

State of Florida



Public Service Commission

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-M-E-M-O-R-A-N-D-U-M-

DATE: October 24, 2019

TO: Office of Commission Clerk (Teitzman)

FROM: Division of Engineering (Doehling, Ellis, Lewis, Salvador, Thompson, O. Wooten, Wright) *JD*

Division of Accounting and Finance (Higgins) *ALM TTS*

Division of Economics (Barrett, Morgan, Redda, Rogers, Wu) *ALM TTS*

Office of the General Counsel (DuVal, Dziechciarz, King, Murphy, Weisenfeld) *ALM TTS*

Office of Industry Development and Market Analysis (Breman, Roberts) *ALM TTS*

RE: Docket No. 20190015-EG – Commission review of numeric conservation goals (Florida Power & Light Company).

Docket No. 20190016-EG – Commission review of numeric conservation goals (Gulf Power Company).

Docket No. 20190017-EG – Commission review of numeric conservation goals (Florida Public Utilities Company).

Docket No. 20190018-EG – Commission review of numeric conservation goals (Duke Energy Florida, LLC).

Docket No. 20190019-EG – Commission review of numeric conservation goals (Orlando Utilities Commission).

Docket No. 20190020-EG – Commission review of numeric conservation goals (JEA).

Docket No. 20190021-EG – Commission review of numeric conservation goals (Tampa Electric Company).

AGENDA: 11/05/19 – Regular Agenda – Post-Hearing Decision – Participation is Limited to Commissioners and Staff

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Polmann

CRITICAL DATES: Pursuant to Section 366.82(6), F.S., the Commission must review conservation goals at least every five years. New conservation goals must be set by January 1, 2020.

SPECIAL INSTRUCTIONS: None

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List of Acronyms

ACE	Affordable Clean Energy
CC	Combined Cycle
CO ₂	Carbon Dioxide
CT	Combustion Turbine
DEF	Duke Energy Florida, LLC
DR	Demand Response
DSM	Demand-Side Management
DSRE	Demand-Side Renewable Energy
EE	Energy Efficiency
EPA	Environmental Protection Agency
F.A.C.	Florida Administrative Code
FDACS	Florida Department of Agriculture and Consumer Services
FEECA	Florida Energy Efficiency and Conservation Act
FIPUG	Florida Industrial Power Users Group
FPL	Florida Power & Light Company
FPUC	Florida Public Utilities Company
F.S.	Florida Statutes
GHG	Greenhouse gases
Gulf	Gulf Power Company
GW / GWh	Gigawatt / Gigawatt-hour
kW / kWh	Kilowatt / kilowatt-hour
LULAC	Florida League of United Latin American Citizens
MW / MWh	Megawatt / Megawatt-hour
NEL	Net energy for load
Nexant	Nexant, Inc.
OEP	Order Establishing Procedure
OPC	Office of Public Counsel
OUC	Orlando Utilities Commission
PCS	White Springs Agriculture Chemicals, Inc. d/b/a PCS Phosphate-White Springs
PV	Photovoltaic
RIM	Rate Impact Measure
SACE	Southern Alliance for Clean Energy
TECO	Tampa Electric Company
TP	Technical Potential
TRC	Total Resource Cost
Walmart	Walmart Inc.

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Case Background

Sections 366.80 through 366.85, and 403.519, Florida Statutes (F.S.), are known collectively as the Florida Energy Efficiency and Conservation Act (FEECA). The seven electric utilities subject to FEECA, collectively known as the FEECA Utilities, are Florida Power & Light Company (FPL), Duke Energy Florida, LLC (DEF), Tampa Electric Company (TECO), Gulf Power Company (Gulf), Florida Public Utilities Company (FPUC), JEA, and Orlando Utilities Commission (OUC). Pursuant to Section 366.82(6), F.S., the Commission must review the conservation goals of each utility subject to FEECA at least every five years. Conservation goals were last established for the FEECA Utilities by Order No. PSC-14-0696-FOF-EU (2014 Goalsetting Order), issued December 16, 2014.¹ Therefore, new goals must be established by January 2020.

Informal meetings were held on June 20 and October 24, 2018, with the FEECA Utilities and interested parties to discuss the current numeric goals proceeding. In an effort to streamline and reduce the need for discovery, staff recommended and the parties agreed to perform a new technical potential study. Further, parties discussed minimum testimony requirements and what level of analysis could be reasonably conducted by the parties within the timeframe of the dockets. On January 15, 2019, seven dockets were established to set numeric conservation goals for each of the FEECA Utilities, the sixth such proceeding.

By Order No. PSC-2019-0062-PCO-EG (Order Establishing Procedure or OEP), issued February 18, 2019, the dockets for each of the FEECA Utilities were consolidated for purposes of hearing and controlling dates, and a tentative list of issues were established. The OEP also established minimum testimony requirements for the FEECA Utilities, in order to further streamline the process. For example, the FEECA Utilities were required to provide a base case scenario that included the effect of free-ridership and did not include costs associated with the regulation of carbon dioxide (CO₂) emissions.²

The Commission acknowledged the intervention of the Office of Public Counsel (OPC) on February 26, 2019.³ The Southern Alliance for Clean Energy (SACE) was granted leave to intervene on April 17, 2019.⁴ The Florida Department of Agriculture and Consumer Services (FDACS) was granted leave to intervene on April 23, 2019.⁵ The Florida Industrial Power Users Group (FIPUG) was granted leave to intervene on May 22, 2019.⁶ White Springs Agriculture Chemicals, Inc. d/b/a PCS Phosphate – White Springs (PCS) was granted leave to intervene on

¹Order No. PSC-14-0696-FOF-EU, issued December 16, 2014, in Docket No. 20130199-EI, *In re: Commission review of numeric conservation goals (Florida Power & Light Company)*, Docket No. 20130200-EI, *In re: Commission review of numeric conservation goals (Duke Energy Florida, Inc.)*, Docket No. 20130201-EI, *In re: Commission review of numeric conservation goals (Tampa Electric Company)*, Docket No. 20130202-EI, *In re: Commission review of numeric conservation goals (Gulf Power Company)*, Docket No. 20130203-EM, *In re: Commission review of numeric conservation goals (JEA)*, Docket No. 20130204-EM, *In re: Commission review of numeric conservation goals (Orlando Utilities Commission)*, and Docket No. 20130205-EI, *In re: Commission review of numeric conservation goals (Florida Public Utilities Company)*.

² Free-ridership and CO₂ regulation costs are discussed in Issues 7 and 5, respectively.

³Order No. PSC-2019-0080-PCO-EG, issued February 26, 2019 (OPC).

⁴Order No. PSC-2019-0137-PCO-EG, issued April 17, 2019 (SACE).

⁵Order No. PSC-2019-0146-PCO-EG, issued April 23, 2019 (FDACS).

⁶Order No. PSC-2019-0182-PCO-EG, issued May 22, 2019 (FIPUG).

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May 23, 2019.⁷ Walmart Inc. (Walmart) was granted leave to intervene on May 23, 2019.⁸ The Florida League of United Latin American Citizens (LULAC) was granted leave to intervene on July 25, 2019.⁹

The Commission held an evidentiary hearing on August 12 and 13, 2019. This recommendation addresses each FEECA Utility's petition for approval of its numeric conservation goals. The Commission has jurisdiction over this matter pursuant to Sections 366.80 through 366.82, F.S.

⁷Order No. PSC-2019-0185-PCO-EG, issued May 23, 2019 (PCS).

⁸Order No. PSC-2019-0186-PCO-EG, issued May 23, 2019 (Walmart).

⁹Order No. PSC-2019-0293-PCO-EG, issued July 25, 2019 (LULAC).

Executive Summary

Promoting cost-effective energy efficiency is as relevant today as in 1980, when FEECA was enacted. FEECA emphasizes reducing the growth rates of weather-sensitive peak demand, reducing and controlling the growth rates of electricity consumption, reducing the consumption of expensive resources such as petroleum fuels, and encouraging demand-side renewable energy resources (DSRE). Section 366.82(2), F.S., requires the Commission to set appropriate goals for each of the FEECA Utilities. Section 366.82(3), F.S., and the Commission's implementing rule, Rule 25-17.0021, Florida Administrative Code (F.A.C.), outline the multiple factors the Commission must consider when setting appropriate conservation goals. As neither the Statute nor Rule has been substantially modified in the past ten years, the issues in the instant proceeding are significantly similar to the issues from the 2009 and 2014 Goalsetting Proceedings.

As the name implies, demand-side management (DSM) is a demand-side or customer-side resource. DSM is the result of customers adopting measures or behaviors to modify their consumption of electricity. As a baseline, all customers are subject to mandatory Florida Building Codes and federal appliance efficiency standards (Codes and Standards). Also, consumer education is key to making wise energy choices. Customer choice plays an essential role in reducing the growth rates of electric demand and energy in Florida. Smaller, more efficient homes, energy-efficient appliances, and behavioral changes are areas in which customers may actively be involved with electric energy efficiency. Energy education can come from many sources, including the Commission and the FEECA Utilities, and empowers customers to take voluntary actions that have a direct impact on their monthly bills. As the mandatory energy efficiency baseline determined by Codes and Standards has increased and education has encouraged further voluntary energy efficiency, customers have continued to reduce their average per capita energy consumption over the last decade for all customer classes.

Utilities design DSM programs to encourage energy efficiency beyond current Codes and Standards. The resulting level of realized savings is uncertain because it relies on voluntary participation. Utility DSM programs are an alternative to investments in infrastructure for generation, transmission, and/or distribution. As such, DSM measures (i.e. individual devices) are analyzed like other resource options to ensure cost-effectiveness for all customers. Factors which can impact the cost-effectiveness of DSM measures include customer usage, fuel forecasts, emissions forecasts, and the cost of planned generation additions. Many of these factors are beyond the utilities' control and the uncontested evidence in the record supports a continued decrease in the cost-effectiveness of utility-sponsored DSM measures. For example, the average fuel price forecast for natural gas is approximately half the value assumed in the 2014 Goalsetting Proceeding. In other words, all else being equal, incremental utility DSM is projected to be less cost-effective now than it was five years ago. However, overall energy efficiency is improving as Codes and Standards and customers' voluntary adoption of measures based on education have increased.

Using a similar methodology as the 2009 and 2014 Goalsetting Proceedings, the FEECA Utilities collected data, performed a detailed technical potential analysis, and then conducted a series of cost-effectiveness analyses. Each DSM measure was evaluated with both the Rate Impact

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Measure (RIM) Test and the Total Resource Cost (TRC) Test alongside the Participants Test.¹⁰ This process resulted in overall cumulative proposed goals for the FEECA Utilities that are lower than those approved in the 2014 Goalsetting Order. Unlike the earlier Goalsetting Proceedings, the RIM cost-effectiveness analysis, based on current projections, results in goals of zero demand and energy in all categories for FPUC, JEA, and OUC, and zero residential demand and energy for Gulf. While the Commission has previously approved goals of zero based on a RIM Test analysis for the municipal utilities, this would be the first time it would establish zero goals for investor-owned utilities.¹¹

FEECA requires the Commission to adopt cost-effective and appropriate goals based upon a detailed analysis of current DSM measure savings and utility avoided costs. As discussed above, many of the factors that impact the cost-effectiveness of incremental utility DSM are outside of the FEECA Utilities' control. Based on the record, staff recommends the continued use of the RIM and Participants Tests to provide an appropriate amount of DSM that is cost effective to the general body of ratepayers. Using the RIM and Participants Tests addresses concerns regarding subsidies between those who can participate in DSM measures and those who cannot, such as renters, and ensures cost-effectiveness for all customers. While this recommendation results in zero goals for some investor-owned utilities for the first time, it is based on a methodology and technical analysis that is valid and consistent with legal requirements, and therefore is appropriate. In addition, it has been vetted several times by the Commission.

Pursuant to Section 366.82(7), F.S., and Rule 25-17.0021(4), F.A.C., each of the FEECA Utilities must file a DSM Plan to meet the goals established by this proceeding. In that future Commission proceeding for approval of their DSM Plans, the FEECA Utilities will offer specific cost-effectiveness analyses on their DSM program offerings. While the DSM goals are set based on a calculation of the sum of standalone measures, utility DSM programs may come in a variety of forms and combine measures that may not individually be cost-effective. As the DSM Plan will be evaluated on a program basis instead of an individual measure basis, the cost-effectiveness analysis may change to allow some programs to pass the RIM Test and produce additional savings for the general body of ratepayers. Staff recommends that the Commission encourage the FEECA Utilities to be flexible with their program design, potentially bundling cost-effective measures with other measures, as well as other techniques which may improve the energy efficiency savings beyond the individual measure evaluations in the current Goalsetting Proceeding. Staff recommends that the Commission should further encourage the FEECA Utilities to address all market segments to allow for the maximum opportunity for customer participation. For those programs that do not pass the RIM Test, staff recommends that the investor-owned utilities demonstrate why such programs are in the public interest in order to seek cost recovery. Doing this will give the Commission an opportunity to consider cost-effectiveness and the resulting rate impact of these programs and make the ultimate determination whether they should be eligible for recovery through the Energy Conservation

¹⁰ The RIM, TRC, and Participants Tests are defined by Rule 25-17.008, F.A.C., and are discussed in Issues 2 and 3. The Participants Test determines if a DSM measure is economic for an individual customer. The RIM and TRC Tests determine if a DSM measure is economic for the general body of ratepayers.

¹¹ Order No. PSC-04-0768-PAA-EG, issued August 9, 2004, in Docket No. 20040030-EG, *In re: Petition for approval of numeric conservation goals by JEA*, and Order No. PSC-04-0767-PAA-EG, issued August 9, 2004, in Docket No. 20040035-EG, *In re: Petition for approval of numeric conservation goals by Orlando Utilities Commission*.

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Cost Recovery Clause. Further, although Section 366.82(8), F.S., authorizes financial rewards, staff recommends that the investor-owned utilities receive no reward for meeting goals based on the RIM and Participants Tests, especially those utilities with zero goals.

All the FEECA Utilities, including those with zero goals, will continue to offer energy audits as required by FEECA, which will help educate customers about voluntary measures and behavioral changes they can make to reduce their energy consumption. Staff recommends that the Commission encourage the FEECA Utilities to include in their DSM Plans programs to educate customers on implementing energy efficiency measures with a two-year or shorter payback, especially those measures that may be applicable to renters and low-income households.

Section 366.82(2), F.S., requires the Commission to establish appropriate goals for DSRE systems. During the 2009 Goalsetting Proceeding, none of the systems were found to be cost-effective. However, the Commission directed the IOUs to develop pilot projects for DSRE systems. In the 2014 Goalsetting Order, the Commission found that the solar pilot programs “are not cost-effective and experience gained since the last goals proceeding indicates that consumers have continued to install systems without any rebates.”

The record in the current proceeding also indicates that DRSE systems are not cost-effective using either the RIM or the TRC test. However, the installation of DSRE systems continues to grow without any utility incentives. Such growth indicates that the Commission’s net metering rule is an appropriate mechanism to encourage the development of these systems.

Discussion of Issues

Issue 1: Are the Company's proposed goals based on an adequate assessment of the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems, pursuant to Section 366.82(3), F.S.?

Recommendation: Yes. The FEECA Utilities retained the consulting firm Nexant, Inc. (Nexant) to independently analyze each utility's energy and demand savings technical potential (TP). Nexant employed the same methodology in the evaluation of each TP analysis and collaborated with the FEECA Utilities and SACE to develop a robust list of DSM measures for inclusion. Nexant's methodology adequately assesses the full amount of energy and demand savings technically feasible from implementation of those DSM measures considered. (Wright)

Position of the Parties:

FPL: Yes. An outside consultant, Nexant, performed the Technical Potential Study for each of the FEECA Utilities. The analysis required extensive iterative work and continuous collaboration to ensure that it was comprehensive and resulted in a thorough and wide-ranging reassessment of conservation and efficiency measures.

GULF: Yes. Through the robust and thorough Market Potential Study performed by Nexant, Inc., Gulf has performed an adequate assessment of the full technical potential of all available demand-side conservation and energy measures, including demand-side renewables. An assessment of supply-side conservation and efficiency measures is outside the scope of this docket.

FPUC: Yes. The Company's proposed goals for the next planning period are based upon the Company's most recent planning process and reflect a full and complete analysis of a wide range of available DSM measures and supply-side conservation and efficiency measures consistent with Section 366.82, Florida Statutes. The technical potential study performed by Nexant provided an adequate assessment of the full technical potential of these measures, including assessment of demand-side renewable energy systems.

DEF: Yes, the technical potential, that is the basis for the proposed goals, includes an evaluation of all potential demand-side conservation and efficiency measures and demand-side renewable energy systems. Demand-side renewable energy systems were evaluated based on the same cost effectiveness standards that were used to evaluate other energy efficiency measures. No renewable measures were found to be cost-effective and therefore, none are included in the proposed goals.

- OUC:** Yes. OUC's proposed goals are based on a sound assessment of the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy resources.
- JEA:** Yes. JEA's proposed goals are based on an adequate assessment of the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. JEA engaged Nexant to evaluate DSM measures in JEA's service territory. Nexant analyzed the technical potential for energy efficiency, demand response, and demand side renewable energy across customer classes for the 2020-2029 time period. For JEA, Nexant also analyzed economic potential and achievable potential.
- TECO:** Yes. Tampa Electric worked in concert with the other FEECA utilities and Nexant to develop a new Technical Potential Study. This new Technical Potential Study for Tampa Electric was based upon the full load forecast for the company which ensures the proposed goals are based on an adequate assessment of the full technical potential of all available demand-side and efficiency measures, including demand-side renewable energy systems, pursuant to Section 366.82(3), F.S.
- OPC:** It appears that Nexant performed an adequate assessment of the full technical potential of all available demand-side conservation and efficiency measures for all FEECA utilities. However, the double application of naturally occurring efficiency in the technical potential stage and free-ridership screen in the economic potential stage of the analysis of FEECA inappropriately reduce the potential DSM goals to be established by the Commission.
- FDACS:** The goals proposed by the FEECA Utilities appear to be an adequate assessment of the full technical potential of all *available and cost-effective* demand-side and supply-side conservation and efficiency measures.
- SACE & LULAC:** No. Among other things, the utilities ignore the possibility of early retirement of measures and overinflate the labor costs to install certain measures, increasing the applicable costs.
- PCS:** No position.
- WALMART:** No position.
- FIPUG:** No position at this time.

Parties' Arguments

The FEECA Utilities assert that they jointly engaged Nexant to conduct individual TP analyses for each utility in a manner consistent with industry standards, the requirements of FEECA, and previous TP studies used for Commission FEECA goalsetting purposes. (FPL BR 7-8; DEF BR 5; TECO BR 3; Gulf BR 2-3; FPUC BR 5, 9; JEA BR 2-3; OUC BR 19) The FEECA Utilities argue that Nexant's TP analysis evaluated an expansive list of DSM measures resulting from collaboration between the FEECA Utilities, Nexant, and SACE. (FPL BR 8; DEF BR 5; TECO BR 3-4; Gulf BR 9-10; FPUC BR 6; JEA BR 4; OUC BR 3) The FEECA Utilities and OPC assert that Nexant performed an adequate assessment of the full technical potential. (FPL BR 8-9; DEF BR 5; TECO BR 3-4; Gulf BR 2-3; FPUC BR 8; JEA BR 3; OUC BR 17; OPC BR 4)

The FEECA Utilities assert that there has been a significant increase in mandated energy efficiency as a result of changes to Codes and Standards which has dramatically reduced the potential savings achievable through DSM programs. (FPL BR 3, 25; DEF BR 7; TECO BR 8; Gulf BR 2; FPUC BR 13; JEA BR 4; OUC BR 19) FDACS argues that Codes and Standards have reduced the level of appropriate conservation goals and the need for utility-sponsored DSM programs. (FDACS BR 19)

SACE & LULAC argue that Nexant's TP study underestimates the true TP for demand-side energy conservation. (SACE & LULAC BR 24) SACE & LULAC and OPC assert that Nexant's TP analysis inappropriately accounted for customers' continued adoption of DSM measures in the absence of utility-sponsored programs, so called natural DSM, by both removing natural DSM from the utility baseline forecasts and applying a free-ridership screen in the economic potential stage. (SACE & LULAC BR 18; OPC BR 4) SACE & LULAC also argue that Nexant failed to consider early retirement of measures. (SACE & LULAC BR 24) PCS, Walmart, and FIPUG took no position on this issue.

Analysis

Collaboration and the Technical Potential Process

Section 366.82(3), F.S., states in relevant part that in developing DSM goals, the Commission "shall evaluate the full technical potential of all available demand-side and supply-side conservation and efficiency measures . . ." Consistent with the Order Establishing Procedure, the FEECA Utilities have addressed their continuing efforts to incorporate supply-side conservation and efficiency measures into their resource planning. FPL witness Koch, DEF witness Cross, and OUC witness Noonan have asserted that their respective utilities continually evaluate the potential for supply-side measures to improve the efficiencies of their generation, transmission, and distribution systems as part of ongoing planning processes. (TR 81, 593-594, 702) JEA witness Wucker stated that JEA continually monitors the operation of its generating units to utilize the system in the most efficient manner. (TR 758) TECO witness Roche and Gulf witness Floyd noted that their utilities also routinely consider supply-side energy efficiency measures in their planning processes, the efforts of which are communicated to the Commission in the filing of their annual Ten-Year Site Plans. (TR 450, 880) FPL witness Koch, DEF witness Cross, and TECO witness Roche each noted that the Commission also evaluates whether supply-side efficiency potentials exist on a utility's system at the time a utility petitions the Commission for a

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determination of need for new generation. (TR 81, 593-594, 880) As such, the instant dockets focus on demand-side efficiency measures.

To facilitate the evaluation of demand-side efficiency measures, the FEECA Utilities began a collaborative process in early 2016 to support the development of a new TP study. (TR 840) In July 2017, the FEECA Utilities initiated a request for proposals (RFP) to seek vendors capable of performing such a study. (TR 840) From August 2017 through September 2017, the FEECA Utilities screened and evaluated responses to the RFP, and, on October 2, 2017, selected Nexant to perform the TP study. (TR 63, 320, 755, 840-841)

FEECA Utilities witness Herndon, Vice President in the Strategic and Planning Practice within the Utility Services business unit of Nexant, defined and explained the purpose of a TP study in his testimony:

Its purpose is to identify the theoretical limit to reducing summer and winter electric peak demand and energy. The TP assumes every identified potential end-use measure is installed everywhere it is “technically” feasible to do so from an engineering standpoint regardless of cost, customer acceptance, or any other real world constraints (such as product availability, contractor/vendor capacity, cost effectiveness, normal equipment replacement rates, or customer preferences). Therefore, the TP does not reflect the MW and GWh savings that are achievable through real-world voluntary utility programs, but rather it establishes the theoretical upper bound for DSM potential.
(TR 325)

Witness Herndon stated that Nexant was retained by the FEECA Utilities to independently analyze each utility’s TP and produce seven separate reports, one for each FEECA Utility. (TR 320-321) Witness Herndon stated that the assessment of TP was the same for all seven electric FEECA Utilities. (TR 320) Witness Herndon outlined the major analytical steps leading up to the TP as follows: (1) utility load forecast disaggregation, (2) measure development, and (3) TP analysis. (TR 321-322) Discussion of Nexant’s utility load forecast disaggregation can be found in Issue 8.

Measure Development

Witness Herndon stated that the starting point for measure identification in the 2019 TP analysis was the list of measures used in the 2014 Florida TP Studies. (TR 323) He explained that the FEECA Utilities reviewed this initial list and added and revised proposed measures before providing the combined list to Nexant. (TR 323; EXH 26-32) Nexant then reviewed the list against its DSM measure library, collaborating with the FEECA Utilities to define the parameters for measure inclusion. (TR 323) Witness Herndon described these parameters in his testimony:

Through discussion with the FEECA Utilities, the parameters for measures to be considered were established, and included the following: measures were limited to those that are currently commercially available in Florida; behavioral measures without accompanying physical changes or utility-provided products and tools

were excluded; and fuel-switching measures, other than in the context of DSRE measures, were excluded.
(TR 323)

Witness Herndon contended that, through an iterative process with the FEECA Utilities, Nexant developed a proposed measure list at the appropriate granularity to apply to the disaggregated utility load forecasts. (TR 323) He also stated that this proposed measure list was shared with SACE, whose input was gathered and considered by Nexant and the FEECA Utilities. (TR 323; EXH 26-32) The results of this consideration were incorporated into a final list of DSM measures for inclusion in the 2019 TP analysis. (EXH 26-32)

The final DSM measure list used in the 2019 TP analysis consists of 278 unique measures, including 248 energy efficiency (EE) measures, 21 demand response (DR) measures, and 9 DSRE measures, that address end-uses at residential, commercial, and industrial facilities in the FEECA Utilities' service territories. (TR 324; EXH 33) When compared to the list of measures used in the 2014 Florida TP Studies, the final DSM measure list used in the 2019 TP analysis includes 107 additional measures and excludes 12 measures. (TR 324; EXH 34) All 12 excluded measures were EE measures, with no DR or DSRE measures being excluded. (EXH 34) Six measures were excluded because they were behavioral measures, two measures because more efficient measures were included in the list, and four measures because changes in Codes and Standards mandate higher energy efficiency minimums than the measures themselves. (TR 71; EXH 167)

Witness Herndon stated that, following the selection of measures to be included in the TP analysis, the next step was to develop individual measure specifications, including quantified demand and energy savings and equipment useful life. (TR 325) These measure specifications were then applied to the disaggregated utility load forecasts to estimate TP in each FEECA Utility's service territory. (TR 325)

Based on the above analysis, staff recommends that the methodology employed by the FEECA Utilities and Nexant in developing the list of DSM measures evaluated in the 2019 TP analysis is adequate for goalsetting purposes.

