BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Proposed amendment of Rule 25-17.0021 F.A.C., Goals for Electric Utilities.	**DOCKET NO. 20200181** **Filed: December 16, 2022**

SOUTHERN ALLIANCE FOR CLEAN ENERGY'S POST WORKSHOP COMMENTS

Southern Alliance for Clean Energy ("SACE") thanks the Commission for the opportunity to submit written comments that build on our oral comments from the November 30, 2022 third rulemaking workshop in the above captioned docket. In order to promote efficiency in the filing of comments, a number of non-utility stakeholders worked together to align a majority of our type and strike redline edits to the current revised draft rule ("redline'). SACE's redline represents a consensus document and individual stakeholders will indicate where they deviate on addressing certain provisions.

SACE has participated in the first and second workshop and submitted post workshop comments for both workshops.[1] We will not reiterate each of the related specific points included in our previous written comments, but will provide additional information and perspective on the current revised draft rule. Towards that end, we have attached our redline as "Attachment A" and provide the following narrative description and reasoning for the redline below.

Overview

In past comments we have highlighted the value of energy efficiency as a resource to the state's utilities and customers. It's well established that low cost energy efficiency reduces the fuel used to generate electricity and can defer the need for more expensive new power generation, thus lowering bills for all customers. Energy efficiency measures also help participating customers reduce energy use and save money on bills directly – which is particularly important for low-income customers. As such, it's a win-win for all customers. Energy savings therefore should be valued from a resource planning perspective as a low cost, low risk utility resource. Spiking fossil

[1] Southern Alliance for Clean Energy, *Post Workshop Comments*, Docket No. 20200181, February 15, 2021 and June 28, 2021.

fuel costs[2] and escalating customer bills should provide added urgency to establish a framework that can lead to higher levels of cost-effective energy savings. Yet, the existing practices used to set FEECA energy savings goals in the past do not value efficiency as a resource – instead they treat the energy saved by efficiency as a cost, rather than a benefit, which depresses efficiency potential and rewards poor performance.

There are two key roadblocks for setting meaningful energy efficiency goals in Florida, which SACE and other stakeholders have consistently identified, specifically these are the use of the Rate Impact Measure ("RIM") cost effectiveness test and the 2-year simple payback screen. It was these two issues specifically that led to zero or near zero proposed goals by a number of the state's utilities in the 2019 Florida Energy Efficiency and Conservation Act ("FEECA") proceeding, and which continue to produce energy savings from utility-led programs that put Florida near the bottom of state rankings for utility-administered energy efficiency.[3] The revised draft rule does not resolve these problematic past practices, and in fact risks their further entrenchment in the Commission's rules.

The Commission tasked its staff to explore ways to modernize the Commission's goal setting practices at the November 2019 Agenda Conference that set and approved the current efficiency goals.[4] That is the catalyst for this rulemaking. Unfortunately, the rule as presently drafted does not remedy the primary issues that prompted this rulemaking. In our review of the Commission's existing rules, we have sought to resolve the key issues that have consistently emerged as sources of contention in previous FEECA goal setting cycles through the adoption of modern, industry standard practices and better information for Commission decision making. In that spirit, we will describe our redline revision below generally in the chronological order that they appear; and trust you will find the following redline recommendations helpful in meeting the Commission's intent to modernize the FEECA goal setting rule.

> ***Section 1****: Low income goals, other goals, and balancing cost-effectiveness test outcomes with rate and bill effects*

Since the 2014 FEECA goal setting proceeding, the Commission has identified low-income programs as a priority.[5] For good reason, too many Floridians pay a disproportionately high share

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[2] Southern Alliance for Clean Energy, *Florida Power Bills to Spike Again: Reliance on Fossil Fuel to Blame*, September 8, 2022, at https://cleanenergy.org/blog/florida-power-bills-to-spike-again-reliance-on-fossil-gas-largely-to-blame/

[3] ACEEE, 2022 State Energy Efficiency Scorecard, December 2022, p. 34., at https://www.aceee.org/research-report/u2206

[4] Florida Public Service Commission, Transcript of Agenda Item No. 8, November 5, 2019, p. 15.

[5] Florida Public Service Commission, Order No. 14-0696-FOF-EO, December 16, 2014, p. 27.

of their income on their power bill – also known as having a high energy burden. No family should have to make a choice between paying a power bill and affording essentials like food, rent, or medicine. At present, the rules provide no guidance for how FEECA will address the unique needs and market barriers involved in providing efficiency to low-income customers in either the goal setting or program planning proceedings. To address this, the redline in Section (1)(c) creates discrete KW and KWH savings goals for low income customers, to be provided through income qualified demand side management ("DSM") programs. These savings goals are proportionate to the population of low income customers in a utility's service territory. This will ensure that low-income customers, who have the greatest need and, like other customers, pay an Energy Conservation Clause Recovery ("ECCR") factor on bills, are adequately represented in the savings goals and the savings benefits from programs. It further ensures that savings from exclusively low income programs are consistent across utilities. The program costs should continue to be recovered through the ECCR factor.

