Christopher T. Wright
Senior Attorney
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, FL 33408-0420
Email: Christopher.Wright@fpl.com
(561) 691-7144
(561) 691-7135 (Facsimile)

July 12, 2019

**-VIA ELECTRONIC FILING-**

Adam Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

**Re: Docket No. 20190015-EG**

Dear Mr. Teitzman:

Pursuant to Order No. PSC-2019-0062-PCO-EG, issued February 18, 2019, attached for filing in the above docket are the rebuttal testimony and exhibits of Florida Power & Light Company witnesses Tom Koch, Andrew Whitley, and Dr. Steven R. Sim. This letter, the rebuttal testimony and exhibits, and a certificate of service together are being submitted via the Florida Public Service Commission's Electronic Filing Web Form as a single PDF file.

Please contact me if you or your Staff has any questions regarding this filing.

Sincerely,

*s/ Christopher T. Wright*
Christopher T. Wright
Senior Attorney
Fla. Auth. House Counsel No. 1007055

Enclosures

cc: Counsel for Parties of Record (w/encl.)

7375560

**CERTIFICATE OF SERVICE**
**DOCKET NO. 20190015-EG**

I HEREBY CERTIFY that a true and correct copy of the foregoing was served by electronic delivery this 12th day of July, 2019 to the following:

| | |
|---|---|
| Margo A. DuVal, Esq.<br>Ashley Weisenfeld, Esq.<br>Division of Legal Services<br>Florida Public Service Commission<br>2540 Shumard Oak Blvd.<br>Tallahassee, Florida 32399-0850<br>Mduval@psc.state.fl.us<br>Aweisenf@psc.state.fl.us | J.R. Kelly, Esq.<br>Patricia Christensen, Esq.<br>Office of the Public Counsel<br>c/o The Florida Legislature<br>111 W. Madison Street, Rm 812<br>Tallahassee FL 32399<br>christensen.patty@leg.state.fl.us<br>kelly.jr@leg.state.fl.us |
| George Cavros, Esq.<br>Southern Alliance for Clean Energy<br>120 E. Oakland Park Blvd., Suite 105<br>Fort Lauderdale, FL 33334<br>george@cavros-law.com<br>Attorney for SACE | Bradley Marshall, Esq.<br>Bonnie Malloy, Esq.<br>Earthjustice<br>111 S. Martin Luther King Jr. Blvd.<br>Tallahassee, FL 32301<br>bmarshall@earthjustice.org<br>bmalloy@earthjustice.org<br>Attorneys for SACE |
| Joan T. Matthews, Esq. / Allan J. Charles, Esq. /<br>Kelley F. Corbari, Esq.<br>Florida Department of Agriculture<br>& Consumer Services<br>Office of General Counsel<br>The Mayo Building<br>407 S. Calhoun Street, Suite 520<br>Tallahassee, FL 32399-0800<br>joan.matthews@freshfromflorida.com<br>allan.charles@freshfromflorida.com<br>Kelley.corbari@freshfromflorida.com | Jon C. Moyle, Jr./Karen A. Putnal/Ian E. Waldick<br>c/o Moyle Law Firm, PA<br>118 North Gadsden Street<br>Tallahassee FL 32301<br>iwaldick@moylelaw.com<br>jmoyle@moylelaw.com<br>kputnal@moylelaw.com<br>mqualls@moylelaw.com<br>Attorneys for FIPUG |
| Stephanie U. Eaton<br>110 Oakwood Drive, Suite 500<br>Winston-Salem NC 27103<br>seaton@spilmanlaw.com<br>Attorneys for Walmart Inc. | Derrick Price Williamson/Barry A. Naum<br>1100 Bent Creek Boulevard, Suite 101<br>Mechanicsburg PA 17050<br>dwilliamson@spilmanlaw.com<br>bnaum@spilmanlaw.com<br>Attorneys for Walmart Inc. |

By: *s/ Christopher T. Wright*
Christopher T. Wright
Fla. Auth. House Counsel No. 1007055

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**FLORIDA POWER & LIGHT COMPANY**

**REBUTTAL TESTIMONY OF THOMAS R. KOCH**

**DOCKET NO. 20190015-EG**

**JULY 12, 2019**

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## I. INTRODUCTION

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

A. My name is Thomas R. Koch. My business address is 6100 Village Boulevard, West Palm Beach, Florida 33407.

**Q. Have you previously submitted testimony in this proceeding?**

A. Yes.

**Q. Are you sponsoring any exhibits in this case?**

A. Yes. I am sponsoring Exhibits TRK-5 and TRK-6, which are attached to my testimony:

TRK-5 – Estimated Cost to Achieve SACE's Proposed Low Income-Specific Goals; and

TRK-6 – SACE's response to FPL Interrogatory No. 1.

**Q. Please provide an overview of Florida Power & Light's (FPL) rebuttal testimonies.**

A. The testimony of the Southern Alliance for Clean Energy (SACE) witnesses Mr. Forest Bradley-Wright and Mr. Jim Grevatt (collectively the SACE witnesses) provided stunningly extreme proposals. Notably, both witnesses omit any assessment of the disastrous and counterproductive multi-billion-dollar economic burden their recommendations would inflict on FPL's customers; a consequence with which they appear totally unconcerned. In addition, their proposals do not comply with the requirements of the Florida Energy Efficiency and Conservation Act (FEECA) nor the Commission's

Rule 25-17.0021, F.A.C (the Goals Rule), unlike FPL's comprehensive analyses supporting its proposed 2020-2029 Demand-Side Management (DSM) Goals (which apparently did not yield SACE's pre-determined outcomes). In an apparent attempt to distract attention from these glaring deficiencies, the witnesses instead proffer a series of superficial, flimsy and improper calculations, radical policy shift recommendations, inaccurate and/or misleading statements, and inconsequential quibbles with FPL's analyses. In sum, their proposals are fatally flawed and should be rejected by the Commission. FPL is providing rebuttal testimonies of five witnesses – Dr. Steven R. Sim, Mr. Andrew W. Whitley and me, and jointly sponsoring Terry Deason and Nexant's Jim Herndon with the other utilities subject to FEECA (FEECA Utilities) – to collectively address the most significant of the numerous issues with the SACE witnesses' testimonies.

**Q. Do you have any overall observations regarding the SACE witnesses' testimonies?**

A. Yes. I have three primary overall observations:

1. This docket is about Goal-setting. FPL has proposed Goals that are compliant with Commission Rules and supported by rigorous, comprehensive and detailed analyses which took many months of work to perform. By contrast, SACE has done the exact opposite. The SACE witnesses have reverted to their standard "percent of retail sales (sales)" dogma which, as it was in the 2014 Goals docket, is non-compliant, incomplete, devoid of any credible support instead relying

on a handful of simplistic, and in some cases incorrect, "back of the envelope" calculations in lieu of any real analysis. SACE has once again begun with its pre-conceived end in mind rather than performing the required analyses and seeing what the true outcome should be. They also engage again in transparent attempts to gut, circumvent and/or eliminate analysis steps required by this Commission in order to reverse engineer the answer to suit their purposes. SACE seeks to distract from the weaknesses of its positions with various irrelevant critiques of FPL's analyses. Given this stark contrast, FPL's proposal remains the only viable proposal before the Commission, and FPL requests the Commission continue to embrace FPL's data-driven approach and once again reject SACE's non-compliant approach.

2. This docket is also about who pays for DSM and how much. FPL's position, supported by the Commission for decades, is clear: the impact on customer rates and avoiding/minimizing cross-subsidization is critical. That is the reason for FPL's unwavering support of cost-effectiveness based on the Rate Impact Measure (RIM) and Participant tests, as well as the two-year payback as the means to accomplish these objectives for the benefit of all customers – particularly low income customers. In contrast, the SACE witnesses pitch unsupported proposals costing tens of billions of dollars including inherent cross-subsidization due to lack of cost-effectiveness. SACE shows total disregard for the financial consequences to FPL's customers. Cost-

effectiveness is a key requirement of FEECA, and its execution via the proven methods above ensures the best outcome for customers.

FPL's analysis remains unchallenged as compliant, comprehensive and robust. Witness Grevatt stated: *"There are literally at least tens of thousands of different assumptions…"* (page 33, lines 23 and 24). Yet tellingly, the SACE witnesses chose not to undertake a disciplined look at FPL's information despite FPL's responses to their extensive interrogatories and requests for production of documents. Ultimately, out of all this detailed information, SACE only picked a few comparatively minor and non-impactful items for their criticisms. All of these have been readily dispensed of by FPL's rebuttal testimonies. This speaks directly to the rigor and quality of FPL's Goals analyses demonstrating that FPL's Goals proposal is fully backed by the required analytical support for approval.

**Q. Please summarize your rebuttal testimony.**

A. My rebuttal testimony addresses certain assertions and proposals made by SACE witnesses Bradley-Wright and Grevatt. Concerning the direct testimony of witness Bradley-Wright, which focuses solely on low income, FPL is empathetic to the financial challenges faced by low income customers and has, in fact, proposed retention and expansion of its Low Income program. However, witness Bradley-Wright deems this insufficient and instead advocates an extreme, unreasonable and unsupported Low Income-specific Goals scheme. Of course, he makes no mention that his proposal

comes with a whopping $4.1 billion incremental cost just to address low income customers that would be recovered through the Energy Conservation Cost Recovery (ECCR) clause from all FPL customers, particularly harming non-participant low income customers. In addition, it is procedurally improper because it is beyond the scope of FEECA and the Goals Rule. To bolster his ill-conceived proposal, he drops any pretense of cost-effectiveness testing. In addition, he makes a host of unsupported, incorrect and misleading statements. This appears to be nothing more than a veiled attempt to circumvent, via a "back door", the required cost-effectiveness testing and free rider consideration by proposing high Goals for low income customers, in effect increasing the rates for all customers including low income customers. In addition, he knowingly and improperly volunteers "guidance" to the Commission regarding DSM Plans and program design even as he simultaneously acknowledges that such issues are improper and beyond the scope of this Goals docket.

Regarding witness Grevatt, I address flaws in his "analytical" work. In particular, I demonstrate that the "benchmarking" upon which he relies to justify his extreme 1.5% percent of sales Goal improperly violates the most basic benchmarking methodology principles. In addition, I address a series of his assertions apparently designed to distract attention from the Goal's astronomical rate impact equivalent cost of approximately $28 billion. These include the assertion that FPL de facto adopted a three-year payback and

complaints regarding FPL's Economic Potential (EP) MW and GWh numbers and certain measures' non-incentive costs. Though he devotes a very large portion of his testimony to these assertions, they essentially just amount to minor quibbles, which ultimately are meaningless because they are incorrect and have zero material impact on the outcome of the analyses (*i.e.,* the Achievable Potential).

## II. SACE WITNESS BRADLEY-WRIGHT'S LOW INCOME RECOMMENDATIONS

**Q. Witness Bradley-Wright begins his testimony with a discussion of low income customers' "energy burden." Do you have concerns with his statements?**

A. Yes. Witness Bradley-Wright's discussion includes a number of incorrect and misleading statements. In an attempt to lay a foundational basis for the large Low Income-specific Goals and programmatic recommendations which come later in his testimony, he states that low income customers face a high energy burden and asserts that it should be the responsibility of utilities' general body of customers to remedy this issue.

On page 4, line 1 of his testimony, he presents a Figure 1 titled: "*Quartile Energy Burdens of Low-Income Households in Southeastern Cities.*" In the caption under Figure 1 he adds the following statement: "*Low-income*

*households in Florida cities in this study face high energy burdens. On average, half the low-income households in Jacksonville, Tampa, Orlando, and Miami have an energy burden greater than 7.2%, and a quarter of them, over 12%. The national average is 3.5%."*

Then, in the text that follows Figure 1, he states: *"Figure 1 above shows the total energy burdens (both household and transportation) in major Florida cities…"* (page 4, lines 12 and 13, emphasis added)

**Q. Please point out the problems with witness Bradley-Wright's Figure 1 and the text that accompanies it.**

A. There are several problems with what he is attempting to convey. First, he has included irrelevant data in Figure 1 and he apparently doesn't understand what the data he's showing represents. The data in Figure 1 was extracted from Figure ES1 of an American Council for an Energy-Efficient Economy (ACEEE) report which he attaches as Exhibit FBW-2 (page 6 of 56). This docket addresses electric utility DSM Goals. It does not address the subject of automobiles, trucks, buses, subways, trains, bicycles, walking, or other modes of transportation. It also does not address gas and heating fuel which are included in the study's energy burden values (Exhibit FBW-2, page 9 of 56). By combining both the overly-broad household energy and transportation information, he rendered Figure 1 essentially meaningless for the purposes of this docket, which addresses resources for electric utilities, not various modes of transportation or non-electric energy costs. Presenting household energy

and transportation data combined makes one wonder if witness Bradley-Wright was merely lazy/careless or whether the incompatible data (for the purposes of this docket) was used intentionally to create a desired impression. Neither explanation reflects well on his testimony.

Further undermining this data's meaningfulness in this docket, it appears that witness Bradley-Wright actually does not understand what the data he is showing represents. On page 9 of Exhibit FBW-2, ACEEE states: *"For low-income families, the majority of household income goes towards rent, transportation, and energy, in that order. In this study we measure only home energy burden, which includes all spending on a home's energy utility bills. Spending on rent, water, and transportation is outside the scope of this analysis."* (emphasis added). If this statement correctly represents the data underlying ACEEE's Figure ES1, it means witness Bradley-Wright doesn't understand the data he's relied on and has characterized it incorrectly. In sum, witness Bradley-Wright has included irrelevant non-electric and possibly transportation data in his Figure 1 rendering this figure and his statements flawed and misleading.

Second, the statement below his Figure 1 *"the national average is 3.5%"* is irrelevant if the purpose of the figure is, as the title indicates, to compare cities in the Southeastern U.S. A national average reflects irrelevant and possibly misleading non-Southeastern data.

Third, when comparing the data for the 13 Southeastern cities included in Figure 1, the four Florida cities appear to have the 2nd, 3rd, 5th, and 8th lowest energy burden values. Miami, the only city shown which is in FPL's service territory, is the 2nd lowest. Other non-Florida cities in the Southeast such as Memphis, New Orleans, Birmingham, and Atlanta have significantly higher values. No one disputes that low income individuals face burdens, but Figure 1 appears to indicate that the energy burden in Florida cities and in FPL's service territory in particular, is considerably lower than in a number of other Southeastern cities outside of the State of Florida. This is directly reflective of FPL's focus on keeping electric rates low for all customers, a strategy that would be eviscerated by witness Bradley-Wright's recommendations.

In summary, witness Bradley-Wright's Figure 1, and his explanation of it, is misleading, possibly incorrect, and confusing on several levels. Most importantly, Figure 1 has been rendered meaningless for the purpose of this docket if he's including transportation and non-electric data with household energy use.

**Q. What is the next problematic statement that needs to be addressed by witness Bradley-Wright?**

A. He states on page 5, lines 15 and 16: *"Energy efficiency is widely recognized as the best strategy for reducing high energy burdens."* (emphasis added)

The problem with such a sweeping statement is that he provides no support for it. As a result, the inclusion of this statement begs at least two questions: (a) recognized by whom, and (b) what strategy choices were considered? By providing no backup support for this statement, it appears entirely possible that the "wide recognition" is largely/solely from the energy efficiency industry for which such a statement is self-serving (see FPL witness Sim's testimony for additional discussion on the energy efficiency industry and its standard positions/advocacy).

Certainly other approaches might be possible. For example, it would seem logical that a low income individual might answer that the best strategy is higher income/wages. And I seriously doubt that any low income individual would view raising electric rates unnecessarily due to implementation of non-cost-effective DSM to be a "best" strategy. To the contrary, it would seem far more likely that this individual's answer would be that whatever you do, don't make the situation worse by raising electric rates. In fact, this Commission's policy of focusing on rate impacts has led to FPL's low income customers having among the lowest energy burdens in the Southeast, as demonstrated by Bradley-Wright's own exhibit.

In summary, without documentation that supports this statement, the statement is at best questionable, and therefore, meaningless for purposes of this docket.

**Q. Witness Bradley-Wright recommends that the Commission set separate "formal" Goals for Low Income. Is this appropriate?**

A. No. His ill-conceived recommendation is as procedurally inappropriate as it is unnecessary. There is no provision in the Commission Goals Rule for establishing a set of secondary Low Income-specific Goals. Rule 25-0021(3), F.A.C. states that the Commission shall set Goals based on: *"… the total, cost-effective, winter and summer peak demand (KW) and annual energy (KWH) savings reasonably achievable in the residential and commercial/industrial classes…"* This means there are only six Goals to be established; three for residential customers and three for business customers. There is no provision for "extra" Goals in addition to those prescribed by the Goals Rule.

**Q. Why did you state that in addition to being inappropriate, such a Goals recommendation is unnecessary?**

A. In my direct testimony, FPL proposed to retain and expand its existing Low Income program. This is because the traditional Energy Efficiency (EE) measures that had been a source of assistance to low income customers no longer make sense because they are not cost-effective. Although FPL's current Low Income program is not cost-effective, FPL is empathetic to the financial challenges faced by low income customers and believes continuing to provide assistance to this vulnerable group is appropriate and warranted to replace eliminated EE program options that will no longer be available. FPL's proposal is consistent with the Commission 2014 Goals docket Order

No. PSC-14-0696-FOF-EU, wherein the Commission recognized the importance of supporting these customers.

In order to enable this, FPL proposed merely adding the MW and GWh related to low income measures to its proposed three residential Goals. Although this Rule-compliant approach was acknowledged by witness Bradley-Wright in his testimony, he instead suggests a non-compliant approach of creating a separate set of Goals for no apparent good reason. On page 12, lines 15 thru 17 of his testimony, he claims the Commission needs to take this step in order to *"…bring additional clarity in evaluation standards…and lead to greater savings impact for low-income customers."* However, he provides not one shred of evidence to support these assertions.

In addition, witness Bradley-Wright mischaracterizes FPL's proposal: *"To their credit, FPL was the only utility to request Commission approval for a specific low-income efficiency target."* (page 26, lines 22 thru 24). FPL did not propose its low income adjustment as a set of "targets" or Goals nor in any way suggested that establishing such Low Income-specific Goals are appropriate. To imply so is incorrect.

Using the approach proposed by FPL, the Commission already has a procedurally-compliant means to address low income as it desires without taking his unsupported supplemental Goals step. Witness Bradley-Wright's

Low Income-specific Goals recommendation is clearly inappropriate and unnecessary.

**Q. Based on the totality of witness Bradley-Wright's testimony, what do you believe to be the true purpose behind his Low Income-specific Goals recommendation?**

A. It appears to be a call for the Commission to abandon application of cost-effectiveness methodologies as a vehicle to create a tidal wave of low income programs devoid of consideration of costs or rate impacts. Section III of his testimony, which comprises fully one third of the 30 pages of his testimony (page 13, line 8 thru page 22, line 21), is devoted to criticisms of Florida's cost-effectiveness methodologies. The rebuttal of his positions is fully covered in the testimonies of FPL witnesses Sim and Whitley. However, given the length of his diatribe on the topic, it appears his real end game is to try to convince the Commission to abandon any meaningful consideration of cost-effectiveness when it comes to low income customers. Ultimately, this would create a "back door approach" that could allow proposing huge Goals, unfettered by the reality of the associated cost of such Goals (to be borne by the general body of customers including low income customers). And, in fact, that is exactly what he proceeds to do in Section IV (page 22, line 23 thru page 24, line 25).

**Q. Setting aside for the sake of argument the fact that his Low Income-specific Goals are inappropriate, are witness Bradley-Wright's recommended amounts reasonable?**

A. Absolutely not. FPL witnesses Sim and Whitley address the severely flawed calculation methodology he used to derive his three Goals numbers. In addition to the flawed basis, he also made basic math errors in 2 of the 3 numbers he created based on adding values from witness Grevatt's testimony. Below I show tables which correct these errors. These corrections do not imply that FPL in any way agrees with witness Bradley-Wright's numbers or methodology.

Witness Bradley-Wright states: *"Table 2 below has the residential Achievable Potential savings from Mr. Grevatt's testimony used for calculating the low-income efficiency targets below. These figures were drawn from Exhibit JMG-2 and FPL's were additionally adjusted to reflect the addition of SEER 14 ASHP as per Grevatt Testimony Table 4."* (page 23, lines 18 thru 21). In the table below, I have corrected the math errors from his Table 2 for FPL's GWh and Summer Peak (MW) using his described methodology which results in even higher numbers than he showed in his testimony.