Energy and Demand Savings Technical Potential

Nexant employed different methodologies to quantify the EE, DR, and DSRE TPs in its analysis. (TR 326-332) The EE TP was developed using Nexant's Microsoft Excel-based EE modeling tool, TEA-POT. (EXH 26-32) Witness Herndon contended that this model projects measure savings as a percentage of the baseline energy consumption when applied to a utility's disaggregated load forecast. The model employs saturation share factors and measure savings ranking to account for measure interaction and overlap, respectively. (TR 327, 329; EXH 169, 172) In comparing Nexant's use of the TEA-POT model to ITRON's 2009 TP study, witness Herndon stated that both approaches appear generally similar and consistent, with one difference being that ITRON's study applied measure savings to individual units of consumption. (EXH 172) Witness Herndon stated that Nexant does not believe this different approach would materially affect the outcome of their analysis. (EXH 172)

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Witness Herndon stated that the DR TP was developed by focusing on “the end-uses available for curtailment during peak periods and the magnitude of load within each of these end-uses that is beyond existing DR enrollment for each utility.” (TR 328) Witness Herndon outlined the end-uses examined in Nexant’s analysis:

Nexant’s approach assumed that large C&I customers will forego virtually all electric demand temporarily if the financial incentive is large enough. For residential and small C&I customers, TP for DR is limited by the loads that can be controlled remotely at scale. For this study, it was assumed that summer DR capacity for residential customers was comprised of air conditioning (A/C), pool pumps and water heaters. For small C&I customers, summer capacity was based on A/C load. For winter capacity, residential DR capacity was based on electric heating loads, pool pumps, and water heaters. For small C&I customers, winter capacity was based on heating load.

(TR 329)

The result of Nexant’s EE and DR TP analysis for each FEECA Utility can be found in Table 1-1. For most utilities, summer and winter demand TP has increased from prior years. Staff believes the additional TP captured by the expanded measures list used in Nexant’s analysis most likely contributes to the increase. Annual energy TP has decreased for most utilities, reflecting the impacts of improvements in Codes and Standards. (TR 81; EXH 176)

**Table 1-1
Technical Potential Changes (Energy Efficiency and Demand Response)**

Utility	Summer Demand (MW)			Winter Demand (MW)			Annual Energy (GWh)		
	2014	2019	Diff.	2014	2019	Diff.	2014	2019	Diff.
FPL	9,215	16,298	7,083	6,802	13,314	6,512	31,468	26,747	(4,721)
DEF	3,657	6,246	2,589	2,468	6,294	3,826	12,073	9,431	(2,642)
TECO	1,809	3,537	1,728	1,251	2,901	1,650	5,961	4,483	(1,478)
Gulf	1,005	1,580	575	695	1,425	730	3,253	2,569	(684)
FPUC*	266	88	(178)	247	86	(161)	123	137	14
JEA	1,349	1,740	391	1,072	2,006	934	3,136	3,005	(132)
OUC*	419	479	60	273	192	(81)	1,808	1,754	(54)

Source: EXH 100, 126, 153, 167, 204, 228, 240

*FPUC and OUC provided 2009 TP values because both utilities were excused from 2014 filing requirements.

The result of Nexant’s DSRE TP analysis can be found in Table 1-2. Total summer and winter demand savings TP from DSRE measures has decreased from prior years, while annual energy savings potential has increased. Summer demand and annual energy savings TP from commercial and industrial DSRE measures have increased. (EXH 167)

Table 1-2
Technical Potential Changes (Demand-side Renewable Energy)

Utility	Summer Demand (MW)			Winter Demand (MW)			Annual Energy (GWh)		
	2014	2019	Diff.	2014	2019	Diff.	2014	2019	Diff.
FPL	14,055	3,992	(10,063)	2,274	9,400	7,126	38,136	48,274	10,138
DEF	5,054	3,061	(1,993)	827	242	(585)	13,736	21,690	7,954
TECO	2,931	2,215	(716)	448	619	171	7,899	12,266	4,367
Gulf*	89	363	274	326	147	(179)	2,072	2,195	123
FPUC**	117	78	(39)	110	0	(110)	659	477	(182)
JEA	1,526	482	(1,044)	246	0	(246)	4,142	2,965	(1,177)

Source: EXH 100, 126, 153, 167, 228, 240

*All responses, excluding Gulf's response, are for solar photovoltaic (PV) systems only.

**FPUC figures are from 2009, as the Utility was excused from the 2014 Goalsetting Proceeding.

***OUC responses are included in Table 1-1.

Response to Parties

SACE & LULAC's and OPC's arguments asserting Nexant's TP analysis inappropriately accounted for natural DSM by removing natural DSM from utility baseline forecasts are addressed in Issue 8. Their arguments concerning Nexant's TP analysis applying a free-ridership screen in the economic potential stage of the analysis are addressed in Issue 7.

SACE witness Grevatt argued that Nexant's TP analysis unreasonably limited estimates of savings potentials to a measure's natural turnover rate, as opposed to considering early retirement of measures. (TR 956) Witness Grevatt stated that there are some measures for which early retirement can be cost-effective and from which substantial savings can be realized. However, he acknowledged that it is usually true that the costs of efficiency savings are lower at the time of natural turnover of a measure than through early retirement. (TR 956) FEECA Utilities witness Herndon argued that early retirement measures are frequently not cost-effective. (TR 1112) In addition, witness Herndon stated that the effect of adding early retirement as a separate class of customers in the study would be negligible. (TR 1112)

The introduction of an additional population of "early retirement" customers would primarily create a shift between years (i.e., if a customer would have been in the natural replacement population in Year 2 but was included in an assumed early retirement population in Year 1, that customer would shift from Year 2 to Year 1), but the long-term 10-year potential would remain essentially the same because that customer would have been included in the study in either case. (TR 1110)

Staff agrees with witness Herndon, and recommends that the inclusion of early retirement measures, while potentially increasing the short-term TP of energy and demand measures, would not materially impact the long-term TP determined from Nexant's TP analysis. As such, staff recommends that Nexant's treatment of measure retirements in its TP analysis is appropriate for goalsetting purposes.

Conclusion

The FEECA Utilities retained the consulting firm Nexant to independently analyze each utility's energy and demand savings technical potential. Nexant employed the same methodology in the evaluation of each TP analysis and collaborated with the FEECA Utilities and SACE to develop a robust list of DSM measures for inclusion. Nexant's methodology adequately assesses the full amount of energy and demand savings technically feasible from implementation of those DSM measures considered.

Issue 2: Do the Company's proposed goals adequately reflect the costs and benefits to customers participating in the measure, pursuant to Section 366.82(3)(a), F.S.?

Recommendation: Yes. The FEECA Utilities properly considered the costs and benefits to customers participating in the measures included in their goals by utilizing the Participants Test, pursuant to Section 366.82(3)(a), F.S. (Morgan)

Position of the Parties:

- FPL:** Yes. In developing its proposed DSM Goals, FPL used the Participant screening test to analyze the potential cost-effectiveness of DSM measures. The Participant screening test fully accounts for all potential benefits and costs that are received and/or incurred by a potential participant in a DSM measure. Only those measures which pass the Participant screening test have been included in FPL's proposed Goals.
- GULF:** Yes. The measures included in the development of Gulf's goals adequately reflect the costs and benefits to participating customers. This was accomplished by performing the Participant's Test and requiring that all measures included in the goals pass this test.
- FPUC:** Yes. The Company's proposed goals adequately reflect the costs and benefits to participating customers as reflected by the outcome of Nexant's cost-effectiveness evaluation, which included an analysis of the costs and benefits to FPUC's customers through the application of the Participants test.
- DEF:** Yes. The proposed goals are based on measures that pass the Participant Cost Test. This test compares the incremental cost to participants to the participant benefits (bill savings). This ensures that the measures provide net benefits to participants.
- OUC:** Yes. OUC's proposed goals are based on a full consideration of Nexant's Participant Test analyses, and those analyses adequately and reasonably reflect the costs and benefits to customers who might participate in the DSM measures and programs studied. Thus, OUC's proposed goals adequately reflect the costs and benefits to participating customers.
- JEA:** Yes. JEA's proposed goals adequately reflect the costs and benefits to customers participating in the measure. JEA's proposed goals are based on forecasts of achievable potential driven primarily by measure-level assessments of cost-effectiveness to customers. Specifically, customer cost-effectiveness is assessed using the Participant Test, where benefits are calculated based on customer bill savings and costs are based on participant costs of acquiring and installing the energy efficiency measure (net of utility program incentives).

TECO: Yes. Tampa Electric utilized the Participant Cost Test (“PCT”) as delineated in Rule 25-17.008, F.A.C., to adequately reflect the costs and benefits to customers participating in a DSM measure thereby adhering to the requirement of Section 366.82(3)(a), F.S.

OPC: No. The companies’ proposed goals do not fully and adequately reflect costs and benefits to participating customers since no TRC measures have been used to establish DSM goals. The FEECA utilities’ sole reliance on RIM to establish the DSM goals have significantly reduced if not eliminated establishing any numeric DSM goals over prior years. Therefore, the results of the TRC test along with the RIM test and low-income programs should be considered to establish the current DSM goals.

FDACS: The goals proposed by the FEECA Utilities appear to adequately reflect the costs and benefits to customers participating in the measures pursuant to Section 366.82(3)(a), F.S. The Commission should continue to balance the goal of energy efficiency and conservation with the impact of the costs and benefits of these measures and programs on rates and overall bills of all of the FEECA Utilities’ rate payers.

SACE & LULAC: No. Among other things, by placing the economic potential of many measures at zero even when they are cost-effective, the utilities underestimate the benefits of many measures. By narrowly focusing on the Lost Sales test and inflating certain labor and administrative costs, the utilities do not properly consider the benefits to the ratepayers as a whole and especially low income communities.

PCS: Yes.

WALMART: No position.

FIPUG: In answering this question, the Commission must balance the goal of conservation with the impact of the cost of conservation programs on rates. The Commission must not overlook rate impact when conservation goals and programs are evaluated.

Parties’ Arguments

The FEECA Utilities agree that the Participants Test is the appropriate test to reflect the costs and benefits to participating customers, and that the Test was applied correctly in the calculation of the DSM goals. (FPL BR 9; DEF BR 13; TECO BR 16; Gulf BR 11; OUC BR 20; JEA BR 6) FDACS also agreed that the costs and benefits to participants were adequately reflected in the goals. (FDACS BR 8) FIPUG and PCS did not provide arguments directly related to the Participants Test.

OPC and SACE & LULAC stated that costs and benefits to participants were not adequately reflected in the goals. OPC argued that the results of the TRC Test, along with RIM and low-income programs, should be considered to establish the DSM goals. (OPC BR 4) SACE & LULAC asserted that benefits to many customers were understated due to a narrow focus on the RIM Test¹² and the inflation of certain labor and administrative costs. (SACE & LULAC BR 8)

Analysis

Section 366.82(3)(a), F.S., requires that the costs and benefits to customers participating in the measure are considered in the establishment of DSM goals. According to FPL witness Whitley, the intent of the Participants Test is to determine if it makes economic sense for an individual customer to participate in a specific DSM measure. (TR 159) The witness further states that the Participants Test compares the incremental costs associated with a DSM measure against the benefits associated with that DSM measure. (TR 161) The Participants Test was applied to all of the measures included in the energy efficiency and demand savings goals proposed by the FEECA Utilities as part of the Economic Potential analysis. (EXH 6, 28, 29, 30, 31, 32, 63)

The benefits to participants included in the Participants Test are bill savings, incentives received, and tax credits received. The Participants Test weighs those benefits against participant incremental costs, including capital and O&M costs. (EXH 7) Generally, bill savings are calculated by multiplying each measure's energy savings by the applicable electric rate; incentives were set at the maximum level to keep the measure passing RIM or to bring the simple payback to two years, whichever amount is lower. (EXH 101, BSP 69, TR 168-169; EXH 124, BSP 1438; EXH 151, BSP 2104; EXH 168, BSP 2353; EXH 194, BSP 2658; EXH 218, BSP 3014; EXH 241, BSP 3278)

Staff observes that no party took issue with the use of the Participants Test as an input in establishing goals. Staff further notes that Issue 2 is limited to the scope of Section 366.82(3)(a), F.S., which requires consideration of the costs and benefits to customers participating in the measures. The Commission found that the Participants Test met this statutory requirement in Order No. PSC-09-0855-FOF-EG (2009 Goalsetting Order), and the following was restated in the 2014 Goalsetting Order:

We find that the Participants Test, as used by the utilities in this proceeding, satisfies the requirements of Section 366.82(3)(a), F.S. As described in Rule 25-17.008, F.A.C., the Participants Test measures the impact of the program on the participating customers. Based on the evidence in the record, as well as existing Commission Rules, we find that the Participants Test must be considered when establishing conservation goals in order to satisfy Section 366.82(3)(a), F.S. (EXH 111, BSP 621)

In addition, staff notes that the Participants Test is an additional test, rather than an alternative, to the RIM or TRC tests when determining cost-effectiveness. The RIM and TRC tests do not address the statutory requirements of Section 366.82(3)(a), F.S., and are discussed in Issue 3.

¹²In its brief, SACE & LULAC referred to the RIM Test as the Lost Sales test.

Conclusion

The FEECA Utilities properly considered the costs and benefits to customers participating in the measures included in their goals by utilizing the Participants Test, pursuant to Section 366.82(3)(a), F.S.

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

Recommendation: Yes. Staff recommends that consideration of the RIM and TRC Tests is necessary to fulfill the requirements of Section 366.82(3)(b), F.S., since neither Test includes both utility incentives and participant contributions. Furthermore, consideration of the RIM and TRC Tests is consistent with the 2009 and 2014 Goalsetting Orders. (Wooten)

Position of the Parties:

FPL: Yes. FPL's proposed goals reflect the RIM 352 MW Summer MW portfolio as measures that passed the RIM screening test and the Participants test, accounting for all of the benefits and costs by all of FPL's customers, both participants and nonparticipants alike. The costs and benefits to the general body of customers are also assessed through FPL's subsequent Integrated Resource Planning ("IRP") work, resulting in the lowest levelized system average electric rate for all customers.

GULF: Yes. By passing the RIM test, Gulf's proposed goals reflect the costs (including incentives) and benefits that minimize overall rate impacts for the general body of customers, whether or not they participate in one of the resulting conservation programs. In addition, by only including measures that also pass the Participant's Test, these proposed goals adequately consider participant contributions as a component of overall customer impact.

FPUC: Yes. FPUC's proposed goals are consistent with the outcome of Nexant's cost effectiveness evaluation of the achievable potential of DSM measures on FPUC's system, which included consideration of the benefits to the general body of FPUC ratepayers through application of the Participants test and Ratepayer Impact Measure (RIM) test.

DEF: Yes, the proposed goals do adequately reflect the costs and benefits to the general body of ratepayers, as a whole, because the goals are based on measures that pass both the Rate Impact Measure (RIM) and Participant tests. The Participant and RIM tests, in tandem with each other, effectively ensure both participants and non-participants benefit.

OUC: Yes. OUC's proposed goals adequately and reasonably reflect the costs and benefits of potential customer-funded DSM measures to the general body of OUC's ratepayers considered as a whole, including consideration of utility incentives and participant contributions. In summary, OUC's proposed zero goals are specifically appropriate for OUC's general body of customers because only one measure, which would provide negligible energy savings – 6,000 *kilowatt*-hours total over the ten-year goals period – passed the RIM test.

- JEA:** Yes. JEA's proposed goals are based on achievable potential that included consideration of the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions, through use of the RIM and Participant tests.
- TECO:** Yes. Tampa Electric utilized the cost-effectiveness methodologies as delineated in Rule 25-17.008, F.A.C., to adequately reflect the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions.
- OPC:** No. The companies' proposed goals only consider the rate impact to the general body of ratepayers (RIM) but do not utilize other benefits (TRC) that affect the general body of ratepayers, thus they do not achieve the full intent of FEECA. The FEECA utilities' sole reliance on RIM to establish the DSM goals have significantly reduced, if not eliminated, establishing any numeric DSM goals when compared to prior years. Therefore, the Commission should consider using the results of the TRC test along with the RIM test and low-income programs to establish the current DSM goals.
- FDACS:** The goals proposed by the FEECA Utilities appear to adequately reflect the costs and benefits to the general body of rate payers as a whole, including utility incentives and participant contributions, as required by Section 366.82(3)(b), F.S. More and more customers are installing energy efficient measures and renewable energy technologies to reduce their electric consumption without incentive from utility-sponsored programs. The Commission should continue to balance the goal of energy efficiency and conservation with the impact of the costs and benefits of these programs on the rates and overall bills of all the FEECA Utilities' rate-payers.
- SACE & LULAC:** No. By improperly focusing on the Lost Sales test, the utilities ignore the real costs and benefits to the general body of ratepayers as a whole. The Lost Sales test treats lost sales, i.e., bill savings, as a cost. Total system costs and benefits are reflected in the Bills test, which thus best meets the requirements of the statute. Additionally, measures that assist low income communities are improperly screened out by the Lost Sales test.
- PCS:** Yes.
- WALMART:** No position.
- FIPUG:** In answering this question, the Commission must balance the goal of conservation with the impact of the cost of conservation programs on rates. The Commission must not overlook rate impact when conservation goals and programs are evaluated.

Parties' Arguments

The FEECA Utilities contend that while the RIM and TRC Tests should be considered, the TRC Test does not account for all factors required by FEECA. (FPL BR 16; Gulf BR 12-13; FPUC BR 12; DEF BR 4-5; OUC BR 17, 21-22; JEA BR 8; TECO BR 5) The FEECA Utilities further argue that RIM in conjunction with the Participants Test adequately reflects the cost and benefits to the general body of ratepayers. (FPL BR 19; Gulf BR 14; FPUC BR 13; DEF BR 4-5; OUC BR 30; JEA BR 8-9; TECO BR 6-7)

OPC asserts that both the RIM and TRC Tests should be used in conjunction to set DSM goals, which would maximize DSM goals while minimizing rate impact. (OPC BR 9) OPC further asserts that not considering the RIM and TRC Tests does not achieve the full intent of FEECA. (OPC BR 9)

SACE & LULAC argue that the TRC Test best represents the interests of low-income ratepayers and results in the most cost-effective energy savings. (SACE & LULAC BR 4) SACE & LULAC further state the TRC Test's importance has been recognized by the Commission and includes all costs, both utility and participants. (SACE & LULAC BR 38)

FIPUG states that pursuing conservation programs is important. However, this must be balanced against the cost and rate impact on ratepayers. (FIPUG BR 1) PCS agrees that DEF's proposed goals adequately reflect the costs and benefits to the general body of ratepayers as a whole. (PSC BR 2) FDACS and Walmart did not provide arguments directly related to the information discussed in this issue.

Analysis

Section 366.82(3)(b), F.S., requires the Commission in establishing goals to consider the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions. The Order Establishing Procedure, in this proceeding, required the electric FEECA Utilities to provide, as part of their pre-filed testimony and exhibits, the achievable potential for both a RIM and TRC based evaluation. Staff reviewed the FEECA Utilities' exhibits and recommends that they meet the requirements of the Commission's procedural order. (EXH 4, 28, 30, 31, 32, 35, 63)

RIM and TRC

Rule 25-17.008(3), F.A.C., adopts and incorporates by reference the publication "Florida Public Service Commission Cost Effectiveness Manual For Demand Side Management Programs and Self-Service Wheeling Proposals" (DSM Manual), which describes the RIM and TRC Tests. FPL witness Whitley testified that both the RIM and TRC Tests use the same benefits. (TR 162) However, the RIM and TRC Tests evaluate the cost to the general body of ratepayers from different viewpoints. Gulf witness Floyd and OUC witness Noonan noted that the RIM Test evaluates the rate impact from the viewpoint of customers who are not participating in DSM programs. (TR 441, 676) Because of this concentration on non-participants, the RIM Test is commonly referred to as the "no losers test." (TR 441, 1288) Witness Floyd further testified that the TRC Test evaluates the cost from the viewpoint of all customers within a utility's service area. (TR 441) Witness Grevatt testified that using the RIM Test as the primary test ignored cost-effective benefits provided by the TRC Test. (TR 977) The record indicates that parties have

advocated for the use of either the RIM or TRC Test, but as seen in Table 3-1, neither Test fully satisfies the requirement of Section 366.82(3)(b), F.S., alone. The TRC Test does not include utility incentives, and the RIM Test does not include participant contributions. Therefore, staff recommends that the results from both Tests are necessary to fulfill the Commission’s statutory requirement under Section 366.82(3)(b), F.S. In the 2014 Goalsetting Order, the Commission found that “...consideration of both the RIM and TRC is necessary to fulfill the requirements of Section 366.82(3)(b), F.S.”

**Table 3-1
 Summary of Cost-Effectiveness Test Components**

	TRC	RIM
<i>Benefits</i>		
Bill Savings	-	-
Incentives	-	-
Tax Credits	-	-
Avoided Generation	Yes	Yes
Avoided Energy	Yes	Yes
<i>Costs</i>		
Participant Contributions	Yes	-
Equipment	Yes	Yes
Administrative	Yes	Yes
Incentives	-	Yes
Lost Revenues	-	Yes

Source: DSM Manual

Conclusion

Staff recommends that consideration of the RIM and TRC Tests is necessary to fulfill the requirements of Section 366.82(3)(b), F.S., since neither Test includes both utility incentives and participant contributions. Furthermore, consideration of the RIM and TRC Tests is consistent with the 2009 and 2014 Goalsetting Orders.

Issue 4: Do the Company's proposed goals adequately reflect the need for incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems, pursuant to Section 366.82(3)(c), F.S.?

Recommendation: Yes. Staff recommends that the FEECA Utilities' methodologies of applying customer incentives for the purpose of establishing goals in this proceeding are adequate. Staff also recommends that performance incentives for FEECA Utilities are not necessary at this time. (Thompson, Vogel)

Position of the Parties:

- FPL:** Yes. Cost-effective incentives for participating customers are reflected in FPL's proposed Goals because they are included and considered in the Participant and RIM screening tests. There is no need to establish incentives for utilities in this proceeding.
- GULF:** Yes. Gulf's proposed goals were developed utilizing the RIM and Participant's tests. In practice, these tests provide incentives to participating customers through the payment of rebates, to the general body of customers by preventing cross-subsidization between DSM program participants and non-participants, and to the utility by ensuring that incorporation of DSM in the resource planning process results in net benefits that put downward pressure on rates.
- FPUC:** Yes. The Company's proposed goals adequately reflect that, in today's environment, there is little need for incentives to promote energy efficiency and demand-side renewable systems.
- DEF:** Yes. DEF does not believe there is currently a need for incentives to promote demand-side renewable energy systems as the demand-side renewable market has continued to mature, and there has been significant growth in customer sited demand-side renewable energy systems. In 2018, DEF customers added an average of over 400 net metered customers each month, and through April 2019, that number has grown to over 700 net metered customers each month.
- OUC:** Yes. OUC's proposed goals adequately reflect the need for incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems.
- JEA:** Yes. JEA has comprehensively analyzed customer-owned energy efficiency measures and none were found to be cost-effective. JEA's load forecast reflects the impacts of net metering associated with customer-owned rooftop solar photovoltaic systems, and this load forecast was used as the basis for the cost-effectiveness analysis. As such, incentives to promote customer-owned demand-side renewable energy systems are adequately reflected in JEA's proposed goals.

Date: October 24, 2019

Utility-owned energy efficiency and renewable energy systems are supply-side issues.

TECO: Yes. For measures that remained cost-effective after taking into account administrative costs but with no incentives, and after the two-year payback screen, Tampa Electric chose incentive levels that would maximize the achievable potential. Demand side renewable systems remained non-cost effective. Furthermore, Tampa Electric does not believe incentives for demand side renewable systems are necessary under a RIM-based goals model due to the large amount of naturally occurring installations of these systems.

OPC: No. The proposed goals ostensibly address the need for incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems but may not adequately reflect the full extent of that need.

FDACS: The goals proposed by the FEECA Utilities appear to adequately reflect the need for incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems, pursuant to Section 366.82(3)(c), F.S.

