 proprietary. And you chose not to come down to  
5 Tallahassee and look at them; isn't that correct?

6           **A.** No. We did come down to Tallahassee and look  
7 at them.

8           **Q.** And -- okay. So they were made available to  
9 you.

10          **A.** Right. We got see them for about six hours,  
11 and these were models, a very complicated model for  
12 seven utilities. We had to do all of our work for the  
13 Commission without the benefit of having those models  
14 available to us. But that's beside the point.

15          **Q.** Well, you raised it. I just want to make sure  
16 the Commission understands the models were provided to  
17 you.

18          **A.** Actually we never got them. We were allowed  
19 to see them on the computers of the law firm that we  
20 visited for six hours. But we never got to take these  
21 very complex and comprehensive models and probe them and  
22 test them and work with them the way that the FEECA  
23 utilities have had all of our work sheets for many days.

24          **Q.** Okay. Mr. Spellman, you chose to come down  
25 here and limit your examination to six hours. Those

1 models were available for you to put inputs into and to  
2 use. You chose not to. Isn't that correct?

3 **A.** We --

4 **MR. SAYLER:** Objection. Asked and answered.

5 **MR. GUYTON:** I'll move on.

6 **BY MR. GUYTON:**

7 **Q.** Let's look at these, at this spreadsheet.  
8 We're looking at Page 1 of the spreadsheet. Am I  
9 correct that if any of the values on the columns to the  
10 left of the final column are incorrect, then the value  
11 in the final column that you used is incorrect?

12 **A.** Yes.

13 **Q.** If you would look at what's Column G in what's  
14 been identified as Exhibit 173, Page 1, that value of  
15 .77 and the value of 2.07 is pulled off of your RFS-20;  
16 correct?

17 **A.** Give me a moment.

18 **Q.** And if you'd look at Exhibit 172, your  
19 original RFS-20, please, sir.

20 **A.** Okay.

21 **Q.** And if you'd look in the column Maximum  
22 Achievable, Step 1, the entry for residential is on the  
23 line that reads Residential Cumulative as Percent of  
24 2007 Sales. That's the .77.

25 **A.** Oh, the original. You mean the original?

1 Q. Yes, sir.

2 A. Correct.

3 Q. And the next line, the commercial industrials'  
4 percent of 2007 sales is the 2.07?

5 A. Correct.

6 Q. Okay. Now you corrected those in your RFS-20,  
7 which is shown on Page 4, did you not? The .77 became  
8 .75?

9 A. Correct.

10 Q. And the 2.07 became 1.32?

11 A. Correct.

12 Q. But you didn't correct those on your worksheet  
13 that you used to calculate your factors to apply in Step  
14 4, did you?

15 A. Subject to check, yes.

16 Q. Okay. Let's look at the column next to Column  
17 G, Column F. You calculated percent achievable -- the  
18 FPL achievable potential as a percentage of 2007 sales,  
19 did you not?

20 A. Correct.

21 Q. And that was 19.21 percent?

22 A. Correct.

23 Q. Okay. Would you accept, subject to check,  
24 that FPL's residential sales in 2007 were -- as reported  
25 in its Ten-Year Site Plan are 55,138 gigawatt hours?

1           **A.**    Yes.

2           **Q.**    Okay.  And would you accept, subject to check,  
3           that Table ES-1 of the technical potential study for FPL  
4           shows a residential technical potential of 20,245  
5           gigawatt hours?  It's one of the documents that I handed  
6           to you this morning for reference.

7           **A.**    Yeah.  That might be helpful if you could  
8           direct us.

9           **Q.**    Okay.  It's, it's a single page entitled Table  
10          ES-1, FPL's Technical Potential Study.

11          **A.**    Okay.  And what was the number again?

12          **Q.**    20,245 gigawatt hours.

13          **A.**    Well, I see the number 20,245, but it's kind  
14          of hard to read the captions, but --

15          **Q.**    Well, will you accept that that's an -- that  
16          I'm representing that it's accurately reported as 20,245  
17          as the technical potential for FPL in the Itron study?

18          **A.**    Subject to check, yes.

19          **Q.**    Okay.  And if one were to divide the sales as  
20          reported in the Ten-Year Site Plan by the technical  
21          potential study, that calculation would be some  
22          36 percent instead of the 19 percent that you show on  
23          your work paper; correct?

24          **A.**    Just a minute.  Give us a moment, please.

25          **Q.**    Sure.

1           **A.**   Give us a moment.

2           **Q.**   Yes, sir.

3           **A.**   The, the number that we calculated was a  
4 percent of the total sales, not just residential sales.

5           **Q.**   Okay.

6           **A.**   So that we, the 19 percent, what I get when I  
7 do the calculation, if I take the 20,245 and divide it  
8 by what we presented on Exhibit 20 of 105,404, I get the  
9 19.2 percent that is shown in Column F.

10          **Q.**   Okay. I'm going to ask you about the first  
11 three columns, the Columns C, D, and E on this work  
12 paper as well. And I'm going to try to shortcut this  
13 for the benefit of everybody's time.

14                    If there were a mistake on Page, on Tab 2 of  
15 Exhibit 173 under Column H, the technical potential  
16 missing measures --

17          **A.**   Okay. Page, what page of that?

18          **Q.**   Page 2 of 173, your work papers.

19          **A.**   Oh, 173.

20          **Q.**   Uh-huh. The tabbed work paper.

21          **A.**   Okay.

22          **Q.**   If there were a mistake under Column H, the  
23 technical potential missing measures on this page,  
24 wouldn't that carry forward onto Columns C, D, and E on  
25 Page 1?

1           **A.**   And if there was a mistake in the amount of  
2 the technical potential missing measures -- I guess  
3 you're in Column H on Page 2.

4           **Q.**   Yes, sir.

5           **A.**   Or if there was a mistake there, would that  
6 impact the numbers in which column was it?

7           **Q.**   C, D, and E on Page 1.

8           **A.**   C, D and E. We're just going to pull up the  
9 formulas just to double-check.

10          **Q.**   Sure.

11          **A.**   Okay. Yes.

12          **Q.**   Okay. Now would you look at your tab, it's  
13 Tab 3 here on the spreadsheet, but it's your tab  
14 Residential Measures.

15          **A.**   Tab 3. Is Tab 3 the same as --

16          **Q.**   I'm sorry. Your tab is, it's the long  
17 spreadsheet, but on your Excel program it's the sheet  
18 entitled Residential Measures.

19          **A.**   Okay.

20          **Q.**   All right.

