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Subject: Docket Nos 080407-EG through 080413-EG -- NRDC/SACE Post-hearing brief and issues statement
Attachments: NRDC-SACE Issue Statement and Post Hearing Brief.pdf

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b. This filing is made in: Docket Nos. 080407-080413 Numeric Conservation Goals:

c. This document is filed on behalf of the Natural Resources Defense Counsel and the Southern Alliance for Clean Energy, Inc.

d. The total pages in the attached document are .

e. The document consists of NRDC-SACE's Issue Statement and post-hearing Brief

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August 28, 2009

Ann Cole
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Florida Public Service Commission
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RE: Docket No.

Dear Ms. Cole:

On behalf of the Natural Resources Defense Council, Inc., and the Southern Alliance for Clean Energy, Inc., enclosed please find for filing the Post-hearing and issues statement brief in the above-referenced dockets. I thank you for your attention to this matter.

Sincerely,

/s/ E. Leon Jacobs, Jr.

E. Leon Jacobs, Jr.
Attorney for The Natural Resources Defense Council, Inc., and
the Southern Alliance for Clean Energy

Enclosures

DOCUMENT NUMBER-DATE
08967 AUG 28 8
FPSC-COMMISSION CLERK

BEFORE THE PUBLIC SERVICE COMMISSION

In re: Commission Review of Numeric) DOCKET NO. 080407-EG
Conservation Goals)
Florida Power & Light Company)
_____)

In re: Commission Review of Numeric) DOCKET NO. 080408-EG
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Progress Energy, Florida, Inc.)
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Jacksonville Electric Authority)
_____)

**THE NATURAL RESOURCES DEFENSE COUNCIL, INC.'S AND
THE SOUTHERN ALLIANCE FOR CLEAN ENERGY, INC.'S**

POST HEARING STATEMENT AND BRIEF

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and the Southern Alliance for Clean Energy, Inc.

NRDC and SACE STATEMENT OF ISSUES AND POSITIONS

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

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

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

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

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

POSITION: *Yes.*

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

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

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

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

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

POSITION: *Yes. Incentives are needed. If the Commission adopts more aggressive goals it would be appropriate, in a future proceeding, to establish performance-based incentives allowing utilities to benefit from cost-effective efficiency programs

DOCUMENT NUMBER-DATE

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while concurrently encouraging the utilities to excel at delivering energy efficiency programs that lower customer bills.*

ISSUE 7: What cost-effectiveness test or tests should the Commission use to set goals, pursuant to Section 366.82, F.S.?

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

ISSUE 8: What residential summer and winter megawatt (MW) and annual Gigawatt-hour (GWh) goals should be established for the period 2010-2019?

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

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

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

ISSUE 10: In addition to the MW and GWh goals established in Issues 7 and 8, should the Commission establish separate goals for demand-side renewable energy systems?

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

ISSUE 11: In addition to the MW and GWh goals established in Issues 7 and 8, should the Commission establish additional goals for efficiency improvements in generation, transmission, and distribution?

POSITION: *Yes. Increasing generating plant efficiency, reducing transmission and distribution losses benefit customers and the environment. We recommend that the Commission set a date certain by which the companies will perform technical economic and potential studies for efficiency improvements at their existing plants and in their existing transmission and distribution systems.*

ISSUE 12: In addition to the MW and GWh goals established in Issues 7 and 8, should the Commission establish separate goals for residential and commercial/industrial customer participation in utility energy audit programs for the period 2010-2019?

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

ISSUE 13: Should this docket be closed?

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

ISSUE 14: What action(s), if any, should the Commission take in this proceeding to encourage the efficient use of cogeneration? (FIPUG NEW ISSUE)

POSITION: *We believe that the Commission should encourage the efficient use of cogeneration.*

ISSUE 15: In setting goals, what consideration should the Commission give to the impact on rates? (OUC NEW ISSUE)

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

ISSUE 16: Since the Commission has no rate-setting authority over OUC and JEA, can the Commission establish goals that put upward pressure on their rates

POSITION: *No. PSC precedent indicates that when the Commission engages in regulatory action that only has an incidental effect on a utility’s rates, the Commission has not engaged in agency “rate setting.” While the PSC cannot determine the overall revenue of a utility, it can adjust a utility’s “rate structure.”*

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BRIEF OF
THE NATURAL RESOURCES DEFENSE COUNCIL, INC., AND
THE SOUTHERN ALLIANCE FOR CLEAN ENERGY, INC.

TABLE OF CONTENTS

INTRODUCTION	1
AGRUMENT	4
I. The Florida Legislature Requires Use of the Total Resource Cost Test.....	4
A. The Amended Statute	4
B. The Plain Language of the Amended Statue Requires Use of the TRC Test.....	5
C. The Legislative History Confirms That Section 3(b) Requires Use of TRC.....	6
D. The Rate Impact Measure Test is Incompatible with the Language of Amended Section 3(b) and Its Legislative History	7
E. The Legislature’s Decision to Consider Ratepayers as a Whole (the TRC Test) is Also Good Policy	9
1. TRC results in the lowest energy costs to ratepayers as a whole.....	10
2. Properly designed programs will help all customers lower their bills, including low-income customers	12
3. Any short term rate impacts from efficiency will be modest.....	13
II. The Two-Year Payback Screen Should be Rejected Because It Arbitrarily Eliminates the Most Cost-Effective Measure and is Both Contrary to the Statute and Unreasonable.....	16
A. Background on the Two-Year Payback Screen.....	17
1. The two-year payback screen and the two-year payback incentive limit.....	17
2. The two-year payback screen thwarts the Legislature’s express Directive by removing hundreds of the most cost-effective measures Totaling between 33% and 46% of the total technical potential.....	18
B. The Commission must reject the two-year payback screen because the evidence shows it will not effectively address free riders.....	19
1. The utilities lack any substantial support for their claim that the two-year payback will minimize free riders.....	20

2.	Utility assumptions that “reasonable” customers will or should adopt these measures are rebutted by the undisputed facts.....	22
3.	Evidence from staff and intervenor witnesses and Utility witness Rufo demonstrates that the two-year screen is not an effective means of addressing free riders.....	23
b.	GDS survey shows low free ridership for CFL measures.....	23
c.	A single screen will not be appropriate for all measures.....	24
d.	Itron’s analysis already accounts for free riders.....	25
e.	Non-incentive DSM programs can also increase adoption.....	25
C.	The Commission must also reject the two-year payback screen because it is contrary to the FEECA statute	26
III.	The Utilities’ Achievable Potential Analysis Does Not Meet the Standards of Section 366.82.....	27
A.	Potential avoided costs were underestimated.....	28
B.	The Application of administrative costs to individual measures improperly suppresses achievable potential.....	28
C.	Market penetration levels underestimated achievable potential.....	29
D.	The technical potential analysis was conservative.....	30
IV.	The Technical Potential Study and Expert Analysis Shows That the Utilities Can Achieve, After a Short Ramp-up Period, Savings of Between 0.9 and One Percent Per Year.....	32
A.	The NRDC/SACE Analysis Demonstrated That One Percent Savings Per Year Is Feasible.....	32
B.	Staff Expert Spellman Conducted a Bottom-up Analysis That Identified Savings of Approximately 0.9 Percent Per Year.....	34
C.	Efficiency Goals Should Be Set Immediately and the Utilities Should Be Required To Complete Corrected Studies.....	36
D.	The Commission Should Use Dr. Steinhurst’s Ramp-up Period.....	36
	CONCLUSION.....	37

INTRODUCTION

In 2008, the Florida Legislature enacted critically important amendments to the substantive statute that governs these proceedings, Section 366.82 of the Florida Energy Efficiency and Conservation Act (“FEECA”). In enacting these amendments, the Legislature recognized the extraordinary potential for increasing energy efficiency in Florida and the tremendous benefits that such programs would deliver to electricity customers. As the Legislature recognized, substantially increasing energy efficiency will reduce customers’ electricity bills, increase Florida’s economic competitiveness, and reduce greenhouse gas emissions. In these consolidated dockets, the Commission must fulfill this legislative mandate.

The context for these amendments is clear. Although Florida was a leading state when it first adopted mandatory energy efficiency programs, the energy efficiency levels being achieved by the FEECA utilities have fallen far below the levels achieved elsewhere in Florida and around the country. A principal reason for this is the utilities’ successful effort to use the Rate Impact Measure (RIM) test during the goal-setting process. The application of this test limits the efficiency goals set by the Commission to a fraction of the goals set elsewhere and a fraction of the levels of efficiency savings actually achieved by other utilities in Florida and around the country. Tr. 1508 (Spellman); Tr. 1443-44 (Wilson). Most importantly, the use of the RIM test has denied Florida electricity customers access to the cost-effective energy efficiency measures that would do the most to reduce their electricity bills.

In its amendments, the Legislature addressed this issue by specifying for the first time the cost-effectiveness tests the Commission must to use in setting goals. The test clearly described by the plain language of section 366.82(3)(b) of the amended statute – and explicitly described in the bill’s legislative history – is the Total Resource Cost (TRC) test. As witness Ralph Cavanagh

describes, this test will provide customers far greater savings on their electricity bills than the RIM test.

