I. Meeting Packet

State of Florida
Public Service Commission
INTERNAL AFFAIRS AGENDA
Thursday – November 9, 2023
Immediately Following Agenda Conference
Room 148 - Betty Easley Conference Center

1. Draft 2023 Ten-Year Site Plans of Florida Electric Utilities (Attachment 1)

2. Draft 2023 Report Annual Report on Activity Pursuant to the Florida Energy Efficiency and Conservation Act (Attachment 2)

3. Draft 2023 Lifeline Assistance Report (Attachment 3)

4. General Counsel's Report

5. Executive Director's report

6. Other Matters

BB/aml

OUTSIDE PERSONS WISHING TO ADDRESS THE COMMISSION ON ANY OF THE AGENDAED ITEMS SHOULD CONTACT THE OFFICE OF THE EXECUTIVE DIRECTOR AT (850) 413-6463.

Attachment 1

State of Florida

Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

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

DATE: October 26, 2023

TO: Braulio L. Baez, Executive Director

FROM: Greg Davis, Engineering Specialist II, Division of Engineering GD TB LK POC

RE: Review of the 2023 Ten-Year Site Plans of Florida Electric Utilities

CRITICAL INFORMATION: Place on November 9, 2023 Internal Affairs Agenda. Approval by the Commission is required by December 31, 2023.

Pursuant to Section 186.801, Florida Statues, electric utilities are required to submit to the Commission a Ten-Year Site Plan which shall estimate a utility's power-generating needs and the general location of its proposed power plant sites. The Commission is required to make a preliminary study of each plan and classify it as "suitable" or "unsuitable" within nine months after receipt of the proposed plan. Electric utility plans were filed on April 3, 2023. Staff seeks approval of the attached draft report that includes a statewide assessment, and an analysis and recommended classification of each plan.

Please contact me or Phillip Ellis if you have any questions or need additional information in reference to the attached document.

GD:pz

Attachment

cc: Keith Hetrick, General Counsel
Mark Futrell, Deputy Executive Director – Technical
Apryl Lynn, Deputy Executive Director – Administrative

Draft 10-26-2023

REVIEW OF THE

2023 TEN-YEAR SITE PLANS

OF FLORIDA'S ELECTRIC UTILITIES

FLORIDA PUBLIC SERVICE COMMISSION

NOVEMBER 2023

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List of Ten-Year Site Plan Utilities

Name	Abbreviation
Investor-Owned Electric Utilities	
Florida Power & Light Company	FPL
Duke Energy Florida, LLC	DEF
Tampa Electric Company	TECO
Municipal Electric Utilities	
Florida Municipal Power Agency	FMPA
Gainesville Regional Utilities	GRU
JEA	JEA
Lakeland Electric	LAK
Orlando Utilities Commission	OUC
City of Tallahassee Utilities	TAL
Rural Electric Cooperatives	
Seminole Electric Cooperative	SEC

Unit Type and Fuel Abbreviations

Reference	Name	Abbreviation
Unit Type	Battery Storage	BAT
	Combined Cycle	CC
	Combustion Turbine	CT
	Hydroelectric	HY
	Internal Combustion	IC
	Photovoltaic	PV
	Steam Turbine	ST
Fuel Type	Bituminous Coal	BIT
	Distillate Fuel Oil	DFO
	Landfill Gas	LFG
	Natural Gas	NG

Executive Summary

Integrated resource planning (IRP) is a utility process that includes a cost-effective combination of demand-side resources and supply-side resources. While each utility has slightly different approaches to IRP, some things are consistent across the industry. Each utility must update its load forecast assumptions based on Florida Public Service Commission (Commission) decisions in various dockets, such as demand-side management goals. Changes in government mandates, such as appliance efficiency standards, building codes, and environmental requirements must also be considered. Other updates involve input assumptions like demographics, financial parameters, generating unit operating characteristics, and fuel costs which are more fluid and do not require prior approval by the Commission. Each utility then conducts a reliability analysis to determine when resources may be needed to meet expected load. Next, an initial screening of demand-side and supply-side resources is performed to find candidates that meet the expected resource need. The demand-side and supply-side resources are combined in various scenarios to decide which combination meets the need most cost-effectively. After the completion of all these components, utility management reviews the results of the varying analyses and the utility's Ten-Year Site Plan (TYSP) is produced as the culmination of the IRP process. Commission Rules also require the utilities to provide aggregate data which provides an overview of the State of Florida electric grid.

The Commission's annual review of utility Ten-Year Site Plans is non-binding as required by Florida Statutes (F.S.), but it does provide state, regional, and local agencies advance notice of proposed power plants and transmission facilities. Any concerns identified during the review of the utilities' Ten-Year Site Plans may be addressed by the Commission at a formal public hearing, such as a power plant need determination proceeding. While Florida Statutes and Commission Rules do not specifically define IRP, they do provide a solid framework for flexible, cost-effective utility resource planning. In this way, the Commission fulfills its oversight and regulatory responsibilities while leaving day-to-day planning and operations to utility management.

Pursuant to Section 186.801, F.S., each generating electric utility must submit to the Commission a Ten-Year Site Plan which estimates the utility's power generating needs and the general locations of its proposed power plant sites over a 10-year planning horizon. The Ten-Year Site Plans of Florida's electric utilities summarize the results of each utility's IRP process and identifies proposed power plants and transmission facilities. The Commission is required to perform a preliminary study of each plan and classify each one as either "suitable" or "unsuitable." This document represents the review of the 2023 Ten-Year Site Plans for Florida's electric utilities, filed by 10 reporting utilities.[1]

All findings of the Commission are made available to the Florida Department of Environmental Protection for its consideration at any subsequent certification proceeding pursuant to the

[1] Investor-owned utilities filing 2023 Ten-Year Site Plans include Florida Power & Light Company, Duke Energy Florida, LLC, and Tampa Electric Company. Municipal utilities filing 2023 Ten-Year Site Plans include Florida Municipal Power Agency, Gainesville Regional Utilities, JEA (formerly Jacksonville Electric Authority), Lakeland Electric, Orlando Utilities Commission, and City of Tallahassee Utilities. Seminole Electric Cooperative also filed a 2023 Ten-Year Site Plan.

Electrical Power Plant Siting Act or the Electric Transmission Line Siting Act.[2] In addition, this document is sent to the Florida Department of Agriculture and Consumer Services pursuant to Section 377.703(2)(e), F.S., which requires the Commission provide a report on electricity and natural gas forecasts.

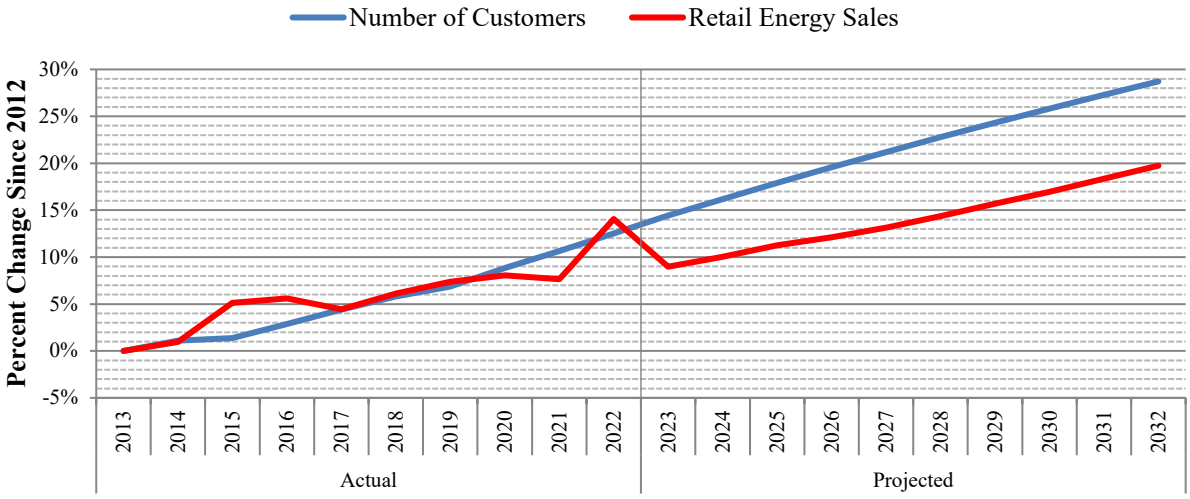
Review of the 2023 Ten-Year Site Plans

The Commission has divided this review into two portions: (1) a Statewide Perspective, which covers the whole of Florida; and (2) Utility Perspectives, which address each of the reporting utilities. From a statewide perspective, the Commission has reviewed the implications of the combined trends of Florida's electric utilities regarding load forecasting, renewable generation, and traditional generation.

Load Forecasting

Forecasting customer energy needs or load is a fundamental component of electric utility planning. In order to maintain an adequate and reliable system, utilities must project and prepare for changes in overall electricity consumption patterns. These patterns are affected by the number and type of customers, and factors that impact customer usage including weather, economic conditions, housing size, building codes, appliance efficiency standards, new technologies, and demand-side management. Florida's utilities use well-known and tested forecasting methodologies, which are consistent with industrywide practices used in generation planning. Figure 1 provides the historical and forecasted trends in customer growth and energy sales. Retail sales in 2023 dropped from 2022 because of abnormal weather conditions in 2022, and normalized weather trends were used to forecast 2023 through 2032.

Figure 1: State of Florida - Growth in Customers and Sales



Source: FRCC 2023 Regional Load and Resource Plan

[2] The Electrical Power Plant Siting Act is Sections 403.501 through 403.518, F.S. Pursuant to Section 403.519, F.S., the Commission is the exclusive forum for the determination of need for an electrical power plant. The Electric Transmission Line Siting Act is Sections 403.52 through 403.5365, F.S. Pursuant to Section 403.537, F.S., the Commission is the sole forum for the determination of need for a transmission line.

Renewable Generation

Renewable resources continue to expand in Florida, with approximately 9,274 megawatts (MW) of renewable generating capacity currently in Florida. The majority of installed renewable capacity is represented by solar photovoltaic (PV) generation which makes up approximately 84 percent of Florida's existing renewables. Notably, Florida electric customers had installed 1,780 MW of demand-side renewable capacity by the end of 2022, an increase of 51 percent from 2021.

Florida's total renewable resources are expected to increase by an estimated 27,630 MW over the 10-year planning period, excluding any potential demand-side renewable energy additions. Solar PV accounts for all of this increase; however, only 5,505 MW of these new solar resources are considered as firm resources for summer peak reliability considerations. If these conditions continue, cost-effective forms of renewable generation will continue to improve the state's fuel diversity and reduce dependence on fossil fuels. Also, several utilities plan on adding battery storage totaling 2,845 MW during the planning period, which would increase firm capacity available during both seasonal system peaks.

Table 1 provides a breakdown of each TYSP Utility's actual 2022 and projected 2032 generation from renewables, in gigawatt-hours (GWh) and as a percentage of the net energy for load (NEL). Renewable energy as a percent of NEL is expected to increase from 5.8 percent in 2022 to 28.0 percent in 2032.

Table 1: State of Florida - Renewable Energy Generation

Utility	2022 Actual			2032 Projected		
	NEL	Renewables		NEL	Renewables	
	GWh	GWh	% NEL	GWh	GWh	% NEL
FPL	147,131	8,660	5.9%	152,225	54,303	35.7%
DEF	46,141	2,225	4.8%	44,705	10,973	7.2%
TECO	21,572	1,492	6.9%	22,822	4,535	19.9%
FMPA	7,097	148	2.1%	6,802	764	11.2%
GRU	1,895	622	32.8%	1,952	881	45.1%
JEA	12,930	150	1.2%	13,765	3,298	24.0%
LAK	3,406	17	0.5%	3,740	180	4.8%
OUC	7,764	346	4.5%	8,077	3,198	39.6%
TAL	2,611	114	4.4%	3,018	115	3.8%
SEC	16,330	463	2.8%	18,233	740	4.1%
State of Florida	274,025	15,786	5.8%	283,094	79,134	28.0%

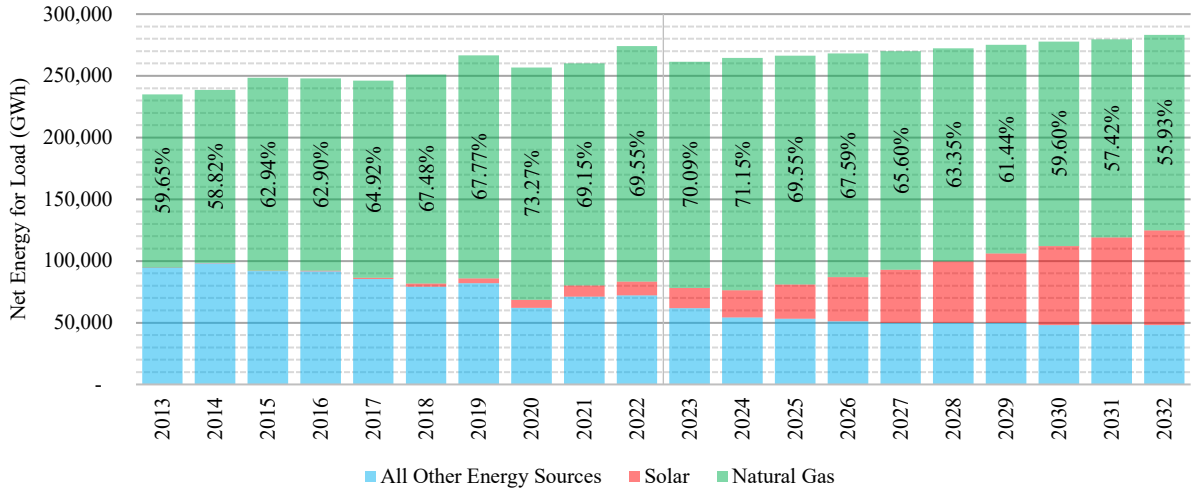
Source: FRCC 2023 Regional Load and Resource Plan & TYSP Utilities' Data Responses

Traditional Generation

Generating capacity within Florida is anticipated to grow to meet the increase in customer demand, with an approximate net increase of 1,900 MW of traditional generation over the planning horizon, with natural gas plant additions offset by coal and oil retirements. Natural gas electric generation, as a percent of NEL, is expected to decline from 70 percent in 2023 to 56 percent over the planning

horizon. Figure 2 illustrates the use of natural gas as a generating fuel for electricity production in Florida compared to solar and all other energy sources combined. The total energy produced by solar generation is projected to exceed all other sources combined excluding natural gas by 2029.

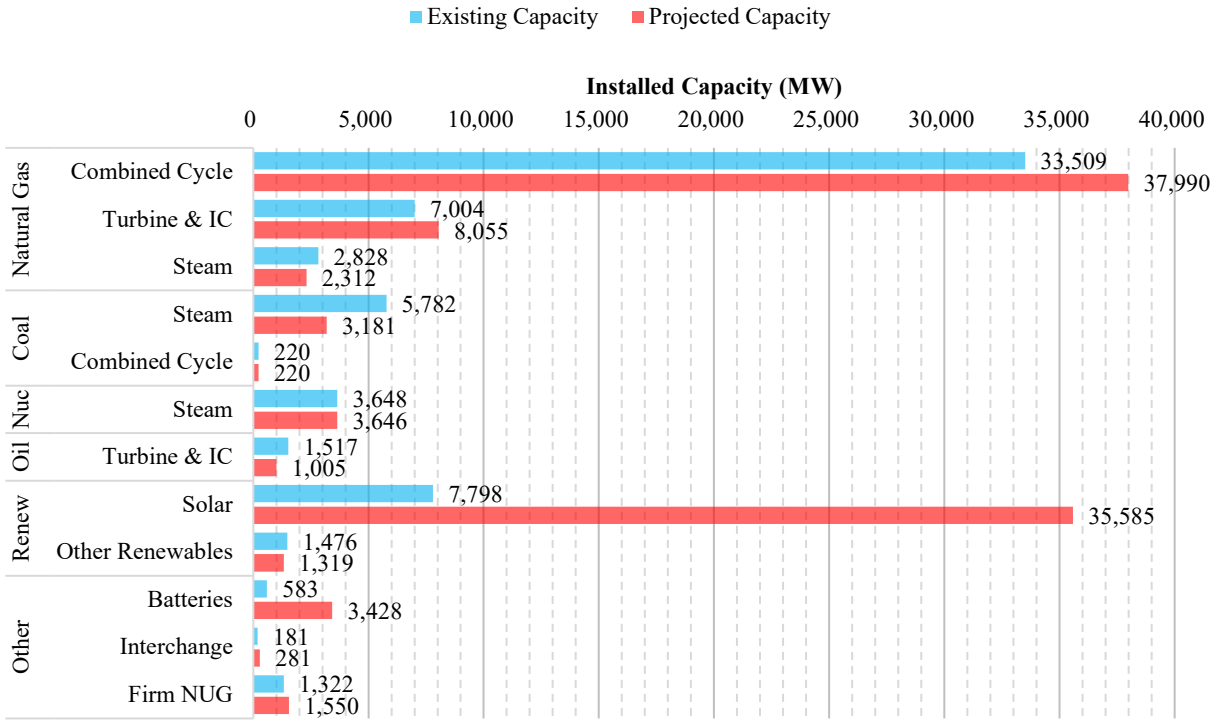
Figure 2: State of Florida - Electricity Generation Sources



Source: FRCC 2014-2023 Regional Load and Resource Plans

Figure 3 illustrates the present and future aggregate capacity mix of Florida based on the 2023 Ten-Year Site Plans. The capacity values in Figure 3 incorporate all proposed additions, changes, and retirements planned during the 10-year period. While natural gas-fired generating units represent a majority of capacity within the state, renewable capacity additions make up the majority of the projected net increase in generation capacity over the planning period. Solar generation is already the second highest category of installed capacity, and will be growing to over 90 percent of the natural gas combined cycle nameplate capacity by the end of the 10-year planning period. As mentioned previously, not all of the installed solar capacity provides a firm resource that is available to serve peak demand.

Figure 3: State of Florida - Current and Projected Installed Capacity



Source: FRCC 2023 Regional Load and Resource Plan & TYSP Utilities' Data Responses

As noted previously, the primary purpose of this review is to provide information regarding proposed electric power plants for local, regional, and state agencies to assist in the certification process. During the next 10 years, there are three new units planned that may require a determination of need from the Commission pursuant to Section 403.519, F.S. All three planned units are natural gas-fired combined cycles that are described as proxy units for planning purposes. JEA's TYSP includes a unit in 2030 and SEC's TYSP includes a unit in 2025 and 2032.

Future Considerations

Florida's electric utilities must also consider changes in environmental regulations associated with existing generators and planned generation to meet Florida's electric needs. Developments in U.S. Environmental Protection Agency (EPA) regulations may impact Florida's existing generation fleet and proposed new facilities. For example, on May 11, 2023, the EPA released a proposed rule consisting of five separate actions under the Clean Air Act Section 111, targeting greenhouse gas (GHG) emissions from fossil fuel-fired electric generating units. These and other relevant EPA actions are further discussed in the Traditional Generation Section.

In order to prepare for and to accommodate the inevitable increase in electric vehicle (EV) ownership, as well as investigate unknowns associated with EV charging, utilities have been tracking the development of the EV market or using pilot programs to collect data on metrics of interest. These range from investments in public EV charging infrastructure, research partnerships, and EV rebate programs. By the end of the planning period, EVs are anticipated to be responsible

for 3.9 percent of NEL and 4.0 percent of summer peak demand. The Commission will continue to ask utilities to note key findings and notable metrics related to these investigations and pilot programs. This information will help inform the Commission about the future power needs of EVs in Florida, which may require additional generating resources or conservation programs to meet their needs.

Conclusion

The Commission has reviewed the 2023 Ten-Year Site Plans of Florida's electric utilities and finds that the projections of load growth appear reasonable. The reporting utilities have identified sufficient additional generation facilities to maintain an adequate supply of electricity. The Commission will continue to monitor the impact of current and proposed EPA Rules, expansion of EV adoption, and the state's dependence on natural gas for electricity production.

Based on its review, the Commission finds the 2023 Ten-Year Site Plans to be suitable for planning purposes. Since the plans are not a binding plan of action for electric utilities, the Commission's classification of these plans as "suitable" or "unsuitable" does not constitute a finding or determination in docketed matters before the Commission.

Introduction

The Ten-Year Site Plans of Florida's electric utilities are the culmination of an integrated resource plan which is designed to give state, regional, and local agencies advance notice of proposed power plants and transmission facilities. The Commission receives comments from these agencies regarding any issues with which they may have concerns. The Ten-Year Site Plans are planning documents that contain tentative data that is subject to change by the utilities upon written notification to the Commission.

For any new proposed power plants and transmission facilities, certification proceedings under the Florida Electrical Power Plant Siting Act, Sections 403.501 through 403.518, F.S., or the Florida Electric Transmission Line Siting Act, Sections 403.52 through 403.5365, F.S., will include more detailed information than is provided in the Ten-Year Site Plans. The Commission is the exclusive forum for determination of need for electrical power plants, pursuant to Section 403.519, F.S., and for transmission lines, pursuant to Section 403.537, F.S. The Ten-Year Site Plans are not intended to be comprehensive, and therefore may not have sufficient information to allow regional planning councils, water management districts, and other reviewing state, regional, and local agencies to evaluate site-specific issues within their respective jurisdictions. Other regulatory processes may require the electric utilities to provide additional information as needed.

Statutory Authority

Section 186.801, F.S., requires all major generating electric utilities submit a Ten-Year Site Plan to the Commission at least every two years. Based on these filings, the Commission performs a preliminary study of each Ten-Year Site Plan and makes a non-binding determination as to whether it is suitable or unsuitable. The results of the Commission's study are contained in this report and are forwarded to the Florida Department of Environmental Protection for use in subsequent proceedings. In addition, Section 377.703(2)(e), F.S., requires the Commission to collect and analyze energy forecasts, specifically for electricity and natural gas, and forward this information to the Department of Agriculture and Consumer Services. The Commission has adopted Rules 25-22.070 through 25-22.072, Florida Administrative Code (F.A.C.) in order to fulfill these statutory requirements and provide a solid framework for flexible, cost-effective utility resource planning. In this way, the Commission fulfills its oversight and regulatory responsibilities while leaving day-to-day planning and operations to utility management.

Applicable Utilities

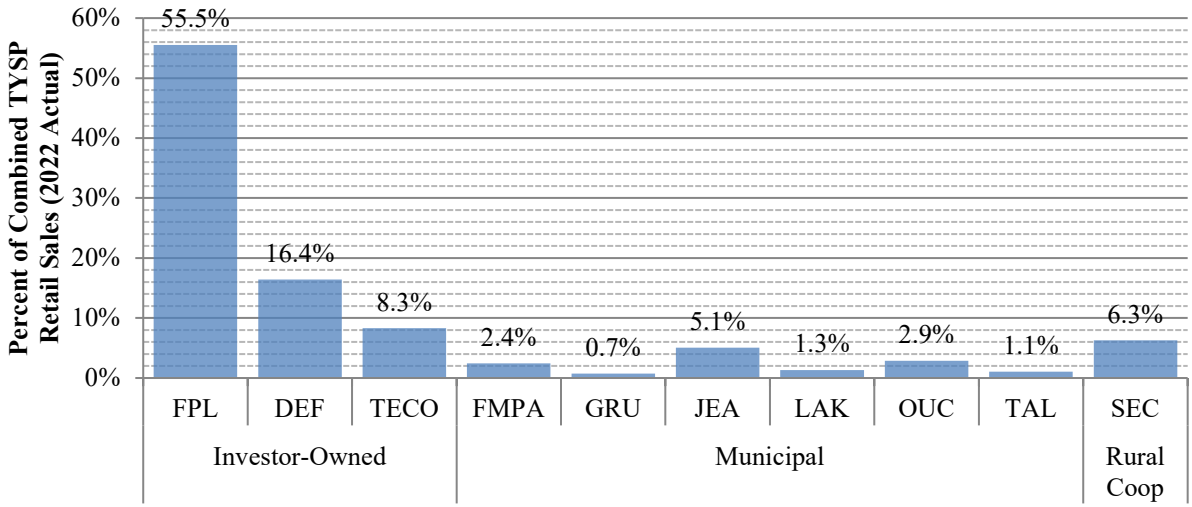
Florida is served by 57 electric utilities, including 4 investor-owned utilities, 35 municipal utilities, and 18 rural electric cooperatives. Pursuant to Rule 25-22.071(1), F.A.C., only electric utilities with an existing generating capacity above 250 MW or a planned unit with a capacity of 75 MW or greater are required to file a Ten-Year Site Plan with the Commission every year.

In 2023, 10 utilities met these requirements and filed a Ten-Year Site Plan, including 3 investor-owned utilities, 6 municipal utilities, and 1 rural electric cooperative. The investor-owned utilities, in order of size, are Florida Power & Light Company, Duke Energy Florida, LLC, and Tampa Electric Company. The municipal utilities, in alphabetical order, are Florida Municipal Power Agency, Gainesville Regional Utilities, JEA (formerly Jacksonville Electric Authority), Lakeland Electric, Orlando Utilities Commission, and City of Tallahassee Utilities. The sole rural electric

cooperative filing a 2023 Ten-Year Site Plan is Seminole Electric Cooperative. Collectively, these utilities are referred to as the Ten-Year Site Plan Utilities (TYSP Utilities).

Figure 4 illustrates the comparative size of the TYSP Utilities, in terms of each utility's percentage share of the combined TYSP Utilities' retail energy sales in 2022. Collectively, the reporting investor-owned utilities account for 80 percent of the reported retail energy sales, while the municipal and cooperative utilities make up approximately 20 percent of the reported retail energy sales.

Figure 4: TYSP Utilities - Comparison of Reporting Electric Utility Sales



Source: FRCC 2023 Regional Load and Resource Plan & 2023 Ten-Year Site Plans

Required Content

The Commission requires each reporting utility to provide information on a variety of topics as required by Section 186.801(2) F.S. Schedules describe the utility's existing generation fleet, customer composition, demand and energy forecasts, fuel requirements, reserve margins, changes to existing capacity, and proposed power plants and transmission lines. The utilities also provide a narrative documenting the methodologies used to forecast customer demand and the identification of resources to meet that demand over the 10-year planning period. This information, supplemented by additional data requests, provides the basis of the Commission's review.

Additional Resources

The Florida Reliability Coordinating Council (FRCC) compiles utility data on both a statewide basis and for Peninsular Florida, which excludes the area west of the Apalachicola River. This provides aggregate data for the Commission's review. Each year, the FRCC publishes a Regional Load and Resource Plan, which contains historic and forecast data on demand and energy, capacity and reserves, and proposed new generating units and transmission line additions. For certain comparisons, the Commission employs additional data from various government agencies, including the Energy Information Administration and the Florida Department of Highway Safety and Motor Vehicles.

Structure of the Commission's Review

The Commission's review is divided into multiple sections. The Statewide Perspective provides an overview of Florida as a whole, including discussions of load forecasting, renewable generation, and traditional generation. The Utility Perspectives provides more focus, discussing the various issues facing each electric utility and its unique situation. Comments collected from various review agencies, local governments, and other organizations are included in Appendix A.

Conclusion

Based on its review, the Commission finds all 10 reporting utilities' 2023 Ten-Year Site Plans to be suitable for planning purposes. During its review, the Commission has determined that the projections for load growth appear reasonable and that the reporting utilities have identified sufficient generation facilities to maintain an adequate supply of electricity.

The Commission notes that the Ten-Year Site Plans are non-binding, and a classification of suitable does not constitute a finding or determination in any docketed matter before the Commission, nor an approval of all planning assumptions contained within the Ten-Year Site Plans.

Statewide Perspective

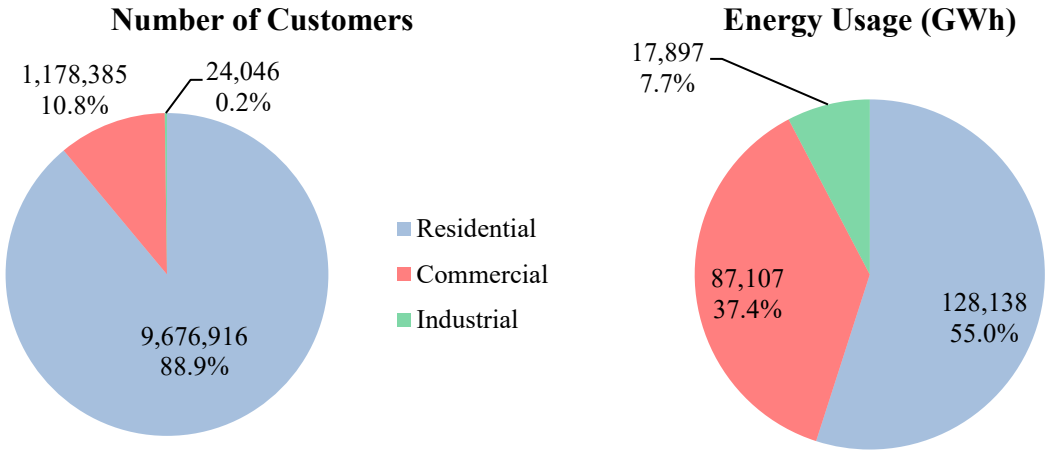
Load Forecasting

Forecasting customer energy needs or load is a fundamental component of electric utility planning. In order to maintain an adequate and reliable system, utilities must project and prepare for changes in overall electricity consumption patterns. These patterns are affected by the number and type of customers, and factors that impact customer usage including weather, economic conditions, housing size, building codes, appliance efficiency standards, new technologies, and demand-side management. Florida's utilities use well-known and tested forecasting methodologies, which are consistent with industrywide practices used in generation planning.

Electric Customer Composition

Utility companies categorize their customers by residential, commercial, and industrial classes. As illustrated in Figure 5, residential customers account for 88.9 percent of the total, followed by commercial (10.8 percent) and industrial (0.2 percent) customers. Commercial and industrial customers make up a sizeable percentage of energy sales due to their higher energy usage per customer.