Additionally, while the rule states that energy savings and demand goals must be numeric, we understand that there may be other non-numeric goals the Commission may wish to consider. It's well established that energy efficiency has benefits beyond lower bills, such as energy burden reduction, job creation, keeping dollars in local communities, and fostering economic development. Therefore, the redline in Section (1)(d) provides that other non-numeric goals associated with energy efficiency can be considered by the Commission.

Lastly, in recognizing the need to balance multiple cost-effectiveness test scenario outcomes with the potential effects on customer rates and bills, the redline provides that the Commission may conduct such a balance. This provision specifically highlights the discretion the Commission already has to balance goals with rate and bill effects. The required cost effectiveness scenarios to be filed by a utility are discussed further below.

Section 2*: Market segments, major end-use categories, and excluded measures*

Section 2 requires a utility to conduct a technical potential study to assess the potential of all available demand-side conservation and efficiency measures and identifies the market segments and major end use categories to be considered. The redline strikes "natural gas substitutes for electricity," adds "efficient electricity substitutes for natural gas," and adds back the "Other' category.

Section 366.82 (2), states the following in relevant part:

> <u>The commission shall adopt appropriate goals for increasing the efficiency of energy consumption</u> and increasing the development of demand-side renewable energy systems, specifically including goals designed to increase the conservation of expensive resources, such as petroleum fuels, to reduce

> and control the growth rates of electric consumption, to reduce the growth rates of weather-sensitive peak demand, and to encourage development of demand-side renewable energy resources. (emphasis added).

The statute contemplates that the Commission should set goals for increasing the efficiency of energy consumption, and is not limited to electricity consumption. Energy sources include both electricity and natural gas, that is why the FEECA statute also applies to natural gas utilities. The focus should be on reducing overall energy use through goals and programs. In this regard, electricity is a more efficient energy source than gas.[6] For instance, induction stoves are more energy efficient than gas stoves, as are high efficiency electric heat pumps and heat pump water heaters.[7] Hence, the intent of the statute is best met by striking electricity substitutes for natural gas and adding and identifying measures that are efficient electricity substitutes for natural gas.

Additionally, the redline adds back the "Other" category because there should be a catchall category for emerging technologies or new and evolving market segments. For instance, the growing adoption of electric vehicles will add considerable load to the FEECA utilities over time, a technology development that could not have been foreseen the last time the FEECA rules were amended. Managing the timing of demand from electric vehicles will be key to placing downward pressure on rates, but measures that help manage electric vehicle demand do not fit neatly in any of the stated market segments or major end-use categories. Hence, it is prudent to maintain an "Other" category in the rule.

Lastly, the redline clarifies that the identification of measures that were analyzed and excluded from consideration applies to the technical potential study and extends the requirement to the subsequent economic and achievable potential analysis. Identification of measures excluded from the economic and achievable analysis will promote administrative efficiency, transparency and provide useful information to the Commission. It is through these analyses that we get a sense of which measures are and are not deemed cost effective, and whether or not all cost effective measures have been included in the final achievable potential estimate.

Section 3*: cost effectiveness tests, addressing freeridership, the DSM manual, balancing the DSM goal levels with bill and rate effects, real-life measure cost data and exempting measures and programs for low-income customers*.

Section 3 includes the majority of our redline revisions as we strived to ensure a framework that will provide clear, accurate and relevant information to the Commission that is not overly

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[6] See Regulatory Assistance Project, *Beneficial Electrification; Ensuring Electrification in the Public Interest*, June 2018, at https://www.raponline.org/wp-content/uploads/2018/06/6-19-2018-RAP-BE-Principles2.pdf

[7] *Id.*

prescriptive, and will maintain the Commission's discretion to balance cost effective test scenario outcomes with rate and bill effects in setting DSM goals.

First, the redline strikes the use of the RIM cost effectiveness test as a required scenario. We have previously identified concerns over reliance on the RIM test for setting goals. Consideration of bill and rate effect is important, but the RIM test fails to provide meaningful information by which the Commission can weigh potential bill and rate effects against actual customer savings and total utility system benefits. We have detailed a number of problems with the RIM test in past comments,[8] and ultimately concluded that it is too fundamentally flawed to be used as a primary test for screening energy efficiency programs and measures when setting FEECA goals. By treating customer bill savings from energy efficiency as a cost, rather than appropriately recognizing such savings as a benefit, RIM obscures the relationship between efficiency investments on overall utility system operational costs and their associated financial effects for all customers. It improperly conflates energy efficiency resource costs with already sunk supply costs, and ultimately fails to indicate a) whether investment in a particular energy efficiency measure or program will yield more financial savings than it costs, or even b) what amount of impact such investments will have on rates (or even if it will in reality have any at all). The Commission can and should give consideration to both how much cost effective energy efficiency potential is available, and what effect given levels of efficiency investment will have on customer rates and bills. But the RIM test fails to provide meaningful information on either count, and is inadequate for either purpose to inform Commission decision making.