**Witness Bradley-Wright's Table 2 – Corrected Errors**

| | 10-Year GWh | Summer MW | Winter MW |
|---|---|---|---|
| **Per Bradley-Wright Testimony** | **1,077** | **337** | **187** |
| **Grevatt - Exhibit JMG-2** | 965 | 377 | 141 |
| **Grevatt - Table 4 SEER 14 ASHP** | 223 | 0 | 46 |
| **Corrected Table 2 Totals** | **1,188** | **377** | **187** |
| **Errors** | **(111)** | **(40)** | **0** |

These math errors also carried over to his "*Table 3 Energy Saving Potential for Utilities' Low-Income Customers (2020-2029)"* (page 24, lines 17 thru 24). Table 3 was derived by multiplying the Table 2 values by witness Bradley-Wright's *"…percentage of population for each utility that is at or below 200% of the federal poverty level"* (page 23, lines 11 and 12). He contends that for FPL this is 36.7% (Table 1, page 5, line 5), a number FPL believes is significantly overstated. These corrected higher witness Bradley-Wright numbers are used as the Low Income-specific Goals values in Exhibit TRK-5, page 1 of 2, line 1.

**Witness Bradley-Wright's Table 3 – Corrected Errors**

| | 10-Year GWh | Summer MW | Winter MW |
|---|---|---|---|
| **Per Bradley-Wright Testimony** | **395** | **124** | **69** |
| **Table 2 - Errors Corrected** | 1,188 | 377 | 187 |
| **Low Income Percent** | 36.7% | 36.7% | 36.7% |
| **Corrected Table 3 Totals** | **436** | **138** | **69** |
| **Errors** | **(41)** | **(14)** | **0** |

**Q. After correcting these math errors, what are the cost implications of witness Bradley-Wright's recommended Low Income-specific Goals?**

A. The magnitude of the cost implications of his Low Income-specific Goals is truly staggering. This is likely why he provides no cost estimate in his testimony. In Exhibit TRK-5, I estimate the cost for the 2020-2029 Goals period that would be recovered from all customers through the ECCR clause using: (i) witness Bradley-Wright's corrected Table 3 GWh and MW proposal (assuming his values are at the generator); and (ii) his "deeper savings" recommendation to include free giveaways of major appliances (*e.g.,* HVAC, water heaters and refrigerators) (page 28, lines 4 thru 12). His proposal would cost approximately a whopping **$4.1 billion** over the 2020-2029 Goals period (Exhibit TRK-5, page 2 of 2, line 25), or about **$408 million per year in additional ECCR charges** (line 24). To put this in perspective, this annual figure is about 2.5 times higher than FPL's total 2019 ECCR charge for all programs combined. The incremental cost for achieving these Low Income-specific Goals alone would add about an extra $4 per month (or $48 per year) for the average 1,000 kWh residential customer. These values are based on the proper practice of achieving all three of witness Bradley-Wright's proposed Goals, not just the single GWh number he wishes the Commission to focus on. In this case, the Winter MW turned out to be the most challenging to achieve requiring many more participants to do so. The fact that this resulted in significantly exceeding the other two Goals illustrates the fundamental flaw with his improper and unbalanced "ratio-based" calculations

instead of using the correct method of building Goals bottom-up from measure-level savings.

It is evident that the large rate and bill impacts that would result from witness Bradley-Wright's aggressive and extreme proposal would add a significant new energy burden to the majority of low income customers (non-participating low income customers) – the very customers he claims he wants to help. The calculated participation based on his "deeper savings" recommendation would only provide a net cost savings to the portion of FPL's low income customers who could or desire to participate leaving the rest with substantial rate increases. Avoiding such a bad outcome for the majority is the key driver behind FPL's Low Income program current and proposed participation levels. SACE's tunnel vision focus on participating customers to the detriment of all other customers remains inappropriate.

In addition, it should be noted that although Exhibit TRK-5 calculates the required participation level based on witness Bradley-Wright's proposed Goals, such a participation level is not realistically attainable. First, FPL believes that witness Bradley-Wright has significantly overstated the percentage number for low income customers in FPL's territory. FPL estimates about 20% of households meet the 200% federal poverty level threshold requirement, not the 37% he claims. Also, his proposed Goals are supposed to represent Achievable Potential (AP). However, he ignores any

consideration of the significant real-world factors such as:

- Studies have found about 50% of income-eligible households are unwilling to allow EE retrofits to be done and FPL's experience bears out that the refusal rate is significant,[i]
- According to the Department of Energy (DOE), approximately 20% of income-qualified households cannot have EE retrofits installed without first addressing significant structural and safety issues;[ii] and
- At least 5% have already undergone EE retrofit work within the past decade.[iii]

As of year-end 2018, FPL's residential customer base is approximately 4.4 million. FPL estimates approximately 875,000 households would qualify as Low Income (representing the total eligible population). Based on the real-world factors above, it's reasonable to expect that only approximately 330,000 customers would truly be both eligible and willing to participate. At the rate of 58,600 participants per year required to meet witness Bradley-Wright's proposed Goals, this represents more than 17% per year penetration, reaching 100% penetration in approximately 5.5 years – a clearly unattainable outcome which has never been achieved in any of FPL's voluntary DSM programs nor by any other utility's program that I am aware of.

**Q. Are witness Bradley-Wright's criticisms of FPL's current and proposed Low Income program warranted?**

A. No. As stated in my direct testimony, many of the DSM-related benefits for low income customers come from outside of FPL's Low Income program

itself. First, FPL believes the best way to help all low income customers is by keeping electric rates low – a consideration that witness Bradley-Wright's proposal willfully ignores. In regards to DSM, FPL accomplishes this by focusing its efforts on cost-effective DSM programs; *i.e.*, programs that pass the RIM and Participant screening tests. FPL also provides EE education on actions customers can take to reduce their electric cost whether by participating in FPL's DSM programs (such as Residential On Call®) or implementing measures, many at low or no cost, that are not offered in FPL's programs. The last option is participation in FPL's Low Income program (which includes measures that do not pass RIM and have customer payback periods of less than two years).

Witness Bradley-Wright does not dispute that FPL has been executing its Low Income program consistent with its 2015 DSM Plan as approved by the Commission: *"In approving Florida Power & Light's ("FPL") 2015 DSM Plan, they again stated that the utility's low-income efficiency program had met the Commission's requirements…"* (page 9, lines 6 and 7). Additionally, he acknowledges that FPL has proposed to retain and expand its Low Income Plan: *"To their credit, FPL was the only utility to request Commission approval for a specific low-income efficiency target."* (page 26, lines 22 thru 24). However, he complains that this is too low. FPL disagrees. As previously mentioned, the negative rate impact on all customers, and negative bill impact on DSM non-participants, inherent in achieving his recommended

levels would result in an unreasonable financial burden on all FPL's customers – particularly low income customers. FPL's proposal is reasonable and consistent with the intent of the Commission's 2014 Goals docket Order No. PSC-14-0696-FOF-EU and strikes the proper balance of support to low income customers without the extreme rate and bill impacts inherent in witness Bradley-Wright's proposal.

**Q. Section V of witness Bradley-Wright's testimony discusses DSM Plans and program design. What is your reaction?**

A. This section is irrelevant, because it represents inappropriate testimony not germane to this docket. Witness Bradley-Wright himself recognizes this and makes a weak attempt to justify its inclusion via his last Q&A: *"Why should this guidance be given during this proceeding, rather than after the utilities file their 2020 DSM Plans?"* (page 30, lines 10 and 11). His subsequent explanation that it would make the Commission's *"…priorities known to the utilities…(that)…will lead to better outcomes for all low-income customers…"* (page 30, lines 12 and 13) is unsupported. Additionally, his assertion that this would lead to *"…deeper savings for the customers who need it most – all while increasing overall savings impact for low-income customers…"* (page 30, lines 16 thru 18) is disingenuous. This starkly demonstrates SACE's self-interested focus on GWh "savings" at the expense of those who must bear the costs of its ambitions. Finally, the question itself demonstrates his lack of knowledge of the process for in Florida for DSM Goal-setting and DSM Plans. Under FEECA, initial program design is left to utilities, as required by

Commission Rule 25-17.0021(4), F.A.C.

In addition, his somewhat generic and unsupported "guidance" in this section demonstrates that he does not even know what is included in FPL's Low Income program. For example, on page 29, lines 19 and 20, he claims that *"…many low-income customers are excluded from participation because they live in a housing type that the utility does not serve, like multi-family and manufactured homes in FPL's territory."* This statement is just false and renders the associated "guidance" he provides off-base and meaningless. Another example is his statement that *"…screening with RIM results in much smaller budgets…"* (page 14, lines 11 and 12). In Florida, budgets are an outcome, not an input, to the Goals and DSM Plan processes. There are no budgetary participation restrictions for Florida utilities' programs. In his zeal for disparaging RIM, witness Bradley-Wright has instead demonstrated his unfamiliarity with Florida's rules, perhaps confusing them with those from another jurisdiction.

## III. SACE WITNESS GREVATT ISSUES

**Q. On page 6, lines 18 thru 23, witness Grevatt suggests that Florida adopt his proposed 1.5% of sales Goal, which he based on a 2-point average of the 2018 performance of two other utilities. Is this appropriate?**

A. Absolutely not. Other FPL witnesses address the problems with using his ill-

conceived concept of Florida blindly setting Goals based on mimicking what someone else has done rather than required utility-specific analytics. In addition to its inappropriateness, I address why his methodology is fundamentally incorrect and, therefore, an invalid basis for comparison.

Minimum standard benchmarking practices require, among other things, that the comparison companies are valid peers with the target company and that the data is broad-based enough to encompass an appropriate range of result variability. Witness Grevatt's cherry-picking approach violates both of these fundamental benchmarking requirements rendering any conclusions drawn invalid. Please also refer to FPL witness Sim's rebuttal testimony for further discussion on why it is completely inappropriate to leap to the conclusion that if a particular resource option makes sense for one utility, it must automatically make sense for another utility, particularly where the two utilities are in different states and subject to their respective state's specific statutes, rules, and regulatory precedent addressing the establishment of DSM Goals.

**Q. Please elaborate on witness Grevatt's invalid cherry-picking benchmarking approach.**

A. Here are just two examples, either of which is a sufficient violation of standard benchmarking norms rendering any inferences from such comparisons invalid. First, witness Grevatt has provided no supporting evidence that either Duke Energy Carolinas (DEC) or Entergy Arkansas are in

any way comparable peers to any of the FEECA Utilities – aside from also being in the electric business and "southern" (*e.g.,* within 1,000 miles of FPL). Obviously, these are totally insufficient criteria to support valid benchmarking, as there are numerous reasons why a company should or should not be included in a peer group. In fact, the electric utilities of the Bahamas, Puerto Rico and Cuba also meet his woefully deficient criteria, as do all other utilities located in between FPL and his cited examples, though none of these are included in his cherry-picked peer group. It is abundantly clear that locational and situational differences such as in legislative/regulatory rules, electric system costs, load patterns, climate, customer base, geography, and the length of time DSM has been pursued, among others can and do exist between witness Grevatt's cherry-picked companies and utilities in Florida which affects the appropriateness of using them as comparison points to FPL and the other FEECA Utilities. None of these factors were considered by witness Grevatt in his quest to justify his advocacy of his percent of sales Goal.

Second, he proposes to set 10 years of projected performance based on a simple 2-point average of a single year's (2018) performance. Clearly, such a simplistic data set is a totally deficient basis to set 10 years of Goals. In addition, he does not indicate whether these values are representative of a typical year for these companies – and apparently with good reason, because they are not representative, which undermines his argument. For example, the

1.67% represents DEC's highest ever number. DEC's 2013-2017 results ranged from approximately 0.5% to 1.1%. 2018's 1.67% is more than 50% higher than DEC's next highest year. Clearly, the "outlier" value he selected is not even representative of DEC's recent past performance, much less an appropriate basis for setting 10 years of prospective Goals for the Florida utilities. It is also a violation of standard benchmarking practices.

**Q. In addition to his invalid benchmarking approach, do you have any other concerns with Witness Grevatt's reliance on the savings purportedly achieved by DEC and Entergy Arkansas?**

A. Yes. Witness Grevatt's cited percentage of sales figures from DEC and Entergy Arkansas are misleading because they are not calculated on the same basis that he proposes applying to the FEECA Utilities. His mistake can be clearly seen in his Table 5 (page 37, lines 1 thru 9) where he lists the FEECA Utilities and his two comparison companies, DEC and Entergy Arkansas, with the last column representing his calculation of each company's savings as a percentage of sales. In the preceding statements describing his view on what the reader should glean from Table 5, he obfuscates a crucial difference in the calculation with a series of what he must or should have known are invalid apples-to-oranges comparisons:

- "*…(DEC) achieved savings equal to approximately 1.67% of sales to eligible customers in 2018. That is at least 7.5 times greater than what any of the Florida utilities have suggested is TRC achievable and more*

*than 90 times what FPL has suggested.…*." (page 36, lines 15 thru 18)

- "*Similarly, Entergy Arkansas achieved savings equal to approximately 1.44% of its 2018 sales to eligible customers. That is at least 6.5 times what any of the Florida utilities have suggested is TRC achievable and about 80 times what FPL has suggested is TRC achievable.…*." (page 36, lines 19 thru 22)

However, the fatal flaw in his table and statements, which render the comparisons invalid, is relegated to a subtle word "eligible" and a couple endnotes buried on pages 48 and 49 of his testimony:

- "*[42] DEC savings are divided by* ***sales from non-opt out customers***." (emphasis added)
- "*[43] Entergy Arkansas savings are divided by* ***sales from non-self-direct customers***." (emphasis added)

What these statements mean is that the "sales" denominator upon which his savings as a percentage of sales calculation for DEC and Entergy Arkansas are based have been significantly reduced by dropping all sales associated with their opt-out customers, thereby artificially inflating the resulting percent of sales value. In fact, in response to discovery, SACE admitted that the savings achieved by DEC based on total retail sales was approximately 60% less than the 1.67% claimed by Grevatt: "*Energy Futures Group...estimated*

*that…DEC's…savings as a percent of total sales (including sales to opt out customers) was…1.05% savings as a percent of total sales… in 2018."* A copy of SACE's response to FPL Interrogatory No. 1 is provided in Exhibit TRK-6.

Obviously, no such sales denominator reduction has been applied in his proposal for the FEECA Utilities. Notwithstanding, witness Grevatt recommends that the Commission apply this inflated percentage to the FEECA Utilities' **total** retail sales: "*Specifically, the PSC could require each Florida utility to ramp up to 1.50% incremental annual savings per year – a level comparable to the 1.67% Duke Energy Carolinas achieved in 2018 and the 1.44% achieved by Entergy Arkansas in 2018*." (page 38, lines 19 thru 22)

In sum, witness Grevatt's percentage of sales proposal for the FEECA utilities is based on an improper benchmarking approach, an apples-to-oranges comparison, and appears to be nothing more than a thinly veiled attempt to mislead the Commission and the FEECA utilities. Therefore, the Commission should reject Mr. Grevatt's invalid percent of sales proposal.

**Q. Witness Grevatt lists a number of alleged "generic concerns" regarding FPL's analysis methodology. Are these valid?**

A. No. Witness Grevatt's purpose appears to be misdirection in order to distract attention from the sky-high approximate $28 billion consequence of his reckless and unsupported 1.5% of sales Goal proposal. In an attempt to

bolster support for his extreme proposal, Witness Grevatt argues that Florida should abandon its core analytical practices that have proved so successful in the past, such as gutting Florida's cost-effectiveness testing. The most significant of these alleged issues are addressed in the testimonies of witnesses Sim, Whitley, Deason, and Herndon. In addition, he also includes a series of essentially minor quibbles that ultimately have zero material impact on the outcome of the analyses (*i.e.,* the AP). I address a number of these and certain flaws in his "analytical" work below.

**Q. On page 25, lines 7 and 8, witness Grevatt claims *"…that FPL essentially adopted a three-year payback screen."* Is this correct?**

A. No. In further discussion on his incorrect assertion that FPL employed a three-year payback screen, Witness Grevatt states: *"The result was eliminating about half of the TRC cost-effective measures that passed the two-year payback screen when estimating TRC achievable potential. I do not know if the other utilities did the same thing."* (page 25, lines 11 thru 14). Setting aside his inappropriate focus on the Total Resource Cost (TRC) test, his complaint appears to be related not to whether FPL's method was appropriate, but instead that it yielded an outcome contrary to his desires. He is mischaracterizing FPL's methodology by improperly combining two unrelated concepts. The two-year payback screening criterion is used during the EP step for the purpose of capturing free ridership. FPL witness Deason fully addresses this criterion's use and appropriateness.

During the AP step, payback must again be considered. However, in the AP step it is used for an entirely different purpose – determining the recruitment potential of voluntary participants. The level of potential participation in a given measure is directly related to how much payback improvement a participant will realize from receiving the utility's maximum cost-effective incentive. By way of example, if a measure's payback without an incentive is 2 years and 1 month and the maximum incentive can only incrementally improve a potential participant's payback by 1 month, a customer's decision will not be influenced by such a meager utility incentive. Therefore, the real-world effect of the utility's action, which is what the AP represents, would be zero.

Conversely, if an EP-passing measure has a payback of 8 years and the maximum incentive will improve that payback to 2.5 years, then the utility incentive would have a material effect on participation and AP. The separate use of payback for the purpose of determining utility-driven AP is appropriate and is something that all utilities must consider to determine the AP. Simply put, witness Grevatt's testimony both misstates the specific payback period screen used by FPL in its analyses and reflects a lack of understanding of the proper dual uses of payback in the EP and AP analyses.

**Q. On pages 28-31 witness Grevatt quibbles with FPL's calculation of the Economic Potential MW and GWh values related to competing measures. Does his complaint have any impact on FPL's proposed Goals?**

A. No. His multi-page discussion is an example of an ultimately meaningless minor technicality that has zero impact of FPL's AP or Goals. Witness Grevatt is attempting to make a mountain out of mole hill. He is correct that in the Technical Potential (TP) where there are two competing measures, such as the pool pump measures he cites, the most efficient of these received 100% of the available TP MW and GWh and the lesser measure(s) appropriately received zero TP MW and GWh. Turning to the EP, FPL reported the count of these surviving measures along with the associated TP MW and GWh values in FPL witness Whitley's Exhibit AWW-4. FPL did not redistribute to a surviving measure the TP MW and GWh from a failing competing measure because this was ultimately unnecessary. Therefore, in the EP, FPL reported the same MW and GWh values for each EP-surviving measure as calculated in the TP step.

Witness Grevatt's assertion that this has any material impact is incorrect. This is because he leaves out the critical point which is that the only truly meaningful part of the EP results is the list of measures that survive the screening. This is because only those measures then move on to the AP step in the analysis. This list of less-efficient measures and their associated savings are captured in the AP step. The associated MW and GWh for the

more efficient EP-failing measures, while possibly of academic interest, have no further use in the subsequent AP step and therefore, were discarded and had no influence on FPL's proposed Goals. As a result, his attempted portrayal of this minor calculation as a significant issue and his assertion that measures were inappropriately excluded is misguided and ultimately pointless.

**Q. On page 32, line 9 through page 33, line 17, witness Grevatt also quibbles with FPL's non-incentive costs for two measures. Please provide your reaction.**

A. Witness Grevatt is again attempting to conjure up an issue where none exists. He should be fully aware that neither of the two measures he cites, LED light bulbs and Low Flow Shower Heads, could survive the EP cost-effectiveness screening regardless of the amount of their associated non-incentive costs because their payback is less than two years (*e.g.*, even if the non-incentive cost was $0.01, these measures would still fail EP). Therefore, his point is moot because neither measure made it to the AP step due to failing the last EP screening step that incorporates the two-year payback.

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

A. Yes.

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[i] *See* "Needs Assessment for the Energy Savings Assistance and California Alternate Rates for Energy Programs" *available at:* http://liob.cpuc.ca.gov/Docs/2016%20LINA%20Final%20Report%20-%20Volume%201%20of%202.pdf (last visited 7/11/2019)

[ii] DOE Office of Weatherization and Intergovernmental Partnerships, personal communication, December 2016.

[iii] *See* "Gauging the Impact of Various Definitions of Low- and Moderate-Income Communities on Possible Electricity Savings From Weatherization, Ian M. Hoffman, Lawrence Berkeley National Laboratory," February 2017, *available at*: https://emp.lbl.gov/sites/all/files/lbnl-1007114.pdf (last visited 7/11/19).