Figure 5: State of Florida - Electric Customer Composition in 2022



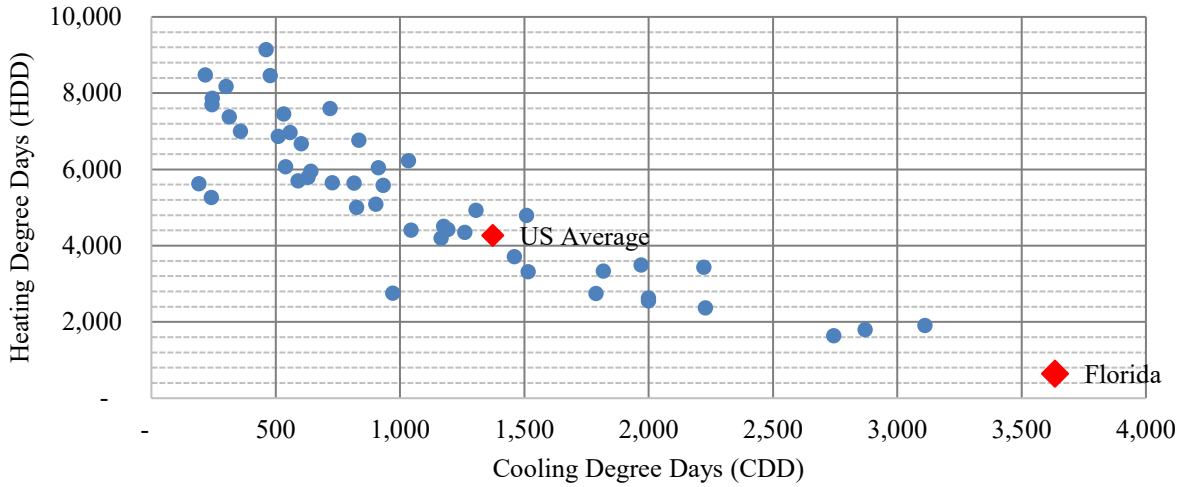
Source: FRCC 2023 Regional Load and Resource Plan

Residential customers in Florida make up the largest portion of retail energy sales. Florida's residential customers accounted for 55 percent of retail energy sales in 2022, compared to a national average of approximately 39 percent.[3] As a result, Florida's utilities are influenced more by trends in residential energy usage, which tend to be associated with weather conditions. Florida's unique climate plays an important role in electric utility planning, with the highest number of cooling degree days and lowest number of heating degree days within the continental United States, as shown in Figure 6. As such, most of Florida's utilities experience their peak

[3] U.S. Energy Information Administration July 2022 Electric Power Monthly.

demand during summer months. However, Florida's residential customers rely more upon electricity for heating than the national average, with only a small portion using alternate fuels such as natural gas or oil for home heating needs. Even with the low frequency of heating days required, such reliance can impact winter peak demand.

Figure 6: National - 20 Year Average Climate Data by State (Continental US)



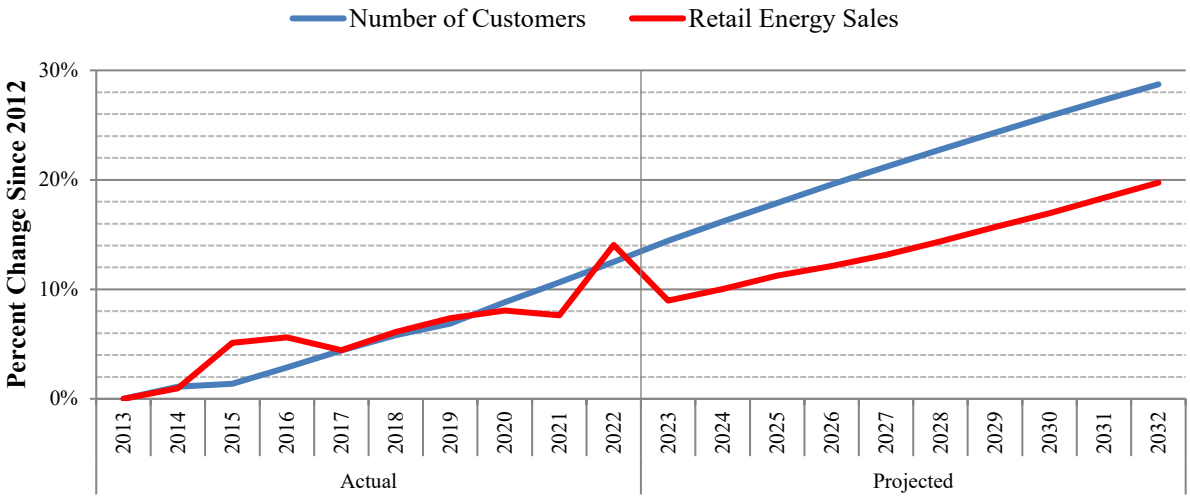
Source: National Oceanic and Atmospheric Administration Data

Growth Projections

For the next 10-year period, Florida's weather normalized retail energy sales are projected to grow at 1.05 percent per year, compared to the 1.14 percent actual annual increase experienced during the 2013-2022 period. The number of Florida's electric utility customers is anticipated to grow at an average annual rate of about 1.33 percent for the next 10-year period, compared to the 1.40 percent actual annual increase experienced during the last decade. These trends are showcased in Figure 7.

As shown in Figure 7, Florida utilities' total retail energy sales reached a historical peak in 2022 surpassing the most recent peak that was reached in 2020. Several factors converged to contribute to this effect: continued growth in the number of retail customers as more people move into the state, warmer than normal weather conditions, and a surge in economic activity in the state's vibrant tourism and service sectors as they further recover from the COVID-19 pandemic, which leads to increased electricity consumption across various industries. The second highest peak in energy sales, occurred in 2020, which was mainly a result of residential customers working or schooling from home during the pandemic. Florida utilities' total retail energy sales are projected to continuously grow at a moderate annual average rate for the next 10 years. This sales growth is driven by an anticipated growth in customers and business activity, as well as the expected increased level of adoption of electric vehicles.

Figure 7: State of Florida - Growth in Customers and Sales



Source: FRCC 2023 Regional Load and Resource Plan

The projected retail energy sales trend reflects the product of the utilities' forecasted number of customers and forecasted energy consumption per customer. The key factor affecting utilities' number of customers is population growth. The key factors affecting utilities' use-per-customer includes weather, the economy, energy prices, and energy efficiency; hence, the corresponding information is utilized to develop the forecast models for projecting the future growth of use-per-customer. The projected growth rate of retail energy sales is impacted by these underlying key factors.

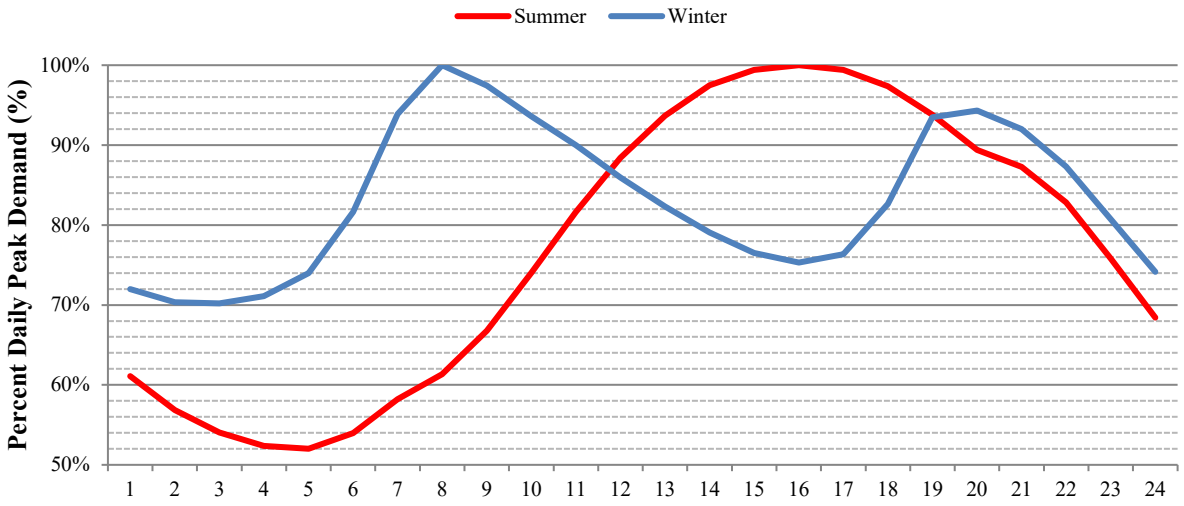
With respect to the energy consumption per customer forecasts, FPL forecasted that its residential use per customer will be flat or slightly grow (as high as 0.8 percent) due to continued economic growth as well as increased adoptions of electric vehicles. The utility expects that its commercial use per customer will decline by 0.3 percent to 2.0 percent per year over the forecast horizon due to continued improvements to equipment efficiencies. DEF reported that its per customer usage for both residential and commercial classes are primarily driven by fluctuations in electric price, end-use appliance saturation and efficiency improvement, building codes, and housing type/size. In addition, the utility is aware that more recently, the customer's ability to self-generate has begun to make an impact. A small percentage of industrial/commercial customers have chosen to install their own natural gas generators, reducing energy consumption from the power grid. Similarly, residential and some commercial accounts have reduced their utility requirements by installing solar panels behind the meter. However, DEF also noted that the penetration of electric vehicles has grown, leading to an increase in residential use per customer, all else being equal. Each of these stated items is directly or indirectly incorporated in DEF's sales forecast. TECO echoed that increases in appliance/lighting efficiencies, energy efficiency of new homes, conservation efforts and housing mix are also the primary drivers affecting the decrease in per customer usage. Other TYSP Utilities likewise reported that the downward pressure to the growth trend in per customer energy consumption is due to advancements in efficient technologies, renewable generation, and alternative energy sources, with some utilities expecting that the increased electric vehicle charging will mitigate this downward pressure to some extent.

Peak Demand

The aggregation of each individual customer's electric consumption must be met at all times by Florida's electric utilities to ensure reliable service. The time at which customers demand the most energy simultaneously is referred to as peak demand. While retail energy sales dictate the amount of fuel consumed by the electric utilities to deliver energy, peak demand determines the amount of generating capacity required to deliver that energy at a single moment in time.

Seasonal weather patterns are a primary factor, with peak demands calculated separately for the summer and winter periods annually. The influence of residential customers is evident in the determination of these seasonal peaks, as they correspond to times of increased usage to meet home cooling (summer) and heating (winter) demand. Figure 8 illustrates a daily load curve for a typical day for each season. In summer, air-conditioning needs increase throughout the day, climbing steadily until a peak is reached in the late afternoon and then declining into the evening. In winter, electric heat and electric water heating produce a higher base level of usage, with a spike in the morning and an additional spike in the evening.

Figure 8: TYSP Utilities - Example Daily Load Curves



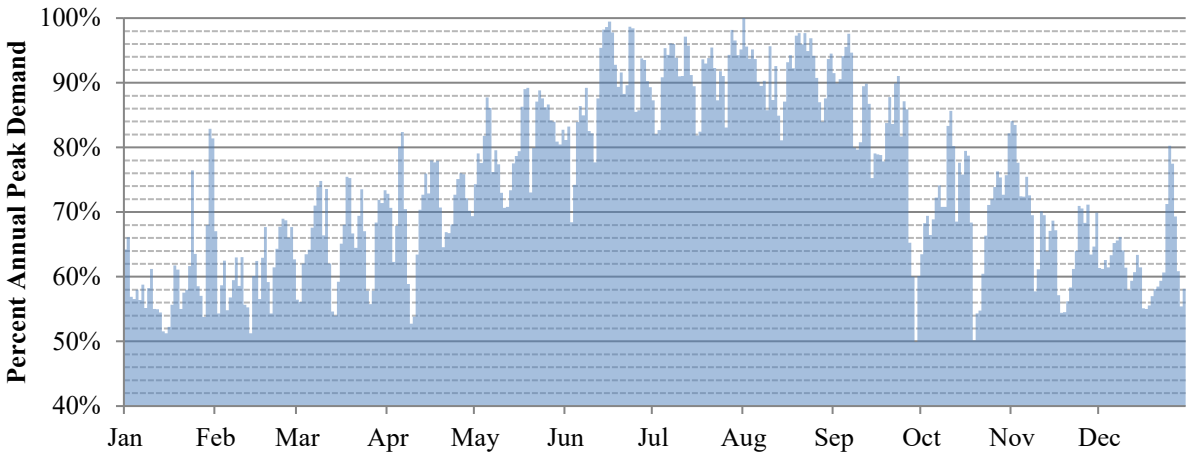
Source: TYSP Utilities' Data Responses

Florida is typically a summer-peaking state, meaning that the summer peak demand generally exceeds winter peak demand, and therefore controls the amount of generation required. Higher temperatures in summer also reduce the efficiency of generation, with high water temperatures reducing the quality of cooling provided, and can sometimes limit the quantity as units may be required to operate at reduced power or go offline based on environmental permits. Conversely, in winter, utilities can take advantage of lower ambient air and water temperatures to produce more electricity from a power plant.

As daily load varies, so do seasonal loads. Figure 9 shows the 2022 daily peak demand as a percentage of the annual peak demand for the reporting investor-owned utilities combined. Typically, winter peaks are short events while summer demand tends to stay at near annual peak

levels for longer periods. The periods between seasonal peaks are referred to as shoulder months, in which the utilities take advantage of lower demand to perform maintenance without impacting their ability to meet daily peak demand.

Figure 9: TYSP Utilities - Daily Peak Demand (2022 Actual)



Source: 2023 TYSP Utilities' Data Responses (Investor-Owned Utilities Only)

Florida's utilities assume normalized weather in forecasts of peak demand. During operation of their systems, they continuously monitor short-term weather patterns. Utilities adjust maintenance schedules to ensure the highest unit availability during the utility's projected peak demand, bringing units back online if necessary or delaying maintenance until after a weather system has passed.

Electric Vehicles

Other trends that may impact customer peak demand and energy consumption are also examined by utilities, including new sources of energy consumption, such as EVs. The reporting TYSP Utilities estimate approximately 279,099 electric plug-in vehicles will be operating in Florida by the end of 2023. The Florida Department of Highway Safety and Motor Vehicles lists the number of registered automobiles, heavy trucks, and buses in Florida, as of January 9, 2023 at 18.36 million vehicles, resulting in an approximate 1.52 percent penetration rate of electric vehicles, up from 0.93 percent last year.[4]

Florida's electric utilities anticipate continued growth in the electric vehicle market, as illustrated in Table 2. Each of the TYSP Utilities was sent a data request regarding estimates of EV ownership, public charging stations, and impacts to their electric grid. OUC did not provide: a public EV count, charging station, and/or demand and energy forecasts. FMPA and SEC are wholesale power providers and do not have retail customers or a service territory. EV ownership is anticipated to grow rapidly throughout the planning period, resulting in approximately 2,657,370 EVs operating within the electric service territories by the end of 2032.

[4] Florida Department of Highway Safety and Motor Vehicles January 2023 Vehicle and Vessel Reports and Statistics.

Table 2: TYSP Utilities - Estimated Number of Electric Vehicles

Year	FPL	DEF	TECO	GRU	JEA	LAK	TAL	Total
2023	185,626	50,326	33,935	1,370	5,739	603	1,500	279,099
2024	259,502	71,688	47,775	1,868	7,651	652	1,879	391,015
2025	353,479	98,400	62,272	2,549	9,782	707	2,315	529,504
2026	475,344	131,212	77,456	3,249	12,150	757	2,815	702,983
2027	625,828	171,260	93,214	4,141	14,772	795	3,381	913,391
2028	807,660	221,135	109,526	5,277	17,653	833	4,020	1,166,104
2029	1,023,942	283,625	126,757	6,725	20,803	881	4,745	1,467,478
2030	1,273,365	360,959	145,373	8,570	24,222	949	5,506	1,818,944
2031	1,551,302	453,548	165,432	10,359	27,920	1,021	6,357	2,215,939
2032	1,855,253	562,110	187,198	12,522	31,905	1,087	7,295	2,657,370

Source: TYSP Utilities' Data Responses

The major drivers of EV growth include a combination of the following: increased availability of charging infrastructure, lower fuel costs and emissions, increased commitment from auto manufacturers, broadened public outreach, expanded vehicle availability (makes and models), and strong government policy support at the local, state, and federal levels. Government agencies, private entities, municipalities, and electric utilities continue to work together to expand charging infrastructure throughout the state to meet this expected growth in EVs as well as to promote electric vehicle ownership.

Table 3 illustrates the reporting electric utilities' projections of public EV charging stations through 2032. While approximately 11,000 charging stations are estimated to be available across the state by the end of 2023, more than 49,000 charging stations are anticipated by 2032. The estimated EV charging station counts listed in Table 3 include both normal and "quick-charge" public charging stations.[5]

Table 3: TYSP Utilities - Estimated Number of Public EV Charging Stations

Year	FPL	DEF	TECO	GRU	JEA	LAK	TAL	Total
2023	7,207	2,644	870	94	145	19	114	11,093
2024	9,634	3,403	993	94	170	19	115	14,428
2025	12,351	4,163	1,126	170	197	22	116	18,145
2026	14,254	4,914	1,270	217	226	24	117	21,022
2027	17,117	5,675	1,425	276	258	25	119	24,895
2028	20,120	6,509	1,591	352	292	28	120	29,012
2029	23,525	7,470	1,767	448	328	28	121	33,687
2030	25,545	8,593	1,955	571	367	30	122	37,183
2031	28,653	9,876	2,154	691	408	31	123	41,936
2032	34,240	11,341	2,363	835	452	33	125	49,389

[5] "Quick-charge" public EV charging stations are those that require a service drop greater than 240 volts and/or use three-phase power.

Source: TYSP Utilities' Data Responses

Table 4 illustrates the TYSP Utilities' projections of energy consumed by EVs through 2032. Across the TYSP Utilities, anticipated growth would result in an annual energy consumption of 10,948.9 GWh by 2032, which represents an impact of approximately 3.9 percent of net energy for load.

Table 4: TYSP Utilities - Estimated Electric Vehicle Annual Energy Consumption (GWh)

Year	FPL	DEF	TECO	GRU	JEA	LAK	TAL	Total
2023	279.0	77.8	171.6	4.4	23.8	1.7	0.7	559.0
2024	584.0	149.2	219.2	6.0	34.5	1.8	1.2	995.9
2025	993.0	240.8	272.2	8.2	46.3	2.0	1.8	1,564.3
2026	1,533.0	356.2	331.0	11.2	59.6	2.1	2.7	2,295.8
2027	2,221.0	495.3	395.6	14.3	74.2	2.2	3.7	3,206.3
2028	3,074.0	663.3	463.8	18.2	90.4	2.3	5.3	4,317.3
2029	4,107.0	862.7	538.1	23.3	108.1	2.4	7.2	5,648.8
2030	5,312.0	1,104.7	620.2	29.6	127.3	2.6	9.7	7,206.1
2031	6,669.0	1,389.0	710.7	37.7	148.2	2.8	12.4	8,969.8
2032	8,182.0	1,721.6	810.6	45.6	170.7	3.0	15.4	10,948.9

Source: TYSP Utilities' Data Responses

Table 5 illustrates the TYSP Utilities' estimates of the effects of EV ownership on summer and winter peak demand through 2032. Across the TYSP Utilities, anticipated growth results in an impact to summer peak demand of approximately 2,200.4 MW and an impact to winter peak demand of approximately 933.0 MW by 2032. Current estimates represent a cumulative impact of approximately 4.0 percent on summer peak demand and a 1.8 percent on winter peak demand by 2032.

Table 5: TYSP Utilities – Estimated Electric Vehicle Impact – Seasonal Peak Demand

Summer Peak Demand (MW)

Year	FPL	DEF	TECO	GRU	JEA	LAK	TAL	Total
2023	68.4	4.4	20.3	0.5	2	0.4	0.2	96.2
2024	142.9	8.8	23.7	0.7	3	0.5	0.3	179.9
2025	242.9	14.4	27.5	1	4	0.5	0.4	290.7
2026	375.3	21.3	31.7	1.3	5.1	0.5	0.5	435.7
2027	543.6	29.7	36.3	1.6	6.4	0.6	0.8	619.0
2028	752.5	39.7	41.1	2.1	7.8	0.6	1.1	844.9
2029	1,005.30	51.9	46.3	2.7	13.5	0.6	1.5	1,121.8
2030	1,300.30	66.5	51.9	3.4	15.9	0.7	2	1,440.7
2031	1,632.40	83.5	57.9	4.1	18.6	0.7	2.6	1,799.8
2032	2,002.60	103.1	64.3	5	21.4	0.8	3.2	2,200.4

Winter Peak Demand (MW)

Year	FPL	DEF	TECO	GRU	JEA	LAK	TAL	Total
2023	29.6	2.4	5.6	0.7	0.5	0.4	0.1	39.3
2024	61.8	3.6	6.7	0.9	0.8	0.5	0.1	74.4
2025	105.1	5.3	7.9	1.2	1.0	0.5	0.2	121.2
2026	162.3	7.5	9.2	1.5	1.3	0.5	0.3	182.6
2027	235.1	10.3	10.7	2.0	1.7	0.6	0.5	260.9
2028	325.5	13.6	12.2	2.5	2.0	0.6	0.6	357.0
2029	434.8	17.6	13.9	3.9	2.4	0.6	0.9	474.1
2030	562.4	22.3	15.7	4.1	2.9	0.7	1.2	609.3
2031	706.1	28.0	17.6	4.9	3.3	0.7	1.5	762.1
2032	866.2	34.6	19.8	5.9	3.8	0.8	1.9	933.0

Source: TYSP Utilities' Data Responses

In order to prepare for and to accommodate the inevitable increase in EV ownership, several utilities now offer programs or tariffs applicable to EV customers. While the nature of these programs/tariffs vary among utilities, many include Time-of-Use (TOU) rates, rebates on certain charging station installations, and programs designed to increase general outreach, education, and awareness of the EV market.

In addition to the increase in general outreach, etc. for EV market awareness and education, some utilities (FPL, DEF, and TECO) have initiated specific EV pilot programs in order to investigate potential unknowns associated with the market. These programs have been established either as independently initiated programs or as part of rate case settlement agreements. Most of the programs are multi-year pilot programs which include extensive investments in vehicle charging infrastructure, research partnerships, and electric vehicle rebate programs. These pilot programs also provide the Commission with valuable information and insight into the growing EV market via annual updates from the utilities with regard to their respective pilot programs. For example, such information includes individual charging session data, peak EV charging hours, impacts to peak demand, as well as other metrics such as revenue generated and port installation costs.

DEF's initial EV pilot program was discontinued in 2021; however, DEF now offers three permanent EV programs as part of its 2021 Settlement Agreement,[6] while FPL and TECO's EV pilot programs are still ongoing through 2025. The Commission will continue to closely monitor the key findings and metrics of interest within these pilot programs in order to be prepared to address any regulatory issues associated with the future energy and demand impacts of electric vehicles in Florida.

Demand-Side Management (DSM)

Florida's electric utilities also consider how the efficiency of customer energy consumption changes over the planning period. Changes in government mandates, such as building codes and

[6] Order No. PSC-2021-0202-AS-EI, issued June 4, 2021, in Docket No. 20210016-EI, In re: *Petition for limited proceeding to approve 2021 settlement agreement, including general base rate increases; with attached 2021 settlement agreement, by Duke Energy Florida, LLC.*

appliance efficiency standards, reduce the amount of energy consumption for new construction and electric equipment. Electric customers, through the power of choice, can elect to engage in behaviors that decrease peak load or annual energy usage. Examples include: turning off lights and fans in vacant rooms, increasing thermostat settings in the summer, and purchasing appliances that go beyond efficiency standards. While a certain portion of customers will engage in these activities without incentives due to economic, aesthetic, or environmental concerns, other customers may lack information or require additional incentives. DSM programs represents an area where Florida's electric utilities can empower and educate its customers to make choices that reduce peak load and annual energy consumption.

Florida Energy Efficiency and Conservation Act (FEECA)

In 1980, the Florida Legislature established FEECA, which consists of Sections 366.80 through 366.83 and Section 403.519, F.S. Under FEECA, the Commission is required to set appropriate goals for increasing the efficiency of energy consumption and increasing the development of demand-side renewable energy systems for electric utilities of a certain size, known as the FEECA Utilities.[7] Of the TYSP Utilities, these include the three investor-owned electric utilities, FPL, DEF, TECO, and two municipal electric utilities, JEA and OUC. The FEECA Utilities represented approximately 88 percent of 2022 retail electric sales reported by the TYSP Utilities.

The FEECA Utilities currently offer demand-side management programs for residential, commercial, and industrial customers. Energy audit programs are designed to provide an overview of customer energy usage and to evaluate conservation opportunities, including behavioral changes, low-cost measures customers can undertake themselves, and participation in utility-sponsored DSM programs.

The last FEECA goal-setting proceeding was completed in November 2019, establishing goals for the period 2020 through 2024. The Commission found that it was in the public interest to continue with the goals established in the 2014 FEECA goal-setting proceeding. Each FEECA electric utility was required to submit a proposed DSM Plan, designed to meet the goals within 90 days of the final order establishing the goals. In 2020, the Commission approved the DSM Plans proposed by the FEECA electric utilities. All FEECA Utilities that filed a 2023 Ten-Year Site Plan incorporated in their planning the impacts of the established DSM goals through 2024. The Commission is scheduled to have a goalsetting proceeding in 2024 for the period 2025 through 2034.

DSM Programs

DSM Programs generally are divided into three categories: interruptible load, load management, and energy efficiency. The first two are considered dispatchable, and are collectively known as demand response, meaning that the utility can call upon them during a period of peak demand or other reliability concerns, but otherwise they are not utilized. In contrast, energy efficiency measures are considered passive and are always working to reduce customer demand and energy consumption.

[7] FEECA also applies to Florida Public Utilities Company, a non-generating investor-owned electric utility. As FPUC purchases power from other generating entities and does not own or operate its own generation resources, it is not required to file a Ten-Year Site Plan. Based on its 2022 Annual Report, FPUC accounted for 0.3 percent of the State's retail energy sales in 2021.

Interruptible load is achieved through the use of agreements with large customers to allow the utility to interrupt the customer's load, reducing the generation required to meet system demand. Interrupted customers may use back-up generation to fill their energy needs, or cease operation until the interruption has passed. A subtype of interruptible load is curtailable load, which allow the utility to interrupt only a portion of the customer's load. In exchange for the ability to interrupt these customers, the utility offers a discounted rate for energy or other credits which are paid for by all ratepayers.

Load management is similar to interruptible load, but focuses on smaller customers and targets individual appliances. The utility installs a device on an electric appliance, such as a water heater or air conditioner, which allows for remote deactivation for a short period of time. Load management activations tend to have less advanced notice than those for interruptible customers, but tend to be activated only for short periods and are cycled through groups of customers to reduce the impact to any single customer. Due to the focus on specific appliances, certain appliances would be more appropriate for addressing certain seasonal demands. For example, load management programs targeting air conditioning units would be more effective to reduce a summer peak, while water heaters are more effective for reducing a winter peak. As of 2023, the total amount of demand response resources available for reduction of peak load is 3,076 MW for summer peak and 2,900 MW for winter peak. Demand response is anticipated to increase to approximately 3,457 MW for summer peak and 3,300 MW for winter peak by 2032.

Energy efficiency or conservation measures also have an impact on peak demand, and due to their passive nature do not require activation by the utility. Conservation measures include improvements in a home or business' building envelope to reduce heating or cooling needs, or the installation of more efficient appliances. By installing additional insulation, energy-efficient windows or window films, and more efficient appliances, customers can reduce both their peak demand and annual energy consumption, leading to reductions in customer bills. Demand-side management programs work in conjunction with building codes and appliance efficiency standards to increase energy savings above the minimum required by local, state, or federal regulations. As of December 31, 2022, energy efficiency is responsible for peak load reductions of 4,487 MW for summer peak and 3,652 MW for winter peak. Energy efficiency is anticipated to increase to approximately 5,282 MW for summer peak and 4,215 MW for winter peak by 2032.

Forecast Load & Peak Demand

The historic and forecasted seasonal peak demand and annual energy consumption values for Florida are illustrated in Figure 10. The forecasts shown below are based upon normalized weather conditions, while the historic demand and energy values represent the actual impact of weather conditions on Florida's electric customers. Florida relies heavily upon both air conditioning in the summer and electric heating in the winter, so both seasons experience a great deal of variability due to severe weather conditions.