To be clear, the RIM test does not indicate what rate impacts will result from efficiency investments. Base rate impacts occur through a rate case proceeding, a petition for which is filed when a utility projects that it will earn below its approved return on equity band. As a general proposition, efficiency savings do not result in recoverable lost revenues for utilities in Florida with increasing populations, an expanding customer base, and economic growth. While energy efficiency measures reduce the excess profits a utility might have otherwise realized, there is no evidence to suggest that utility-led programs to reduce energy use would actually exceed electricity sales growth and drive a utility to seek an adjustment in its rates, nor that such a request would be approved by the Commission. In fact, the state's utilities are well within their earnings band.[9] The <u>purpose</u> of energy efficiency measures is to help reduce energy use (a primary intent of FEECA) which subsequently leads to lower power bills. It is not uncommon for lost revenues to account for the vast majority of costs in a utility's RIM test calculation. For instance, in Florida Power & Light's 2020 program plan filing, the Company projected lost revenues that were 5.7 times higher

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[8] Southern Alliance for Clean Energy, *Post Workshop Comments*, Docket No. 20200181, February 15, 2021 and June 28, 2021.

[9] *See eg*. Florida Power and Light Co., *Rate of Return Surveillance Report*, November 22, 2022, at http://www.floridapsc.com/library/financials/EI802-DOCS/EARNINGS-SURVEILLANCE/EI802-2022-09-ESR.pdf

than its total utility energy efficiency program costs - that means lost revenues were **85% of these combined costs** overall.[10] To be clear, lost revenues represent sunk supply costs, and are not in any way an actual cost of the utility's energy efficiency programs. Perversely, the RIM test rewards DSM measures that do little to nothing to actually reduce energy use, while penalizing measures that lead to the more efficient use of energy – a primary intent of the FEECA statute.[11]

Another reason sometimes given for reliance on the RIM test is that it limits cross-subsidies. The ECCR factor will increase with more robust investment in energy efficiency, including for non-participants in efficiency programs. But it's important to note that efficiency is a low cost, low risk resource alternative to more expensive power generation and provides system savings that accrue to all customers. Efficiency programs allow participants to leverage a utility incentive, typically while making significant personal investment, for energy efficiency improvements that help not only the participant to reduce energy use but also helps the utility's system – in the form of reduced fuel use, transmission and distribution savings, and the deferral of generation investments. These benefits accrue to all customers, much like other investments, such solar generation investments, that place long-term downward pressure on rates. By contrast, limiting customer access to efficiency incentives ultimately leads to more energy waste and higher utility system costs passed on to all customers. The best remedy for concerns related to which customers get the full benefit of participation in utility efficiency programs is not to limit access to such programs, but to instead ensure all customers get to access them. If the state's utilities had meaningfully invested in energy efficiency years ago, the impact of escalating bills from fuel price spikes today would have been mitigated for all customers. Like all resources, energy efficiency has a cost that is borne by all customers, but it is less than the cost customers pay for more expensive supply resources.

In place of RIM we substitute the Utility Cost Test ("UCT"), also called the Program Administrator Test. The UCT provides a clear picture of system benefits as it is essentially the RIM test minus the lost revenue cost component. The UCT is standard industry cost benefit test that has been widely adopted across the country,[12] including in the Southeast, in North Carolina, South Carolina, and Georgia. This test is directly relevant to evaluation of efficiency as an energy resource, since it compares the cost of saving energy against providing power through supply resources. Moreover, it is a symmetrical test that considers the direct utility costs for operating efficiency programs against the direct financial benefits of efficiency in reduced utility system costs, which are benefits that are passed on to all customers.

To appropriately address rate and bill effects, the redline provides that a utility will provide specific information on the bill and rate effects of each cost effectiveness scenario outcome, in addition to providing data on total utility system net benefits, and average per customer costs and benefits.

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[10] SACE analysis of Florida Power and Light's 2020 Demand Side Management Plan, February 24, 2020.
[11] Section 366.82 (2), Fla. Stat.
[12] *See* National Standards Practice Manual, Spring 2017.

Quantified data for each of these specific metrics are useful for Commission decision making, and provide the public with meaningful information about the value of utility investments in energy efficiency. Moreover, with this addition the Commission will have clear rate and bill information that the RIM test cannot provide. This requirement in Section 3 mirrors the redline in Section 1 stating explicitly the Commission's discretion to balance the level of DSM goals with rate and bill effects.