Remarkably, the utilities have been unwilling to accept the changes mandated by the legislature. As the utilities would read the statute, the 2008 amendments change nothing. The Commission should, they argue, simply continue to apply the same RIM test it has been applying for years. Florida Power and Light (FPL) has even proposed efficiency goals that are *lower* than the goals set in 2004. In place of a defensible reading of the statute, the utilities attempt to convince the Commission to ignore the amended statute by deploying exaggerated and misleading claims that customers will be hurt by rate increases goals are set based on TRC. The utilities have it all backwards. As even they must admit, the very reason they claim rates would have to go up is precisely because of the large *customer savings* that would occur under a TRC program. Customer savings are precisely what the Legislature was hoping to achieve and what will be achieved through use of the TRC test. Moreover, under a TRC portfolio, even if a rate increase were required – and it would be a modest one at most – customers as a whole will still achieve substantial savings on their electric bills.

Thus, the first critical issue in this proceeding is what cost-effectiveness test – TRC or RIM – should be used. As NRDC/SACE describe, the plain language of the amended statute answers this question in favor of TRC. In addition, NRDC/SACE also explain why the Legislature’s decision is sound policy and the utilities’ criticisms are fundamentally flawed.

The second major issue before the Commission is the utilities’ use of the so-called two-year payback screen. Incredibly, this screen eliminates an enormous number of the *most cost-effective* efficiency measures. It makes absolutely no sense as a matter of good policy to eliminate the most cost-effective measures. Such an approach is particularly harmful to low-

income customers who can quickly and dramatically reduce their bills through such measures. Further, the screen is does not even serve the purpose of preventing free riders as claimed by the utilities. The utilities have completed no analysis in support their claim and the evidence in fact shows that it does *not* effectively address free riders. Finally, the screen is contrary to the Legislature’s directive that the Commission pursue the “most cost-effective energy efficiency,” Fla. Stat. § 366.81, and consider the “full technical potential” of all energy efficiency. Fla. Stat. § 366.82(3). Accordingly, the Commission must reject this arbitrary screen.

The third question for the Commission is the actual energy efficiency goals for each of the seven FEECA utilities. The utilities ask for efficiency goals that are astonishingly low – zero and 1.5 percent of sales over *ten* years. In contrast, other utilities in Florida and elsewhere have recently achieved energy efficiency gains of close to or above one percent of sales *each* year. The utilities arrived at such low goals by using RIM and the two-year payback screen, and imposing conditions that severely constrained the achievable potential analysis. For these reasons, the Commission must disregard the utilities’ proposed goals.

In contrast, NRDC/SACE’s expert witnesses and staff witness Richard Spellman offer conservative annual goals of, respectively, one percent and approximately 0.9 percent. The Florida-specific evidence from the Technical Potential study and the analysis by these experts shows that these goals are well within the range of what can be achieved. In addition, the actual energy efficiency savings achieved by other utilities further shows the reasonableness and achievability of these proposed goals in Florida. The Commission should adopt the goals recommended by NRDC/SACE immediately so that Florida customers can start to enjoy the significant savings that will result from implementing such cost-effective energy efficiency programs.

ARGUMENT

I. The Florida Legislature Requires Use of the Total Resource Cost Test

The plain language of the amended statute clearly directs the Commission to consider the Total Resource Cost Test when setting energy efficiency goals. This reading of the statute is confirmed by the explicit reference to the TRC test contained in the legislative history. It is equally clear that the Rate Impact Measure is not consistent with the language of the amended statute. Likewise, the legislative history indicates that the Legislature intended that the Commission must change its past practice of relying on the RIM test and instead use the TRC test. Finally, the Legislature's decision to require use of the TRC test is a sound policy judgment as this will provide the maximum savings to customers by minimizing the total cost to customers of receiving reliable energy services.

NRDC/SACE and the utilities agree that under Section 366.82(3)(d) greenhouse gas emission costs must be included. For ease of reference, NRDC/SACE simply refer to the TRC and RIM tests, understanding that they would include greenhouse gas emission costs, rather than the more cumbersome "E-RIM" and "E-TRC" formulations.

A. The Amended Statute

In the 2008 amendment to FEECA, the legislature, for the first time, established specific cost-effectiveness criteria that the PSC must apply when setting energy efficiency goals. The first step the legislature prescribed is that the PSC "evaluate the full technical potential of all available demand-side and supply-side conservation and energy efficiency measures." Fla. Stat. 366.82 (3) (2008). Second, in setting goals, the legislature enumerated four items the PSC must consider, the first two of which provide the cost-effectiveness tests it must consider. *Id.* In section 3(a), the legislature required the PSC to consider "the costs and benefits to customers

participating in the measure.” There is no debate among the parties that section 3(a) requires application of the “Participant Test.” In section 3(b), the legislature required that the PSC consider “[t]he costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions.” As explained in more detail below, section 3(b) requires application of the TRC test.

B. The Plain Language of the Amended Statute Requires Use of the TRC Test

In interpreting the FEECA amendment, the plain and obvious language of the statute controls. *Knox v. Adventist Health Sys./ Sunbelt, Inc.*, 817 So.2d 961, 962 (Fla. 5th DCA 2002). Here, the plain language of the FEECA amendments requires that the PSC employ the Total Resource Cost test when setting energy efficiency goals. This is readily apparent from the language of the amendment. Section 3(b) mandates that the PSC consider “[t]he costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions.” TRC is the cost-effectiveness test that focuses on the “general body of ratepayers as a whole.” As described in the testimony of NRDC/SACE witness Ralph Cavanagh – testimony which none of the utilities sought to cross-examine – the TRC test does this by considering the total costs of an energy-efficient measure, no matter who pays for it, as well as the cost of implementing the efficiency program, and comparing that to the benefit the measure provides to the participant and all the utility’s customers including through avoided generation, transmission, distribution, and environmental costs.¹ The fact that the legislation calls for considering ratepayers “as a whole” is particularly significant because, in contrast to the Rate Impact Measure (RIM) test preferred by the utilities, the TRC test considers the costs and

¹ 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.

benefits to *all* ratepayers in determining whether a particular measure is efficient.² Tr. 1414 (Cavanagh).

In addition, TRC, unlike RIM, includes both “utility incentives and participant contributions” in the calculation, because the test accounts for the *total* cost of the measure regardless of how that cost may be divided between the utility and participants. As TECO witness Bryant confirmed, Tr. 547-9, incentives are included in the TRC test as defined by the PSC Cost-Effectiveness Manual, which states that TRC is “based on the total costs of the program, including both the participants' and the utility's costs.” Ex. 156. The fact that the TRC test includes incentives was further confirmed by not only NRDC/SACE witnesses Cavanagh, Mosenthal, Steinhurst, and Wilson but also by Staff witness Richard Spellman.³ In addition, FPL consultant Dean admitted in his rebuttal testimony that incentives costs are “included as part of what participants would pay to install” a measure. Tr. 2070.^{4 5}

C. The Legislative History Confirms That Section 3(b) Requires Use of TRC

To the extent the text of the FEECA amendment is ambiguous, the Commission may look to its legislative history. *Weber v. Dobbins*, 616 So.2d 956, 958 (Fla. 1993). Even if this were the case, which it is not, *supra* Part X, the legislative history also clearly mandates the TRC test. The legislative history of the FEECA amendment consists of a staff committee report and an end

² In fact, as Mr. Cavanagh noted, the TRC test used to be called the “All Ratepayers Test.” Tr. 1414.

³ Tr. 1413-14 (Cavanagh); Tr. 1341 (Mosenthal); Tr. 1114 (Steinhurst); Ex. 97 (Spellman).

⁴ In his direct testimony, FPL consultant Dean claimed that “incentive costs are excluded” in the TRC test. Tr. 1229. Yet in his rebuttal, he admitted, that incentives “are part of the [TRC] analysis but are ‘hidden’ by being included as part of what participants would pay to install a utility recommended efficiency measure.” Tr. 2070. The use to the term “hidden” is misleading. Whether the utility incentive and participant contribution are separately identified or “hidden” together as part of the total measure cost, the TRC test result is the same.

⁵ Witness Sim also argues that if the Participant Test and TRC test are both used then participant contributions will be “double count[ed].” Tr. 86. As Mr. Cavanagh explains, this assertion makes no sense because those contributions are each part of a different test that reveals cost-effectiveness from a different perspective. Tr. 1414.

of session report on House Bill 7135. Ex. 84, 85.⁶ Both of these reports confirm that section 3(b) requires use of the TRC test. *Id.* The reports each paraphrase the language of 3(a) and 3(b) and explain, in parenthesis, the test that each section describes: For 3(a), the “(Participants test)” and for 3(b) “(similar to a Total Resource Cost test or TRC test but including the costs of incentives).” *Id.* The legislative history thus confirms that the legislature intended that the Commission employ the TRC test to set goals, provided that it included the cost of incentives. As Mr. Wilson suggests, it appears that the Legislature may have been under the impression that the TRC test did not include incentives. Tr. 1447. However, since the TRC test does include utility incentives, it clearly satisfies both the legislative history and the plain terms of the statute. Accordingly, the legislative history further confirms that the Commission must use the TRC test.