# Estimated Cost to Achieve SACE's Proposed Low Income-Specific Goals

## A. Annual Low-Income-Specific Savings (Corrected)

| | | 10-Year GWh | Summer MW | Winter MW | |
|---|---|---|---|---|---|
| 1 | **Corrected Low Income-Specific Goals** | **436** | **138** | **69** | 10-year totals (assumes witness Bradley-Wright's numbers are at the generator) |
| 2 | **Annual Low Income-Specific Goals** | **43.6** | **13.8** | **6.9** | Line 1 / 10 years |

## B. Per Participant Savings - "Deeper Savings" plus Current FPL Low Income Measures

| | | Per Participant (@ Meter) | | | |
|---|---|---|---|---|---|
| | **"Deeper Savings" Measures** | **kWh** | **Summer kW** | **Winter kW** | |
| 3 | HVAC (14 SEER) | 287 | 0.14 | 0.00 | 14 v. 13 SEER (prior standard) in lieu of ASHP which is only applicable to minority of FPL customers |
| 4 | Efficient Water Heater | 120 | 0.01 | 0.03 | Current standard v. prior standard |
| 5 | ENERGY STAR Refrigerator | 164 | 0.02 | 0.01 | ENERGY STAR v. less efficient than current standard |
| 6 | **Subtotal Savings per Participant** | **571** | **0.16** | **0.04** | Sum lines 3 thru 5 |
| 7 | Current FPL Low Income Program | 650 | 0.27 | 0.07 | 2018 average |
| 8 | **Total Savings per Participant** | **1,221** | **0.43** | **0.11** | Line 6 + Line 7 (assumes current low-cost measures installed with "deeper savings" measures) |

## C. Participants Required to Achieve SACE's Low Income-Specific Goals (Annual)

| | | | | | |
|---|---|---|---|---|---|
| 9 | Annual Low Income-Specific Goals | 43.6 | 13.8 | 6.9 | Line 2 |
| 10 | Total Savings per Participant | 1,283 | 0.46 | 0.12 | Line 8 (converted to be at the generator) |
| 11 | **Annual Participants Required** | **34,000** | **30,200** | **58,600** | Line 9 (converted to kWh and kW) / Line 10 |
| 12 | **Annual Savings Achieved** | **75.2** | **26.8** | **6.9** | Line 10 * minimum participation required to meet all 3 Goals (Winter MW requires the most) |
| 13 | Variance v. SACE's Proposed Goals | 31.6 | 13.0 | 0.0 | Line 12 - Line 9 (overachievement for 2 of 3 numbers driven by imbalance in SACE's proposed Goals) |

## Estimated Cost to Achieve SACE's Proposed Low Income-Specific Goals (cont'd)

### D. Total Cost - Installed Equipment ("Incentive") plus Program Operations

| | "Deeper Savings" Measures | Cost | |
|---|---|---|---|
| 14 | HVAC (14 SEER) | $4,500 | Lines 14 thru 19 are per participant |
| 15 | Efficient Water Heater | $1,133 | |
| 16 | ENERGY STAR Refrigerator | $1,196 | |
| 17 | **Subtotal "Deeper Savings" Measures** | **$6,829** | Sum lines 14 thru 16 |
| 18 | Current FPL Low Income Program | $115 | 2018 average |
| 19 | **Total Cost per Participant** | **$6,944** | Lines 17 + Line 18 |
| 20 | **Required Participants (Annual)** | **58,600** | Page 1, Line 13 (in order to achieve all 3 Goals) |
| 21 | **Annual Total Equipment Cost ($ Millions)** | **$406.9** | Line 19 * Line 20 / 1000000 (participant's "incentive" = 100% of installed cost) |
| | **Program Operations** | | |
| 22 | Per Participant | $19 | |
| 23 | **Program Operations ($ Millions)** | **$1.2** | Line 22 * Line 20 / 1000000 plus $125K for program manager & Housing Authority membership |
| 24 | **TOTAL - Annual Cost ($Millions)** | **$408.2** | Line 21 + Line 23 |
| 25 | **TOTAL - 2020-2029 ($ Billions)** | **$4.1** | Line 24 * 10 (years) |

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

| | |
|---|---|
| In re: Commission Review of Numeric Conservation Goals (Florida Power & Light Company) | Docket No. 20190015-EG<br><br>Filed: July 8, 2019 |

**SOUTHERN ALLIANCE FOR CLEAN ENERGY'S OBJECTIONS AND RESPONSES TO FLORIDA POWER & LIGHT COMPANY'S FIRST SET OF INTERROGATORIES (NOS. 1-11)**

Pursuant to Rule 28-106.206, F.A.C. and Florida Rule of Civil Procedure 1.340, Southern Alliance for Clean Energy ("SACE") hereby responds to Florida Power & Light Company's ("FPL's") First Set of Interrogatories (Nos. 1-11) and states as follows:

**OBJECTIONS AND RESPONSES TO INTERROGATORIES**

1. See page 6, lines 21-23 of the Direct Testimony of Mr. Grevatt. Please identify the actual energy savings as a percentage of annual sales achieved by Duke Energy Carolinas and Entergy Arkansas each year during 2010 through 2018. Please also identify the specific data or numbers used to calculate the annual sales achieved by Duke Energy Carolinas and Entergy Arkansas for each year during 2010 through 2018.

   ANSWER: SACE objects on the grounds that this interrogatory asks for analysis that SACE and Mr. Grevatt have not performed and are under no obligation pursuant to the Florida Rules of Civil Procedure to undertake. Subject to SACE's specific objection, SACE answers that Mr. Grevatt has not calculated savings as a percent of eligible annual sales achieved by Duke Energy Carolinas or Energy Arkansas prior to 2018. However, Energy Futures Group ("EFG") estimated that Duke Energy Carolina's ("DEC's") 2017 savings as a percent of total sales (including sales to opt out customers) was 1.07%, which is almost identical to the 1.05% savings as a percent of total sales DEC estimated it achieved in 2018. Since the portion of opt out sales in 2017 and 2018 was very similar, DEC's 2017 savings as a percent of total eligible sales (excluding opt outs) would also be

similar to the 1.67% estimated for 2018.

2. See Table 5 on page 37 of the Direct Testimony of Mr. Grevatt. Does Mr. Grevatt agree that the total eligible sales used to calculate the energy savings as a percentage of annual sales for Entergy Arkansas is based on the sales from non-self-direct customers only? If your response is anything other than an unqualified "yes", please explain your response in detail.

   ANSWER: Yes, because savings as a percent of eligible sales (i.e. sales to customers who are allowed to participate in efficiency programs) is the best reference for benchmarking what can be achieved from eligible customers in another jurisdiction. It is Mr. Grevatt's understanding that there are no opt out provisions in Florida, so "eligible sales" for the Florida utilities are their total sales.

3. See Table 5 on page 37 of the Direct Testimony of Mr. Grevatt. Does Mr. Grevatt agree that the total eligible sales used to calculate the energy savings as a percentage of annual sales for Entergy Arkansas is based on the sales from non-self-direct customers only? If your response is anything other than an unqualified "yes", please explain your response in detail.

   ANSWER: Yes, because savings as a percent of eligible sales (i.e. sales to customers who are allowed to participate in efficiency programs) is the best reference for benchmarking what can be achieved from eligible customers in another jurisdiction. It is my Mr. Grevatt's understanding that there are no opt out provisions in Florida, so "eligible sales" for the Florida utilities are their total sales.

4. See Table 5 on page 37 of the Direct Testimony of Mr. Grevatt. Does Mr. Grevatt agree that the total eligible sales used to calculate the energy savings as a percentage of annual

**DECLARATION**

The undersigned provides the information in responses 1-6, 8, and 11, and jointly provides the information in responses 9-10, and hereby swears and affirms that the foregoing responses constitute true and correct answers to the best of his knowledge, information, and belief.

Jim Grevatt

STATE OF NEW YORK

COUNTY OF KINGS

BEFORE ME, the undersigned authority, personally appeared Jim Grevatt who is personally known or produced Driver's License as identification, and who was sworn and says that the foregoing responses are true.

Sworn to and subscribed before this 24 day of July, 2019.

Notary Public

BRIAN K. ESSER
NOTARY PUBLIC-STATE OF NEW YORK
No. 02ES6301086
Qualified in Kings County
My Commission Expires 04-14-2022

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**FLORIDA POWER & LIGHT COMPANY**

**REBUTTAL TESTIMONY OF ANDREW W. WHITLEY**

**DOCKET NO. 20190015-EG**

**JULY 12, 2019**

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## I. INTRODUCTION

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

A. My name is Andrew W. Whitley, and my business address is 700 Universe Blvd., Juno Beach, Florida 33408.

**Q. Have you previously submitted testimony in this proceeding?**

A. Yes.

**Q. Are you sponsoring any rebuttal exhibits in this case?**

A. Yes. I am sponsoring the following four exhibits that are attached to my rebuttal testimony:

- Exhibit AWW-15: SACE 1.5% Plan Analysis: Levelized System Average Electric Rate Calculation
- Exhibit AWW-16: SACE 1.5% Plan Analysis: Comparison of Levelized System Average Electric Rates
- Exhibit AWW-17: SACE 1.5% Plan Analysis: Additional Cost Needed to be Added to RIM Plan to Increase its Levelized System Average Electric Rate to That of the 1.5% Plan
- Exhibit AWW-18: SACE 1.5% Plan Analysis: Comparison of the Resource Plans: Projection of System Average Electric Rates and Monthly Customer Bills (Assuming 1,200 kWh Usage)

**Q. What is the purpose of your rebuttal testimony?**

A. My rebuttal testimony addresses several issues brought forth by the two Southern Alliance for Clean Energy (SACE) witnesses in this case: Mr.

Grevatt and Mr. Bradley-Wright. If I do not address other specific issues in SACE testimony, it should not be assumed that I agree with either Mr. Grevatt or Mr. Bradley-Wright. There are other Florida Power & Light Company ("FPL") witnesses that address additional deficiencies in the testimony filed by the SACE witnesses.

**Q. Please summarize your rebuttal testimony.**

A. My rebuttal testimony primarily addresses the following topics in Mr. Grevatt's testimony:

- The lack of any resource planning analysis in the development of his proposed Goals;
- The disregard for decades of reliance upon the cost-effectiveness tests used in Florida for Demand-Side Management (DSM) analysis;
- The logical fallacies the SACE witnesses attempted to use to diminish the electric rate impact of non-cost-effective DSM;
- The extreme rate and bill impacts resulting from Mr. Grevatt's 1.5% of retail sales (sales) proposal; and
- Several other à la carte points made by Mr. Grevatt that lack any kind of backup analysis or meaningful support.

Finally, I address a few points made by Mr. Bradley-Wright regarding application of cost-effectiveness tests to his "deeper savings" plan for low-income customers.

## II. LACK OF RESOURCE PLANNING KNOWLEDGE AND ITS EFFECTS ON SACE'S TESTIMONY

**Q. Does Mr. Grevatt's testimony discuss FPL's resource planning process at all?**

A. No.

**Q. Does Mr. Grevatt's experience as set forth in his testimony and exhibits include any experience related to resource planning?**

A. No. From a review of Mr. Grevatt's testimony and exhibits, it appears Mr. Grevatt's career seems exclusively focused on the evaluation and promotion of utility energy efficiency programs.

**Q. Is Mr. Grevatt's lack of experience in resource planning apparent in his testimony?**

A. Yes. There are several points in Mr. Grevatt's testimony that indicate his lack of resource planning experience. These include:

- His belief that supply-side options inherently cause cross-subsidization;
- His mistaken belief that supply-side resources are only added to address growing demand;
- His complete disregard for FPL's system reliability criteria; and
- His "analysis" that leads to proposed DSM Goals that consist only of energy targets and does not address the most important factor in FPL's system reliability analyses: Summer peak MW demand.

**Q. Why does Mr. Grevatt believe that supply-side options cause cross-subsidization?**

A. According to Mr. Grevatt, supply-side options are only added to address growing demand:

> *"Consider supply-side investments that are made solely to address growing demand – either at the system-level (e.g. a new power plant) or at the local level (e.g. a substation capacity upgrade). By definition, the need for those supply-side investments is driven solely by new customers who are adding load to the system and/or existing customers whose demands are growing." (Page 11, lines 17-21)*

Based on this (faulty) assumption, Mr. Grevatt comes to the conclusion that customers whose demand is not growing are subsidizing new customers or customers with growing demand:

> *"…the costs of the new power plant and/or the substation capacity upgrade in this scenario will not be borne solely by the customers whose new demand or growing demand created the need for the supply-side investments. Instead, to the extent that these costs are recovered through rates, they will be borne by all customers, including those existing customers whose demand did not grow." (Page 12, lines 4-8)*

**Q. Are supply-side options built exclusively to address growing demand?**

A. No. Mr. Grevatt displays a keen ignorance of how the determination of resource needs is conducted in a resource planning environment. As stated in

my direct testimony, generation resources, such as the power plant example Mr. Grevatt provides, are added to meet FPL's projected resource needs based on FPL's reliability criteria. The timing and magnitude of these resource needs are not determined solely on increasing system demand; many other factors such as increase or decreases in existing generating capacity, retirement of existing resources, expiration of existing purchased power agreements, increases or decreases in the amount of firm capacity from DSM programs, and economic considerations all factor into the need to add new generation resources to a utility system.

**Q. When a new generating resource is added to an electric utility system, do all customers benefit from it?**

A. Yes. Continuing with the power plant example laid forth by Mr. Grevatt, once a new power plant comes in service, all of the electric utilities' customers benefit from the continued or increased system reliability that the power plant provides. In addition, all of the electric utilities' customers can benefit from the effects associated with the increase in system generating efficiency that the new generation resource may provide, such as decreased system fuel usage and decreased system emissions. In practice, FPL has added, for the reasons mentioned above, combined cycle and solar units to meet its system reliability needs in recent years. These units have lowered FPL's system heat rate, and/or have decreased fossil fuel use, and all of FPL's customers benefitted from the resulting system fuel savings.

**Q. When FPL determines that additional resources are needed to satisfy its reliability criteria, how are those resources evaluated?**

A. Pages 9 and 10 of my direct testimony cover the process behind the economic evaluation of resource options. To succinctly summarize this testimony, FPL evaluates all resource options on the basis of electric rate impacts for all customers. A discussion of this methodology is also available in numerous FPL Ten Year Site Plans. An excerpt from FPL's 2019 Ten Year Site Plan on page 60 is included below:

> *"The basic economic analyses of the competing resource plans focus on total system economics. The standard basis for comparing the economics of competing resource plans is their relative impact on FPL's electricity rate levels, with the general objective of minimizing FPL's projected levelized system average electric rate (i.e., a Rate Impact Measure or RIM methodology)"*

**Q. Does Mr. Grevatt's perception of how supply-side options are economically evaluated conflict with FPL's actual methodology used to evaluate resource options?**

A. Yes. Mr. Grevatt seems to believe that supply-side resource options are not evaluated on a rate impact basis. Mr. Grevatt's statement on pages 10 and 11 of his testimony responds to a question of applying the RIM test to supply options as follows:

> *"Many proposed supply side investments would fail. Put simply, because the RIM test is a test of whether rates may go up, any supply-*

*side investment that would raise rates, all other things being equal, would fail the RIM test." (Page 10, lines 24-25; Page 11, line 1)*

This conflicts with the methodology for economic evaluation that is provided in both my direct testimony and FPL's Ten Year Site Plans, which indicates that FPL evaluates its resource options based on which option offers the best rate impact to its customers.

**Q. Is Mr. Grevatt's characterization of the RIM test as "a test of whether rates go up" accurate?**

A. No. The RIM test is used as a comparison between a DSM measure and an equivalent portion of a supply-side option. It is a test of whether that measure results in a lower or higher electric rate *compared* to that supply-side option. Evaluation of supply-side options is done on a similar basis, as competing resource options and resource plans are economically evaluated based on which option results in the lowest rate for FPL's customers, while meeting all of FPL's reliability criteria. Mr. Grevatt's perception of how resource options are evaluated is completely devoid of any understanding of resource planning principles including how supply options are evaluated.

**Q. If Mr. Grevatt did not utilize any resource planning principles in his analysis, how did Mr. Grevatt determine his proposed DSM Goals?**

A. He seemingly used two alternative approaches, but he ultimately settled on a percentage of sales approach. This percentage of sales approach has nothing to do with FPL's planning process.

In his first approach, which he ultimately abandoned, Mr. Grevatt disregarded FPL's and the FPSC's principle of seeking the option with the better rate impact and urged dropping the RIM test and instead using the TRC cost-effectiveness test. Then, starting with FPL's results based on the TRC path of the economic screening, Mr. Grevatt performed two "corrections" for alleged errors in FPL's Economic Potential analysis. His first "correction" was to reject the two-year payback screen used to address free ridership. In his second "correction," he rejected FPL's analyses of Achievable Potential and substituted an arbitrary assumption that the Achievable Potential would be fifty percent of the Economic Potential. The resulting GWh, summer peak demand, and winter peak demand saving for what he characterized as "Partially Corrected Achievable Potential" are shown on Tables 7, 8, and 9 on page 42 of his testimony. However, after all these machinations, he abandoned this approach and used another approach that he explained earlier in his testimony:

> *"Another approach would be to base energy efficiency targets on what the leading utilities in the South are already achieving. Specifically, the PSC could require each Florida utility to ramp up to 1.50% incremental annual savings per year – a level comparable to the 1.67% Duke Energy Carolinas achieved in 2018 and the 1.44% achieved by Entergy Arkansas in 2018."(Page 38, lines 18-22)*

Mr. Grevatt's second approach, this percentage of sales approach, was much simpler than his first approach. However, Mr. Grevatt readily acknowledged that with this second approach he could not "*recommend specific peak demand savings targets….*" (Page 43, line 20).

In the end, Mr. Grevatt's proposed Goals are not based on an in-depth analysis, but rather are based on the 2018 energy efficiency performance of two unrelated so-called (by him) "leading" utilities – Duke Energy Carolinas and Entergy Arkansas.

**Q. Does FPL serve customers in North or South Carolina?**

A. No.

**Q. Does FPL serve customers in Arkansas?**

A. No.

**Q. Are Mr. Grevatt's proposed Goals based in any part on FPL's most recent planning process or any resource planning principles?**

A. No.

**Q. Are FPL's proposed Goals required to be based upon its most recent planning process?**

A. Yes. Rule 25-17.0021 F.A.C., subsection (3) states in part that: "*In a proceeding to establish or modify goals, each utility shall propose numerical goals for the ten-year period…, based upon the utility's most recent planning process…*" (emphasis added). Accordingly, FPL based its proposed goals upon its most recent planning process to comply with the Commission's DSM

Goals rule. Mr. Grevatt's focus on activities in other states apparently led him to overlook, or simply choose to ignore, this requirement in Florida.

**Q. Does Mr. Grevatt propose Summer and Winter MW values for his proposed Goals?**

A. No. Mr. Grevatt claims that he does not have specific peak demand savings goals because he arrived at his desired peak savings energy targets from a "top-down" approach, not a "bottom-up" approach. He then recommends that:

> *"the PSC initiate a process to more carefully assess peak demand savings potential, perhaps even as part of the utilities' energy efficiency program plan filings, in order to establish such goals." (Page 44, lines 8-10)*

**Q. Is establishing Summer and Winter MW goals a large part of the objective in this current docket?**

A. Yes, and he clearly fails to do so.

## III. DISREGARD FOR THE DECADES OF RELIANCE UPON THE COST-EFFECTIVENESS TESTS USED IN FLORIDA

**Q. Does Mr. Grevatt offer any opinions on the RIM test beyond what you have already discussed?**

A. Yes, Mr. Grevatt goes out of his way to disparage the use of the RIM test, stating that it is "not a cost-effectiveness test" and stating that it is only used as a primary cost-effectiveness test in Florida.

**Q. Is it reasonable to base planning assumptions around the priorities of the jurisdiction in which you are planning?**

A. Yes. One of Mr. Grevatt's most prominently cited materials is the National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources. While FPL does not in any way endorse this manual, it should be noted that Mr. Grevatt's approach for setting goals violates the very first principle set forth in the Manual's Executive Summary: "tailor DSM to the Goals of the jurisdiction."

**Q. Does Mr. Grevatt's DSM "analysis" follow this precept?**

A. No. As previously stated, Mr. Grevatt goes out of his way to disparage the RIM test's usefulness as a cost-effectiveness test for DSM. However, he disregards the fact that the RIM test is a Commission-approved cost-effectiveness test for DSM and the Commission has stated that its policy is to use both the RIM and TRC tests, along with the Participant test, in setting DSM goals. As a result, the Florida Commission has used the RIM test for several decades in its DSM Goals setting process. The fact that use of the RIM test has been prevalent in Florida for so long, and the fact that FPL has electric rates that are among the lowest in the nation, are certainly not coincidental.

## IV. ATTEMPTING TO MINIMIZE THE RATE AND BILL IMPACTS OF DSM NOT BASED ON THE RIM TEST

**Q. Does Mr. Grevatt provide any commentary on the rate impact of the TRC plan versus the RIM plan?**

A. Yes. Mr. Grevatt describes the differential between the TRC plan and the RIM plan as "almost imperceptible."

**Q. Is this an accurate portrayal of this rate impact?**

A. No. Mr. Grevatt's review of my direct testimony either ignored or missed Exhibit AWW-11. In this exhibit, I show that although the rate differential between the TRC plan and the RIM plan seems small, this differential equates to a nearly $200 million one-time payment from customers in 2029. A $200 million charge to customers is certainly not "imperceptible" or inconsequential.