The Cost Effectiveness Manual for Demand Side Management Programs and Self Service Wheeling Proposals ("DSM Manual") adopted in 1991 identifies several standard cost-effectiveness test methodologies historically used by the Commission. Despite being one of the most commonly used standard cost benefit test methodologies, Florida's DSM Manual does not currently include the UCT. The DSM Manual is referenced in a companion rule, Rule 25-17.008, F.A.C. (a rule with little substantive content). We propose, amending the DSM Manual to include the UCT with its commonly recognized calculation methodology. We provide the relevant amendment to the DSM manual as "Attachment B." The definition and calculation methodology is drawn directly from the California Standard Practice Manual.[13]

If noticing and conducting a rulemaking for Rule 25-17.008 is necessary to amend the DSM Manual it could likely be conducted in just a few months. Doing so to add a widely used industry standard cost test is warranted, and would not take an inordinate amount of time relative to this rulemaking – which is entering its third year.

However, if the Commission decides not to amend the DSM Manual, the Commission could alternatively define the UCT in the rule, for instance using the language filed by Earthjustice, or define it as: "The Utility Cost Test is determined using its standard and commonly applied definition and calculation methodology." Sub-section 4 of Rule 25-17.008, F.A.C. already states that "[n]othing in this rule shall be construed as prohibiting any party from providing additional data proposing additional formats for reporting cost effectiveness data." While Sub-section 4 allows for the use of the UCT, the Commission should provide guidance to all parties as to the standard definition of the UCT and its calculation methodology, either in an amended DSM Manual, or in the rule itself.

Additionally, the redline provides guidance, clarity, and appropriate flexibility in how a utility may address freeriders, while requiring that the approach be non-arbitrary. It requires that the methodology be transparent, based on empirical evidence and consistent with standard industry practice. This standard also applies to consideration of overlapping measures, rebound effects, and interactions with building codes and appliance efficiency standards. Moreover, the current practice of using an arbitrary simple payback calculation, like the 2-year screen, is disallowed as a method

[13] California Practice Standard Manual, p. 23, 2001.

for determining free ridership. The 2-year screen is a blunt proxy instrument with no supporting evidence to justify its continued use for determining free ridership. Florida is a solitary outlier in its use of the two 2-year screen, which eliminates many of the most common and cost effective measures that are typically included in utility efficiency programs around the country, including many that would provide substantial benefit to low-income customers such as efficient lighting, duct repair, and programmable thermostats.

As SACE cited in the testimony of Witness Grevatt in the most recent FEECA goals setting cycle, the 2-year payback screen had the result of depressing economic potential in 2019 by **80% for Gulf, 139% for Tampa Electric and over 150% for FPL**[14] Put simply, eliminating the 2-year screen results in roughly a doubling – or more – of cost-effective savings potential. This scale of difference is simply too large to ignore by continuing to rely upon a factually unsupported proxy screening practice.

Given the Commission's interest in prioritizing the needs of low income customers,[15] the redline includes language that exempts measures used in low income programs from freeridership[16] and standard cost-effectiveness screening - as has been the Commission's practice in past FEECA proceedings. Low income programs can be screened for rate and bill effects, and should be evaluated to ensure programs are spending the money wisely, but not held to the same requirement for cost-effectiveness that apply to standard efficiency program offerings. Further, in Section 4, the redline requires each utility to consider strategies in the program planning phase to minimize free ridership. The program planning phase is the appropriate time to address free ridership through program design and with real-life data.[17]

Moreover, Commission practice should require real-life data in measure cost characteristics used in a utility's efficiency potential analysis. In past proceedings, administrative costs for measures used by utilities have been very erratic and exaggerated. For instance, in the 2014 goal setting proceeding, the utilities used an arbitrary flat administrative cost of $50 per measure and in the 2019 proceeding used an administrative cost pegged to kWh saved.[18] In 2019, the administrative cost for a 17-SEER heat pump measure was $239.92. A 21-SEER heat pump had an administrative cost of $392.52. There appears to be no rhyme or reason to how the administrative costs are set for potential analysis. Measures costs should be based on historical costs of measures bundled in

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[14] Direct Testimony of Jim Grevatt, Docket Nos. 20190015-EG, 20190016-EG,20190018-EG, 20190019-EG, 20190020-EG, 20190021-p. 22, June 10, 2019

[15] Florida Public Service Commission, Order No. 14-0696-FOF-EO, December 16, 2014, p. 27.

[16] *See* Southern Alliance for Clean Energy, *Post Workshop Comments*, Docket No. 20200181, June 28, 2021.

[17] *See* Southern Alliance for Clean Energy, *Post Workshop Comments*, Docket No. 20200181, June 28, 2021.

[18] Florida Public Service Commission, Docket Nos. 20190015-EG, 20190016-EG,20190018-EG, 20190019-EG, 20190020-EG, 20190021, Hearing Transcript, August 13, 2019, p. 488.

programs, rather than unmoored theoretical constructs. In reality, the measures are bundled in programs and administrative costs are much lower than the costs used to evaluate measures for cost-effectiveness in past goal setting. This is glaring problem that the redline strives to rectify by requiring that "[e]ach utility's goal projections must be ~~based on~~ informed by the utility's most recent planning process and must ~~shall~~ reflect the annual KW and KWH savings, **and program costs,** over a ten-year period, from potential demand-side management programs …." If it is the Commission's intention to more closely link programs with goals to obtain more real-life KW and KWH savings data, the move then also must naturally extend to real life data on program costs, including administrative costs.