Demand-side management, including demand response and energy efficiency, along with self-service generation, is included in each graph appearing in Figure 10 for seasonal peak demand and annual energy for load. The total demand or total energy for load represents what otherwise would need to be served if not for the impact of these programs and self-service generators. The net firm

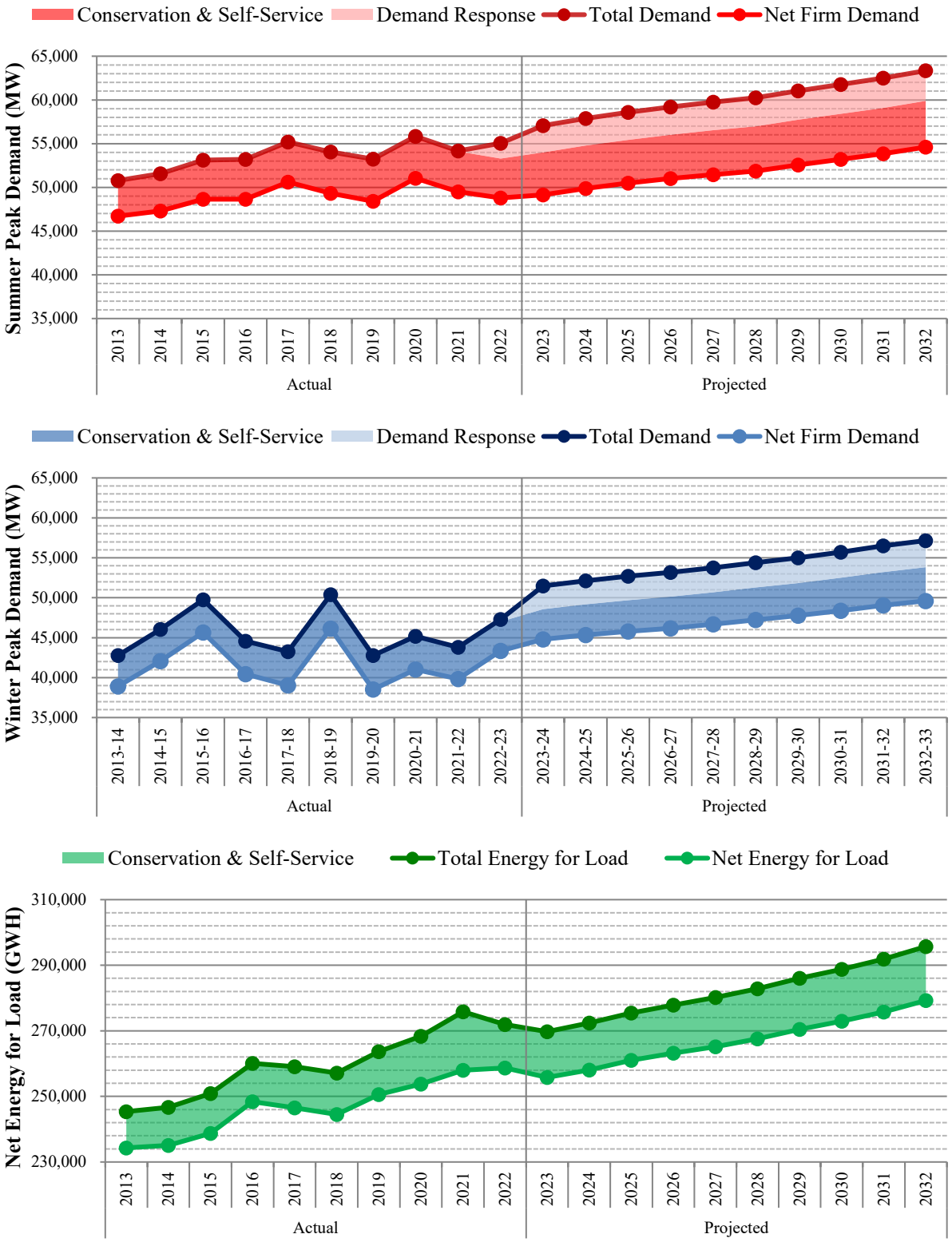
demand is used as a planning number for the calculation of generating reserves and determination of generation needs for Florida's electric utilities.

Demand response is included in Figure 10 in two different ways based upon the time period considered. For historic values of seasonal demand, the actual rates of demand response activation are shown, not the full amount of demand response that was available at the time. Overall, demand response has only been partially activated as sufficient generation assets were available during the annual peak. Residential load management has been called upon to a limited degree during peak periods, with a lesser amount of interruptible load activated.

For forecast values of seasonal demand, it is assumed that all demand response resources will be activated during peak. The assumption of all demand response being activated reduces generation planning need. Based on operating conditions in the future, if an electric utility has sufficient generating units, and it is economical to serve all customers' load, demand response would not be activated or only partially activated in the future.

As previously discussed, Florida is normally a summer-peaking state and was for the past 10 years. This trend is anticipated to continue, with the next 10 forecasted years all anticipated to be summer peaking. Based upon current forecasts using normalized weather data, Florida's electric utilities anticipate a gradual increase in both summer and winter net firm demand during the planning period.

Figure 10: State of Florida - Historic & Forecast Seasonal Peak Demand & Annual Energy



Source: FRCC 2023 Regional Load and Resource Plan

Forecast Methodology

Load forecasting is an essential requirement of all electric utility companies for purposes of system planning. In order for utilities to reliably and cost-effectively serve their respective customers, they must be able to accurately determine their energy and demand requirements. Thus, the load forecast function facilitates the ongoing equilibrium between system demand and system supply.

Load forecasting can be divided into three types depending on the forecasting horizon: short, medium and long-term. Short-term load forecasting denotes forecast horizons of up to one week ahead. Medium-term load forecasting ranges from one week to one year ahead. Long-term load forecasting typically targets forecast horizons of one to ten years, and sometimes up to several decades. Long-term load forecasting provides the essential load requirement data that a utility must have in order to effectively modify its system of generation, transmission, and distribution assets. Load forecasts directly impact the timing, type, and location of expansions, replacements, and retirements. Hence, the load forecast function plays a vital role in an electric utility's system planning and, in Florida, serves as the foundation of a utility's Ten-Year Site Plan (TYSP).

Florida's electric utilities perform long-term forecasts of peak demand and annual energy sales using various forecasting models, including econometric and end-use models, and other forecasting techniques such as surveys. In the development of econometric models, the utilities use historical data sets including dependent variables (e.g., winter peak demand per customer, residential energy use per customer) and independent variables (e.g., peak daily minimum temperature, heating degree days, real personal income, etc.) to infer relationships between the two types of variables. These historical relationships, combined with available forecasts of the independent variables and the utilities' forecasts of customers, are then used to forecast the peak demand and energy sales. For some customer classes, such as industrial customers, surveys may be conducted to determine the customers' expectations for their own future electricity consumption.

Forecasting models for energy sales are prepared by revenue class (e.g., residential, commercial, industrial, etc.). Commonly, the results of the models must be adjusted to take into account exogenous impacts, such as the impact of the recent growth in electric vehicles and distributed generation. The forecasting models for energy sales must also take into account demand-side management.

Another forecasting model, sometimes used to project energy use in conjunction with econometric models, is an "end-use model." These models can capture trends in appliance and equipment saturation and efficiency, as well as building size and thermal efficiency, on customers' energy use. If such end use models are not used, the econometric models for energy often include an index comprised of efficiency standards for air conditioning, heating, and appliances, as well as construction codes for recently built homes and commercial buildings.

Florida's electric utilities rely upon data which is sourced from public and private entities for historic and forecast values of specific independent variables used in econometric modeling. Public resources such as the University of Florida's Bureau of Economic and Business Research, which provides county-level data on population growth, and the U.S. Department of Commerce's Bureau of Labor Statistics, which publishes the Consumer Price Index, are utilized along with private

forecasts for economic growth from macroeconomic experts, such as Moody's Analytics. By combining historic and forecast macroeconomic data with customer and climate data, Florida's electric utilities project future load conditions.

Historically, the various forecast models and techniques used by Florida's electric utilities are commonly used throughout the industry, and each utility has developed its own individualized approach to projecting load. The models have relied upon dependent and independent variable data to project energy and demand amounts that exist within a probabilistic range. The resulting forecasts allow each electric utility to evaluate its individual needs for new generation, transmission, and distribution resources to meet customers' current and future needs reliably and affordably. Again for the 2023 TYSP, Florida's electric utilities used these same types of models and techniques to prepare their forecasts.

Accuracy of Retail Energy Sales Forecast

For each reporting electric utility, the Commission reviewed the historic forecast accuracy of past retail energy sales forecasts. The standard methodology for our review involves comparing actual retail sales for a given year to energy sales forecasts made three, four, and five years prior. For example, the actual 2022 retail energy sales were compared to the forecasts made in 2017, 2018, and 2019. These differences, expressed as a percentage error rate, are used to determine each utility's historic forecast accuracy by applying a five-year rolling average. An average error with a negative value indicates an under-forecast, while a positive value represents an over-forecast. An absolute average error provides an indication of the total magnitude of error, regardless of the tendency to under-or-over forecast. For the 2023 TYSPs, determining the accuracy of the five-year rolling average forecasts involves comparing the actual retail energy sales for the period 2018 through 2022 to forecasts made between 2013 and 2019. These are summarized in Table 6.

Table 6: TYSP Utilities - Accuracy of Retail Energy Sales Forecasts
(Five-Year Rolling Average)

Year	Five-Year Analysis Period	Forecast Years Analyzed	Forecast Error (%)	
			Average	Absolute Average
2013	2013 - 2009	2010 - 2004	16.25%	16.25%
2014	2014 - 2010	2011 - 2005	14.95%	14.95%
2015	2015 - 2011	2012 - 2006	12.48%	12.48%
2016	2016 - 2012	2013 - 2007	9.11%	9.11%
2017	2017 - 2013	2014 - 2008	5.96%	5.96%
2018	2018 - 2014	2015 - 2009	3.47%	3.47%
2019	2019 - 2015	2016 - 2010	2.13%	2.32%
2020	2020 - 2016	2017 - 2011	1.58%	2.04%
2021	2021 - 2017	2018 - 2012	1.04%	1.61%
2022	2022 - 2018	2019 - 2013	-0.13%	1.36%

Source: 2004-2023 Ten-Year Site Plans
* Inputs used including utilities' revisions to the corresponding prior TYSP-reported actual and/or projected data.

To verify whether more recent forecasts lowered the error rates, an additional analysis was conducted to determine with more detail, the source of high error rates in terms of forecast timing. Table 7 provides the error rates for forecasts made between one to six years prior, along with the three-year average and absolute average error rates for the forecasting period of a three to five-year period that was also used in the analysis in Table 6.

As displayed in Table 7, the utilities' retail energy sales forecasts show large positive error rates during the recession-impacted period 2011 through 2014. Starting in 2015, the error rates have declined considerably; and, the error rates calculated based on recent years' TYSPs continue to show lower forecast error rates, compared to the peak value of the error rates related to 2011-2014 sales forecasts. Most of the last three years' four-year ahead forecasts and the last four years' three-year ahead forecasts all bear negative error rates (under-forecasts). Additionally, most of the last five years' two-year ahead forecasts and one-year ahead forecasts render negative error rates as well. Note that all of the 2022-related forecasts made between one to six years prior show relatively higher negative error rates. This is due to the annual sales achieved which is mainly attributable to the very hot weather Florida experienced in 2022.

Table 7: TYSP Utilities - Accuracy of Retail Energy Sales Forecasts - Annual Analysis
(Analysis of Annual and Three-Year Average of Three- to Five- Prior Years)*

Year	Annual Forecast Error Rate (%)						3-5 Year Error (%)	
	Years Prior						Average	Absolute Average
	6	5	4	3	2	1		
2011	21.67%	20.91%	20.22%	17.14%	3.89%	0.18%	19.42%	19.42%
2012	26.43%	26.12%	23.16%	8.58%	4.01%	3.81%	19.29%	19.29%
2013	28.58%	26.29%	10.00%	5.98%	5.58%	2.97%	14.09%	14.09%
2014	27.15%	9.69%	6.00%	5.62%	2.73%	2.11%	7.10%	7.10%
2015	7.18%	3.53%	3.13%	0.92%	-0.10%	-1.27%	2.52%	2.52%
2016	4.22%	4.27%	2.18%	1.14%	0.10%	-1.07%	2.53%	2.53%
2017	6.87%	4.82%	3.48%	2.42%	1.45%	-0.18%	3.57%	3.57%
2018	4.16%	2.65%	1.64%	0.64%	-1.25%	-1.19%	1.64%	1.64%
2019	2.77%	1.86%	0.75%	-1.40%	-1.42%	-2.03%	0.40%	1.34%
2020	2.44%	1.27%	-0.97%	-1.07%	-1.91%	-1.22%	-0.25%	1.10%
2021	2.58%	0.35%	0.02%	-0.80%	-0.05%	0.03%	-0.15%	0.39%
2022	-1.60%	-1.87%	-2.85%	-2.23%	-2.13%	-3.06%	-2.32%	2.32%

Source: 2004-2023 Ten-Year Site Plans
*Inputs used include utilities' revisions to the corresponding prior TYSP-reported actual and/or projected sales data.

Barring any unforeseen economic crises or atypical weather patterns, average forecasted energy sales error rates in the next few years are likely to be more reflective of the error rates shown for 2015 through 2021 in Table 6. However, all the major global and domestic events (e.g., the Russian-Ukrainian War, pandemic, supply chain issues, high inflation rates, potential recession, etc.), individually or collectively, could impact the US economy. As such, there remains uncertainty as to what the economic impacts of such events will be going forward. Therefore, the actual retail energy sales of the next few years could be different from what Florida utilities projected in 2022 and prior years. Consequently, the average forecasted energy sales error rates in

the next few years may deviate from the lower levels recently recorded. It is important to recognize that the dynamic nature of the economy, the weather, and now even global health, political and economic issues present a degree of uncertainty for Florida utilities' load forecasts, ultimately impacting the accuracy of energy sales forecasts.

Renewable Generation

Pursuant to Section 366.91, F.S., the Legislature has found that it is in the public interest to promote the development of renewable energy resources in Florida. Section 366.91(2)(e), F.S., defines renewable energy in part, as follows:

> "Renewable energy" means electrical energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen produced or resulting from sources other than fossil fuels, biomass, solar energy, geothermal energy, wind energy, ocean energy, and hydroelectric power.

Although not considered a traditional renewable resource, some industrial plants take advantage of waste heat, produced in production processes, to also provide electrical power via cogeneration. Phosphate fertilizer plants, which produce large amounts of heat in the manufacturing of phosphate from the input stocks of sulfuric acid, are a notable example of this type of renewable resource. The Section 366.91(2)(e), F.S., definition also includes the following language which recognizes the aforementioned cogeneration process:

> The term [Renewable Energy] includes the alternative energy resource, waste heat, from sulfuric acid manufacturing operations and electrical energy produced using pipeline-quality synthetic gas produced from waste petroleum coke with carbon capture and sequestration.

Existing Renewable Resources

Currently, renewable energy facilities provide approximately 9,274 MW of firm and non-firm generation capacity, which represents 14.1 percent of Florida's overall generation capacity of 65,868 MW in 2022. Table 8 summarizes the contribution by renewable type of Florida's existing renewable energy sources.

Table 8: State of Florida - Existing Renewable Resources

Renewable Type	MW	% Total
Solar	7,798	84.1%
Municipal Solid Waste	475	5.1%
Biomass	380	4.1%
Waste Heat	232	2.5%
Wind	272	2.9%
Landfill Gas	68	0.7%
Hydroelectric	51	0.5%
Renewable Total	**9,274**	100.0%

Source: FRCC 2023 Regional Load and Resource Plan & TYSP Utilities' Data Responses

Of the total 9,274 MW of renewable generation, approximately 3,442 MW are considered firm, based on either operational characteristics or contractual agreement. Firm renewable generation can be relied on to serve customers and can contribute toward the deferral of new fossil fuel power plants. Solar generation contributes approximately 3,002 MW to this total, based upon the

coincidence of solar generation and summer peak demand, or about 40 percent of its installed capacity. Changes in timing of peak demand may influence the firm contributions of renewable resources such as solar and wind.

Of the 1,476 MW of non-solar generation, only 440 MW is treated as firm because of contractual commitments. The remaining renewable generation can generate energy on an as-available basis or for internal use (self-service). As-available energy is considered non-firm, and cannot be counted on for reliability purposes; however, it can contribute to the avoidance of burning fossil fuels in existing generators. Self-service generation reduces demand on Florida's utilities.

Utility-Owned Renewable Generation

Utility-owned renewable generation also contributes to the state's total renewable capacity. The majority of this generation is from solar facilities. Due to the intermittent nature of solar resources, capacity from these facilities has previously been considered non-firm for planning purposes. However, several utilities are attributing firm capacity contributions to their solar installations based on the coincidence of solar generation and summer peak demand. Of the approximately 5,604 MW of existing utility-owned solar capacity, approximately 2,891 MW, or about 52 percent, is considered firm. All other renewable sources account for an additional 156 MW of utility-owned generation.

Non-Utility Renewable Generation

Approximately 3514 MW, or 38 percent of Florida's existing renewable capacity is not owned by utilities, either from large supply-side non-utility generators or small distributed customer owned generation. Approximately 1,734 MW of that comes from supply side resources from non-utility generators such as cogeneration facilities and renewable energy power plants with a capacity no greater than 80 MW (collectively referred to as Qualifying Facilities or QFs). In 1978, the US Congress enacted the Public Utility Regulatory Policies Act (PURPA), which requires utilities to purchase electricity from QFs at the utility's full avoided cost. These costs are defined in Section 366.051, F.S., which provides in part that:

> A utility's "full avoided costs" are the incremental costs to the utility of the electric energy or capacity, or both, which, but for the purchase from cogenerators or small power producers, such utility would generate itself or purchase from another source.

If a renewable energy generator can meet certain deliverability requirements, its capacity and energy output can be paid for under a firm contract. Rule 25-17.250, F.A.C., requires each investor-owned utility to establish a standard offer contract with timing and rate of payments based on each fossil-fueled generating unit type identified in the utility's Ten-Year Site Plan. In order to promote renewable energy generation, the Commission requires the investor-owned utilities to offer multiple options for capacity payments, including the options to receive early (prior to the in-service date of the avoided-unit) or levelized payments. The different payment options allow renewable energy providers the option to select the payment option that best fits its financing requirements, and provides a basis from which negotiated contracts can be developed.

As previously discussed, large amounts of renewable energy is generated on an as-available basis. As-available energy is energy produced and sold by a renewable energy generator on an hour-by-hour basis for which contractual commitments as to the quantity and time of delivery are not required. As-available energy is purchased at a rate equal to the utility's hourly incremental system fuel cost, which reflects the highest fuel cost of generation each hour.

Demand-Side Renewable Generation

Approximately 1,780 MW, or 19 percent of existing renewable capacity is from customer-owned systems, also referred to as demand-side renewable systems. Rule 25-6.065, F.A.C., requires the investor-owned utilities to offer net metering for all types of renewable generation up to 2 MW in capacity and a standard interconnection agreement with an expedited interconnection process. Net metering allows a customer with renewable generation capability, to offset their energy usage. In 2008, the effective year of Rule 25-6.065, F.A.C., customer-owned renewable generation accounted for 3 MW of renewable capacity. As of the end of 2022, approximately 1,780 MW of renewable capacity from over 189,952 systems has been installed statewide. Table 9 summarizes the growth of customer-owned renewable generation interconnections. Almost all installations are solar, with non-solar generation accounting for only 21 installations and 7.2 MW of installed capacity. The renewable generators in this category include wind turbines and anaerobic digesters.

Table 9: State of Florida - Customer-Owned Renewable Growth

Year	2016	2017	2018	2019	2020	2021	2022
Number of Installations	15,994	24,166	37,862	59,508	90,552	103,947	189,952
Installed Capacity (MW)	141	205	317	514	835	1,177	1,780

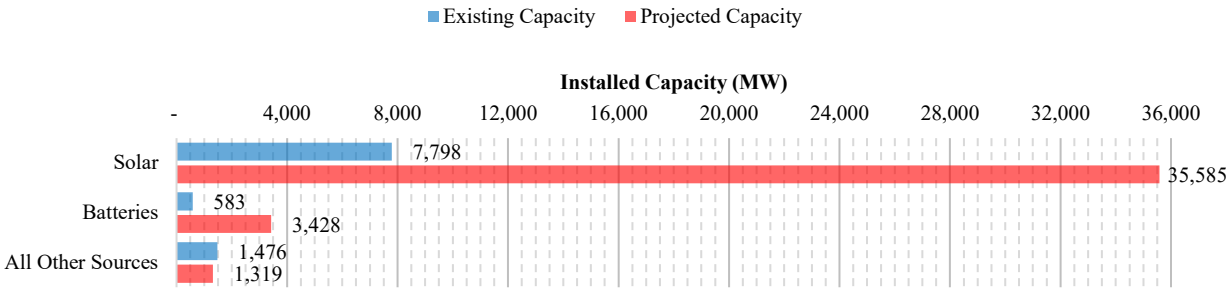
Source: 2016-2023 Net Metering Reports

Planned Renewable Resources

Florida's total renewable resources are expected to increase by an estimated 27,630 MW over the 10-year planning period, an increase from last year's estimated 15,894 MW projection. Figure 11 summarizes the existing and projected renewable capacity by generation type as well as energy storage capacity in the form of batteries. Solar generation, primarily utility-owned, is projected to have the greatest increase over the planning horizon. While solar generation is covered under the Power Plant Siting Act, all future solar projects are below the 75 MW threshold, and therefore are not required to seek approval from the Commission prior to construction.

Of the 27,630 MW projected net increase in renewable capacity, firm resources contribute 5,505 MW, or about 20 percent, of the total. This net increase value takes into account that for some existing renewable facilities contracts for firm capacity are projected to expire within the 10-year planning horizon. If new contracts are signed in the future to replace those that expire, these resources will once again be included in the state's capacity mix to serve future demand. If these contracts are not extended, the renewable facilities could still deliver energy on an as-available basis.

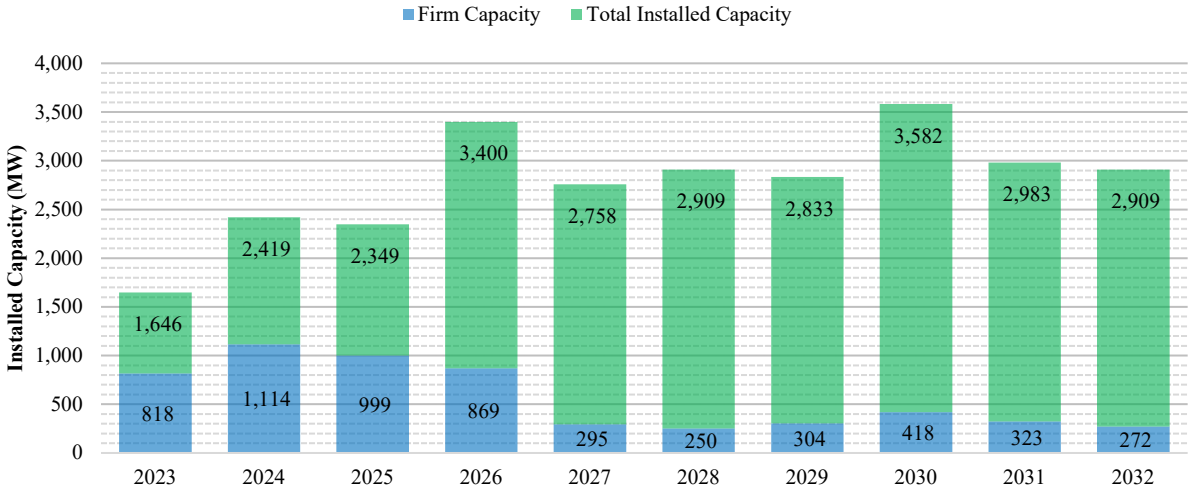
Figure 11: State of Florida - Current and Projected Renewable Resources



Source: FRCC 2023 Regional Load and Resource Plan & TYSP Utilities' Data Responses

As noted above, solar generation is anticipated to increase significantly over the 10-year period, with a net total of 27,787 MW to be installed. This consists of 24,599 MW of utility-owned solar and 3,188 MW of contracted solar. The firm contribution of solar varies by utility, with some having a set percentage value for all projects over the planning period, and others having a declining value as projects are added. Figure 12 provides an overview of the additional solar capacity generation planned within the next 10 years, as well as the amount considered firm for summer reserve margin planning.

Figure 12: TYSP Utilities - Planned Solar Installations

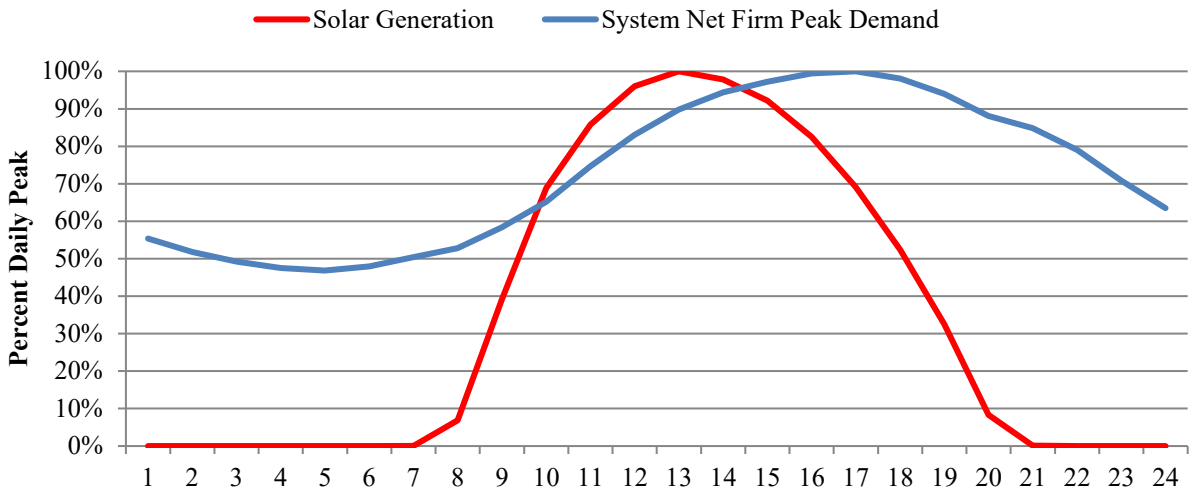


Source: FRCC 2023 Regional Load and Resource Plan & TYSP Utilities' Data Responses

As the amount of solar increases in the state, the difference in how it operates compared to traditional generation will have an increasing importance to the grid. Solar generation cannot be dispatched as needed, but is produced based upon the conditions at the plant site, influenced by variations in daylight hours, cloud cover, and other environmental factors. Generally speaking, the

peak hours for production of a solar facility are closer to noon, whereas the peak in system demand tends to be in the early evening in summer and early morning in winter. Figure 13 illustrates this with example data from FPL from its hourly dispatch model for their 2024 summer peak day. While solar generation peaks at 1:00 p.m., the net firm system demand peaks at 5:00 p.m., when solar generation is only at 69 percent of its daily peak. By 6:00 p.m., demand remains high, at 98 percent of its daily peak, while solar generation falls to 52 percent. Energy storage and other technologies to shift load, such as demand-side management programs or demand response, can be used to offset these characteristics.

Figure 13: FPL 2024 Summer Peak Day Hourly Dispatch



Source: 2023 FPL Data Response

Energy Storage Outlook

In addition to a number of electric grid related applications, emerging energy storage technologies have the potential to considerably increase not only the firm capacity contributions from solar PV installations, but their overall functionality as well. Energy storage technologies currently being researched include pumped hydropower, flywheels, compressed air, thermal storage, and battery storage. Of these technologies, battery storage is primarily planned and used by utility companies. Battery storage has been proposed to be connected directly to the grid, behind the meter box (net metering) or connected directly to a Solar/PV unit. Battery storage technology has continued to advance, and the cost of storage is projected to continue to decline over the long-term, aided, in part, by continued tax credits from the Inflation Reduction Act.

Currently, Florida's utilities have primarily engaged in small pilot programs to determine the best placement and usage for energy storage technologies, including behind the customer's meter, at distribution substations, and at generating facilities. Each use case has its own benefits, to allow customers to ride out outages (net metering), improve reliability and decrease line losses (distribution substations), or provide firm capacity to the grid (at generating facilities). Currently, the TYSP Utilities have 583 MW of installed energy storage, primarily batteries, with the single largest installation being FPL's 409 MW Manatee battery storage site.

Over the next decade, utilities are anticipating adding approximately 2,845 MW of energy storage, primarily directly on the transmission system or connected to a specific power plant. For example, DEF will be constructing combined solar and energy storage systems with 225 MW of planned energy storage capacity. As these systems are associated with a particular facility, the improved firm contribution has already been included in the prior discussion regarding solar firm capacity.

Traditional Generation

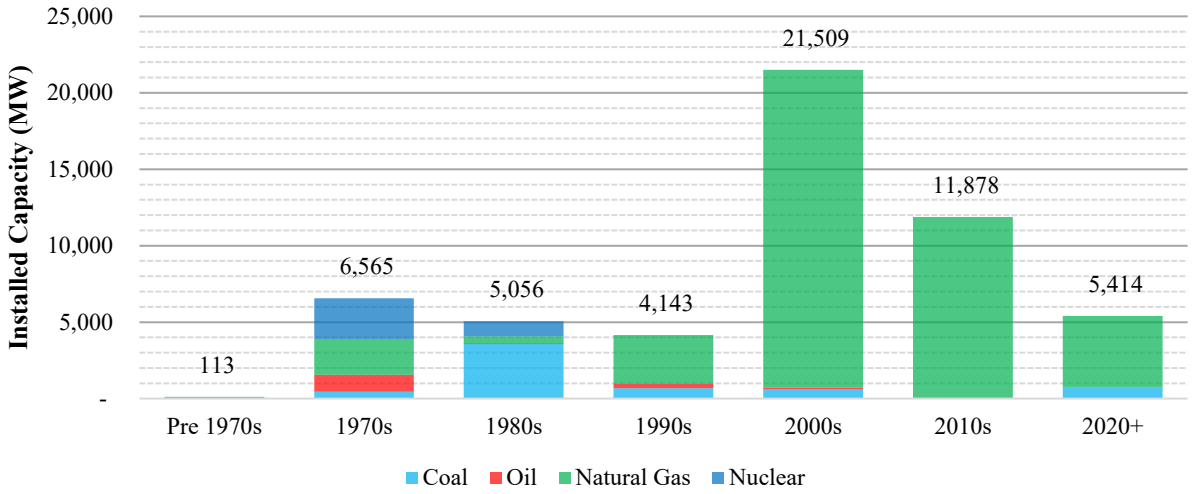
While renewable generation increases its contribution to the state's generating capacity, a majority of generation is projected to come from traditional sources, such as fossil-fueled steam and combustion turbine generators that have been added to Florida's electric grid over the last several decades. Due to forecasted increases in peak demand, further traditional resources are anticipated over the planning period.

Florida's electric utilities have historically relied upon several different fuel types to serve customer load. Previous to the oil embargo, Florida used oil-fired generation as its primary source of electricity until the increase in oil prices made this undesirable. Since that time, Florida's electric utilities have sought a variety of other fuel sources to diversify the state's generation fleet and more reliably and affordably serve customers. Numerous factors, including swings in fuel prices, availability, environmental concerns, and other factors have resulted in a variety of fuels powering Florida's electric grid. Solid fuels, such as coal and nuclear, increased during the shift away from oil-fired generation, and more recently natural gas has emerged as the dominant fuel type in Florida.