21           **MR. GUYTON:** Commissioners, I apologize, but  
22 this is both in a filtered and an unfiltered format, and  
23 I just wanted to make sure that you had the benefit of  
24 all the spreadsheet in front of you.

25           **BY MR. GUYTON:**

1           **Q.**    Let's see if we can shorten this,  
2 Mr. Spellman. You took and added the cumulative  
3 gigawatt hours for five residential measures on the  
4 spreadsheet to carry forward to what we've identified as  
5 Tab 2, correct, Column H?

6           **A.**    Let me just double-check on that. Yes.

7           **Q.**    Okay. And those five measures are highlighted  
8 in red on the spreadsheet; correct?

9           **A.**    Correct.

10          **Q.**    Okay. And if you look at the unfiltered  
11 spreadsheet, you can see that there are a number of  
12 lines, but the five highlighted ones are still in red.

13          **A.**    Correct.

14          **Q.**    Okay. And aren't -- and then the total of  
15 that that you show, those five measures, is 163 gigawatt  
16 hours. That's shown on the top of your spreadsheet.  
17 It's a little hard to see, but I think it's under Column  
18 **Q.**

19          **A.**    Yes.

20          **Q.**    Okay. And isn't the total of the five  
21 measures that you intended to add only 17 gigawatt hours  
22 instead of the 163 that you show?

23          **A.**    I don't think so, but let me check.

24          **Q.**    All right. If you'd look at the formula for  
25 that 163, don't you show that formula as being the sum

1 of Q20 through Q64 divided by a million?

2 **A.** Yes.

3 **Q.** And the first measure of the five begins at  
4 Q20 and the last begins at Q64; correct?

5 **A.** Yes.

6 **Q.** But you added not just the five in red, but  
7 every cell between Q20 and Q64.

8 **A.** Oh, that's a good question. Correct.

9 **Q.** So the 163 value which you carry over to the  
10 next page of your spreadsheet and then finally to the  
11 first three columns of the first page of your  
12 spreadsheet are wrong. That value should be 17 gigawatt  
13 hours instead of 163.

14 **A.** Correct.

15 **Q.** All right. Would you accept, subject to  
16 check, that you did the same thing on the commercial  
17 industrial and that you added the gigawatt hours of all  
18 the measures reflected on those spreadsheets instead of  
19 the ones you intended to filter?

20 **A.** Let's -- we can check that. We can do that.

21 **Q.** All right.

22 **A.** To save time, we'll accept that, subject to  
23 check.

24 **Q.** Would you accept -- I'm sorry. I'll get to  
25 the mike.

1                   **COMMISSIONER EDGAR:** Thank you.

2           **BY MR. GUYTON:**

3           **Q.** Would you accept, subject to check, that if  
4 you corrected your spreadsheet, your residential value  
5 shown of 163 gigawatt hours is overstated by a  
6 percentage of -- oh, let me make sure that I find it --  
7 some 900 percent, 959 percent?

8           **A.** Say that again. I didn't hear that last  
9 number.

10          **Q.** If -- would you accept, subject to check, the  
11 163-gigawatt-hour value used for your residential  
12 adjustment on your Step 4 was overstated by 959 percent?

13          **A.** Right. I guess I would be a little cautious  
14 with that because, you know, if you had a number of ten  
15 instead of, instead of one, then the difference would  
16 look like, you know, a very large number, 1,000 percent  
17 or something. So the point is that if you corrected the  
18 163 gigawatt hours to 17, it doesn't really change  
19 our -- it has an insignificant impact on our  
20 recommendations.

21          **Q.** Okay. And the commercial industrial value  
22 that you show on your Step 4 was 150 gigawatt hours?

23          **A.** Yes.

24          **Q.** And would you accept, subject to check, that  
25 if you corrected that for the matters that you intended

1 to filter out, that the value would have been -- I've  
2 lost my place -- been less than that? Do you have  
3 that cal -- you said you were able to check that. Did  
4 you redo the calculation?

5 **A.** (By Ms. Guidry) It was freezing my computer  
6 when I was trying to --

7 **Q.** Pardon?

8 **A.** (By Mr. Spellman) We would accept that it  
9 would be less.

10 **Q.** Okay. And that indeed would carry over to the  
11 factors that you calculated on Page 1 of your  
12 spreadsheet.

13 **A.** That's right.

14 **Q.** Okay. So in every step of GDS's adjustment to  
15 FPL's or to Itron's estimate of E-TRC achievable  
16 potential there was an error in your step.

17 **A.** Correct. Although the sum total is not  
18 significant and wouldn't significantly change our  
19 conclusions or recommendations or goals.

20 **Q.** But you haven't calculated the sum total of  
21 all the errors, have you?

22 **A.** No. But we would be glad to do so.

23 **Q.** No, I'm not asking you to. I just wanted to  
24 make sure that the Commission understood that you've  
25 reached a conclusion without doing the calculation.

1 That's correct, is it not?

2 **A.** Well, I don't think so. Because we have --  
3 for all of the issues that we were aware of, we actually  
4 have done a sensitivity analysis to determine what the  
5 impact would be. For example, the decay rate. So I  
6 would say for some of them we have and some of them we  
7 haven't.

8 **Q.** All right. But you don't know the total  
9 effect of everything that we've covered here today?

10 **A.** Well, it would be my professional judgment  
11 that the impact would be very minor or insignificant.

12 **Q.** Okay. But let's be clear, you've not done the  
13 calculation.

14 **A.** I've done it for some of them, but not all of  
15 them.

16 **MS. BROWNLESS:** Excuse me. Asked and  
17 answered.

18 **COMMISSIONER EDGAR:** I concur.

19 **MR. GUYTON:** Okay.

20 **BY MR. GUYTON:**

21 **Q.** Now we've just gone over the calculation for  
22 one of the six FEECA utilities, have we not?

23 **A.** Correct.

24 **Q.** And GDS used the same methodology and approach  
25 for the other FEECA utilities that it used for FPL, did

1 it not?

2 **A.** The general approach was the same for each  
3 utility.

4 **Q.** Is there any reason for the Commission to  
5 believe that the calculations for the other six FEECA  
6 utilities are any less error prone than they were for  
7 FPL?

8 **A.** Well, yes. The good news is that on the E-TRC  
9 gigawatt hours, fortunately we got those correct for the  
10 other six, and we had the misfortune of getting it wrong  
11 for one, for Florida Power & Light.

12 **Q.** Well, actually you've corrected your Step 2  
13 for all the utilities, haven't you?

14 **A.** You mean the step -- the step for the E-TRC we  
15 have corrected and Step 2 we've corrected.