SACE & LULAC: No. The utilities' analysis to arrive at their proposed goals are deeply flawed and arbitrarily stop at a two-year payback, artificially limiting available market penetration and energy efficiency, including for low income communities.

PCS: No position.

WALMART: No position.

FIPUG: In answering this question, the Commission must balance the goal of conservation with the impact of the cost of conservation programs on rates. The Commission must not overlook rate impact when conservation goals and programs are evaluated.

Parties' Arguments

FPL, Gulf, FPUC, OUC, JEA, and TECO argue that incentives are adequately reflected in their proposed DSM goals. (FPL BR 24; Gulf BR 15; FPUC BR 15; OUC BR 25; JEA BR 11; TECO BR 6) FPL and Gulf assert that utility incentives are not needed at this time. (FPL 25-26; Gulf BR 15) However, Gulf argues that if the Commission were to adopt the recommendations of SACE, the consideration of utility performance incentives may be warranted. (Gulf BR 15) DEF did not provide arguments directly related to the information discussed in this issue.

OPC recommends that the Commission should determine whether the FEECA Utilities' proposed goals, especially related to the need for incentives, adequately safeguard all interests of

the general body of ratepayers, including program participants, against undue rate impacts while achieving the intent of FEECA. (OPC BR 11) OPC argues that if the Commission relies upon the FEECA Utilities' proposed RIM goals, there should not be any rewards for exceeding those goals. (OPC BR 17) FDACS contends that the Commission must consider the impact of Codes and Standards in determining whether the proposed goals reflect the need for incentives. (FDACS BR 9) SACE & LULAC argue that all of the FEECA Utilities arbitrarily limit incentives to a two-year payback horizon. (SACE & LULAC BR 34) FIPUG did not provide arguments directly related to the information discussed in this issue. PCS and Walmart took no position on this issue.

Analysis

Customer Incentives

In establishing DSM goals, Section 366.82(3)(c), F.S., requires the Commission to consider whether incentives are needed to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems. Regarding customer incentives, each FEECA Utility's filing included evaluations based on the Participants Test paired with the RIM and TRC Tests. (TR 151, 334-335, 446; EXH 167, 240) The Participants Test takes into consideration incentives to customers, and staff found no evidence in the record opposing the use of the Participants Test as a means to reflect the need for customer incentives. Therefore, staff recommends that the use of the Participants Test adequately reflects the need for customer incentives. SACE witness Grevatt argued that all of the FEECA Utilities arbitrarily limit incentives to a two-year payback horizon. (TR 935) The appropriateness of a two-year payback period is addressed in Issue 7; however, staff notes that customer incentives are considered at the program approval phase, which follows the goalsetting proceeding. In the 2009 Goalsetting Order, which was echoed in the 2014 Goalsetting Order, the Commission stated the following:

With regard to customer-owned energy-efficiency and demand-side renewable energy systems, incentives are typically provided through each DSM program. Our staff evaluates each program proposed by a utility prior to making a recommendation as to whether it should be approved. Part of our staff's evaluation process includes an analysis of the cost-effectiveness tests performed by the utility, including the appropriateness of any incentives the utility proposes to offer to customers taking advantage of a particular program as well as the cost and benefits to all customers. Therefore, in our view, a mechanism for providing customers with incentives is already in place and we should continue to make decisions about customer incentives on an individual program basis.¹³

The appropriateness of utility-proposed program incentives for customers continues to be evaluated at the program approval phase. Therefore, staff recommends that a mechanism for providing customers with incentives is already in place, and the Commission should continue to make decisions about customer incentives on an individual program basis. As discussed in Issue 10, each FEECA Utility offers customers net metering as an incentive to develop DSRE systems.

¹³2014 Goalsetting Order, page 14.

Utility Incentives

Section 366.82(8), F.S., states:

The commission may authorize financial rewards for those utilities over which it has rate setting authority that exceed their goals and may authorize financial penalties for those utilities that fail to meet their goals, including, but not limited to, the sharing of generation, transmission, and distribution cost savings associated with conservation, energy efficiency, and demand-side renewable energy systems additions.

No investor-owned utility or intervenor expressed the need to establish utility incentives. Gulf witness Floyd specifically argued that reliance on the RIM Test in goalsetting obviates the need for utility incentives. (TR 455) In the 2009 Goalsetting Order, which was reiterated in the 2014 Goalsetting Order, the Commission recognized that such incentives would be a cost to ratepayers and stated the following:

We believe establishing incentives during this proceeding would unnecessarily increase costs to ratepayers at a time when consumers are already facing financial challenges. Increasing rates in order to provide incentives to utilities is more appropriately addressed in a future proceeding after utilities have demonstrated and we have evaluated their performance.¹⁴

As in the previous goalsetting Orders, it is still the case that establishing utility incentives during this proceeding would unnecessarily increase costs to ratepayers. Therefore, staff recommends that no utility incentives are needed.

Conclusion

Staff recommends that the FEECA Utilities' methodologies of applying customer incentives for the purpose of establishing goals in this proceeding are adequate. As discussed in Issue 8, staff also recommends that performance incentives for FEECA Utilities are not necessary if DSM goals based on the RIM Test are established.

¹⁴2014 Goalsetting Order, page 14.

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

Recommendation: Yes. Currently there are no costs imposed by state and federal regulations on the emissions of greenhouse gases (GHG). Consistent with Section 366.82(3)(d), F.S., and the Order Establishing Procedure, the Utilities filed base case analyses for goals that did not include costs associated with CO₂ emissions. (Salvador, Higgins, Breman)

Position of the Parties:

FPL: Yes. FPL accounted for forecasted CO₂ compliance costs in a sensitivity screening analysis. Forecasted CO₂ compliance costs are currently projected to be zero until the late 2020s when non-zero costs begin to appear and then gradually increase over time. FPL's sensitivity screening analysis demonstrated that the number of measures passing changed only slightly when CO₂ compliance costs were included. Accordingly, FPL's proposed Goals adequately reflect these forecasted costs.

GULF: Yes. Gulf is not incurring costs associated with state or federal regulations on the emission of greenhouse gases. Therefore, Gulf has not included assumptions for costs of greenhouse gas emissions in the development of its proposed goals. Gulf's DSM evaluations are consistent with the statute's directive and with the assumptions used in determining the next generating unit identified in the Company's 2019 Ten Year Site Plan.

FPUC: Yes, to the extent that FPUC has been unable to identify any costs that it incurs as a result of state or federal regulation of the emission of greenhouse gases.

DEF: Yes. Given the uncertainty of future carbon regulation, it is reasonable to exclude the cost of carbon emissions in this goal setting process.

OUC: Yes. Even though there are no current or pending state or federal regulations applicable to greenhouse gas emissions, OUC's proposed goals are based on cost-effectiveness analyses, conducted by Nexant, that include the projected costs of carbon dioxide ("CO₂") emissions regulation based on the projected timing of CO₂ regulation and the projected CO₂ emissions prices, in dollars per ton, used by FPL and DEF in their cost-effectiveness analyses for these consolidated goals dockets.

JEA: Yes. There currently are no costs imposed by State and Federal regulations on the emissions of greenhouse gases (GHG). While there is much speculation on the potential for GHG regulations, it would be inappropriate to establish DSM goals that would increase customer rates based on speculation related to yet-to-be defined potential regulations of GHG emissions.

- TECO:** Yes. Currently there are no state or federal regulations on the emissions of greenhouse gases nor is there any time horizon established on which any such regulation may be enacted. Therefore, the appropriate greenhouse gas emissions cost utilized by Tampa Electric in the determination of its proposed DSM goals was zero.
- OPC:** Currently, there are no costs imposed by state or federal regulations on the emission of greenhouse gases. It appears that the companies have not included any costs for greenhouse gases in their analyses used to establish the conservation goals.
- FDACS:** The goals proposed by the FEECA Utilities appear to adequately reflect the costs imposed by state and federal regulations *currently* in existence, on the emission of greenhouse gases over the past five years, pursuant to Section 366.82(3)(d), F.S.
- SACE & LULAC:** No. Given the climate crisis, and a bi-partisan bill currently pending in Congress on carbon fees, some cost for greenhouse gas emissions over the ten-year planning horizon should be assumed.
- PCS:** No position.
- WALMART:** No position.
- FIPUG:** The cost of greenhouse gas regulation should be based on regulations currently in effect, not regulations that may or may not be implemented at some point in the future.

Parties' Arguments

Several FEECA Utilities state that since there are no current state or federal regulations on the emissions of GHG, their proposed goals appropriately reflect a zero cost for CO₂ in the base case scenario. (FPL BR 26; TECO BR 17; Gulf BR 15; JEA BR 11; FPUC BR 2; OUC BR 26) FPL's sensitivity screening analysis demonstrates that the number of measures passing the RIM Test and the TRC Test changed only minimally when projected CO₂ compliance costs were included. (FPL BR 27) DEF and OUC assert that there is considerable uncertainty associated with CO₂ costs. (DEF BR 13; OUC BR 25-26) JEA states that it would be inappropriate to establish DSM goals that would increase customer rates based on speculation related to yet-to-be defined potential regulation of GHG. (JEA BR 11) FPUC asserts that it does not own generation assets and it does not incur any direct costs as a result of any state and federal regulations on GHG emissions. (FPUC BR 15)

OPC asserts that currently there are no costs imposed by state or federal regulations on the emission of GHG, and that it is therefore appropriate that the Utilities have not included any costs for GHG in their analyses used to establish the conservation goals. (OPC BR 11) FDACS

states that the goals proposed by the FEECA Utilities appear to adequately reflect the costs imposed by state and federal regulations currently in existence, on the emission of GHG over the past five years. (FDACS BR 9) FIPUG argues that the cost of GHG regulation should be based on regulations currently in effect, not regulations that may or may not be implemented at some point in the future. (FIPUG BR 3) SACE & LULAC state that given the climate crisis, and a bi-partisan bill currently pending in Congress on carbon fees, some cost for GHG emissions over the ten-year planning horizon should be assumed. (SACE & LULAC BR 8) PCS and Walmart take no position on this issue.

Analysis

When establishing conservation goals, Section 366.82(3)(d), F.S., requires the Commission to consider the costs currently imposed by state and federal regulations on the emission of GHG. There are no current state or federal GHG emissions regulations in place that affect the FEECA Utilities. Therefore, according to the minimum filing requirements outlined in the OEP, the FEECA Utilities were required to propose goals that excluded costs associated with CO₂ emissions. The FEECA Utilities were permitted to include a sensitivity analysis that included a cost for CO₂ emissions, provided it was consistent across all FEECA Utilities. Accordingly, none of the FEECA Utilities included a cost of CO₂ compliance in the base case when developing their respective proposed goals. FPL, DEF, and OUC were the only FEECA Utilities that conducted sensitivity analyses including costs for CO₂ emissions, which was consistent across the three utilities. (TR 168, 592, 654) The FEECA Utilities' approach to considering state and federal GHG regulations in this proceeding is also consistent with the approach approved in the 2014 Goalsetting Proceeding.

Regulation of Greenhouse Gases

On July 8, 2019, the Environmental Protection Agency (EPA) published the final Affordable Clean Energy (ACE) rule consisting of emission guidelines for GHG emissions from existing electric utility generating units. (EXH 107 BSP 00135-00137) ACE establishes CO₂ emission requirements for coal-fired electric steam generating units. Both FPL and DEF state that there are no existing environmental regulations that will cause them to incur CO₂ emission compliance costs during the next ten years. (TR 282; EXH 107 BSP 00139, 175 BSP 02449) Based on the forgoing, staff concludes the ACE compliance costs for GHG emissions from existing electric utility generating units are reasonably expected to be zero during the term that the new FEECA goals will be in place. Therefore, staff recommends that it is speculative to incorporate CO₂ costs at this time, and that the Commission has the authority and ability to respond appropriately should CO₂ costs occur.

Utilities with CO₂ Sensitivity

FPL, DEF, and OUC provided additional information describing how the costs for CO₂ emissions were developed for a sensitivity to the base case as instructed by the OEP. (TR 168, 592, 654) The three utilities provided sensitivity analyses using the same composite CO₂ compliance cost forecast, which can be found in Table 5-1. The composite CO₂ cost forecast was based on separate CO₂ cost forecasts from FPL and DEF. This composite is a simple average developed by adding the annual CO₂ compliance cost values from FPL's and DEF's current CO₂ cost forecasts and dividing by two. (TR 168, 592, 654) DEF's CO₂ cost is consistent with the

assumptions included in DEF’s 2019 Ten-Year Site Plan. (TR 592) FPL’s CO₂ cost was based on the environmental compliance cost forecast that FPL received in 2018 from an independent consultant, ICF International. (TR 155-156, 219; EXH 21) Given the uncertainty of future CO₂ regulation, forecasted compliance costs remain highly speculative.

**Table 5-1
 Composite CO₂ Costs Forecast (FPL & DEF)**

CO ₂ Costs Forecast (Nominal \$/Ton)	
2019	\$0.00
2020	\$0.00
2021	\$0.00
2022	\$0.00
2023	\$0.00
2024	\$0.00
2025	\$2.50
2026	\$4.26
2027	\$5.92
2028	\$7.88
2029	\$9.60
2030	\$11.66

Source: EXH 10, 43, 49

Impact of CO₂ Sensitivity

Nexant conducted the CO₂ cost sensitivity analysis for DEF and OUC. (TR 336) Nexant’s CO₂ cost sensitivity economic and achievable potential analyses indicated that there were no meaningful achievable potential energy savings for OUC. (TR 658) No additional measures passed the RIM Test for DEF or OUC. (EXH 28, 31) Only two additional measures passed the RIM Test for FPL. (EXH 8-9) Staff summarizes the economic potential impacts of these sensitivities in Table 5-2. The Table uses the average percentage change of the non-zero proposed goals for each cost-effectiveness test pathway. Based on this review, it appears that carbon emissions sensitivity results in a small increase for both the RIM and TRC portfolios.

**Table 5-2
 Economic Potential CO₂ Sensitivities – Average Percent Change**

Test	Goal	CO₂
RIM	Summer (MW)	2.08%
	Winter (MW)	3.27%
	Energy (GWh)	2.75%
TRC	Summer (MW)	4.00%
	Winter (MW)	3.52%
	Energy (GWh)	5.61%

Source: EXH 9, 176, 204

Based on the analysis above, staff concludes that the impact of the costs for CO₂ emissions was relatively small for DEF, OUC, and FPL. Section 366.82(6), F.S., allows the Commission on its own motion to change the DSM goals for a reasonable cause.

Conclusion

Section 366.82(3)(d), F.S., requires the Commission to consider costs imposed by state and federal regulations on the emission of GHG. Currently, there are no costs imposed by state and federal regulations on the emissions of GHG. Consistent with the Order Establishing Procedure, the Utilities filed base case goals analyses that did not include costs associated with CO₂ emissions. Therefore, staff recommends that the Utilities’ proposed goals adequately reflect the costs imposed by state and federal regulations on the emission of GHG. Additionally, the Commission has the authority to re-evaluate and modify FEECA goals if costs are imposed in the future.

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

Recommendation: The Participants Test, the RIM Test, and the TRC Test should be considered to set goals in this proceeding. (Ellis, Lewis)

Position of the Parties:

FPL: In addition to the Participant test, the Commission should use the RIM economic screening test to set goals pursuant to Section 366.82, F.S., consistent with its prior decisions and rationale for doing so. FPL's proposed goals minimize rate impacts to customers and avoid cross subsidies between non-participants and participants. FPL's proposed Goals are projected to result in the lowest levelized system average electric rates.

GULF: The Commission should use the combination of RIM and Participant's tests to set goals for Gulf Power. This combination of tests is consistent with longstanding Commission precedent and the language contained within section 366.82(3)(b), Florida Statutes. These tests provide an appropriate balance between participating and non-participating customer benefits and ensure downward pressure on overall electric rates. The TRC test, on the other hand, does not reflect all costs to the general body of ratepayers.

FPUC: The Commission should use the results of the RIM Test as the threshold for setting DSM goals for new measures. If the results of the RIM test indicate a DSM measure may be cost-effective, then it should also be required to pass both the TRC test and the Participants test.

DEF: The Commission should establish goals based on measures that are cost effective based on both the RIM and Participant tests.

OUC: The PSC should base any goals that it establishes for OUC on the RIM test, to ensure that any required measures must be cost-beneficial to OUC's general body of customers. This is particularly important because it will minimize or eliminate any cross-subsidization of participating customers by non-participating customers, and it is also important because the PSC does not have rate setting jurisdiction over OUC.

JEA: The Commission should use the RIM and Participant tests in setting goals. When used in conjunction, these tests fulfill the Commission's statutory obligations. Specifically, the Participant test includes all of the benefits and costs that a customer who is considering participating in a DSM measure would consider; whereas the RIM test includes all of the benefits and costs that the utility's customers as a whole would incur if the utility implements a particular measure.

- TECO:** The Commission should use the RIM test in conjunction with the PCT test to establish DSM goals. As history has proven, these tests allow the accomplishment of significant DSM development without placing undue upward pressure on rates or creating winners and losers by the cross-subsidization among participants and non-participants.
- OPC:** The FEECA utilities' sole reliance on RIM to establish the DSM goals have significantly reduced, if not eliminated, establishing any numeric DSM goals when compared to prior years. Goals should be set based upon the required consideration of both TRC and RIM.
- FDACS:** The Commission's current practice of setting goals based on measures that take into consideration various tests, such as the Participant's, Total Resource Cost (TRC), and Rate Impact Measure (RIM) Tests, should continue. The use of multiple tests allows for a better perspective of the cost-effectiveness of the energy efficiency and conservation programs. The Commission should continue to balance the goal of energy efficiency and conservation with the impact of the costs and benefits of these programs on the rates and overall bills of all the FEECA Utilities' rate-payers.
- SACE & LULAC:** The Bills test and the Participant test. The Bills test focuses on ratepayers as a whole by considering the total cost of implementing the efficiency measure compared to its benefits, including avoided generation, transmission, and distribution costs. The Bills test focuses on reducing the average bills of all customers. This is especially important for low income communities, as people struggle to pay monthly energy *bills*, not monthly energy rates.
- PCS:** PCS Phosphate supports the use of the Participant Test and the Rate Impact Measure ("RIM") test to evaluate the costs and benefits of specific DSM measures.
- WALMART:** No position.
- FIPUG:** The Commission should give significant weight to the RIM test to determine cost-effectiveness. Regardless of which cost-effectiveness test the Commission approves, what is most important is that the Commission encourage conservation programs that strike a reasonable balance between the advantages of the programs to program participants and other rate payers and that these conservation programs are fairly evaluated. Further, in the use of the RIM test, the Commission should be sure that all utilities are conducting the test in the same way and that "lost revenue" for clause "losses" is not included.

Parties' Arguments

The FEECA Utilities suggest goals are based primarily on the achievable potential of measures passing the RIM Test, which mitigates upward rate pressure for all customers, and avoids cross-subsidies between participating and non-participating customers. The FEECA Utilities argue that the implementation of the proposed goals based on the RIM and Participants Tests will ensure that all customers, including low-income customers, will not be harmed by their costs. (DEF BR 14; FPL BR 27; FPUC BR 15; GULF BR 2-3; JEA BR 2; OUC BR 3; TECO BR 4)

OPC's concern is that the FEECA Utilities' primary use of the RIM Test results in proposed goals that only consider "no rate impacts" to the general body of ratepayers, and do not reflect other benefits that affect the general body of ratepayers. OPC argues the FEECA Utilities' sole reliance on RIM to establish the DSM goals has significantly reduced most of the numeric DSM goals when compared to prior years. OPC contends that the proposed goals do not achieve the full intent of FEECA because the Utilities did not consider any measure that passed TRC. (OPC BR 2)

FDACS encourages the Commission to continue the current practice of setting goals based on measures that take into consideration various tests, such as the Participant, TRC, and RIM Tests. FDACS asserts the use of multiple tests allows for a better perspective of the cost-effectiveness of the energy efficiency and conservation programs. (FDAC BR 15)

SACE & LULAC propose that a "partially-corrected TRC" analysis be used to set conservative ten-year goals for the Utilities. Furthermore, SACE & LULAC argue that their proposed goals are cost-effective under the TRC Test and they are achievable. (SACE & LULAC BR 6).

PCS supports the usage of the RIM and Participants Tests to set goals. (PCS BR 2). FIPUG advocates for the use of the RIM Test to determine cost-effectiveness. Further, FIPUG argues that in using the RIM Test, the Commission should be sure that all utilities are conducting the cost-effectiveness tests in the same way and that "lost revenue" from clause "losses" are not included. (FIPUG BR 3) Walmart took no position on this issue.

Analysis

Pursuant to Section 366.82(3)(b), F.S., when establishing DSM goals, the Commission shall take into consideration the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions. Several of the parties' arguments expressed support for a specific test or tests upon which goals should be established. Staff notes that the specific basis for establishing the recommended goals is discussed in Issue 8 of this recommendation. The analysis in this Issue relates to the costs and benefits that the Commission should consider when establishing goals.

By Rule 25-17.008(3), F.A.C., which implements Section 366.82(1)-(5), F.S., the Commission adopted the DSM Manual to determine the cost-effectiveness of programs. The DSM Manual outlines the components of the Participants Test, RIM Test, and the TRC Test. Table 6-1, provides an illustration of the costs and benefits, as presented in Rule 25-17.008, F.A.C., assessed under each Test.

Table 6-1
Summary of Cost-Effectiveness Test Components

	Participants	Total Resource Cost	Rate Impact Measure
<i>Benefits</i>			
Bill Savings	Yes	-	-
Incentives	Yes	-	-
Tax Credits	Yes	-	-
Avoided Generation	-	Yes	Yes
Avoided Energy	-	Yes	Yes
<i>Costs</i>			
Participant Contributions	Yes	Yes	-
Equipment	-	Yes	Yes
Administrative	-	Yes	Yes
Incentives	-	-	Yes
Lost Revenues	-	-	Yes

Source: DSM Manual

As explained by FPL witness Whitley, these tests are designed to provide preliminary economic screening information regarding the individual DSM measures being evaluated. He further explained that the intent of the Participants Test is to determine if a measure makes economic sense for an individual customer, the intent of the RIM Test is to evaluate the effect of a measure on rates which impact both participants and non-participants, and the intent of the TRC Test is to measure the total cost of a DSM measure against its benefits. (TR 159; TR 161)

Although the FEECA Utilities have proposed goals based on the RIM and Participants Tests, FEECA Utilities witness Deason stated that the DSM Manual does not prescribe the use of one test to the exclusion of another. Witness Deason further provided that the DSM Manual gives the Commission the discretion to evaluate the various tests and use them accordingly. (TR 1049) SACE witness Grevatt testified that the FEECA Utilities' goals should be based on a properly applied TRC Test; however, he acknowledged that potential rate impacts should be considered. (TR 934) As previously discussed, the RIM Test evaluates the effect of a measure on rates.

It is staff's view that the testimony cited above recognizes that all three tests in the DSM Manual should be considered when establishing goals. Consideration of all three tests is consistent with past Commission decisions and comports with Section 366.82(3), F.S. In the 2009 Goalsetting Proceeding, the Commission interpreted Section 366.82(3), F.S., to require use of multiple tests. Specifically, the 2009 Goalsetting Order, states:

. . . 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 the TRC Tests address costs and benefits beyond those associated solely with the program participant. By having the 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.

In the 2014 Goalsetting Order, the Commission states “that consideration of both the RIM and TRC is necessary to fulfill the requirements of Section 366.82(3)(b), F.S.”

Based on the record in this proceeding, staff recommends that a combination of the Participants Test, the RIM Test, and the TRC Test should be considered to set goals in this proceeding. Having reviewed the testimony and exhibits provided by the FEECA Utilities, staff recommends that the Commission has the necessary information to comply with the statutory requirement to consider costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions.

Conclusion

Staff recommends that a combination of the Participants Test, the RIM Test, and the TRC Test should be considered to set goals in this proceeding.

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

Recommendation: Yes. The two-year payback screen is a reasonable method to account for free riders in determining conservation goals in this proceeding. Each utility should continue in their education and outreach efforts for all ratepayers, with an emphasis on low-income communities. These efforts should educate all customer groups on energy efficiency opportunities, with a specific emphasis on behavioral changes and efficiency measures with a payback period of two years or less. (Redda, Morgan)

Position of the Parties:

FPL: Yes. FPL's proposed Goals reflect consideration of free riders, as required by Rule 25-17.0021(3), F.A.C., by using a screening process in which only DSM measures for which the participant's costs are not fully recovered in two years without an incentive payment pass. This process helps protect FPL's general body of customers from paying incentives to program participants that would already be economically motivated to participate in the program without incentives (*i.e.*, "free riders").

GULF: Yes. As required by Rule 25-17.0021, Florida Administrative Code, the goals established in this proceeding must account for the effects of free ridership. Consistent with long-standing Commission precedent, Gulf utilized a two-year payback criterion to account for free ridership. The two-year payback criterion is an objective, reasonable and efficient method of addressing free ridership during the goal-setting process as required by Commission rule.