Existing Generation

Florida's generating fleet includes incremental new additions to a historic base fleet, with units retiring as they become uneconomical to operate or maintain. Currently, Florida's existing capacity ranges greatly in age and fuel type, and legacy investments continue. The weighted average age of Florida's generating units is 21 years. While the original commercial in-service date may be in excess of 50 years for some units, they are constantly maintained as necessary in order to ensure safe and reliable operation, including uprates from existing capacity, which may have been added after the original in-service date. Figure 14 illustrates the decade in which current operating generating capacity was originally added to the grid, with the largest additions occurring in the 2000s.

Figure 14: State of Florida - Electric Utility Installed Capacity by Decade



Source: FRCC 2023 Regional Load and Resource Plan

The existing generating fleet will be impacted by several events over the planning period. New and proposed environmental regulations may require changes in unit dispatch, fuel switching, or installation of pollution control equipment which may reduce net capacity. Modernizations will allow more efficient resources to replace older generation, while potentially reusing power plant assets such as transmission and other facilities, switching to more economic fuel types, or uprates at existing facilities to improve power output. Lastly, retirements of units which can no longer be economically operated and maintained or meet environmental requirements will reduce the existing generation.

Impact of EPA Rules

In addition to maintaining a fuel efficient and diverse fleet, Florida's utilities must also comply with environmental requirements that impose incremental costs or operational constraints. On May 11, 2023, EPA released a proposed rule consisting of five separate actions under the Clean Air Act Section 111, targeting GHG emissions from fossil fuel-fired electric generating units (EGUs). The proposed EPA actions include emission guidelines for large and frequently used fossil fuel-fired stationary combustion turbines; guidelines for existing fossil fuel-fired steam generating EGUs; standards for new, reconstructed, and modified coal units; updates to the New Source Performance Standards for fossil fuel-fired stationary combustion turbines; and the repeal of the Affordable Clean Energy Rule, which had previously replaced the Clean Power Plan. Because this rule process is ongoing, the final impact of these regulations is not yet determined.

Modernization and Efficiency Improvements

Modernizations involve removing existing generator units that may no longer be economical to operate, such as oil-fired steam units, and reusing the power plant site's transmission or fuel handling facilities with a new set of generating units. The modernization of existing plant sites, allows for significant improvement in both performance and emissions, typically at a lower price than new construction at a greenfield site. Not all sites are candidates for modernization due to site layout and other concerns, and to minimize rate impacts, modernization of existing units should be considered along with new construction at greenfield sites.

The Commission has previously granted determinations of need for several conversions of oil-fired steam units to natural gas-fired combined cycle units, including FPL's Cape Canaveral, Riviera, and Port Everglades power plants. DEF has also conducted a conversion of its Bartow power plant, but this did not require a determination of need from the Commission. Additional planned conversions from coal are planned by the TYSP Utilities, such as the approximately 429 MW Stanton Unit 2, jointly owned by FMPA and OUC, which will be converted to natural gas in 2025.

Utilities also plan several efficiency improvements to existing generating units. For example, the conversion of existing simple cycle combustion turbines into a combined cycle unit, which captures the waste heat and uses it to generate additional electricity using a steam turbine. Overall, 780 MW of additional summer firm capacity is from uprates to existing natural gas fired combined cycle units. In addition, DEF and OUC plan transmission upgrades that will allow them improved access to capacity from existing natural gas units at the Osprey and Osceola plant sites. While these do not change the amount of capacity available in the state as a whole, it improves the ability to deliver capacity where needed on the system.

Another notable project involving existing generation is FPL's hydrogen pilot at its Okeechobee natural gas-fired combined cycle facility. The pilot project, approved as part of FPL's 2021 Settlement Agreement,[8] involves using a solar powered electrolyzer to produce hydrogen from water and replacing up to 5 percent of the fuel mix with hydrogen in the unit's combustion turbines.

Planned Retirements

Power plant retirements occur when the electric utility is unable to economically operate or maintain a generating unit due to environmental, economic, or technical concerns. Table 10 lists the 3,648 MW of existing generation that is scheduled to be retired during the planning period. A majority of the retirements are coal-fired steam generators, with six units totaling 2,136 MW of capacity to be retired by 2032.

Table 10: State of Florida - Electric Generating Units to be Retired

Year	Utility Name	Plant Name & Unit Number	Net Capacity (MW) Summer
Coal Steam Retirements			
2023	SEC	Seminole Generating Station Unit 1	573
2023	TEC	Big Bend Unit 3	395
2024	FPL	Daniel Units 1 & 2	502
2025	FMPA & OUC	Stanton Energy Center Unit 1	451
2029	FPL	Scherer Unit 3	215
		Coal Subtotal	**2,136**
Gas Steam Retirements			
2025	FPL	Gulf CEC Units 4	75
2027	FPL	Gulf CEC Units 5	75
2030	JEA	Northside Unit 3	524
2031	GRU	Deerhaven Unit FS02	232
		Coal Subtotal	**906**
Oil Combustion Turbine Retirements			
2025	DEF	Bayboro Units P1-P4	171
2027	DEF	Debary Units P2-P6	227
2027	DEF	P.L. Bartow Units P1 & P3	82
2025	FPL	Lansing Smith Unit A	32
		Oil Subtotal	**512**
Natural Gas Combustion Turbine Retirements			
2025	FPL	Pea Ridge Units 1-3	15
2026	GRU	Deerhaven Units GT01-02	35
2027	DEF	University of Florida Unit P1	44
		Gas Subtotal	**94**
		Total Retirements	**3,648**

Source: 2023 Ten-Year Site Plans

[8] Order No. PSC-2021-0446-S-EI, issued December 2, 2021, in Docket No. 20210015-EI, *In re: Petition for rate increase by Florida Power & Light Company.*

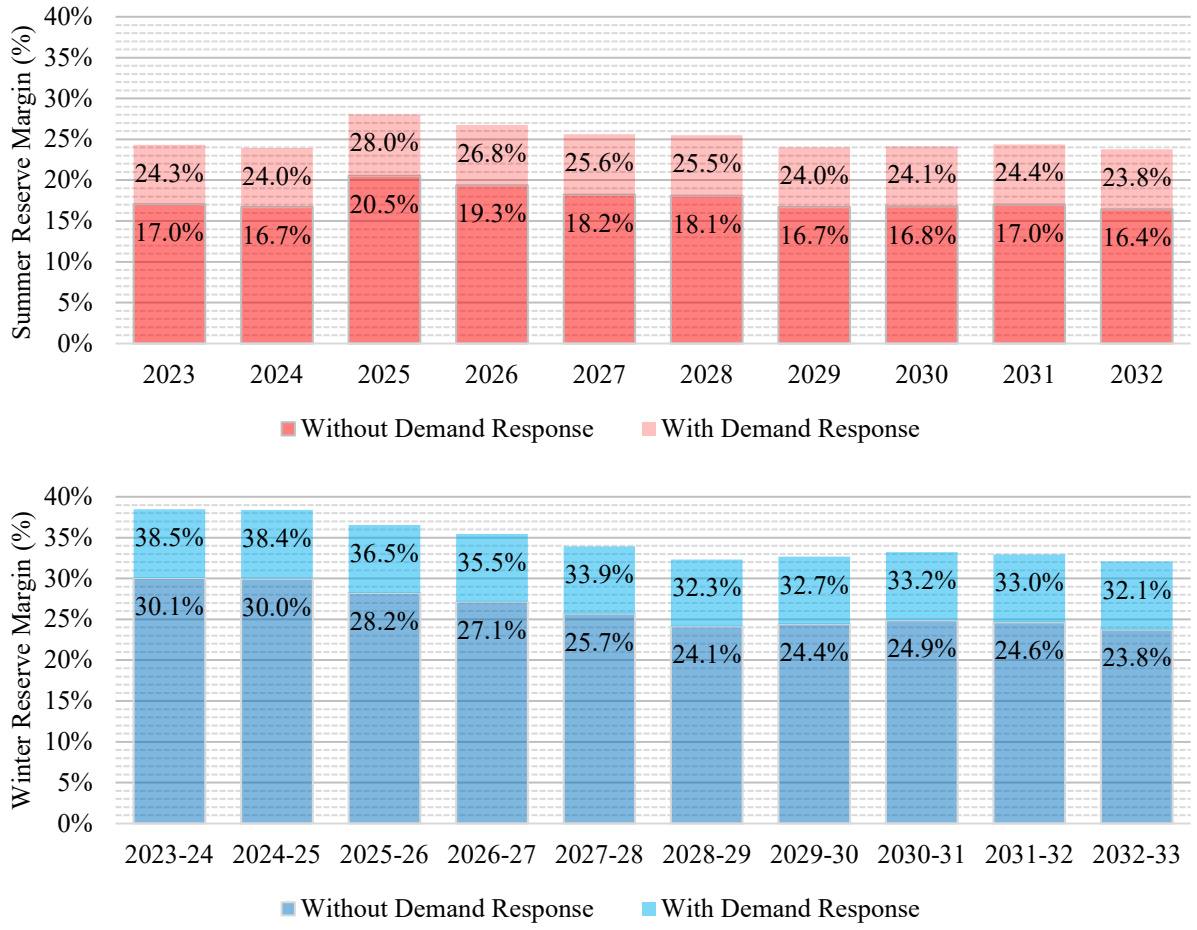
Reliability Requirements

Florida's electric utilities are expected to have enough generating assets available at the time of peak demand to meet forecasted customer demand. If utilities only had sufficient generating capacity to meet forecasted peak demand, then potential instabilities could occur if customer demand exceeds the forecast, or if generating units are unavailable due to maintenance or forced outages. To address these circumstances, utilities are required to maintain additional planned generating capacity above the forecast customer demand, referred to as the reserve margin.

On July 1, 2019, the SERC Reliability Corporation (formerly the Southeastern Electric Reliability Council) became the new Compliance Enforcement Authority for all electric utilities previously registered with the FRCC. Electric utilities within Florida must maintain a minimum reserve margin of 15 percent for planning purposes. Certain utilities have elected to have a higher reserve margin, either on an annual or seasonal basis. The three largest reporting electric utilities, FPL, DEF, and TECO, are party to a stipulation approved by the Commission that utilizes a 20 percent reserve margin for planning.

While Florida's electric utilities are separately responsible for maintaining an adequate planning reserve margin, a statewide view illustrates the degree to which capacity may be available for purchases during periods of high demand or unit outages. Figure 15 is a projection of the statewide seasonal reserve margin including all proposed power plants.

Figure 15: State of Florida - Projected Reserve Margin by Season



Source: FRCC 2023 Regional Load and Resource Plan - Revised Form 10

Role of Demand Response in Reserve Margin

The Commission also considers the planning reserve margin without demand response. As illustrated above in Figure 15, the statewide seasonal reserve margin exceeds the FRCC's required 15 percent planning reserve margin without activation of demand response. Demand response activation increases the reserve margin on average 7.4 percent in summer and 8.3 percent in winter.

Demand response participants receive discounted rates or credits regardless of activation, with these costs recovered from all ratepayers. Because of the voluntary nature of demand response, a concern exists that a heavy reliance upon this resource would make participants reconsider the value of the discounted rates or credits. For interruptible customers, participants must provide notice that they intend to leave the demand response program, with a notice period of three or more years being typical. For load management participants, usually residential or small commercial customers, no advanced notice is typically required to leave. Historically, demand response participants have rarely been called upon during the peak hour, but are more frequently called upon during off-peak periods due to unusual weather conditions.

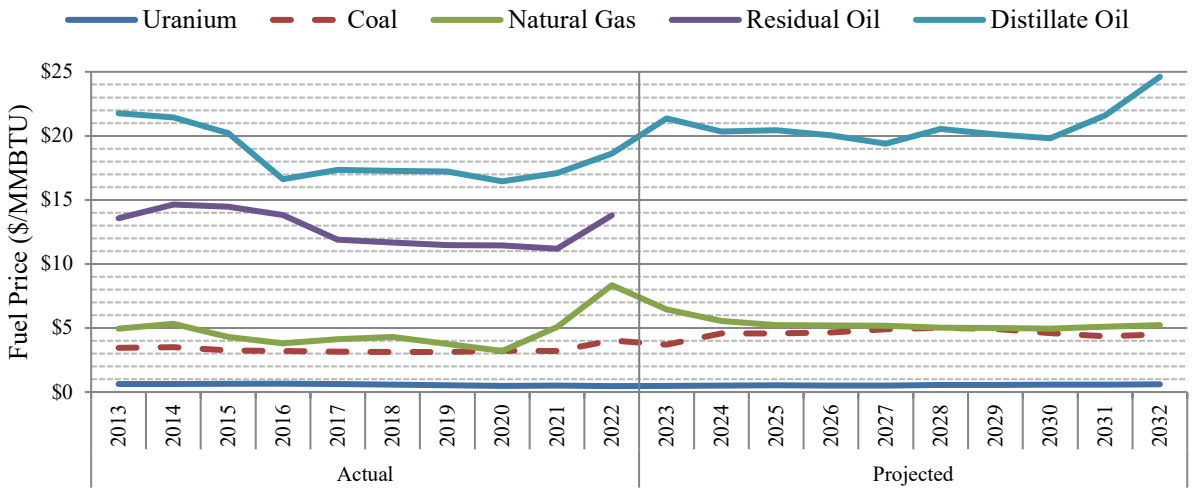
Fuel Price Forecast

Fuel price is an important economic factor affecting the dispatch of the existing generating fleet and the selection of new generating units. In general, the capital cost of a fuel-based power plant is inversely proportional to the cost of the fuel used to generate electricity from that unit. The major fuels consumed by Florida's electric utilities are natural gas, coal, and uranium. Distillate oil also factors into Florida utilities' fuel mix, albeit minimally when compared to historical levels. Figure 16 illustrates the weighted average fuel price history and forecasts for the reporting electric utilities.

Natural gas remains the most intensively used fuel state-wide on a per GWh basis, accounting for approximately 70 percent of electric generation in 2022. As shown in Figure 16, the price of natural gas continued to decline from 2012 until 2020. However, natural gas prices saw a sizable increase from 2020 through 2022, with a peak of $8.12 per million British Thermal Units (BTUs) in 2022. The price of natural gas is now forecast to decline from 2022 through 2030. Meanwhile, the price of coal was stable from 2012 through 2021. Even so, forecasts anticipate coal prices to increase gradually from $2.66 in 2021 to $5.02 per million BTUs in 2028. It should be noted that the use of coal is projected to decrease substantially through 2030.

Distillate oil remains the most expensive fuel, which explains why it is used for backup and peaking purposes only. Also of note is a phasing out of residual oil, with no forecast for purchasing residual oil after 2023. The truncated graph on Figure 16 reflects this phasing out of residual oil.

Figure 16: TYSP Utilities - Average Fuel Price of Reporting Electric Utilities



Source: TYSP Utilities' Data Responses

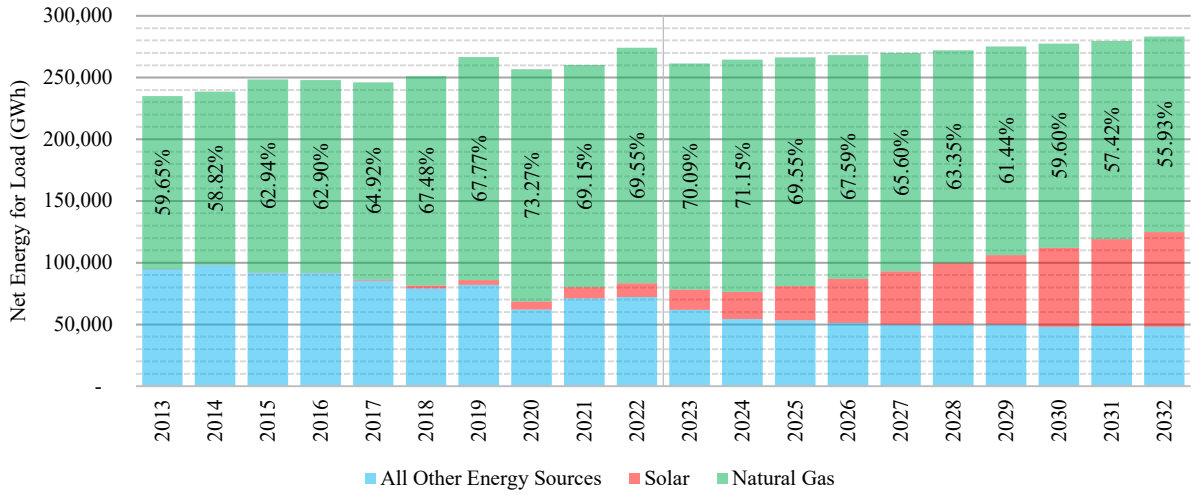
As shown in Figure 16, the price of natural gas continued to decline from 2012 until 2020. Even though current forecasts project the price of natural gas to remain relatively stable over the long term, there remains some degree of natural gas price volatility over the short and medium term. For instance, natural gas price volatility was reflected in the 2023 requests for fuel factor mid-course corrections (increases or decreases in customer fuel charges) filed by FPL, DEF, and TECO

and approved by the Commission on March 7, 2023. FPL filed for a second fuel factor mid-course correction in 2023, which was approved on June 27, 2023.[9]

Fuel Diversity

Natural gas has risen to become the dominant fuel in Florida and since 2011 has generated more net energy for load than all other fuels combined. As Figure 17 illustrates, natural gas was the source of approximately 70 percent of electric energy consumed in Florida in 2022. Natural gas electric generation, as a percent of net energy for load, is anticipated to decline throughout the remainder of the planning period, offset by solar generation. Solar generation is anticipated to exceed all non-natural gas energy sources combined by 2029.

Figure 17: State of Florida - Natural Gas Generation



Source: FRCC 2013-2022 Regional Load and Resource Plans

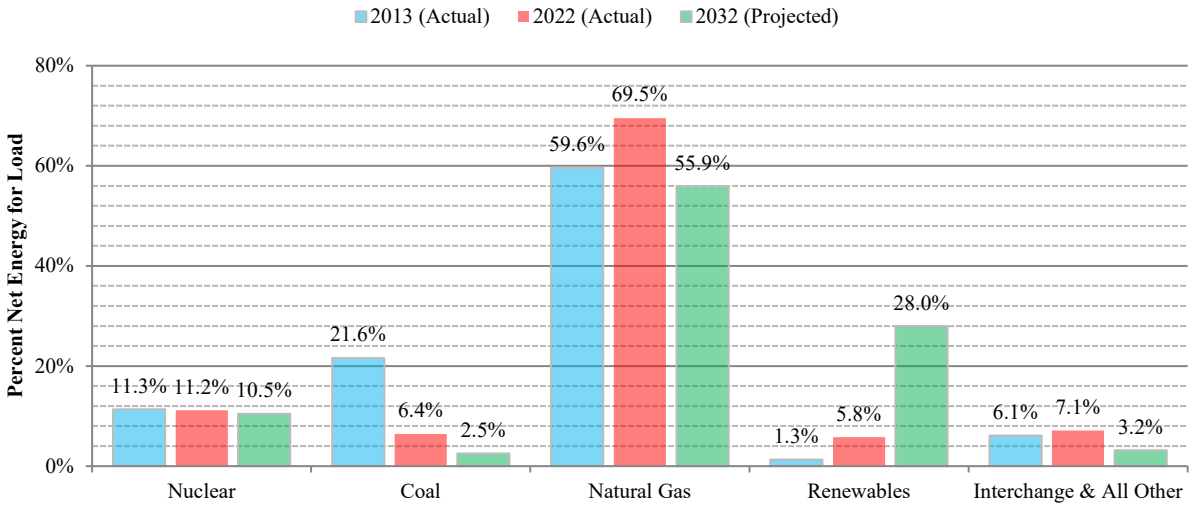
Because a balanced fuel supply can enhance system reliability and mitigate the effects of volatility in fuel price fluctuations, it is important that utilities have a level of flexibility in their generation mix. Maintaining fuel diversity on Florida's system faces several difficulties. Existing coal units will require additional emissions control equipment leading to reduced output, or retirement if the emissions controls are uneconomic to install or operate. New solid fuel generating units such as nuclear and coal have long lead times and high capital costs. New coal units face challenges relating to new environmental compliance requirements, making it unlikely they could be permitted without novel emissions control technology.

Figure 18 shows Florida's historic and forecast percent net energy for load by fuel type for the actual years 2013 and 2022, and forecast year 2032. Nuclear generation is expected to remain steady throughout the planning period. Coal generation is expected to continue its downward trend well into the planning period. Natural gas has been the primary fuel used to meet the growth of

[9] Docket No. 20230001-EI, *In re: Fuel and purchased power cost recovery clause with generating performance incentive factor.*

energy consumption, and this trend is anticipated to continue throughout the planning period. Renewables are expected to exceed all other generation sources except for natural gas by 2032.

Figure 18: State of Florida - Historic and Forecast Generation by Fuel Type



Source: FRCC 2013-2022 Regional Load and Resource Plan

Based on 2020 Energy Information Administration data, Florida ranks fifth in terms of the total volume of natural gas consumed compared to the rest of the United States.[10] For volume of natural gas consumed for electric generation, Florida ranks second, behind Texas. Natural gas is not used as a heating fuel in most of Florida's homes and businesses, which rely instead upon electricity that is increasingly being generated by natural gas. As Florida has very little natural gas production and limited gas storage capacity, the state is reliant upon out-of-state production and storage to satisfy the growing electric demands of the state.

New Generation Planned

Current demand and energy forecasts continue to indicate that in spite of increased levels of conservation, energy efficiency, renewable generation, and existing traditional generation resources, the need for additional generating capacity still exists. While reductions in demand have been significant, the total demand for electricity is expected to increase, making the addition of traditional generating units necessary to satisfy reliability requirements and provide sufficient electric energy to Florida's consumers. Because any capacity addition has certain economic impacts based on the capital required for the project, and due to increasing environmental concerns relating to solid fuel-fired generating units, Florida's utilities must carefully weigh the factors involved in selecting a supply-side resource for future traditional generation projects.

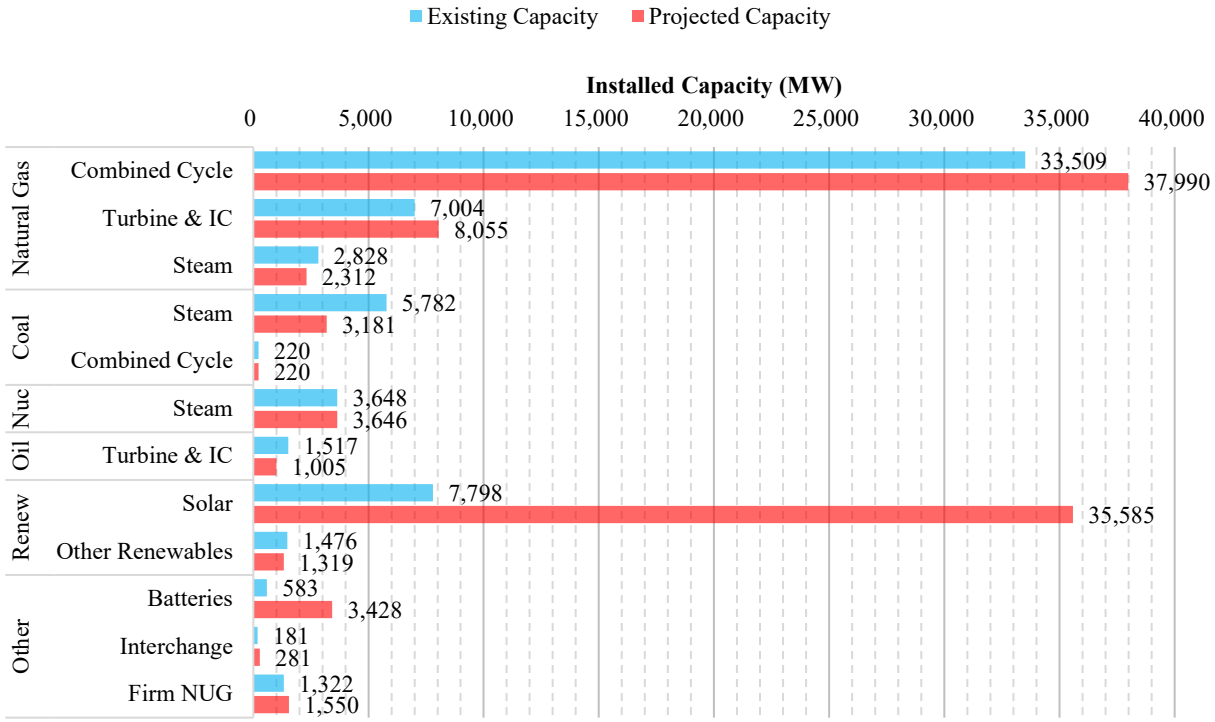
In addition to traditional economic analyses, utilities also consider several strategic factors, such as fuel availability, generation mix, and environmental compliance prior to selecting a new supply-side resource. Limited supplies, access to water or rail delivery points, pipeline capacity, water

[10] U.S. Energy Information Administration natural gas consumption by end-use annual report.

supply and consumption, land area limitations, cost of environmental controls, and fluctuating fuel costs are all important considerations to the utilities' IRP process.

Figure 19 illustrates the present and future aggregate capacity mix. The capacity values in Figure 19 incorporate all proposed additions, retirements, fuel switching, uprates and derates, and changes in operational or contract status contained in the reporting utilities' 2023 Ten-Year Site Plans and the FRCC's 2023 Regional Load and Resource Plan.

Figure 19: State of Florida - Current and Projected Installed Capacity



Source: FRCC 2023 Regional Load and Resource Plan & TYSP Utilities' Data Responses

Commission's Authority Over Siting

Any proposed steam or solar generating unit greater than 75 MW requires a certification under the Electrical Power Plant Siting Act (PPSA), contained in Sections 403.501 through 403.518, F.S. The Commission has been given exclusive jurisdiction to determine the need for new electric power plants through Section 403.519, F.S. Upon receipt of a determination of need, the electric utility would then seek approval from the Florida Department of Environmental Protection, which addresses land use and environmental concerns. Finally, the Governor and Cabinet, sitting as the Siting Board, ultimately must approve or deny the overall certification of a proposed power plant. There are three planned units, all natural gas-fired combined cycles, requiring certification under the PPSA; two 571 MW units with in-service dates of 2025 and 2032 for SEC, and a 518 MW unit with an in-service date of 2030 for JEA. Each of these three units have been identified as a proxy unit, with the respective utilities, SEC and JEA, intending to update in future planning documents.

While solar generation is covered under the Power Plant Siting Act, all future solar projects are below the 75 MW threshold, and therefore are not required to seek approval from the Commission prior to construction.

New Power Plants by Fuel Type

Nuclear

Nuclear capacity, while an alternative to natural gas-fired generation, is capital-intensive and requires a long lead time to construct. In April 2018, FPL received Combined Operating Licenses from the Nuclear Regulatory Commission for two future nuclear units, Turkey Point Units 6 & 7. These units are planned to be sited at FPL's Turkey Point site, the location of two existing nuclear generating units. The earliest possible in service date for these two units are outside the scope of the Ten-Year Site Plan.

Natural Gas

Several new natural gas-fired combustion turbines, internal combustion units, and combined cycle units are planned over the next 10 years. While combined cycle systems are the dominant generating unit type, combustion turbines that run only in simple cycle mode and internal combustion units, taken together, will represent the third most abundant type of generating capacity by the end of 2032. As combustion turbines are not a form of steam generation, unless part of a combined cycle unit, they do not require siting under the Power Plant Siting Act. Table 11 summarizes the approximately 3,587 MW of additional capacity from new natural gas-fired generating units proposed by the 2023 Ten-Year Site Plan utilities.

Several utilities are exploring the use of natural gas internal combustion units (also called reciprocating engines) as a means of fast ramping peaking capacity. Such additions afford improved environmental and reliability benefits, enhanced operational flexibility, and improvements to system resiliency.

Table 11: TYSP Utilities - Planned Natural Gas Units

In-Service Year	Utility Name	Plant Name & Unit Number	Unit Type	Net Capacity (MW)	Notes
Previously Approved New PPSA Units					
2023	SEC	Seminole Combined Cycle	CC	1,099	Docket No. 20170266-EI
			Subtotal	**1,099**	
New Units Requiring PPSA Approval					
2025	SEC	Unnamed CC	CC	571	
2030	JEA	Unnamed CC	CC	518	
2032	SEC	Unnamed CC	CC	571	
			Subtotal	**1,660**	
New Units Not Requiring PPSA Approval					
2024	LAK	CD McIntosh ME1-ME6	IC	120	Six 20 MW Units
2025	TECO	Reciprocating Engine	IC	37	Pair of 18.5 MW Units
2027	SEC	Unnamed CT	CT	317	
2030	SEC	Unnamed CT	CT	317	
2030	TECO	Reciprocating Engine	IC	37	Pair of 18.5 MW Units
			Subtotal	**828**	
			Total	**3,587**	

Source: 2023 Ten-Year Site Plans

Transmission

As generation capacity increases, the transmission system must grow accordingly to maintain the capability of delivering energy to end-users. The Commission has been given broad authority pursuant to Chapter 366, F.S., to require reliability within Florida's coordinated electric grid and to ensure the planning, development, and maintenance of adequate generation, transmission, and distribution facilities within the state.

The Commission has authority over certain proposed transmission lines under the Electric Transmission Line Siting Act (TLSA), contained in Sections 403.52 through 403.5365, F.S. To require certification under Florida's TLSA, a proposed transmission line must meet the following criteria: a nominal voltage rating of at least 230 kV, crossing a county line, and a length of at least 15 miles. Proposed lines in an existing corridor are also exempt from TLSA requirements. The Commission determines the reliability need and the proposed starting and end points for lines requiring TLSA certification. The proposed corridor route is subsequently determined by the Florida Department of Environmental Protection during the certification process. Much like the PPSA, the Governor and Cabinet sitting as the Siting Board ultimately must approve or deny the overall certification of a proposed line.