16 **Q.** All right. But you don't want to, you don't  
17 want to leave the Commission with the impression that  
18 you didn't make a mistake on Step 2 for the other six?

19 **A.** Certainly not.

20 **Q.** Okay. Mr. Spellman, in your Step 4 you rely  
21 on a GRU study that was prepared for them by IMF. Do  
22 you recall that?

23 **A.** I believe it was ICF.

24 **Q.** ICF?

25 **A.** But, yes, I do, I do recall.

1 Q. And you're familiar with that ICF study?

2 A. Yes, I am.

3 Q. Okay. And the ICF study that you referred to  
4 and used, the TRC benefit cost ratio in that study for  
5 GRU was what?

6 A. I don't recall.

7 Q. Would you accept, subject to check, that it  
8 was .5?

9 A. I said I don't recall. I guess the -- which  
10 TRC value are you referring to?

11 Q. The benefit cost cutoff measure.

12 A. I just don't know.

13 Q. Okay. But you're generally familiar with the  
14 GRU study. Indeed, you relied upon it for purposes of  
15 your Step 4; correct?

16 A. Yes.

17 Q. Okay. And when -- as a result of that study,  
18 GRU began implementing a more aggressive DSM portfolio,  
19 did it not?

20 A. Right. And in fact they changed from using  
21 the RIM Test to the TRC Test as a city council policy.

22 Q. And you're generally familiar with the types  
23 of programs that evolved, because you've talked in your  
24 testimony about the success that GRU has enjoyed in  
25 2007; correct?

1           **A.**    Yes.

2           **Q.**    And indeed you recommend GRU to the Commission  
3 as a leader in Florida, do you not?

4           **A.**    As well as other utilities, yes.

5           **Q.**    Okay.  And is one of the ways that they lead  
6 is in getting information out to their customers through  
7 their website to explain their programs?

8           **A.**    Yes.

9           **Q.**    Okay.

10           **MR. GUYTON:**  We'd ask that the other document  
11 that, be identified -- that we passed out be identified.  
12 This is the one that has the GRU logo.

13           **COMMISSIONER EDGAR:**  Okay.  We are on, let's  
14 see, 174.  Mr. Guyton, a title, please.

15           **MR. GUYTON:**  GRU Website.

16           **COMMISSIONER EDGAR:**  Okay.

17                   (Exhibit 174 marked for identification.)

18 **BY MR. GUYTON:**

19           **Q.**    Now Page 1 of what has been identified as  
20 Exhibit 174 is a listing of the GRU programs that, that  
21 GRU has developed as a result of the ICF study; correct?

22           **A.**    Correct.

23           **Q.**    Okay.  And if I -- if we can take a look at  
24 that, what's the status of the Energy Star® for  
25 affordable housing?

1           **A.**   Temporarily suspended, according to this.

2           **Q.**   Same thing for reflective roof coating and  
3 refrigerator buyback?

4           **A.**   Correct.

5           **Q.**   And then there are a number of other programs  
6 that are awaiting October 1 budget approval?

7           **A.**   Correct.

8           **Q.**   Okay.  If you'd look over to the last page of  
9 this exhibit, this is the note that accompanies the  
10 programs that are temporarily suspended.  Isn't it true  
11 that, according to the GRU website, that GRU has  
12 launched a company-wide effort to cut costs and to keep  
13 prices down for customers, and as a result of that they  
14 have suspended a number of their DSM programs?

15          **A.**   I must not be on the right page.  Which page  
16 again?

17          **Q.**   The last page that reads, "Six programs  
18 temporarily suspended."

19           **MR. SAYLER:**  Excuse me, Madam Chair.

20           **COMMISSIONER EDGAR:**  Mr. Sayler.

21           **MR. SAYLER:**  I'm just wondering about laying  
22 the foundation for this particular document.  And the  
23 document that I have before me did not reference six  
24 programs.  It was missing that page.

25           **COMMISSIONER EDGAR:**  Mr. Guyton.

1           **MR. SAYLER:** I have it now.

2           **MR. GUYTON:** Okay.

3           **COMMISSIONER EDGAR:** So, Mr. Sayler, you're --

4           **MR. SAYLER:** Have we established that this is  
5 in fact from GRU's website and that the witness is  
6 actually in fact familiar with this prior to this point  
7 in time?

8           **MR. GUYTON:** I thought I had. I thought he  
9 had said that one of the ways that they were a leader  
10 in, in DSM was having an effective website that noted  
11 all their programs.

12           **COMMISSIONER EDGAR:** As a communication tool.  
13 He did say that.

14           **MR. SAYLER:** Thank you.

15           **COMMISSIONER EDGAR:** Okay. Let's move  
16 forward.

17           **MR. SPELLMAN:** I'm sorry. Can you repeat the  
18 question?

19 **BY MR. GUYTON:**

20           **Q.** Sure. Isn't it correct that GRU has suspended  
21 at least six of its DSM programs temporarily, according  
22 to the GRU website?

23           **A.** Yeah. I guess according -- if this is a  
24 recent copy of what's on their website, then that's what  
25 it says, that they have launched a company-wide effort

1 to cut costs and keep prices down for customers. "In  
2 March we announced an immediate hiring freeze and began  
3 efforts to trim budgets." I assume that's across the  
4 entire company, not just with demand-side management.

5 **MR. GUYTON:** Uh-huh. And that's all we have.  
6 Thank you, Commissioners.

7 Thank you, Mr. Spellman, Ms. Guidry.

8 **COMMISSIONER EDGAR:** Thank you. Are there  
9 questions from the munis? No? No questions?

10 Ms. Kaufman, questions?

11 **MS. KAUFMAN:** No, ma'am.

12 **COMMISSIONER EDGAR:** NRDC?

13 **MS. COLANDER:** Yes, we do. Thank you.

14 **CROSS EXAMINATION**

15 **BY MS. COLANDER:**

16 **Q.** Good morning, Mr. Spellman.

17 **A.** Good morning.

18 **COMMISSIONER EDGAR:** Be sure your mike is on,  
19 please.

20 **MS. COLANDER:** There we go. Thank you.

21 **COMMISSIONER EDGAR:** And go ahead and  
22 introduce yourself for the record, if you would, just  
23 because we haven't --

24 **MS. COLANDER:** Absolutely. My name is Brandi  
25 Colander, an attorney with the Natural Resources Defense

1 Council, representing NRDC and SACE this morning. Thank  
2 you for having me, Commissioners.

3 **BY MS. COLANDER:**

4 **Q.** So, Mr. Spellman, as I'm sure you're aware,  
5 the goals that you've recommended by NRDC -- the goals  
6 that you've recommended as well as the NRDC/SACE  
7 witnesses are quite similar, but there are some  
8 significant differences. So in our time, our brief time  
9 together this morning I'd just like to explore those  
10 differences. Okay?