FPUC: Yes, the cost-effectiveness review conducted by Nexant on behalf of FPUC included the analysis of several free ridership scenarios. FPUC's proposed goals are reflective of the outcomes of the analysis of those scenarios.

DEF: Yes. The proposed goals are based on measures that have greater than a two-year payback period. A two-year payback period is a reasonable time period in which to limit measures and assume that customers will adopt them absent a utility incentive. This time period has been recognized by the Commission in past proceedings as a reasonable proxy to eliminate free riders.

OUC: Yes. OUC's proposed goals appropriately reflect consideration of free riders by application of the two-year payback screen that the Commission has approved for the past 25 years. The two-year screen strikes a reasonable balance between the desire for greater energy conservation and the desire to avoid the adverse economic effects of free ridership, *i.e.*, that free riders cause all customers to pay more than necessary to achieve conservation benefits and to subsidize free riders.

JEA: Yes. The screening criteria were based on simple payback to the customer (2 years of less) and were designed to remove measures from the achievable

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potential forecasts that exhibit the key characteristic most associated with high levels of free-ridership in utility rebate programs. The sensitivity of total achievable potential to this particular screening criterion was tested using alternative simple payback screening values (1 year and 3 years).

TECO: Yes. Tampa Electric utilized a longstanding Commission practice, initially approved in the 1994 DSM goals proceeding, of screening out measures having a payback period of two years or less without any incentive. This two-year payback criterion is the appropriate means to apply to minimize free ridership as required by the Commission's rule.

OPC: No. The double application of naturally occurring efficiency in the technical potential stage and free-ridership screen in the economic potential stage of the analysis of FEECA inappropriately reduces the potential DSM goals to be established by the Commission. Low-income programs should continue even though they do not pass RIM or are eliminated under the two-year payback standard. In addition, as stated in the previous issue, the utilities' over-reliance on the RIM test improperly weights the utilities' lost revenues as a cost to the general body of ratepayers as a whole and, therefore, possibly overestimates the effect of free riders.

FDACS: The goals proposed by the FEECA Utilities appear to appropriately reflect consideration of free riders. In considering whether the Companies' proposed goals appropriately reflect free riders, however, the Commission should consider policy options that take into account the payback period of the proposed program measures.

**SACE &
LULAC:** No. Among other things, the load forecasts used by Nexant in its analysis already included naturally occurring energy efficiency. As such, the possibility of free riders had already been accounted for at the Technical Potential stage of the analysis. Furthermore, the completely arbitrary two-year screen used by the utilities is not backed by any empirical evidence and improperly screens out measures that are especially important to low income communities.

PCS: No position.

WALMART: No position.

FIPUG: No position at this time.

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Parties' Arguments

As it relates to DSM program participation, a free rider is a customer who receives an incentive for a utility-sponsored program that they would have installed without a financial incentive. (DEF BR 8) The FEECA Utilities contend that free-ridership has been addressed by using a two-year payback criterion, and unanimously state this is the appropriate method to identify and screen free-ridership, which is required by Rule 25-17.0021(3), F.A.C. (FPL BR 32-34; DEF BR 8; TECO BR 10; Gulf BR 21; FPUC BR 17; JEA BR 15; OUC BR 34)

Several FEECA Utilities assert that some variation of a two-year payback screen has been used in prior DSM goalsetting proceedings since 1994. (FPL BR 32-34; DEF BR 8; TECO BR 10; Gulf BR 21; TR 554; JEA BR 15; OUC BR 34) FPL notes that in the 2009 Goalsetting Proceeding, the Commission used a modified two-year payback criterion in which a selected number of measures failing the two-year payback screen were allowed to be recognized for goalsetting. However, FPL states that this deviation from the historical screen was one of the reasons why the 2009 DSM Goals rate impacts were later deemed to be too large. (FPL BR 32)

SACE & LULAC argue for the removal of the two-year payback screen for free-ridership on the basis that applying the two-year payback screen in the economic potential stage in addition to naturally-occurring efficiency savings in the TP stage, results in the double counting of free riders. (SACE & LULAC BR 16) Also, SACE & LULAC argue no empirical evidence was cited by the FEECA Utilities to support their use of a two-year payback screen. (SACE & LULAC BR 16) In addition, SACE witness Grevatt argues that financial and non-financial market barriers, such as lack of capital for the initial DSM investment and lack of DSM program awareness, hinders customers, specifically low-income customers, from investing in measures that have less than a two-year payback period. (TR 946-948)

OPC argues that the FEECA Utilities overstated free-ridership in the setting of goals due to the impact of the naturally-occurring DSM adjustment in the TP stage being coupled with the two-year payback screen in the economic potential stage, amounting to a double application or adjustment for free riders. (OPC BR 15-16) OPC also argues that low-income programs should be available to customers even if the programs do not pass RIM or have a payback period less than two years. (OPC BR 15)

FDACS argues that the goals the FEECA Utilities proposed appear to reflect the consideration of free riders appropriately. (FDACS BR 10) FDACS states the Commission should require the FEECA Utilities to maintain and develop EE and conservation programs targeted to low-income customers and require that cost and savings for these programs be reported to the Commission. (FDACS BR 7, 11) PCS, Walmart, and FIPUG took no position on this issue.

Analysis

Evaluating whether the FEECA Utilities' proposed goals appropriately reflect consideration of free riders is a specific requirement of Rule 25-17.0021(3), F.A.C., which states in part:

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 (K.W.) and annual energy (K.W.H.) savings reasonably achievable in the residential and commercial/industrial classes through DSM. Each utility's projection shall reflect 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.

A free rider is a customer who receives an incentive for a utility-sponsored program that he/she would have installed without a financial incentive. (TR 67-68) The FEECA Utilities asserted that the Commission has addressed free-ridership in prior DSM goalsetting dockets by having used some form of a two-year payback screen since 1994. (TR 92, 500, 554; 594, 708, 795, 833) The FEECA Utilities asserted that although they tested longer and shorter payback periods around the two-year mark, the two-year threshold was selected because it represented a balanced approach. (TR 67, 459, 554, 629, 733-734, 759, 864; EXH 100, 126, 153, 167, 194, 220, 241) The Commission allowed a deviation from the straight line two-year payback screen in 2009, when it adopted a modified two-year payback criterion, in which a selected number of measures that had been traditionally screened out were allowed to be recognized for goalsetting. (TR 1063) FEECA Utilities witness Deason stated that, in 2014, when the Commission again used the two-year pack criterion to identify free riders, the Commission determined that two years provides sufficient economic incentive to convince a customer to participate in a given EE program. (TR 1063)

Two-Year Payback Screen

The FEECA Utilities maintain universal customer adoption is not assumed to occur if the payback period is less than two years, but the two-year payback period reasonably serves as a point of differentiation to predict when customers are more likely to adopt a measure based on the measure's economic attractiveness without an economic incentive. (TR 1065-1067) The FEECA Utilities stated that they did not consider alternative methods for addressing free-ridership other than the two-year payback period, due to the Commission's long-standing historical acceptance of some form of a two-year payback screen to address residential and commercial/industrial free-ridership. (TR 112-113, 478, 554, 629; EXH 194, 218, 241) The FEECA Utilities also stated that they have historically included measures in programs that either have shorter payback periods or do not pass the RIM Test to encourage low-income participation. (TR 84, 501, 550-554, 610-611, 708, 768, 897)

SACE witness Grevatt argued that Nexant accounted for naturally-occurring efficiencies at the TP stage, which in effect, removed the effects of free-ridership. Thus, according to witness Grevatt, the two-year payback screen at the economic potential stage constituted a redundant adjustment for free riders. (TR 947) On rebuttal, FEECA Utilities witness Herndon explained that the naturally-occurring efficiency evident in the FEECA Utilities' baseload forecasts in the TP stage reflects certain EE measures that customers install on their own (i.e. without the benefit of a utility DSM program), such as a heat pump water heater. (TR 1104) DEF reports that its load forecasts capture efficiency adoption "above the baseline" by modeling historical sales, and such historical sales impact the Company's load forecasts. (EXH 181) The TP accounts for the net penetration rates for efficiency adoptions, which it describes as the difference between the

anticipated adoption of efficiency measures resulting from DSM efforts and the “business as usual” adoption rates absent DSM intervention. (EXH 26) According to witness Herndon, Nexant aligned its DSM measure saturation assumptions, based on forecasted trends, with the utility’s forecast assumptions, based on historical saturation rates, so that the TP is applied only to customers who have not installed those particular DSM measures. (TR 1103-1104) Witness Herndon argued that aligning forecast assumptions in this way “does not address the likelihood of future free-ridership for those remaining customers in a utility sponsored DSM program.” (TR 1105)

Staff is persuaded that the DSM saturation level adjustment to account for naturally-occurring efficiencies in no way addresses the free-ridership potential for customers who are not yet participants in the DSM program in question. Logically, a separate adjustment to account for free riders in the achievable potential stage is required to effect a removal of energy and demand related to those measures which would be adopted, without the need for any incentive, by those customers who do not yet have the measures installed. The basis for these two separate adjustments by the FEECA Utilities demonstrates that double counting of free-ridership alleged by SACE & LULAC and OPC is not evident in this proceeding.

SACE witness Grevatt testified that the FEECA Utilities do not use or cite to any empirical evidence or data that supports a two-year payback screen as the most appropriate method for considering free riders. (TR 946-947) Witness Deason argued it would be impossible to provide empirical evidence to demonstrate results not assumed or even envisioned by the two-year payback screen. (TR 1067) The FEECA Utilities have cited precedent as their chief argument when it comes to keeping the two-year payback screen, with all of the FEECA Utilities testifying that they did not consider any other method as an alternative to measuring free-ridership. (TR 92, 112-113, 478-479, 500, 554, 594, 629, 708, 795, 834; EXH 194) OUC witness Noonan indicated that a two-year payback equates to a fifty percent return on an investment, and he speculates that a reasonable person would make that investment on their own without needing an incentive. (TR 744) JEA witness Wucker expressed a similar sentiment in stating that “a 50 percent return is a very attractive return.” (TR 795) At hearing, staff inquired whether the FEECA Utilities considered methods of acquiring more specific information about free-ridership, such as customer surveys. FPL, JEA, and TECO witnesses responded that collecting such information would be complex, costly, and controversial. (TR 111, 798, 910-911) Staff agrees that the use of empirical evidence would be difficult to establish a suitable free rider screen, and the traditional two-year payback approach strikes a balance between promotion of EE and minimization of free-ridership. Staff notes that no intervenor posited any alternative methodology to identify free riders.

Witness Grevatt testified that market barriers such as customers’ lack of DSM awareness and customers’ competing demand for financial resources prevent many customers from investing in measures with a payback of less than two years (TR 946-948). SACE witness Grevatt described financial and non-financial market barriers that preclude a customer from participating in a DSM program. (TR 946-948) In his rebuttal testimony, witness Deason testified that the premise for fulfilling FEECA’s purpose is to determine and implement the most efficient and cost-effective programs. He argued that neither FEECA nor Rule 25-17.0021(3), F.A.C., requires the

elimination of market barriers or even mentions it. (TR 1067-1068) According to witness Deason, if goals were implemented to eliminate market barriers by offering incentives where they are not needed, the cost passed onto customers becomes an undue burden. (TR 1067-1069) Staff agrees that the stated purpose of the FEECA statutes centers on establishing cost-effective efficiency goals rather than eliminating market barriers.

SACE witness Grevatt stated that measures passing TRC with a payback period longer than two years were rejected by FPL because the company assumed most customers would not participate at the level of incentives that would be offered. (TR 946-951) SACE witness Grevatt argued that this contradicts the premise that customers would install a measure only if it has a two-year payback period or less. (TR 946-951). FPL witness Koch explained that the two-year payback screen at the economic potential stage is used to screen out measures with a payback period shorter than two years, while measure elimination at the achievable potential stage with payback periods greater than two years is based on expected participation rates under conditions of limited incentives. (TR 1155-1156) Witness Koch argued the level of potential participation in a given measure is related to how much payback improvement a participant will realize from receiving the utility's maximum cost-effective incentive. (TR 1155-1156) Staff is persuaded that the two adjustments in the economic potential and achievable potential stage address different, but valid, concerns.

Payback Sensitivities

Pursuant to the OEP, the FEECA Utilities were required to test free-ridership by performing potential economic testing at higher and lower free-ridership payback screens. The FEECA Utilities addressed this requirement by performing one- and three-year sensitivities, with the two-year mark considered as the base case. (EXH 100, 126, 153, 167, 194, 220, 241) Each of the FEECA Utilities provided such sensitivities at the economic potential level. The impact on energy and demand savings resulting from such sensitivities is summarized across FEECA Utilities in Table 7-1.¹⁵ (TR 816-817; EXH 29, 35) Moving to a one-year payback period screen under the TRC portfolio increases demand and energy savings by a significant margin, but much less so under the RIM portfolio. Similarly, moving to a three-year payback period screen under the TRC portfolio decreases demand and energy savings by a significant margin, but much less so under the RIM portfolio. These sensitivities suggest that the potential for material changes in energy savings for free-ridership screens is highly dependent upon the cost-effectiveness test used.

¹⁵Table 7-1 shows the average percentage change of the non-zero proposed goals for each cost-effectiveness test pathway. TECO and Gulf payback period data were excluded due to response errors (TECO) and baseline values not reflected in the remaining analysis (Gulf).

**Table 7-1
 Payback Period Sensitivities at the Economic Potential Level
 (Average Percent Change)**

Test	Goal	Payback Period	
		3 Year	1 Year
RIM	Summer (MW)	-6.2%	1.4%
	Winter (MW)	-4.7%	4.2%
	Energy (GWh)	-5.5%	2.9%
TRC	Summer (MW)	-33.9%	39.2%
	Winter (MW)	-38.4%	65.0%
	Energy (GWh)	-43.2%	51.6%

Source: EXH 9, 159, 176, 204, 228

FPL maintained that a one-year payback period would increase the number of DSM measures that the Company would offer, consequently requiring the general body of customers to subsidize the participating customers due to increasing free-ridership rates, which would ultimately result in rate increases. (EXH 107) FPL also argued that a three-year threshold would adequately address free-ridership; however, it has the potential to eliminate measures where free-ridership is low. (EXH 107) OUC argued that the number of measures would increase with a shorter payback period criterion; however, the utility's costs would increase as well. (EXH 203) OUC stated that these higher costs, along with increases in lost revenue, would have a larger rate impact on non-participants. (EXH 203) OUC maintained that the opposite would be true if the three-year payback criterion was used. (EXH 203)

The results of these sensitivities demonstrate that the TRC portfolio is more sensitive to changes to the free rider screen. As discussed in Issue 8, goals based on the TRC test would also cause upward pressure on utility customer rates.

In summary, staff recommends that the evidence in this proceeding supports the continued use of the two-year payback criterion as a reasonable method for identifying potential free riders for the purpose of setting goals. No intervenor provided an alternative method, and naturally-occurring efficiency adjustments in the TP stage has been shown to be unrelated to free rider adjustments. As discussed, elimination of DSM measures with relatively low customer incentives in the achievable potential stage is unrelated to the adjustment for potential free riders at the economic potential stage. Based on the reasons stated above, staff believes the continued use of the two-year payback period criterion used to establish goals is reasonable. A separate analysis related to whether a different free-ridership criterion applicable to low-income customers is reasonable appears below.

Customer Education

Customer education has been, and continues to be, a critical component for promoting EE programs. Under direction from the Commission, all of the FEECA Utilities have maintained customer education programs since the 2014 Goalsetting Proceeding. (TR 603; EXH 108, 131, 203, 227, 249) SACE witness Grevatt argued that lack of awareness of DSM measures and the

related potential savings benefits acts as a non-financial market barrier that prevents customers from investing in EE and DSM measures. (TR 946-948) Staff believes education remains an integral part of promoting conservation and DSM programs for all customers. The FEECA Utilities should be encouraged to continue their educational efforts, including information on measures with paybacks of two years or less and behavioral changes that customers can follow to save energy.

Low-Income Customers

SACE witness Bradley-Wright contends that the use of a two-year payback screen impacts low-income customers because free ridership assumptions do not apply to this group of customers. (TR 1001) Witness Bradley-Wright argues that low-income customers, due to their financial constraints and housing conditions, have an effective payback period of zero or near zero. SACE witness Grevatt adds that low-income customers may not purchase EE measures with a two-year payback because of short-term or other financial pressures. (TR 946) Witness Bradley-Wright proposed the Commission evaluate the savings potential for low-income customers, in part, by removing the two-year payback screen used by the FEECA Utilities accounting for free riders. (TR 1008)

TECO witness Roche testified that one of the reasons he does not support SACE witness Bradley-Wright's alternative method for evaluating low-income DSM measures is because the removal of the free ridership screen would ignore Florida law. (TR 1376, 1386) Witness Roche states that, if the free ridership consideration were removed, the amount of cost-effective DSM goals would be inflated. (TR 1376)

Staff reviewed both the applicable statute and rule. Section 366.81, F.S., requires efficient and cost-effective renewable energy systems and conservation systems in order to protect the health, safety, and welfare of the state and its citizens. Rule 25-17.0021, F.A.C., requires projection of energy and demand savings which reflect the consideration of free riders. As a means of addressing this statute and rule, the Commission has applied a two-year payback screen to eliminate free rider measures since 1994. (TR 69) SACE may be correct, in staff's view, that low-income customers have a shorter payback period than two years, but there is no evidence in this proceeding suggesting what that payback period is for each DSM measure, or how a payback screen to account for such differentiated payback periods should be implemented. Staff agrees with witness Roche that eliminating a free rider screen for low-income customers is not consistent with the cost-effectiveness mandate of FEECA as it pertains to goalsetting. Staff recommends that the two-year payback screen, applied to all cost-effective DSM measures and across all customers, low-income and otherwise, is a reasonable means of addressing free ridership for the purpose of goalsetting.

Beyond the argument for elimination of the two-year payback screen, witness Bradley-Wright posited that separate energy efficiency goals or targets for low-income customers should be established as part of the FEECA goalsetting process in this proceeding. Witness Bradley-Wright makes this argument based upon his assessment of the scale of the need within this population group. (TR 997) He estimated approximately 5 million households, or 36.7 percent of all households in the FEECA Utilities' combined service areas, have incomes at or below 200 percent of the federal poverty line. He explained that such households have high energy burdens

relative to median energy burden households. (TR 997-998) He stated energy efficiency is widely recognized as the best solution to address high energy burdens. (TR 999) Witness Bradley-Wright indicates low-income energy efficiency was a key energy policy priority in the 2014 FEECA Goalsetting proceeding, and FEECA Utilities have all pledged their support of low-income energy efficiency programs going forward. (TR 995) In order to address energy efficiency for this customer group, he suggested establishing utility efficiency programs using the TRC Test rather than the RIM Test, eliminating the two-year payback screen altogether, and setting achievable potential at 50 percent of economic potential (TR 1008). The EE goals or targets witness Bradley-Wright proposes include ten-year targets for energy savings for each of the FEECA Utilities except FPUC. (TR 1011)

FPL witness Koch disputed witness Bradley-Wright's testimony regarding DSM goals for low-income customers, arguing that separate goals or targets established for low-income customers is procedurally inappropriate. He stated that only six goals (energy, summer demand, and winter demand for residential and commercial industrial classes) are to be established per Rule 25-17.0021, F.A.C., all of which are based on totals for those respective classes. (TR 1139) Witness Koch also expressed his concern that high energy burden data for low-income households used by witness Bradley-Wright is incompatible with the central concern addressed in this proceeding, electric utility DSM goals. In this regard, he argued that the data witness Bradley-Wright relies upon contains all sources of household energy and transportation, and is based on national rather than regional data sets. (TR 1135) Witness Koch stated that witness Bradley-Wright lacks support for his statement that energy efficiency is widely recognized as the best solution to address high energy burdens. He further stated that potential actions to raise rates resulting from the adoption of non-cost effective DSM would be of concern to low-income customers and would not constitute a "best" strategy. (TR 1138) He disagreed as well with witness Bradley-Wright's estimate of the number of low-income households, stating that the percentage of households meeting the federal poverty guidelines for FPL is closer to 20 percent rather than 37 percent. (TR 1145) Witness Koch testified that witness Bradley-Smith's proposed low-income goals would result in a significant increase in customer ECCR rates, including increasing the energy burden on the majority of low-income customers (non-participants). (TR 1144-1145)

Staff agrees with FPL witness Koch that the current rule does not contemplate separate goals for low-income customers, which represents a procedural issue for adopting such goals. Rule 25-17.0021(1), F.A.C., states, in part, "Overall Residential KW and KWH goals and overall Commercial/Industrial KW and KWH goals shall be set by the Commission for each year over a ten-year period." The rule clearly indicates that the goals to be established by the Commission apply to the entire customer class rather than a subset of the class. In addition, the testimony in this case regarding the impact of SACE's low-income goals indicates that establishing low-income goals can be expected to result in higher rates overall for the general body of ratepayers, including low-income customers who do not participate in DSM programs. Staff recommends that SACE's argument for establishing separate goals for low-income customers is inconsistent with the Commission's rule and can negatively impact customer rates and is, therefore, not persuasive.

Conclusion

Staff recommends that the two-year payback screen is a reasonable method to account for free riders in determining conservation goals in this proceeding. Further, staff recommends the Commission direct each utility to continue in their education and outreach efforts for all ratepayers, with an emphasis on low-income communities. These efforts should educate all customer groups on energy efficiency opportunities, with a specific emphasis on behavioral changes and efficiency measures with a payback period of two years or less.

Issue 8: What residential summer and winter megawatt (MW) and annual Gigawatt-hour (GWh) goals should be established for the period 2020-2029?

Recommendation: The Commission should establish residential numeric conservation goals based upon a cost-effectiveness analysis that allows all ratepayers, both participants and non-participants, to benefit from DSM measures. The annual conservation goals should be based upon the RIM and Participants Tests, as this combination addresses concerns regarding subsidies between those who can participate in DSM measures and those who cannot, such as renters and low-income households. Consistent with staff’s recommendations in Issues 5 and 7, the goals should use no cost for carbon emissions and a two-year payback as a free-ridership screen should be included. As goals are RIM Test based, the FECCA Utilities should not be eligible for rewards for exceeding their goals. (Doehling, Ellis, Higgins, Wooten, Wu)

Position of the Parties:

FPL: The Commission should approve the following residential Goals for the period 2020-2029:

Year	Summer MW		Winter MW		Annual MWh	
	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative
2020	24.0	24.0	20.7	20.7	12	12
2021	24.0	48.1	20.7	41.5	12	23
2022	24.0	72.1	20.7	62.2	12	35
2023	24.0	96.1	20.7	82.9	12	47
2024	24.0	120.1	20.7	103.7	12	58
2025	24.0	144.2	20.7	124.4	12	70
2026	24.0	168.2	20.7	145.1	12	81
2027	24.0	192.2	20.7	165.9	12	93
2028	24.0	216.2	20.7	186.6	12	105
2029	24.0	240.3	20.7	207.4	12	116

GULF: The Commission should approve the Company’s proposed goals totaling zero summer and winter MW and zero GWh for the period 2020-2029. Gulf’s goals (i) reflect the Company’s resource planning process; (ii) reflect all costs and benefits to participants and the general body of customers; (iii) account for free riders; and (iv) avoid cross-subsidization of participants by non-participants. Additionally, Gulf’s goals properly reflect the evolving role for utilities in offering energy efficiency and diminishing cost-effectiveness results.

FPUC: The Commission should establish no annual goals, or goals of zero, for the period 2020-2029. The Company should, nonetheless, be allowed to file a DSM Plan to the extent any of its current programs, when updated, remain cost-effective under the Commission’s Rule. To the extent an existing program may

remain cost-effective, continuation of such program would be consistent with FEECA.

DEF:

DUKE ENERGY FLORIDA - PROPOSED RIM GOALS 2020-2029			
	Winter Peak MWs	Summer Peak MWs	GWHs
Residential	78	108	115

OUC:

The PSC should establish goals of zero for OUC for residential summer and winter peak demand (“MW”) reductions and annual gigawatt-hour (“GWh”) savings.

JEA:

No residential DSM measures passed the RIM test. Accordingly, the Commission should establish goals of 0 MW (summer and winter) and 0 MWh (annual energy) for the residential class.

TECO:

Tampa Electric proposes the residential summer and winter Megawatt (MW) and annual Gigawatt-hour (GWh) goals in the chart below be established for the period 2020-2029:

Tampa Electric's 2020-2029 Proposed Residential DSM Goals at the Generator			
Year	Summer Demand (MW)	Winter Demand (MW)	Annual Energy (GWh)
	Incremental	Incremental	Incremental
2020	4.7	2.58	9.3
2021	4.9	2.57	9.6
2022	5.0	2.56	9.7
2023	5.2	2.56	10.0
2024	5.4	2.55	10.3
2025	5.6	2.54	10.7
2026	5.8	2.54	11.0
2027	6.0	2.53	11.3
2028	5.6	2.53	10.5
2029	6.0	2.52	11.3

The cumulative effect of these residential goals through 2029 would be a summer MW reduction of 54.0 MW, a winter MW reduction of 25.5 MW and cumulative energy savings of 103.6 GWh.