Table 12 lists all proposed transmission lines in the 2023 Ten-Year Site Plans and the FRCC 2023 Regional Load and Resource Plan that require TLSA certification. All planned lines have already received the approval of the Commission, either independently or as part of a PPSA determination of need.

Table 12: State of Florida - Planned Transmission Lines

Utility	Transmission Line	Line Length (Miles)	Nominal Voltage (kV)	Date Need Approved	Date TLSA Certified	In-Service Date
FPL	Levee to Midway	150	500	May 1988	4/1990	6/2030
FPL	Sweatt to Whidden	79	230	April 2022	9/2022	12/2025
TECO	Thonotosassa to Wheeler	8	230	6/22/2007	8/2008	TBD
TECO	Wheeler to Willow Oak	17	230	6/23/2007	8/2008	TBD
TECO	Lake Agnes to Gifford	28	230	9/26/2007	2/2009	TBD

Source: 2023 Ten-Year Site Plans & FRCC 2023 Regional Load and Resource Plan

Utility Perspectives

Florida Power & Light Company (FPL)

FPL is an investor-owned utility and Florida's largest electric utility. FPL's service territory previously was solely in the FRCC Region and consisted of South Florida and the east coast. FPL's parent company, NextEra Energy Inc., acquired Gulf Power Company (Gulf) in January 2019. Resource planning is now being done for the single entity of FPL, with the former Gulf territory referred to as FPL's Northwest Florida Division (FPL NWFL). The information presented in this section is based on integrated resource planning (IRP) analyses conducted in 2022 and the first quarter of 2023.

As an investor-owned utility, FPL, is subject to the regulatory authority of the Commission over all aspects of utility operations, including rates, reliability, and safety. Pursuant to Section 186.801(2), F.S., the Commission finds FPL 2023 Ten-Year Site Plan suitable for planning purposes.

Load and Energy Forecasts

In 2022, FPL's service area had approximately 5,775.850 customers and annual retail energy sales of 126,450 GWh, or approximately 54.0 percent of Florida's annual retail energy sales. Similar to the 2021 customer growth, the total number of customers grew by approximately 1.5 percent in 2022 which was driven primarily by growth in the number of residential customers.

FPL's weather-normalized annual retail energy sales increased by 1.2 percent in 2022, driven by growth in the commercial class. Residential energy sales decreased slightly by 0.2 percent due to usage declines. Commercial energy sales increased due to both customer and usage growth. Industrial energy sales increased but had a negligible impact on total retail sales because the industrial class sales are a small proportion of total retail sales.

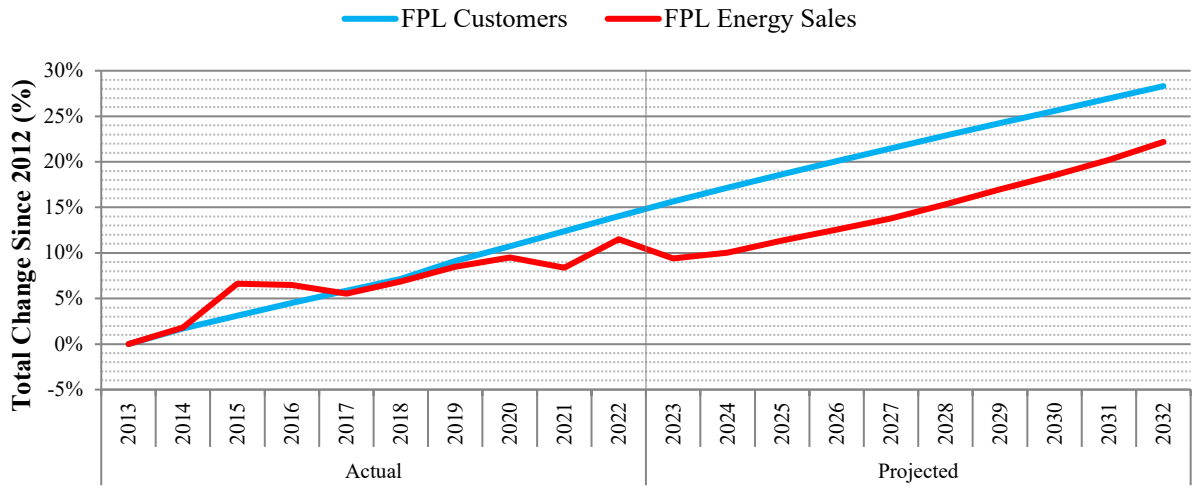
Over the past 10 years, FPL's customer base has increased by 14.0 percent, while retail sales have grown by approximately 11.5 percent. For the 2022 TYSP forecast horizon, the number of customers are forecasted to grow by 1.1 to 1.3 percent per year driven primarily by residential customer growth. According to FPL, its total customer growth is being driven primarily by growth in residential customer numbers.

FPL's weather-normalized energy consumption per customer for residential and commercial customers reflect the impacts of the pandemic and the resulting return to more normal conditions. In 2022, residential usage decreased by 1.7 percent as the abatement of the pandemic and a strong economy led to customers spending less time at home (i.e. returning to work-place/school). Commercial usage, on the other hand, increased by 2.2 percent due to rebounding commercial activity. FPL's industrial use per customer declined by 9.4 percent, but this decline was attributable to strong growth in the number of small industrial customers with low average usage.

Over the TYSP forecast horizon, residential use per customer is forecasted to be flat or slightly grow up to 0.8 percent due to continued economic growth as well as increased adoptions of electric vehicles. Commercial usage is forecast to decline between 0.3 to 2.0 percent per year over the forecast horizon due to continued improvements to equipment efficiencies. FPL's total retail sales are forecasted to grow by 0.7 to 1.5 percent per year. This projected retail sales growth is driven

by sales growth in the residential class and commercial class, and these class-level energy sales increases are driven by growth in the number of customers. Customers for the FPL system are forecasted to grow by 1.1 to 1.3 percent per year over the TYSP forecast horizon, with total customer growth being driven primarily by residential customer growth. Figure 20 illustrates historic and prospective forecasted growth rates in customers and retail energy sales for the resource plan FPL filed in its 2023 TYSP.

Figure 20: FPL Growth



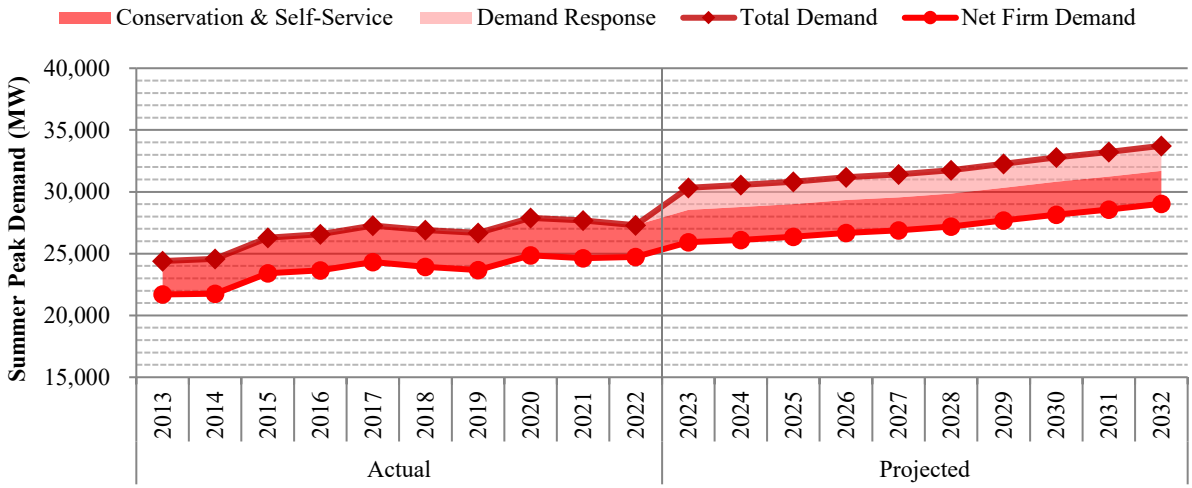
Source: 2023 Ten-Year Site Plan

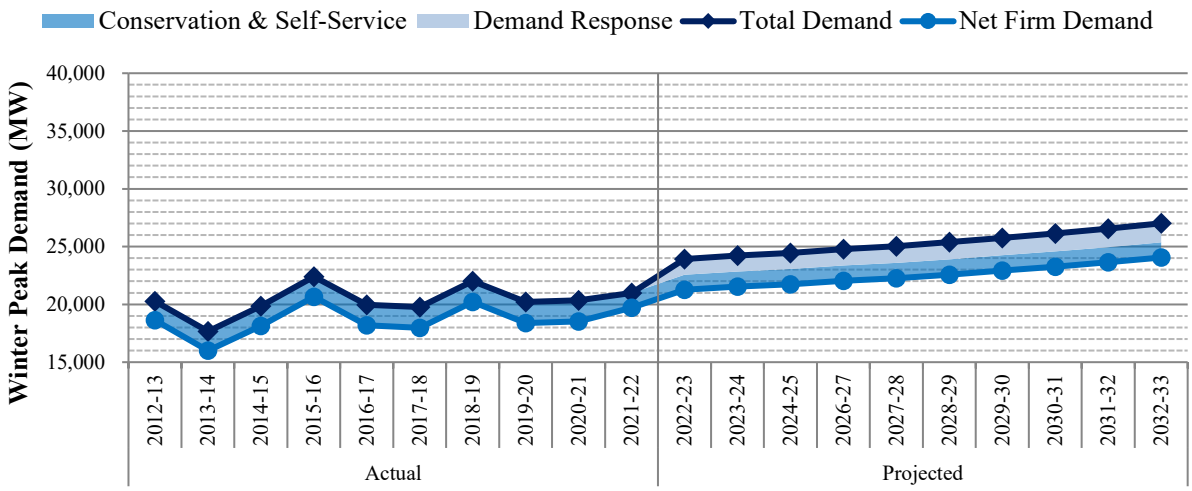
As mentioned earlier, on January 1, 2019, GPC became a subsidiary of NextEra, FPL's parent company. FPL and GPC integrated the two systems into a single electric system, effective January 1, 2022. The demand and energy forecasts for the years 2023 through 2032 are presented as a single integrated utility (FPL), as depicted in Figure 21.

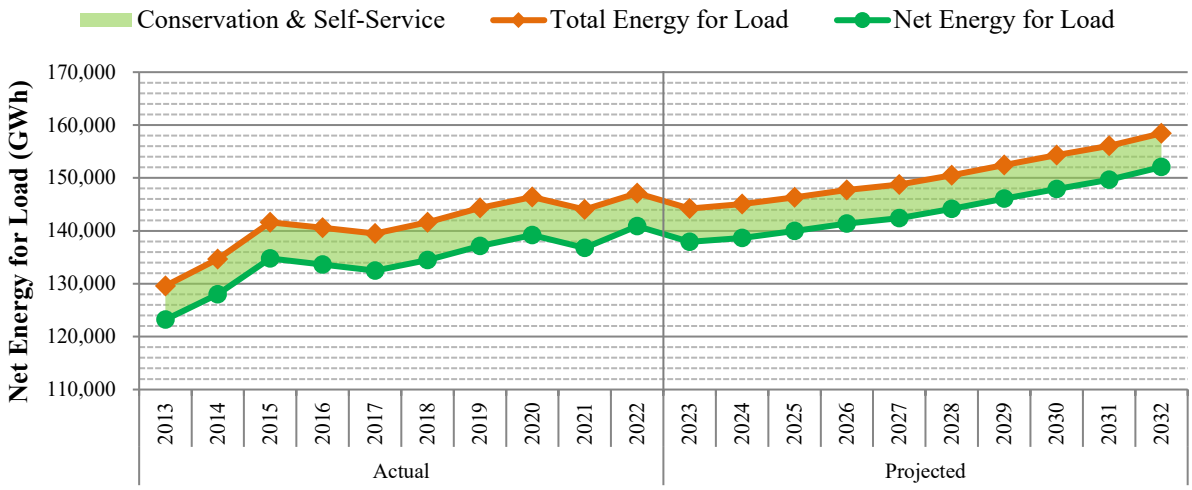
The three graphs in Figure 21 show FPL's seasonal peak demand, summer and winter, and net energy for load, for the historic years 2013 through 2022, with the integrated FPL/GPC forecast for years 2022, and forecast for years 2023 through 2032. These graphs include the impact of demand-side management, and for future years assume that all available demand response resources will be activated during the seasonal peak. During the past 10 years, demand response has not been activated during seasonal peak demand.

As an investor-owned utility, FPL is subject to FEECA and currently offers energy efficiency and demand response programs to customers to reduce peak demand and annual energy consumption. The last FEECA goal-setting proceeding was completed in November 2019, establishing goals for the period 2020 through 2024. In August 2020, the Commission approved separate FPL and GPC DSM plans designed to achieve the 2020-2024 DSM goals. In November 2021, the Commission approved an integrated FPL DSM plan designed to achieve FPL's and GPC's goals combined. In preparing its 2023 Ten-Year Site Plan seasonal peak demand and energy forecasts, FPL/GPC assume the trends in these goals will be extended through the forecast period (through 2032).

Figure 21: FPL Demand and Energy Forecasts
(Reflects post operational integration with GPC)







Source: 2023 Ten-Year Site Plan

Fuel Diversity

Table 13 shows FPL's actual net energy for load by fuel type for 2022 and the projected fuel mix for 2032. FPL relies primarily upon natural gas and nuclear for energy generation, making up approximately 92 percent of net energy for load in 2022. FPL is projected to use natural gas for less than half of its energy generation by 2030. Only two utilities, FPL and GRU, are anticipated to reach this level of reduced natural gas consumption by the end of the planning period. By 2032, natural gas will still be the highest individual fuel at 45.2 percent, while renewables will account for over a third of generation, at 35.7 percent, followed by nuclear at 18.7 percent. FPL projects an exit from coal by 2028.

Table 13: FPL Energy Generation by Fuel Type

Fuel Type	Net Energy for Load			
	2022		2032	
	GWh	%	GWh	%
Natural Gas	105,121	**71.4%**	68,828	**45.2%**
Coal	1,748	**1.2%**	0	**0.0%**
Nuclear	29,518	**20.1%**	28,448	**18.7%**
Oil	258	**0.2%**	2	**0.0%**
Renewable	8,660	**5.9%**	54,303	**35.7%**
Interchange	-2,292	**-1.6%**	0	**0.0%**
NUG & Other	4,118	**2.8%**	644	**0.4%**
Total	**147,131**		**152,225**	

Source: 2023 Ten-Year Site Plan

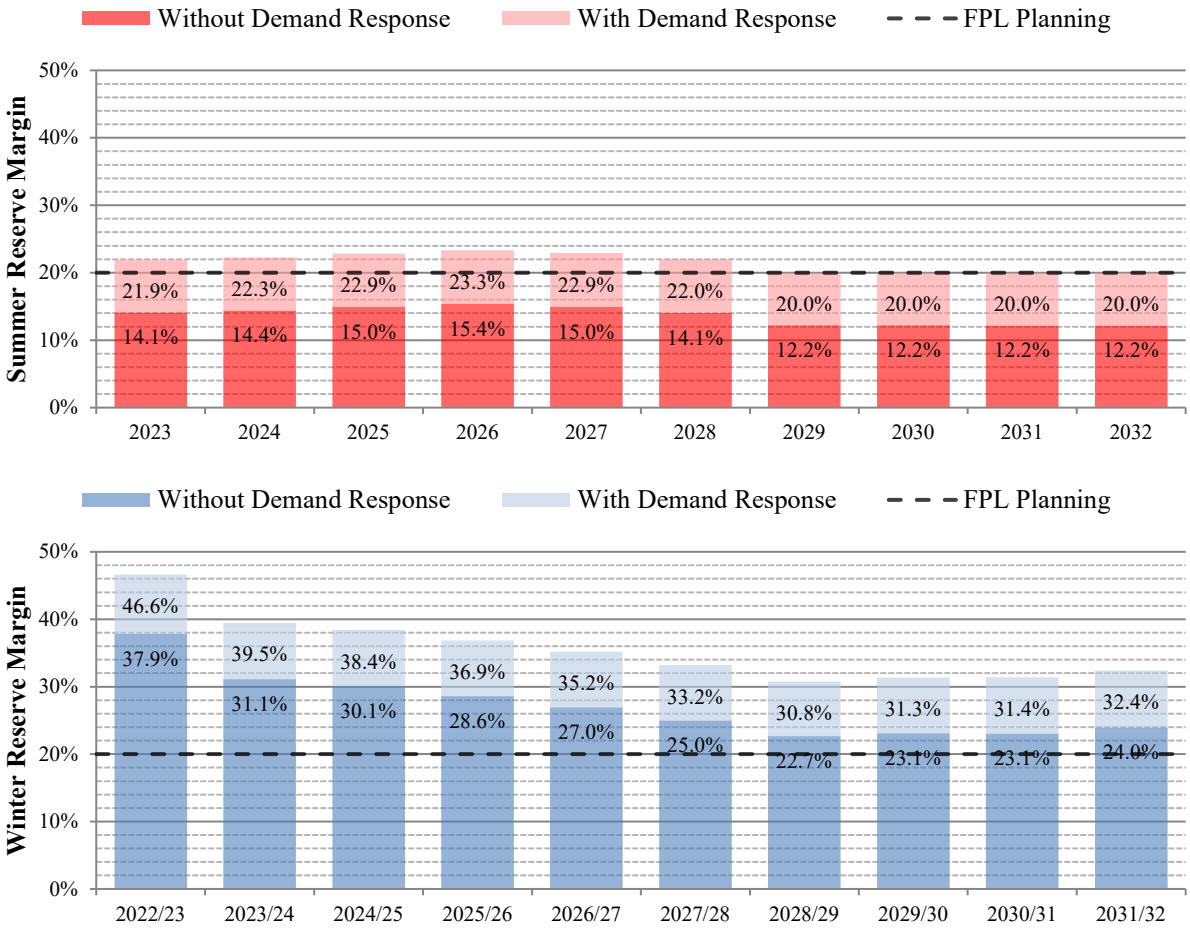
Reliability Requirements

While previously only reserve margin has been discussed, Florida's utilities use multiple indices to determine the reliability of its electric supply. An additional metric is the Loss of Load Probability (LOLP), which is a probabilistic assessment of the duration of time electric customer demand will exceed electric supply, and is measured in units of days per year. FPL uses a maximum LOLP of no more than 0.1 days per year, or approximately 1 day of outage per 10 years. Between the two reliability indices, LOLP and reserve margin, the reserve margin requirement is typically the controlling factor for the addition of capacity.

Since 1999, FPL has utilized a 20 percent reserve margin criterion for planning based on a stipulation approved by the Commission.[11] Figure 22 displays the forecast planning reserve margin for FPL through the planning period for both seasons, with and without the use of demand response. As shown in the figure, FPL's generation needs are controlled by its summer peak throughout the planning period.

[11] Order No. PSC-99-2507-S-EU, issued December 22, 1999, in Docket No. 19981890-EU, *In re: Generic investigation into the aggregate electric utility reserve margins planned for Peninsular Florida.*

Figure 22: FPL Reserve Margin Forecast



Source: 2023 Ten-Year Site Plan

In addition to LOLP and the reserve margin, FPL utilizes a third reliability criterion which it refers to as its 10 percent generation-only reserve margin. This criterion requires that available firm capacity be 10 percent greater than the sum of customer seasonal demand, without consideration of incremental energy efficiency and all existing and incremental demand response resources. Currently, no other utility utilizes this same metric. FPL's generation-only reserve margin is not the controlling factor for any planned unit additions. However, it does provide useful information regarding the assurance that the projected 20 percent reserve margin will be realized.

While FPL does not include incremental energy efficiency resources and cumulative demand response in its resource planning for the generation-only reserve margin criterion, the utility would remain subject to FEECA and the conservation goals established by the Commission. FPL would continue paying rebates and other incentives to participants, which are collected from all ratepayers through the Energy Conservation Cost Recovery Clause, but would not consider the potential capacity reductions of any future participation in energy efficiency or demand response programs during the 10-year planning period for planning purposes only when using this reliability criterion.

Generation Resources

FPL plans multiple unit retirements and additions during the planning period as are described in Table 14. Particularly noteworthy is the company's plan to retire its three remaining coal units, totaling 717 MW, which consist of FPL's partial ownership of Scherer Unit 3 and Daniel Units 1 and 2, all assets which it acquired from its purchase of GPC. In the first quarter of 2023, FPL has retired the Martin solar thermal facility, a 75 MW system that did not provide capacity but offset fuel consumption at the Martin combined cycle unit by providing additional steam. These retirements are partially offset by planned upgrades to its existing natural gas combined cycle generating units over the planning period, which increase summer capacity by 255 MW.

FPL does not plan any new fossil generating unit additions over the next 10-year period, only solar and battery facilities. The majority of changes on FPL's system are from new solar photovoltaic plants, with a planned 268 sites totaling 19,966 MW in capacity, of which 3,342 MW are considered firm for the summer peak. FPL's planned solar generation units were approved as part of its last base rate settlement, either in base rates (745 MW), through the SolarTogether Expansion (1,788 MW), or a Solar Base Rate Adjustment (SoBRA) mechanism (1,788 MW).[12] In addition, FPL plans a total of 15,645 MW of solar generation that have not yet been reviewed by the Commission. Also, FPL anticipates adding a total of 2,000 MW of battery storage in the latter years of the planning period. None of these additions require a need determination pursuant to the PPSA.

[12] Order No. PSC-2021-0446-S-EI, issued December 2, 2021, in Docket No. 20210015-EI, *In re: Petition for rate increase by Florida Power & Light Company* and Amendatory Order PSC-2021-0446A-S-EI, issued December 9, 2021, in Docket No. 20210015-EI, *In re: Petition for rate increase by Florida Power & Light Company.*

Table 14: FPL Generation Resource Changes

Year	Plant Name & Unit Number	Unit Type	Net Capacity (MW) Sum	Solar Firm Capacity (MW) Sum	Notes
Retiring Units					
2023	Martin Solar Thermal	PV	75		Co-fired at Martin CC
2024	Daniel 1 & 2	BIT-ST	502		
2025	Gulf Clean Energy Center Unit 4	NG-ST	75		
2025	Pea Ridge 1 – 3	NG-CT	12		
2027	Gulf Clean Energy Center Unit 5	NG-ST	75		
2028	Lansing Smith 3A	CT-LO	32		
2029	Scherer 3	BIT-ST	215		
2030	Perdido 1 & 2	LFG-IC	4		
Total Retirements			**990**		
New Units					
2023	Sited Solar Facilities	PV	745	290	Settlement (10 sites)
2023	Sited Solar Facilities	PV	447	229	SolarTogether (6 sites)
2024	Sited Solar Facilities	PV	894	409	SoBRA (12 sites)
2024	Sited Solar Facilities	PV	745	365	SolarTogether (10 sites)
2025	Sited Solar Facilities	PV	894	402	SoBRA (12 sites)
2025	Sited Solar Facilities	PV	596	268	SolarTogether (8 sites)
2026	Unsited Solar Facilities	PV	2,235	533	30 Sites
2027	Unsited Solar Facilities	PV	2,235	141	30 Sites
2028	Unsited Solar Facilities	PV	2,235	141	30 Sites
2029	Unsited Solar Facilities	PV	2,235	141	30 Sites
2029	Unsited Battery Storage	BAT	100		
2030	Unsited Solar Facilities	PV	2,235	141	30 Sites
2030	Unsited Battery Storage	BAT	600		
2031	Unsited Solar Facilities	PV	2,235	141	30 Sites
2031	Unsited Battery Storage	BAT	500		
2032	Unsited Solar Facilities	PV	2,235	141	30 Sites
2032	Unsited Battery Storage	BAT	800		
Total New Units			**21,966**	**3,342**	
Net Additions			**20,976**		

Source: 2023 Ten-Year Site Plan

Duke Energy Florida, LLC (DEF)

DEF is an investor-owned utility and Florida's second largest electric utility. The utility's service territory is within the FRCC region and is primarily located in central and west central Florida. As an investor-owned utility, the Commission has regulatory authority over all aspects of operations, including rates, reliability, and safety. Pursuant to Section 186.801(2), F.S., the Commission finds DEF's 2023 Ten-Year Site Plan suitable for planning purposes.

Load & Energy Forecasts

In 2021, DEF had approximately 1,933,060 customers and annual retail energy sales of 40,512 GWh or approximately 17.3 percent of Florida's annual retail energy sales. DEF's total customers grew approximately 1.81 percent in 2022. Over the last 10 years, DEF's customer base has increased by 14.91 percent, while retail sales have grown by 10.64 percent.

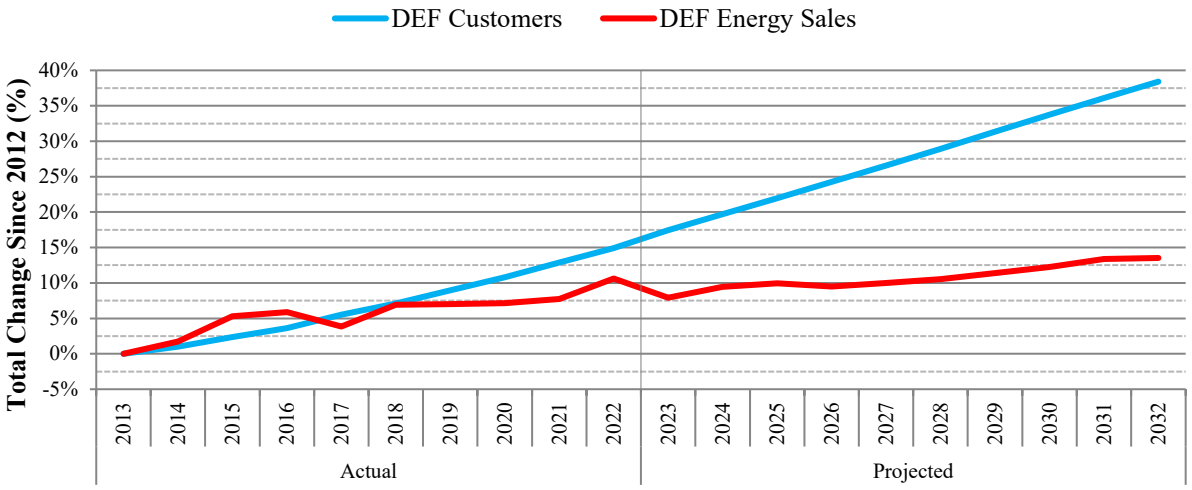
DEF's customer growth has always been dominated by the residential and commercial customer classes. Customer growth trends are driven by broad economic and demographic factors such as population growth, migration, retirement, affordable housing, mortgage rates and job growth. More recent information reflects a return to the long-term trend of population migration into Florida. Commercial customer growth typically tracks residential growth supplying needed services.

DEF's projected retail energy sales trend reflects the product of the utility's forecasted number of customers and forecasted energy consumption per customer. Per customer usage for DEF's residential and commercial classes are primarily driven by fluctuations in electricity price, end-use appliance saturation and efficiency improvement, housing type/building size, improved building codes, and space conditioning equipment fuel type. With respect to the average KWh consumption per customer, the utility is aware that the ability to self-generate recently has begun to make more of an impact. A small percentage of industrial/commercial customers have chosen to install their own natural gas generation, reducing consumption from the power grid. Similarly, residential and some commercial accounts have reduced their utility requirements by installing solar panels behind their meters. The utility also noted that the penetration of electric vehicles has grown, leading to an increase in residential use per customer, all else being equal.

For the 2023 TYSP forecast horizon, DEF's forecast results indicate that the utility's customer base is projected to grow at an average annual rate of 1.84 percent, and its retail energy sales are projected to grow at an average annual rate of 0.57 percent.

Figure 23 illustrates historic and prospective forecasted growth rates in customers and retail energy sales for the resource plan DEF filed in its 2023 TYSP.