D. The Rate Impact Measure Test is Incompatible with the Language of Amended Section 3(b) And Its Legislative History

Unlike use of the TRC test, use of the RIM test is not consistent with amended section 3(b). First, there is no dispute that the RIM test does not include “participant costs,” as required by section 3(b). As the PSC cost-effectiveness manual explains, RIM “costs include the program costs incurred by the utility, the incentive paid to participants, and increased supply costs.” Ex. 136. Dr. Sim admits that the RIM test does not include “participants costs” as explicitly required section 3(b). Ex. 4.2 (Sim Dep. 21).

Second, the RIM test also excludes the participants’ benefits, which come in the form of reduced energy expenditures and lower energy bills. Ex. 4.2 (Sim Dep. 16); Tr. 1415 (Cavanagh); Ex. 156 (Cost-effectiveness Manual). These benefits are essential to any accounting of the “costs and benefits to ratepayers as a whole.”

⁶ Fl. House of Representatives’ 2008 Legislative Session End of Session Report and the House of Representatives Staff Analysis of HB 7135 for the Committee on Energy and the Environment & Natural Resources Council.

Third, the purpose of the RIM test is to focus on rates, not overall costs and benefits. Nowhere in the amendments is there any suggestion that the Commission should focus on rates when setting goals. Utility witnesses claim that the PSC must use the RIM test to avoid “winners and losers” and cross-subsidization. Tr. 1232 (Dean); Tr. 23. 82 (Sim); Tr. 418 (Masiello). The utility’s focus on short-term effects on ratepayer subgroups is antithetical to the statute’s directive that the Commission consider “ratepayers *as a whole*.” Considering ratepayers “as a whole” means that the Commission cannot set goals based on a claim that there will be a winning subgroup and a losing subgroup but must instead consider all ratepayers together. In other words, the legislature has directed that goals be set based on measures where the benefits to the whole group (“winners” and “losers” together) are greater than the costs to the whole group. The RIM test cannot provide this perspective. (As discussed in section (I)(E), over the long-term, all customer subgroups will benefit from avoiding more expensive sources of supply).

While admitting that the RIM test itself cannot satisfy section 3(b), several utility witnesses argue that the RIM test in combination with the Participant test does satisfy section 3(b). Tr. 86 (Sim); Tr. 1230 (Dean). However, if section 3(b) is read to require application of both the RIM and Participant tests, then section 3(a), which everyone agrees requires application of the Participant test, would be rendered meaningless. Thus, the utility’s interpretation violates the “basic rule of statutory construction . . . that the Legislature does not intend to enact useless provisions, and courts should avoid readings that would render part of a statute meaningless.” *Larimore v. State*, 2 So. 3d 101, 114 (Fla. 2008) (internal quotations omitted). More importantly, this approach also violates section 3(b) itself because applying both the RIM and Participant tests will still not result in the analysis of costs and benefits to the “general body of ratepayers as a whole” as called for by that section. As Witness Mosenthal explains, the utilities have not

attempted to combine these two tests into a single test but have applied each standing alone and excluded measures if they fail either one. Tr. 1340; *see also* Ex. 4.2 (Sim Dep. 32). The participant benefits and contributions will still be considered only in the Participant test and will not be imported in any way into the RIM test. The RIM test will thus continue to exclude measures without any consideration of the participant benefits (i.e., customer savings) or participant contributions, which are of course fundamental parts of the “costs and benefits to the general body of ratepayers as a whole.” In contrast, the TRC test provides a single vehicle in which all the statutorily required costs and benefits can be considered together.

Finally, the legislative history also confirms that the legislature did not intend the Commission to apply the RIM test. Under the heading, “Present Situation,” the House of Representatives Staff Analysis describes the PSC’s practice of requiring the Participant, RIM and TRC tests. Under the heading, “Effect of Proposed Changes,” the Staff Analysis then indicates that the amendments require the PSC to consider the Participant and TRC tests, clearly omitting any mention of the RIM test.⁷ Ex. 84, 85. Plainly, the authors of the Staff Analysis would not have included the new cost-effectiveness test under the section titled “Effect of Proposed Changes” if they thought those changes maintained the status quo.

In sum, the plain language of the amendments as well as the legislative history demonstrate that the legislature intended the Commission to switch from setting goals based on measures that pass the RIM test and instead set goals based on measures that pass the TRC test.

⁷ Witness Dean correctly recounts the Commission’s past preference for the RIM test. Tr. 1221-27. The Commission’s past decisions obviously do not trump the Legislature’s amendments. The only relevance of this history is to provide the context in which the legislature acted. If the legislature had intended that the Commission continue to employ the RIM test, one would have to ask why the legislature had acted at all. *See Unruh v. State*, 669 So.2d 242, 245 (Fla. 1996) (noting the “general rule that the legislature does not intend to enact purposeless and therefore useless, legislation”).

E. The Legislature's Decision To Consider Ratepayers as a Whole (the TRC Test) Is Also Good Policy

1. TRC results in the lowest energy costs to ratepayers as a whole

The legislature's decision to require application of the TRC test rather than the RIM test represents sound energy policy. As a policy matter, there can be little debate that society benefits by minimizing the total cost to customers of receiving reliable energy services. As Witness Cavanagh and others have testified, this is precisely the perspective that the TRC test takes. The TRC test evaluates efficiency from the perspective of all customers and includes the total costs (including both program and incremental measure costs) and benefits to customers.

The RIM test, in contrast, does not focus on how to deliver energy services in the most economically efficient manner. Instead, it focuses exclusively on short-term rate impacts and therefore eliminates numerous highly cost-effective efficiency measures that, if adopted, will reduce customers' energy bills, lower overall energy costs, and, by avoiding the cost of new generation, may also reduce rates over the long term. As Bob Trapp of the PSC explained in a presentation to the Florida Legislature last year, under the RIM test "[p]rograms with relatively higher kWh reductions will result in higher revenue losses and reduce the potential to be cost-effective under RIM." Ex. 86. As this correctly indicates, use of the RIM test discourages adoption of many energy efficiency measures. Indeed, Progress Energy witness Masiello confirmed in his deposition that measures promoting replacement of incandescent light bulbs with compact florescent bulbs, one of the most cost-effective types of measures available to consumers, would *not* pass the RIM test. Tr. 401. Continued use of the RIM test would leave substantial cost savings unachieved, cost savings that Florida customers need and deserve.

Furthermore, the focus on rates is fundamentally misplaced. What is important to customers are total utility *bills* rather than *rates*. Customers clearly benefit if, for a constant level

of service, their rates go up but their bills go down. In addition, both Florida's economy and environment are better off when total energy bills and total energy sales are reduced through cost-effective energy efficiency. The best test to determine whether an energy efficiency measure will achieve this result is TRC, which appropriately considers the total costs and total benefits of energy efficiency measures. Moreover, because the TRC test ensures that the total benefits exceed the costs, those benefits will be considerably greater than any unrecovered revenues that may need to be recovered through a rate increase. Under the current regulatory structure, the only party who may not benefit under the TRC test are the utilities because when customers save more energy, there is less need for the utilities to construct additional supplies, on which they earn a profit. Tr. 176 (Sim); Tr. 424 (Masiello); Tr. 563 (Bryant). As described in Mr. Cavanagh's testimony, this regulatory structure can and should be adjusted to bring the utilities' incentives in line with those of customers and the environment. Tr. 1424.

Finally, it is important to note that the difference between the RIM and TRC achievable savings are even greater than it would appear from the utilities' RIM and TRC numbers. Ex. 1345 (Mosenthal). One of the reasons for this is the disproportionate effect of the two-year payback screen. As explained in more detail in section II, *infra*, the two-year payback screen is arbitrary, unreasonable and contrary to the legislature's direction. However, this screen also diminishes the difference between the measures that pass RIM and pass TRC. This is because by eliminating the most cost-effective measures that pass TRC, it also eliminates the measures with the greatest kWh savings. Tr. 401 (Masiello). For example, in PEF's analysis, when the two-year screen was applied to measures that had passed RIM, it eliminated only 179 GWh but when it was applied to measures that passed TRC it eliminated 1,872 GWh, a more than ten fold increase. Tr. 402-03; Ex. 2.6 (Response 73). In its 1994 decision, the Commission indicated that

“the difference in demand and energy savings between RIM and TRC portfolios are negligible.” Ex. 76 at 22. The same cannot be said for difference between the two tests based on the evidence in this docket, which shows the difference is very substantial and customer savings will be far greater under a TRC portfolio.