11 **A.** Okay.

12 **Q.** If you could turn to Page 24 of your  
13 testimony. Does the list that begins on Line 24 -- let  
14 me know when you get there.

15 **A.** I'm there.

16 **Q.** Okay. Great. Does the list that begins on  
17 Line 24 include all of the reasons that you believe that  
18 the achievable potential study underestimated the  
19 achievable potential for the FEECA utilities?

20 **MR. SAYLER:** Madam Chairman, if --

21 **COMMISSIONER EDGAR:** Mr. Sayler.

22 **MR. SAYLER:** If she could slow down and read a  
23 little bit, or speak a little slower.

24 **MS. COLANDER:** I'm sorry. It's New Jersey.  
25 I'm sorry.

1                   **COMMISSIONER EDGAR:** I was going to say, we're  
2 in Tallahassee and we hear more slowly than you speak up  
3 north.

4                   **MS. COLANDER:** Absolutely.

5                   **COMMISSIONER EDGAR:** If you would restate the  
6 question.

7                   **MS. COLANDER:** So Line 24 -- absolutely. I'm  
8 sorry.

9 **BY MS. COLANDER:**

10                  **Q.** So beginning on Line 24.

11                  **A.** Can you --

12                  **Q.** Okay. So does the list that begins on Line 24  
13 include all of the reasons that you believe that the  
14 achievable potential study underestimated the achievable  
15 potential for the FEECA utilities?

16                  **MR. GUYTON:** I don't want to slow this down  
17 any, but is this in the nature of friendly cross?

18                  **MS. COLANDER:** No. We have -- the only focus  
19 is to focus on our differences.

20                  **COMMISSIONER EDGAR:** I'm going to allow.

21                  **THE WITNESS:** I would say that this list  
22 represents the issues covered in our testimony, and that  
23 there were other concerns that we had identified to the  
24 staff, but we decided to focus only on these issues.

25 **BY MS. COLANDER:**

1 Q. Okay.

2 A. And so our testimony only covers those issues.

3 Q. So it's a narrow universe, more or less?

4 A. That our testimony covers.

5 Q. Okay. Thank you. And then can you please  
6 turn to Page 64 of your testimony, and we're going back  
7 to similar pages, 64 through 67. And I think this is  
8 the section where you described how you developed your  
9 recommended goals; correct?

10 A. Correct.

11 Q. So would you please very briefly summarize  
12 this portion of your testimony so that we have the  
13 appropriate context for where your recommendations  
14 differ from NRDC and SACE's witnesses?

15 A. Yeah. I think the main difference is that we  
16 started with the utility's technical potential study,  
17 and that would be the first bullet on Page 64, Lines 16  
18 through 18. We spent a considerable amount of time  
19 scouring and pouring through the utility's technical  
20 potential studies. We asked, I think, even Mr. Rufo  
21 would say an extraordinary number of information  
22 requests and production of document requests. But we  
23 felt after a rigorous review of the Itron study for  
24 technical potential and the achievable potential that  
25 that was a good starting point. We felt the technical

1 potential was, was well done. We did find some  
2 deficiencies in the achievable potential, so we decided  
3 to start with the Itron estimate of the E-TRC achievable  
4 potential and move forward.

5 Q. Okay.

6 A. The difference with the -- my understanding of  
7 the NRDC/SACE case is that they felt there were too many  
8 deficiencies in the work that had been done by Itron and  
9 the Collaborative, and they were going to recommend a  
10 goal, I think it was the 1 percent per year goal, that  
11 they felt was reasonable based upon what others have  
12 been able to achieve.

13 And I'd say, even though we ended up, our  
14 goals are actually a little bit lower than what I think  
15 SACE and NRDC are proposing, but the difference would be  
16 is that, you know, we're starting with Florida data and  
17 the achievable potential study and then adjusting that  
18 for where we saw the deficiencies, to -- so we sort of  
19 did a bottom up to get there.

20 Q. Approach?

21 A. Yeah.

22 Q. Thank you.

23 A. And I could go through the rest of it, but  
24 it's fairly well explained in my testimony.

25 Q. Okay. That's sufficient. Thank you.

1 I want to talk a little bit about the  
2 transition period adjustment that you discussed in your  
3 testimony. It starts on Page 7. And just to keep this  
4 brief, would it be a reasonable generalization to  
5 describe the goals that you proposed for each utility as  
6 being relatively uniform over the first five years, and  
7 then for the second five years you're essentially  
8 doubling the goal in the first five years?

9 A. Subject to check.

10 Q. Uh-huh. And then would it be okay if we  
11 simplify this to say that there are basically two large  
12 steps up, one in 2010 and then another in 2015?

13 A. Well, I guess I should -- maybe you can tell  
14 me what you're referring to.

15 Q. Line 17. Sorry. Page 17, Line 13 of your  
16 testimony.

17 A. I don't see that. You're sure it's Page 17?

18 Q. Yeah. What I'm trying to get to is the  
19 transition period adjustment, and I just want to use  
20 layman's terms so that we can follow one another. And  
21 you're essentially taking two steps up. In your  
22 testimony you're saying that there's going to be a ramp  
23 up in 2010 and then another in 2015.

24 A. Right. I'd agree with that. The -- what we  
25 did was we took our goals based upon the build -- the

1 four steps that I discussed with Mr. Guyton. And then  
2 for the first five years we said we're going to reduce  
3 them by 50 percent.

4 Q. Right.

5 A. So that lowered them substantially. And then  
6 after that --

7 Q. I'm sorry. And just to clarify, the 50  
8 percent would be in 2010?

9 A. Well, we reduced it by 50 percent each year.

10 Q. Okay.

11 A. So if the, you know, the goals were, if they  
12 were up here, we'd reduce them by half --

13 Q. Half.

14 A. -- each year for the first five years, and  
15 then went to the trajectory that we had forecast.

16 Q. Okay. And if you were to start in 2010, isn't  
17 it then reasonable that the utilities could achieve that  
18 50 percent level if you're doing it year by year?

19 A. We felt that our year by year goals were,  
20 because they ramp up and because they're based upon  
21 where we started with the achievable potential study,  
22 that the utilities would have a good chance of, would be  
23 able to achieve those goals because we had reduced them  
24 by 50 percent.