Conclusion

We again thank the Commission and commission staff for their engagement in this rulemaking and look forward to working with the Commission, staff and other stakeholders to modernize the current rule in a way that leads to lower cost outcomes for Floridians and the state.

Respectfully submitted on December 16, 2022,

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ATTACHMENT A

25-17.0021 Goals for Electric Utilities.

(1) The Commission will ~~shall~~ initiate a proceeding at least once every five years to establish ~~numerical~~ goals for each affected electric utility, as defined by Section 366.82(1)(a), F.S.~~, to reduce the growth rates of weather-sensitive peak demand, to reduce and control the growth rates of electric consumption, and to increase the conservation of expensive resources, such as petroleum fuels.~~ The Commission will set annual ~~Overall~~ Residential kilowatt (KW) and kilowatt-hour (KWH) goals and annual ~~overall~~ Commercial/Industrial KW and KWH goals ~~shall be set by the Commission for each year~~ over a ten-year period. The goals~~,~~ will ~~shall~~ be based on:

(a) An assessment of the technical potential of available measures;~~ and~~

(b) ~~a~~An estimate of the total cost-effective KW ~~kilowatt~~ and KWH ~~kilowatt-hour~~ savings reasonably achievable through demand-side management programs in each utility's service area over a ten-year period. The Commission may give consideration to balancing the level of cost-effective demand side management goals with their potential effects on customer rates and bills; and

(c) discrete KW and KWH savings for low income customers provided through income qualified demand side management programs in each utility's service areas over a ten year period. These savings goals shall be proportionate to the population of low income customers in the utlity's service area. For the purposes of this rule, the term "Low Income Customer" means households earning at or below two hundered percent (200%) of the federal poverty level, as determined by the United States Department of Health and Human Services. "Income qualified" demand side management programs that serve low income housholds.

(d) In addition to the numeric goals above, the Commission may give consideration to other goals.

(2) Pursuant to the schedule in an order establishing procedure in the proceeding to

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establish demand-side management goals, each utility must file a technical potential study. ~~The Commission shall set goals for each utility at least once every five years.~~ The technical potential study must be used to develop the proposed demand-side management goals, and it must assess the full technical potential of all available demand-side conservation and efficiency measures, including demand-side renewable energy systems, associated with each of the following market segments and major end-use categories.

Residential Market Segment:

(Existing Homes and New Construction should be separately evaluated) Major End-Use Category

(a) Building Envelope Efficiencies.

(b) Cooling and Heating Efficiencies.

(c) Water Heating Systems.

(d) Lighting Efficiencies.

(e) Appliance Efficiencies.

(f) Peak Load Shaving.

(g) Solar Energy and Renewable Energy Sources.

(h) ~~Natural Gas Substitutes for Electricity~~Efficient Electricity Substitutes for Natural Gas.

(i) Other.

Commercial/Industrial Market Segment:

(Existing Facilities and New Construction should be separately evaluated) Major End-Use Category

(~~i~~j) Building Envelope Efficiencies.

(~~j~~k) Cooling and Heating Efficiencies.

(~~k~~l) Lighting Efficiencies.

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(~~l~~m) Appliance Efficiencies.

(~~m~~n) Power Equipment/Motor Efficiency.

(~~n~~o) Peak Load Shaving.

(~~o~~p) Water Heating Systems.

(~~p~~q) Refrigeration/Freezing Equipment.

(~~q~~r) Solar Energy and Renewable Energy Sources.

(~~r~~s) ~~Natural Gas Substitutes for Electricity~~Efficient Electricity Substitutes for Natural Gas.

(~~s~~t) High Thermal Efficient Self Service Cogeneration.

(u) Other.

Each utility's filing must describe how the technical potential study was used to develop the goals filed pursuant to subsection (3) below, including identification of measures that were analyzed but excluded from consideration from the technical potential study and any subsequent economic and achievable potential studies. ~~The Commission on its own motion or petition by a substantially affected person or a utility may initiate a proceeding to review and, if appropriate, modify the goals. All modifications of the approved goals, plans and programs shall only be on a prospective basis.~~

(3) Pursuant to the schedule in an order establishing procedure in the proceeding to establish demand-side management goals, each utility must file its proposed demand-side management goals. ~~In a proceeding to establish or modify goals, each utility shall propose numerical goals for the ten year period and provide ten year projections, based upon the utility's most recent planning process, of the total, cost-effective, winter and summer peak demand (KW) and annual energy (KWH) savings reasonably achievable in the residential and commercial/industrial classes through demand-side management.~~ Each utility must also file demand-side management goals developed under two scenarios: ~~one scenario that includes~~