OPC:

The companies rely too heavily on the RIM test as the sole criteria for establishing the achievable potential for each company. The Commission should give some weight to and consider the TRC test results as well. If the

Commission relies upon the companies’ proposed RIM goals or approves goals that are lower than the RIM-achievable potential, OPC submits there should be no rewards for exceeding those goals. The summer and winter megawatt and annual gigawatt-hour goals for residential customers should reflect these considerations, although OPC does not propose specific numeric amounts.

FDACS: The residential summer and winter megawatt (MW) and annual Gigawatt-hour (GWh) goals proposed by the FEECA Utilities for the 2020-2029 period appear appropriate. The Commission, however, should continue to balance the goal of energy efficiency and conservation with the impact of the costs and benefits of these programs on the rates and overall bills of all the FEECA Utilities’ rate-payers, particularly low-income customers.

SACE & LULAC: The Commission should approve the corrected Bills test analysis goals contained within Witness Grevatt’s testimony and additionally corrected for Florida Power & Light, and, as a subset of those goals, approve specific goals for low-income communities consistent with the testimony of Witness Bradley-Wright. These goals are presented below. As bills are driven by energy use, SACE and LULAC do not propose specific MW goals for low-income customers, only GWh goals.

Utility	Incremental Annual Energy Savings (GWh)										Total
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
FPL^	136	162	162	162	162	162	162	162	162	162	1,594
Duke	68	135	166	166	166	166	166	166	166	166	1,530
TECO	22	34	34	34	34	34	34	34	34	34	323
Gulf	15	31	42	42	42	42	42	42	42	42	381
Orlando	8	16	16	16	16	16	16	16	16	16	155
JEA	14	28	37	37	37	37	37	37	37	37	336

Utility	Summer Peak MW										Total
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
FPL^	59	70	70	70	70	70	70	70	70	70	689
Duke	29	59	72	72	72	72	72	72	72	72	663
TECO	4	7	7	7	7	7	7	7	7	7	64
Gulf	3	7	9	9	9	9	9	9	9	9	83
Orlando	2	4	4	4	4	4	4	4	4	4	37
JEA	3	7	9	9	9	9	9	9	9	9	80

Date: October 24, 2019

Utility	Winter Peak MW										Total	
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
FPL^	22	26	26	26	26	26	26	26	26	26	26	256
Duke	13	27	33	33	33	33	33	33	33	33	33	303
TECO	3	5	5	5	5	5	5	5	5	5	5	51
Gulf	3	6	9	9	9	9	9	9	9	9	9	79
Orlando	1	2	2	2	2	2	2	2	2	2	2	19
JEA	2	4	5	5	5	5	5	5	5	5	5	49

^All values are from Exhibit JMG-2, except for FPL which includes the addition of the 50% of the economic potential (representing the achievable potential) of the two-speed pool pump and SEER 21 ASHP vs electric resistance heat spread out over the ten-year period (63 GWh per year, 31 summer MW per year, and 11 winter MW per year)

Utility	Residential Low-Income Incremental Annual Energy Savings (GWh) Goals as a Subset of the Residential Goals (included in the total noted above) (from Table 4 of Forest Bradley-Wright Testimony)										10-Year Total	
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
FPL	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	395
Duke	57.2	57.2	57.2	57.2	57.2	57.2	57.2	57.2	57.2	57.2	57.2	572
TECO	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	117
Gulf	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	133
Orlando	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	67
JEA	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	125

PCS: Duke Energy Florida’s proposed residential summer and winter megawatt and annual Gigawatt-hour goals for 2020-2029 are a reasonable balance of FEECA’s express goals and costs and rate impacts to Florida consumers and should be approved.

WALMART: No position.

FIPUG: The Commission should set goals that balance the importance of pursuing conservation programs against their cost and the impact of that cost on rates.

Parties' Arguments

The FEECA Utilities propose goals based upon the achievable potential of those measures that pass both the RIM Test and the Participants Test. (FPL BR 37-38; DEF BR 5; TECO BR 3; GULF BR 3; FPUC BR 17; JEA BR 17; OUC BR 3) Gulf, FPUC, JEA, and OUC propose residential goals of zero based on the technical analysis performed. (Gulf BR 26; FPUC BR 7; JEA BR 17; OUC BR 3) Several FEECA Utilities argue that while the proposed conservation goals are lower than the prior goalsetting proceeding, this is reasonable due to reduced cost-effectiveness of measures and changes in Codes and Standards. (FPL BR 41; Gulf BR 1-2; FPUC BR 13; OUC BR 5) JEA and OUC state they will continue to offer DSM programs to customers, but argue that the Commission should impose RIM Test based goals to give them the flexibility to determine the level of investment desired by the local community. (JEA BR 2-3, 9; OUC BR 3-4)

The FEECA Utilities propose to continue and/or expand programs that target low-income customers. (FPL BR 38; DEF BR 10; TECO BR 14-15; GULF BR 27-28; FPUC BR 17-18; JEA BR 9; OUC 43) Several FEECA Utilities argue against the establishment of separate goals for low-income customers, as they contend it is unnecessary, is inconsistent with or beyond the scope of FEECA, may increase rates, or is unsupported by data in this proceeding. (FPL BR 4-5, 46-47; DEF BR 10-12; TECO BR 13-15; GULF BR 8, 28-30; JEA BR 17-18; OUC BR 40-44)

OPC contends that the FEECA Utilities' sole reliance on the RIM Test is improper because it reduces or eliminates numeric conservation goals compared to prior goalsetting proceedings. (OPC BR 6-7) OPC does not propose specific goals, but recommends the Commission use the results of both the RIM and TRC Tests to establish goals and consider low-income programs. (OPC BR 16-17) OPC proposed that if the Commission approves goals based on the RIM Test, then the FEECA Utilities should not be eligible for financial rewards for exceeding their goals. (OPC BR 17)

FDACS supports the FEECA Utilities' proposed residential goals. (FDACS BR 14) FDACS suggests the Commission require the FEECA Utilities to maintain and continue developing programs for customer education along with those targeted to low-income customers. (FDACS BR 14-15) FDACS further suggests that the FEECA Utilities increase data tracking of these program costs and savings. (FDACS BR 14-15)

SACE & LULAC argue that the FEECA Utilities cannot set conservation goals of zero or near zero, as they assert zero or near zero goals are not intended by the Legislature. (SACE & LULAC BR 2, 47-48) SACE & LULAC contend that the FEECA Statute does not allow the Commission to use the RIM Test, referred to as the "Lost Sales Test," to determine cost-effectiveness for goalsetting when it results in a zero value. (SACE & LULAC BR 12-13)

SACE & LULAC acknowledge that SACE witness Grevatt's proposed goal of 1.5 percent of energy savings is not based on a Florida-specific analysis. (SACE & LULAC BR 6) Therefore, SACE & LULAC propose goals based on witness Grevatt's attempted correction of the FEECA Utilities' TRC goals analysis. (SACE & LULAC BR 6) SACE & LULAC assert that while the TRC Test may result in upwards pressure on rates, customers will have an opportunity to participate in programs to reduce usage and therefore reduce bills. (SACE & LULAC BR 39-40)

SACE & LULAC also propose that the FEECA Utilities have separate goals established for low-income customers to meet the particular needs of those customers. (SACE & LULAC BR 6-7) SACE & LULAC further contend that FEECA Utilities with zero or near zero goals may not be able to legally recover costs for low-income programs if they do not have specific goals for low-income achievements. (SACE & LULAC BR 22-23)

PCS supports DEF's proposed residential goals. (PCS BR 2, 4). FIPUG does not propose any specific goals, but supports cost-effective measures, especially DR. (FIPUG BR 5) Walmart took no position regarding the residential goals to be established.

Analysis

Section 366.81, F.S., states in part that:

The Legislature finds and declares that it is critical to utilize the most efficient and cost-effective demand-side renewable energy systems and conservation systems in order to protect the health, prosperity, and general welfare of the state and its citizens. Reduction in, and control of, the growth rates of electric consumption and of weather-sensitive peak demand are of particular importance.

The FEECA Statute then goes on to task the Commission with the responsibility to establish appropriate goals and require the FEECA Utilities to develop and implement plans and programs to accomplish these goals. As outlined in Section 366.82(3), F.S., and Rule 25-17.0021(3), F.A.C., the Commission must consider multiple factors when determining the FEECA Utilities' annual numeric conservation goals, including those discussed in Issues 1 through 7.

Goal Development

Pursuant to FEECA, the Commission is tasked with establishing appropriate and cost-effective conservation goals. As with the 2009 and 2014 Goalsetting Proceedings, this is accomplished by a review of the technical potential, economic potential, and achievable potential of each FEECA Utility. As required by 366.82(3), F.S., and discussed in Issue 1, the FEECA Utilities first developed the technical potential, which represents the theoretical maximum conservation possible without consideration of economics. Next, pursuant to the OEP, each of the FEECA Utilities developed economic potential values for the RIM and TRC Tests pathways, similar to the methodology used in the 2009 and 2014 Goalsetting Proceedings. FEECA Utilities witness Herndon defined economic potential as follows:

[Economic Potential] is a subset of [Technical Potential], which assumes every identified potential end-use measure is installed everywhere it is "economically" feasible to do so, regardless of customer acceptance, or any other real-world constraints (such as product availability, contractor/vendor capacity, normal equipment replacement rates, or customer preferences).
(TR 334)

Last, the achievable potential was developed, which represents the inclusion of all factors, including projected customer participation rates at given incentive levels, and represents the amount that can be cost-effectively achieved by voluntary measure adoption. (TR 74-78, 337-

339, TR 869-873) Nexant performed the economic and achievable potential analyses for all utilities excluding FPL and TECO, which performed their own analyses after the technical potential. (TR 321) DEF and Gulf conducted their own measure screening and provided Nexant with the results, which it used to determine the final achievable potential values. (TR 321)

Factors Influencing DSM Goals

Utility DSM represents an alternative resource to supply-side generation to meet customer needs, but must be evaluated while considering the economics and reliability impacts for Florida's FEECA Utilities. (TR 54) FPL witness Koch acknowledged that as utility DSM programs will ultimately be funded by the general body of ratepayers, they should be cost-effective to ensure fairness for all customers, including both DSM participants and non-participants. (TR 54) DSM program savings are determined by voluntary customer participation, which may be driven by multiple factors, unlike efficiency through Codes and Standards which affects all customers. (TR 56, 76)

Multiple utility witnesses asserted that there has been a decrease in the cost-effectiveness and availability of DSM for most utilities since the 2014 Goalsetting Proceeding. (TR 212-213, 431, 603-604, 828-829). Specific areas that have reduced the current cost-effectiveness of DSM measures include Codes and Standards (Issue 1), GHG emissions (Issue 5), load forecasts, and a reduction in avoided costs for generation and fuel. A majority of these factors are beyond any individual utility's control, and may represent outside market forces or regulatory requirements. More stringent Codes and Standards reduce the incremental savings available for the FEECA Utilities. Lower avoided costs reduce the savings of measures, decreasing the amount of incentives that can be offered or making the measure not cost-effective. The impact of these changes reduce the potential for utility-sponsored DSM in Florida as compared to the 2014 Goalsetting Proceeding. No intervenors offered evidence contrary to the decline in DSM cost-effectiveness and staff recommends the evidence provided demonstrates that cost-effectiveness has declined.

Load Forecast

The FEECA Utilities' load forecast served as the foundation of all seven FEECA Utilities' DSM goalsetting analyses. (EXH 26-32) Section 366.82(3), F.S., requires "[i]n developing the goals, the commission shall evaluate the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems." Therefore, as discussed in Issue 1, the first step in the DSM goals development process is to analyze the TP so as to identify the theoretical limit to reducing summer and winter electric peak demand and energy. (TR 325) The TP is derived from utility load forecasts and DSM measure impacts (energy and demand savings). (TR 322) FEECA Utilities witness Herndon indicated that TP for DR is effectively the total of customer loads that could be curtailed during conditions when utilities need capacity reductions. (TR 325, 328). The results of the load forecasts exhibit the direct impact Codes and Standards have on the final DSM goals developed. For example, FPL's recent annual net energy for load (NEL) forecasts have been lower than they otherwise would have been due to the improved Codes and Standards. (TR 227) This means that FPL will be serving fewer MWh annually, thus, less opportunity exists to apply kWh reductions

from utility DSM to FPL's system, further lowering the potential benefits of kWh reductions from utility DSM. (TR 227)

For the instant goals proceeding, the FEECA Utilities collectively retained Nexant to conduct the TP analysis. FEECA Utilities witness Herndon of Nexant indicated that he had performed a high level review of documents from the 2009 and 2014 FEECA Goalsetting Proceedings and the 2009 TP studies developed by ITRON. (EXH 101, 125, 152, 170, 196, 219, 242) Witness Herndon claimed that the overall approach Nexant used for preparing the Market Potential Study Report in the current FEECA goals proceeding for each utility is generally similar to what was used by ITRON in developing the TPs in the 2014 goals proceeding. (EXH 101, 125, 152, 170, 196, 219, 242) Both of these studies based each utility's TP (except FPUC and OUC) in part on its base load forecast.^{16,17} (EXH 101) Nexant used each utility's 2017 Ten-Year Site Plan (TYSP) as its primary data source for the load forecasts.¹⁸ (TR 326; EXH 152) The 2017 TYSPs were used because they were the most current site plans available at the time the Market Potential Studies of the utilities were initiated. (TR 326, 367; EXH 26) Nexant then supplemented the TYSP data with existing secondary data to create a disaggregated utility load forecast broken out by customer-class, end-use, and equipment type.¹⁹ (EXH 101) This disaggregated forecast forms the basis for the development of market potential.²⁰ (TR 320-322; EXH 101, 125, 152, 170, 196, 219, 242)

Witness Herndon asserted that Nexant's approach for load disaggregation to identify DR opportunities is more advanced than what is used for most potential studies. (TR 328) Typically, only consumption or peak demand values from billing data will be disaggregated to identify DR opportunities. In contrast, Nexant disaggregates the load for every hour of the year using Advanced Metering Infrastructures data. Witness Herndon claimed that this more precise approach is superior because the loads available at times when needed can vary substantially. (EXH 101, 125, 152, 170, 196, 219, 242) Staff recommends that Nexant's approach is appropriate to be used in the instant proceeding.

With respect to NEL forecasts provided to Nexant for TP analyses, the majority of the FEECA Utilities have projected lower levels of NEL compared with their projections in the 2014 goals proceeding. Collectively, the total NEL of the FEECA Utilities, excluding FPUC and OUC, forecasted in the current goals proceeding is reduced over the current goals period, as shown in Table 8-1. (EXH 157, 202) For the 2014 proceedings, both FPUC and OUC requested to use, and the Commission approved their use of, a proxy methodology in goals development; thus, these

¹⁶2014 Goalsetting Order, Pp. 4-5.

¹⁷A primary difference noted between the two studies appears to be that the ITRON study applied measure savings to individual units of consumption (e.g., end-use appliance), while the Nexant study applied measure savings as a percentage of the baseline energy consumption (e.g., residential class) for the disaggregated utility load forecast.

¹⁸FPUC does not develop a TYSP. Nexant relied on the then-currently available load forecast provided by FPUC in response to Nexant's data request in October 2017.

¹⁹Secondary data included Energy Information Administration (EIA) end-use modeling, EIA Commercial Building Energy Consumption Survey and EIA Manufacturing Energy Consumption Survey that was used when the utility did not have data available for a portion of the forecast disaggregation.

²⁰Nexant only considered the baseline load forecast contained in the utility TYSP in developing the disaggregated load forecast for 2020, which is the first year of the 2020-2029 DSM goals study period.

utilities did not prepare NEL forecasts. Consequently, there are no baselines against which to make a comparison of load forecasts for FPUC and OUC.

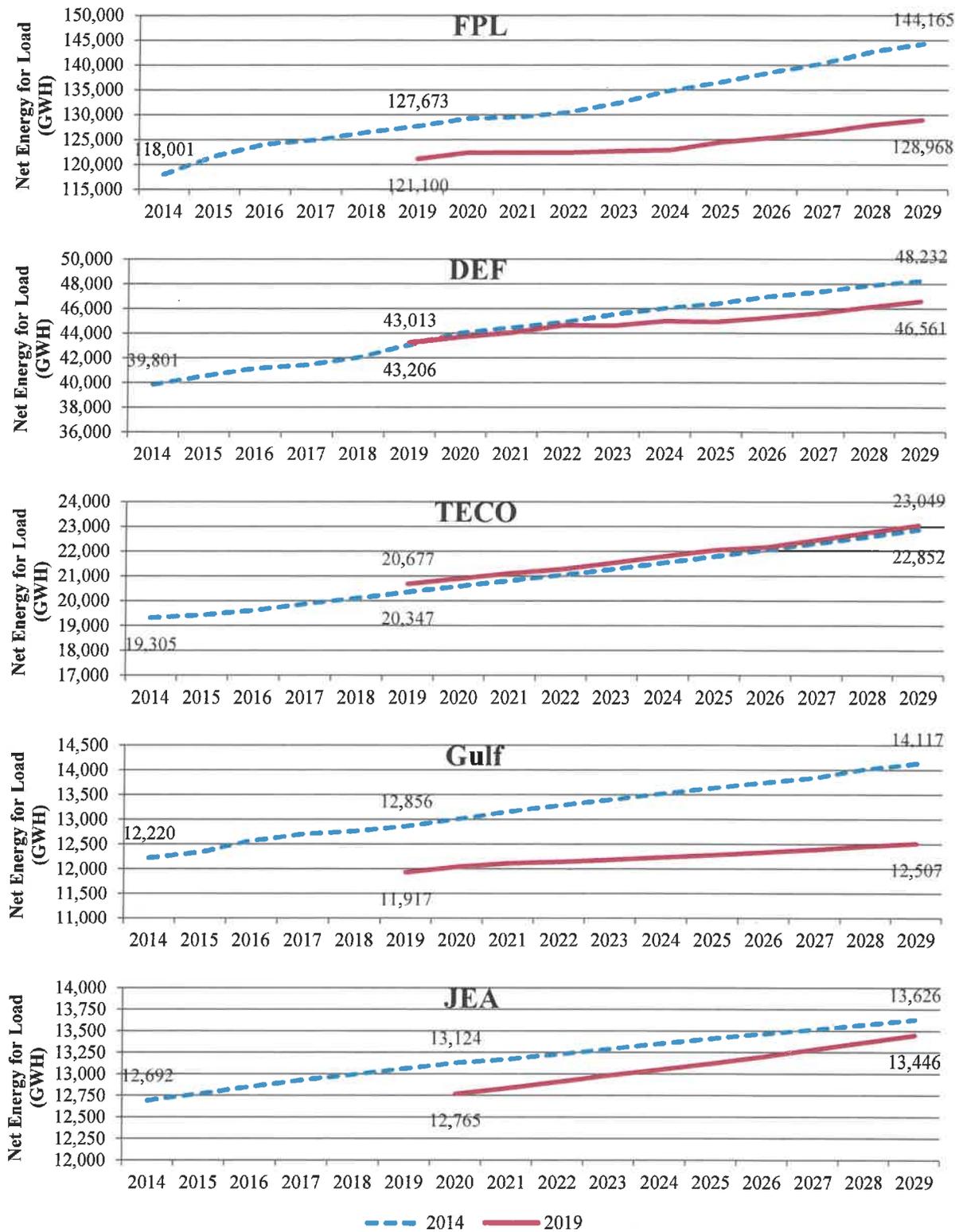
Table 8-1
Comparison of the Total Net Energy for Load (GWh)
Forecasts of FPL, Gulf, DEF, JEA and TECO

Year	Forecast Used in 2014 Goals Proceeding	Forecast Used in Current Goals Proceeding	Difference
2024	229,225	214,871	-14,354
2029	242,992	224,531	-18,461

Source: EXH 106, 130, 174, 226, 246

Figure 8-1 further depicts the trends of NEL that the FEECA Utilities, excluding FPUC and OUC, projected in the 2014 and the current goals proceedings. As can be seen, NEL forecasts of FPL, DEF, Gulf, and JEA are all lower than what the utilities presented in the 2014 goals proceeding; only TECO proffered a slightly higher forecast for the instant proceeding.

Figure 8-1 - Load Forecast Comparison



Source: EXH 106, 130, 174, 226, 246

In response to staff's discovery, FPL explained that, for the 2020-2030 forecast period, NEL as well as summer and winter peak demand forecasts filed in the current goals proceeding have smaller compound growth rates than the forecasts filed in the 2014 goals proceeding, and the decline in forecast growth rates began following the 2007-2009 Great Recession. (EXH 106) FPL stated that the lower NEL is the result of the continuing impact of Codes and Standards, particularly more efficient air conditioning and LED lighting. (EXH 106) In general, lower projected NEL leads to lower benefits for DSM measures, since lower NEL leads to lower overall system variable costs and reduces the impact of these costs from DSM. (TR 224-229; EXH 106)

DEF indicated that the current load forecast incorporates the history of the recovery from the Great Recession which, while long and sustained, has been slower than the economic expansion which preceded 2008. DEF asserted that the last ten years have exhibited lower customer usage rates for both energy and peak demand due to increasing energy efficiency and changes in customer behavior over that period, and these trends are more fully captured in the current load forecast. (EXH 174) DEF also stated that the lower expected growth in NEL leads to a lower value for DSM program goals in the current proceeding compared to the goals presented in the 2014 goals proceeding. (EXH 174)

Gulf projected slower growth in NEL, summer peak demand, and winter peak demand compared to Gulf's growth rates in the 2014 goals proceeding. Gulf averred that the decreased load forecast affects the proposed DSM goals in two ways: reducing the potential energy and demand reductions available from utility-sponsored DSM initiatives, and decreasing the cost-effectiveness of DSM measures. (EXH 130)

JEA's forecast of NEL was lower than the forecast adopted in the 2014 goals proceeding, although JEA's current forecast of NEL yields an annual growth rate of NEL to be slightly higher (0.58 percent versus 0.42 percent for the instant and 2014 proceedings, respectively) over the 2020 through 2030 period. (EXH 226) JEA indicated that all else being equal, the trends in JEA's NEL, as well as summer and winter peak loads, would reduce the amount of cost-effective conservation and energy efficiency measures. (EXH 226)

For TECO, the annual growth rate of NEL was 0.1 percent lower than that of the 2014 goals proceeding, and the growth rates for summer and winter peak demands are 0.2 percent higher than that of the 2014 proceeding. (EXH 246) TECO explained that the cause for the slower growth in NEL in the current proceeding is primarily due to projected declines in phosphate loads, and the slightly stronger growth in the peak demand is primarily due to a stronger customer growth projection. (EXH 246) TECO also indicated that the trends for slower growth in NEL would cause the conservation and energy efficiency measures to be slightly less cost-effective, while the slightly stronger growth in peak demands would cause a slight increase in cost-effectiveness. (EXH 246)

SACE witness Grevatt asserted that "[i]n developing estimates of technical potential [...] Nexant already accounted for naturally-occurring efficiency." (TR 947) The load forecasting process relies upon historic customer energy usage to predict future energy consumption. Historic customer behavior reflects the naturally occurring efficiency adoption, thus, the load forecasts'

estimates of future energy consumption include the impact of naturally occurring efficiency adoption above baseline Codes and Standards. (EXH 118) Staff notes that all the utilities indicated such impact is included in their load forecasts, with an emphasis that the impact is implicitly, not explicitly, captured in their load forecasts.²¹ (EXH 117, 118, 142, 143, 181, 182, 312, 327, 238, 257, 258)

Staff notes that the load forecasts utilized by the FEECA Utilities in the current goals proceeding are identical with those provided in the utilities’ 2017 TYSPs. Staff has reviewed the information presented in this proceeding including the forecasting methods, major assumptions, key data sources, and the criteria utilized to develop and evaluate the forecasts. Staff has also reviewed the changes, and/or improvements, between the forecasts adopted in the 2014 and the current proceedings, and among the more recent TYSPs and other Commission dockets. (TR 145-151, 155, 156, 224-226, 320, 326; EXH 26, 32, 101, 104, 106, 111, 114, 117, 118, 125, 130, 135, 142, 143, 152, 157, 162, 169, 170, 174, 181, 182, 196, 202, 208, 213, 214, 219, 226, 231, 237, 238, 242, 244, 246, 252, 257, 258) Based on the record and the discussion above, staff recommends that load forecasts utilized by the FEECA Utilities in the current proceeding are appropriate for the purpose of DSM goalsetting.

Avoided Generation, Transmission and Distribution

With reduced load forecasts there is a potential for delayed avoided generation. DEF witness Cross notes that an avoided unit further out is a primary influence on cost-effectiveness. (TR 605) The record shows that there is an even split of natural gas-fired combined cycle (CC) avoided units and natural gas-fired combustion turbine (CT) avoided units. Table 8-2 illustrates the-in-service date, type, and capacity of the avoided units in this goals proceeding and the 2014 Goalsetting Proceeding.