**Q. Does Mr. Grevatt's use of only Cumulative Present Value of Revenue Requirements (CPVRR) for the economic analysis of resource plans with different levels of DSM result in a complete picture of DSM's impact?**

A. No. As stated in pages 9 and 10 of my direct testimony, CPVRR alone cannot be used in economic analysis between resource plans that have different levels of DSM. The rate and bill impacts must also be accounted for in order to have a complete picture of the impact of DSM. Therefore, Mr. Grevatt's statement that FPL's customers would be given $104 million dollars in "bill savings" is an incomplete view because it does not account for the rate impact on all of FPL's customers, and does not account for the individual bill impact on

customers who either do not or cannot participate in DSM offerings that fail the RIM test.

**Q. Does Mr. Grevatt offer any analysis showing the projected rate and bill impacts of his 1.5% of sales recommendation?**

A. No.

**Q. Did FPL conduct an analysis of the projected rate and bill impacts of Mr. Grevatt's 1.5% of sales recommendation?**

A. Yes. Mr. Grevatt recommended a GWh-only reduction goal that scaled up to a 1.5% reduction in sales by 2024. An analysis was performed based on such a goal. The results of this analysis are presented in Exhibits AWW-15 through AWW-18.

**Q. How was this analysis conducted?**

A. FPL began with the Levelized System Average Electric Rate calculation for its TRC resource plan that was previously presented in my direct testimony in Exhibit AWW-11. The following modifications to this sheet were then made to approximate the effects of SACE's recommendation of a 1.5% of sales target:

- Because the Exhibit AWW-11 sheet utilizes the projected total GWh sales value, and Mr. Grevatt's recommended 1.5% reduction goal applies only to the retail sales portion of total sales, I developed annual modifiers to address the additional impact of the GWh goal on total GWh sales. These annual modifiers were then multiplied by the previously projected net annual GWh sales in

Exhibit AWW-11 to derive reduced annual total sales projections in line with the GWh goal. This appears in Column (8a) of Exhibit AWW-15.

- Because the "1.5% reduction in sales" goal would reduce projected variable costs, the same annual modifiers were multiplied by the previously projected variable costs to derive reduced annual variable costs. This is shown in Column (2) of Exhibit AWW-15.
- In order to achieve such an extreme level of GWh reduction, projected DSM expenditures would have to increase. The GWh associated with 1.5% of FPL's retail sales is over 50 times the GWh associated with FPL's TRC resource plan. FPL conservatively assumed that the currently projected DSM program costs for the TRC resource plan would increase by only a factor of 20. This is shown in Column (3) of Exhibit AWW-15.
- FPL then produced a Levelized System Average Electric Rate based on these assumptions to achieve a 1.5% of sales "goal" and compared this rate to the levelized rates and bill impacts of the three resource plans FPL originally presented.

**Q. What were the results of this analysis?**

A. These results are presented in Exhibits AWW-15 through AWW-18. Exhibit AWW-15 shows that Mr. Grevatt's 1.5% of sales proposal results in a Levelized System Average Electric Rate of 10.3906 cents/kWh.

**Q. How does this compare to the Levelized System Average Electric Rates of the three resource plan presented in your direct testimony?**

A. Exhibit AWW-16, which is an expanded version of Exhibit AWW-10 from my direct testimony, shows this comparison. The levelized rate for SACE's 1.5% of sales proposal appears on the last row and is, as expected, significantly larger than the levelized rate for all three of the resource plans FPL originally presented (the Supply Only plan, the RIM plan, and the TRC plan). To provide some context for how much larger this rate is, Exhibit AWW-17 shows the calculation of how large a one-time cost added in 2029 would have to be in order to make the Levelized System Average Electric Rate of the RIM plan equivalent to the Levelized System Average Electric Rate of SACE's 1.5% plan. This exhibit shows in Column (5) that over $27 billion dollars would need to be added in 2029 to equalize the rates of these two plans.

**Q. What effect does SACE's recommendation have on annual rates and bill impact for customers?**

A. This effect is shown in Exhibit AWW-18. For the period of 2020-2030, SACE's plan is expected to increase the cost to a customer whose monthly usage of 1,200 kWh does not change as a result of this 1.5% reduction plan (i.e., a non-participant in DSM), by almost $1,020 when compared to the Supply Only plan. For reference, over the same period, the RIM plan (on which FPL based its proposed goals) is expected to decrease the same customer's bills compared to the Supply Only plan by $1.54. To put things

into perspective, through 2030 SACE's plan costs a customer who continues to use 1,200 kWh per month over $1,000 more than a plan based on FPL's proposed Goals.

## V. OTHER CONSIDERATIONS – LINE LOSSES AND NON-ENERGY BENEFITS

**Q. Does Mr. Grevatt bring up any other considerations that you wish to address?**

A. Yes. In his "review of assumptions," Mr. Grevatt brings up two points from which he draws erroneous conclusions.

**Q. What is the first of these two points?**

A. The first of these points is found on page 35, lines 1-7 of his testimony. In this paragraph, Mr. Grevatt alleges that FPL incorrectly used only average values for line losses when converting the impacts of DSM from customer savings at the meter to savings at the generator.

**Q. What does Mr. Grevatt propose that FPL should have done in evaluating line losses?**

A. Mr. Grevatt claims that utilities should use "marginal" line loss rates in evaluating DSM measures.

**Q. Does Mr. Grevatt explain what marginal line losses are?**

A. No. Mr. Grevatt only claims that by "definition," marginal line losses should be used in evaluating DSM measures. He does not, however, provide a definition of what he means by the term marginal. Instead, he references an

online paper (in his footnote #39) that uses a hypothetical utility to justify the use of higher line loss values.

**Q. How did FPL account for line losses in its analyses?**

A. FPL used the information from its latest available line loss study (from 2018 using values for the full year of 2017) in its DSM analyses. FPL's line losses were 6.14% for monthly peak periods and 4.86% for energy over the entire year. For an example, a DSM measure with 1 kW of Summer peak reduction, 1 kW of Winter peak, and 1000 kWh of annual energy reduction at the meter would have those values adjusted upwards due to line losses to 1.065 peak kW reduction at the generator, and 1,051 annual kWh reduction at the generator[1].

**Q. Would it be appropriate for FPL to use a theoretical calculation of marginal line losses in DSM analysis?**

A. No. Rather than base its line loss factors around a theoretical calculation, FPL uses the most recent actual system line loss values based on real-world performance of its electric system. These values account for the varying levels of load that an electric system will experience over the course of the year.

**Q. Why is it important to differentiate between line losses at the peak and line losses for annual energy?**

A. Line losses at the peak are generally higher during periods of high system load (one of the few facts present in the paper Mr. Grevatt uses to support his line loss conjecture). Peak loads represent system loads at the margin.

[1] Calculations for line losses are: 1kW / (1 – 0.0614) = 1.065 kW peak demand and 1,000 kWh / (1 – 0.0486) = 1,051 kWh annual energy

Consequently, line losses based on peak load conditions represent line losses at the margin.

However, annual energy sales occur during each of the annual 8,760 hours and in a wide variety of system conditions. As a result, there is no single "marginal" line loss number that would be appropriate to use for energy sales for all hours of the year. Therefore, it is appropriate to use average annual line losses to adjust the energy impact of DSM. As indicated in my response to SACE Interrogatory 9 (Referenced in Mr. Grevatt's Exhibit JMG-19), FPL correctly uses average line losses when adjusting for energy, and peak line losses when adjusting for demand.

**Q. Does Mr. Grevatt recognize the value of using different line loss factors for energy and demand?**

A. No. Mr. Grevatt's final 1.5% of sales proposal for DSM is entirely based on annual energy reduction that would occur over 8,760 hours of varying load, yet he incorrectly advocates usage of a marginal line loss factor that only occurs at high load.

**Q. Is FPL's approach of using line losses consistent with the way it analyzes supply-side options?**

A. Yes. When evaluating a new supply-side option, FPL typically performs a line loss analysis based on, among other factors, the unit's capacity, projected hours of operation, and location. Based on these factors, FPL's system studies produce a line loss value for that unit based on the system peak period, as well

as a line loss value for annual energy over the remainder of the year. This is consistent with how line losses are accounted for in the evaluation of DSM measures.

**Q. What is the second point that Mr. Grevatt addresses?**

A. On page 35, lines 8-22 of his testimony, Mr. Grevatt contends that FPL failed to include all participant benefits in the TRC test.

**Q. What other participant benefits does Mr. Grevatt feel that FPL excluded?**

A. Mr. Grevatt lists the following:

- Other fuel savings (for example, natural gas savings for a house that uses gas heat);
- Water savings (for example, reduced water usage from low-flow showerheads; and
- "[A]ny of a range of non-energy benefits," which Mr. Grevatt does not further clarify.

**Q. Is FPL a natural gas utility?**

A. No.

**Q. Is FPL a water utility?**

A. No.

**Q. Is this docket focused solely on electric utilities?**

A. Yes.

**Q. Are any of the "non-energy" benefits (NEB) Mr. Grevatt proposes reasonably quantifiable?**

A. No. Because FPL is not a natural gas or water utility, it would have no information regarding a customer's usage of either natural gas or water.

**Q. Does Mr. Grevatt propose any reasonable quantification of these NEBs for use in FPL's service area?**

A. No.

**Q. Do Commission rules require that any benefits be reasonably quantifiable?**

A. Yes. Rule 25-17.008, F.A.C. requires that additional benefits must be "reasonably quantified."

**Q. Have any of these NEBs ever been included in previous DSM Goals filings in Florida?**

A. No.

## VI. TOPICS IN MR. BRADLEY-WRIGHT'S TESTIMONY

**Q. Does Mr. Bradley-Wright's testimony have any topics you wish to address?**

A. Yes, there are two topics in Mr. Bradley-Wright's testimony that I will address. The first of these is his assertion that use of the RIM test precludes FPL from offering a Low-Income DSM Program. The second topic addresses his proposal to move beyond a regular low-income program to outright giveaways of costly, high-efficiency appliances.

**Q. Regarding the first point, what did Mr. Bradley-Wright's testimony address in regards to the RIM test?**

A. Much of Mr. Bradley-Wright's opinions on the RIM test were either directly referencing or parroting Mr. Grevatt's opinions on the RIM test that are rebutted earlier in my testimony and in the testimonies of other FPL witnesses. However, Mr. Bradley-Wright also focused on the application of the RIM test towards low-income measures and programs. In page 14, lines 1-22 of his testimony, Mr. Bradley-Wright details why he thinks that the RIM test should not be used to evaluate low-income measures.

**Q. Did FPL's Low-Income Program in the last DSM Plan pass RIM?**

A. No.

**Q. Did FPL still offer this program?**

A. Yes. In fact, Mr. Bradley-Wright's testimony acknowledges this:

> *"…since the 2014 Energy Efficiency Act proceeding, the Commission and utilities do not require low-income efficiency measures and programs to pass the RIM test." (Page 14, lines 20-22)*

FPL has offered its Low-Income Program to customers for the past five years despite the fact that it does not pass RIM.

**Q. Does application of the RIM test in DSM proceedings and the resulting lower rate impacts benefit low-income customers?**

A. Yes, even if low-income customers are unable to participate in DSM measures, these customers still benefit because measures that pass the RIM test result in lower electric rates compared to measures that do not pass RIM.

This fact is especially important for low-income customers. As Mr. Bradley-Wright notes in his testimony:

> "*According to a recent report by the Federal Reserve, nearly 40 percent of Americans would struggle to cover an unexpected $400 expense, such as a car repair or appliance replacement, and 12% wouldn't be able to pay their current monthly bills, while others resort to high-interest short-term lending (e.g. payday loans), which can lead to even greater financial risk." (Page 6, lines 8-12)*

Mr. Bradley-Wright's testimony states that many low-income customers would struggle with a $400 expense. Out of the 525 residential energy efficiency measures that were evaluated, 224 of them have incremental costs to the participant greater than $400. Stated otherwise, 43% of the measures identified in the Technical Potential study would be out of reach of the customers Mr. Bradley-Wright has identified. However, all of those customers would benefit from continued low electric rates.

**Q. Does Mr. Bradley-Wright propose any DSM solutions for these low-income customers who may not be able to afford to participate in DSM measures such as these?**

A. Yes, and that proposal is the second point I wish to address. This point deals with Mr. Bradley-Wright's suggestion of a "deeper savings" program and how such a program fares under the RIM and TRC cost-effectiveness tests used in Florida.

**Q. What does Mr. Bradley-Wright propose in his "deeper savings" suggestion?**

A. Mr. Bradley-Wright proposes the following in his testimony:

> *"…larger scale improvements like HVAC equipment replacement, insulation, water heaters, and appliances upgrades, and comprehensive air sealing for ductwork and building envelopes do more to address the root causes of high energy burdens by eliminating significantly more energy waste and therefore substantially reduce monthly energy bills. Therefore, the other program delivery channel should strive to capture deep savings for each participant, sufficient to reduce electric bills enough to materially improve the financial standing of the low-income customers served every month for many years to follow." (Page 28, lines 4-12)*

Essentially, Mr. Bradley-Wright proposes a low-income program in which the utility's non-low-income customers, and non-participating low-income customers, pay the entire cost for appliance replacements for participating low-income customers.

**Q. Did Mr. Bradley-Wright provide an analysis that showed how his "deeper savings" program fares under the RIM and TRC tests?**

A. No.

**Q. How do Mr. Bradley-Wright's "deeper savings" proposals fare under the cost-effectiveness tests used in Florida?**

A. Table 1 below shows the results under both the RIM and TRC tests of FPL giving away appliances for free. The total cost for the appliance and its installation are considered utility program costs under the both the RIM and TRC test. The assumptions for appliance costs, kW reduction, and kWh reduction are the same that FPL witness Koch explains and uses in his rebuttal testimony.

The first column analyzes the cost-effectiveness ratios of a proposal in which FPL covers the entire cost of replacing just a customer's AC system. The second and third columns repeat this analysis for proposals that cover the entire cost of just an efficient refrigerator, and just an efficient water heater, respectively. The fourth column shows a proposal that covers the cost of all three appliances.

**Table 1**

| | (1) "Deeper Savings" AC Unit | (2) "Deeper Savings" Energy Star Refrigerator | (3) "Deeper Savings" Efficient Water Heater | (4) "Deeper Savings" AC, Fridge, and Water Heater |
|---|---|---|---|---|
| Summer kW Reduction: | 0.14 | 0.02 | 0.01 | 0.17 |
| Winter kW Reduction: | 0 | 0.01 | 0.03 | 0.04 |
| Annual kWh Reduction: | 287 | 164 | 120 | 571 |
| Cost of Appliances: | $4,500 | $1,196 | $1,133 | $6,829 |
| RIM Ratio = | 0.04 | 0.04 | 0.03 | 0.04 |
| TRC Ratio = | 0.04 | 0.05 | 0.04 | 0.04 |
| Participant Test Ratio = | Infinite | Infinite | Infinite | Infinite |

**Q. What do these results show about this "deeper savings" proposal?**

A. The Participant test results are, not surprisingly, infinite (in other words, the participant benefits are infinitely higher than the participant costs), because the low-income participant incurs no cost to participate in these measures. All of the individual appliance measures as well as the combination measure all have RIM ratios approaching zero, indicating that the "deeper savings" proposal places an extreme cost and electric rate burden on the rest of FPL's customers. Finally, all of these measures also have a TRC benefit-to-cost ratio approaching zero. Mr. Bradley-Wright's testimony on page 15, lines 1-19 goes through why he believes the TRC test is the appropriate test to use to evaluate low-income measures. However, by his own criteria, these "deeper savings" measures would be eliminated by his favored TRC test.

**Q. Are the magnitudes of the cost-effectiveness ratios in Table 1 significant?**

A. Yes. A cost-effectiveness ratio consists of the benefits of a measure divided by its cost. Therefore, a ratio of 1.00 indicates that the costs are equal to the benefits. A cost-effectiveness ratio of 0.50 then indicates that the costs for a measure are twice that of the benefits. In the examples I outlined analyzing Mr. Bradley-Wright's "deeper savings" proposal, the RIM ratio was 0.04 and the TRC ratio was 0.04. If one were to evaluate this measure using the TRC (as Mr. Bradley-Wright claims is appropriate), the costs would be roughly twenty-five times the benefits.

**Q. Could the cost of these appliances be lowered enough to enable the "deeper savings" proposal to pass the TRC test?**

A. Realistically, no. Table 2 below shows the results of a "break-even" analysis of the appliance costs in these "deeper savings" proposals. Using the same appliance parameters for kW and kWh reductions that were analyzed in Table 1, the cost of the appliances was adjusted until the TRC ratio reached a break-even level (1.00). The row labeled "Cost of Appliances" indicates how low the price of an appliance must be in order to get back to a breakeven point.

**Table 2**

| | (1) "Deeper Savings" AC Unit | (2) "Deeper Savings" Energy Star Refrigerator | (3) "Deeper Savings" Efficient Water Heater | (4) "Deeper Savings" AC, Fridge, and Water Heater |
|---|---|---|---|---|
| Summer kW Reduction: | 0.14 | 0.02 | 0.01 | 0.17 |
| Winter kW Reduction: | 0 | 0.01 | 0.03 | 0.04 |
| Annual kWh Reduction: | 287 | 164 | 120 | 571 |
| **Cost of Appliances:** | **$200** | **$56** | **$40** | **$296** |
| RIM Ratio = | 0.44 | 0.28 | 0.28 | 0.38 |
| **TRC Ratio =** | **1.00** | **1.00** | **1.00** | **1.00** |
| Participant Test Ratio = | Infinite | Infinite | Infinite | Infinite |

For these "deeper savings" proposals to break-even on the TRC test, one would have to be able to purchase and install an HVAC system for $200, a refrigerator for $56, or a water heater for $40. This indicates that the total appliance costs for these "deeper savings" proposals would have to be reduced to the point of total absurdity for Mr. Bradley-Wright's proposed low-income program to reach even a breakeven point using the TRC test.

## VII. CONCLUSIONS

**Q. Please summarize the main issues you have with Mr. Grevatt's and Mr. Bradley-Wright's testimonies.**

A. The two issues that best encapsulate the problems with both Mr. Grevatt's and Mr. Bradley-Wright's testimonies are the following:

- The lack of any resource planning analysis in regards to setting Goals; and
- The lack of knowledge and/or respect for years of Commission practices and direction in regard to the analysis of DSM.

The lack of any resource planning analysis results in fundamental flaws in the recommendations from both witnesses. FPL has utilized its resource planning principles to ensure that its customers would have reliable electric service at the lowest possible electric rates for years. SACE's witnesses both disregarded these principles and, instead, base their goals by "copy-catting" what they claim are "leading" utilities.

Furthermore, both witnesses argue against tried and true methods for evaluating DSM that have been used by the Commission for close to 25 years and which are required in DSM goals-settings in Florida. They offer no compelling argument for abandoning the RIM test that has helped customers avoid unnecessary rate impacts from non-cost-effective DSM measures for almost three decades. In Mr. Grevatt's case, this lack of perspective on use of the RIM test led him to propose a 1.5% of sales reduction plan that would

greatly increase the electric rates of FPL customers, and increase bills for non-participants in DSM, over the next ten years. In Mr. Bradley-Wright's case, this lack of perspective leads him to disregard the benefits that low electric rates offer customers and leads him to suggest a "deeper savings" program that would not pass even his favored TRC test. For these reasons, I would recommend that the Commission reject the proposed Goals set forth by both Mr. Grevatt and Mr. Bradley-Wright.