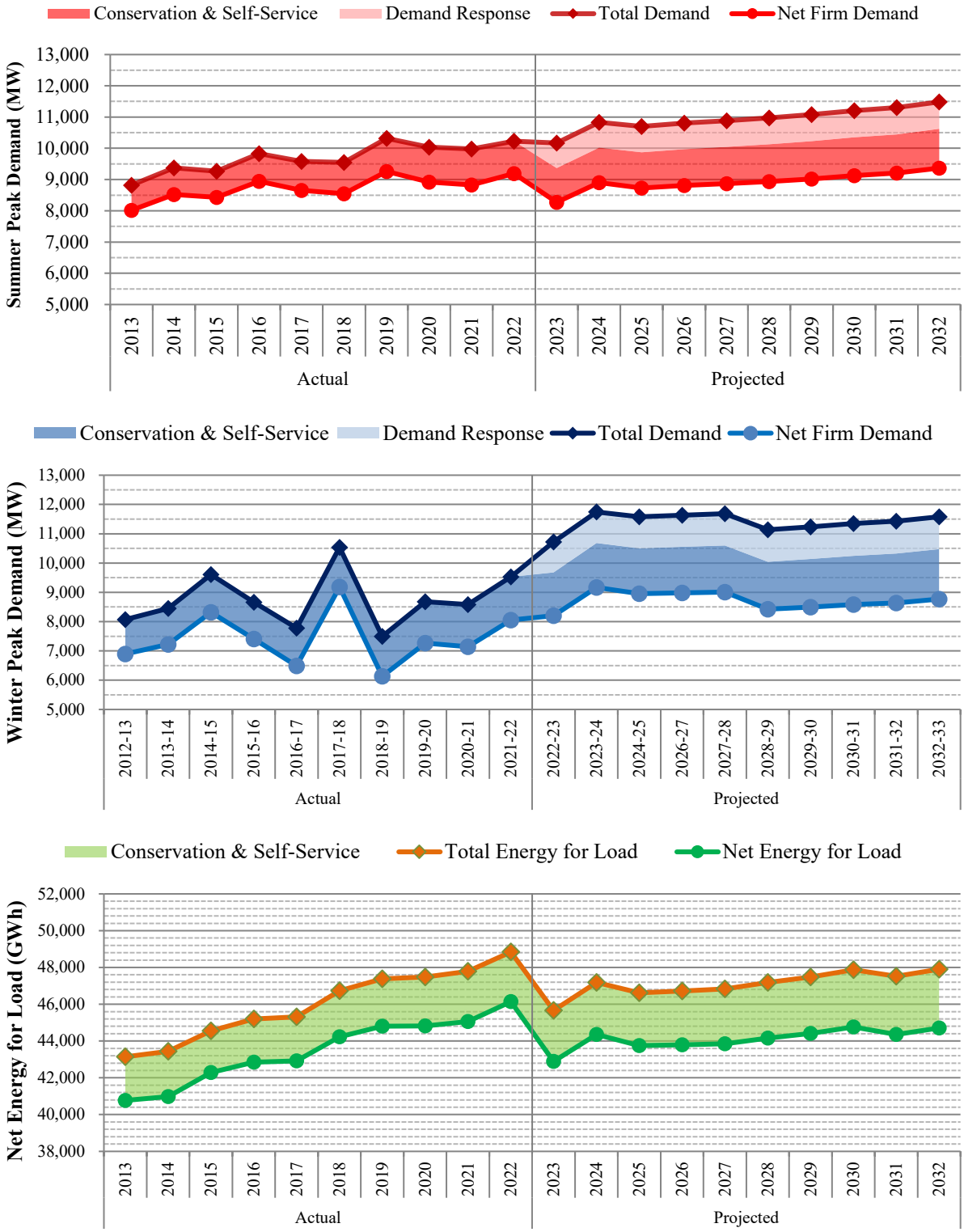
Figure 23: DEF Growth



Source: 2023 Ten-Year Site Plan

The three graphs in Figure 24 show DEF's seasonal peak demand and net energy for load for the historic years of 2013 through 2022 and forecast years 2023 through 2032. These graphs include the full impact of demand-side management and assume that all available demand response resources will be activated during the seasonal peak. During the past 10 years, demand response has not been activated during seasonal peak demand. As an investor-owned utility, DEF is subject to FEECA, and currently offers energy efficiency and demand response programs to customers to reduce peak demand and annual energy consumption. In November 2019, the Commission established demand-side management goals for DEF for the years 2020 through 2024. In August 2020, the Commission approved DEF's plan designed to achieve the 2020-2024 DSM goals. In preparing its 2023 Ten-Year Site Plan seasonal peak demand and energy forecasts, DEF assumes trends in these goals will be extended through the forecast horizon (through 2032).

Figure 24: DEF Demand and Energy Forecasts



Source: 2023 Ten-Year Site Plan and Data Responses

Fuel Diversity

Table 15 shows DEF's actual net energy for load by fuel type as of 2022 and the projected fuel mix for 2032. DEF relies primarily upon natural gas and coal for energy generation, making up approximately 88 percent of net energy for load in 2022. DEF plans to increase renewable energy generation over the planning period, somewhat offsetting natural gas and coal usage. DEF projects that renewable energy will provide over 24 percent of its generation by 2032, which is the fourth highest percentage of renewable energy generation in 2032 of the TYSP Utilities. Natural gas would remain the primary fuel, at 67.3 percent in 2032.

Table 15: DEF Energy Generation by Fuel Type

Fuel Type	Net Energy for Load			
	2022		2032	
	GWh	%	GWh	%
Natural Gas	36,423	**78.9%**	30,086	**67.3%**
Coal	4,375	**9.5%**	3,642	**8.1%**
Nuclear	0	**0.0%**	0	**0.0%**
Oil	146	**0.3%**	1	**0.0%**
Renewable	2,225	**4.8%**	10,973	**24.5%**
Interchange	1,203	**2.6%**	1	**0.0%**
NUG & Other	1,769	**3.8%**	2	**0.0%**
Total	**46,141**		**44,705**	

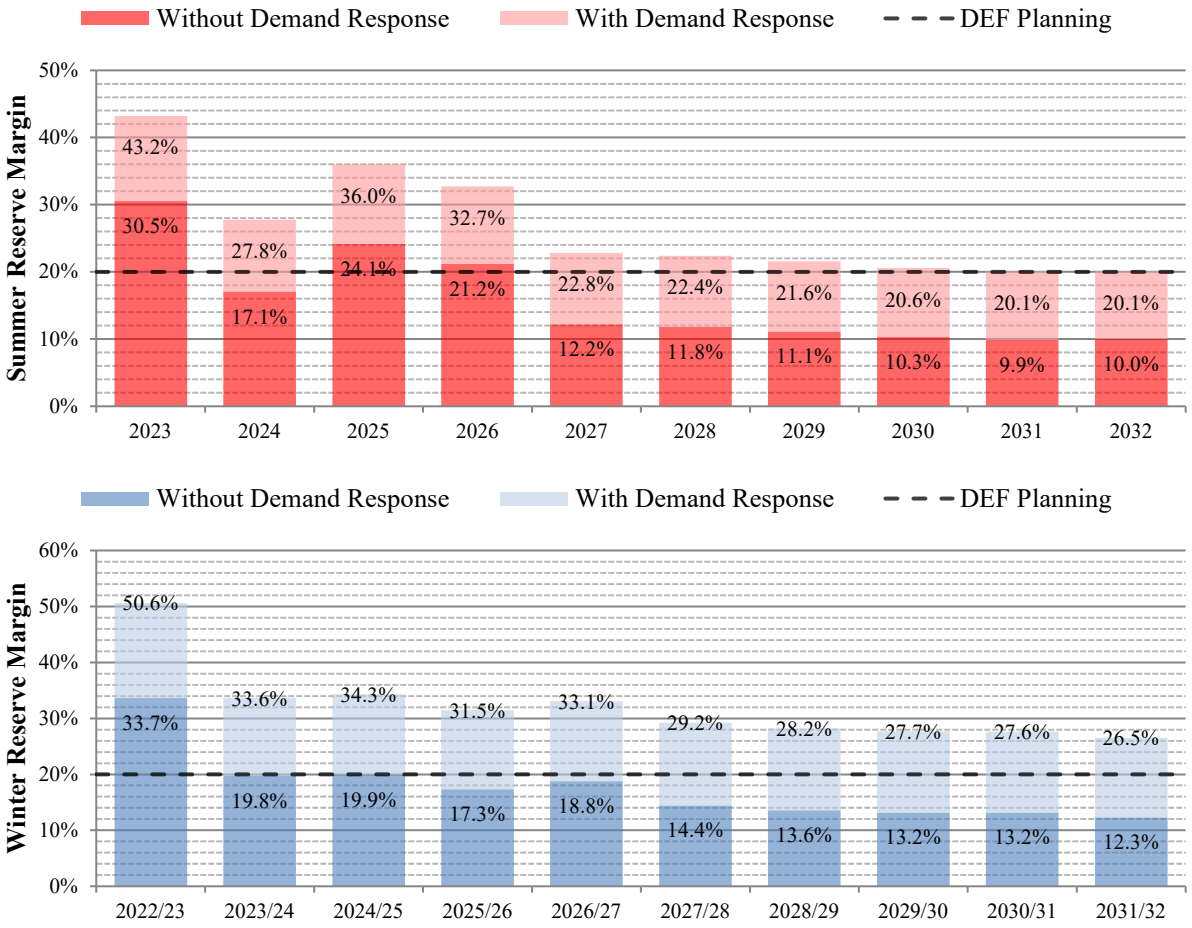
Source: 2023 Ten-Year Site Plan and Data Responses

Reliability Requirements

Since 1999, DEF has utilized a 20 percent planning reserve margin criterion based on a stipulation approved by the Commission.[13] Figure 24 displays the forecast planning reserve margin for DEF through the planning period for both seasons, with and without the use of demand response. As shown in the figure, DEF's generation needs are mostly controlled by its summer peaking throughout the planning period.

[13] Order No. PSC-99-2507-S-EU, issued December 22, 1999, in Docket No. 19981890-EU, *In re: Generic investigation into the aggregate electric utility reserve margins planned for Peninsular Florida.*

Figure 25: DEF Reserve Margin Forecast



Source: 2023 Ten-Year Site Plan

Generation Resources

DEF projects multiple unit retirements and additions during the planning period, as described in Table 16. DEF plans to fully utilize the Osprey natural gas combined-cycle facility, which it recently purchased but has been limited due to transmission constraints, when transmission upgrades are completed in 2025.

DEF has included 3,748 MW of planned solar additions across 50 sites, which make up approximately 86 percent of DEF's planned total new capacity, and contribute 886 MW of firm capacity. In addition to conventional solar generation and battery energy storage, DEF plans to co-locate energy storage at six sites from 2029 through 2031, referring to these units as "Solar Plus Storage," for a total of 225 MW of energy storage capacity. The capacity of these batteries is not reflected in Table 16, as they are targeted to provide winter capacity, not summer. None of the solar and battery additions require a need determination pursuant to the PPSA. In July 2020, DEF petitioned the Commission to implement a Clean Energy Connection program (CEC), which is designed to be a community solar program through which participating customers can voluntarily

subscribe to a share of new solar energy centers.[14] The Order approving the CEC program was appealed to the Supreme Court of Florida, which has not yet completed its review.[15]

Table 16: DEF Generation Resource Changes

Year	Plant Name & Unit Number	Unit Type	Net Capacity (MW) Sum	Solar Firm Capacity (MW) Sum	Notes
Retiring Units					
2025	Bayboro P1-P4	DFO-CT	171		
2027	Debary P2-P6	DFO-CT	227		
2027	Bartow P1 & P3	DFO-CT	82		
2027	University of Florida	NG-CT	44		
Total Retired MW			**524**		
New Units					
2023	Sited Solar Facilities	PV	300	171	4 Sites
2024	Sited Solar Facilities	PV	225	128	3 Sites
2025	Unsited Solar Facilities	PV	449	112	6 Sites
2025	Sited Solar	PV	75	43	1 Site
2026	Unsited Solar Facilities	PV	300	75	4 Sites
2027	Unsited Solar Facilities	PV	300	75	4 Sites
2027	Unsited Solar Storage	BAT	100		
2028	Unsited Solar Facilities	PV	300	37	4 Sites
2029	Unsited Solar Facilities	PV	225	28	3 Sites
2029	Unsited Solar + Storage	PV/BAT	150	19	2 Sites
2030	Unsited Solar Facilities	PV	300	37	4 Sites
2030	Unsited Solar + Storage	PV/BAT	150	19	2 Sites
2031	Unsited Solar Facilities	PV	375	47	5 Sites
2031	Unsited Solar + Storage	PV/BAT	150	19	2 Sites
2032	Unsited Solar Facilities	PV	449	56	6 Sites
2032	Unsited Solar Storage	BAT	150		
Total New MW			**3,998**	**886**	
Net Additions			**3,474**		

Source: 2023 Ten-Year Site Plan

[14] See Docket No. 20200176-EI, *In re: Petition for a limited proceeding to approve clean energy connection program and tariff and stipulation, by Duke Energy Florida, LLC.*

[15] Order No. PSC-2021-0059A-S-EI, issued September 23, 2022, in Docket No. 20200176-EI, *In re: Petition for a limited proceeding to approve clean energy connection program and tariff and stipulation, by Duke Energy Florida, LLC.*

Tampa Electric Company (TECO)

TECO is an investor-owned utility and Florida's third largest electric utility. The utility's service territory is within the FRCC region and consists primarily of the Tampa metropolitan area. As an investor-owned utility, the Commission has regulatory authority over all aspects of operations, including rates, reliability, and safety. Pursuant to Section 186.801(2), F.S., the Commission finds TECO's 2023 Ten-Year Site Plan suitable for planning purposes.

Load & Energy Forecasts

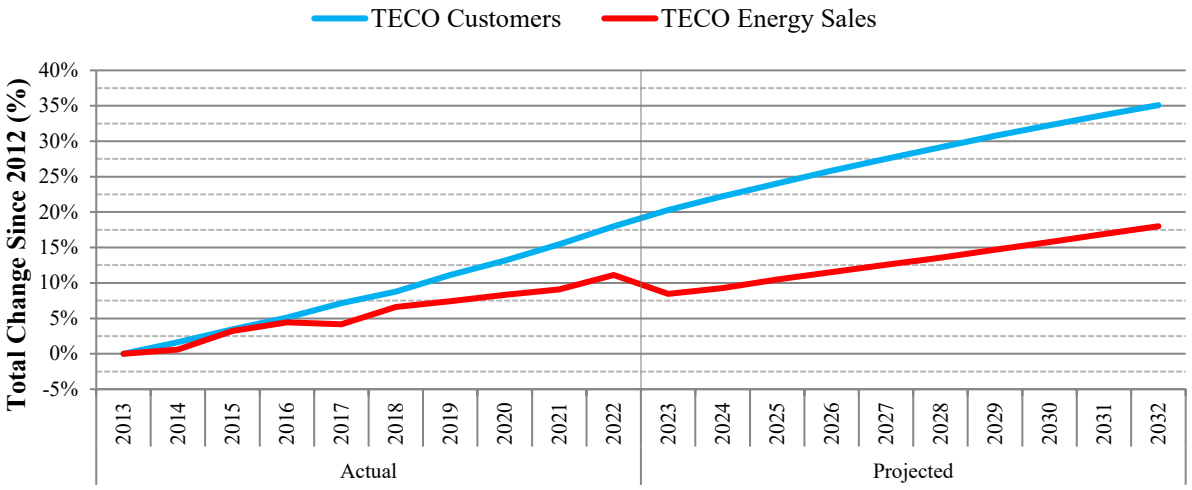
In 2022, TECO had approximately 819,718 customers and annual retail energy sales of 20,467 GWh or approximately 8.7 percent of Florida's annual retail energy sales. Over the last 10 years, TECO's customer base has increased by 18.0 percent, while retail sales have increased by 11.1 percent.

TECO's total customer growth in 2022 averaged 2.2 percent with the residential class being the engine behind the growth. Over the next 10 years customer growth is expected to increase at an average rate of 1.3 percent annually. The primary driver of customer growth will be new construction and increasing net in-migration to the utility's service area.

TECO's average annual energy consumption per residential customer is slightly lower in 2022 than in 2021, primarily due to the returning to pre-pandemic usage patterns. Over the next 10 years, the utility expects average energy consumption per residential customer to decline at an average annual rate of 0.1 percent. The main drivers behind the decline are increases in appliance efficiencies, lighting efficiencies, energy efficiency in new homes, conservation efforts, and changes in housing mix. In 2022, TECO's commercial per customer usage was slightly higher in 2022 than in 2021, primarily due to hotter weather and the return to pre-pandemic usage patterns. The utility's industrial per customer usage in 2022 was also higher than in 2021, primarily due to the industrial phosphate sector that had less self-serving generation and more energy purchases from TECO.

For the next 10 years, TECO's retail energy sales are projected to grow at an annual average rate of almost 1 percent. This is below the projected customer growth rate of 1.3 percent primarily due to continued per customer energy consumption declines in the residential sector, as well as declines in the phosphate sector as the mining industry continues to move south and out of the utility's service territory. Figure 26 illustrates historic and prospective forecasted growth rates in customers and retail energy sales for the resource plan TECO filed in its 2023 TYSP.

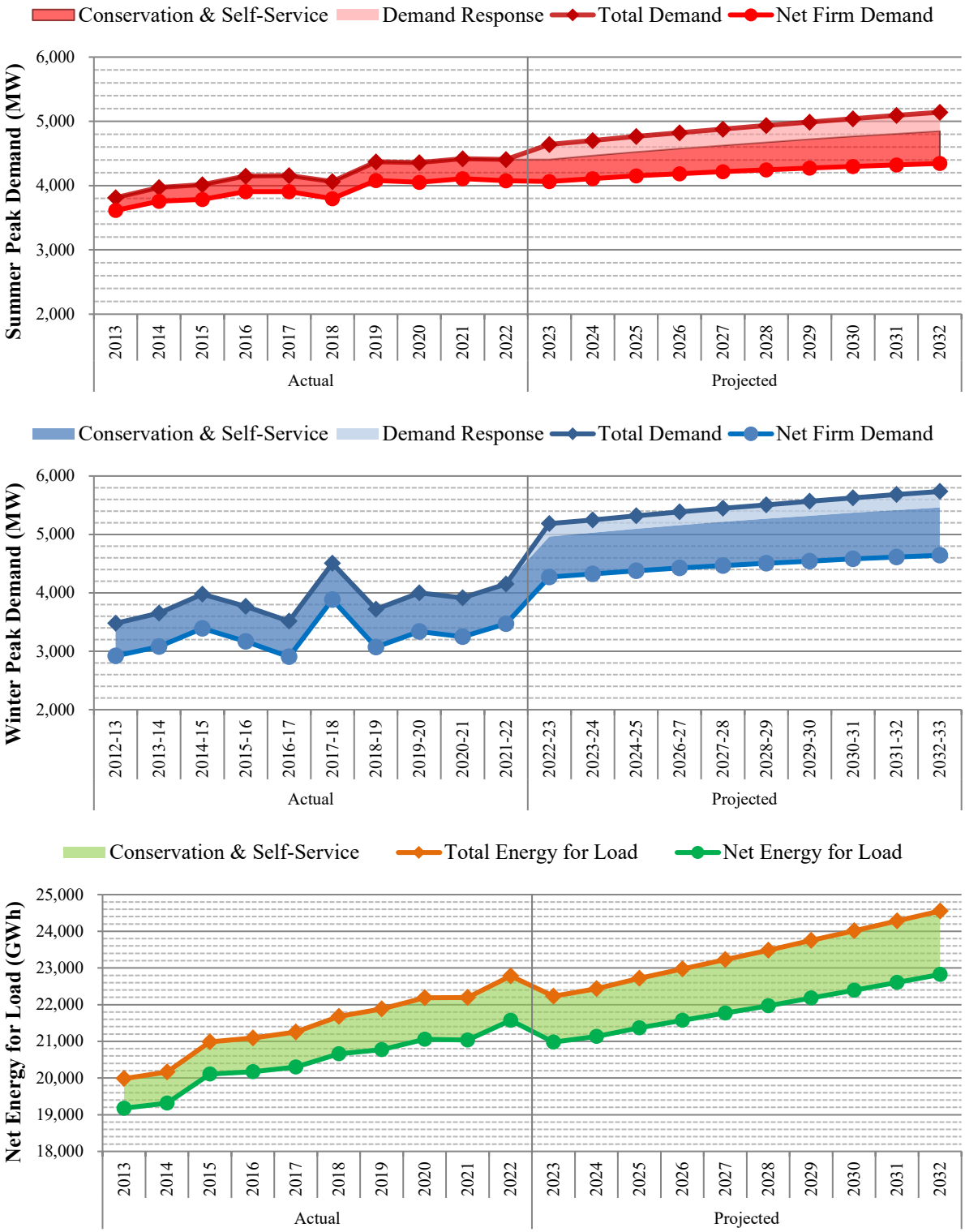
Figure 26: TECO Growth



Source: 2023 Ten-Year Site Plan

The three graphs in Figure 27 show TECO's seasonal peak demand and net energy for load for the historic years of 2013 through 2022 and forecast years 2023 through 2032. These graphs include the full impact of demand-side management, and assume that all available demand response resources will be activated during the seasonal peak. Historically, demand response has not been activated during seasonal peak demand, excluding the summer of 2013 and winters of 2017-2018 and 2018-2019. As an investor-owned utility, TECO is subject to FEECA and currently offers energy efficiency and demand response programs to customers to reduce peak demand and annual energy consumption. In November 2019, the Commission established demand-side management goals for TECO for the years 2020 through 2024. In August 2020, the Commission approved TECO's plan designed to achieve the 2020-2024 DSM goals. In preparing its 2023 Ten-Year Site Plan seasonal peak demand and energy forecasts, TECO assumes the trends in these goals will be extended through the forecast period (through 2032).

Figure 27: TECO Demand and Energy Forecasts



Source: 2023 Ten-Year Site Plan and Data Responses

Fuel Diversity

Table 17 shows TECO's actual net energy for load by fuel type as of 2022 and the projected fuel mix for 2032. Based on its 2023 Ten-Year Site Plan, natural gas is used for the majority of TECO's energy generation. Natural gas accounts for approximately 79 percent of net energy for load in 2022 and is projected to account for approximately 78 percent in 2032. In the future, TECO projects that energy from coal will decrease and energy from renewables will increase. TECO projects that renewable energy will increase from 6.0 percent to 19.9 percent by 2032.

Table 17: TECO Energy Generation by Fuel Type

Fuel Type	Net Energy for Load			
	2022		2032	
	GWh	%	GWh	%
Natural Gas	17,066	**79.1%**	17,826	**78.1%**
Coal	1,337	**6.2%**	243	**1.1%**
Nuclear	0	**0.0%**	0	**0.0%**
Oil	6	**0.0%**	0	**0.0%**
Renewable	1,492	**6.9%**	4,535	**19.9%**
Interchange	23	**0.1%**	170	**0.7%**
Other	1,649	**7.6%**	48	**0.2%**
Total	**21,572**		**22,822**	

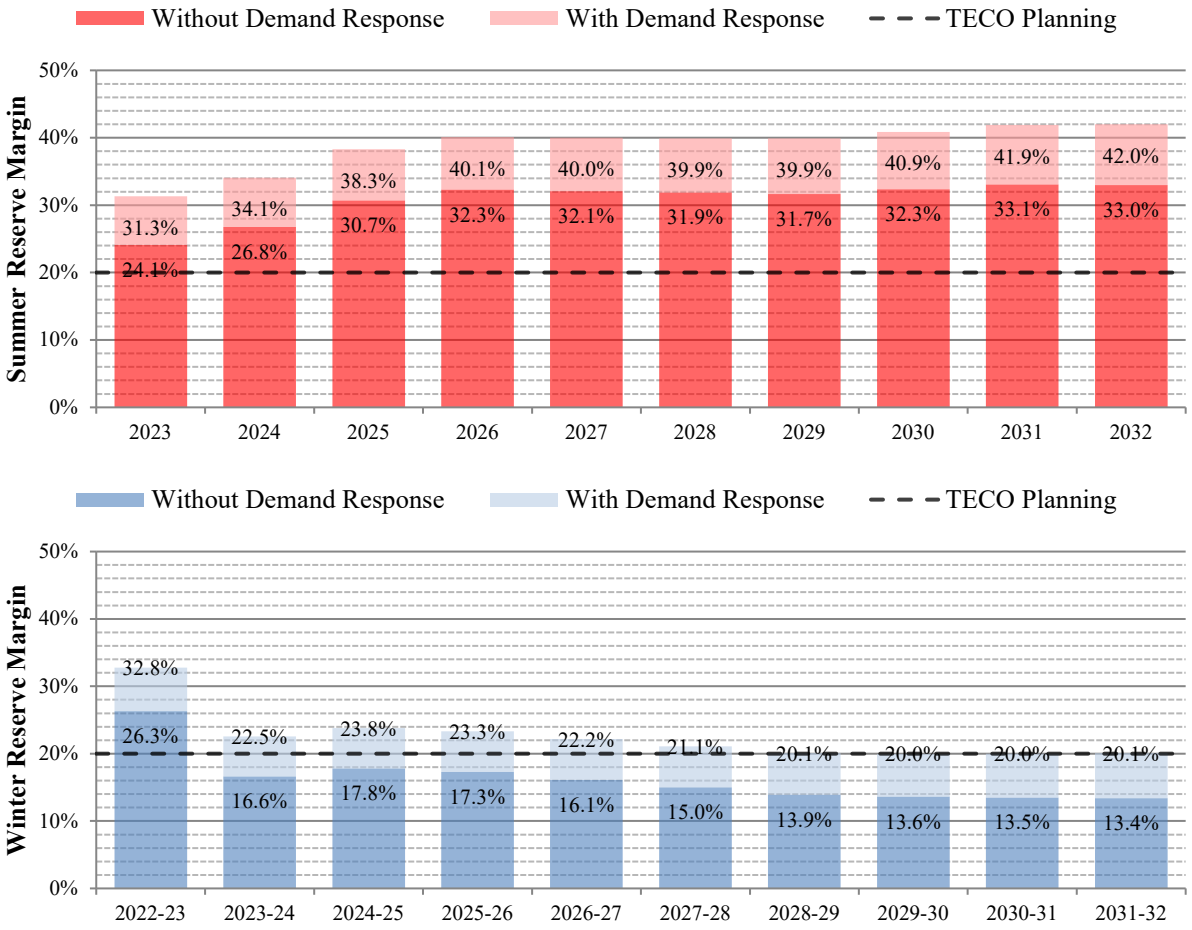
Source: 2023 Ten-Year Site Plan and Data Responses

Reliability Requirements

Since 1999, TECO has utilized a 20 percent planning reserve margin criterion based on a stipulation approved by the Commission.[16] TECO also elects to maintain a minimum supply-side reserve margin of 7 percent. Figure 28 displays the forecast planning reserve margin for TECO through the planning period for both seasons, with and without the use of demand response. As shown in the figure, TECO's generation needs are being controlled by its winter peak. TECO's current and planned investments in solar generation contribute to this shift in planning because solar resources provide coincident capacity during the summer peak but not the winter peak. TECO's 7 percent supply-side only reserve margin is not the controlling factor for any planned unit additions. However, it does provide useful information regarding the assurance that the projected 20 percent reserve margin will be realized.

[16] Order No. PSC-99-2507-S-EU, issued December 22, 1999, in Docket No. 19981890-EU, *In re: Generic investigation into the aggregate electric utility reserve margins planned for Peninsular Florida.*

Figure 28: TECO Reserve Margin Forecast



Source: 2023 Ten-Year Site Plan

Generation Resources

TECO plans one unit retirement and multiple unit additions during the planning period, as described in Table 18. TECO anticipates retiring its natural gas-fired Big Bend Unit 3. For natural gas-fired units, TECO plans to add two reciprocating internal combustion engine facilities in 2025 and 2030, with each facility including a pair of 18.5 MW units. TECO also anticipates adding several solar projects over the planning period totaling 967 MW over 14 sites, supplemented by the addition of 195 MW of battery storage. None of the solar and battery additions require a need determination pursuant to the PPSA.

Table 18: TECO Generation Resource Changes

Year	Plant Name & Unit Number	Unit Type	Net Capacity (MW)	Solar Firm Capacity (MW)	Notes
			Sum	Sum	
				Retiring Units	
2023	Big Bend 3	NG-BIT	395	N/A	
Total Retirements			**395**	**N/A**	
				New Units	
2023	Sited Solar Facilities	PV	230	128	4 Sites
2024	Dover Storage	BAT	15	15	1 Site
2025	Unsited Solar Facility 1	PV	138	77	2 Sites
2025	Battery Storage 1	BAT	100		
2025	Reciprocating Engine 1	NG-IC	37		
2026	Unsited Solar Facility 2	PV	224	125	3 Sites
2027	Unsited Solar Facility 3	PV	75	42	1 Site
2028	Unsited Solar Facility 4	PV	75	42	1 Site
2029	Unsited Solar Facility 5	PV	75	42	1 Site
2030	Unsited Solar Facility 6	PV	75	42	1 Site
2030	Reciprocating Engine 2	NG-IC	37		
2031	Unsited Solar Facility 7	PV	75	42	1 Site
2031	Battery Storage 2	BAT	40		
2032	Battery Storage 3	BAT	40		
Total New Units			**1,236**	**555**	
Net Additions			**841**		

Source: 2023 Ten-Year Site Plan

Florida Municipal Power Agency (FMPA)

FMPA is a governmental wholesale power company owned by several Florida municipal utilities throughout the state. Collectively, FMPA is Florida's seventh largest electric utility and third largest municipal electric utility. While FMPA has 31 member systems, only those members that are participants in the All-Requirements Power Supply Project (ARP) are addressed in the utility's Ten-Year Site Plan. FMPA is responsible for planning activities associated with ARP member systems. For a municipal utility, the Commission's regulatory authority is limited to safety, rate structure, territorial boundaries, bulk power supply, operations, and planning. Pursuant to Section 186.801(2), F.S., the Commission finds FMPA's 2023 Ten-Year Site Plan suitable for planning purposes.

Load & Energy Forecasts

In 2022, FMPA had approximately 281,397 customers and annual energy sales of 6,037 GWh or approximately 2.6 percent of Florida's annual energy sales. Over the last 10 years, FMPA's customer base has increased by 5.38 percent, while energy sales have increased by 6.09 percent.

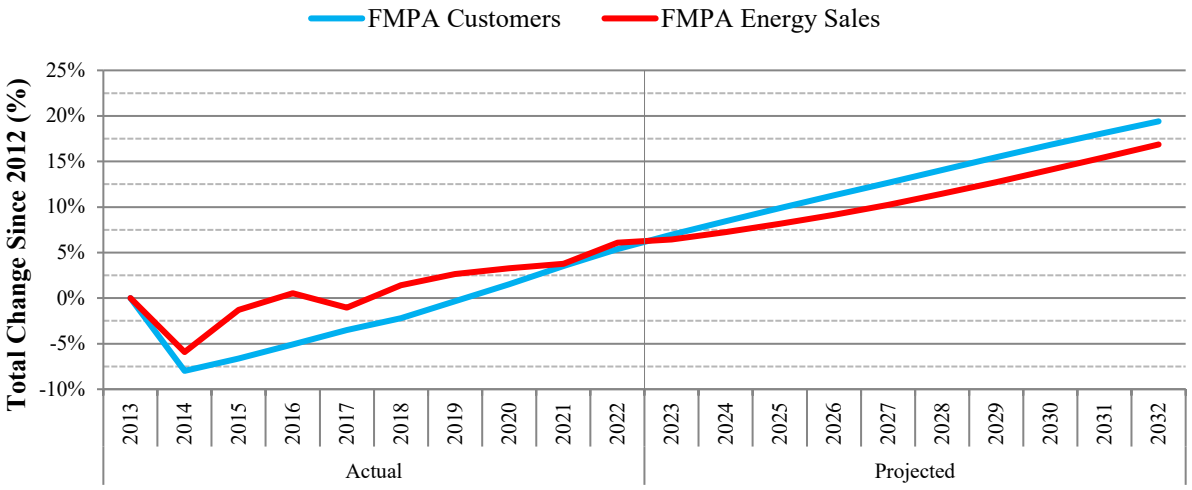
FMPA noted that, in aggregate, its energy usage has been relatively flat in both the residential and non-residential sectors after controlling for weather variation from normal conditions. There are countervailing factors that influence usage. In general, declines in electricity prices and population growth have an upward impact on energy usage. Concurrently, a continued orientation to conservation and continued improvement in energy efficiency, driven primarily from technological advances, equipment standards, and building codes, place downward pressure on average usage.