25 Q. Uh-huh. Okay. And if they're in the process

1 of this ramp up from 2009 to 2010, couldn't they  
2 continue the ramp up through 2011 to 2012 and then reach  
3 the potential energy efficiency target more quickly?

4       **A.** Well, I think our revised exhibits actually  
5 show the trajectory. If -- I guess it's on the second  
6 errata sheet. Table 1 shows what we were proposing.  
7 And I'm just, I'm looking at the megawatt hour savings.  
8 It shows the goals for 2014, and basically it -- you  
9 know, I'm looking at the Table 1 of our Exhibit 2.  
10 The -- what we were expecting after five years for  
11 gigawatt hour sales was about, it ranged from a low of  
12 1.5 percent total to 2.3 percent, and there are similar  
13 numbers for peak load as well.

14               And we felt that, you know, making this  
15 change, you know, moving to an E-TRC based plan was  
16 going to take time to ramp up to do that because you'd  
17 have to, for example, change from like an audit approach  
18 to more integrated programs, and it would take time to  
19 do that. And we felt it was important to have a  
20 transition period to allow the utilities to change their  
21 way of operating programs so they'd get higher  
22 penetration and higher savings.

23       **Q.** And can you explain it, just expound upon what  
24 that would require? I mean, because this is basically  
25 suggesting that it needs to be less aggressive.

1           **A.**    I'm sorry?

2           **Q.**    This is essentially -- you're suggesting that  
3 it then, that the target, the energy efficiency target  
4 then should be less aggressive to allow for this  
5 integration period. Can you just describe what that  
6 would entail?

7           **A.**    Well, it's going to -- you know, a lot of the  
8 effort would change from an audit program where you just  
9 give advice, you give advice, you make recommendations  
10 on what people should do, to helping customers, you  
11 know, find the equipment, having some incentive level  
12 that's appropriate for the equipment, doing more  
13 outreach, education, training, and then counting those  
14 savings, you know, actually tracking and reporting.

15                   And that would be an expanded, more intensive  
16 effort than, for example, just audits. And it's going  
17 to take time to make that change. You can't -- it's  
18 difficult to do that in 30 or 60 days. And we felt --  
19 and this is a substantial change in the way you do  
20 business. It's a better change, but it takes time to do  
21 it. And we also want to make sure there was a -- that  
22 this was, these goals were reasonably achievable.

23           **Q.**    So speaking of reasonably achievable, I just  
24 want to contrast your suggestions to those of NRDC and  
25 SACE witnesses. Specifically Witness Steinhurst, his

1 suggestion was a three- to four-year ramp up period.  
2 That's based on his review of historical ramp up rates  
3 and followed by a relatively uniform level over the  
4 final six to seven years. Are you familiar with this  
5 distinction, subject to check, or --

6 **A.** I listened to that testimony, but I must have  
7 missed that particular piece.

8 **Q.** Okay. So subject to check, or would you --

9 **A.** Subject to check.

10 **Q.** Great. And then would you agree that the ramp  
11 up that he is suggesting is reasonable based on your  
12 experience and your expertise?

13 **MR. GUYTON:** Objection. That's friendly  
14 cross, and it's trying to adopt this witness as her  
15 direct witness. This is not a cross-examination of this  
16 witness's direct testimony.

17 **MS. COLANDER:** Commissioners, we are simply  
18 trying to show the distinction between his suggestions  
19 and ours. They are significantly different. We think  
20 it's important.

21 **MR. GUYTON:** And I agree that that's the way  
22 the earlier questions were phrased, but she's gone  
23 beyond that with this question.

24 **COMMISSIONER EDGAR:** Can you try to restate?

25 **MS. COLANDER:** Sure.

1 **BY MS. COLANDER:**

2 Q. Subject to check, do you believe that what  
3 Mr. Steinhurst has suggested is reasonable in light of  
4 your integration requirements to really more  
5 aggressively ramp up energy efficiency?

6 **MR. GUYTON:** Same objection.

7 **COMMISSIONER EDGAR:** Hold on. Ms. Helton.

8 **MS. HELTON:** It sounded an awfully lot like  
9 friendly cross to me, Madam Chairman.

10 **MS. COLANDER:** Commissioner, I mean, I think  
11 the objective is to just create a record that allows you  
12 to see the distinctions between what our organizations  
13 are suggesting, and this is more for us to have the  
14 opportunity to proffer information for you. So our  
15 intention is certainly not friendly cross. We have  
16 different viewpoints and we hope you take that into  
17 consideration.

18 **COMMISSIONER EDGAR:** Mr. Guyton?

19 **MR. GUYTON:** The problem that I have is not --  
20 it kind of goes beyond friendly cross. You're asking  
21 this witness to give a judgment as to an opinion given  
22 by another witness. It is beyond the scope of his  
23 direct testimony. It's not a proper matter for  
24 cross-examination. If she wanted to use this witness as  
25 part of her direct, she should have retained him and had

1 him testify.

2 **MS. COLANDER:** We can move on. It's  
3 completely fine.

4 **COMMISSIONER EDGAR:** Sustained. Please do.

5 **BY MS. COLANDER:**

6 **Q.** On Page 63 of your testimony, Line 21, you say  
7 that on average these top 20 energy efficiency utilities  
8 save over 1 percent of their annual kilowatt hour sales  
9 every year, year after year; correct?

10 **A.** Correct.

11 **Q.** And then on Page 175, line 16 of your  
12 deposition, you were asked to clarify the importance of  
13 this 1 percent.

14 **A.** Correct.

15 **Q.** Can you clarify for the record, once and for  
16 all, why 1 percent is of significance? And essentially  
17 if you could provide your -- not NRDC/SACE's --  
18 perspective on the context for your foundation for  
19 formulating the 1 percent?

20 **A.** Sure. And I did cover this in my deposition.

21 I think the point is that there's a body of  
22 information available both in Florida and in the  
23 Southeast that there are utilities that are saving over  
24 1 percent per year today. And obviously GRU is close to  
25 that, even though they've suspended things temporarily

1 because of the economy. Austin Energy is around  
2 1 percent per year savings. And Laurens Electric  
3 Cooperative in South Carolina is about 1.3 percent. The  
4 top 20 utilities reported in the EIA are well over  
5 1 percent.

6 And the significance is that we know that in  
7 the Southeast and in Florida that utilities with  
8 well-designed, aggressive programs can save at that  
9 level or higher once programs are ramped up. And these  
10 are cost-effective programs that pass the TRC Test, and  
11 they've been able to do this year after year after year.  
12 And it suggests to me that the FEECA utilities could do  
13 the same thing at the 1 percent or so level, but that  
14 would be after, you know, ramping up and designing  
15 programs and having adequate staff to do it.