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

A. Yes.

## SACE 1.5% Plan Analysis: Levelized System Average Electric Rate Calculation

| Year | (1) Annual Discount Factor 7.73% | (2) **Reduced** Resource Plan Variable Costs ($000, Nom) | (3) **Increased** Resource Plan Fixed Costs ($000, Nom) | (4) Non-Resource Plan Other System Costs * ($000, Nom) | (5) = (2)+(3)+(4) System Revenue Requirements ($000, Nom) | (6) Load Forecast NEL (GWh) | (7) **Original** DSM Energy Reduction ** (GWh) | (8) = (6) - (7) **Original** Load Forecast NEL Adjusted by DSM (GWh) | (8a) **Reduced** Load Forecast NEL Adjusted for Addl. DSM (GWh) | (9) = ((5)/(8a))/10 Annual Electric Rate (cents/kWh, Nom) | (10) = (9) *(1) Annual Electric Rate (cents/kWh, NPV) | (11) Nominal Levelized System Average Rate (cents/kWh) | (12) = (11) * (1) NPV Levelized System Average Rate (cents/kWh) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2019 | 1.000 | 2,122,230 | 0 | 7,586,380 | 9,708,610 | 121,100 | 28 | 121,072 | 121,072 | 8.01888 | 8.01888 | 10.3906 | 10.3906 |
| 2020 | 0.928 | 1,804,880 | 219,013 | 7,669,252 | 9,693,144 | 122,284 | 72 | 122,212 | 122,059 | 7.94137 | 7.37138 | 10.3906 | 9.6448 |
| 2021 | 0.862 | 1,783,084 | 331,716 | 7,705,581 | 9,820,381 | 122,370 | 87 | 122,282 | 121,643 | 8.07309 | 6.95579 | 10.3906 | 8.9525 |
| 2022 | 0.800 | 1,762,950 | 499,526 | 7,716,451 | 9,978,927 | 122,331 | 106 | 122,225 | 120,767 | 8.26296 | 6.60839 | 10.3906 | 8.3100 |
| 2023 | 0.742 | 1,841,481 | 663,001 | 7,821,043 | 10,325,526 | 122,680 | 128 | 122,553 | 119,941 | 8.60880 | 6.39081 | 10.3906 | 7.7135 |
| 2024 | 0.689 | 1,997,268 | 790,675 | 7,937,980 | 10,725,923 | 123,864 | 150 | 123,714 | 119,605 | 8.96780 | 6.17948 | 10.3906 | 7.1599 |
| 2025 | 0.640 | 2,085,049 | 955,935 | 7,951,483 | 10,992,467 | 124,440 | 171 | 124,270 | 118,480 | 9.27787 | 5.93428 | 10.3906 | 6.6460 |
| 2026 | 0.594 | 2,233,451 | 1,052,875 | 8,036,357 | 11,322,683 | 125,430 | 192 | 125,238 | 117,758 | 9.61519 | 5.70862 | 10.3906 | 6.1690 |
| 2027 | 0.551 | 2,289,773 | 1,234,022 | 8,171,527 | 11,695,321 | 126,520 | 213 | 126,308 | 117,123 | 9.98554 | 5.50298 | 10.3906 | 5.7262 |
| 2028 | 0.512 | 2,306,108 | 1,404,791 | 8,326,565 | 12,037,464 | 127,941 | 234 | 127,707 | 116,800 | 10.30600 | 5.27193 | 10.3906 | 5.3152 |
| 2029 | 0.475 | 2,335,921 | 1,579,359 | 8,490,504 | 12,405,784 | 128,968 | 254 | 128,713 | 116,068 | 10.68840 | 5.07511 | 10.3906 | 4.9337 |
| 2030 | 0.441 | 2,364,674 | 1,519,163 | 8,672,175 | 12,556,011 | 130,368 | 254 | 130,114 | 116,585 | 10.76986 | 4.74675 | 10.3906 | 4.5796 |
| 2031 | 0.409 | 2,479,185 | 1,589,594 | 8,852,117 | 12,920,896 | 131,676 | 254 | 131,422 | 117,757 | 10.97253 | 4.48897 | 10.3906 | 4.2509 |
| 2032 | 0.380 | 2,621,930 | 1,603,252 | 9,020,030 | 13,245,213 | 133,326 | 255 | 133,071 | 119,235 | 11.10851 | 4.21841 | 10.3906 | 3.9458 |
| 2033 | 0.352 | 2,660,630 | 1,554,284 | 9,169,386 | 13,384,299 | 134,288 | 254 | 134,034 | 120,098 | 11.14453 | 3.92833 | 10.3906 | 3.6626 |
| 2034 | 0.327 | 2,748,915 | 1,563,270 | 9,337,609 | 13,649,793 | 135,498 | 254 | 135,244 | 121,182 | 11.26392 | 3.68544 | 10.3906 | 3.3997 |
| 2035 | 0.304 | 2,883,981 | 1,691,768 | 9,508,749 | 14,084,498 | 136,706 | 254 | 136,452 | 122,264 | 11.51973 | 3.49860 | 10.3906 | 3.1557 |
| 2036 | 0.282 | 3,137,466 | 1,867,490 | 9,691,112 | 14,696,068 | 138,064 | 255 | 137,809 | 123,479 | 11.90163 | 3.35515 | 10.3906 | 2.9292 |
| 2037 | 0.262 | 3,266,905 | 2,011,870 | 9,854,522 | 15,133,297 | 138,933 | 254 | 138,678 | 124,259 | 12.17885 | 3.18688 | 10.3906 | 2.7189 |
| 2038 | 0.243 | 3,384,812 | 2,157,823 | 10,035,320 | 15,577,956 | 140,133 | 254 | 139,879 | 125,334 | 12.42911 | 3.01893 | 10.3906 | 2.5238 |
| 2039 | 0.225 | 3,481,932 | 2,176,375 | 10,219,433 | 15,877,740 | 141,312 | 254 | 141,058 | 126,391 | 12.56239 | 2.83229 | 10.3906 | 2.3426 |
| 2040 | 0.209 | 3,605,789 | 2,312,575 | 10,442,179 | 16,360,543 | 142,844 | 255 | 142,589 | 127,763 | 12.80540 | 2.67986 | 10.3906 | 2.1745 |
| 2041 | 0.194 | 3,748,606 | 2,426,154 | 10,634,303 | 16,809,063 | 144,981 | 254 | 144,727 | 129,678 | 12.96214 | 2.51796 | 10.3906 | 2.0184 |
| 2042 | 0.180 | 3,847,590 | 2,458,639 | 10,827,790 | 17,134,019 | 146,450 | 254 | 146,196 | 130,994 | 13.07995 | 2.35848 | 10.3906 | 1.8736 |
| 2043 | 0.167 | 4,080,779 | 2,511,192 | 11,023,698 | 17,615,670 | 147,916 | 254 | 147,662 | 132,309 | 13.31408 | 2.22838 | 10.3906 | 1.7391 |
| 2044 | 0.155 | 4,258,989 | 2,651,368 | 11,222,044 | 18,132,401 | 149,765 | 255 | 149,510 | 133,964 | 13.53529 | 2.10281 | 10.3906 | 1.6143 |
| 2045 | 0.144 | 4,341,782 | 2,672,033 | 11,422,719 | 18,436,535 | 150,845 | 254 | 150,590 | 134,932 | 13.66355 | 1.97037 | 10.3906 | 1.4984 |
| 2046 | 0.134 | 4,449,824 | 2,701,406 | 11,625,982 | 18,777,212 | 152,304 | 254 | 152,050 | 136,240 | 13.78245 | 1.84487 | 10.3906 | 1.3908 |
| 2047 | 0.124 | 4,572,794 | 2,768,354 | 11,831,987 | 19,173,135 | 153,766 | 254 | 153,511 | 137,550 | 13.93907 | 1.73191 | 10.3906 | 1.2910 |
| 2048 | 0.115 | 4,681,938 | 2,780,845 | 12,035,230 | 19,498,013 | 155,584 | 255 | 155,329 | 139,178 | 14.00941 | 1.61572 | 10.3906 | 1.1984 |
| 2049 | 0.107 | 4,774,856 | 2,847,426 | 12,244,942 | 19,867,224 | 156,653 | 254 | 156,398 | 140,136 | 14.17706 | 1.51770 | 10.3906 | 1.1123 |
| 2050 | 0.099 | 4,843,702 | 2,781,810 | 12,457,450 | 20,082,962 | 158,123 | 254 | 157,868 | 141,454 | 14.19756 | 1.41080 | 10.3906 | 1.0325 |
| 2051 | 0.092 | 4,913,556 | 2,731,468 | 12,672,969 | 20,317,993 | 159,599 | 254 | 159,345 | 142,776 | 14.23064 | 1.31259 | 10.3906 | 0.9584 |
| 2052 | 0.086 | 4,984,435 | 2,612,776 | 12,891,538 | 20,488,749 | 161,491 | 254 | 161,237 | 144,472 | 14.18182 | 1.21420 | 10.3906 | 0.8896 |
| 2053 | 0.079 | 5,056,353 | 2,525,489 | 13,116,714 | 20,698,556 | 162,571 | 254 | 162,317 | 145,440 | 14.23173 | 1.13102 | 10.3906 | 0.8258 |
| 2054 | 0.074 | 5,129,326 | 2,461,170 | 13,345,146 | 20,935,642 | 164,067 | 254 | 163,813 | 146,780 | 14.26327 | 1.05217 | 10.3906 | 0.7665 |
| 2055 | 0.068 | 5,203,370 | 2,364,058 | 13,576,884 | 21,144,312 | 165,570 | 254 | 165,316 | 148,127 | 14.27446 | 0.97741 | 10.3906 | 0.7115 |
| 2056 | 0.064 | 5,278,501 | 2,303,127 | 13,811,974 | 21,393,602 | 167,504 | 254 | 167,249 | 149,859 | 14.27581 | 0.90734 | 10.3906 | 0.6604 |
| 2057 | 0.059 | 5,354,736 | 2,218,686 | 14,049,563 | 21,622,985 | 168,598 | 254 | 168,344 | 150,840 | 14.33505 | 0.84572 | 10.3906 | 0.6130 |
| 2058 | 0.055 | 5,432,091 | 2,165,637 | 14,291,429 | 21,889,156 | 170,123 | 254 | 169,869 | 152,207 | 14.38122 | 0.78754 | 10.3906 | 0.5690 |
| 2059 | 0.051 | 5,510,583 | 2,066,812 | 14,537,648 | 22,115,043 | 171,656 | 254 | 171,402 | 153,580 | 14.39969 | 0.73196 | 10.3906 | 0.5282 |
| 2060 | 0.047 | 5,590,229 | 2,087,922 | 14,788,300 | 22,466,451 | 173,634 | 254 | 173,379 | 155,352 | 14.46168 | 0.68234 | 10.3906 | 0.4903 |
| 2061 | 0.044 | 5,671,047 | 2,065,728 | 15,043,463 | 22,780,239 | 174,746 | 254 | 174,492 | 156,348 | 14.57017 | 0.63812 | 10.3906 | 0.4551 |
| 2062 | 0.041 | 5,753,055 | 2,065,220 | 15,303,219 | 23,121,495 | 176,303 | 254 | 176,049 | 157,744 | 14.65762 | 0.59587 | 10.3906 | 0.4224 |
| 2063 | 0.038 | 5,836,271 | 2,098,348 | 15,567,651 | 23,502,269 | 177,869 | 254 | 177,615 | 159,147 | 14.76765 | 0.55726 | 10.3906 | 0.3921 |
| 2064 | 0.035 | 5,920,712 | 2,136,157 | 15,836,842 | 23,893,711 | 179,648 | 254 | 179,394 | 160,741 | 14.86476 | 0.52066 | 10.3906 | 0.3639 |
| 2065 | 0.033 | 6,006,398 | 2,194,400 | 16,110,879 | 24,311,677 | 181,444 | 254 | 181,190 | 162,350 | 14.97482 | 0.48687 | 10.3906 | 0.3378 |
| | | | | | | | | | | | 140.39733 | | 140.39733 |

* Includes system costs not affected by the resource plan such as existing generation, T&D, staff, and DSM costs not tied directly to new DSM signups (such as rebates to existing load management participants, etc.).

** DSM energy reductions are incremental from August 2019.

**Levelized System Average Electric Rate (cents/kWh) =** **10.3906**

Docket No. 20190015-EG
SACE 1.5% Plan Analysis:
Levelized System Average Electric Rate Calculation
Exhibit AWW-15, Page 1 of 1

# SACE 1.5% Plan Analysis: Comparison of Levelized System Average Electric Rates

| Resource Plan | Levelized System Average Electric Rate (cents/kWh) | Avoids Cross-Subsidization of Customer Groups ? |
|---|---|---|
| RIM Resource Plan | 9.6278 | Yes |
| Supply Only Resource Plan | 9.6321 | Yes |
| TRC Resource Plan | 9.6332 | No |
| **SACE 1.5% Plan** | **10.3906** | **No** |

**SACE 1.5% Plan Analysis: Additional Cost Needed to be Added to RIM Plan to Increase its Levelized System Average Electric Rate to That of the 1.5% Plan**

| Year | (1) Annual Discount Factor 7.73% | (2) Resource Plan Variable Costs ($000, Nom) | (3) Resource Plan Fixed Costs ($000, Nom) | (4) Non-Resource Plan Other System Costs * ($000, Nom) | (5) "What If" One-Time Cost ($000, Nom) | (6) = (2)+(3)+(4)+(5) System Revenue Requirements ($000, Nom) | (7) Load Forecast NEL (GWh) | (8) DSM Energy Reduction ** (GWh) | (9) = (7) - (8) Load Forecast NEL Adjusted by DSM (GWh) | (10) = ((6)/(9))/10 Annual Electric Rate (cents/kWh, Nom) | (11) = (10) *(1) Annual Electric Rate (cents/kWh, NPV) | (12) Nominal Levelized System Average Rate (cents/kWh) | (13) = (12) * (1) NPV Levelized System Average Rate (cents/kWh) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2019 | 1.000 | 2,120,510 | 0 | 7,586,380 | 0 | 9,706,890 | 121,100 | 28 | 121,072 | 8.01746 | 8.01746 | 10.3906 | 10.3906 |
| 2020 | 0.928 | 1,806,740 | 2,566 | 7,669,252 | 0 | 9,478,558 | 122,284 | 59 | 122,225 | 7.75502 | 7.19840 | 10.3906 | 9.6448 |
| 2021 | 0.862 | 1,792,250 | 78,833 | 7,705,581 | 0 | 9,576,664 | 122,370 | 59 | 122,310 | 7.82981 | 6.74618 | 10.3906 | 8.9525 |
| 2022 | 0.800 | 1,784,500 | 210,293 | 7,716,451 | 0 | 9,711,243 | 122,331 | 59 | 122,271 | 7.94237 | 6.35199 | 10.3906 | 8.3100 |
| 2023 | 0.742 | 1,882,400 | 337,872 | 7,821,043 | 0 | 10,041,315 | 122,680 | 60 | 122,621 | 8.18892 | 6.07911 | 10.3906 | 7.7135 |
| 2024 | 0.689 | 2,067,280 | 441,547 | 7,937,980 | 0 | 10,446,807 | 123,864 | 60 | 123,804 | 8.43817 | 5.81453 | 10.3906 | 7.1599 |
| 2025 | 0.640 | 2,189,470 | 592,290 | 7,951,483 | 0 | 10,733,242 | 124,440 | 60 | 124,380 | 8.62937 | 5.51949 | 10.3906 | 6.6460 |
| 2026 | 0.594 | 2,378,230 | 688,387 | 8,036,357 | 0 | 11,102,974 | 125,430 | 60 | 125,370 | 8.85615 | 5.25797 | 10.3906 | 6.1690 |
| 2027 | 0.551 | 2,472,840 | 882,142 | 8,171,527 | 0 | 11,526,509 | 126,520 | 60 | 126,460 | 9.11474 | 5.02308 | 10.3906 | 5.7262 |
| 2028 | 0.512 | 2,525,930 | 1,059,039 | 8,326,565 | 0 | 11,911,534 | 127,941 | 60 | 127,881 | 9.31458 | 4.76478 | 10.3906 | 5.3152 |
| 2029 | 0.475 | 2,593,390 | 1,242,934 | 8,490,504 | **27,982,696** | 40,309,524 | 128,968 | 60 | 128,907 | 31.27014 | 14.84782 | 10.3906 | 4.9337 |
| 2030 | 0.441 | 2,644,850 | 1,416,204 | 8,672,175 | 0 | 12,733,229 | 130,368 | 60 | 130,308 | 9.77166 | 4.30680 | 10.3906 | 4.5796 |
| 2031 | 0.409 | 2,769,990 | 1,494,312 | 8,852,117 | 0 | 13,116,419 | 131,676 | 60 | 131,616 | 9.96569 | 4.07706 | 10.3906 | 4.2509 |
| 2032 | 0.380 | 2,934,950 | 1,513,121 | 9,020,030 | 0 | 13,468,101 | 133,326 | 60 | 133,266 | 10.10618 | 3.83778 | 10.3906 | 3.9458 |
| 2033 | 0.352 | 2,973,960 | 1,468,878 | 9,169,386 | 0 | 13,612,224 | 134,288 | 60 | 134,228 | 10.14111 | 3.57463 | 10.3906 | 3.6626 |
| 2034 | 0.327 | 3,073,670 | 1,495,023 | 9,337,609 | 0 | 13,906,301 | 135,498 | 60 | 135,438 | 10.26765 | 3.35947 | 10.3906 | 3.3997 |
| 2035 | 0.304 | 3,225,540 | 1,562,429 | 9,508,749 | 0 | 14,296,718 | 136,706 | 60 | 136,646 | 10.46258 | 3.17754 | 10.3906 | 3.1557 |
| 2036 | 0.282 | 3,508,520 | 1,726,831 | 9,691,112 | 0 | 14,926,463 | 138,064 | 60 | 138,003 | 10.81602 | 3.04911 | 10.3906 | 2.9292 |
| 2037 | 0.262 | 3,650,880 | 1,861,706 | 9,854,522 | 0 | 15,367,108 | 138,933 | 60 | 138,872 | 11.06563 | 2.89558 | 10.3906 | 2.7189 |
| 2038 | 0.243 | 3,784,850 | 1,997,664 | 10,035,320 | 0 | 15,817,835 | 140,133 | 60 | 140,073 | 11.29258 | 2.74287 | 10.3906 | 2.5238 |
| 2039 | 0.225 | 3,892,000 | 2,011,136 | 10,219,433 | 0 | 16,122,570 | 141,312 | 60 | 141,252 | 11.41404 | 2.57339 | 10.3906 | 2.3426 |
| 2040 | 0.209 | 4,029,470 | 2,052,596 | 10,442,179 | 0 | 16,524,245 | 142,844 | 60 | 142,784 | 11.57292 | 2.42193 | 10.3906 | 2.1745 |
| 2041 | 0.194 | 4,189,780 | 2,144,925 | 10,634,303 | 0 | 16,969,007 | 144,981 | 60 | 144,921 | 11.70918 | 2.27457 | 10.3906 | 2.0184 |
| 2042 | 0.180 | 4,302,610 | 2,152,115 | 10,827,790 | 0 | 17,282,514 | 146,450 | 60 | 146,390 | 11.80583 | 2.12874 | 10.3906 | 1.8736 |
| 2043 | 0.167 | 4,558,530 | 2,180,318 | 11,023,698 | 0 | 17,762,546 | 147,916 | 60 | 147,856 | 12.01339 | 2.01069 | 10.3906 | 1.7391 |
| 2044 | 0.155 | 4,759,790 | 2,298,440 | 11,222,044 | 0 | 18,280,274 | 149,765 | 60 | 149,704 | 12.21091 | 1.89706 | 10.3906 | 1.6143 |
| 2045 | 0.144 | 4,848,750 | 2,391,652 | 11,422,719 | 0 | 18,663,122 | 150,845 | 60 | 150,784 | 12.37735 | 1.78490 | 10.3906 | 1.4984 |
| 2046 | 0.134 | 4,972,640 | 2,413,167 | 11,625,982 | 0 | 19,011,790 | 152,304 | 60 | 152,244 | 12.48771 | 1.67156 | 10.3906 | 1.3908 |
| 2047 | 0.124 | 5,109,260 | 2,472,437 | 11,831,987 | 0 | 19,413,684 | 153,766 | 60 | 153,705 | 12.63045 | 1.56932 | 10.3906 | 1.2910 |
| 2048 | 0.115 | 5,231,020 | 2,477,076 | 12,035,230 | 0 | 19,743,326 | 155,584 | 60 | 155,524 | 12.69475 | 1.46410 | 10.3906 | 1.1984 |
| 2049 | 0.107 | 5,333,920 | 2,534,495 | 12,244,942 | 0 | 20,113,356 | 156,653 | 60 | 156,592 | 12.84439 | 1.37503 | 10.3906 | 1.1123 |
| 2050 | 0.099 | 5,410,749 | 2,501,634 | 12,457,450 | 0 | 20,369,833 | 158,123 | 60 | 158,063 | 12.88720 | 1.28059 | 10.3906 | 1.0325 |
| 2051 | 0.092 | 5,488,701 | 2,465,730 | 12,672,969 | 0 | 20,627,399 | 159,599 | 60 | 159,539 | 12.92939 | 1.19257 | 10.3906 | 0.9584 |
| 2052 | 0.086 | 5,567,795 | 2,365,588 | 12,891,538 | 0 | 20,824,921 | 161,491 | 60 | 161,431 | 12.90019 | 1.10447 | 10.3906 | 0.8896 |
| 2053 | 0.079 | 5,648,046 | 2,288,539 | 13,116,714 | 0 | 21,053,298 | 162,571 | 60 | 162,511 | 12.95500 | 1.02955 | 10.3906 | 0.8258 |
| 2054 | 0.074 | 5,729,472 | 2,241,868 | 13,345,146 | 0 | 21,316,487 | 164,067 | 60 | 164,007 | 12.99729 | 0.95878 | 10.3906 | 0.7665 |
| 2055 | 0.068 | 5,812,092 | 2,139,604 | 13,576,884 | 0 | 21,528,580 | 165,570 | 60 | 165,510 | 13.00740 | 0.89065 | 10.3906 | 0.7115 |
| 2056 | 0.064 | 5,895,922 | 2,076,085 | 13,811,974 | 0 | 21,783,981 | 167,504 | 60 | 167,443 | 13.00975 | 0.82688 | 10.3906 | 0.6604 |
| 2057 | 0.059 | 5,980,982 | 1,988,354 | 14,049,563 | 0 | 22,018,899 | 168,598 | 60 | 168,538 | 13.06464 | 0.77077 | 10.3906 | 0.6130 |
| 2058 | 0.055 | 6,067,289 | 1,930,128 | 14,291,429 | 0 | 22,288,846 | 170,123 | 60 | 170,063 | 13.10621 | 0.71772 | 10.3906 | 0.5690 |
| 2059 | 0.051 | 6,154,862 | 1,828,198 | 14,537,648 | 0 | 22,520,709 | 171,656 | 60 | 171,596 | 13.12425 | 0.66712 | 10.3906 | 0.5282 |
| 2060 | 0.047 | 6,243,721 | 1,725,641 | 14,788,300 | 0 | 22,757,662 | 173,634 | 60 | 173,573 | 13.11127 | 0.61863 | 10.3906 | 0.4903 |
| 2061 | 0.044 | 6,333,886 | 1,662,993 | 15,043,463 | 0 | 23,040,342 | 174,746 | 60 | 174,686 | 13.18959 | 0.57766 | 10.3906 | 0.4551 |
| 2062 | 0.041 | 6,425,374 | 1,622,619 | 15,303,219 | 0 | 23,351,212 | 176,303 | 60 | 176,243 | 13.24943 | 0.53863 | 10.3906 | 0.4224 |
| 2063 | 0.038 | 6,518,208 | 1,621,466 | 15,567,651 | 0 | 23,707,324 | 177,869 | 60 | 177,809 | 13.33302 | 0.50312 | 10.3906 | 0.3921 |
| 2064 | 0.035 | 6,612,406 | 1,624,558 | 15,836,842 | 0 | 24,073,806 | 179,648 | 60 | 179,588 | 13.40504 | 0.46953 | 10.3906 | 0.3639 |
| 2065 | 0.033 | 6,707,990 | 1,602,686 | 16,110,879 | 0 | 24,421,555 | 181,444 | 60 | 181,384 | 13.46399 | 0.43775 | 10.3906 | 0.3378 |
| | | | | | | | | | | | 140.39733 | | 140.39733 |

* Includes system costs not affected by the resource plan such as existing generation, T&D, staff, and DSM costs not tied directly to new DSM signups (such as rebates to existing load management participants, etc.).