2. Properly designed programs will help all customers lower their bills, including low-income customers

It is critical to re-emphasize that as a matter of policy, the legislature was correct to focus on customer costs – that is bills – rather than focus on electricity rates. What matters to customers and the economy of Florida is the size of customers’ electric bills. Under the TRC test, the total costs of delivering electric services will be minimized. Tr. 1419 (Cavanagh). Contrary to the misleading suggestion of several utility witnesses, there can be no question that, as whole, customers will pay lower electric bills if measures that pass the TRC test are applied. As customers reduce their bills through efficiency measures, some temporary increase in rates may be equitable to allow utilities to recover revenues to cover fixed costs. However, customers as a whole will save money even if rates go up. A June 2006 analysis by the National Action Plan on Energy Efficiency found that on average bills will be reduced by 2.9 percent over a ten-year period due to energy efficiency programs even if there is some rate increase. Ex. 96.

The main argument employed by the utilities is that under the TRC test, customers who do not adopt energy efficiency measures may subsidize the adoption of energy efficiency measures by customers who do adopt such measures and also that this may disproportionately harm low-income and other vulnerable customers. Tr.1233 (Dean); Tr. 137 (Sim). The record rebuts these claims. For instance, although FPL’s consultant Dean and Sim claim that low income customers will be harmed because they cannot participate in programs as easily, witness Haney, the head of FPL’s DSM program, testifies to the exact opposite – the success of FPL at

reaching low-income customers. As Mr. Haney explains “low income customers are taking advantage of our programs at the same rate or at a similar rate as the rest of our customers.” Tr. 267-23; see also Ex. 22; (JRH-6). FPL’s success at delivering programs to low-income customers is confirmed by the testimony of witness Cavanagh, who cites examples of programs such as the Hood River Conservation Project, which not only had very high participation overall but also had greater participation by less wealthy households. Ex. 1419.

In any event, NRDC/SACE does not dispute that savings should be maximized for all classes of rate-payers, and that it is particularly important to ensure savings for low-income and other vulnerable demographics. The way to do this, however, is not to withhold investment in energy efficiency -- and the concomitant customer savings -- by using the RIM test. Rather, the answer is to ensure that opportunities to participate are widely available. Simply put, if utilities design their programs well – and NRDC/SACE share their own confidence that they can do so – *then few if any customers will not be in a position to benefit from energy efficiency programs.* This means that programs should be made broadly available and include all classes and that the kind of low-income programs FPL has followed should be maintained or even expanded. And if all customers are provided an opportunity to participate, then they are all treated equitably. In some cases utilities have achieved participation rates as high as ninety percent. Tr. 1419.

3. Any short-term rate impacts from efficiency will be modest

Moreover, the rate impacts are likely to be modest. As Staff witness Spellman indicates in his testimony, a March 2009 study by the Lawrence Berkeley National Laboratory (LBNL) estimated that the long term rate impacts of implementing a “Significant Energy Efficiency scenario,” defined as saving one percent per year of annual electric sales, would result in a

“levelized rate impact of 0.83 percent over a 20-year period.” Tr. 1531.⁸ Moreover, any rate increases associated with energy efficiency programs are of a totally different nature from rate increases associated with the need to construct new more-expensive power plants. The rate increases that may be necessary as a result of energy efficiency programs are the direct result of customers *saving* money on their electricity bills, precisely the kind of relief that Floridians need.

In their rebuttal, JEA witness Vento, and OUC witness Halley include tables of increased electricity bills that they claim will occur if the goals recommended by Witness Steinhurst are adopted. In his rebuttal, FPL consultant Dean also provides an estimate of the total unrecovered fixed costs – i.e., customer savings – if staff witness Spellman’s proposal were adopted.

Such projections are unpersuasive for at least four reasons. First, it is critical to recognize what is omitted from these figures: Nowhere do they present the significant cost savings that participants will experience. In fact, if programs are designed well, all customers will have opportunities to participate and participation should be very high. As FPL has demonstrated, this high participation can and should include low-income customers at the same or greater rates than other groups. As the Legislature wisely determined by requiring consideration of “the general body of ratepayers as a whole,” it does not make sense as a matter of policy to ignore the substantial *savings* that all households will have the chance to enjoy through energy efficiency programs. Moreover, there is no question that under a TRC portfolio, the customer savings as a whole will be significantly greater than any unrecovered fixed costs.

Second, none of these witnesses provide any of the methodology or assumptions used in their calculations and, because of the timing of the rebuttal testimony, NRDC/SACE were unable

⁸ The LBNL also reports that a “Moderate Energy Efficiency scenario (which is defined as saving 0.5 percent per year of the incremental annual retail electric sales) demonstrates a levelized rate impact of 0.14 percent over a 20-year period.” Tr. 1531. For an “Aggressive Energy Efficiency scenario (which is defined as saving 2.0 percent per year of the incremental annual retail electric sales) demonstrates a levelized rate impact of 3.28 percent over a 20-year planning period.” *Id.*

to take their depositions or otherwise discover the methods they used. Importantly, their numbers are inconsistent with the LBNL study, which suggests that rate increases should not exceed 0.83 percent over twenty years. Mr. Masiello's numbers are also inconsistent with the first-year cost he has claimed in his testimony. Tr. 1836-38.

Third, the calculations appear to ignore two key facts. As Witness Steinhurst explained in his direct testimony, the measures considered by the utilities have consisted primarily of load control measures which could pass the RIM test and that have a much smaller impact on the total cost of service compared to many of the energy efficiency measures that pass the TRC test. Tr. 1114. In addition, the goals proposed by NRDC/SACE and staff witness Spellman are large enough to avoid additional costly supply side power plants and avoiding these plants will result in substantial avoided cost benefits in terms of both energy and capacity that will be enjoyed both by the great majority of ratepayers who have participated in programs and the minority of ratepayers who have chosen not to participate.

Finally, Dr. Steinhurst's testimony also rebuts the claim that TRC programs are not good for customers. Dr. Steinhurst spent twenty-three years as a state consumer advocate on energy matters and has testified on behalf groups such as of the American Association of Retired Persons. Tr. 1141. Accordingly, he has significant expertise in evaluating the effect of energy efficiency programs on low-income consumers and the elderly. As he testified, the TRC-based goals he proposed will benefit Floridians and ratepayers as a whole.

[T]he program participants, especially low income and elderly customers, will see real savings immediately. Nonparticipants will also see real savings soon and for years to come, System-wide benefits for all customers will kick in gradually whenever there is an expensive power line upgrade or new generator that can be avoided. EE -- energy efficiency programs far exceed supply-side expenses in creating jobs as well and increasing the size of the state economy as a whole, floating nonparticipants' boats as well.

Tr. 1143-44; *see also* Tr. 1096.

II. The Two-Year Payback Screen Should Be Rejected Because It Arbitrarily Eliminates the Most Cost-Effective Measures And Is Both Contrary to the Statute and Unreasonable

In addition to reliance on the RIM test, the utility parties further constrained the universe of available measures for the achievable potential study by excluding measures that had a simple payback of two years or less. This was done to minimize payments to so called “free riders,” individuals that would adopt the measure without any utility incentive. As explained below, however, the methodology adopted by the utilities is akin to using a sledge hammer in the place of a scalpel, given the wholesale exclusion of hundreds of the most cost-effective measures in the face of evidence that these measures will not be adopted absent some DSM program and the availability of measure-specific strategies to avoid excessive free-ridership. By adopting the two-year payback screen, the utility parties have effectively created a “reverse-cost-effectiveness test,” because the screen removes all of the measures that are cheapest and most cost-effective from the customer’s perspective. The utility parties opted for this approach despite their own admission that they lack any actual data or analysis showing the adoption patterns of free riders or supporting their contention that it makes sense to completely exclude measures with a payback of less than two years.

In light of these and other facts described herein, there can be little question that the two-year payback is an absurd policy that harms customers and Florida by limiting access to the most cost-effective measures. The Commission can and should reject the utility parties’ use of the 2-year payback screen. In fact, it would be contrary to the Commission’s statutory mandate, to which all Commission actions must be tethered, to do otherwise. *Southwest Florida Water Mgmt Dist. v. Save the Manatee Club, Inc.*, 773 So.2d 594, 598-99 (Fla. App. 1st Dist. 2000). This is

true for at least three reasons: *First*, in amending the FEECA statute, the Legislature made plain its belief that “it is critical to utilize the *most efficient and cost-effective* demand-side renewable energy systems and conservations systems....” *Id.* § 366.81. Yet it is precisely the most efficient, cost-effective measures that the 2-year payback screen by definition eliminates from any DSM incentive program, thereby thwarting the main purpose for which the FEECA amendments were enacted.

Second, the Legislature has instructed the Commission, “in developing [energy efficiency] goals,” to “evaluate the full technical potential of *all* available demand-side ... conservation and efficiency measures” § 366.82(3), Fla. Stat. The two-year payback’s wholesale elimination of a full 33.9% to 46.7 % of the available technical potential cannot be reconciled with consistent with the Legislature’s instruction to develop goals based on the *full* technical potential of *all* available DSM measures.

Third, the Commission must base its decision on competent and substantial evidence and cannot approve methodologies that arbitrarily screen out DSM measures. *See* Fla. Stat. § 120.68(7)(b). The two-year payback screen, however, has no basis in any study of the actual experiences of any utility customer and is wholly arbitrary.