**Table 8-2
 Avoided Units**

Company	FPL	DEF	TECO	Gulf	OUC	JEA
2019 Proceeding (2020 – 2029)	2026 CC (1,886 MW)	2027 CT (233 MW)	2023 CT (229 MW)	2024 CC (595 MW)	2032 CC (650 MW)	2029 CT (223 MW)
Years from Start	6 Years	7 Years	3 Years	4 Years	12 Years	9 Years
2014 Proceeding (2015 – 2024)	2019 CC (1,269 MW)	2015 CT (214 MW)	2019 CT (190 MW)	2023 CC (750 MW)	N/A	2036 CT (193 MW)
Years from Start	4 Years	0 Years	4 Years	8 Years	N/A	21 Years

Source: TR 442; EXH 100, 167, 194, 220, 240; 2014 Goalsetting Order

Whereas fuel prices were down universally across the FEECA Utilities, avoided generation is more variable. The avoided units for FPL and DEF are further delayed beyond their initial

²¹Utilities that provided the load forecast to Nexant for TP analysis.

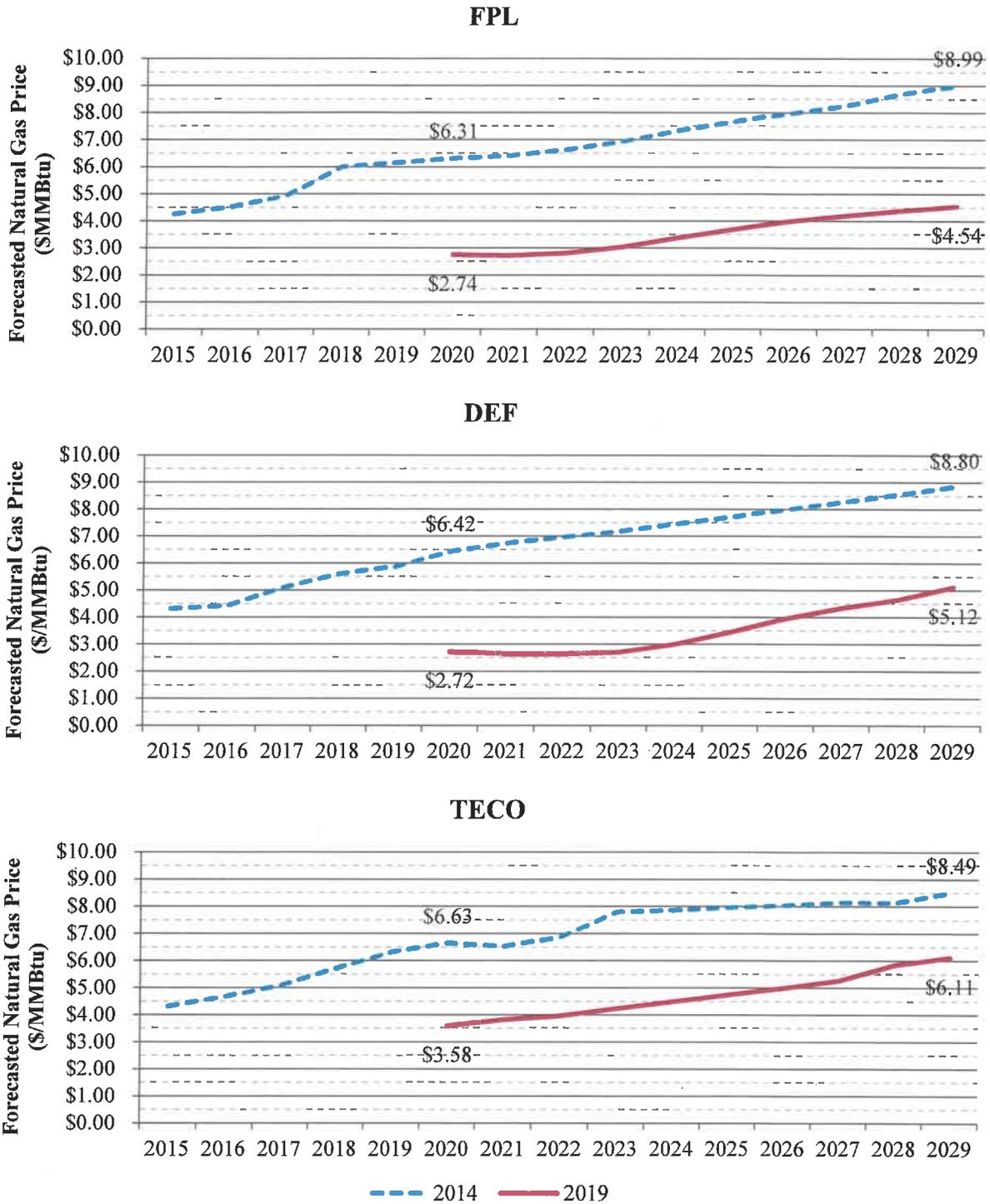
planning from the 2014 Goalsetting Proceeding, by 2 and 7 years, respectively, lessening their potential DSM impact. (EXH 100, 167) DEF's initial unit is seven years from the start of the analysis period, and later units are delayed further outside of the scope of this current proceeding. (EXH 167) The projected in-service date for OUC's avoided unit is outside of the goalsetting period, but no avoided unit was determined in 2014 as the Commission approved a proxy methodology for the 2014 Goalsetting Proceeding. (EXH 194) FPL witness Sim stated that there are decreased capital costs for avoided units in this proceeding when compared to the previous goals proceeding, which decreases the cost-effectiveness of DSM. (TR 232; EXH 23) TECO, Gulf, and DEF echoed the statement of decreased capital costs reducing cost-effectiveness of DSM. (EXH 130, 174, 246) Consequently, the delayed avoided generation and lowered avoided generation costs leads to reduced potential for cost-effective goals.

Avoided transmission and distribution costs are a supply-side factor with an effect on potential goals. TECO witness Roche testified that one of the factors elevating the potential demand goals is an increase in avoided transmission and distribution costs. (TR 831-832) Similarly, FPL witness Sim stated that the increased avoided transmission and distribution costs are projected to increase the cost-effectiveness of DSM. (TR 236-237) TECO, DEF and FPL had forecasted increased avoided transmission and distribution costs when compared to the previous goals proceeding. (EXH 24, 42, 240) OUC asserted that proposed goals are not affected by transmission and distribution costs because the only cost is that of interconnecting the avoided unit to the existing transmission. (EXH 194, 203) Likewise, the only anticipated transmission and distribution costs JEA expected are associated with connecting the avoided unit to the existing system, but the Company affirmed that an increase of costs would increase cost-effectiveness of DSM. (EXH 225) FPUC acknowledged that changes in cost of transmission and distribution have no impact on its goals. (EXH 157) Despite these increases in avoided transmission and distribution costs placing an upwards pressure on goals, the full analyses still show lowered goals for most of the FEECA Utilities, as other factors had a greater impact.

Fuel Forecast

Figure 8-2 displays the applicable system-wide average nominal natural gas price forecasts from the 2014 Goalsetting Proceeding and those used in the current proceeding for FPL, DEF, and TECO. Due to confidentiality, Gulf's forecast was not included. As illustrated in Figure 8-2, current forecasted natural gas prices for years 2020-2029 are substantially lower than those forecasted for use in the 2014 Goalsetting Proceeding. (EXH 20, 43, 107, 175, 247) FPL witness Sim noted that while a decline in fuel prices is beneficial to ratepayers, it reduces the fuel savings associated with reduced energy consumption. (TR 219) As a result, utility DSM measures focusing on energy consumption are less cost-effective, reducing potential goals.

**Figure 8-2
 Comparison of Natural Gas Price Forecasts By Utility**



Source: EXH 20, 43, 107, 175, 247

Date: October 24, 2019

During the hearing, a number of FEECA Utility witnesses were cross-examined by FIPUG and SACE & LULAC concerning the accuracy of prior fuel price forecasts. Such prior forecasts were used for company planning as well as past Commission proceedings. (TR 98, 250, 481, 623, 661) The cross-examination primarily focused on the forecast error rates of projected 2016, 2017, and 2018 natural gas prices. The projections were performed in years 2011 through 2015. Thus each projection spanned a five-year period. In general, the results showed a clear trend of over-forecasting natural gas prices for all FEECA Utilities with the exception of FPUC. Over-forecasted gas prices would tend to improve the cost-effectiveness of incremental utility DSM. FPUC was not probed for historical accuracy due to it being a non-energy generating utility. (EXH 101, 124, 168, 194, 218, 241) The methodology for calculating forecast error was not performed consistently by the FEECA Utilities. (EXH 101, 124, 168, 194, 218, 241) The primary difference was whether the forecasted price, or the actual price, represented the denominator in the rate calculation.

A review of the FEECA Utilities' (with the exception of FPUC) historic fuel forecasts regarding what likely drove the forecast errors over the recent past yielded a common theme that domestic U.S. natural gas supply had greatly increased over the relevant period (forecasts made in 2011-2015), which resulted in historically-low pricing now being experienced. (EXH 20, 43, 107, 168, 175, 247) The increased U.S. domestic supply can primarily be attributed to advancements in, and broad application of, fracking and/or horizontal drilling techniques. (EXH 20, 43, 107, 168, 175, 247)

With the exception of TECO and not including FPUC, all remaining FEECA Utilities showed improvement (i.e. closer to zero) in five-year-out error rates as the analysis bands move closer to present. (EXH 20, 43, 107, 175, 247) For example, forecasts of year 2018 which were performed in 2013, show improved error rates over forecasts of year 2017 performed in 2012. Similar patterns exist for five-year-prior forecasts of 2017 relative to five-year-prior forecasts of 2016. In other words, the error rates of more recent, equal-duration forecasts appear to be improving.

With respect to the 2019 Goalsetting Proceeding, FPL, DEF, TECO, and Gulf employed essentially the same fuel price forecasting methodology as in the 2014 Goalsetting Proceeding. (EXH 101, 124, 168, 241) JEA has utilized a similar fuel forecasting methodology for several years, but the specific methodology used for the 2019 Goalsetting Proceeding has not been previously used by JEA. (EXH 218) While OUC has utilized a similar fuel price forecast methodology for "several years." (EXH 194)

In reviewing both the methodologies and results (i.e. estimated future fuel price values) of the fuel price forecasts filed in this proceeding, staff recommends this information is suitable for the purposes of estimating the future fuel costs of electric generation for the utilities and their respective customers. (EXH 20, 101, 168, 184, 194, 218, 241, 251)

Administrative Costs

Pursuant to the DSM Manual, administrative costs are an estimated screening component that are included in the economic analysis for both the RIM and TRC Tests. SACE witness Grevatt argues that the FEECA Utilities made assumptions about average program costs per measure, which were unreasonable and resulted in inflated administrative costs in relation to the measure.

(TR 962-963) DEF, with assistance from Nexant, developed a residential and commercial cost per kWh (\$/kWh) based on the sum of actual administrative costs divided by kWh achievements. (EXH 167) FPL and TECO based administrative costs on historic administrative cost and similar measures that did not have an analog in the current measure portfolio. (EXH 100, 240) With the assistance of Nexant, Gulf estimated administrative costs using existing program costs from other FEECA Utilities and national utility program data. (EXH 126) JEA, OUC and FPUC administrative costs were exclusively calculated by Nexant, which used program cost estimates based on electric FEECA Utilities DSM programs and regional utility program data. (EXH 153, 194, 220) Gulf witness Floyd argues that the administrative costs are used for the goalsetting procedure, but are not representative of actual program administrative costs. (TR 490) OUC witness Noonan echoes this argument and states that final program administrative costs may or may not equal the estimated administrative costs used in the goals proceeding, but are used for the purpose of analysis. (TR 719) FEECA Utilities witness Herndon further clarified that administrative costs are not related to the cost of the measure. (TR 359) Because administrative costs are estimates, more refined administrative costs will be determined in the program approval proceeding. Staff has reviewed the administrative costs estimates and recommends that, based on the record, the estimates are reasonable for the purpose of setting goals.

Resulting Residential Goal Levels

FEECA Utilities

The FEECA Utilities proposed to establish annual numeric conservation goals based upon a combination of the RIM and Participants Tests. (TR 78, 430, 541, 586-7, 676-7, 755, 826-7). While the proposed conservation goals are RIM-based, staff notes many of the measures included also pass the TRC Test, as the FEECA Utilities evaluated RIM, TRC, and Participants Tests for all measures in each of the cost-effectiveness pathways. (EXH 100 BSP 00025, 167 BSP 02333-4, 240 BSP 03240) As discussed in Issues 5 and 7, no FEECA Utility included carbon costs and each FEECA Utility also adopted a two-year payback screen to address free-ridership.

For four utilities, Gulf, FPUC, JEA, and OUC, the cost-effectiveness analysis yields values of zero in one or more categories. (EXH 35, 149, 204, 228). While investor-owned utilities have proposed constrained goals before due to concerns of generation planning, this is the first instance of the cost-effectiveness analysis resulting in a value of zero for investor-owned utilities.²² Regarding whether zero goals are appropriate under FEECA, FPL witness Sim testified that zero goals are appropriate when the cost-effectiveness analysis demonstrates that no measures are cost-effective. (TR 312) The Commission has previously assigned zero goals to both JEA and OUC when no measures were found to be cost-effective under the RIM Test.²³ As supported by the record, the RIM-based goals proposed by the FEECA Utilities are based on a

²²Order No. PSC-94-1313-FOF-EG, issued October 25, 1994, in Docket No. 19930548-EG; Order No. PSC-14-0696-FOF-EU.

²³Order No. PSC-04-0768-PAA-EG, issued August 9, 2004, in Docket No. 20040030-EG, *In re: Petition for approval of numeric conservation goals by JEA*, Order No. PSC-04-0767-PAA-EG, issued August 9, 2004, in Docket No. 20040035-EG, *In re: Petition for approval of numeric conservation goals by Orlando Utilities Commission*.

technical review of a measure-by-measure analysis taking into account numerous factors in a bottom-up approach, without a dictated end point.

SACE witness Grevatt argued that the RIM Test is not a cost-effectiveness test, and should not solely be relied upon for determining conservation goals. (TR 934) FEECA Utilities witness Deason testified that cross-subsidization and rate impact concerns have encouraged the use of the RIM Test to establish goals before, and it has been utilized in every goalsetting proceeding except one since 1994. (TR 1047-1048) JEA witness Wucker argued that relying on RIM eliminates DSM goal-related upward pressure on customer rates that would affect municipal utilities and allow local government the latitude to determine the level of investment in DSM desired. (TR 1344) SACE witness Grevatt testified that no other state relies on the RIM Test as the sole or primary test for cost-effectiveness. (TR 944-945) FEECA Utilities witness Deason argued that other states may be subject to laws and rules that differ from FEECA, and are therefore not germane to the discussion of what goals should be established pursuant to FEECA. (TR 1054-1055) Gulf witness Floyd asserted that each state has unique circumstances and methods for establishing DSM goals, and that other states still consider the RIM Test in the goalsetting process. (TR 1289) Based on the record above, staff recommends that the RIM Test, as outlined in the DSM Manual, is an adequate cost-effectiveness test to determine whether customer rates will be impacted and that an outcome of zero for the measures evaluated should not eliminate its usage in Florida for goalsetting.

In its post-hearing brief, SACE & LULAC argue that FEECA does not allow the use of the RIM Test to determine goals if the RIM Test goals are calculated to be zero. (SACE & LULAC BR 12-13) Further, SACE & LULAC argue that zero goals themselves are inappropriate and not allowed by FEECA. (SACE & LULAC BR 47-48) On cross-examination, witnesses were asked whether a goal value of zero meets the intent of FEECA. (TR 312, 509-510) FPL witness Sim stated that values of zero are within the intent of FEECA as it uses the terms “appropriate” and “cost-effective” to refer to the goals. (TR 312) Gulf witness Floyd asserted that the zero value was the outcome of the process to determine goals based on what is cost-effective and reasonably achievable. (TR 509-510) On cross-examination, witnesses were also asked whether the companies would still achieve energy savings if their goal was zero. (TR 504, 1090) Gulf Witness Floyd responded that energy savings would still occur from energy-audits which educate customers on conservation, but that those savings are not counted towards the numeric energy goals. (TR 504) FEECA Utilities witness Deason testified that there is a continued need for the FEECA Utilities to engage in customer outreach and education efforts. (TR 1090) Further, witness Deason stated that in determining appropriate goals the Commission should consider cost-effectiveness. (TR 1093-1094) Staff agrees that goal values of zero are sometimes appropriate, as the Commission must consider all the factors required by Section 366.82(3)(a) through (d), F.S. By continuing customer education through energy audits and other means, the FEECA Utilities meet the intent of FEECA.

Intervenor Proposals

SACE & LULAC jointly proposed alternative annual numeric energy goals.²⁴ SACE witness Grevatt critiqued how the FEECA Utilities conducted the TRC Tests, which he argued fails to properly account for all utility and participant impacts and therefore understates the amount of conservation savings. (TR 967-968) SACE witness Grevatt proposed two potential sets of annual numeric conservation goals if the Commission does not require the FEECA Utilities to redo their TRC analysis pursuant to his recommendations. (TR 968)

SACE witness Grevatt's recommendation was for the Commission to establish energy savings goals based on the 2018 achievements of two utilities in the Carolinas and Arkansas, Duke Energy Carolinas (DEC) and Entergy Arkansas (EA), with demand goals to be set in a later proceeding. (TR 968, 973-974) Witness Grevatt proposes goals based upon a percentage of NEL, ramping up to annual savings of 1.5 percent of NEL. Such a proposal would yield a goal of 46,782 GWh. By comparison, DEF and OUC had combined retail energy sales in 2018 of 45,913 GWh. (EXH 183, 207) FPL witness Koch and DEF witness Cross argued DEC and EA are not comparable peer utilities and that the NEL percentages for DEC are atypical for that utility, and the savings primarily represent behavioral programs not considered in this proceeding. (TR 1150-1154, 1307-1308) In its brief, SACE & LULAC also do not support witness Grevatt's 1.5 percent of NEL goals as they are not the result of Florida-specific data. (SACE & LULAC BR 6) Staff agrees with the FEECA Utilities and SACE & LULAC, that as the proposal is not based on Florida-specific data; it is not comparable and should not be used for goalsetting.

SACE witness Grevatt also provided another potential set of DSM goals, which he referred to as the "partially-corrected" TRC achievable potential (Modified TRC Goals), based on the FEECA Utilities' TRC economic potential analyses. Witness Grevatt made modifications with the intent of removing the effects of the two-year payback and assuming that 50 percent of the economic potential value represents the achievable potential. (TR 970-972) SACE witness Grevatt argued that this represents a partial correction of the FEECA Utilities' analyses; therefore, his NEL proposal, as discussed above, should be used. (TR 972) Nevertheless, SACE & LULAC adopt the Modified TRC Goals as their proposed goals for this proceeding in their brief. (SACE & LULAC BR 6)

FEECA Utilities witness Herndon, Gulf witness Floyd, and DEF witness Cross argued that the Modified TRC Goals are analytically unsound because they use a simple percentage from a single utility to apply to all utilities, use a ratio of economic potential to achievable potential based on non-Florida studies, and remove consideration of free-ridership. (TR 1115-1116, 1280, 1311-1312) FEECA Utilities witness Deason, Gulf witness Floyd, and TECO witness Roche stated that other factors such as climate, population, state building codes, rates, utility planning practices, regulatory guidelines and requirements, and historic achievements may affect utilities in other states. (TR 1098, 1278, 1373) Staff agrees with the concerns expressed by the FEECA Utilities' witnesses regarding SACE & LULAC's Modified TRC Goals, as it is based on applying non-Florida specific achievements to the percent of economic potential that is achievable potential, and does not consider free-ridership.

²⁴SACE & LULAC propose goals for all FEECA Utilities excluding FPUC, as they did not intervene in Docket No. 20190017-EG.

Staff's Recommendation

Staff recommends that the Commission establish numeric conservation goals based upon a cost-effectiveness analysis that allows all ratepayers, both participants and non-participants, to benefit from DSM measures. Therefore, staff recommends that the annual conservation goals be based upon the RIM and Participants Tests as this combination addresses concerns regarding subsidies between those who can participate in DSM measures and those who cannot, such as renters and low-income households. As discussed in Issue 5, there is no existing carbon legislation and none is anticipated within the ten-year goalsetting horizon of the current docket. As discussed in Issue 7, a two-year payback period is reasonable to address free-ridership and should be used in the analysis. This recommendation is similar to the 2014 Goalsetting Order.

Staff recognizes that these recommended goals result in zero residential goals for several of the FEECA Utilities, including two investor-owned and two municipal electric utilities. The Commission has previously approved goals of zero before for municipal utilities.²⁵ The reasoning for the Commission's prior acceptance of zero goals was that no measures passed a cost-effectiveness analysis using a combination of the RIM and Participants Tests. This is also the case in some of the current proceeding's utility proposals. Staff therefore recommends the zero residential goals for Gulf, FPUC, JEA, and OUC in this proceeding based on the technical analysis presented using the RIM and Participants Tests.

Although Section 366.82(8), F.S., authorizes financial rewards for utilities that exceed their goals, Gulf witness Floyd testifies that using RIM based goals eliminates the need for utility incentives for DSM achievements, as RIM Test based programs put downward pressure on rates. (TR 455) TECO witness Roche testified that with goals based on the RIM and Participants Tests, there is no reason for a utility to come in for a reward, as both participants and non-participants receive benefits. (TR 925) Staff agrees with witnesses Floyd and Roche regarding the lack of need for utility incentives, and staff recommends that the FEECA Utilities receive no reward for meeting goals based on the RIM and Participants Tests. Basing conservation goals on the RIM Test represents the most cost-effective option for both the FEECA Utilities and the general body of ratepayers.

The cumulative results of each utility's proposal, the achievable potential based on the RIM and TRC scenarios, the proposed goals by SACE & LULAC, and staff's recommendation are provided in Table 8-3. A breakdown of the residential annual goals are included in Attachment A for each utility.

²⁵Order No. PSC-04-0768-PAA-EG, issued August 9, 2004, in Docket No. 20040030-EG, *In re: Petition for approval of numeric conservation goals by JEA*, and Order No. PSC-04-0767-PAA-EG, issued August 9, 2004, in Docket No. 20040035-EG, *In re: Petition for approval of numeric conservation goals by Orlando Utilities Commission*.

**Table 8-3
 Residential Cumulative Goal Proposals**

Summer Peak Demand (MW)					
Utility	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC*	Staff Recom.
FPL	257.3	240.3	240.3	689.0	240.3
DEF	122.0	108.0	108.0	663.0	108.0
TECO	124.2	54.0	54.0	64.0	54.0
Gulf	20.0	0.0	0.0	83.0	0.0
FPUC	0.1	0.0	0.0	N/A	0.0
JEA	10.7	0.0	0.0	80.0	0.0
OUC	8.7	0.0	0.0	37.0	0.0

Winter Peak Demand (MW)					
Utility	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC*	Staff Recom.
FPL	236.8	207.4	207.4	256.0	207.4
DEF	89.0	78.0	78.0	303.0	78.0
TECO	48.1	25.5	25.5	51.0	25.5
Gulf	19.0	0.0	0.0	79.0	0.0
FPUC	0.1	0.0	0.0	N/A	0.0
JEA	10.3	0.0	0.0	49.0	0.0
OUC	6.9	0.0	0.0	19.0	0.0

Annual Energy Consumption (GWh)					
Utility	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC*	Staff Recom.
FPL	46.1	0.1	0.1	1,594.0	0.1
DEF	194.0	115.0	115.0	1,530.0	115.0
TECO	322.5	103.6	103.6	323.0	103.6
Gulf	98.0	0.0	0.0	381.0	0.0
FPUC	0.2	0.0	0.0	N/A	0.0
JEA	86.1	0.0	0.0	336.0	0.0
OUC	67.5	0.0	0.0	115.0	0.0

*SACE & LULAC did not intervene in the FPUC docket.
 Source: EXH 4-5, 35, 40-41, 63, 65, 69, 149, 204, 228, 248

DSM Plan Considerations

Pursuant to Rule 25-17.0021(4), F.A.C., each of the FEECA Utilities will file a DSM Plan to meet the goals established by this proceeding within 90 days of the Final Order. Pursuant to Section 366.82(11), F.S., all the FEECA Utilities, including those with zero goals, will continue to offer residential energy audits. These energy audits will help educate customers both about voluntary measures they can take to reduce their energy consumption as well as potential utility DSM programs that may be developed. As discussed in Issue 7, the FEECA Utilities should

continue to offer programs to educate all customer groups on energy efficiency opportunities broadly, and should consider offering education on energy efficiency targeted specifically to low-income customers.