** DSM energy reductions are incremental from August 2019.

**Levelized System Average Electric Rate (cents/kWh) =** **10.3906**

Docket No. 20190015-EG
SACE 1.5% Plan Analysis: Additional Cost Needed to be Added to RIM Plan to Increase its Levelized System Average Electric Rate to That of the 1.5% Plan
Exhibit AWW-17, Page 1 of 1

## SACE 1.5% Plan Analysis: Comparison of the Resource Plans: Projection of System Average Electric Rates and Monthly Customer Bills (Assuming 1,200 kWh Usage)

**1) Projection of System Average Electric Rates & Customer Bills:**

| | Supply Only Resource Plan | | RIM Resource Plan | | TRC Resource Plan | | SACE 1.5% Plan | |
|---|---|---|---|---|---|---|---|---|
| Year | Projected Electric Rate (cents/kWh) | Projected Customer Bill ($/1,200 kWh) | Projected Electric Rate (cents/kWh) | Projected Customer Bill ($/1,200 kWh) | Projected Electric Rate (cents/kWh) | Projected Customer Bill ($/1,200 kWh) | Projected Electric Rate (cents/kWh) | Projected Customer Bill ($/1,200 kWh) |
| 2020 | 7.753 | $93.03 | 7.755 | $93.06 | 7.763 | $93.16 | 7.941 | $95.30 |
| 2021 | 7.826 | $93.91 | 7.830 | $93.96 | 7.838 | $94.06 | 8.073 | $96.88 |
| 2022 | 7.936 | $95.24 | 7.942 | $95.31 | 7.951 | $95.42 | 8.263 | $99.16 |
| 2023 | 8.181 | $98.17 | 8.189 | $98.27 | 8.199 | $98.38 | 8.609 | $103.31 |
| 2024 | 8.428 | $101.14 | 8.438 | $101.26 | 8.448 | $101.38 | 8.968 | $107.61 |
| 2025 | 8.618 | $103.42 | 8.629 | $103.55 | 8.639 | $103.67 | 9.278 | $111.33 |
| 2026 | 8.844 | $106.13 | 8.856 | $106.27 | 8.866 | $106.40 | 9.615 | $115.38 |
| 2027 | 9.103 | $109.23 | 9.115 | $109.38 | 9.125 | $109.51 | 9.986 | $119.83 |
| 2028 | 9.302 | $111.63 | 9.315 | $111.77 | 9.326 | $111.91 | 10.306 | $123.67 |
| 2029 | 9.550 | $114.60 | 9.563 | $114.75 | 9.576 | $114.91 | 10.688 | $128.26 |
| 2030 | 9.872 | $118.47 | 9.772 | $117.26 | 9.775 | $117.30 | 10.770 | $129.24 |

**2) Projection of Average Monthly Customer Bill Differentials:**

| Monthly Bill Differentials for Each Plan Compared to the Supply Only Plan | | | | |
|---|---|---|---|---|
| Year | Supply Only Resource Plan | RIM Resource Plan | TRC Resource Plan | SACE 1.5% Plan |
| 2020 | $0.00 | $0.03 | $0.12 | $2.26 |
| 2021 | $0.00 | $0.05 | $0.15 | $2.97 |
| 2022 | $0.00 | $0.07 | $0.18 | $3.92 |
| 2023 | $0.00 | $0.09 | $0.21 | $5.13 |
| 2024 | $0.00 | $0.12 | $0.24 | $6.47 |
| 2025 | $0.00 | $0.13 | $0.25 | $7.92 |
| 2026 | $0.00 | $0.14 | $0.27 | $9.25 |
| 2027 | $0.00 | $0.14 | $0.27 | $10.59 |
| 2028 | $0.00 | $0.15 | $0.28 | $12.05 |
| 2029 | $0.00 | $0.15 | $0.31 | $13.66 |
| 2030 | $0.00 | ($1.21) | ($1.17) | $10.77 |

**3) Projection of Annual & Through 2030 Total Customer Bill Impacts for 1,200 kWh Usage:**

| Year | RIM Plan vs. Supply Only Plan | SACE 1.5% Plan vs. Supply Only Plan |
|---|---|---|
| 2020 | $0.30 | $27.14 |
| 2021 | $0.59 | $35.62 |
| 2022 | $0.86 | $47.03 |
| 2023 | $1.14 | $61.60 |
| 2024 | $1.40 | $77.67 |
| 2025 | $1.60 | $94.99 |
| 2026 | $1.71 | $111.01 |
| 2027 | $1.74 | $127.13 |
| 2028 | $1.79 | $144.56 |
| 2029 | $1.83 | $163.95 |
| 2030 | ($14.51) | $129.23 |
| **Total =** | **($1.54)** | **$1,019.93** |

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**FLORIDA POWER & LIGHT COMPANY**

**REBUTTAL TESTIMONY OF DR. STEVEN R. SIM**

**DOCKET NO. 20190015-EG**

**JULY 12, 2019**

## TABLE OF CONTENTS

# I. INTRODUCTION

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

A. My name is Steven R. Sim, and my business address is Florida Power & Light Company, 700 Universe Boulevard, Juno Beach, Florida 33408.

**Q. Have you previously submitted direct testimony in this proceeding?**

A. Yes.

**Q. Are you sponsoring any rebuttal exhibits in this case?**

A. Yes. I am sponsoring one exhibit that is attached to my rebuttal testimony:

Exhibit SRS-6 Inaccurate and/or Misleading Statements Made by SACE Witness Grevatt.

**Q. What is the purpose of your rebuttal testimony?**

A. My rebuttal testimony discusses a number of issues and problems found in the testimonies of the two witnesses who represent the Southern Alliance for Clean Energy ("SACE") in this docket: Mr. Grevatt and Mr. Bradley-Wright.

**Q. How is your rebuttal testimony structured?**

A. My rebuttal testimony is structured to address the nine (9) main topics identified in the table of contents. I then close my testimony with a few concluding remarks.

**Q. Please provide a summary of your testimony.**

A. I will summarize the key points of my testimony in bullet format.

- SACE's witnesses do not even attempt to contest the fact that the cost-effectiveness of utility Demand-Side Management ("DSM") has been declining for some time and that this trend is continuing. Nor do they

contest the fact that, due to FPL's continuing efforts to improve the efficiency of its generating system, the cost-effectiveness of utility DSM is declining even more for FPL's system. Because they cannot dispute these facts that were discussed in my direct testimony, Mr. Grevatt attempts to distract attention away from declining cost-effectiveness in three ways: (i) to disparage the Rate Impact Measure ("RIM") cost-effectiveness test, (ii) to allege problems in the determination of DSM Achievable Potential, and (iii) use the first two distractions as a premise to completely abandon any and all cost-effectiveness considerations in recommending a DSM Goal.

- Despite the undisputed fact of steadily declining cost-effectiveness of utility DSM, particularly for FPL's system, Mr. Grevatt recommends a GWh Goal that is 2,476% of the current FPL GWh Goal. Mr. Grevatt's recommended GWh Goal is unreasonable, unsupported, and inconsistent with the State of Florida requirements for goals-setting. In addition, this recommendation is even more extreme than the recommendation SACE made, and which the Florida Public Service Commission ("FPSC") rejected, in the last DSM Goals docket (Docket No. 20130199-EI). In addition to being extreme, the current recommendation by SACE's witness is illogical.
- The approach Mr. Grevatt used to "develop" his recommended GWh Goal – simply pointing to other states and saying in effect that "they are doing it so you should too" – is not based on any FPL-specific (or

even Florida-specific) analyses. Therefore, his recommended DSM Goal is unsupported and indefensible.

- By "developing" his recommended Goal, Mr. Grevatt clearly violated or ignored Florida requirements for developing DSM Goals. He did not (i) base his recommendation using FPL's most recent planning process, or (ii) take DSM cost-effectiveness into account.
- The two SACE witnesses have experience in the energy efficiency industry, but have no experience in actually planning a utility system, performing system reliability analyses, or analyzing supply options. As a consequence of their lack of experience in these areas, which are important in a resource goals-setting docket, they made numerous inaccurate and/or misleading statements which significantly undermine their credibility.
- Finally, despite making several references to a document (largely developed by the energy efficiency industry) that purports to show the energy efficiency industry how to give guidance to utility regulators in meeting the regulators' policy guidelines, Mr. Grevatt chose to violate or ignore the "guiding principle" of the very document he repeatedly referred to: to "*identify and articulate the jurisdiction's applicable policy goals*".[1] Although the FPSC has clearly articulated what its policy goals and requirements are in regard to DSM goals-setting, Mr. Grevatt chose to simply ignore those policy goals and requirements as

[1] Page ix, Executive Summary, National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources, Edition 1 Spring 2017

well. He then, in effect, tells the FPSC that he knows better than they do what is best for the State of Florida.

I conclude from my review that SACE's witnesses, due to the combination of their many inaccurate and/or misleading statements, and the fact that they performed no FPL-specific (or even Florida-specific) analyses to support their recommendation, have no credibility for the purposes of this docket. As a result, their recommendation in this docket should be rejected.

## II. REBUTTAL OF INTERVENOR ARGUMENTS

### 1) What the SACE witnesses had to say about the fact that the cost-effectiveness of utility DSM has been steadily declining and continues to decline

**Q. In your direct testimony, you discussed the fact that the cost-effectiveness of utility DSM, whether evaluated by the RIM or TRC cost-effectiveness screening test, has been steadily declining for years and that it is continuing to decline. Did either of the intervenor testimonies contest that fact?**

A. No. Their combined testimony is 75 pages in length, not including the exhibits. However, they did not address this fact even once.

**Q. In addition to this overall decline in the cost-effectiveness of utility DSM, you discuss in your direct testimony the additional fact that the significant improvements FPL continues to make regarding the efficiency with which electricity is produced by its generating system further reduce the cost-effectiveness of utility DSM on FPL's system. Did either of the intervenor testimonies contest that fact?**

A. No.

**Q. What can be reasonably concluded from the fact that neither of the SACE witnesses took issue with these two points?**

A. I note that the first of these two points is critical in regard to setting DSM Goals for all Florida utilities (including FPL) and the second point is critical in regard to setting DSM Goals specifically for FPL. Because these two points are critical in this docket, it is reasonable to conclude that, because the SACE witnesses do not contest either of these two points, they simply cannot dispute these facts. Certainly if the opposite had been the case – DSM cost-effectiveness was seen to be increasing – these witnesses would have shone a very bright spotlight on such a trend and would probably have made it a centerpiece of their testimonies.

**Q. Do you believe that the declining cost-effectiveness of utility DSM influenced the testimony of the SACE witnesses?**

A. Yes. The omission in their testimonies of even an attempt to contest these points amounts to a silent admission by the SACE witnesses that utility DSM cost-effectiveness has been declining, and continues to decline. Consequently,

their testimonies stay as far away as possible from a discussion of DSM cost-effectiveness. In particular, Mr. Grevatt's testimony attempts to divert attention away from declining cost-effectiveness in three ways: (i) by disparaging the RIM cost-effectiveness test (through a series of unfortunately chosen statements), (ii) by alleging problems in the determination of Achievable Potential, and (iii) by using the first two topics as a premise to attempt to completely abandon any consideration of DSM cost-effectiveness in regard to DSM Goals.

**2) <u>The "reasonableness" of the DSM Goal recommended by Mr. Grevatt</u>**

**Q. In your direct testimony you show that for a proxy DSM measure, the benefits of implementing that measure are approximately 33% lower than would have been projected for the same DSM measure in the last DSM Goals docket. Based on that, what would be a reasonable conclusion to draw regarding in what direction the new Goals should move?**

A. Assuming that DSM Goals will continue to be set based primarily on cost-effectiveness (which should be the case when considering any supply or DSM option), and assuming all else equal, the only reasonable conclusion is that DSM Goals should be set lower than in the last DSM Goals docket.

**Q. Do the SACE witnesses recommend Goals that move in that direction?**

A. No. The SACE witnesses ignore the fact that utility DSM cost-effectiveness is significantly lower and propose DSM Goals that are enormously higher than those set in the last DSM Goals docket based on cost-effectiveness.

**Q. What are the DSM Goals proposed by SACE's witnesses?**

A. I think that is actually a difficult question to definitively answer. In Mr. Grevatt's testimony, he initially suggested that goals could be set using two approaches. His first approach was to use a series of "what if" assumptions in which he attempted to "adjust" the analyses the utilities performed. His second approach was to:

*"…require each Florida utility to ramp up to 1.50% incremental annual* (energy) *savings per year…"* (Page 38, line 20)

In regard to his first approach, Mr. Grevatt made some "what if" adjustments that led to tables that showed Summer MW, Winter MW, and annual GWh values for the 10-year period. However, Mr. Grevatt ultimately discarded his first approach, and recommended his second approach, with the following statement on page 42, lines 21 through 25:

*"…since it is not possible to make all the needed corrections to the utilities' analyses in this proceeding, I recommend that the PSC consider what the*

*leading Southern utilities have achieved….energy savings equal to approximately 1.5% of sales per year."*

However, Mr. Bradley-Wright used a table of values from Mr. Grevatt's discarded first approach, then took a percentage of that table's values to create his own set of values that he presents in his own tables. Because Mr. Grevatt discarded his first approach and moved on to something else, it is unclear if one SACE witness (Mr. Bradley-Wright) is basing his values on a set of values the other witness (Mr. Grevatt) has decided not to recommend.

In short, there appears to be a lack of coordination and consistency, and certainly a lack of clarity, between the two SACE witnesses in regard to what they, in tandem, are actually recommending for FPL's DSM Goals. However, there is more clarity regarding what Mr. Grevatt alone is recommending.

**Q. How do Mr. Grevatt's recommended DSM Goals for FPL compare to the Goals that were set for FPL by the FPSC in the last DSM Goals docket?**

A. In the last DSM Goals docket (Docket No. 20130199-EI), the FPSC established DSM Goals for all customers without specifically setting separate Goals for low income customers. (Low income customers were addressed in the DSM Plan docket that followed the DSM Goals docket.)

Mr. Grevatt's recommendation also does not address DSM Goals for low income customers. Therefore, a comparison of the DSM Goals set in the last

DSM Goals docket and Mr. Grevatt's recommendation allows an "apples to apples" comparison. This comparison, for FPL, is provided in the Table 1 below.

**Table 1**
**Comparison of FPSC's Current Goals for FPL**
**vs. SACE Witness Grevatt's Recommended DSM Goals for FPL**

| | (1) | (2) | (3) = (2) / (1) |
|---|---|---|---|
| | **FPSC 2015-2024 DSM Goals for FPL** | **Grevatt's 2020-2029 Recommended DSM Goals for FPL** | **Difference (%)** |
| **Annual GWh** | 526 | 13,022 | 2476% |
| **Summer MW** | 525 | No recommendation | --- |
| **Winter MW** | 324 | No recommendation | --- |

As shown in Table 1, Mr. Grevatt only recommended a Goal for GWh reductions. In regard to Summer MW and Winter MW Goals, Mr. Grevatt states on page 43, lines 20 that:

*"I cannot recommend specific peak demand savings targets…"*

Mr. Grevatt concludes his brief discussion of Summer MW and Winter MW goals by recommending that MW goals not be set now, but be set at some point in the future:

*"…I would recommend that the PSC initiate a process to more carefully assess peak demand savings potential, perhaps even as part of the utilities' energy efficiency program plan filings, in order to establish such goals."* (Page 44, lines 8 through 10)

In other words, Mr. Grevatt is recommending not to set Summer MW and Winter MW goals in the DSM Goals docket that is intended for that purpose.

**Q. In light of the fact Mr. Grevatt did not contest that cost-effectiveness of utility DSM has significantly declined since the last Goals were set and that this trend is continuing, what is your reaction to the one Goal that Mr. Grevatt recommends?**

A. In light of the trend of declining cost-effectiveness of DSM, and by recommending a DSM Goal that is 2,476% of the last DSM Goal set by the FPSC, Mr. Grevatt has obviously decided to recommend a Goal that is completely divorced from any considerations of cost-effectiveness.

**Q. On page 3, lines 10-12 of his testimony, Mr. Grevatt states that his testimony *"assesses the reasonableness of the energy efficiency savings goals proposed in this proceeding by the Florida utilities."* Do you think that his recommended Goal is reasonable?**

A. No, it is not. The FPSC set Goals for FPL in 2014 that represented 100% of FPL's economic Achievable Potential. As demonstrated in the direct testimonies of FPL witnesses Whitley and Koch, significantly less DSM passed the economic screening in this year's screening analyses, and

significantly less DSM emerged from the Achievable Potential analyses. Therefore, to recommend a DSM Goal that is 2,476% of the prior goal is definitely not reasonable. It is also not logical. Mr. Grevatt is clearly not basing his recommended Goal on the results of either the economic screening analyses or the Achievable Potential analyses.

**3) <u>The rationale for Mr. Grevatt's recommended DSM Goal</u>**

**Q. If Mr. Grevatt is not basing his recommended DSM Goal on either economics or Achievable Potential considerations, what is the rationale for his recommended Goal?**

A. His rationale is simply to point to other states and say, in effect, "someone else is doing this so you should too!"

**Q. Does it make sense to set DSM Goals based solely on what might be occurring in other states?**

A. Of course not. One of the fundamental principles of resource planning is that every utility is different and, therefore, what may be the best decision for one utility may not be the best decision for another utility. Two electric utilities, even if they are in the same state, can differ significantly in regard to many aspects including, but not necessarily limited to: electrical load patterns, types of existing generating units, efficiencies of existing generating units, fuel mix, and fuel delivery costs.