A. Background on the Two-Year Payback Screen

1. The two-year payback screen and two-year payback incentive limit

There are two ways that the utilities have applied a two-year payback criteria. The first is the two-year payback screen by which the utilities screen out measures with a simple payback of less than two years. A “simple” payback means that without any incentive at all these measures will provide a customer a payback of less than two years. This two-year payback screen means that such measures are omitted entirely from the achievable potential and from each utility’s

goals. The second way that the utilities use a two-year payback criteria is to limit the maximum level of incentives for measures that would have a longer payback absent an incentive. Both uses of the two-year criteria are unreasonable. However, in this section we focus on the two-year payback *screen*.

In the 1994 goal-setting order, the Commission, while not endorsing the two-year payback, approved goals for FPL that had relied on the screen. Ex. 76. In the 1994 proceeding Commissioners expressed serious concern about the two-year payback, with Commissioner Clark stating “I guess what I’m saying is I think you need another method to determine free riders.”⁹ FPL’s witness responded that “We’re looking for it. We haven’t found it yet.” As described below, FPL witnesses indicated no knowledge of any search for alternatives. In this docket, the Commission may only approve the two-year payback screen if it is supported by the evidence presented and if the screen is consistent with the amended FEECA statute. It is not.

2. The two-year payback screen thwarts the Legislature’s express directive by removing hundreds of the most cost-effective measures totaling between 33% and 46% of the total technical potential

In the utilities’ analysis the two-year payback screen was applied both to measures that passed the TRC test and those that passed the RIM analysis. Measures that failed the two-year payback screen were then eliminated from consideration in the achievable potential analysis and were also not included in each utility’s proposed goals. Tr. 889 (Rufo). Utility witnesses admit that the two-year payback screen removed the most cost-effective measures from the customers’ perspective by eliminating the measures that have the quickest payback to the customer. Tr. 282 (Haney); Tr. 923 (Rufo). Utility witnesses also admit that the measures that were eliminated by

⁹ Docket Nos. 930548-EG, 930549-EG, 930550-EG, 930551-EG, Transcript Vol. V, at 644, available at <http://www.psc.state.fl.us/dockets/cms/docketFilings2.aspx?docket=930548>. The Commission should take notice of this official PSC record. *Cooper v. State*, 845 So.2d 312, 313 (Fla. Dist. Ct. App. 2003); Fla. Stat. § 90.202(5).

the two-year payback screen tend to have relatively higher kWh reduction benefits than the measures that passed this screen. Tr. 401 (Masiello).

The sheer amount of cumulative technical energy efficiency potential lost through elimination by the two-year payback screen is enormous. For the total FPL analysis, fully 33.9% of the starting technical potential is eliminated. For FPU, the percentage removed reached a high of 46.7% of annual GWh technical potential. (Ex. 151) As FPL witness Sim testifies, the measures eliminated by the two-year payback screen represent almost half of FPL's economic potential. (Exhibit SRS-4). For the TRC test, 275 of 585 measures (47%) were removed at this step in FPL's analysis. Tr. 1334-35 (Mosenthal); Ex. SRS-4). For the other utilities, the share of the technical potential removed due to the two-year payback screen fell within this 33.9% to 46% range. (Ex. 151). Remarkably, this amount of eliminated energy-efficiency is far greater than the "blanket 17%" free rider reduction the Commission found unreasonable in its 1994 goal order. Ex. 76 at 42.

That vast amounts of GWh reduction benefits are eliminated by the two-year payback screen is not surprising. In fact, the bulk of savings in many programs come from these type of measures. An example is compact fluorescent light bulbs (CFLs). These products offer very quick paybacks, often less than 6 months. Tr. 1332 (Mosenthal). However, despite having been available for over a quarter century, CFL's still have relatively low penetration and awareness among the general population. *Id.* Yet in PEF's analysis, to take one example, CFL's passed the TRC test, but were captured and eliminated from further consideration by the two-year payback screen. Tr. 403.

B. The Commission Must Reject The Two-Year Payback Screen Because The Evidence Shows It Will Not Effectively Address The Claimed Objective of Addressing Free Riders

The use of the two-year payback screen must be rejected because it is arbitrary and not supported by any substantial evidence. First, the utilities fail to present any evidence in support of their claim that it is an effective means to minimize free-riders. Second, evidence presented by NRDC/SACE affirmatively shows that it will not be effective.

1. The utilities lack any substantial support for their claim that the two-year payback will minimize free riders

The utilities assert that the purpose for the two-year payback screen is to address free riders. However, the utilities' witnesses admit that they have not performed any actual studies showing that the two-year screen is an effective way to address this issue. In witness Haney's direct testimony, he claimed that "FPL's approach [to the two-year payback] has been tested analytically through research." Tr. 250. This claim did not stand up to questioning at his deposition. Witness Haney admitted that FPL has not conducted any research of its own on the effectiveness of the technique. Rather, Haney's claim that FPL had "tested" the two-year payback simply "refers to us looking at articles around customer adoption of energy-efficiency measures." Ex. 4.3 (Haney Dep. 84); Tr. 289. In fact, witness Haney could only provide one such article, could only recall a single conversation about the two-year payback with colleagues at FPL, and did not know how free riders are addressed elsewhere in the country. Ex. 4.3 (Haney Dep. 83, 117, 118). Mr. Haney also testified that since 1994, FPL has never considered any alternative to the two-year payback. Ex. 4.3 (Haney Dep. 114). PEF witness Masiello and TECO witness Bryant similarly admitted to having no Florida specific research on adoption patterns and free riders. Tr. 407 (Masiello); Tr. 556 (Bryant). In addition, none of the utilities sought any advice on free ridership from their expert Mike Rufo. Tr. 908 (Rufo).

FPL consultant James Dean briefly addresses the two-year payback in his direct testimony. He indicates that the essential issue with respect to free riders is determining the

appropriate balance between paying too much in incentives and thus paying unnecessarily for free riders and paying too little and thereby not achieving additional measure adoptions. Tr. 1236. In other words, it is a balance between the number of non-free riders who will adopt a measure as a result of a certain incentive versus the cost of paying that incentive to free riders. Mr. Dean then provides a summary of the discount rates found in academic literature, which he claims roughly correlate to a two-year payback. However, on cross-examination, Mr. Dean had to admit that “I really don’t speak to adoption rates in my testimony.” Tr. 1252; see also Tr. 1257 (“I can’t comment on what the adoption rates would be for any given measure”). When asked how he could balance the potential for paying too large an incentive and paying too little and not achieving sufficient adoption of a measure, Mr. Dean quickly disavowed any responsibility for assisting with that critical task, stating “I will not be doing that balancing act. The Commissioners are doing that balancing act.” Tr. 1254. In other words, while Mr. Dean may provide an interesting summary of the academic literature, he provides no evidence in support of the claim that a two-year payback screen is an appropriate way to minimize free riders. In his deposition, Witness Haney was similarly unable to provide any information on the levels of adoption at various payback periods and in fact did not believe that FPL had ever done such an analysis when it first designed the two-year payback. Ex. 4.3 (Haney Dep. 99, 109). Mr. Haney also indicated that he did not have any idea of how much of the technical potential was omitted as a result of the two-year payback screen, as this was “[n]ot an analysis that was done.”¹⁰ Ex. 4.3 (Haney Dep. 108).

¹⁰ FPL witness Haney also demonstrated serious confusion with respect to how free riders operate and the effect of the two-year payback. As noted, free riders are those people who would adopt a measure without an incentive but take the incentive offered by the utility. Ex. 4.3 (Haney Dep. 80-81). However, Mr. Haney was unable to indicate whether he thought all free riders would adopt a measure if a \$50 incentive were offered, Ex. 4.3 (Haney Dep. 99), and suggested that there would be more free-riders if the incentive were increased to \$150, Ex. 4.3 (Haney Dep. 88). As Witness Mosenthal and other utility witnesses explain, the exact same number of free riders will of course adopt

Finally, it is revealing that in their rebuttal testimony, neither of FPL's consultant Dean nor Mr. Haney present any substantive defense of the two-year payback. Tr. 2073-74 (Dean); Tr. 1663-65 (Haney). Rather, both resort to claiming that NRDC/SACE had agreed to the two-year payback in the collaborative. This hearsay claim is contradicted by numerous documents presented to Mr. Haney on cross-examination, including a letter Mr. Haney himself authored.¹¹ Tr. 292, 296. Moreover, this claim is irrelevant to the question before the Commission.

2. Utility assumptions that “reasonable” customers will or should adopt these measures are rebutted by the undisputed facts

In his testimony, FPL witness Haney suggest that the two-year payback is based on “[t]he assumption . . . that a reasonable customer will adopt DSM if the DSM measure provides them” a payback in two years or less. Tr. 250. FPL consultant Dean may have intended to make the same point in his discussion of discount rates. However, to the extent that the utilities are simply assuming that people will adopt these measures in the absence of a DSM program, the evidence overwhelmingly disproves their claim.