As stated by witness Herndon, the DSM goals are based on measures using high level estimates, not the specifics used to design programs. (TR 399) In that future Commission proceeding, the FEECA Utilities will offer specifics on their DSM program offerings in their DSM Plans. While the FEECA goals are set based on a calculation of the sum of standalone measures, the FEECA Utilities will not be limited to strictly those measures, but instead utility DSM programs may come in a variety of forms and combine measures that would not individually be cost-effective. DEF witness Cross testified that by bundling measures that are not cost-effective under the RIM Test, or by including some measures that were screened out by the two-year payback period, along with measures that pass the RIM Test, a program can be cost-effective as a whole. (TR 633) As the DSM Plan will be evaluated on a program basis instead of an individual measure basis, the cost-effectiveness analysis may change to allow some programs to pass the RIM Test and produce additional savings for the general body of ratepayers.

Staff recommends that the Commission encourage the FEECA Utilities to be flexible with their program design, potentially bundling cost-effective measures with others, as well as other techniques which may improve the energy efficiency savings compared to the individual measure evaluations in the current goalsetting proceeding. The Commission should further encourage the FEECA Utilities to address all market segments to allow for the maximum opportunity for customer participation. For those proposed programs that do not pass the RIM Test, the Commission should require the FEECA Utilities to demonstrate why they are in the public interest in order to seek cost recovery. This will give the Commission an opportunity to consider the rate impact of these programs and make the ultimate determination whether they should be eligible for recovery through the Energy Conservation Cost Recovery Clause.

Conclusion

The Commission should establish residential numeric conservation goals based upon a cost-effectiveness analysis that allows all ratepayers, both participants and non-participants, to benefit from DSM measures. The annual conservation goals should be based upon the RIM and Participants Tests, as this combination addresses concerns regarding subsidies between both those who can participate in DSM measures and those who cannot, such as renters and low-income households. Consistent with staff's recommendations in Issues 5 and 7, the goals should use no cost for carbon emissions and a two-year payback as a free-ridership screen should be included. As goals are RIM Test based, the FEECA Utilities should not be eligible for rewards for exceeding their goals with these programs.

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Issue 9: What commercial/industrial summer and winter megawatt (MW) and annual Gigawatt hour (GWh) goals should be established for the period 2020-2029?

Recommendation: As discussed in Issue 8, staff recommends that annual commercial/industrial conservation goals should be based upon the RIM and Participants Tests. Consistent with staff's recommendations in Issues 5 and 7, the goals should use no cost for carbon emissions and a two-year payback as a free-ridership screen should be included. (Doehling, Ellis, Higgins, Wooten, Wu)

Position of the Parties:

FPL: The Commission should approve the following commercial/industrial Goals for the period 2020-2029:

Year	Summer MW		Winter MW		Annual MWh	
	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative
2020	11.2	11.2	5.1	5.1	91	91
2021	11.2	22.4	5.1	10.3	91	181
2022	11.2	33.6	5.1	15.4	91	272
2023	11.2	44.7	5.1	20.6	91	363
2024	11.2	55.9	5.1	25.7	91	453
2025	11.2	67.1	5.1	30.8	91	544
2026	11.2	78.3	5.1	36.0	91	635
2027	11.2	89.5	5.1	41.1	91	725
2028	11.2	100.7	5.1	46.2	91	816
2029	11.2	111.9	5.1	51.4	91	906

GULF: The Commission should approve the Company's proposed goals totaling 15 MW (summer) 11 MW (winter) and 0 GWh. Gulf's goals (i) reflect the Company's resource planning process; (ii) reflect all costs and benefits to participants and the general body of customers; (iii) account for free riders; and (iv) avoid cross-subsidization of participants by non-participants. Additionally, Gulf's goals properly reflect the evolving role for utilities in offering energy efficiency and diminishing cost-effectiveness results.

FPUC: The Commission should establish no annual goals, or goals of zero, for the period 2020-2029. The Company should, nonetheless, be allowed to file a DSM Plan to the extent any of its current programs, when updated, remain cost-effective under the Commission's Rule. To the extent an existing program may remain cost-effective, continuation of such program would be consistent with FEECA.

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DUKE ENERGY FLORIDA - PROPOSED RIM GOALS 2020-2029			
	Winter Peak MWs	Summer Peak MWs	GWHS
DEF:	121	135	51

(Cross)

OUC: The PSC should establish goals of zero for OUC for commercial and industrial summer and winter peak demand reductions and annual energy savings.

JEA: No commercial/industrial DSM measures passed the RIM test. Accordingly, the Commission should establish goals of 0 MW (summer and winter) and 0 MWh (annual energy) for the commercial/industrial class.

TECO: Tampa Electric proposes the commercial/industrial summer and winter Megawatt (MW) and annual Gigawatt-hour (GWh) goals in the chart below be established for the period 2020-2029:

Tampa Electric's 2020-2029 Proposed Commercial/Industrial DSM Goals at the Generator			
Year	Summer Demand (MW)	Winter Demand (MW)	Annual Energy (GWh)
	Incremental	Incremental	Incremental
2020	2.7	1.9	5.5
2021	2.5	1.7	6.5
2022	2.4	1.6	5.5
2023	2.9	2.0	6.5
2024	2.4	1.6	5.6
2025	2.5	1.8	6.7
2026	2.8	1.9	5.8
2027	2.6	1.8	6.8
2028	2.4	1.7	5.8
2029	2.6	1.8	6.8

The cumulative effect of these commercial/industrial goals through 2029 would be a summer MW reduction of 25.8 MW, a winter MW reduction of 17.8 MW and cumulative energy savings of 61.4 GWh.

OPC: The companies rely too heavily upon the RIM test as the sole criteria for establishing the achievable potential for each company. The Commission should give some weight to and consider TRC results as well. If the Commission relies upon the companies' proposed RIM goals or approves goals that are lower than the RIM-achievable potential, OPC submits there should be no rewards for

exceeding those goals. The summer and winter megawatt and annual gigawatt-hour goals for commercial/industrial customers should reflect these considerations, although OPC does not propose specific numeric amounts.

FDACS: The commercial/industrial summer and winter megawatt (MW) and annual Gigawatt hour (GWh) goals proposed by the FEECA Utilities for the 2020-2029 period appear to be appropriate. The Commission, however, should continue balance the goal of energy efficiency and conservation with the impact of the costs and benefits of these programs on rates and overall customer bills.

SACE & LULAC: The Commission should approve the corrected Bills test analysis goals contained within Witness Grevatt’s testimony. These goals are presented below and offer a conservative goal of what is economically achievable for each of the utilities.

Utility	Incremental Annual Energy Savings (GWh)										Total
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
FPL	253	346	346	346	346	346	346	346	346	346	3,367
Duke	46	93	114	114	114	114	114	114	114	114	1,052
TECO	36	56	56	56	56	56	56	56	56	56	538
Gulf	17	34	46	46	46	46	46	46	46	46	422
Orlando	12	24	25	25	25	25	25	25	25	25	238
JEA	21	43	55	55	55	55	55	55	55	55	507

Utility	Summer Peak MW										Total
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
FPL	55	76	76	76	76	76	76	76	76	76	738
Duke	10	19	24	24	24	24	24	24	24	24	217
TECO	6	10	10	10	10	10	10	10	10	10	93
Gulf	3	6	8	8	8	8	8	8	8	8	76
Orlando	2	4	4	4	4	4	4	4	4	4	38
JEA	3	6	8	8	8	8	8	8	8	8	76

Utility	Winter Peak MW										Total
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
FPL	38	52	52	52	52	52	52	52	52	52	510
Duke	7	14	17	17	17	17	17	17	17	17	156
TECO	5	8	8	8	8	8	8	8	8	8	77
Gulf	2	5	6	6	6	6	6	6	6	6	56
Orlando	2	3	3	3	3	3	3	3	3	3	31
JEA	2	5	6	6	6	6	6	6	6	6	57

PCS: Duke Energy Florida's proposed commercial/industrial summer and winter megawatt and annual Gigawatt-hour goals for 2020-2029 are a reasonable balance of FEECA's express goals and costs and rate impacts to Florida consumers and should be approved.

WALMART: No position.

FIPUG: The Commission should set goals that balance the importance of pursuing conservation programs against their cost and the impact of that cost on rates.

Parties' Arguments

The FEECA Utilities propose goals based upon a combination of those measures which pass both the RIM and Participants Tests. (FPL BR 37; DEF BR 8; TECO BR 4; Gulf BR 3; FPUC BR 18; JEA BR 12; OUC BR 33) FPUC, JEA, and OUC propose zero commercial/industrial goals for all categories, while Gulf proposes zero annual GWh goals based on the technical analysis performed. (Gulf BR 32; FPUC BR 7; JEA BR 18; OUC BR 3) Several FEECA Utilities acknowledge that the proposed conservation goals are lower than the prior goalsetting proceeding, but that this is reasonable due to reduced cost-effectiveness of measures and changes in Codes and Standards. (FPL BR 41; Gulf BR 1-2; FPUC BR 13; OUC BR 5) JEA and OUC state they will continue to offer DSM programs to customers, but argue that the Commission should base goals on the RIM Test to give them the flexibility to determine the level of investment desired by the local community. (JEA BR 2-3, 9; OUC BR 3-4)

FPL, DEF, TECO, and Gulf assert that SACE's argument that the RIM Test cannot be used to establish goals ignores prior Commission precedent and rulings from the Florida Supreme Court. (FPL BR 18; DEF BR 3; TECO BR 5-6; Gulf BR 18-19) The FEECA Utilities argue that relying on the TRC Test to establish goals would increase cross-subsidies between participating customers and non-participants and would increase rates overall. (FPL BR 28-29; DEF BR 3-4; TECO BR 5-7; Gulf BR 19; FPUC BR 15-16; JEA BR 13-14; OUC BR 10-11) DEF, Gulf and OUC argue that SACE & LULAC's Modified TRC Goals cannot be relied upon because they are arbitrarily set at 50 percent of the TRC economic potential, include measures screened out by the two-year payback, inappropriately apply one utility's analysis results to others, or do not reflect any analysis of the measures themselves. (DEF BR 12; Gulf BR 28-29; OUC BR 40)

SACE & LULAC argue that the FEECA Utilities cannot set conservation goals of zero or near zero, as they assert zero goals are not intended by the Legislature. (SACE & LULAC BR 2, 47-48) SACE & LULAC state that the Commission has never set a zero goal for investor-owned utilities. (SACE & LULAC BR 48-49) SACE & LULAC assert that FEECA does not allow the Commission to use the RIM Test to determine cost-effectiveness for goalsetting when it results in a zero value. (SACE & LULAC BR 12-13) SACE & LULAC contend that other states do not use the RIM Test primarily to set goals, and that non-FEECA Utilities have greater savings than those proposed by several FEECA Utilities. (SACE & LULAC BR 13-14)

SACE & LULAC state that SACE witness Grevatt initially proposed a goal of 1.5 percent of net energy for load, which they acknowledge is not based on a Florida-specific analysis. (SACE &

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LULAC BR 6) Therefore, SACE & LULAC propose goals based on witness Grevatt's attempted correction of the FEECA Utilities' TRC Test analysis. (SACE & LULAC BR 6) SACE & LULAC argue that the FEECA analysis is rife with errors and cannot be adequately corrected in this proceeding. (SACE & LULAC BR 5-6) SACE & LULAC propose the Commission should rely on witness Grevatt's partially corrected TRC Test, referred to as the "Bills Test," to set goals. (SACE & LULAC BR 4) SACE & LULAC assert that while the TRC Test may result in upward pressure on rates, customers will have an opportunity to participate in programs to reduce usage and therefore reduce bills. (SACE & LULAC BR 39-40) SACE & LULAC contend that if FEECA Utilities offer accessible programs, cross-subsidies between participants and non-participants would only occur if customers choose not to participate. (SACE & LULAC BR 42)

OPC does not propose specific goals, but recommends the Commission use the results of both the TRC Test along with the RIM Test. (OPC BR 18) OPC states if the Commission relies upon the FEECA Utilities' proposed RIM goals, then there should be no rewards for exceeding those goals. (OPC BR 18) FDACS supports the FEECA Utilities commercial/industrial goals and recommends that the Commission should balance concerns regarding rates with the goal of energy efficiency. (FDACS BR 15)

PCS, addressing DEF specifically, recommends the Commission should approve DEF's proposed goals as a reasonable balance of FEECA's express requirements and the cost and rate impacts to Florida consumers. (PCS BR 5) FIPUG does not propose any specific goals, but supports cost-effective measures, especially DR. (FIPUG BR 5) Walmart took no position regarding commercial/industrial goals to be established.

Analysis

The same factors discussed in Issue 8 influence the FEECA Utilities' commercial/industrial annual numeric DSM goals. Unlike the residential goals, Gulf and OUC are proposing goals lower than their RIM achievable potential. For Gulf, witness Floyd stated that Gulf did not elect to include all energy efficiency measures in its achievable potential because several of the passing measures were limited to certain customer types and had low projected participation rates. (TR 448-449) Inclusion of these measures would result in a non-zero number for commercial/industrial energy of 6 GWh and an increase in the summer demand goals by 5 MW and winter demand goals by 2 MW. (TR 448) For OUC, witness Noonan outlined that a single energy efficiency measure passed for the RIM achievable potential for OUC, but that the 6 MWh savings associated with it were over the ten-year period. (TR 676-677)

As discussed in Issue 8, staff recommends that the annual numeric conservation goals be based upon the RIM and Participants Tests, as the combination addresses concerns regarding cross-subsidies between those who can participate in DSM measures and those who cannot. While Gulf and OUC's modifications to their achievable potential are intended to reflect low potential participation levels, both are the result of the technical analysis and should not be rejected, even if the value is small. As discussed in Issue 8, neither company would be required to offer these specific measures as programs, and should be flexible in the program design process. Consistent with staff's recommendations in Issues 5 and 7, the goals should be established with no cost for carbon emissions and using a two-year payback free-ridership screen. The cumulative results of each utility's proposal, the achievable potential based on the RIM and TRC scenarios, the

proposed goals by SACE & LULAC, and staff's recommendation are provided in Table 9-1. A breakdown of the potential commercial and industrial annual goals are included in Attachment B for each utility.

**Table 9-1
 Commercial & Industrial Cumulative Goal Proposals**

Summer Peak Demand (MW)					
Utility	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC*	Staff Recom.
FPL	193.7	111.9	111.9	738.0	111.9
DEF	172.0	135.0	135.0	217.0	135.0
TECO	41.7	25.8	25.8	93.0	25.8
Gulf	36.0	20.0	15.0	76.0	20.0
FPUC	0.2	0.0	0.0	N/A	0.0
JEA	23.0	0.0	0.0	76.0	0.0
OUC	10.2	0.0	0.0	38.0	0.0

Winter Peak Demand (MW)					
Utility	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC*	Staff Recom.
FPL	82.1	51.4	51.4	510.0	51.4
DEF	131.0	121.0	121.0	156.0	121.0
TECO	32.9	17.8	17.8	77.0	17.8
Gulf	36.0	13.0	11.0	56.0	13.0
FPUC	0.2	0.0	0.0	N/A	0.0
JEA	13.7	0.0	0.0	57.0	0.0
OUC	2.5	0.0	0.0	31.0	0.0

Annual Energy Consumption (GWh)					
Utility	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC*	Staff Recom.
FPL	149.8	0.9	0.9	3,367.0	0.9
DEF	238.0	51.0	51.0	1,052.0	51.0
TECO	92.1	61.4	61.4	538.0	61.4
Gulf	124.0	6.0	0.0	422.0	6.0
FPUC	1.7	0.0	0.0	N/A	0.0
JEA	175.8	0.0	0.0	507.0	0.0
OUC	69.8	0.006	0.0	238.0	0.006

*SACE & LULAC did not intervene in the FPUC docket.

Source: TR 676-677; EXH 4-5, 31, 35, 40-41, 63, 65, 149, 204, 228, 248

Conclusion

As discussed in Issue 8, staff recommends that annual commercial/industrial conservation goals should be based upon the RIM and Participants Tests. Consistent with staff's recommendations in Issues 5 and 7, the goals should use no cost for carbon emissions and a two-year payback as a free-ridership screen should be included.

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

Recommendation: Staff recommends as a goal, that each of the FEECA Utilities continue to promote net metering throughout their service territories. Net metering is an effective means of encouraging the development of DSRE systems that allow participants to offset their energy usage. (Vogel, Roberts)

Position of the Parties:

- FPL:** Goals of zero should be established for demand-side renewable energy systems because such systems are not cost-effective for FPL's customers. They fail both the RIM and the TRC economic screening tests. A Goal level of zero would best protect the general body of customers and minimize cross-subsidies between participants and non-participants.
- GULF:** All demand-side renewable energy systems were evaluated using the same cost-effectiveness standards as other energy efficiency measures. No renewable measures are cost-effective under either the RIM or TRC cost-effectiveness tests and, therefore, none are reflected in Gulf's achievable potential results. Therefore, no goals should be established for demand-side renewable energy systems.
- FPUC:** The Commission should not establish separate goals for FPUC for demand-side renewable energy systems. All conservation goals for FPUC should be established to promote cost-effective DSM without any bias towards any particular technology or program. If, however, further analysis demonstrates that certain demand-side renewable energy systems are cost effective, FPUC should have the flexibility to include such systems as part of its DSM Plan.
- DEF:** Given that renewable systems were not deemed cost effective under the RIM test, it would not be appropriate to establish goals for demand-side renewable systems in this goal setting proceeding. Demand-side renewable systems were evaluated using the same criteria as were used for other energy efficiency measures. Programs that provide incentives to customers who install renewable systems would result in cross subsidies between participants and non-participants and increase rates to all customers.
- OUC:** The PSC should set goals of zero for OUC to increase its development of demand-side renewable energy systems. None of the demand-side renewable energy measures evaluated by Nexant, including solar photovoltaic, battery storage, and Combined Heat & Power ("CHP") measures, passed the RIM test for OUC. OUC has already implemented and operates substantial demand-side and supply-side renewable energy measures using solar and landfill gas renewable energy technologies.

- JEA:** The cost-effectiveness analysis of demand-side renewable energy systems shows that they are not cost-effective. Therefore, no goals should be established for demand-side renewable systems.
- TECO:** Goals should not be established for increasing the development of demand-side renewable energy systems as they continue to be non-cost effective. If any goals are set, they should be set at zero, as these measures are not cost-effective.
- OPC:** Since none of the renewables pass TRC and RIM, OPC takes no position on what, if any, goals should be established for increasing the development of demand-side renewable energy systems, pursuant to Section 366.82(2), F.S.
- FDACS:** The Legislature has declared that it is critical to utilize the most efficient and cost-effective demand-side renewable energy systems. The Commission should encourage the FEECA Utilities to seek out innovative research and development programs to develop new measures and programs that assist customers with conserving their energy consumption while enabling utilities to shifting peak energy demand.
- SACE & LULAC:** Goals should be established to create pilot programs at schools that also serve as storm shelters along with solar plus battery storage in order to increase resiliency and offset peak demand.
- PCS:** No position.
- WALMART:** No position.
- FIPUG:** No position at this time.

Parties' Arguments

The Commission is required to set appropriate DSRE goals for the seven electric utilities subject to FEECA. The FEECA Utilities all agree that no goals or goals of zero should be established because no DSRE system measure proved to be cost-effective. (FPL BR 49; Gulf BR 6, 32; FPUC BR 4, 7; Duke BR 14; OUC BR 3-4, 48; JEA BR 19; TECO BR 19) FPL witness Koch argues that the goals for the DSRE systems should be set at zero because none of the DSRE measures proved to be cost-effective in either the RIM or TRC tests. (TR 82) TECO witness Roche also testified that “[t]he residential and commercial renewable energy systems were both screened out without any program administration or incentive costs so they will not pass cost-effectiveness as a DSM program.” (TR 885) FPL argues that this is consistent with the Commission’s decision in the 2014 DSM Goals docket. (FPL BR 49)

SACE & LULAC argue that zero is not a goal for DSRE. (SACE & LULAC BR 47) SACE & LULAC propose “the utilities adopt a pilot program investing in [PV] solar installations coupled

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with battery storage at schools that are designated as storm shelters.” (SACE & LULAC BR 7) According to SACE & LULAC “[s]olar plus battery storage allows a facility, like a school that is designated as a shelter, to generate its own power, independent of the grid, allowing it to provide power for critical needs, such as medical equipment, cooling, lighting, and charging cell phones.” (SACE & LULAC BR 45-46)

OPC does not take a position on what goals should be established for increasing the development of DSRE systems, given none of the renewables pass TRC and RIM. (OPC BR 19) OPC asserts “[t]he companies’ proposed goals should adequately safeguard the interests of the general body of ratepayers against undue rate impacts while achieving the intent of [FEECA].” (OPC BR 2)

In its brief, FDACS states “[t]he Legislature has declared that it is critical to utilize the most efficient and cost-effective demand-side renewable energy systems.” FDACS continues, “[t]he Commission should encourage the FEECA Utilities to seek out innovative research and development programs to develop new measures and programs that assist customers with conserving their energy consumption while enabling utilities to shifting [sic] peak energy demand.” (FDACS BR 15) PCS, Walmart, and FIPUG took no position on this issue.

Analysis

Section 366.81, F.S., states:

. . . [t]he Legislature finds and declares that it is critical to utilize the most efficient and cost-effective demand-side renewable energy systems and conservation systems in order to protect the health, prosperity, and general welfare of the state and its citizens.

Section 366.81, F.S., further states:

. . . [s]ince solutions to our energy problems are complex, the Legislature intends that the use of solar energy, renewable energy sources, highly efficient systems, cogeneration, and load-control systems be encouraged.

Section 366.82(2), F.S., requires the Commission to adopt appropriate goals for increasing the development of DSRE systems. In developing the goals, the Commission shall take into account the benefits and costs to the consumer participating in the DSRE measure and the benefits and costs to the general body of ratepayers. In the 2009 Goalsetting Order, the Commission stated the following:

We find that the amendments to Section 366.82(2), F.S., require us to establish goals for demand-side renewable energy systems. None of these resources were found to be cost-effective in the utilities’ analyses. However, we can meet the intent of the Legislature to place added emphasis on these resources, while protecting ratepayers from undue rate increases by requiring the IOUs to offer renewable programs subject to an expenditure cap. We direct the IOUs to file pilot programs focusing on encouraging solar water heating and solar PV technologies in the DSM program approval proceeding. Expenditures allowed for

recovery shall be limited to 10 percent of the average annual recovery through the Energy Conservation Cost Recovery clause in the previous five years as shown in the table below. Utilities are encouraged to design programs that take advantage of unique cost-saving opportunities, such as combining measures in a single program, or providing interested customers with the option to provide voluntary support.²⁶

In the 2014 Goalsetting Order, the Commission found that the pilot programs “are not cost-effective and experience gained since the last goals proceeding indicates that consumers have continued to install systems without any rebates.” In that Order, the Commission also stated the following:

Each of the IOUs should continue to implement the provisions of Rule 25-6.065, F.A.C., Interconnection and Net Metering of Customer-Owned Renewable Generation. The rule is an appropriate means to encourage the development of demand-side renewable energy, as it expedites the interconnection of customer-owned renewable energy systems and benefits participating customers through net metering.

The record in the current proceeding also indicates that DSRE systems are not cost-effective using either the RIM or the TRC test. However, the installation of DSRE systems continues to grow without any utility incentives. Such growth indicates that the Commission’s net metering rule is an appropriate mechanism to encourage the development of these systems.

Net Metering

Net metering is defined in Section 366.91(2)(c), F.S., as a “metering and billing methodology whereby customer-owned renewable generation is allowed to offset the customer’s electricity consumption on site.” Rule 25-6.065, F.A.C., Interconnection and Net Metering of Customer-Owned Renewable Generation (Net Metering Rule), sets forth the requirements of net metering.

The Net Metering Rule lays out the groundwork for implementing the net metering programs of the public utilities. Customers are able to use the energy they generate from solar PV panels to offset their energy usage. Excess energy produced is delivered to the utility’s grid and the customer receives credit toward the next month’s bill. At the end of the year, the utility is required to pay the customer for any unused energy credits.

Gulf witness Floyd testified, DSRE systems are growing tremendously in Gulf’s territory. (TR 510) Witness Floyd also stated, “customers are receiving the benefits of energy efficiency and

²⁶Order No. PSC-09-0855-FOF-EG, Issued December 30, 2009, in Docket No. 20080407-EG, *In re: Commission review of numeric conservation goals* (Florida Power & Light Company), in Docket No. 20080408-EG, *In re: Commission review of numeric conservation goals* (Progress Energy Florida, Inc.), in Docket No. 20080409-EG, *In re: Commission review of numeric conservation goals* (Tampa Electric Company), Docket No. 20080410-EG, *In re: Commission review of numeric conservation goals* (Gulf Power Company), in Docket No. 20080411-EG, *In re: Commission review of numeric conservation goals* (Florida Public Utilities Company), in Docket No. 20080412-EG, *In re: Commission review of numeric conservation goals* (Orlando Utilities Commission), in Docket No. 20080413-EG, *In re: Commission review of numeric conservation goals* (JEA).

demand-side renewables in the market in the most-efficient way without unnecessary incentives.” (TR 460) Witness Floyd asserted that, the net-metering rule creates a good, understood model for the customer. (TR 510-511) Witness Floyd stated, there are “more solar providers in Gulf’s service area,” which naturally creates competition. (TR 510) Witness Floyd stated, “[d]emand-side renewables have experienced tremendous growth since the end of the utility incentives in 2015.” (TR 460) DEF witness Cross stated in her testimony that “Florida currently ranks among the top ten states based on the cumulative amount of solar electric capacity installed.” (TR 595) Witness Cross agreed with other FEECA utilities that “[t]he cost to install solar has dropped significantly in recent years,” and with those costs declining utilities are “seeing continued growth in the number of customers installing [DSRE] systems on their own, without incentives from the utility.” (TR 595) As more households embrace renewable energy, the demand will stimulate more business competition and drive the cost of using or owning renewable energy, such as solar, down.