~~potential demand-side management programs that pass the Participant and Rate Impact Measure Tests,~~ ~~and~~ one scenario that includes potential demand-side management programs that pass the Participant and Total Resource Cost Tests, and one scenario that includes potential demand-side management programs that pass the Participant and the Utility Cost Tests, as these terms are used in Rule 25-17.008, F.A.C. Each utility must provide a transparent estimate of quantified effects for each goal scenario it submits, including total utility system benefits, average bill savings associated with decreased energy use, rate effects, and bill impacts. Each utility's goal projections must be ~~based on~~ informed by the utility's most recent planning process and must ~~shall~~ reflect the annual KW and KWH savings, and program costs, over a ten-year period, from potential demand-side management programs with consideration of overlapping measures, rebound effects, free riders, interactions with building codes and appliance efficiency standards, and the utility's latest monitoring and evaluation of conservation programs and measures. Consideration of overlapping measures, rebound effects, free riders, interactions with building codes and appliance efficiency standards must be based on a transparent, evidence-based methodology that is consistent with industry standard practices, and must be accounted for within the utility's assumptions for naturally occurring energy efficiency adoption outside of utility-administered programs. Freeridership screening shall not be based on simple payback duration. Any program, or its measures, that are designed to meet goals established for Low Income Customers shall be excepted from standard cost-effectiveness requirements and free ridership consideration. ~~Each utility's projections shall be based upon an assessment of, at a minimum, the following market segments and major end-use categories.~~

~~Residential Market Segment:~~

~~(Existing Homes and New Construction should be separately evaluated) Major End-Use Category~~

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~~(a) Building Envelope Efficiencies.~~

~~(b) Cooling and Heating Efficiencies.~~

~~(c) Water Heating Systems.~~

~~(d) Appliance Efficiencies.~~

~~(e) Peakload Shaving.~~

~~(f) Solar Energy and Renewable Energy Sources.~~

~~(g) Renewable/Natural gas substitutes for electricity.~~

~~(h) Other.~~

~~Commercial/Industrial Market Segment:~~

~~(Existing Facilities and New Construction should be separately evaluated) Major End-Use Category~~

~~(i) Building Envelope Efficiencies.~~

~~(j) HVAC Systems.~~

~~(k) Lighting Efficiencies.~~

~~(l) Appliance Efficiencies.~~

~~(m) Power Equipment/Motor Efficiency.~~

~~(n) Peak Load Shaving.~~

~~(o) Water Heating.~~

~~(p) Refrigeration Equipment.~~

~~(q) Freezing Equipment.~~

~~(r) Solar Energy and Renewable Energy Sources.~~

~~(s) Renewable/Natural Gas substitutes for electricity.~~

~~(t) High Thermal Efficient Self Service Cogeneration.~~

~~(u) Other.~~

(4) Within 90 days of a final order establishing or modifying goals, <u>each utility must</u>

file its demand-side management plan that includes the programs to meet the approved goals, along with program administrative standards that include a statement of the policies and procedures detailing the operation and administration of each program. Each utility must consider strategies to mitigate excessive free ridership during program planning ~~or such longer period as approved by the Commission, each utility shall submit for Commission approval a demand side management plan designed to meet the utility's approved goals.~~ The following information must ~~shall~~ be filed ~~submitted~~ for each demand-side management program included in the utility's demand-side management plan for a ten-year projected horizon period:

(a) The program name;

(b) The program start date;

~~(c) A statement of the policies and procedures detailing the operation and administration of the program;~~

(c) ~~(d)~~ The total number of customers, or other appropriate unit of measure, in each customer segment ~~class of customer~~ (i.e. residential, low income, commercial, industrial, etc.) for each calendar year in the planning horizon;

(d) ~~(e)~~ The total number of eligible customers, or other appropriate unit of measure, in each customer segment ~~class of customers~~ (i.e., residential, low income, commercial, industrial, etc.) for each calendar year in the planning horizon;

(e) ~~(f)~~ An estimate of the annual number of customers, or other appropriate unit of measure, in each class of customers projected to participate in the program for each calendar year of the planning horizon, including a description of how the estimate was derived;

(f) ~~(g)~~ The cumulative penetration levels of the program by calendar year calculated as the percentage of projected cumulative participating customers, or appropriate unit of measure, by year to the total customers eligible to participate in the program;

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(g) ~~(h)~~ Estimates on an appropriate unit of measure basis of the per customer and program total annual KWH reduction, winter KW reduction, and summer KW reduction, both at the customer meter and the generation level, attributable to the program. A summary of all assumptions used in the estimates, and a list of measures within the program must ~~will~~ be included;

(h) ~~(i)~~ A methodology for measuring actual KW ~~kilowatt~~ and KWH ~~kilowatt-hour~~ savings achieved from each program, including a description of research design, instrumentation, use of control groups, and other details sufficient to ensure that results are valid;

(i) ~~(j)~~ An estimate of the cost-effectiveness of the program using the cost-effectiveness tests required pursuant to Rule 25-17.008, F.A.C. ~~If the Commission finds that a utility's conservation plan has not met or will not meet its goals, the Commission may require the utility to modify its proposed programs or adopt additional programs and submit its plans for approval.~~

(j) An estimate of the annual amount to be recovered through the energy conservation cost recovery clause for each calendar year in the planning horizon.