A corollary to this fundamental principle could be added, which points out that this principle becomes even more meaningful when comparing utilities in one state to utilities in another state. When comparing utilities in one state to utilities in another state, all of the above-mentioned potential differences between utilities still need to be considered or accounted for. But now other potential differences may also come into play. These include, but are not necessarily limited to: weather patterns, usage of energy sources other than electricity, state policy goals, and regulatory and/or legislative mandates.

For these reasons, it is folly to recommend an action for a utility in one state based solely on what a utility in another state may be doing. Using what may be happening in another state as a basis for recommending what Florida utilities, much less a specific Florida utility with its own individual characteristics, should be mandated to do, is not only foolish, it is illogical. Use of such a rationale for setting DSM Goals has no basis in resource planning principles, ignores statutory requirements, and should be rejected by this Commission.

**4) <u>Whether Mr. Grevatt's recommended DSM Goal complies with the State of Florida requirements for goals-setting</u>**

**Q. Did the manner by which Mr. Grevatt arrived at his recommended DSM Goal meet the requirements for DSM goal-setting in the State of Florida?**

A. No. By arbitrarily pointing to actions in other states, Mr. Grevatt is violating two State of Florida requirements for DSM goals-setting. The first of these is to set Goals based on each utility's resource planning process. The second is to consider DSM cost-effectiveness.

**Q. Are DSM Goals in Florida required to be based on each utility's resource planning process?**

A. Yes. The FPSC stated the following in its order at the close of the last DSM Goals proceeding (Docket No. 20130199-EI): *"Rule 25-17.0021(3), F.A.C., requires that each utility's proposed Goals must be based upon the utility's most recent planning process."* (Order No. PSC-14-0696-FOF-EU, page 31.)

**Q. Did Mr. Grevatt base his recommended DSM Goal for FPL on FPL's most recent planning process?**

A. No. This is shown in two ways. First, because his rationale for his recommended Goal is (paraphrasing) 'utilities in other states do this,' he has obviously ignored the resource planning process of FPL or of any other Florida utility. Second, the fact that Mr. Grevatt recommended only a GWh Goal, and then could not recommend a Summer MW or Winter MW Goal after he came up with his recommended GWh Goal, shows he does not

understand electric utility resource planning at all. Therefore, he could not, and did not, use FPL's most recent resource planning process.

**Q. Please explain.**

A. When boiled down to its fundamentals, resource planning by vertically integrated utilities such as FPL seeks to accomplish two basic things. First, utilities need to maintain system reliability. This is done by determining when resources are needed and how much resource is needed. Second, the utility then determines which resource option(s) are most economical to add to meet that need.

The key point is that system reliability analyses must be completed first. Regardless of whether one uses a reserve margin criterion or a loss-of-load probability type reliability criterion, the focus of system reliability analyses is on firm MW that can be generated or reduced to meet peak load. Therefore, when considering DSM resources in system reliability analyses, the focus is on MW reduction at peak hours, not on reductions that may occur at midnight, 9:00 a.m. on a mild Spring or Fall day, or on annual MWh reductions. Annual MWh reduction capabilities of DSM options are only important later when analyzing the economics of DSM resource options.

For these reasons, FPL's resource planning process first accounts for system peak hour MW values in system reliability analyses. Then, when turning to economic analyses of DSM options, FPL accounts for both MW and MWh

reduction capabilities of DSM initially in preliminary economic screening of DSM measures, and later through system economic analyses of resource plans with and without incremental DSM. (FPL witness Whitley's direct testimony describes how FPL utilized its resource planning process in the analyses that led to FPL's proposed DSM Goals.)

A key point is that the MWh value associated with the amount of DSM that is economic for the system to add is simply an output of the planning process. It is not a starting point for the planning process. By recommending only a GWh Goal, and no Summer MW or Winter MW Goal, Mr. Grevatt has gone about it completely backwards from a resource planning perspective. He is recommending an energy-only Goal that does not address system reliability and which, on its own, cannot even be meaningfully addressed in economic analyses. This is because he started at the wrong point. Mr. Grevatt described the problem he created for himself as follows:

*"I cannot recommend specific peak demand savings targets because I arrived at these energy savings targets from a "top down" perspective…"* (Page 43, lines 20 and 21)

From a resource planning perspective, his description of a "top down" approach really means that he did no analysis at all. He simply jumped over the entire planning process to what he wants his answer to be without

bothering to go through all of the detailed and necessary analyses that FPL did.

For these reasons, Mr. Grevatt's recommendation is definitely not based on FPL's most recent resource planning process (and is not based on any Florida utility resource planning process that I know of).

**Q. Did FPL use its most recent planning process in developing its proposed DSM Goals?**

A. Yes.

**Q. Are DSM Goals in Florida also required to consider the cost-effectiveness of DSM?**

A. Yes. The FPSC stated in its order at the close of the last DSM Goals docket: "*During the 2009 goals proceeding this issue was vetted by many of the same parties in this proceeding including SACE, FIPUG, and the FEECA utilities. As part of that proceeding we issued Order No. PSC-09-0855-FOF-EG, p.15, which stated the following: "…consideration of both the RIM and TRC tests is necessary to fulfill the requirements of Section 366.82(3)(b), F.S. Both the RIM and TRC Tests address costs and benefits beyond those associated solely with the program participant. By having RIM and TRC results, we can evaluate the most cost-effective way to balance the goals of deferring capacity and capturing energy savings while minimizing rate impacts to all customers."* (Order No. PSC-14-0696-FOF-EU, page 12.)

Thus, the State of Florida requires that the cost-effectiveness of DSM be considered in the setting of DSM Goals. (This statement also makes it clear that the FPSC believes it is important to minimize electric rate impacts. I will return to that point later in this testimony.)

**Q. Did Mr. Grevatt consider cost-effectiveness in developing his recommended Goal?**

A. No. His "development" effort consisted of simply pointing to other states and recommending that Florida should do what they are/may be doing. Therefore, he clearly did not consider what the cost-effectiveness of such an action would be for FPL's specific system.

**Q. Did FPL consider cost-effectiveness in developing its proposed DSM Goals?**

A. Yes.

**5) <u>The work experience, and inexperience, of the two SACE witnesses</u>**

**Q. What type of work experience do the two SACE witnesses have?**

A. From a review of the work experience described in their respective testimonies, it appears that Mr. Grevatt's and Mr. Bradley-Wright's work experience has been primarily, if not exclusively, in what I would call the energy efficiency "industry." Mr. Grevatt acknowledges this and even uses the same term in the following statement from his testimony:

*"I have worked in the energy efficiency industry since 1991…."* (Page 2, line 2)

**Q. Do you have an opinion regarding how their work experience may have affected their testimony?**

A. Yes. I believe that because their work experience has been restricted to the energy efficiency industry, their perspectives regarding utility systems, how the systems operate, and how these systems need to be planned, is actually quite narrow.

I say this based on my own work experience. My first 12 years at FPL was spent designing, implementing, and then analyzing DSM options. In the latter portions of this period, I realized how much I did not know, but needed to know, regarding how a utility system of generating units operates in order to meaningful analyze how DSM options will affect that system. In other words, I realized how narrow my DSM-only perspective really was regarding information I needed to know in order to meaningfully evaluate DSM options. Consequently, I spent a lot of time with FPL's resource planners and eventually joined that group.

Therefore, I believe that anyone whose work experience has been similarly narrow by working solely in the area of energy efficiency has, almost by definition, not been fully exposed to a variety of utility system issues and knowledge that is necessary to truly understand the impact of DSM options on

a utility system. This is even more meaningful if that energy efficiency work has been done outside of an electric utility. Thus, I believe the SACE witnesses' narrow perspective has led to problems in their testimonies in at least two ways.

**Q. Please explain.**

A. First, the energy efficiency industry, as with many other industries (such as, for example, the aluminum siding industry), seek to maximize both their influence and market share. In so doing, they naturally tend to highlight what they view as the strong points of their products and downplay (or even not discuss) the weak points of their products. An element of that clearly appears in these witnesses' testimonies by their decision not to discuss the declining cost-effectiveness of utility DSM.

In addition, industries often develop their own analyses that seek to show only the strong points of their products and to ignore their products' weaker points. These analyses may be performed by what is essentially a closed shop of like-minded people in that industry. Such analyses may consider few or no contrarian points of view. Individuals in the industry then may end up referring only to these analyses from other like-minded individuals or organizations in attempting to justify why their product should be selected. The tendency is to attempt to portray these analyses as definitive when in reality the analyses consider only one point of view: a pro-product view.

In looking at the documents attached to these witnesses' testimonies as exhibits, one sees that the documents are largely from others in the energy efficiency industry. In other words, those references are one-sided references. Although this is entirely understandable in the role these witnesses have been asked to fill (proponents of ever increasing levels of utility energy efficiency), it is important to take a step back and consider the source and motivation of their reference materials.

Second, having worked primarily, or exclusively, in the energy efficiency industry outside of an electric utility, these witnesses have not worked as electric utility resource planners or worked side-by-side with utility resource planners. Thus, they have little or no actual experience in having to perform system reliability analyses for a utility or in performing evaluations of supply options.

These two characteristics of the SACE witnesses' work history, experience in working only in the energy efficiency industry combined with no real experience in actual utility resource planning in which both supply and DSM options are analyzed, has resulted in a number of problems in their testimonies. These show up most clearly in numerous inaccurate and/or misleading statements they make in their testimonies. I will address a few of these problem statements next.

**6) <u>Inaccurate statements made regarding the RIM cost-effectiveness test</u>**

**Q. What cost-effectiveness screening tests are recognized and used in the State of Florida?**

A. The State of Florida recognizes and uses three cost-effectiveness screening tests for DSM:

- The Rate Impact Measure (RIM) test;
- The Total Resource Cost (TRC) test; and,
- The Participant Test.

These three tests have been used in the State of Florida for decades. Furthermore, in regard to DSM goals-setting, the FPSC has made the following statement:

*"…a combination of the Participants test, the RIM test, and the TRC test shall all be used to set goals."* (FPSC Order No. PSC-14-0696-FOF-EU)

**Q. Does Mr. Grevatt have a problem with any of the cost-effectiveness tests mandated for use by the State of Florida?**

A. Yes. He does not believe the RIM test should be used in DSM analyses for the following reason:

*"…the RIM test is not actually a test of cost-effectiveness…"* (Page 4, lines 7 & 8)[2]

**Q. What is your reaction to that statement?**

A. I have three reactions. First, and perhaps most importantly, it does not matter what Mr. Grevatt's personal opinion is of the RIM test. The State of Florida, which is the third most populous state in the country, recognizes the RIM test as a valid cost-effectiveness test for DSM analyses and requires the use of the RIM test, along with the other two tests listed above, in DSM goals-setting in Florida.

Second, in most if not all of the prior Florida DSM goals-setting dockets, intervenors (including SACE) have argued that the TRC test, not the RIM test, should be the primary test used to set Goals. But this is the first time someone has made a claim that the RIM test is not a cost-effectiveness test. As such, this claim can be viewed as an extreme one. This new and extreme claim may be the product of recognition of the declining cost-effectiveness of utility DSM by the energy efficiency industry and their attempt to find a way to combat or ignore this reality. Or it may simply be due to misguided thinking by Mr. Grevatt.

Third, Mr. Grevatt's statement is simply wrong from a resource planning perspective. From this perspective, a cost-effectiveness test (other than the

[2] Eight (8) inaccurate and/or misleading statements made by Mr. Grevatt that I discuss in my rebuttal testimony, beginning with this one, are compiled in Exhibit SRS-6.

Participants test, which is a specialty test solely from a potential participant's perspective) for evaluating electric utility resource options needs to account for all of the resource option's system cost impacts and avoided system cost impacts that will be reflected in the utility's electric rates if that resource option is selected. The RIM test does exactly that. It accounts for all system costs that are projected to be avoided by DSM (*i.e.*, the "benefits" of DSM) as well as accounts for all system costs that are incurred in implementing DSM, including incentives that utilities pay to participating customers. In addition, it accounts for unrecovered revenue requirements that would naturally occur from DSM's reduction of kWh and/or kW. All of these system impacts will be reflected in electric rates if the DSM option is selected.

Therefore, from a resource planning perspective of resource options, the RIM test is an excellent cost-effectiveness analysis tool. In fact, for purposes of planning a utility system, the RIM test is far superior to the TRC test because the TRC test does not account for two important cost impacts. One of the costs that is omitted in the TRC test is pointed out in in Mr. Bradley-Wright's testimony:

*"…analysis with the TRC is not impacted by levels of utility incentives offered…"* (Page 15, lines 13 and 14)

In addition to not accounting for the costs of utility incentives, the TRC test also does not account for the unrecovered revenue requirements triggered by DSM. Because of these reasons, I do not view the TRC test as a meaningful test with which to plan a utility system. A meaningful test has to account for all costs and cost impacts incurred and avoided that will be reflected in a utility's electric rates.

A simple analogy using supply options may be helpful. If one were evaluating a new combustion turbine versus a new combined cycle unit, one would never consider omitting an important cost of one option (for example, the cost of the heat recovery steam generators in the combined cycle unit) in the evaluation. Yet the omission of important costs is exactly what occurs when using the TRC test to evaluate a DSM option.

For this reason, and from a resource planning perspective, I view the RIM test, in combination with the Participant test, as the only meaningful cost-effectiveness tests to use when attempting to decide if a utility should offer a DSM option. However, unlike Mr. Grevatt, I readily acknowledge that the RIM test, the TRC test, and the Participant test are all cost-effectiveness tests that the Commission recognizes must be performed when establishing DSM goals in Florida.

**Q. Mr. Grevatt made a few other statements about the RIM test. Would you please address those?**

A. Yes. The first of these statements regarding the RIM test that I will address is the following:

*"It is only a test of whether rates will go up…"* (Page 7, lines 7 and 8, emphasis added)

The statement is incorrect. The RIM test is used to indicate the relative impacts on electric rates that a DSM option will have versus a competing supply option. Both options may end up raising rates, both options may end up lowering rates, or one option may raise rates while the other option lowers rates. That is immaterial in the test. The objective of the RIM test is to determine which option will have a better impact on electric rates for all customers. Therefore, the RIM test does not have a built-in "rule" that if an individual option raises electric rates it automatically fails the test. Instead, the RIM test determines which of two competing options is better for all customers from an electric rate perspective.

**Q. Does Mr. Grevatt's lack of understanding regarding the objective of the RIM test lead him to make other inaccurate statements?**

A. Yes. Consider the following statement of his:

*"Put simply, because the RIM test is a test of whether rates may go up, any supply-side investment that would raise rates, all other things equal, would fail the RIM test."* (Page 10, line 24, through Page 11, line 1)

As just discussed above, the objective of the RIM test is to identify which of two competing options, supply or DSM, will have a better impact on electric rates for all customers. Both options may end up raising electric rates, but in this case the one that raises rates the least is the economic choice for all customers. Therefore, this statement of Mr. Grevatt's is inaccurate.

**Q. Did Mr. Grevatt have anything else to say about the RIM test and supply options?**

A. Yes. The following two additional statements regarding the RIM cost-effectiveness test and supply options appear in his testimony:

*"…the RIM test is not applied to supply-side investments; if it were, many supply-side investments, such as new power plants…would be routinely rejected."* (Page 4, lines 17 through 20)

and on page 10, lines 20 and 21, the following Q & A appears:

*"Q. Is the RIM test typically applied to supply-side investments? A. No, <u>not in my experience</u>."* (emphasis added)

**Q. Do you agree with these statements?**

A. No. The problem with the first statement has already been discussed. Mr. Grevatt mistakenly believes that any resource option that will raise electric rates has to automatically fail the test. As explained above, that is not accurate. The objective of the RIM test is to identify which of two competing options, supply or DSM, will have a better impact on electric rates for all customers.

Regarding his second statement, I highlighted the portion with which he attempts to qualify his claim with the phrase: *"…not in my experience"*. It is exactly his lack of experience in resource planning, particularly in economic evaluation of supply options, that has led him astray.

First, it should be obvious to anyone who has actually used the RIM test that the test typically compares a DSM option to a competing supply option. Therefore, a supply option is analyzed in every such application of the RIM test.

Second, when a utility compares two competing supply options, it accounts for all costs of acquiring the option and the fixed costs associated with operating and maintaining the supply options. It then accounts for all of the variable costs of operating the option and accounts for all of the utility system costs that are projected to be avoided by the presence and operation of the

option (*e.g.*, the benefits of the option). This is done for each competing supply option.

At this point, it should be clear that the economic approach used when applying the RIM test to evaluate a DSM option, accounting for all of the costs of acquiring the option and operating it, then accounting of all corresponding utility system costs that are avoided by the option, is an identical approach to how supply options are evaluated.

**Q. In regard to the RIM test evaluation approach in comparison to supply side evaluation, what about the fact that the RIM test accounts for unrecovered revenue requirements?**

A. The RIM test does account for unrecovered revenue requirements that naturally occur with DSM options. These must be accounted for in order to determine the relative impact on electric rates between the competing DSM and supply options. This is because DSM options lower the amount of sales over which revenue requirements or costs are recovered.

In regard to supply option evaluations, because the number of sales over which costs are recovered does not change regardless of which supply option is chosen, there are zero unrecovered revenue requirements. One could show a calculation in which one accounts for unrecovered revenue requirements in supply option analyses, but what would be the point if that value is always zero?

From a resource planning perspective, I see the RIM test evaluation of DSM exactly matching the evaluation approach taken when evaluating supply options. All utility system costs and avoided system costs are fully accounted for in both evaluations. Furthermore, both evaluations also account for unrecovered revenue requirements (which are always zero for supply options). Therefore, the approach taken when evaluating supply options is identical to the RIM test evaluation approach.

**Q. The TRC is favored by both SACE witnesses. Is the TRC test approach also identical to the approach used when analyzing supply options?**

A. No. As previously discussed, the TRC test does not account for all costs because it excludes the cost of incentives. The TRC test also does not account for unrecovered revenue requirements. Therefore, the TRC test approach is definitely not an equivalent approach to how supply options are evaluated.

**Q. The RIM test fully accounts for all costs incurred and avoided that will be reflected in a utility's electric rates. However, it also indicates the relative impact a resource option will have on electric rates. Do supply option evaluations also indicate relative impacts on electric rates?**

A. Yes. The evaluation approach for supply options not only determines which supply option has the lowest cost, it simultaneously determines which supply option has the most beneficial impact on electric rates. This can be seen by recalling what an electric rate is. Simply stated, an electric rate is a fraction in which the numerator (costs) is divided by the denominator (numbers of sales units typically expressed in kWh).

Because DSM options result in changes to both costs and kWh sales, both of these changes have to be accounted for. Looking only at costs is not enough because it tells you nothing about the full impact of DSM on electric rates. One has to account for the reduction in kWh sales. However, with supply options, the denominator (kWh) does not change. As a result, the supply option with the lowest cost will also result in the lowest electric rate.

For example, assume you have two supply options. One has a net system cost of 1, and the other has a net system cost of 2. Now look at these options and their costs from an electric rate perspective in which the costs are recovered over total sales of 6. In terms of fractions, 1/6 is a lower value than 2/6. In terms of an electric rate, a cost of 1 divided by 6 units of sales is a lower electric rate than a cost of 2 divided by the same 6 units of sales.

In summary, the RIM test evaluation approach for DSM is identical to the approach taken when evaluating supply options. So, although the RIM "name" is not commonly applied to supply option evaluations, it could be.

**Q. What is the next inaccurate statement Mr. Grevatt made about the RIM test that you will discuss?**

A. On page 8, lines 16 through 18, Mr. Grevatt made the following statement:

*"…the RIM test is really a test of impact <u>on those customers who choose not to participate</u> in an efficiency program."* (emphasis added)

This statement is inaccurate in at least two ways. First, the RIM screening test is designed to see which of the two competing options, DSM or supply, have a better impact on electric rates. Electric rates affect all customers, not just "those customers who choose not to participate in an efficiency program." Second, customers may simply not be eligible for a particular DSM option that will raise rates for all customers. In that case, "choosing not to participate" is not a factor.

One example of ineligibility is that all residential customers can see an increase in electric rates from RIM-failing DSM programs they are ineligible for if those programs are designed solely for commercial/industrial customers. Similarly, commercial/industrial customers can see an increase in electric rates from RIM-failing DSM programs they are ineligible for if those programs are designed solely for residential customers.

Another example of program ineligibility comes from Mr. Bradley-Wright's testimony. The main point of his testimony essentially says that because, based on his claim that approximately 37% of FPL's residential customers fall at or below 200% of the Federal Poverty Level, FPL should design DSM programs specifically for those customers. From his suggested program design, the remaining 63% of FPL's residential customers would be ineligible for such programs. If those DSM offerings failed the RIM test, then these remaining 63% of FPL's residential customers, plus 100% of FPL's

commercial/industrial customers who would also be ineligible for such programs, would be negatively impacted by higher electric rates due to these DSM offerings. I also note that Mr. Bradley-Wright's main idea is to offer the 37% of residential customers new, energy-efficient HVAC, refrigeration, and water heater equipment at no cost to those customers. All other FPL customers would have to pay for 100% of the costs for those appliances and equipment. I doubt that such an offering would have a beneficial impact on electric rates. FPL witness Whitley examines whether Mr. Bradley-Wright's proposed approach would pass either the RIM or TRC tests in his rebuttal testimony.