Since 2008, customer-owned solar PV installations have steadily increased throughout the state. As seen in Table 10-1, 23,120 customer-owned solar PV installations have been added by the four largest IOUs between 2017 and 2019. These solar installations are primarily from residential and business customers.

**Table 10-1
 Number of Solar PV Installations**

Utility	2017	2018	2019*	Total
FPL	2,163	3,825	2,250	8,238
DEF	3,025	5,079	2,949	11,053
TECO	740	1,268	829	2,837
Gulf	382	297	313	992
Total	6,310	10,469	6,341	23,120

*2019 figures do not include a full year of data.
 Source: EXH 105, 129, 173, 245

As reflected in the table 10-1, the current net metering rule has contributed to the increasing demand for customer-owned generation.

SACE & LULAC’s Pilot Program

Although no testimony was sponsored for this issue, in their brief, SACE & LULAC propose a DSRE goal; implemented through a five-year pilot program that they believe would meet the DSRE goal requirements of FEECA. The proposed pilot program is not included in the hearing record. The proposal does include solar PV and battery installations at schools and staff notes that witness Floyd testified that the cost of battery storage is still too high to be considered cost effective. (TR 513)

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SACE & LULAC's proposal is lacking any competent and substantial evidence in the hearing record. Due to the lack of evidence in the record, staff does not recommend SACE & LULAC's proposed pilot program should be approved at this time.

Conclusion

As discussed in this issue, the DSRE systems were evaluated for each of the FEECA Utilities using the same criteria used for other energy efficiency measures. Based upon the evidence in the record, staff recommends measures to promote DSRE systems are not cost-effective. Evidence in the hearing record does show that net metering is an effective means of encouraging the development of DSRE systems that allow participants to offset their energy usage. Staff recommends the continued promotion of net metering is an appropriate goal in this proceeding, consistent with the Commission's decision in 2014.

Issue 11: Should these dockets be closed?

Recommendation: Yes. These dockets should be closed after the time for filing an appeal has run. Within 90 days of the issuance of the final order, each Utility should file a demand-side management plan designed to meet the Utility's approved goals. (Dziechciarz, Duval, Weisenfeld, Murphy, King)

Position of the Parties:

FPL: Yes. This docket should be closed upon the issuance of an appropriate order approving FPL's proposed numeric conservation Goals set forth in Ex. 5 (FPL Ex. TRK-4) for the years 2020-2029.

GULF: Yes. This docket should be closed upon the issuance of an appropriate order approving Gulf Power's proposed numeric conservation Goals for the years 2020-2029.

FPUC: Yes.

DEF: No position.

OUC: Yes. When the Commission's order approving OUC's goals has become final and is not subject to any appeals or reconsideration, these dockets, specifically including Docket No. 20190019-EG, should be closed.

JEA: Yes.

TECO: Yes, Tampa Electric's Docket No. 20190021-EG should be closed once the Commission's decisions on all of the issues in the docket have become final and the Commission has concluded that the docket has otherwise met the requirements for closure.

OPC: Yes.

FDACS: The dockets should be closed upon the Commission making a determination on all of the issues in the dockets and upon the Commission's Order issued in this proceeding becoming final.

SACE & LULAC: Yes, after the Commission has approved SACE's & LULAC's proposed goals for the utilities.

PCS: No position.

WALMART: No position.

FIPUG: Yes.

Analysis

These dockets should be closed after the time for filing an appeal has run. Within 90 days of the issuance of the final order, each Utility should file a demand-side management plan designed to meet the Utility's approved goals.

Conclusion

These dockets should be closed after the time for filing an appeal has run. Within 90 days of the issuance of the final order, each Utility should file a demand-side management plan designed to meet the Utility's approved goals.

Florida Power & Light Company - Residential Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	25.7	24.0	24.0	59	24.0
2021	25.8	24.0	24.0	70	24.0
2022	25.9	24.0	24.0	70	24.0
2023	26.0	24.0	24.0	70	24.0
2024	25.9	24.0	24.0	70	24.0
2025	25.8	24.0	24.0	70	24.0
2026	25.7	24.0	24.0	70	24.0
2027	25.6	24.0	24.0	70	24.0
2028	25.5	24.0	24.0	70	24.0
2029	25.5	24.0	24.0	70	24.0
Total*	257.3	240.3	240.3	689	240.3

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	25.1	20.7	20.7	22	20.7
2021	24.7	20.7	20.7	26	20.7
2022	24.4	20.7	20.7	26	20.7
2023	24.1	20.7	20.7	26	20.7
2024	23.8	20.7	20.7	26	20.7
2025	23.4	20.7	20.7	26	20.7
2026	23.1	20.7	20.7	26	20.7
2027	22.9	20.7	20.7	26	20.7
2028	22.7	20.7	20.7	26	20.7
2029	22.5	20.7	20.7	26	20.7
Total*	236.8	207.4	207.4	256	207.4

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	4.349	0.012	0.012	136	0.012
2021	4.620	0.012	0.012	162	0.012
2022	4.989	0.012	0.012	162	0.012
2023	5.440	0.012	0.012	162	0.012
2024	5.072	0.012	0.012	162	0.012
2025	4.765	0.012	0.012	162	0.012
2026	4.508	0.012	0.012	162	0.012
2027	4.295	0.012	0.012	162	0.012
2028	4.120	0.012	0.012	162	0.012
2029	3.976	0.012	0.012	162	0.012
Total*	46.135	0.116	0.116	1,594	0.116

*Values Differ Due to Rounding
 Source: EXH 4, 5, 65

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Duke Energy Florida, LLC - Residential Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	16	14	14	29	14
2021	14	13	13	59	13
2022	13	12	12	72	12
2023	13	11	11	72	11
2024	12	11	11	72	11
2025	12	10	10	72	10
2026	12	10	10	72	10
2027	11	9	9	72	9
2028	10	9	9	72	9
2029	9	9	9	72	9
Total*	122	108	108	663	108

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	12	10	10	13	10
2021	10	9	9	27	9
2022	10	8	8	33	8
2023	9	8	8	33	8
2024	9	8	8	33	8
2025	9	8	8	33	8
2026	8	7	7	33	7
2027	8	7	7	33	7
2028	7	7	7	33	7
2029	7	6	6	33	6
Total*	89	78	78	303	78

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	33	17	17	68	17
2021	27	15	15	135	15
2022	24	14	14	166	14
2023	21	12	12	166	12
2024	19	12	12	166	12
2025	18	11	11	166	11
2026	16	10	10	166	10
2027	14	9	9	166	9
2028	12	8	8	166	8
2029	10	7	7	166	7
Total*	194	115	115	1,530	115

*Values Differ Due to Rounding
Source: EXH 40, 41, 65,

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Tampa Electric Company - Residential Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	10.9	4.7	4.7	4	4.7
2021	11.2	4.9	4.9	7	4.9
2022	11.5	5.0	5.0	7	5.0
2023	11.9	5.2	5.2	7	5.2
2024	12.3	5.4	5.4	7	5.4
2025	12.7	5.6	5.6	7	5.6
2026	13.0	5.8	5.8	7	5.8
2027	13.5	6.0	6.0	7	6.0
2028	13.6	5.6	5.6	7	5.6
2029	13.6	6.0	6.0	7	6.0
Total*	124.2	54.0	54.0	64	54.0

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	4.9	2.6	2.6	3	2.6
2021	4.8	2.6	2.6	5	2.6
2022	4.8	2.6	2.6	5	2.6
2023	4.8	2.6	2.6	5	2.6
2024	4.8	2.6	2.6	5	2.6
2025	4.8	2.5	2.5	5	2.5
2026	4.8	2.5	2.5	5	2.5
2027	4.8	2.5	2.5	5	2.5
2028	4.8	2.5	2.5	5	2.5
2029	4.8	2.5	2.5	5	2.5
Total*	48.1	25.5	25.5	51	25.5

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	27.3	9.3	9.3	22	9.3
2021	28.4	9.6	9.6	34	9.6
2022	29.3	9.7	9.7	34	9.7
2023	30.5	10.0	10.0	34	10.0
2024	31.7	10.3	10.3	34	10.3
2025	33.1	10.7	10.7	34	10.7
2026	34.6	11.0	11.0	34	11.0
2027	35.5	11.3	11.3	34	11.3
2028	35.9	10.5	10.5	34	10.5
2029	36.2	11.3	11.3	34	11.3
Total*	322.5	103.6	103.6	323	103.6

*Values Differ Due to Rounding
Source: EXH 63, 65, 248

Gulf Power Company - Residential Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	1	0	0	3	0
2021	1	0	0	7	0
2022	1	0	0	9	0
2023	2	0	0	9	0
2024	2	0	0	9	0
2025	2	0	0	9	0
2026	2	0	0	9	0
2027	3	0	0	9	0
2028	3	0	0	9	0
2029	3	0	0	9	0
Total*	20	0	0	83	0

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	1	0	0	3	0
2021	1	0	0	6	0
2022	1	0	0	9	0
2023	1	0	0	9	0
2024	2	0	0	9	0
2025	2	0	0	9	0
2026	2	0	0	9	0
2027	3	0	0	9	0
2028	3	0	0	9	0
2029	3	0	0	9	0
Total*	19	0	0	79	0

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	5	0	0	15	0
2021	5	0	0	31	0
2022	6	0	0	42	0
2023	7	0	0	42	0
2024	9	0	0	42	0
2025	10	0	0	42	0
2026	12	0	0	42	0
2027	14	0	0	42	0
2028	15	0	0	42	0
2029	15	0	0	42	0
Total*	98	0	0	381	0

*Values Differ Due to Rounding
 Source: EXH 35, 65

Florida Public Utilities Company - Residential Annual Goals

Summer Peak Demand (MW)				
Year	TRC Achievable	RIM Achievable	Utility Proposal	Staff Recom.
2020	0.01	0	0	0
2021	0.01	0	0	0
2022	0.01	0	0	0
2023	0.01	0	0	0
2024	0.01	0	0	0
2025	0.01	0	0	0
2026	0.01	0	0	0
2027	0.01	0	0	0
2028	0.01	0	0	0
2029	0.01	0	0	0
Total*	0.10	0	0	0

Winter Peak Demand (MW)				
Year	TRC Achievable	RIM Achievable	Utility Proposal	Staff Recom.
2020	0.01	0	0	0
2021	0.01	0	0	0
2022	0.01	0	0	0
2023	0.01	0	0	0
2024	0.01	0	0	0
2025	0.01	0	0	0
2026	0.01	0	0	0
2027	0.01	0	0	0
2028	0.01	0	0	0
2029	0.01	0	0	0
Total*	0.10	0	0	0

Annual Energy Consumption (GWh)				
Year	TRC Achievable	RIM Achievable	Utility Proposal	Staff Recom.
2020	0.02	0	0	0
2021	0.02	0	0	0
2022	0.02	0	0	0
2023	0.02	0	0	0
2024	0.02	0	0	0
2025	0.02	0	0	0
2026	0.02	0	0	0
2027	0.02	0	0	0
2028	0.02	0	0	0
2029	0.02	0	0	0
Total*	0.20	0	0	0

*Values Differ Due to Rounding
 Source: EXH 159

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JEA - Residential Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	0.68	0	0	3	0
2021	0.75	0	0	7	0
2022	0.88	0	0	9	0
2023	1.01	0	0	9	0
2024	1.14	0	0	9	0
2025	1.25	0	0	9	0
2026	1.30	0	0	9	0
2027	1.31	0	0	9	0
2028	1.25	0	0	9	0
2029	1.15	0	0	9	0
Total*	10.71	0	0	80	0

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	0.65	0	0	2	0
2021	0.72	0	0	4	0
2022	0.84	0	0	5	0
2023	0.96	0	0	5	0
2024	1.08	0	0	5	0
2025	1.18	0	0	5	0
2026	1.24	0	0	5	0
2027	1.25	0	0	5	0
2028	1.21	0	0	5	0
2029	1.12	0	0	5	0
Total*	10.26	0	0	49	0

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	5.28	0	0	14	0
2021	5.80	0	0	28	0
2022	6.84	0	0	37	0
2023	7.94	0	0	37	0
2024	8.99	0	0	37	0
2025	9.85	0	0	37	0
2026	10.42	0	0	37	0
2027	10.70	0	0	37	0
2028	10.45	0	0	37	0
2029	9.80	0	0	37	0
Total*	86.08	0	0	336	0

*Values Differ Due to Rounding
Source: EXH 65, 228

Orlando Utilities Commission - Residential Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	0.62	0	0	2	0
2021	0.64	0	0	4	0
2022	0.72	0	0	4	0
2023	0.80	0	0	4	0
2024	0.89	0	0	4	0
2025	0.96	0	0	4	0
2026	1.01	0	0	4	0
2027	1.04	0	0	4	0
2028	1.04	0	0	4	0
2029	1.01	0	0	4	0
Total*	8.72	0	0	37	0

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	0.44	0	0	1	0
2021	0.47	0	0	2	0
2022	0.54	0	0	2	0
2023	0.62	0	0	2	0
2024	0.70	0	0	2	0
2025	0.77	0	0	2	0
2026	0.82	0	0	2	0
2027	0.85	0	0	2	0
2028	0.86	0	0	2	0
2029	0.84	0	0	2	0
Total*	6.90	0	0	19	0

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	4.09	0	0	8	0
2021	4.39	0	0	16	0
2022	5.18	0	0	16	0
2023	6.02	0	0	16	0
2024	6.85	0	0	16	0
2025	7.59	0	0	16	0
2026	8.16	0	0	16	0
2027	8.48	0	0	16	0
2028	8.50	0	0	16	0
2029	8.21	0	0	16	0
Total*	67.47	0	0	155	0

*Values Differ Due to Rounding
 Source: EXH 65, 204

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Florida Power & Light Company - Commercial & Industrial Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	20.2	11.2	11.2	55	11.2
2021	20.7	11.2	11.2	76	11.2
2022	21.2	11.2	11.2	76	11.2
2023	21.7	11.2	11.2	76	11.2
2024	21.7	11.2	11.2	76	11.2
2025	21.7	11.2	11.2	76	11.2
2026	21.7	11.2	11.2	76	11.2
2027	21.7	11.2	11.2	76	11.2
2028	21.7	11.2	11.2	76	11.2
2029	21.7	11.2	11.2	76	11.2
Total*	193.7	111.9	111.9	738	111.9

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	7.1	5.1	5.1	38	5.1
2021	7.6	5.1	5.1	52	5.1
2022	8.0	5.1	5.1	52	5.1
2023	8.5	5.1	5.1	52	5.1
2024	8.5	5.1	5.1	52	5.1
2025	8.5	5.1	5.1	52	5.1
2026	8.5	5.1	5.1	52	5.1
2027	8.5	5.1	5.1	52	5.1
2028	8.5	5.1	5.1	52	5.1
2029	8.5	5.1	5.1	52	5.1
Total*	82.1	51.4	51.4	510	51.4

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	8.291	0.091	0.091	253	0.091
2021	11.031	0.091	0.091	346	0.091
2022	13.760	0.091	0.091	346	0.091
2023	16.496	0.091	0.091	346	0.091
2024	16.556	0.091	0.091	346	0.091
2025	16.617	0.091	0.091	346	0.091
2026	16.678	0.091	0.091	346	0.091
2027	16.740	0.091	0.091	346	0.091
2028	16.802	0.091	0.091	346	0.091
2029	16.865	0.091	0.091	346	0.091
Total*	149.837	0.906	0.906	3,367	0.906

*Values Differ Due to Rounding
Source: EXH 4, 5, 65

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Duke Energy Florida, LLC - Commercial & Industrial Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	22	16	16	10	16
2021	19	13	13	19	13
2022	17	11	11	24	11
2023	17	12	12	24	12
2024	18	14	14	24	14
2025	18	14	14	24	14
2026	16	13	13	24	13
2027	15	13	13	24	13
2028	15	14	14	24	14
2029	15	15	15	24	15
Total*	172	135	135	217	135

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	16	14	14	7	14
2021	14	13	13	14	13
2022	13	11	11	17	11
2023	14	12	12	17	12
2024	14	13	13	17	13
2025	14	13	13	17	13
2026	12	11	11	17	11
2027	11	11	11	17	11
2028	12	12	12	17	12
2029	11	11	11	17	11
Total*	131	121	121	156	121

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	39	8	8	46	8
2021	37	8	8	93	8
2022	37	8	8	114	8
2023	34	8	8	114	8
2024	29	7	7	114	7
2025	22	5	5	114	5
2026	15	3	3	114	3
2027	11	2	2	114	2
2028	8	1	1	114	1
2029	6	1	1	114	1
Total*	238	51	51	1,052	51

*Values Differ Due to Rounding
Source: EXH 40, 41, 65

Date: October 24, 2019

Tampa Electric Company - Commercial & Industrial Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	4.1	2.7	2.7	6	2.7
2021	4.1	2.5	2.5	10	2.5
2022	4.1	2.4	2.4	10	2.4
2023	4.1	2.9	2.9	10	2.9
2024	4.2	2.4	2.4	10	2.4
2025	4.2	2.5	2.5	10	2.5
2026	4.2	2.8	2.8	10	2.8
2027	4.2	2.6	2.6	10	2.6
2028	4.2	2.4	2.4	10	2.4
2029	4.4	2.6	2.6	10	2.6
Total*	41.7	25.8	25.8	93	25.8

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	3.3	1.9	1.9	5	1.9
2021	3.3	1.7	1.7	8	1.7
2022	3.3	1.6	1.6	8	1.6
2023	3.3	2.0	2.0	8	2.0
2024	3.3	1.6	1.6	8	1.6
2025	3.3	1.8	1.8	8	1.8
2026	3.3	1.9	1.9	8	1.9
2027	3.3	1.8	1.8	8	1.8
2028	3.3	1.7	1.7	8	1.7
2029	3.5	1.8	1.8	8	1.8
Total*	32.9	17.8	17.8	77	17.8

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	9.0	5.5	5.5	36	5.5
2021	9.0	6.5	6.5	56	6.5
2022	9.0	5.5	5.5	56	5.5
2023	9.0	6.5	6.5	56	6.5
2024	9.1	5.6	5.6	56	5.6
2025	9.1	6.7	6.7	56	6.7
2026	9.1	5.8	5.8	56	5.8
2027	9.1	6.8	6.8	56	6.8
2028	9.1	5.8	5.8	56	5.8
2029	10.6	6.8	6.8	56	6.8
Total*	92.1	61.4	61.4	538	61.4

*Values Differ Due to Rounding
 Source: EXH 63, 65, 248

Date: October 24, 2019

Gulf Power Company - Commercial & Industrial Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	2	1	1	3	1
2021	3	1	1	6	1
2022	3	1	1	8	1
2023	3	2	1	8	2
2024	4	2	1	8	2
2025	4	2	2	8	2
2026	4	2	2	8	2
2027	4	2	2	8	2
2028	4	2	2	8	2
2029	4	2	2	8	2
Total*	36	20	15	76	20

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	2	1	1	2	1
2021	3	1	1	5	1
2022	3	1	1	6	1
2023	3	1	1	6	1
2024	4	1	1	6	1
2025	4	1	1	6	1
2026	4	1	1	6	1
2027	4	2	1	6	2
2028	4	2	1	6	2
2029	4	2	2	6	2
Total*	36	13	11	56	13

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	9	0	0	17	0
2021	10	0	0	34	0
2022	12	1	0	46	1
2023	13	1	0	46	1
2024	15	1	0	46	1
2025	16	1	0	46	1
2026	15	1	0	46	1
2027	14	1	0	46	1
2028	11	0	0	46	0
2029	9	0	0	46	0
Total*	124	6	0	422	6

*Values Differ Due to Rounding

Source: EXH 35, 65

Date: October 24, 2019

Florida Public Utilities Company - Commercial & Industrial Annual Goals

Summer Peak Demand (MW)				
Year	TRC Achievable	RIM Achievable	Utility Proposal	Staff Recom.
2020	0.03	0	0	0
2021	0.03	0	0	0
2022	0.03	0	0	0
2023	0.03	0	0	0
2024	0.02	0	0	0
2025	0.02	0	0	0
2026	0.02	0	0	0
2027	0.02	0	0	0
2028	0.02	0	0	0
2029	0.02	0	0	0
Total*	0.24	0	0	0

Winter Peak Demand (MW)				
Year	TRC Achievable	RIM Achievable	Utility Proposal	Staff Recom.
2020	0.03	0	0	0
2021	0.03	0	0	0
2022	0.03	0	0	0
2023	0.03	0	0	0
2024	0.02	0	0	0
2025	0.02	0	0	0
2026	0.01	0	0	0
2027	0.01	0	0	0
2028	0.01	0	0	0
2029	0.01	0	0	0
Total*	0.20	0	0	0

Annual Energy Consumption (GWh)				
Year	TRC Achievable	RIM Achievable	Utility Proposal	Staff Recom.
2020	0.24	0	0	0
2021	0.25	0	0	0
2022	0.26	0	0	0
2023	0.20	0	0	0
2024	0.15	0	0	0
2025	0.12	0	0	0
2026	0.11	0	0	0
2027	0.12	0	0	0
2028	0.12	0	0	0
2029	0.13	0	0	0
Total*	1.70	0	0	0

*Values Differ Due to Rounding
 Source: EXH 159

JEA - Commercial & Industrial Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	2.12	0	0	3	0
2021	2.24	0	0	6	0
2022	2.50	0	0	8	0
2023	2.57	0	0	8	0
2024	2.57	0	0	8	0
2025	2.60	0	0	8	0
2026	2.58	0	0	8	0
2027	2.37	0	0	8	0
2028	1.97	0	0	8	0
2029	1.51	0	0	8	0
Total*	23.04	0	0	76	0

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	1.80	0	0	2	0
2021	1.79	0	0	5	0
2022	1.85	0	0	6	0
2023	1.69	0	0	6	0
2024	1.44	0	0	6	0
2025	1.26	0	0	6	0
2026	1.17	0	0	6	0
2027	1.06	0	0	6	0
2028	0.92	0	0	6	0
2029	0.76	0	0	6	0
Total*	13.74	0	0	57	0

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	15.66	0	0	21	0
2021	16.81	0	0	43	0
2022	19.04	0	0	55	0
2023	20.05	0	0	55	0
2024	20.50	0	0	55	0
2025	20.83	0	0	55	0
2026	20.19	0	0	55	0
2027	17.81	0	0	55	0
2028	14.22	0	0	55	0
2029	10.69	0	0	55	0
Total*	175.79	0	0	507	0

*Values Differ Due to Rounding
 Source: EXH 65, 228

Orlando Utilities Commission - Commercial & Industrial Annual Goals

Summer Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	0.24	0	0	2	0
2021	0.31	0	0	4	0
2022	0.44	0	0	4	0
2023	0.62	0	0	4	0
2024	0.86	0	0	4	0
2025	1.17	0	0	4	0
2026	1.51	0	0	4	0
2027	1.76	0	0	4	0
2028	1.77	0	0	4	0
2029	1.50	0	0	4	0
Total*	10.18	0	0	38	0

Winter Peak Demand (MW)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	0.11	0	0	2	0
2021	0.12	0	0	3	0
2022	0.15	0	0	3	0
2023	0.18	0	0	3	0
2024	0.21	0	0	3	0
2025	0.26	0	0	3	0
2026	0.32	0	0	3	0
2027	0.37	0	0	3	0
2028	0.39	0	0	3	0
2029	0.36	0	0	3	0
Total*	2.46	0	0	31	0

Annual Energy Consumption (GWh)					
Year	TRC Achievable	RIM Achievable	Utility Proposal	SACE & LULAC	Staff Recom.
2020	2.24	0.0006	0	12	0.0006
2021	2.72	0.0006	0	24	0.0006
2022	3.64	0.0006	0	25	0.0006
2023	4.94	0.0006	0	25	0.0006
2024	6.42	0.0006	0	25	0.0006
2025	8.19	0.0006	0	25	0.0006
2026	10.05	0.0006	0	25	0.0006
2027	11.28	0.0006	0	25	0.0006
2028	11.09	0.0006	0	25	0.0006
2029	9.25	0.0006	0	25	0.0006
Total*	69.83	0.0060	0	238	0.0060

*Values Differ Due to Rounding
 Source: TR 676-677; EXH 65, 204