16 Q. Thank you. Switching gears, is commercial  
17 lighting typically a large percentage of savings in  
18 commercial DSM programs?

19 A. Yes. That's been the experience nationwide.

20 Q. Okay. So was it peculiar to you that in the  
21 Itron analysis there were no commercial lighting  
22 measures that were carried forward except LED exit  
23 signs?

24 A. Well, as I said, we looked at all of those  
25 issues to figure out, you know, what things were the

1 technical potential, the economic and the achievable.  
2 And as evidenced by our testimony, we found some things  
3 that probably should be included that weren't.

4 Q. Can you elaborate?

5 MR. GUYTON: Objection. This is just merely a  
6 rehash of direct. I mean, this is not  
7 cross-examination. This is friendly cross.

8 COMMISSIONER EDGAR: Sustained. Sustained.

9 BY MS. COLANDER:

10 Q. Okay. The two-year payback approach, is it  
11 correct that that would essentially throw out all the  
12 commercial lighting programs that represent the most  
13 abundant energy efficiency opportunities for commercial  
14 buildings?

15 MR. GUYTON: Objection. Friendly cross.

16 MS. COLANDER: Commissioner, we believe that  
17 this is an important component of the analysis, and in  
18 his expert opinion we think that it's an important part  
19 of the record.

20 MR. GUYTON: And had -- it would have been  
21 entirely appropriate for them to retain Mr. Spellman and  
22 ask this as part of her direct. But, I mean, this is  
23 just friendly cross.

24 MS. COLANDER: Your Honor -- I mean, I'm  
25 sorry, Commissioner. We disagree on this point, which

1 is again the point of asking it now. It's not friendly  
2 cross. We disagree on this particular point, so we're  
3 trying to clarify the record.

4 **COMMISSIONER EDGAR:** I understand.

5 **MS. COLANDER:** And I'm sorry. My last, my  
6 last piece is I'm three questions shy of being complete.  
7 And we've tried to make many concessions to abbreviate  
8 this day, so we really are trying to be cooperative.  
9 But there are distinct differences in our analysis, and  
10 we'd appreciate it if that would be heavily considered.

11 **COMMISSIONER EDGAR:** All considered and all  
12 appreciated. The objection is sustained. And let's see  
13 where your next questions take us. Please take that  
14 into account.

15 **BY MS. COLANDER:**

16 **Q.** In the programs that exist where commercial  
17 lighting is a large share of commercial lighting program  
18 savings, are there programs that are designed that are  
19 able to capture commercial lighting savings without high  
20 free ridership?

21 **MR. GUYTON:** Objection. This does not go to a  
22 distinction between her witness and, and this witness.  
23 This just is a general inquiry about an area that  
24 Mr. Spellman hasn't been offered on.

25 **COMMISSIONER EDGAR:** Ms. Helton.

1           **MS. COLANDER:** That's fine. We'll go to our  
2 next question.

3           **COMMISSIONER EDGAR:** Okay.

4           **MS. COLANDER:** We'll go to our next question.

5           **COMMISSIONER EDGAR:** Okay.

6 **BY MS. COLANDER:**

7           **Q.** Regarding your recommended goals,  
8 Mr. Spellman, based on your review of rebuttal testimony  
9 and any other recently produced discovery material, have  
10 you made additional calculations or analysis that would  
11 indicate any further adjustments that might be  
12 appropriate at this time?

13           **MR. GUYTON:** Objection. That goes to an  
14 attempt to include through cross-examination  
15 surrebuttal, which is inappropriate and not contemplated  
16 by the prehearing orders.

17           **MS. COLANDER:** Commissioner -- I'm sorry.

18           **COMMISSIONER EDGAR:** Ms. Helton? Ms. Helton.

19           **MS. HELTON:** It sounds to me that what we're  
20 doing here is a little bit of bolstering what was  
21 prefiled as direct testimony, and it seems to me that  
22 maybe my suggestion would be that we move on.

23           **COMMISSIONER EDGAR:** I concur.

24           **MS. COLANDER:** We're done.

25           **COMMISSIONER EDGAR:** All right. Thank you

1 very much.

2 Ms. Brownless.

3 **MS. BROWNLESS:** Good after -- good afternoon.  
4 Lord, I'm messed up already.

5 **COMMISSIONER EDGAR:** It's been no windows day  
6 after day.

7 **CROSS EXAMINATION**

8 **BY MS. BROWNLESS:**

9 **Q.** Good morning, Mr. Spellman.

10 **A.** Good morning.

11 **MS. BROWNLESS:** I need to hand an exhibit out.

12 **COMMISSIONER EDGAR:** All right. We've got  
13 some, some audio something. Okay.

14 So, Ms. Brownless, you're going to have an  
15 exhibit distributed?

16 **MS. BROWNLESS:** Yes, ma'am.

17 **COMMISSIONER EDGAR:** Okay. Is this something  
18 that we need to mark?

19 **MS. BROWNLESS:** Yes, ma'am.

20 **COMMISSIONER EDGAR:** Okay.

21 **MS. BROWNLESS:** And I think this will be  
22 Exhibit 175, if I'm correct.

23 **COMMISSIONER EDGAR:** Yes, 175. Title, please.

24 **MS. BROWNLESS:** GDS Contract.

25 **COMMISSIONER EDGAR:** I'm sorry. I didn't

1 catch that.

2 **MS. BROWNLESS:** GDS Contract.

3 **COMMISSIONER EDGAR:** Okay.

4 **MS. BROWNLESS:** How am I doing, Commissioner?

5 (Exhibit 175 marked for identification.)

6 Has everybody got their paperwork?

7 **COMMISSIONER EDGAR:** Yes. We're ready, if you  
8 are.

9 **MS. BROWNLESS:** Thank you.

10 **BY MS. BROWNLESS:**

11 **Q.** Can you look through what's been identified as  
12 Exhibit 175, which is the staff's response to Florida  
13 Solar Coalition's first request for production of  
14 documents, Numbers 1 and 2?

15 **A.** I've looked through it.

16 **Q.** Okay. Does that look like a true and correct  
17 copy of what the staff provided?

18 **A.** Yes.

19 **Q.** Okay. Now when did you sign this contract,  
20 Mr. Spellman?

21 **A.** November 11th, 2008.

22 **Q.** Okey-doke. And turning to Page 6 of the  
23 contract, there is a, there are milestones set out,  
24 aren't there?