Residential average usage is modeled directly using an industry-standard econometric model developed by nFront Consulting LLC. The model includes explanatory variables such as personal income per household, weather by month, electricity price. Over the last several years, EVs have been adopted in increasing numbers in the utility's service area. Given the significance of this trend, FMPA's 2023 load forecast includes a projection of the future impact of EV charging energy.

For the current 10-year forecast horizon, the utility is projecting a 1.23 percent average annual growth rate for its customer base, and a 1.04 percent average annual growth rate for energy sales.

Figure 29 illustrates historic and prospective forecasted growth rates in customers and retail energy sales for the resource plan FMPA filed in its 2023 TYSP.

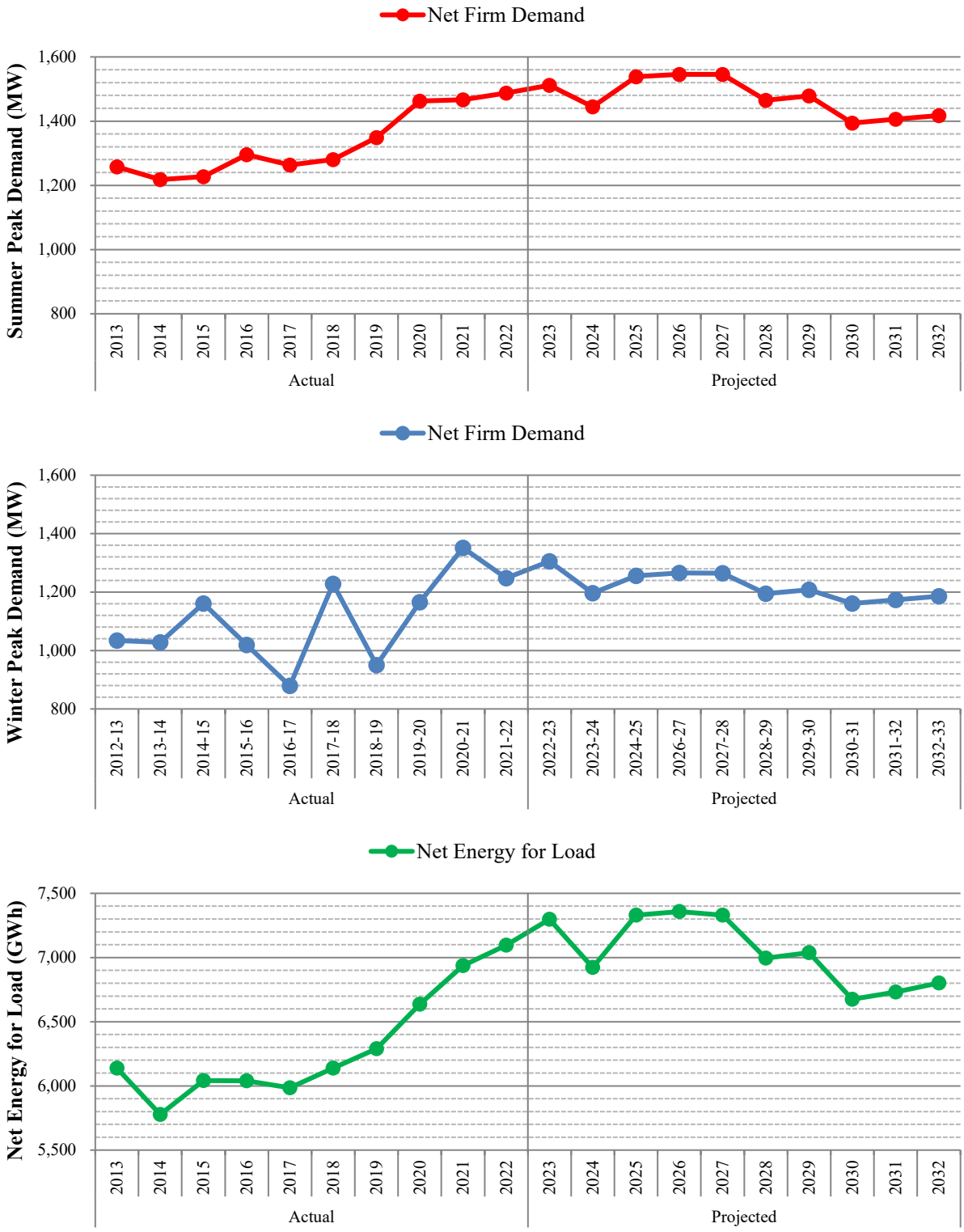
Figure 29: FMPA Growth



Source: 2023 Ten-Year Site Plan

The three graphs in Figure 30 show FMPA's seasonal peak demand and net energy for load for the historic years 2013 through 2022 and forecast years 2023 through 2032. As FMPA is a wholesale power company, it does not directly engage in energy efficiency or demand response programs. ARP member systems do offer demand-side management programs, the impacts of which are included in the graphs.

Figure 30: FMPA Demand and Energy Forecasts



Source: 2023 Ten-Year Site Plan and Data Responses

Fuel Diversity

Table 19 shows FMPA's actual net energy for load by fuel type as of 2022 and the projected fuel mix for 2032. FMPA uses natural gas as its primary fuel, supplemented by coal and nuclear generation. FMPA projects to end energy generation from coal by 2027, but approximately 89 percent of energy would still be sourced from natural gas and nuclear. FMPA projects serving 11 percent of its net energy for load with renewable resources by the end of the planning period.

Table 19: FMPA Energy Generation by Fuel Type

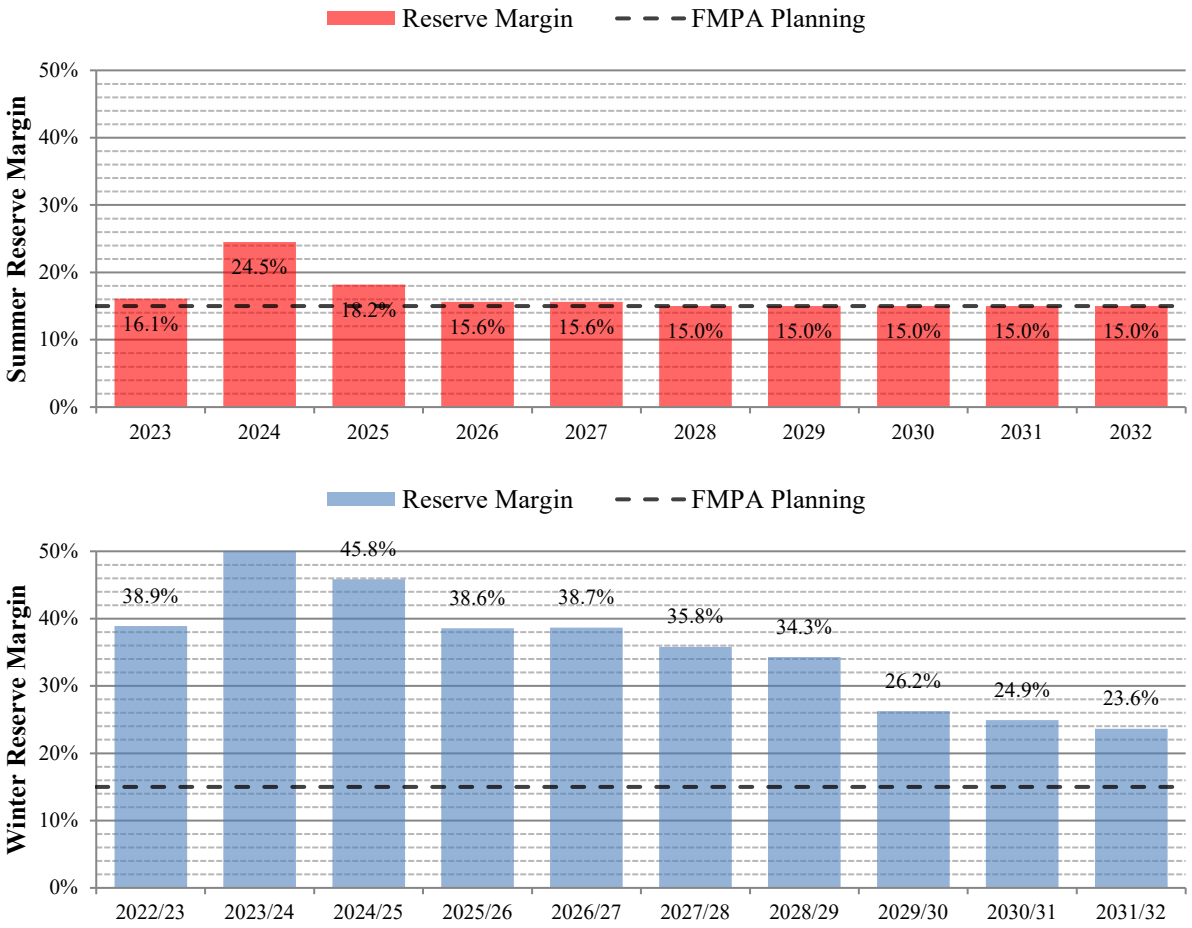
Fuel Type	Net Energy for Load			
	2022		2032	
	GWh	%	GWh	%
Natural Gas	5,965	**84.0%**	5,645	**83.0%**
Coal	578	**8.1%**	0	**0.0%**
Nuclear	399	**5.6%**	391	**5.7%**
Oil	7	**0.1%**	2	**0.0%**
Renewable	148	**2.1%**	764	**11.2%**
Interchange	0	**0.0%**	0	**0.0%**
NUG & Other	0	**0.0%**	0	**0.0%**
Total	**7,097**		**6,802**	

Source: 2023 Ten-Year Site Plan and Data Responses

Reliability Requirements

FMPA utilizes a 15 percent planning reserve margin criterion. Figure 31 displays the forecast planning reserve margin for FMPA through the planning period for both seasons. As shown in the figure, FMPA's generation needs are controlled by its summer peak throughout the planning period.

Figure 31: FMPA Reserve Margin Forecast



Source: 2023 Ten-Year Site Plan

Generation Resources

FMPA plans on retiring Stanton Energy Center Unit 1, a coal unit, in 2025 as described in Table 20. FMPA also has entered in three purchased power agreement (PPA) that will add a total of 254 MW of solar capacity by the end of 2026.

Table 20: FMPA Generation Resource Changes

Year	Plant Name & Unit Number	Unit Type	Net Capacity (MW) Sum	Notes
Retiring Units				
2025	Stanton Energy Center 1	BIT-ST	118	Jointly Owned with OUC
Total Retirements			**118**	
Net Additions			**(118)**	

Gainesville Regional Utilities (GRU)

GRU is a municipal utility and the smallest electric utility required to file a Ten-Year Site Plan. The utility's service territory is within the FRCC region and consists of the City of Gainesville and its surrounding area. GRU also provides wholesale power to the City of Alachua and Clay Electric Cooperative. As a municipal utility, the Commission's regulatory authority is limited to safety, rate structure, territorial boundaries, bulk power supply, operations, and planning. Pursuant to Section 186.801(2), F.S., the Commission finds GRU's 2023 Ten-Year Site Plan suitable for planning purposes.

Load & Energy Forecasts

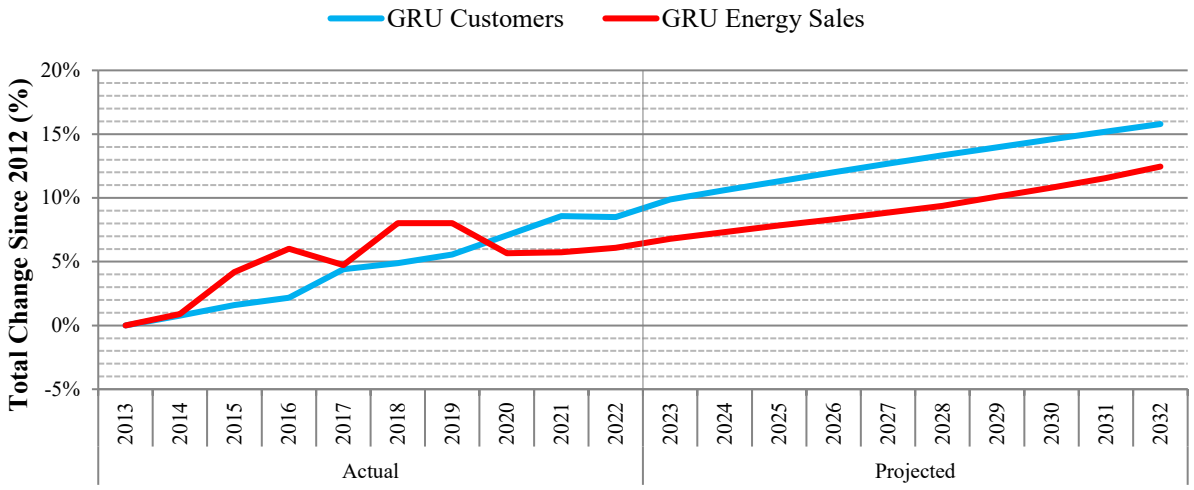
In 2022, GRU had approximately 101,051 customers and annual retail energy sales of 1,797 GWh, or approximately 0.8 percent of Florida's annual retail energy sales. Over the last 10 years, GRU's customer base has increased by 8.5 percent, while retail sales have increased by 6.1 percent.

GRU noted that over the past 10 years, its residential energy consumption per customer increased 0.29 percent per year, while its non-residential consumption per customer declined 0.63 percent per year. For the next 10 years, the utility projects that its residential energy usage per customer will stay relatively constant, and non- residential energy usage per customer will decline at a rate of 0.20 percent per year. GRU recognized some of the factors that effect the usage per customer which include increasing electricity prices, improved building code, energy efficiency standards and regulations, and utility-sponsored conservation measures. GRU noted that, in general, the pandemic resulted in increased residential usage and reduced non-residential usage. The utility also acknowledged that in future years, loads associated with EV charging are anticipated to support increase in usage per customer for all classes with the greatest increases in residential with at-home charging.

For the current 10-year forecast horizon, both GRU's number of customers and retail energy sales will grow at an annual average rate of 0.58 percent. The utility indicated that its projected growth of retail energy sales is supported by its projected increase in the number of customers and offset negatively by flat or declining energy usage per customer. The utility also noted that load associated with electric vehicle charging is anticipated to support energy sales more in this forecast than in past forecasts.

Figure 32 illustrates historic and prospective forecasted growth rates in customers and retail energy sales for the resource plan GRU filed in its 2023 TYSP.

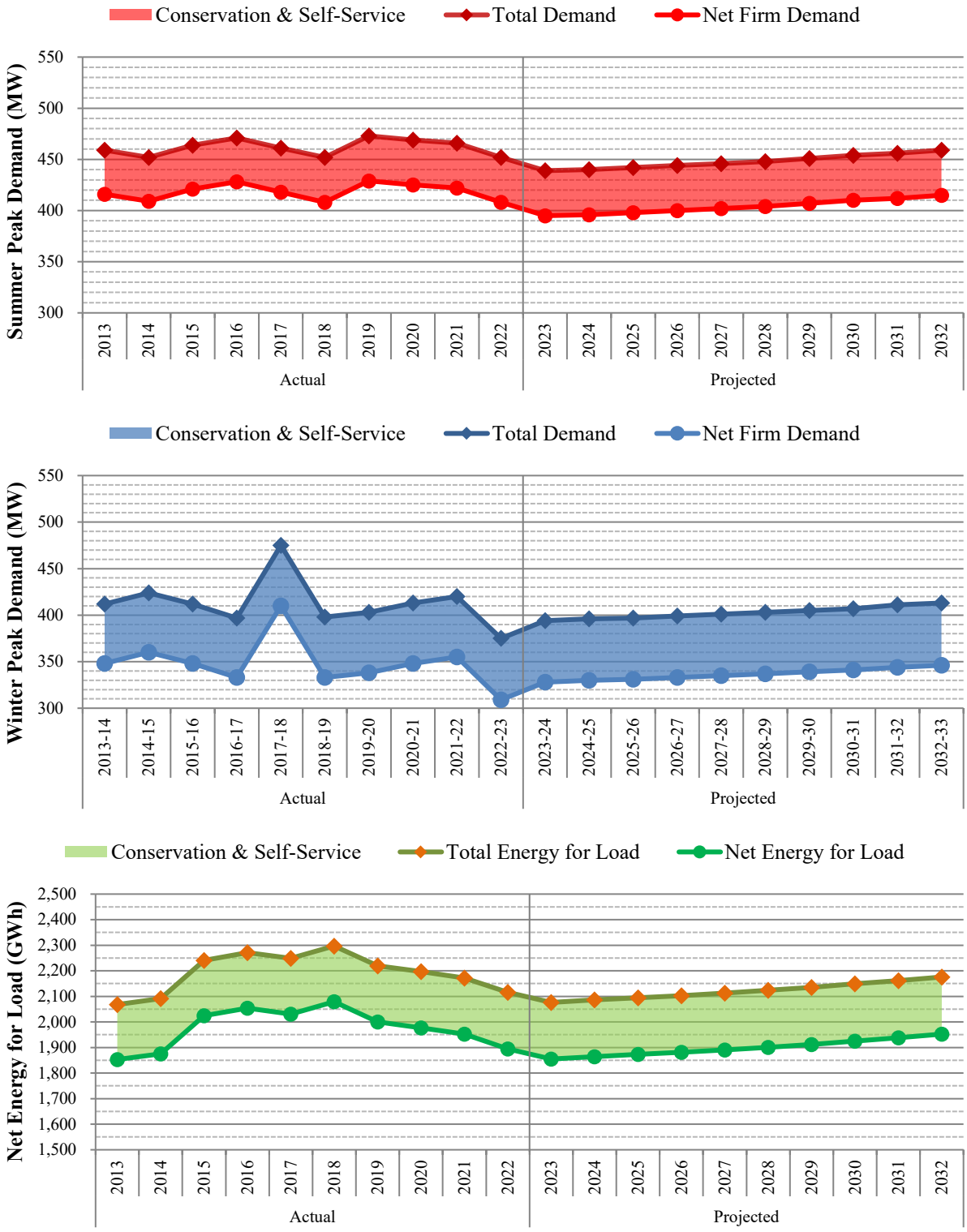
Figure 32: GRU Growth



Source: 2023 Ten-Year Site Plan

The three graphs in Figure 33 show GRU's seasonal peak demand and net energy for load for the historic years of 2013 through 2022 and forecast years 2023 through 2032. GRU engages in multiple energy efficiency programs to reduce customer peak demand and annual energy for load. The graphs in Figure 33 include the impact of these demand-side management programs.

Figure 33: GRU Demand and Energy Forecasts



Source: 2022 Ten-Year Site Plan and Data Responses

Fuel Diversity

Table 21 shows GRU's actual net energy for load by fuel type as of 2022 and the projected fuel mix for 2032. In 2022, natural gas and renewables were the primary fuel for energy generation, making up approximately 93 percent of net energy for load. GRU currently has the highest percentage contribution of renewables in Florida for net energy for load and will retain that ranking in 2032. By 2025, renewables will be the majority fuel source used by the utility and natural gas will become the minority fuel source by the end of planning period at 24.0 percent; renewables will be 45.1 percent. Coal-fired generation will be eliminated by 2023.

Table 21: GRU Energy Generation by Fuel Type

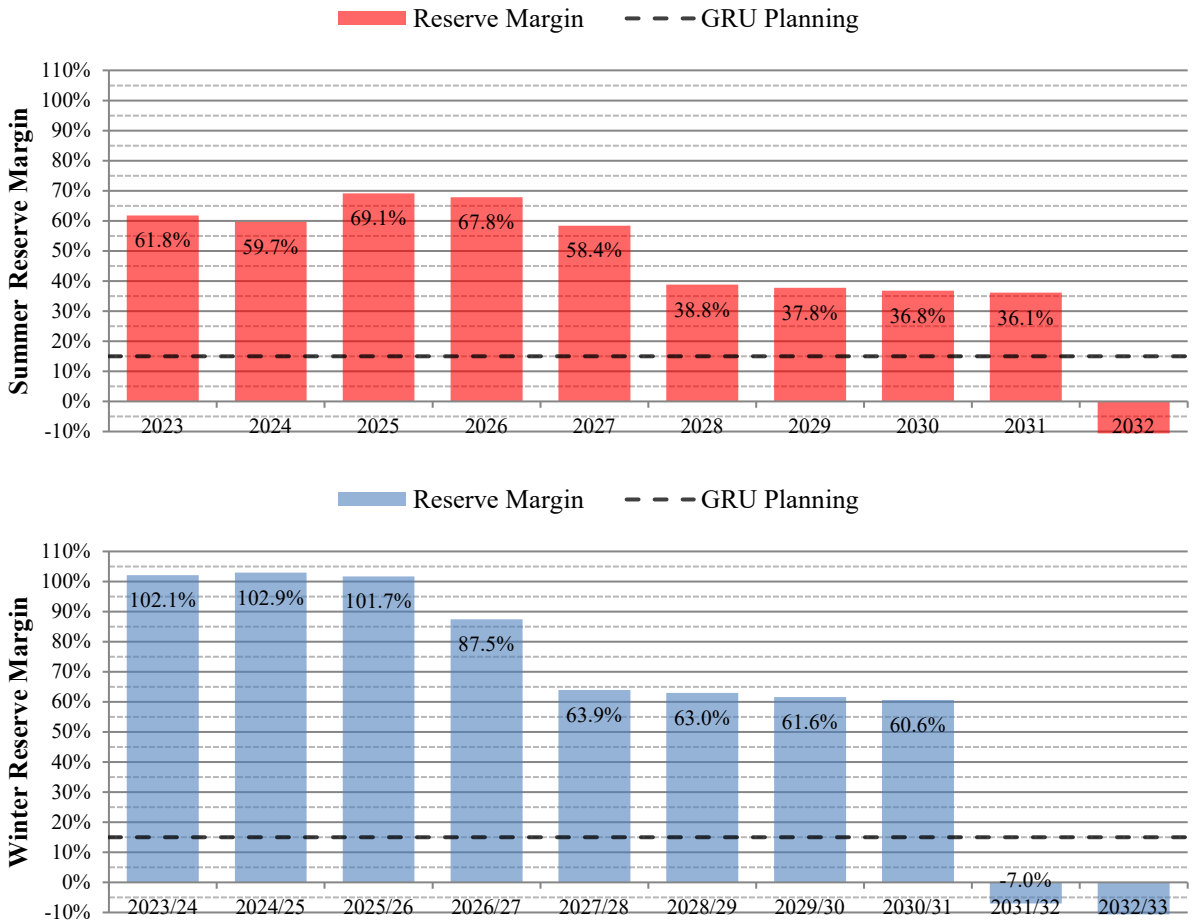
Fuel Type	Net Energy for Load			
	2022		2032	
	GWh	%	GWh	%
Natural Gas	1,338	**70.6%**	469	**24.0%**
Coal	32	**1.7%**	0	**0.0%**
Nuclear	0	**0.0%**	0	**0.0%**
Oil	2	**0.1%**	0	**0.0%**
Renewable	622	**32.8%**	881	**45.1%**
Interchange	0	**0.0%**	0	**0.0%**
NUG & Other	-99	**-5.2%**	602	**30.8%**
Total	**1,895**		**1,952**	

Source: 2023 Ten-Year Site Plan and Data Responses

Reliability Requirements

GRU utilizes a 15 percent planning reserve margin criterion for seasonal peak demand. Figure 34 displays the forecast planning reserve margin for GRU through the planning period for both seasons. As shown in the figure, GRU's generation needs are controlled by its summer peak throughout the planning period. As a smaller utility, the reserve margin is an imperfect measure of reliability due to the relatively large impact a single unit may have on reserve margin. GRU's reserve margin, is projected to be negative in the Winter of 2031/32 and Summer of 2032 due to a unit retiring in 2031. GRU will need to add approximately 76 MW to meet its reserve margin for winter 2031/2032, and 212 MW for summer 2032 to meet their planning reserve margin. As GRU approaches this date, the utility will continue to evaluate how to meet its 15 percent reserve margin criterion. Staff believes this to be acceptable for planning purposes this year. Staff will evaluate future plans to ensure reserve margin is maintained.

Figure 34: GRU Reserve Margin Forecast



Source: 2023 Ten-Year Site Plan

Generation Resources

GRU currently plans on retiring two natural gas-fired combustion turbines in 2026, a natural gas-fired steam unit in 2027, and a coal unit in 2031 as described in Table 22. GRU entered into a 20 year contract that is expected to deliver an additional 75 MW of solar capacity through a PPA with an expected in-service year of 2025. GRU did not include a placeholder unit in this year's plan, but as noted above will need to add resources, either through construction of utility-owned generation or through purchased power agreements, in the outer years to address reliability. Staff anticipates GRU will address their unit selection in future TYSPs to meet the required planning reserve margin of 15 percent.

Table 22: GRU Generation Resource Changes

Year	Plant Name & Unit Number	Unit Type	Net Capacity (MW) Sum
Retiring Units			
2026	Deerhaven GT01 & GT02	NG – CT	35
2027	Deerhaven FS01	NG – ST	76
2031	Deerhaven FS02	BIT – ST	232
Total Retirements			**343**
Net Additions			**(343)**

Source: 2023 Ten-Year Site Plan

JEA

JEA, formerly known as Jacksonville Electric Authority, is Florida's largest municipal utility and fifth largest electric utility. JEA's service territory is within the FRCC region, and includes all of Duval County as well as portions of Clay and St. Johns Counties. As a municipal utility, the Commission's regulatory authority is limited to safety, rate structure, territorial boundaries, bulk power supply, operations, and planning. Pursuant to Section 186.801(2), F.S., the Commission finds JEA's 2023 Ten-Year Site Plan suitable for planning purposes.

Load & Energy Forecasts

In 2022, JEA had approximately 507,868 customers and annual retail energy sales of 12,491 GWh or approximately 5.3 percent of Florida's annual retail energy sales. Over the last 10 years, JEA's customer base has increased by 19.43 percent, while retail sales have increased by 8.09 percent.

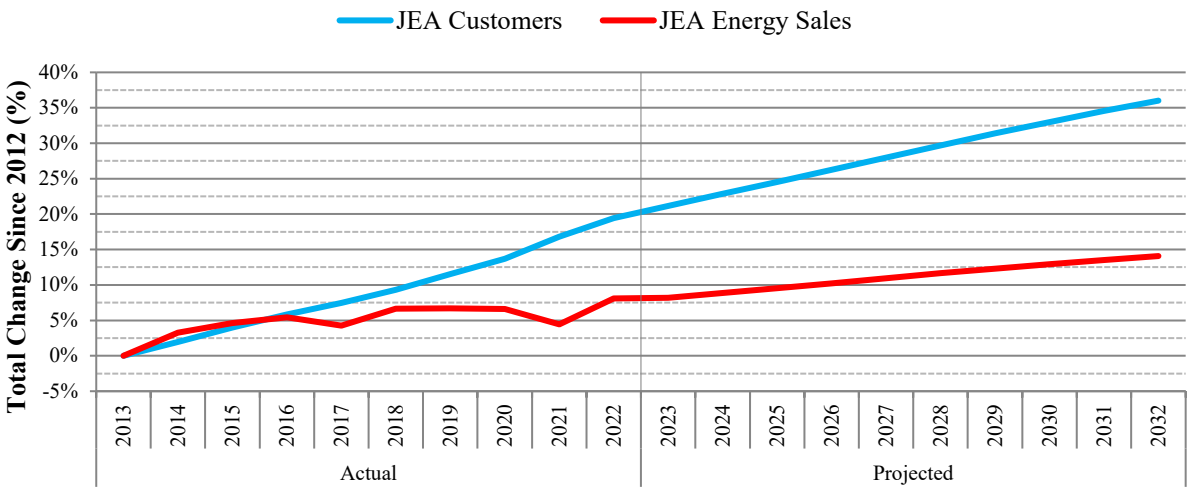
JEA utilized various economic and demographic forecasts from Moody's Analytics as the inputs to the utility's forecasting models. Overall, Moody's Analytics forecast percentage growth for all parameters utilized in JEA's 2023 TYSP are very similar as compared to the 2022 forecasts. As a result, JEA projected a small growth for residential, commercial, and industrial customers. With respect to energy sales, the utility anticipated that the residential class will have a higher rate of growth, compared to the commercial and industrial classes, with the main driver being the housing growth in JEA's service territory per Moody's analytics forecast.

JEA acknowledged that the average annual energy usage per customer for the residential class is decreasing for the forecasted 10-year period. It noted that the utility funded demand-side management programs, continue to be the main contributors to the usage decrease. The other contributing factors include customer behavioral changes, increased electric rates, more multifamily housing constructions compared to single-family housing (which use less energy per customer), as well as more energy efficient air conditioners.

JEA reported that it also promotes the energy-saving education and measures for commercial and industrial customers. Over the current forecasting period, the utility expects that the average energy consumption per customer is decreasing for commercial customers but increasing slightly for industrial customers.

For the next 10 years, JEA's forecast results indicate that the customer numbers are projected to grow at an average annual rate of 1.29 percent; and the retail energy sales are projected to grow at an average annual rate of 0.59 percent. Figure 35 illustrates historic and prospective forecasted growth rates in customers and retail energy sales for the resource plan JEA filed in its 2023 TYSP.