**7) <u>An inaccurate statement made regarding supply options</u>**

**Q. Did Mr. Grevatt make any other inaccurate statement about supply side options?**

A. Yes. On page 11, lines 19 through 21, he makes the following statement:

*"<u>By definition</u>, the need for supply-side investments is driven <u>solely</u> by new customers who are adding load to the system and/or existing customers whose demands are growing."* (emphasis added)

I do not know in what dictionary Mr. Grevatt found this "definition," but the statement is inaccurate. I agree that supply options can be added to meet

growth in load. However, supply options are also added for a variety of non-load-growth reasons, including, but not necessarily limited to: (i) end of contract life for a power purchase agreement, (ii) early termination of a now uneconomic power purchase agreement, (iii) retirement of a now uneconomic existing generating unit, (iv) discontinuation of formerly cost-effective DSM offerings, and (v) enhanced system economics.

These non-load-growth reasons for adding new resources are fully understood by even first-year resource planners. These reasons are also understood by anyone who has any experience in performing or even reading the results of system reliability analyses. Mr. Grevatt's inexperience in these areas has again caused him to make an inaccurate statement.

**8) <u>Another inaccurate and/or misleading statement</u>**

**Q. Do you disagree with any other statements by the two SACE witnesses in their testimonies?**

A. Yes. There actually are numerous statements they made in which they use the term "bills" in either an inaccurate or a misleading way. The following statement from Mr. Grevatt is a good example of these statements and the context in which the term is used:

*"The utilities' proposed savings goals are unreasonably low…saddling their customers with higher electricity bills as a result."* (Page 3, Lines 22 through 25)

If Mr. Grevatt is stating that higher levels of DSM will result in all utility customers receiving lower monthly bills, that statement could be true only if all of the higher levels of DSM truly pass the RIM test. If, on the other hand, Mr. Grevatt is referring to higher levels of DSM that fail the RIM test, that statement would be inaccurate. High levels of DSM that fail the RIM test results in higher electric rates for all customers, higher monthly bills for non-participants in DSM, and perhaps higher bills even for customers who may participate in a DSM program but who are ineligible for other DSM options that fail the RIM test.

However, if Mr. Grevatt is referring to utility system costs when he uses the term "bills," he is using the term "bills" in a misleading way. FPL has long acknowledged that if high levels of DSM that do not pass the RIM test were to be mandated in Florida, total utility cumulative present value of revenue requirements (CPVRR) could go down more than would be the case with DSM programs that pass the RIM test. However, electricity rates for all customers would increase as a result.

The term “bill” is commonly understood to mean the monthly bill a customer receives from the utility for his/her electricity usage. It is not commonly used to mean total CPVRR costs for the utility as a whole. So, if the SACE witnesses are using the term “bills” in this atypical manner, it is presumably being done so in order to create the misleading, “sound bite” impression that all customers will receive lower bills if non-RIM-passing DSM were to be implemented. This is obviously not true for all customers. Individual customers who are participants in this type of DSM may see decreases in their individual bills, but non-participants in this type of DSM will see increases in their individual bills because electric rates for all customers will have been increased.

Over the years, it has been my impression that this misleading use of the term “bill” has, unfortunately, become a staple in the playbook of the energy efficiency industry. Facing declining cost-effectiveness of utility DSM, their industry may believe that misleading statements such as this should be used to disguise the weaker points of their product. However, in regulatory arenas such as this docket, I believe that the use of misleading statements, such as this one, simply undermines the credibility of Mr. Grevatt’s testimony.

**9) <u>An important contradiction in Mr. Grevatt's testimony</u>**

**Q. Did Mr. Grevatt mention a document titled "National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources" in his testimony?**

A. Yes. After mentioning that he works for a firm by the name of Energy Futures Group (EFG)**,** he stated:

*"…EFG has authored or co-authored…a national best practices manual for cost-effectiveness analysis of efficiency resources."* (Page 1, lines 17 thru 24).

He refers to this document again a few pages later:

*"…as discussed in the National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources, regulators should consider trade-offs between bill savings, participation levels, and rate impacts."* (Page 4, line 24 through Page 5, line 2)

**Q. What is your reaction to this last statement?**

A. I have a couple of reactions. First, this is yet another instance in which Mr. Grevatt has used the term "bill" in a misleading way when he appears to be referring to total utility cost. Second, it strikes me as illogical that DSM "participation levels" on its own would have any value. Participation levels in truly cost-effective DSM offerings that bring value to all of a utility's

customers, such as RIM-passing DSM, could be a meaningful metric. However, a metric of participation levels in non-cost-effective DSM offerings that do not bring value to all of a utility's customers (due to higher electric rates from RIM-failing DSM) is less than meaningless, it is destructive. Third, I am in full agreement with the portion of the statement that states the rate impacts should be considered by regulators.

**Q. Returning to this document, have you reviewed it?**

A. Yes, I have reviewed the document.

**Q. What are your thoughts about the document?**

A. Three main thoughts came to mind. First, as the title of the document, National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources indicates, this is not a broad scope document designed to examine how both supply and DSM resources should be evaluated. The document's focus is almost entirely on utility DSM options.

Second, the document appears to me to be essentially a strategy or sales "how to" guide for the energy efficiency industry to use to attempt to convince regulators and/or electric utilities to choose, and/or show them how to justify, more utility energy efficiency to meet particular policy goals, including policy goals outside of the electric utility area. This is not surprising given the fact that many of the principal authors of the document are energy efficiency industry employees. As a result, the document is predictably one-sided in favor of utility energy efficiency programs. For example, the RIM cost-

effectiveness test is only discussed at the end of the document in appendices, and then only in a dismissive way.

Third, the foundation of the document appears to be a set of what is labeled as seven "Resource Value Framework Steps." I found these seven "Framework Steps" to be most interesting, particularly in regard to this current docket.

**Q. Please explain.**

A. In the document's Executive Summary, Figure ES-1 lists the seven Framework Steps as follows:

- *STEP 1 Identify and articulate the jurisdiction's applicable policy goals*
- *STEP 2 Include all the utility system costs and benefits*
- *STEP 3 Decide which non-utility impacts to include in the test, based on applicable policy goals*
- *STEP 4 Ensure that the test is symmetrical in considering both costs and benefits*
- *STEP 5 Ensure the analysis is forward looking and incremental*
- *STEP 6 Develop methodologies to account for all relevant impacts, including hard to quantify impacts*
- *STEP 7 Ensure transparency in presenting the inputs and results of the cost-effectiveness test.*

I interpret Step 1 to be the fundamental "guiding principle" step of the document because it indicates the importance of first understanding what a jurisdiction's policy goals are in order to assist the jurisdiction in meeting those policy goals. (In fact, the May 18, 2017 Media Release announcing the document referred to this first step as the "foundational principle".)[3]

In regard to this docket, the FPSC is the relevant jurisdiction. Earlier in this rebuttal testimony, I quoted two passages that I believe summarize key components of what the FPSC has stated are its policy and requirements for setting DSM Goals. In the interest of clarity, those statements are repeated here. The first of these statements by the FPSC is:

*'…consideration of both the RIM and TRC tests is necessary to fulfill the requirements of Section 366.82(3)(b), F.S. Both the RIM and TRC Tests address costs and benefits beyond those associated solely with the program participant. By having RIM and TRC results, we can evaluate the most cost-effective way to balance the goals of deferring capacity and capturing energy savings while minimizing rate impacts to all customers.'"*

(Order No. PSC-14-0696-FOF-EU, page 12)

[3] Available at: https://nationalefficiencyscreening.org/wp-content/uploads/2017/05/NSPM-media-release-final-5-17-17.pdf (last visited July 11, 2019).

The second of these statements by the FPSC is:

*"Rule 25-17.0021(3), F.A.C., requires that each utility's proposed Goals must be based upon the utility's most recent planning process."* (Order No. PSC-14-0696-FOF-EU, page 31)

Through these statements, the FPSC has articulated that, in setting DSM Goals, its policy and requirements include:

i) Utilize both the RIM and TRC costs in order to balance capacity and energy savings while minimizing rate impacts to all customers; and,

ii) Base DSM Goals on each utility's resource planning process.

What is interesting to me is that although Mr. Grevatt is clearly familiar with this document, and therefore familiar with its first step "guiding principle," he has chosen to violate or ignore the document's "guiding principle."

**Q. Please elaborate.**

A. This is a DSM goals-setting proceeding in the State of Florida. The relevant "jurisdiction," the FPSC, has clearly stated (through their statements listed above) prior to the beginning of this docket that its policy and requirements in regard to DSM goals-setting include use of both the RIM and TRC tests to assist in balancing costs savings with rate minimization and that DSM Goals must be based on each utility's most recent resource planning process.

Therefore, the information that is sought in the document's STEP 1 "guiding principle" *("Identify and articulate the jurisdiction's applicable policy goals"*) has already been identified and articulated by the FPSC. So the only relevant question in regard to this docket is whether Mr. Grevatt chose to follow the "guiding principle" and incorporate the FPSC's articulated policy goals when he developed his recommended DSM Goal.

**Q. Did Mr. Grevatt follow this "guiding principle" in developing his recommended DSM Goal?**

A. No. The fact that he clearly violated or ignored the "guiding principle" step is evidenced by the following:

- Rather than using the RIM test to help craft his recommended Goal, he tells the FPSC that they should completely abandon this cost-effectiveness test.
- Rather than using the policy of considering how to best balance cost savings and rate minimization, he ignores rate minimization concerns completely.
- Rather than base DSM Goals on DSM cost-effectiveness, he performs no cost-effectiveness analysis of his recommended GWh Goal.
- And, rather than ensuring that his recommended DSM Goal is based on each individual utility's most recent resource planning process, he ignores all utility-specific (and Florida-specific) considerations and simply recommends that Florida set Goals on a one-size-fits-all GWh metric from other states.

**Q. What conclusion do you draw from Mr. Grevatt's abandonment of the first "guiding principle" in the document he refers to in his testimony?**

A. The conclusion I draw is that the first "guiding principle" step in the document - to first understand the policy goals of a jurisdiction and then help it to meet those goals – has no real meaning to the energy efficiency industry, or at least to Mr. Grevatt. Apparently, policy goals can be thrown out of the window by Mr. Grevatt if they do not serve his purpose or he does not agree with them.

In such a case, Mr. Grevatt believes he should tell the jurisdiction, in this case the FPSC, that he knows better than they do what the policy goals for the State of Florida should be. And Mr. Grevatt's testimony can accurately be characterized as having done exactly that.

## III. CONCLUSION

**Q. Would you please summarize your review of the SACE witnesses' testimony?**

A. Yes. I will do so in bullet point format.

- SACE's witnesses do not even attempt to contest the fact that the cost-effectiveness of utility DSM has been declining for some time and that this trend is continuing. Nor do they contest the fact that due to FPL's continuing efforts to improve the efficiency of its generating system,

the cost-effectiveness of utility DSM is declining even more for FPL's system. Because they cannot dispute these facts, discussed in my direct testimony, Mr. Grevatt attempts to distract attention away from declining cost-effectiveness in three ways: (i) by disparaging the RIM cost-effectiveness test, (ii) by alleging problems in the determination of DSM Achievable Potential, and (iii) by using the first two distractions as a premise to completely abandon cost-effectiveness considerations in recommending a DSM Goal.

- Despite the fact of steadily declining cost-effectiveness of utility DSM, particularly for FPL's system, Mr. Grevatt's recommends a GWh Goal that is 2,476% of the current FPL GWh Goal. This recommendation is even more extreme than the recommendation SACE made, and which the FPSC rejected, in the last DSM Goals docket. In addition to being extreme, the current recommendation by SACE's witness is illogical.
- The approach Mr. Grevatt used to "develop" his recommended GWh Goal, simply pointing to other states and saying in effect that "they are doing it so you should too", is not based on any FPL-specific (or even Florida-specific) analyses. Therefore, his recommended DSM Goal is unsupported and indefensible.
- In "developing" his recommended Goal, Mr. Grevatt clearly violated or ignored Florida requirements for developing DSM Goals. He did not (i) base his recommendation using FPL's most recent planning process, or (ii) take DSM cost-effectiveness into account.

- The two SACE witnesses have experience in the energy efficiency industry, but have no experience in actually planning a utility system, performing system reliability analyses, or analyzing supply options. As a consequence of their lack of experience in these areas that are important in a resource goals-setting docket, they made numerous inaccurate and/or misleading statements which significantly undermine their credibility.
- Finally, despite making several references to a document (largely developed by the energy efficiency industry) which purports to give guidance in how to provide support for regulators (such as the FPSC) in meeting their policy guidelines, Mr. Grevatt chose to violate or ignore the "guiding principle" of the very document he refers to. Although the FPSC has clearly articulated what its policy goals and requirements are in regard to DSM goals-setting, Mr. Grevatt chose to ignore those policy goals and requirements. He then, in effect, tells the FPSC that he knows better than they do what is best for Florida.

**Q. Based on your review of the SACE witnesses' testimonies, do you have any final thoughts as they pertain to DSM goals-setting in this docket?**

A. Yes. The objective of this proceeding is to set DSM Goals for FPL and the other Florida utilities, and the FPSC will set those goals. Setting aside the topic of potential goals specifically for low-income customers, the FPSC has been presented with two distinctly different sets of goals for FPL that have been proposed/recommended separately by the SACE witnesses and by FPL.

The SACE witnesses recommend only one DSM Goal for all of FPL's customers, a GWh goal. In regard to goals for Summer MW and Winter MW, Mr. Grevatt said he could not recommend such goals. The reason for that is obvious from looking at how he "developed" his GWh goal. He did no analyses that would have required him to actually evaluate both the MW and MWh impacts of DSM measures on FPL's specific system. Instead, he simply pointed outside of Florida and, in effect, said "do the same thing they are doing" for a GWh value. But at this point, he is stuck and cannot recommend any meaningful DSM MW goal based on Florida utility-specific information.

Besides resulting in a recommendation that is completely unsupported by any analysis, this "approach" to developing goals violates several Florida requirements as explained above in my testimony. Furthermore, his recommended GWh goal of 2,467% of the current GWh goal for FPL set in the last DSM Goals docket is clearly illogical given the declining cost-effectiveness of DSM.

In comparison, FPL has presented the FPSC with a full set of proposed goals for Summer MW, Winter MW, and annual GWh for both residential and commercial/industrial customers as required. FPL has detailed the steps it took in deriving its proposed goals, and those steps used FPL's most recent resource planning process as required. Through rigorous analyses, FPL also

fully considered the cost-effectiveness of utility DSM given current forecasts and assumptions as required.

The cost-effectiveness of utility DSM has been steadily declining for some time, and this trend continues. The DSM Achievable Potential levels that resulted from FPL's analyses clearly reflect this. As a result, FPL is proposing lower DSM Goals this year compared to the goals set in the last DSM Goals docket. Lower goals levels at this time are fully supported by FPL's analyses and are, therefore, logical. In addition, lower DSM Goals are needed to ensure that incremental DSM expenditures are truly cost-effective for all of FPL's customers.

In closing, the choice between the two sets of DSM Goals proposed/recommended for FPL in this docket by SACE and by FPL could not be clearer.

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

A. Yes.

**Inaccurate and/or Misleading Statements**
**Made by SACE Witness Grevatt**

| Item | Witness | Starting Page/Line | Inaccurate and/or Misleading Statement | Correct Information |
|---|---|---|---|---|
| 1 | Grevatt | 4 / 7 | *"…the RIM test is not actually a test of cost-effectiveness…"* **(Inaccurate)** | The RIM test is one of three DSM cost-effectiveness screening tests recognized, and whose use is required, in the State of Florida. The RIM test has been recognized and used in other states for decades. This is because it fully accounts for all DSM costs and all system costs avoided by DSM (i.e., DSM's benefits) that are accounted for in a utility's electric rates. In addition, the RIM test also accounts for unrecovered revenue requirements that automatically occur with DSM options. |
| 2 | Grevatt | 7 / 7 | *"It is only a test of whether rates will go up…"* **(Inaccurate)** | The RIM test indicates the relative impact on electric rates that a DSM option will have versus a competing supply option. Both options may end up raising rates, both options may end up lowering rates, or one option may raise rates while the other option lowers rates. The direction in which electric rates may go is immaterial. The objective of the RIM test is to determine which option will have a better impact on electric rates for all customers. |
| 3 | Grevatt | 10 / 24 | *"Put simply, because the RIM test is a test of whether rates may go up, any supply-side investment that would raise rates, all other things equal, would fail the RIM test."* **(Inaccurate)** | As explained above, the RIM test is not a test of whether rates go up. It is a test of the relative impact on electric rates between a DSM option and a competing supply option to determine which option has the best impact on rates. If both options would cause rates to go up, the option that causes rates to go up by the smaller amount is the winner in the RIM test. Conversely, if both options would cause rates to go down, the option that causes rates to go down the most is the winner in the RIM test. |

**Inaccurate and/or Misleading Statements**
**Made by SACE Witness Grevatt**

| Item | Witness | Starting Page/Line | Inaccurate and/or Misleading Statement | Correct Information |
|---|---|---|---|---|
| 4 | Grevatt | 4 / 17 | *"…the RIM test is not applied to supply-side investments; if it were, many supply-side investments, such as new power plants…would be routinely rejected."* **(Inaccurate)** | Every RIM test analysis that compares a DSM option with a competing supply option evaluates both a supply option and a DSM option. Furthermore, when evaluating supply options against each other, the same approach is taken in that evaluation as is taken in the RIM test. All incurred and avoided costs of the resource itself and on the utility system that are reflected in the utility's electric rates are accounted for. Unrecovered revenue requirements for supply options in such an evaluation are always zero and do not need to be accounted for. In addition, because supply options do not change the number of sales over which costs are recovered, the supply option with the lowest system cost also is the supply option that has the most beneficial rate impact. Thus supply option evaluation captures all relevant costs and denotes both cost savings and relative rate impacts. Thus the RIM test approach is applied to supply option evaluation. It simply is not usually referred to by that name. |
| 5 | Grevatt | 10 / 20 | *"Q. Is the RIM test typically applied to supply-side investments? A. No, not in my experience."* **(Inaccurate and misleading)** | Please see the Correct Information above for Item 4 regarding why this statement is inaccurate. In addition, the qualifier *"…not in my experience"* is misleading because Mr. Grevatt's work experience shows no relevant experience in performing evaluations of competing supply side options for an electric utility's decision-making purposes. |
| 6 | Grevatt | 8 / 16 | *"…the RIM test is really a test of impact on those customers who choose not to participate in an efficiency program."* **(Inaccurate)** | First, the RIM test simultaneously indicates what the utility's total costs are projected to be for all customers and the relative directional impact on electric rates with which the utility will serve all customers. Thus the RIM test is meaningful for all customers, not just *"customers who choose not to participate in an efficiency program".* Second, because electric rates apply to all customers, the RIM test also is meaningful to customers who are ineligible for any particular DSM program. An example would be a DSM program for commercial/industrial customers for which residential customers are ineligible. |

**Inaccurate and/or Misleading Statements**
**Made by SACE Witness Grevatt**

| Item | Witness | Starting Page/Line | Inaccurate and/or Misleading Statement | Correct Information |
|---|---|---|---|---|
| 7 | Grevatt | 11 / 19 | *"By definition, the need for supply-side investments is driven solely by new customers who are adding load to the system and/or existing customers whose demands are growing."* **(Inaccurate)** | Load growth is only one reason why new resources are added. Other reasons include, but are not necessarily limited to: (i) end of contract life for a power purchase agreement, (ii) early termination of a now uneconomic power purchase agreement, (iii) retirement of a now uneconomic existing generating unit, (iv) discontinuation of formerly cost-effective DSM offerings, and (v) enhanced system economics. |
| 8 | Grevatt | 3 / 22 | *"The utilities' proposed savings goals are unreasonably low…saddling their customers with higher electricity bills as a result."* **(Inaccurate and Misleading)** | The witness is actually discussing total utility costs, but misleadingly uses the term "bills". Individual customers get monthly bills. Goals that are higher than those proposed by the utilities may reduce total costs for the utility, but will result in higher electric rates. Individual customers who do not, or cannot, participate in DSM offerings that raise electric rates will be served under higher electric rates and will have higher bills as a result. By comparison, Goals that the utilities have proposed will result in lower electric rates for all customers. |