(5) The Commission may, on its own motion or on a petition by a substantially affected person or a utility, initiate a proceeding to review and, if appropriate, modify the goals. All modifications of the approved goals, plans, and programs will be on a prospective basis.

(6) ~~(5)~~ Each utility must ~~shall~~ submit an annual report no later than March 1 ~~of each year~~ summarizing its demand-side management plan and the total actual achieved results for its approved demand-side management plan in the preceding calendar year. The report must ~~shall~~ contain~~, at a minimum,~~ a comparison of the achieved KW and KWH reductions with the established Residential and Commercial/Industrial goals, and the following information for

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each approved program:

(a) The name of the utility;

(b) The name of the program and program start date;

(c) The calendar year the report covers;

(d) The ~~T~~total number of customers, or other appropriate unit of measure, by customer class for each calendar year of the planning horizon;

(e) The ~~T~~total number of customers, or other appropriate unit of measure, eligible to participate in the program for each calendar year of the planning horizon;

(f) The ~~T~~total number of customers, or other appropriate unit of measure, projected to participate in the program for each calendar year of the planning horizon;

(g) The potential cumulative penetration level of the program to date calculated as the percentage of projected participating customers to date to the total eligible customers in the class;

(h) The actual number of program participants and the current cumulative number of program participants;

(i) The actual cumulative penetration level of the program calculated as the percentage of actual cumulative participating customers to the number of eligible customers in the class;

(j) A comparison of the actual cumulative penetration level of the program to the potential cumulative penetration level of the program;

(k) A justification for any variance~~s~~ greater ~~larger~~ than 15% from ~~for~~ the annual goals established by the Commission;

(l) Using on-going measurement and evaluation results the annual KWH reduction, the winter KW reduction, and the summer KW reduction, both at the meter and the generation level, per installation and program total, based on the utility's approved measurement/evaluation plan;

CODING: Words underlined are additions; words in ~~struck through~~ type are deletions from existing law.

(m) The per installation cost and the total program cost of the utility;

(n) The net benefits for measures installed during the reporting period, annualized over the life of the program, as calculated by the following formula:

annual benefits = $B_{npv} \times d/[1 - (1+d)^{-n}]$

where

B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period.

D = discount rate (utility's after tax cost of capital).

N = life of the program.

Rulemaking Authority 350.127(2), 366.05(1)~~, 366.82(1)-(4)~~ FS. Law Implemented 366.82~~(1)-(4)~~ FS. History–New 4-30-93, Amended ____________

CODING: Words underlined are additions; words in ~~struck through~~ type are deletions from existing law.

ATTACHMENT B

COST EFFECTIVENESS MANUAL

FOR

DEMAND SIDE MANAGEMENT PROGRAMS

AND

SELF SERVICE WHEELING PROPOSALS

Florida Public Service Commission

Tallahassee, Florida Adopted at June 11, 1991 Agenda Conference Effective: July 17, 1991

Amended on: ________

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PSC FORM CE 3.3S Lost Revenues Allocation

SECTION I. INTRODUCTION

This manual describes the minimum data requirements for the cost-effectiveness analyses used by the Florida Public Service Commission (FPSC) to evaluate utility proposed conservation programs, direct load control programs, and self-service wheeling proposals. The use of this manual is authorized by FPSC Rule 25-17.008, F.A.C.

Chapter 366.82, Florida Statutes, requires the FPSC to review and approve cost effective utility conservation programs. In addition, Chapter 366.051, Florida Statutes, requires public utilities to provide wheeling for self-service customers if such wheeling is not likely to result in higher cost electric service to the utility's general body of retail and wholesale customers or adversely affect the adequacy or reliability of electric service to all customers. FPSC Rule 25-17.008 and this manual were adopted as part of the implementation of these Statutes.

There are four ~~three~~ tests contained in this manual: the Utility Cost Test, Total Resource Test, the Participants Test, and the Rate Impact Test. ~~In evaluating conservation and direct load control programs, the Commission will review the results of all three tests to determine cost-effectiveness.~~ The Rate Impact and Total Resource tests used for self-service wheeling projects are similar to those used for conservation and load control programs. A Participants Test is not specified for self-service wheeling since it is assumed that the proposal is cost-effective to the party requesting the wheeling. In addition to the Rate Impact and Total Resource tests, there are additional considerations listed for self service wheeling projects.

Figure 1 is a pictorial comparison of the three cost effectiveness analyses set forth in this manual. Only very broad categories of costs and benefits are depicted so that the conceptual differences may be seen at a glance. The detailed definitions and applicable formulas are found in the manual proper.