Indeed, the utilities' own expert witness, Mike Rufo testified that the adoption rates for many of the measures excluded by the two-year payback will *not* increase significantly absent utility programs. As Mr. Rufo explained, Exhibit 151 shows that for some highly cost-effective measures screened out by the two-year payback there will only be 2.9 percent additional adoption in the absence of a DSM program.¹² Tr. 920. Likewise, staff witness Spellman

the measure and take the incentive, regardless of whether it is a \$50 incentive or a \$150 dollar incentive. Tr. 1329 (Mosenthal); Tr. 555 (Bryant).

¹¹ Furthermore, in addition to erroneously claiming that NRDC-SACE endorsed highly selective portions of the methods used in the achievable potential study, utility witnesses also made the even broader claim that NRDC-SACE endorsed the entire achievable potential study. Tr. 1676, 1708 (Sim); Tr. 1802 (Masiello). The inaccuracy of this testimony is clearly established by an exchange of correspondence authenticated by Mr. Haney. Exs. 142-146.

¹² For some of the measures included in table 151, it appears that the ten-year penetration rate is higher. This is likely due to new federal appliance standards that will go into effect before 2019. For such measures, incentive or other programs may be appropriate before the standards go into effect or to encourage replacement of inefficient appliances that would otherwise remain in service for many years.

testifies that the average penetration rates for the measures eliminated by the two-year screen is quite low, averaging only twenty-five percent for residential measures, thus demonstrating that a payback of less than two years alone is not sufficient to trigger a reasonable level of measure adoption.¹³ Tr. 1500.

3. Evidence from witnesses Mosenthal, Spellman and Rufo demonstrates that the two-year screen is not an effective means of addressing free riders

Contrary to the utilities' unsupported claims that the two-year payback screen is effective, the evidence actually shows that it is not for several reasons.

a. Shorter paybacks do not result in more free ridership

The utilities have fundamentally misunderstood how free riders and non-free riders operate. The utilities' claim is that they need to exclude measures with rapid paybacks (less than two-years) in order to reduce the number of free riders who will participate. However, as NRDC/SACE expert Mosenthal testifies, the number of free riders will remain constant regardless of what level of incentive is offered. Tr. 1329-30. In other words, someone who would adopt a measure anyway (the very definition of a free rider) will adopt it whether the payback is two-years or whether an incentive reduces it to one-year. What one gets by offering a more generous incentive (which shortens the payback) is more adoptions by *non-free riders*. *Id.* Conversely, one will generally get fewer non-free riders compared to free riders if the payback is less generous. Thus, the utilities' basic premise that free riders will necessarily be minimized by keeping incentives low is faulty. As Mr. Mosenthal testified, with good program design, large

¹³ The record contains hundreds of similar examples. For instance, all of the following measures were screening out by PEF despite having penetration rates of less than forty percent: air conditioner maintenance; proper sizing of HVAC systems; CFLs; T-8 lighting; low flow showerheads; faucet aerators and water heater blankets. Tr. 1506-07 (Spellman).

and cost-effective savings net of free riders can be captured from the measures that were excluded. Tr. 1327.

b. GDS survey shows low free ridership for CFL measures

In contrast to the utilities, Staff Expert Spellman conducted an actual survey of utilities and organizations across the United States to determine the impact of free-ridership with respect a specific measure that is excluded by the two-year payback screen, namely CFL lighting. The results of the survey show that all of the residential lighting programs examined by GDS experienced very low free-ridership rates. Tr. 1505; Ex. 94.

c. A single screen will not be appropriate for all measures

The evidence shows that different measures face different barriers to their adoption and therefore no single screen such as the two-year payback can effectively address free riders for all measures. The utilities' own witness Mike Rufo clearly demonstrated that, based on extensive evidence of actual adoption rates, different measures have differ rates of adoption even when the participant's benefit-cost ratio is the same (i.e., the same payback). Tr. 930-33; *see also* Ex. 1331 (Mosenthal). In fact, Mr. Rufo's testimony indicates that for a measure with high barriers, it would take a *six month* payback in order to get half the eligible customers to adopt a measure. Tr. 935-36. Other utility witnesses admitted this as well. Tr. 410-12 (Masiello); Tr. 558-59 (Bryant). Because the barriers differ, it follows that the required balance point between the number of free riders and non-free riders who adopt at different incentive levels will differ for different measures.¹⁴ As witness Mosenthal explains, the fact that different measures have different barriers means that "a simplistic focus on customer payback . . . is a poor way to predict or influence free ridership." Tr. 1332. Not surprisingly, there is no evidence of any state outside

¹⁴ Indeed, the PSC reached the same conclusion in its 1994 Order on goals, stating that "[v]arious demand-side measures have vastly different free rider impacts." Ex. 76 at 36.

Florida using the two-year payback screen. *Id.* Outside of Florida, Mr. Rufo testified that he had never used a two-year payback screen and in only one instance was a one-year payback proposed, although he did not know whether use of that screen had survived Commission scrutiny. Tr. 928.

d. Itron’s analysis already accounts for free riders

Commission Rule 25-17.0021 requires utilities to “account for” free riders. In fact, the analysis conducted by Itron already does this. As Mike Rufo testified, Itron’s analysis does not include free riders in the achievable potential analysis that it conducts. Tr. 959-60; Tr. 1322-24 (Mosenthal). This is because the free riders are part of the “naturally occurring” levels of adoption and the achievable potential only considers adoptions above this level. Thus, goals based on the technical potential analysis will not count free riders and thus would meet the Commission Rule without applying an arbitrary two-year screen. As Mr. Mosenthal discusses, the specific strategies for how to minimize free riders are more appropriately considered at the program level. Tr. 1331; *see also* Ex. 76 at 42 (1994 Goal Order) (finding that free ridership is “better addressed at the program development stage of these dockets”).

e. Non-incentive DSM programs can also increase adoption

Although the evidence does not support ruling incentives out for any measures based on the two-year screen, it is important to emphasize that even if that were the case, the measures should still be included in utility goals because non-incentive programs can also increase measure adoption. Tr. 1325 (Mosenthal); Tr. 938 (Rufo). Such non-incentive gains would still be part of the “achievable potential” and thus should be included in utility efficiency goals.¹⁵

¹⁵ Some of the utilities currently have voluntary non-incentive programs to promote such measures. Tr. 385, 407, 413 (Masiello). However, it is appropriate that the gains from such programs should be included in utility goals in order to provide an assurance that such voluntary efforts continue.

In sum, the evidence before the Commission shows that the utilities have not done any substantial analysis in support of their contention that the two-year payback screen is an effective or appropriate way to minimize free riders. To the extent that they simply believe that customers “should” adopt energy efficiency measures at this payback level, this belief is irrelevant as the evidence shows that actual customer adoption rates for these measures are low. Indeed, the evidence presented by national experts shows that the two-year payback is not a sensible way to address free ridership. Given that the two-year payback screen eliminates between 33.9 and 46 of the technical potential, all of which are by definition the *most* cost effective energy efficiency measures, the evidence demonstrates that the two-year payback screen is arbitrary and unreasonable. *See* Ex. 76 (1994 Goals Order) (rejecting a blanket 17% free rider reduction as “arbitrary” and determining that free ridership is “better addressed at the program development stage of these dockets”). Accordingly, the Commission must reject the two year payback screen.

C. The Commission Must Also Reject The Two-Year Payback Screen Because It is Contrary To the FEECA Statute

The two-year payback is also contrary to two aspects of the FEECA statute. First, in the amendments to FEECA, the Legislature emphasized the paramount importance of employing the most cost-effective energy efficiency. It stated that “it is critical to utilize the *most efficient and cost-effective* demand-side renewable energy systems and conservations systems...” Fla. Stat. § 366.81 (emphasis added). The two-year payback screen has precisely the opposite effect because it eliminates the most cost-effective 33.9 to 46.7 percent of the measures. Thus, rather than helping Florida customers achieve the “most efficient and cost-effective” measures, these measures will be ignored and customers will be asked instead to implement measures that, while they are also cost-effective – i.e., they also pass the TRC test – deliver lower customer savings and longer paybacks. It may be that the utilities, which profit most in the current structure from

constructing new power plants, prefer delivering programs with lower customer savings. But the Legislature has expressly indicated its preference for implementation of the most cost-effective measures and the Commission must follow this direction. Accordingly, the Commission must reject the two-year payback screen.

Second, the recent amendments to FEECA changed the statute to direct that when setting goals the Commission must “evaluate the full technical potential of *all* available demand-side ... conservation and efficiency measures ...” Fla. Stat. § 366.82(3). However, the utilities have, through the two-year payback screen, arbitrarily screened out fully 33.9 percent to 46.7 percent of the available technical potential for demand-side measures. As noted above, this technical potential does not include adoptions by free riders and thus the two-year payback excludes 33.9 to 46.7 of the non-free rider potential. This drastic and arbitrary reduction of the technical potential must be rejected because is not authorized by any provision of the amended FEECA statute and directly violates the directive that the Commission base goals on “*all* available” measures. See Fla. Stat. § 120.52(8); *Manatee Club*, 773 So.2d at 598-99.