25 **A.** Yes, there are.

1           **Q.**    Okay.  And they're self-explanatory and set  
2 out the different tasks that you are to complete; is  
3 that right?

4           **A.**    Yes.

5           **Q.**    When did you actually receive the FEECA  
6 utilities technical potential study?

7           **A.**    Well, I remember there was a delay.  We could  
8 look it up.

9           **Q.**    Was it after February 13th?

10          **A.**    Yeah.  I just don't remember the exact date.  
11 Because I know originally we were going to get it in  
12 2008, but it was well into 2009.  Do you -- I assume we  
13 got it the same day everybody else did.  We can look it  
14 up, but --

15          **Q.**    Can you take a minute and look it up for me?

16          **A.**    Yeah.

17                    Okay.  We got the statewide technical  
18 potential report -- okay.  We got a draft of the  
19 statewide on March 4th, and then we got the final report  
20 on April, about April 14th.

21          **Q.**    And would that have included the individual  
22 technical potential studies for each of the utilities?

23          **A.**    There were separate reports for each utility.

24          **Q.**    And were those available on April 14th?

25          **A.**    I guess I need to correct this.  We've got a

1 variety of e-mails here. Okay. We got the draft  
2 technical potential report on March 5th.

3 Q. Okay.

4 A. We got the final statewide technical report on  
5 March 16th.

6 Q. Okay.

7 A. They came in on different days, but the  
8 Florida Power & Light one, for example, came in  
9 April 6th. April 6th.

10 Q. Okay. So --

11 A. And then the other one sort of came in --

12 Q. Dribbled after that.

13 A. Right.

14 Q. Okay. When did you actually receive the  
15 achievable potential studies, which included the  
16 economic potential analysis?

17 A. What I recall is that's when the utilities did  
18 their filings. Yeah. I think it was about -- it was  
19 the beginning of June. I don't remember the exact date.

20 Q. So you think those were included in the direct  
21 testimony of the utilities filed on June 1st?

22 A. Right. Right. Correct.

23 Q. Okay. And would that have been the first time  
24 that you would have seen that information?

25 A. Yes. It made for an interesting June.

1 Q. When did you file your testimony here?

2 A. July 17th.

3 Q. Okay. So you had about 45 days to look at all  
4 this data; correct?

5 A. Correct. For the achievable.

6 Q. On Pages 72 through 77 of your testimony you  
7 deal with demand-side renewable energy resources; is  
8 that correct?

9 A. Correct.

10 Q. Okay. And essentially if I look at the top of  
11 Page 76, you've got a little chart there that talks  
12 about your recommendations for those alternative energy  
13 sources; right?

14 A. Correct.

15 Q. Okay. And subject to check, if I add those  
16 numbers up, you're talking about roughly \$24.5 million a  
17 year for five years; is that right?

18 A. Correct.

19 Q. And this figure represents 10 percent of the  
20 FEECA's actual expenses from 2004 through 2008; right?

21 A. Let me just double-check that. Yes.

22 Q. Okay. Are you recommending megawatt goals for  
23 solar technologies at this time?

24 A. No.

25 Q. Is your suggestion -- well, are these funds

1 equivalent to an incentive to develop the solar market  
2 in Florida?

3 **A.** Right. We saw this as a market test for  
4 renewable R&D, and, you know, and include testing of  
5 various demand-side renewable energy technologies, but  
6 more of a test of the market to see the test customer  
7 acceptance and what happens with, you know, the prices  
8 of the technology with support from a program and all  
9 the other things you'd want to look at in an R&D  
10 program. But we see this as an R&D program, not as one  
11 of the ones covered under the FEECA goals.

12 **Q.** Okay. And did you listen to the testimony  
13 previously by Mr. Rufo and, about Interrogatory Number 7  
14 regarding the fact that there's 2 percent of existing  
15 residential homes in Florida that have solar hot water  
16 heaters?

17 **A.** Yes.

18 **Q.** Okay. And he also testified that that  
19 reflected a 75 percent market share for solar water  
20 heaters after ten years. Did you hear that?

21 **A.** That was the -- well, you mean --

22 **Q.** That was his projection.

23 **A.** Right. Correct.

24 **Q.** Okay. If the Commission approves your  
25 measure, will these funds allow further market

1 penetration?

2 **A.** Yes.

3 **Q.** Do you believe these funds will help  
4 stabilize, create and stabilize the solar technology  
5 market in Florida?

6 **MR. GUYTON:** Objection. We've indulged this.  
7 This is clearly friendly cross.

8 **MS. BROWNLESS:** A few more questions,  
9 Mr. Guyton.

10 **MR. GUYTON:** Well --

11 **BY MS. BROWNLESS:**

12 **Q.** Have the costs --

13 **COMMISSIONER EDGAR:** I'm sorry, Ms. Brownless.  
14 I did not hear you. I really didn't.

15 **MS. BROWNLESS:** Sorry.

16 **COMMISSIONER EDGAR:** All right. So we are  
17 moving forward?

18 **MS. BROWNLESS:** Yes, ma'am.

19 **BY MS. BROWNLESS:**

20 **Q.** Have the costs of solar technologies decreased  
21 over the last five years?

22 **A.** I have not examined that issue specifically  
23 for Florida. GDS has collected data on the current  
24 costs for, you know, residential and commercial solar  
25 installations, but I don't have data that would show

1 whether it's increased or decreased.

2 Q. Do you have your deposition here,  
3 Mr. Spellman?

4 A. Yes, I do.

5 Q. Can you turn to Lines 223 and 224 -- or Pages  
6 223 and 224?

7 A. I'm there.

8 Q. And on Page 223, look at the questions and  
9 answers.

10 A. Okay.

11 Q. Okay. When asked that question at deposition,  
12 did you indicate that the cost of solar technology had  
13 decreased over the past five years?

14 A. We can --

15 Q. Lines 22.

16 A. I guess I did.

17 Q. And did you also indicate that you believed  
18 that solar costs would continue to decrease over the  
19 next five years?

20 A. I did.

21 **MS. BROWNLESS:** Thank you.

22 That's all we have. Thank you, ma'am.

23 **COMMISSIONER EDGAR:** Are there questions from  
24 the bench?

25 Commissioner Skop.

1                   **COMMISSIONER SKOP:** Thank you, Madam Chair.  
2 Just a quick question to FPL, which may prevent some of  
3 my questions for the witnesses.

4                   But going back to the GRU exhibit, what  
5 inference was FPL attempting to draw from the witness  
6 testimony regarding the last page of the GRU exhibit?