The calculation of demand-reduction benefits for cost-effectiveness analyses performed under FPSC Rule 25-17.008 shall be on a revenue requirements basis for all programs under consideration. However, when the demand reduction achieved by a program cannot be reasonably projected to extend for the life of the avoided generating unit, the demand-reduction benefits shall also be calculated on a value of deferral basis.

The term "avoided generating unit" as used in this manual refers to a utility's proposed generating unit that is avoided in whole or in part by the demand-side management program. Avoided capacity charges shall be used in lieu of avoided generating unit costs, where appropriate, to determine cost effectiveness. Use of avoided capacity charges in lieu of avoided generating unit costs may be particularly appropriate by nongenerating utilities, wholesale power purchasers, or members of a power pool arrangement.

This manual does not address interruptible and curtailable load. However, nothing herein shall preclude the Commission from applying this methodology to such non-firm

load after explicit consideration of the matter by the Commission in a proceeding.

The delineation of the various ways of expressing test results is not meant to discourage the continued development of additional variations for expressing cost effectiveness.

SECTION II. CONSERVATION AND DIRECT LOAD CONTROL

This Section describes the cost effectiveness tests that are required for conservation and direct load control programs. Three separate tests are defined. These are: the Total Resource Test, the Participants Test, and the Rate Impact Test.

The following information is provided for each test: (1) a definition; (2) the components of the benefits; (3) the components of the costs; (4) the formulas to be used to express the results in acceptable ways; and (5) the reporting format.

UTILITY COST TEST

DEFINITION

The Utility Cost Test measures the net costs of a demand-side management program as a resource option based on the costs incurred by the program administrator (including incentive costs) and excluding any net costs incurred by the participant. The benefits are similar to the TRC benefits. Costs are defined more narrowly.

GENERAL DESCRIPTION OF BENEFITS

The benefits for the Utility Cost Test are the avoided supply costs of energy and demand, the reduction in transmission, distribution, generation, and capacity valued at marginal costs for the periods when there is a load reduction. The avoided supply costs should be calculated using net program savings, savings net of changes in energy use that would have happened in the absence of the program. For fuel substitution programs, benefits include the avoided supply costs for the energy-using equipment not chosen by the program participant only in the case of a combination utility where the utility provides both fuels.

GENERAL DESCRIPTION OF COSTS

The costs for the Utility Cost Test are the program costs incurred by the administrator, the incentives paid to the customers, and the increased supply costs for the periods in which load is increased. Administrator program costs include initial and annual costs, such as the cost of utility equipment, operation and maintenance, installation, program administration, and customer dropout and removal of equipment (less salvage value). For fuel substitution programs, costs include the increased supply costs for the energy-using equipment chosen by the program participant only in the case of a combination utility, as above. In this test, revenue shifts are viewed as a transfer payment between participants and all ratepayers. Though a shift in revenue affects rates, it does not affect revenue requirements, which are defined as the difference between the net marginal energy and capacity costs avoided and program costs. Thus, if NPVpa > 0 and NPVRIM < 0, the administrator's overall total costs will decrease, although rates may increase because the sales base over which revenue requirements are spread has decreased.

FORMULAS

The formulas for the net present value, the benefit-cost ratio and levelized cost are presented
below:

NPVpa = Bpa - Cpa

BCRpa = Bpa/Cpa

LCpa = LCpa/IMP

Where:

NPVpa Net present value of Program Administrator costs

BCRpa Benefit-cost ratio of Program Administrator costs

LCpa Levelized cost per unit of Program Administrator cost of the resource

Bpa Benefits of the program

Cpa Costs of the program

LCpc Total Program Administrator costs used for levelizing

$$B_{pa} = \sum_{t=1}^{N} \frac{UAC_t}{(1+d)^{t-1}} + \sum_{t=1}^{N} \frac{UAC_{at}}{(1+d)^{t-1}}$$

$$C_{pa} = \sum_{t=1}^{N} \frac{PRC_t + INC_t + UIC_t}{(1+d)^{t-1}}$$

$$LCpc = \sum_{t=1}^{N} \frac{PRC_t + INC_t}{(1+d)^{t-1}}$$

The first summation in the Bpa equation should be used for conservation and load management programs. For fuel substitution programs, both the first and second summations should be used.

REPORTING FORMAT

The results of this test can be expressed either as a net present value, benefit-cost ratio, or levelized costs. The net present value is the primary test, and the benefit-cost ratio and levelized cost are the secondary tests.

Net present value (NPVpa) is the benefit of the program minus the administrator's costs, discounted over some specified period of time. A net present value above zero indicates that this demand-side program would decrease costs to the administrator and the utility. The benefit-cost ratio (BCRpa) is the ratio of the total discounted benefits of a program to the total discounted costs for a specified time period. A benefit-cost ratio above one indicates that the program would benefit the combined administrator and utility's total cost situation. The levelized cost is a measure of the costs of the program to the administrator in a form that is sometimes used to estimate costs of utility-owned supply additions. It presents the costs of the program to the administrator and the utility on per kilowatt, per kilowatt-hour, or per therm basis levelized over the life of the program.

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