III. The Utilities’ Achievable Potential Analysis Does Not Meet The Standards of Section 366.82

The analysis of achievable potential conducted by the utilities is unreasonable and fails to meet the standards of Section 366.82. The two most significant reasons for this are the utilities’ decision to rely on the RIM test and to apply the arbitrary two-year payback screen. Indeed, in his testimony, Utility witness Mike Rufo was careful to provide appropriate caveats on his analysis: it shows the “achievable potential resource . . . for a given set of conditions” imposed by the utilities.¹⁶ Tr. 1045. In addition to the use of the RIM test and two-year payback, there are a number of additional significant flaws in the utilities analyses that further constrain the

¹⁶ On cross-examination, Mr. Rufo explained that he was referring to the “cost-effectiveness tests used, any screening criteria, incentive levels, marketing budgets” and the two-year payback screen. Tr. 1073-74.

achievable potential they report. These include flaws in the consideration of avoided costs, the application of administrative costs to individual measures, unreasonably constrained penetration rates, and omissions from the technical potential analysis.

A. Potential Avoided Costs Were Underestimated

Although the utilities' presentation of avoided costs was extremely opaque, NRDC/SACE expert Steinhurst was able to identify several flaws in their analysis. The first is that the utilities unreasonably deny demand side management any capacity value until the date of the next projected new generation unit. Tr. 1090. As Dr. Steinhurst explains, this improperly undervalues energy efficiency because the capacity resources freed up through DSM in fact have value and can be sold to other utilities.¹⁷ Tr. 1092; see also Tr. 1482 (Spellman) (discussing improper limits on displacement of current electric load through energy efficiency). Second, several of the utilities did not consider the potential to defer or avoid units that are planned but not yet actually constructed. Tr. 175 (Sim); Tr. 420 (Masiello). As Dr. Steinhurst explains, this fails to recognize that substantial savings that could occur from deferment or cancelation and thus again undervalues energy efficiency. Tr. 1095.

B. The Application of Administrative Costs to Individual Measures Improperly Suppresses Achievable Potential

The large FEECA utilities, FPL, PEF, TECO and Gulf improperly drove up the cost of individual efficiency measures by applying administrative costs at the individual measure level and then eliminated any measures that no longer passed their cost-effectiveness criterion with these additional costs. Tr. 889 (Rufo). The reason for this is that utilities generally incur administrative costs when they run a program that delivers a suite of energy efficiency measures to a certain customer groups. Tr. 1349 (Mosenthal). The administrative costs of these programs

¹⁷ Dr. Sim's rebuttal response is off the mark because the benefits that he indicates are credited to DSM immediately do not include avoided generating capacity value. Tr. 1751.

are essentially fixed and will not change depending on whether fifteen or sixteen measures are offered by the program. In this situation, it makes no sense to screen out a measure due to administrative costs when that measure would otherwise be cost-effective and can be delivered as the “sixteenth” measure at no extra administrative cost. Id. As Mr. Mosenthal suggests, administrative costs should be included when 1) considering the total portfolio of efficiency opportunities, and 2) also at the program phase, at which point the entire cost of running a program – including administrative costs – can be compared to the benefits that will be delivered by the suite of measures in that portfolio. Tr. 1350. If it turns out that the benefits do not outweigh the costs, revisions can be made at that point. See Fla. Stat § 366.82(7). None of the rebuttal testimony explains why it makes sense to apply administrative to individual measures. Tr. 1864 (Bryant); Tr. 1665-66 (Haney).

C. Market Penetration Levels Underestimated Achievable Potential

As the utilities’ witness Mike Rufo testified, Itron’s Florida analysis represents an estimate of the achievable potential “for a *given set of conditions.*” (emphasis added) Tr. 1045. Among the key conditions identified by Mr. Rufo on cross-examination were the “incentive levels, [and] marketing budgets.” Tr. 1073. These two factors are key to the level of market penetration that is identified. Rufo states that “forecasted measures adoption can increase as a result from increased utility program incentives and/or increases in customer awareness from marketing and education efforts.” Ex. 151 at 12. And in this case, however, both factors were unreasonably constrained.

First, the two-year payback incentive limit capped incentive levels at an amount that would not provide a payback of less than two years. Tr. 118 (Sim). Since the adoption of measures is contingent in part on incentive levels provided to customers, constraining incentives

to a two-year payback screen level reduces achievable potential. As noted *supra*, witness Rufo testified that he had never used a two-year payback limit outside of Florida and had only applied a one-year payback limit. Tr. 928. In addition, the evidence shows that for measures with high barriers, incentives capped at a two-year payback will result in very low penetration levels. Tr. 930-33.

Second, measure adoption curves were calibrated to “obtain results that better align with actual program accomplishments in Florida.” Tr. 893 (Rufo). This unreasonably constrains penetration rates because the FEECA utilities “accomplishments” reflect the appallingly low levels of energy efficiency that they have pursued in the past. They have been achieving energy savings is several magnitudes of times smaller than leading utilities around the country. Ex. 91 (RFS-5).

Third, the marketing and education budget was similarly based on historical patterns of marketing expenditures by the FEECA utilities. Ex. 4.9 (Floyd Dep. 156). As with the past “accomplishments,” past marketing budgets were designed to achieve the low goals then in effect. Accordingly, reliance on these budgets further constrains the potential penetration rates.

D. The Technical Potential Analysis Was Conservative

The technical potential analysis does not estimate the full technical potential because a number of critical measures and also several entire sectors were omitted. As explained by NRDC-SACE witness John D. Wilson in his pre-filed testimony, a substantial suite of measures known as retrocommissioning was omitted from the study on the basis that those measures were included elsewhere in the study. Although Mr. Rufo’s rebuttal testimony suggests a few additional measures that were included, his rebuttal implicitly confirms that a significant portion of the suite of retrocommissioning measures were not included. Tr. 1026. In addition, four

sectors were entirely omitted: 1) agriculture; 2) transportation, communications and utilities; 3) construction; and 4) outdoor/street lighting. Tr. 1452 (Wilson). Mr. Spellman and Caroline Guidry identified a number of other measures that were omitted. In light of these omissions, the technical potential falls short of the statutory requirement to consider “the full technical potential of *all* available demand-side and supply-side conservation and efficiency measures.” Fla. Stat. § 366.82(3).

In sum, the achievable analysis conducted by the utilities was deeply flawed and cannot be relied on. In addition to the principal flaws of relying on the RIM test and excluding measures through application of the two-year payback screen, the achievable potential was also unreasonably constrained for the reasons described above.

As NRDC/SACE’s witnesses indicated in their testimony and at the hearing, it was challenging to obtain complete information on exactly how the Utilities’ analysis was conducted in the time frame available. As NRDC/SACE’s witnesses acknowledged, this led to some reasonable misunderstandings regarding how the analysis had been conducted, such as Mr. Mosenthal’s initial understanding of how FPL conducted the participant test. However, there were no misunderstandings with respect to the two primary flaws identified by NRDC/SACE and staff witness Spellman – use of the RIM test and two-year payback screen – nor with the additional flaws described above. Indeed, it is particularly notable that the utilities’ primary expert, Mr. Rufo, does not offer any testimony (direct or rebuttal) in support of the two central flaws (RIM and the two-year payback). Tr. 1013. Nor did Mr. Rufo offer a rebuttal respecting any of the issues discussed above except for a partial rebuttal, which NRDC/SACE accepts, of the omissions to the technical potential. *Id.* Accordingly, the record shows that the achievable potential is significantly flawed due to conditions imposed by the utilities. Basing goals on such

a flawed analysis would not only be contrary to the amended FEECA statute but would deprive Florida customers of the opportunity to achieve the substantial savings on their electric bills that they deserve.

IV. The Technical Potential Study And Expert Analysis Shows That the Utilities Can Achieve, After a Short Ramp-up Period, Savings of Between 0.9 and One Percent Per Year

The evidence before the Commission demonstrates that, contrary to the claims made by the utilities, Florida can achieve cost-effective energy efficiency savings of between 0.9 and one percent of electricity sales per year. This is the clear conclusion of the independent analysis of two teams of experts: 1) the NRDC/SACE experts Mr. Mosenthal, Dr. Steinhurst and Mr. Wilson; and 2) the staff experts Richard Spellman and Caroline Guidry (collectively “Spellman”). Each analysis is discussed in turn.

A. The NRDC/SACE Analysis Demonstrated That One Percent Savings Per Year Is Feasible

NRDC/SACE’s analysis started with consideration of the technical and achievable potential studies performed by the utilities. Tr. 1311 (Mosenthal). As described above, NRDC/SACE’s expert witnesses identified several omissions in the Technical potential study and major flaws in the Achievable Potential study. Because of the limited time and information available,¹⁸ experts Mosenthal and Steinhurst were unable to complete a bottom-up process to determine the full achievable potential. In the absence of this, they determined an energy efficiency goal that would deliver substantial savings to Florida’s electricity customers, but which was conservative enough that it could definitely be met by the utilities. This determination was based on their expert opinions and detailed knowledge of the achievable

¹⁸ Under the original schedule, NRDC/SACE would have been provided the results of the Achievable Potential study in March, 2009. Ex. 142. However, the project was delayed and they did not receive any information until the Utilities filed their direct testimony and at that point received additional information from the utilities only through discovery requests.

potential energy efficiency elsewhere and consideration of Itron's technical potential analysis.