7                   **MR. GUYTON:** What FPL was attempting to point  
8 out was that this utility, which is being touted by this  
9 witness as a leading Florida utility in DSM, has this  
10 year decided to suspend its characterized successful  
11 programs because of the economy and budget constraints.

12                   **COMMISSIONER SKOP:** Okay. Thank you.

13                   Mr. Spellman, just a quick question regarding  
14 the, Page 6 of the GRU exhibit. By chance, did you read  
15 the, yesterday's *Wall Street Journal*?

16                   **THE WITNESS:** I did not.

17                   **COMMISSIONER SKOP:** Okay. All right. I'll  
18 skip that question then.

19                   Could -- are you aware, or I guess -- let me  
20 find my notes here. If you're able to comment, would  
21 GRU be inherently different from an investor-owned  
22 utility to the extent that it would transfer a  
23 substantial portion of its net revenues to the City of  
24 Gainesville's general fund?

25                   **THE WITNESS:** That would be the primary

1 difference.

2 **COMMISSIONER SKOP:** Okay.

3 **THE WITNESS:** Correct. That would be the  
4 primary difference. There may be -- there are other  
5 differences, but I guess the, they're comparable in that  
6 they're both located in Florida, they have similar, you  
7 know, weather conditions, and, and we use that as an  
8 example because people are always looking for examples  
9 of what could you do in Florida, so we tried to pick  
10 utilities in Florida.

11 **COMMISSIONER SKOP:** Okay. So for the sake of  
12 discussion, if GRU was experiencing declining unit sales  
13 and revenues during the economic downturn and was  
14 responsible for funding the city's operating budget,  
15 which was in a deficit, could that explain why they  
16 would need to reduce expenses and undergo cost reduction  
17 efforts?

18 **THE WITNESS:** Sure.

19 **COMMISSIONER SKOP:** Okay. And with respect to  
20 the six programs that were temporarily suspended, could  
21 those also be reasonably explained by the extent that  
22 they may be mature programs that are being displaced,  
23 not only by cost reduction measures, but also by the  
24 adoption of newer programs such as solar PV rebates that  
25 GRU offered?

1           **THE WITNESS:** Sure. That's possible. I also  
2 notice they say they've temporarily suspended them. So  
3 I'm assuming that as the economy turns around, then they  
4 will unsuspend them, which is a good business, a  
5 reasonable business decision.

6           **COMMISSIONER SKOP:** Okay. And, again, we  
7 don't regulate GRU, but, again, I am a GRU customer and  
8 they do offer a broad base range of alternatives, some  
9 of which are offered by other IOUs, some are not. But  
10 GRU is not similarly situated in terms of being fully  
11 accountable to its ratepayers.

12           The question that I had with respect to your  
13 testimony on Page 74 at, beginning at Line 19 through 20  
14 where you discuss basically the R&D type projects, solar  
15 thermal and solar PV measures, they're not found to be  
16 cost-effective at this time. Are you familiar with that  
17 part of your testimony?

18           **THE WITNESS:** Yes, I am.

19           **COMMISSIONER SKOP:** Okay. Can you relate  
20 that -- are you familiar also with Mr. Steinhurst's  
21 testimony generally?

22           **THE WITNESS:** Yes, I am.

23           **COMMISSIONER SKOP:** Okay. On Page 35 of his  
24 testimony he had made the statement that solar PV  
25 currently, or would easily pass the Participant Test in

1 2015. And in terms of the cost-effectiveness, do you --  
2 I was trying to define the, or flesh out the apparent  
3 disconnect in those two statements. Because, again, it  
4 seemed to me that he, I guess, hinted in his testimony  
5 that, that solar PV might be cost-effective.

6 **THE WITNESS:** Right. And it's my  
7 understanding that the work done by Itron was not found  
8 to be cost-effective at this time. And I don't have any  
9 information that would suggest that it, that it is  
10 cost-effective right now.

11 **COMMISSIONER SKOP:** Okay. All right. And  
12 then just to -- I think I heard this at the beginning,  
13 but my understanding is you've been retained by PSC  
14 staff to perform an independent evaluation --

15 **THE WITNESS:** Correct.

16 **COMMISSIONER SKOP:** -- of the Itron study and  
17 the collaborative goal setting.

18 **THE WITNESS:** Correct. Correct.

19 **COMMISSIONER SKOP:** Thank you.

20 **COMMISSIONER EDGAR:** Anything on redirect?

21 **MR. SAYLER:** No, Madam Chairman.

22 **COMMISSIONER EDGAR:** Okay. Let's move  
23 exhibits.

24 **MR. SAYLER:** One moment. I believe we have  
25 a -- okay. With the exhibits, yes, Madam Chairman. For

1 staff we have Exhibits Numbers 87 through 109, which we  
2 would like to have moved into the record at this time.

3 **COMMISSIONER EDGAR:** Okay. Seeing no  
4 objection, we will admit at this time Exhibits 87  
5 through 109.

6 (Exhibits 87 through 109 admitted into the  
7 record.)

8 **MR. GUYTON:** Florida Power & Light moves  
9 Exhibits 172 through 174.

10 **MR. SAYLER:** Excuse me. We also have Exhibit  
11 171, which is the second errata sheet as well. I  
12 apologize for not mentioning that sooner.

13 **COMMISSIONER EDGAR:** That's okay. Okay. No  
14 objections on 171. Admitted at this time.

15 (Exhibit 171 admitted into the record.)

16 And 172 through 174 submitted by FPL. Any  
17 objection? No objections. Show them entered into the  
18 record at this time.

19 (Exhibits 172 through 174 admitted into the  
20 record.)

21 And that brings us to 175. Ms. Brownless.

22 **MS. BROWNLESS:** Yes, ma'am. Yes, ma'am.  
23 Florida Solar Coalition would move 175, please.

24 **COMMISSIONER EDGAR:** Okay. Hearing no  
25 objection, Exhibit 175 is entered into the record.

1 (Exhibit 175 admitted into the record.)

2 And the witnesses are excused. Thank you.

3 And it's about that time, so let's take about  
4 a ten-minute stretch and come back at 25 minutes to the  
5 hour. We are on recess.

6 (Recess taken.)

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STATE OF FLORIDA        )  
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COUNTY OF LEON         )

CERTIFICATE OF REPORTER

I, LINDA BOLES, RPR, CRR, Official Commission Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorneys or counsel connected with the action, nor am I financially interested in the action.

DATED THIS 18<sup>th</sup> day of August, 2009.

Linda Boles  
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