As Mr. Mosenthal and Mr. Rufo both testify, the technical potential analysis accounts for the ways in which Florida's potential differs from the potential in other states. Tr. 1365; Tr. 964-65 (Rufo). Mr. Mosenthal therefore compared the results of the Florida achievable potential study with the results from a recent KEMA study in Connecticut. Tr. 1364-65. (KEMA performed work on the FEECA utilities study as a subcontractor to ITRON and used the same DSMASSYST model in CT). As Mr. Mosenthal describes, the technical potential in each state was similar: 36% in Connecticut and 34% in Florida (without considering the additions recommended by Mr. Wilson or Mr. Spellman). *Id.* In the Connecticut study, KEMA estimated achievable potential at 22.5% or roughly 62% of the technical potential. (In contrast, in Florida the utility analysis found between 0 and 2% achievable.) As Mr. Mosenthal indicates, it is fairly typical for the achievable potential result to be about sixty percent of the technical potential, as was the case in Connecticut. *Id.* For Florida, sixty percent of the technical potential would yield an achievable potential of 22.8 percent of sales. Accepting the adjustments to the technical potential study recommended by Mr. Wilson, the achievable potential figure would rise to approximately 25 percent, translating into an average of 2.5% incremental savings per year. *Id.*

NRDC/SACE's experts also considered the levels of energy efficiency that have been set and achieved elsewhere. For example, exhibit 78 shows that ten states have recently set annual efficiency goals of *two* percent or more -- twice what NRDC/SACE propose and more than twenty times what FPL proposed. It also shows that four states have recently set goals of 1.5 percent. Moreover, in a number of jurisdictions, efficiency programs have been capturing savings of one percent of total electric load per year for decades and some programs have been achieving savings of more than one percent. Tr. 1311 (Mosenthal); Tr. 1087 (Steinhurst). As

Mr. Mosenthal describes, Floridians are no less capable of achieving energy efficiency than people elsewhere. Tr. 1311.

In order to be conservative, NRDC/SACE experts recommended an annual goal of one percent of electric load per year. This goal is well below the likely true achievable potential of more than 2 percent per year and also half of the goals recently set in numerous states around the country. Tr. 1087 (Steinhurst) In order to give the utilities time to expand their efficiency programs, Witness Steinhurst proposed a three to four year ramp up period.¹⁹ Tr. 1087. With this ramp-up, the goals are approximately 9% of retail sales over ten years. Tr. 1087.

B. Staff Expert Spellman Conducted a Bottom-up Analysis That Identified Savings of Approximately 0.9 Percent Per Year

The PSC staff hired Richard Spellman, an energy efficiency expert with GDS Associates, in order to review the technical, economic, and achievable potential studies performed by the FEECA utilities and Itron. In his testimony, Mr. Spellman indicates the flaws he found in the utilities analysis, describes the methods he used to correct these flaws, and his determination of the achievable potential.

First, Mr. Spellman's analysis identified many of the same flaws in the utilities analysis as did NRDC/SACE's experts. These include 1) improper reliance on the RIM test to set goals; 2) improper use of the two-year payback screen; 3) some omissions to the technical potential analysis; and 4) conservative market penetration. Tr. 1476. Mr. Spellman's analysis of these and other flaws is supported by thorough research. Tr. 1476.

Second, Mr. Spellman corrected a number of the flawed decisions imposed on the Itron study by the utilities and thereby recalculated a corrected achievable potential using Florida-

¹⁹ The testimony of the utilities' own witnesses, notably that of Mr. Haney, actually indicates that significantly shorter ramp-up times (of less than one year), would be entirely feasible. Tr. 281. Again, however, NRDC/SACE proposes the 3-year period in an effort to be conservative.

specific data. Specifically, Spellman started with the achievable cost effective potential based on the economic screening using the TRC and Participant tests. Tr. 1476. Next Spellman lifted the arbitrary two-year payback screen by adding back in the residential and small commercial sectors. This was done with measure data provided in the utility-specific technical potential reports. *Id.* Finally, Spellman made adjustments to allow for higher penetrations that would result from more aggressive marketing and education strategies and adjusted to account for some of the energy efficiency measures that were excluded from the original technical potential. *Id.*

Importantly, Spellman's result is highly conservative because of the corrections he did not make. For example, Mr. Spellman did not correct for the utilities failure to include all avoidable units in their avoided cost analysis. He also did not lift the two-year payback for all sectors and therefore continued to exclude – unreasonably in the view of NRDC/SACE's experts – measures from the large commercial and industrial sectors. Mr. Spellman also did not add in all the measures that he had identified as missing from the technical analysis and also did not add in those identified by Mr. Wilson. Finally, he did not make any adjustments for the use of lower kWh baselines or attempt to adjust for the flaws he had identified in FPL's linear programming model. Tr. 1542. Based on this bottom-up analysis, Spellman arrived at the following revised ten-year achievable potential levels of 8.71% for FPL; 11.45% for Progress; 8.5% for TECO; 9.95% for Gulf; 8.91% for JEA; 7.42% for OUC; and 7.96% for FPUC. Ex. 172.

Like NRDC/SACE, Mr. Spellman also compared his analysis with information on other energy efficiency programs. These showed that the top utilities nationwide are achieving average annual kWh savings of 1.79 percent of sales. Tr. 1539; Ex. 103 (RFS-17). Nearby, Gainesville Regional Utilities achieved 0.75 percent in 2007. Tr. 1538.

Finally, it is important to note that Mr. Spellman's analysis has received intense and detailed scrutiny from the utilities. The goals summarized above reflect revisions that Mr. Spellman made to his initial calculations after the discovery of a cell error. Tr. 1475. At the hearing the utilities harped away on this already-corrected error and other alleged errors. These criticisms ring hollow as Mr. Spellman corrected the significant errors and conducted sensitivity analyses showing that other alleged errors are not significant. E.g. Tr. 1595-96. In fact, the adversarial peer review that Mr. Spellman's analysis has received should give the Commission great confidence in his final analysis.

In sum, Mr. Spellman's and the NRDC/SACE goals are similar, and represent the lower bound of what can certainly be achieved by the FEECA Utilities.

C. Efficiency Goals Should Be Set Immediately and the Utilities Should Be Required to Complete Corrected Studies

It is critical that the Commission adopt interim goals at the level that NRDC/SACE recommended (one percent) or at the level that Staff Witness Spellman recommended (approximately 0.9 percent) immediately such that Florida customers can begin to enjoy the significant savings on their bills that such programs will generate. However, NRDC/SACE's experts believe that the one percent goals they advocate do not reflect the full potential that can be achieved in Florida. Therefore, NRDC/SACE advocates that while the Commission set one percent goals, it also require that the utilities resubmit achievable potential studies that are not improperly constrained in the ways identified by NRDC/SACE's experts and Mr. Spellman. Once these studies are complete, final goals can be set.

D. The Commission Should Use Dr. Steinhurst's Ramp-up Period

The Commission should include the ramp up design recommended by Dr. Steinhurst. This ramp up period provides for a generous and gradual three-step transition period over three

years for the larger utilities and a four step transition over four years for the smaller ones. Tr. 1120. In contrast, the “ramp up” period proposed by Mr. Spellman is simply a flat fifty percent reduction for the first five years. Tr. 1542. Dr. Steinhurst’s approach is preferable because it starts lower, providing an easier initial transition, is graduated throughout, and ends sooner. As FPL’s own witness testified “DSM measures can be ramped up . . . fairly quickly,” and thus a NRDC/SACE’s shorter transition is sufficient. Tr. 146. Accordingly, whether the Commission bases its goals on the one percent advocated by NRDC/SACE or the 0.9 percent pre-transition proposal by Mr. Spellman (Ex. 172, column 5), it should use Dr. Steinhurst’s proposed ramp-up.

CONCLUSION

NRDC/SACE respectfully request that the Commission take the following actions in this proceeding. First, the Commission should follow the clear mandate of the amended FEECA statute and use the TRC test when setting goals. Second, the Commission must reject the arbitrary two-year payback screen, which would eliminate the most cost-effective measures without even achieving the claimed purpose of minimizing free riders. Third, the Commission should set demand side energy efficiency goals that, after a short transition period, achieve savings on the order of one percent per year as proposed by NRDC/SACE or 0.9 percent per year as proposed by staff witness Richard Spellman. By taking these steps, the Commission will fulfill the Legislature’s mandate and start the vital process of helping customers reduce their electricity bills, improve Florida’s economic competitiveness, reduce reliance on imported fossil fuels, and lower greenhouse gas emissions.

Respectfully submitted this 28th day of August, 2009,

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy and correct copy of the foregoing was served on this 28th day of August, 2009, via electronic mail and via US Mail on:

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