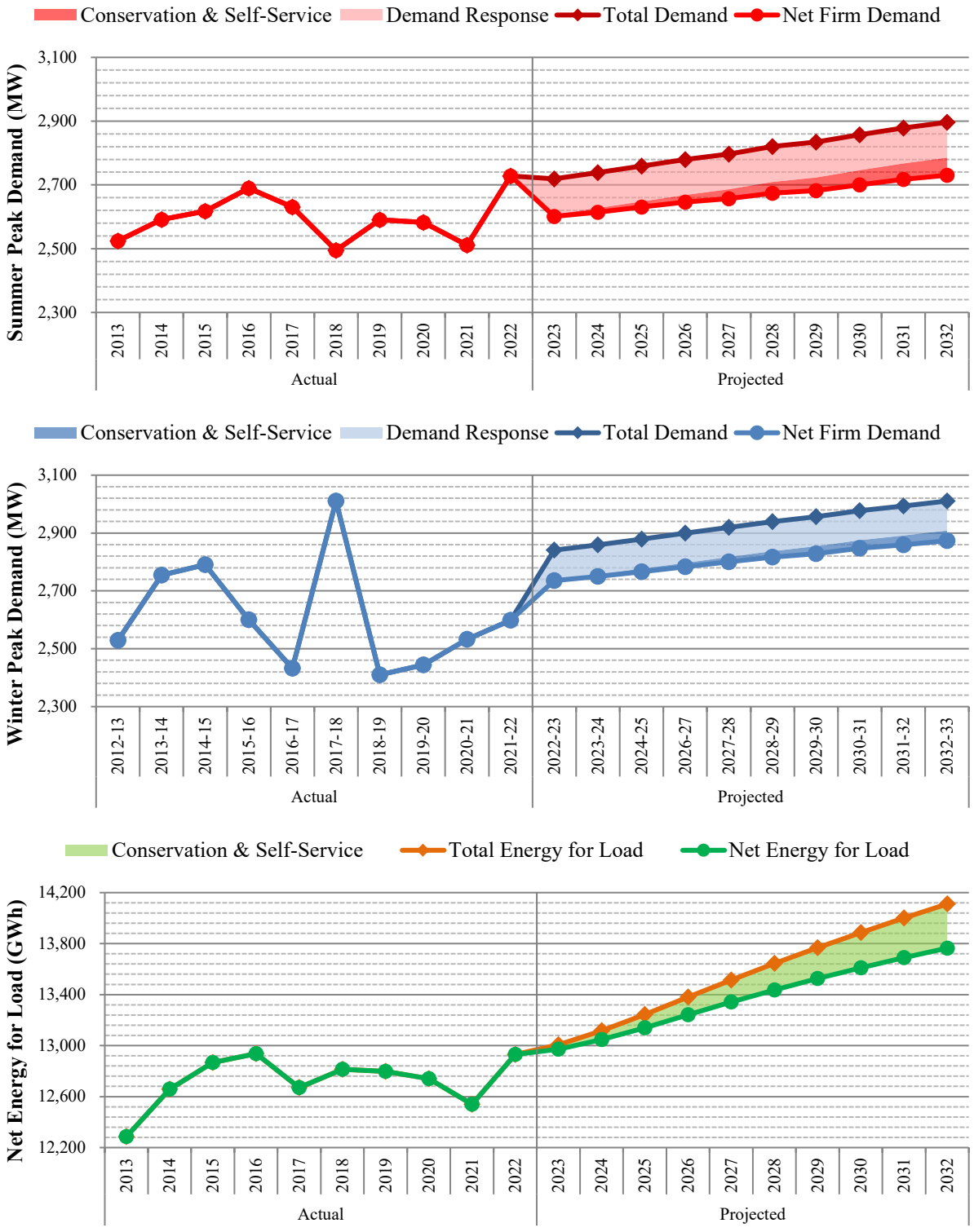
Figure 35: JEA Growth



Source: 2023Ten-Year Site Plan

The three graphs in Figure 36 show JEA's seasonal peak demand and net energy for load for the historic years of 2013 through 2022 and forecast years 2023 through 2032. While a municipal utility, JEA is subject to FEECA and currently offers energy efficiency and demand response programs to customers to reduce peak demand and annual energy consumption. These graphs include the full impact of demand-side management, and assume that all available demand response resources will be activated during the seasonal peak. In November 2019, the Commission established demand side management goals for JEA for the years 2020 through 2024. In July 2020, the Commission approved JEA's plan designed to achieve the 2020-2024 DSM goals. In preparing its 2023 Ten-Year Site Plan seasonal peak demand and energy forecasts, JEA assumes the trends in these goals will be extended through the forecast period (through 2032).

Figure 36: JEA Demand and Energy Forecasts



Source: 2022 Ten-Year Site Plan and Data Responses

Fuel Diversity

Table 23 shows JEA's actual net energy for load by fuel type as of 2022 and the projected fuel mix for 2032. While natural gas was the dominant fuel source in 2022, purchases through the Interchange was JEA's second most utilized energy source. JEA has the highest percentage of energy from interchange, primarily from a contract with the Municipal Electric Authority of Georgia for 200 MW from the Vogtle nuclear Units 3 and 4. JEA's 2023 Ten-Year Site plan projects that a JEA will reduce its use of coal while increasing its renewable fuel source.

Table 23: JEA Energy Generation by Fuel Type

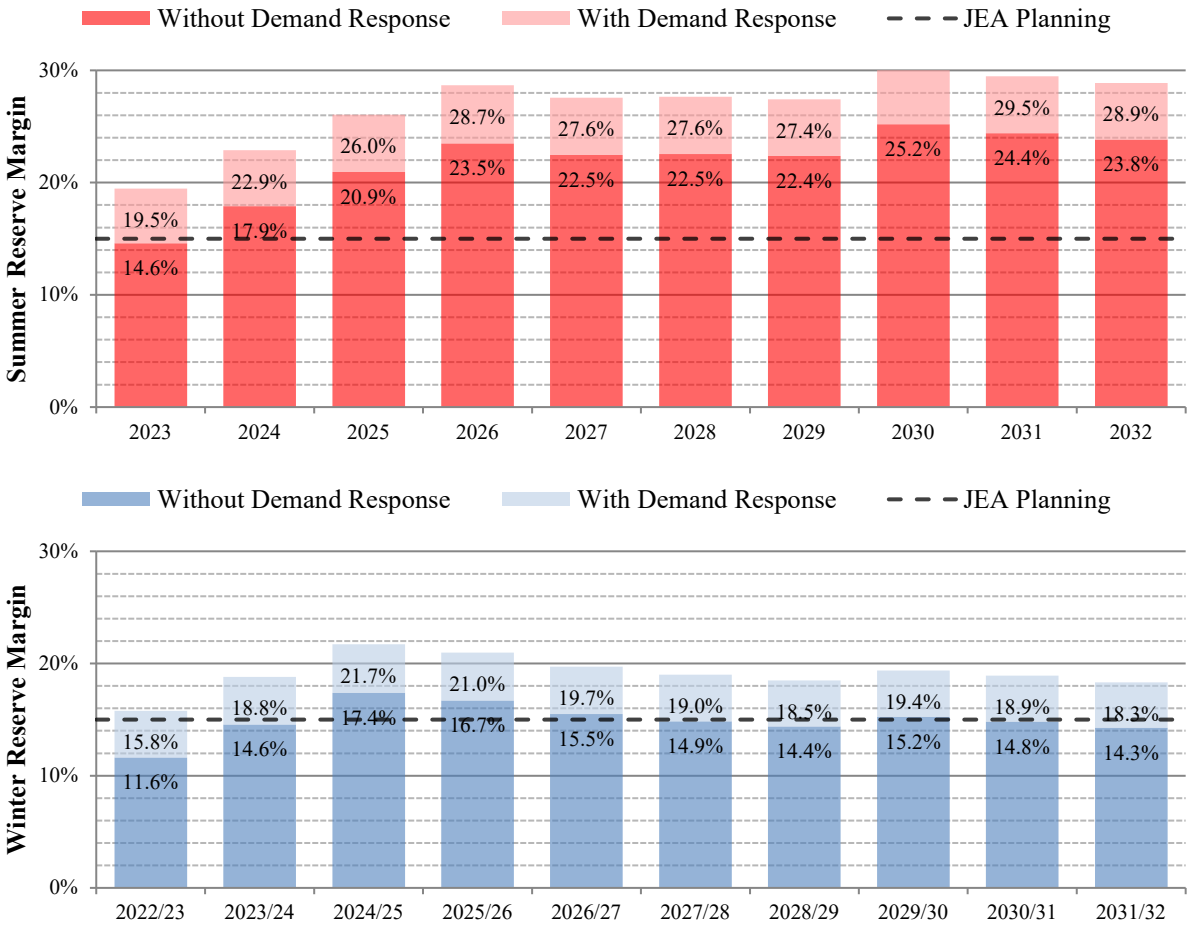
Fuel Type	Net Energy for Load			
	2022		2032	
	GWh	%	GWh	%
Natural Gas	7,562	**58.5%**	7,408	**53.8%**
Coal	1,404	**10.9%**	757	**5.5%**
Nuclear	0	**0.0%**	0	**0.0%**
Oil	43	**0.3%**	0	**0.0%**
Renewable	150	**1.2%**	3,298	**24.0%**
Interchange	3,770	**29.2%**	2,301	**16.7%**
NUG & Other	0	**0.0%**	0	**0.0%**
Total	**12,930**		**13,765**	

Source: 2023 Ten-Year Site Plan and Data Responses

Reliability Requirements

JEA utilizes a 15 percent planning reserve margin criterion for seasonal peak demand. Figure 37 displays the forecast planning reserve margin for JEA through the planning period for both seasons, with and without the use of demand response. JEA's current and planned purchased power agreements with solar generators contribute to this shift in planning because solar resources provide coincident capacity during the summer peak but not the winter peak.

Figure 37: JEA Reserve Margin Forecast



Source: 2023 Ten-Year Site Plan

Generation Resources

In 2030, JEA will retire its Northside Unit 3 and add an unnamed combined cycle unit, as detailed in Table 24. In addition, JEA is planning to enter in several solar PPAs totaling 1,274 MW. Also, JEA has entered a PPA with Municipal Electric Authority of Georgia for 206 MW of firm capacity from Vogtle Units 3 and 4 nuclear units, which will be operational around Q3 2023 and Q3 2024, respectively.

Table 24: JEA Energy Generation by Fuel Type

Year	Plant Name & Unit Number	Unit Type	Net Capacity (MW) Sum	Notes
Retiring Units				
2030	Northside Unit 3	NG-ST	524	
Total Retirements			**524**	
New Units				
2030	Unnamed CC	CC	518	
Total New Units			**518**	
Net Additions			**(6)**	

Source: 2023 Ten-Year Site Plan

Lakeland Electric (LAK)

LAK is a municipal utility and the state's third smallest electric utility required to file a Ten-Year Site Plan. The utility's service territory is within the FRCC region and consists of the City of Lakeland and surrounding areas. As a municipal utility, the Commission's regulatory authority is limited to safety, rate structure, territorial boundaries, bulk power supply, operations, and planning. Pursuant to Section 186.801(2), F.S., the Commission finds LAK's 2023 Ten-Year Site Plan suitable for planning purposes.

Load & Energy Forecasts

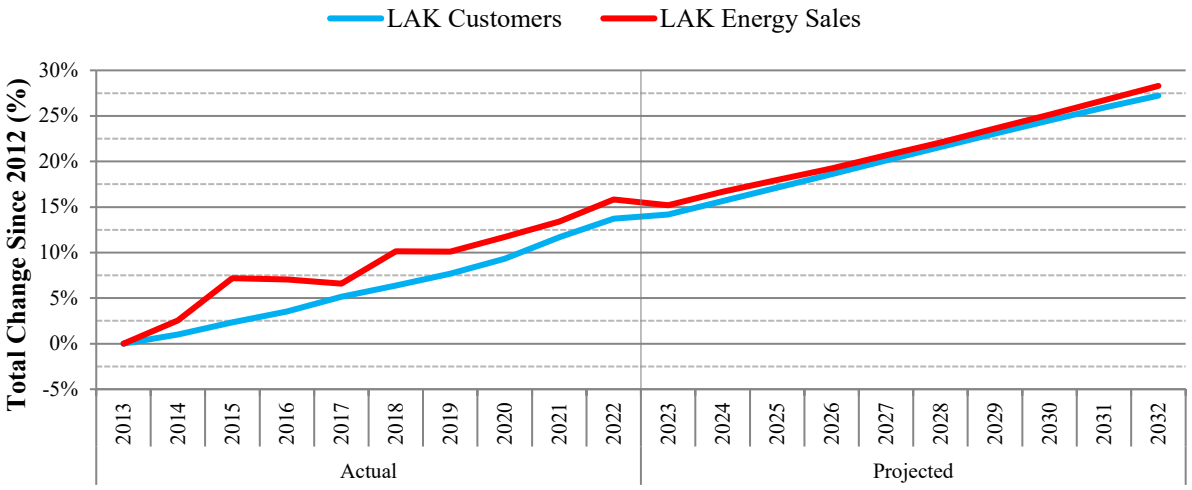
In 2021, LAK had approximately 139,635 customers and annual retail energy sales of 3,279 GWh or approximately 1.4 percent of Florida's annual retail energy sales. Over the last 10 years, LAK's customer base has increased by 13.77 percent, while retail sales have grown by 15.82 percent.

In recent years, LAK's service area in Polk County has seen a boom in e-commerce warehouse development. Particularly, Amazon moved its air-hub from Tampa to the utility's service area in 2020 and it is continuing to expand. As a result, LAK experienced 2.2 percent total customer growth in 2022.

Despite customer growth, LAK noted that its residential average energy consumption per customer has been declining and this trend is expected to continue. The main factors that contribute to the decline include increased appliance energy efficiency, improved building shell insulation, and changes in residential building type mix. The utility's commercial average energy consumption per customer has also been declining, and this trend is expected to continue. Main contributors to the historical decline are lighting upgrades, appliance energy efficiency improvements, and the customer adoption of energy management systems. LAK is forecasting a flattening of the industrial average energy consumption mainly because the industrial customers that are projected to be added are expected to be mostly classified in the "small demand" industrial category.

LAK noted that, although the average energy consumption per customer is declining or flat for all three main rate classes, positive customer growth rates are expected to compensate for average use declines. The utility assumed the impact of conservation programs are already included in the energy sales history and made no additional assumptions regarding their impact. For the next 10 years, the utility's forecast results indicated that its number of customers are projected to grow at an average annual rate of 1.21 percent, and its retail energy sales are projected to grow at an average annual rate of 1.20 percent. Figure 38 illustrates historic and prospective forecasted growth rates in customers and retail energy sales for the resource plan LAK filed in its 2023 TYSP.

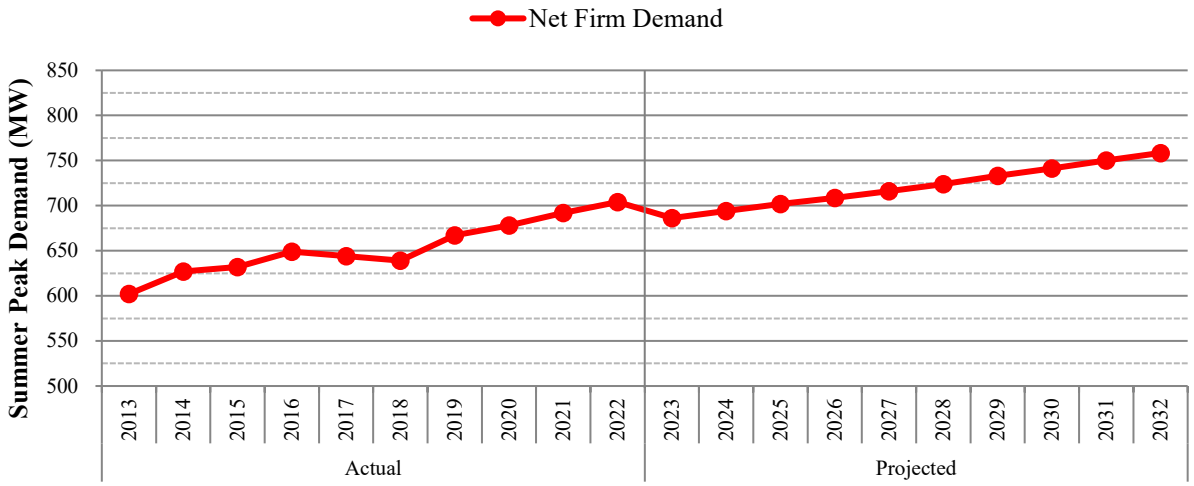
Figure 38: LAK Growth

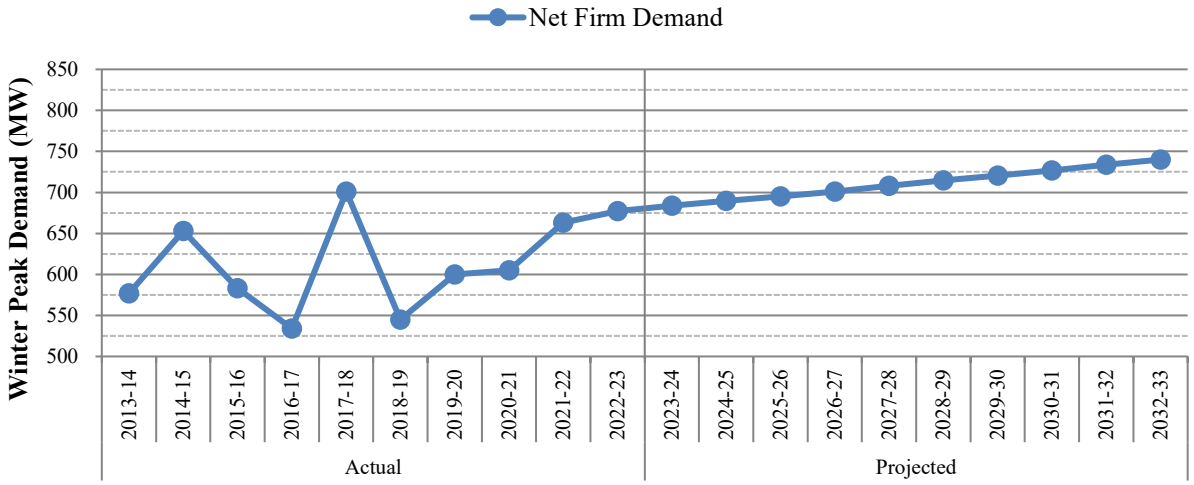


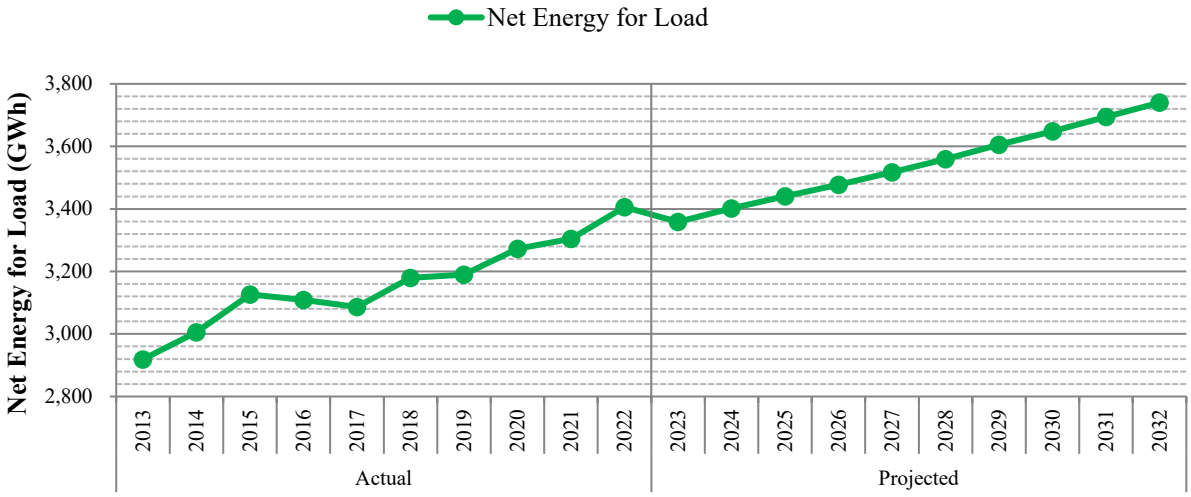
Source: 2023 Ten-Year Site Plan

The three graphs in Figure 39 show LAK's seasonal peak demand and net energy for load for the historic years of 2013 through 2022 and forecast years 2023 through 2032. LAK reported zero conservation and demand response, so Total Demand and Net Energy for Load are the same.

Figure 39: LAK Demand and Energy Forecasts







Source: 2023 Ten-Year Site Plan and Data Responses

Fuel Diversity

Table 25 shows LAK's actual net energy for load by fuel type as of 2022 and the projected fuel mix for 2032. LAK uses natural gas as its primary fuel type for energy, with Interchange purchases representing about 27 percent net energy for load. While natural gas generation is anticipated to increase over the next 10 years, interchange purchases are projected to decrease to about 9 percent in 2032. Coal has been completely eliminated as a fuel type and renewables are projected to increase to about 5 percent over the next 10-years

Table 25: LAK Energy Generation by Fuel Type

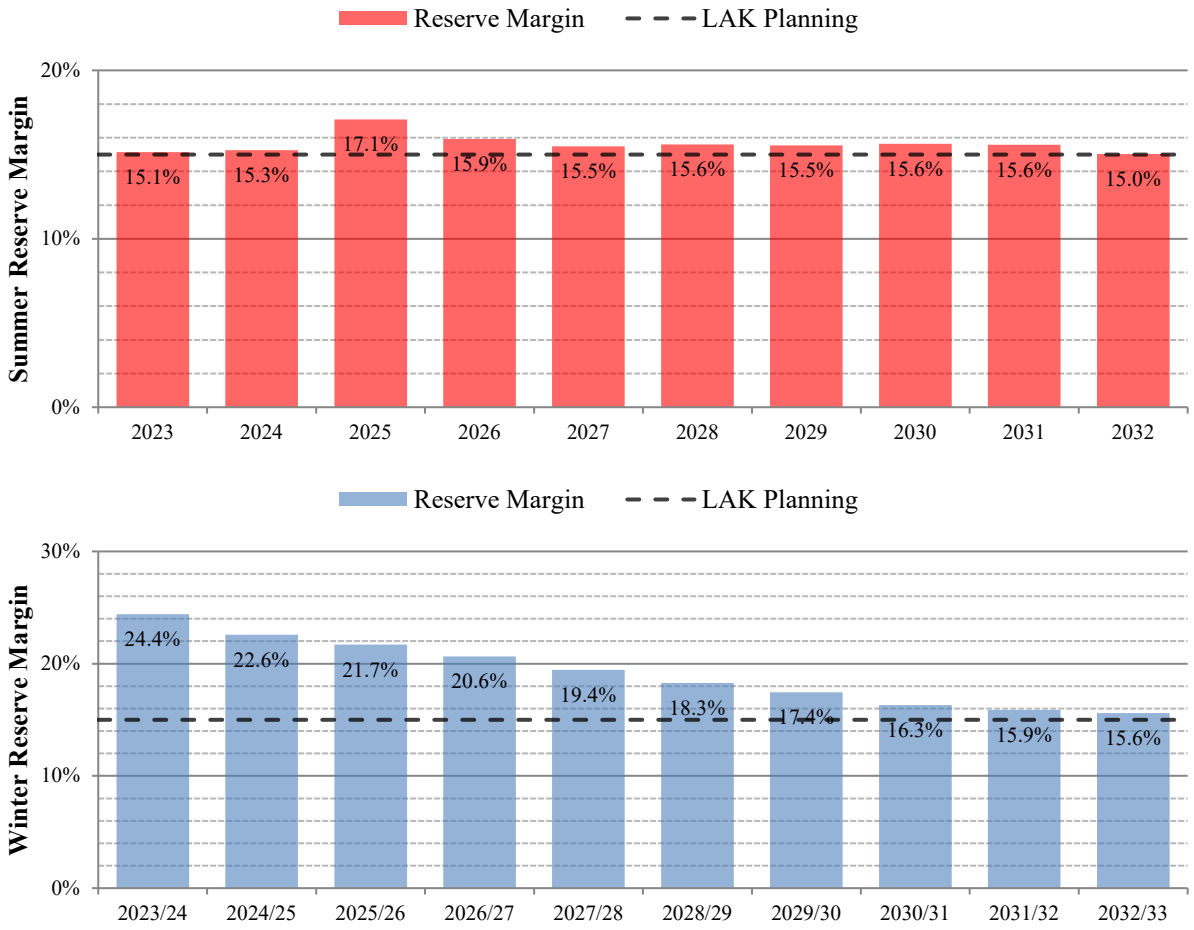
Fuel Type	Net Energy for Load			
	2022		2032	
	GWh	%	GWh	%
Natural Gas	2,477	**72.7%**	3,234	**86.5%**
Coal	0	**0.0%**	0	**0.0%**
Nuclear	0	**0.0%**	0	**0.0%**
Oil	0	**0.0%**	9	**0.2%**
Renewable	17	**0.5%**	180	**4.8%**
Interchange	0	**0.0%**	0	**0.0%**
NUG & Other	912	**26.8%**	317	**8.5%**
Total	**3,406**		**3,740**	

Source: 2023 Ten-Year Site Plan and Data Responses

Reliability Requirements

LAK utilizes a 15 percent planning reserve margin criterion for seasonal peak demand. Figure 40 displays the forecast planning reserve margin for LAK through the planning period for both seasons. As a smaller utility, the reserve margin is an imperfect measure of reliability due to the relatively large impact a single unit may have on reserve margin. For example, LAK's largest single unit, McIntosh 5, a natural gas-fired combined turbine unit, represented about 55 percent of summer net firm peak demand as of December 2022.

Figure 40: LAK Reserve Margin Forecast



Source: 2023 Ten-Year Site Plan

Generation Resources

LAK is adding a set of natural gas internal combustion engines during the planning period, as detailed in Table 26. LAK is seeking to add another 75 MW of Solar/PV on its property (McIntosh Plant Site) through a PPA by year 2025.

Table 26: LAK Generation Resource Changes

Year	Plant Name & Unit Number	Unit Type	Net Capacity (MW)	Solar Firm Capacity (MW)	Notes
			Sum	Sum	
New Units					
2024	CD McIntosh Power Plant 1-6	NG-IC	120	N/A	6 units at 20 MW each
Total New Units			**120**	**N/A**	

Source: 2023 Ten-Year Site Plan and Data Responses

Orlando Utilities Commission (OUC)

OUC is a municipal utility and Florida's sixth largest electric utility and second largest municipal utility. The utility's service territory is within the FRCC region and primarily consists of the Orlando metropolitan area. As a municipal utility, the Commission's regulatory authority is limited to safety, rate structure, territorial boundaries, bulk power supply, operations, and planning. Pursuant to Section 186.801(2), F.S., the Commission finds OUC's 2023 Ten-Year Site Plan suitable for planning purposes.

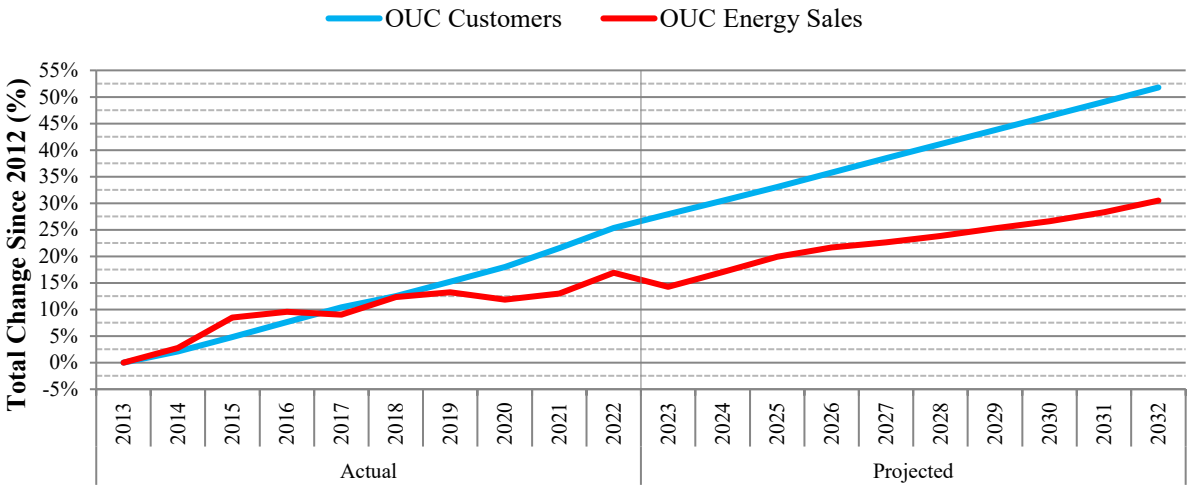
Load & Energy Forecasts

In 2022, OUC had approximately 269,172 customers and annual retail energy sales of 7,042 GWh or approximately 3.0 percent of Florida's annual retail energy sales. Over the last 10 years, OUC's customer base has increased by 25.34 percent, while its retail energy sales have increased by 16.89 percent, approximately.

OUC experienced a continued decline in average use per residential customer in 2022. The utility noted that such decline has tapered dramatically since the beginning of the 10-year historic period due to the increased saturation of more efficient HVAC equipment and other electrical devices, as well as customer conservation efforts. OUC's forecasted residential average per-customer usage is expected to remain relatively flat as increased electric vehicle charging mitigates further saturation of more efficient electrical equipment and conservation efforts. The utility's average use per commercial customer also experienced a slight, long-term decline, which was greatly exacerbated by the impacts of the pandemic in 2020, but is expected to return to pre-pandemic levels.

Over the forecast horizon, OUC is projecting growth in the number of customers at an average annual rate of 1.92 percent, and retail sales at an average annual rate of 1.49 percent. OUC noted that the main contributors to the projected customer growth include the increased population and household numbers in its service area. The main drivers for the projected growth of the energy sales include the recovery from COVID-19 pandemic effects, the projected growth in electric vehicle charging load, and major commercial expansions by Universal Studios and the Orlando International Airport that are largely outside of normal growth. Figure 41 illustrates historic and prospective forecasted growth rates in customers and retail energy sales for the resource plan OUC filed in its 2023 TYSP.

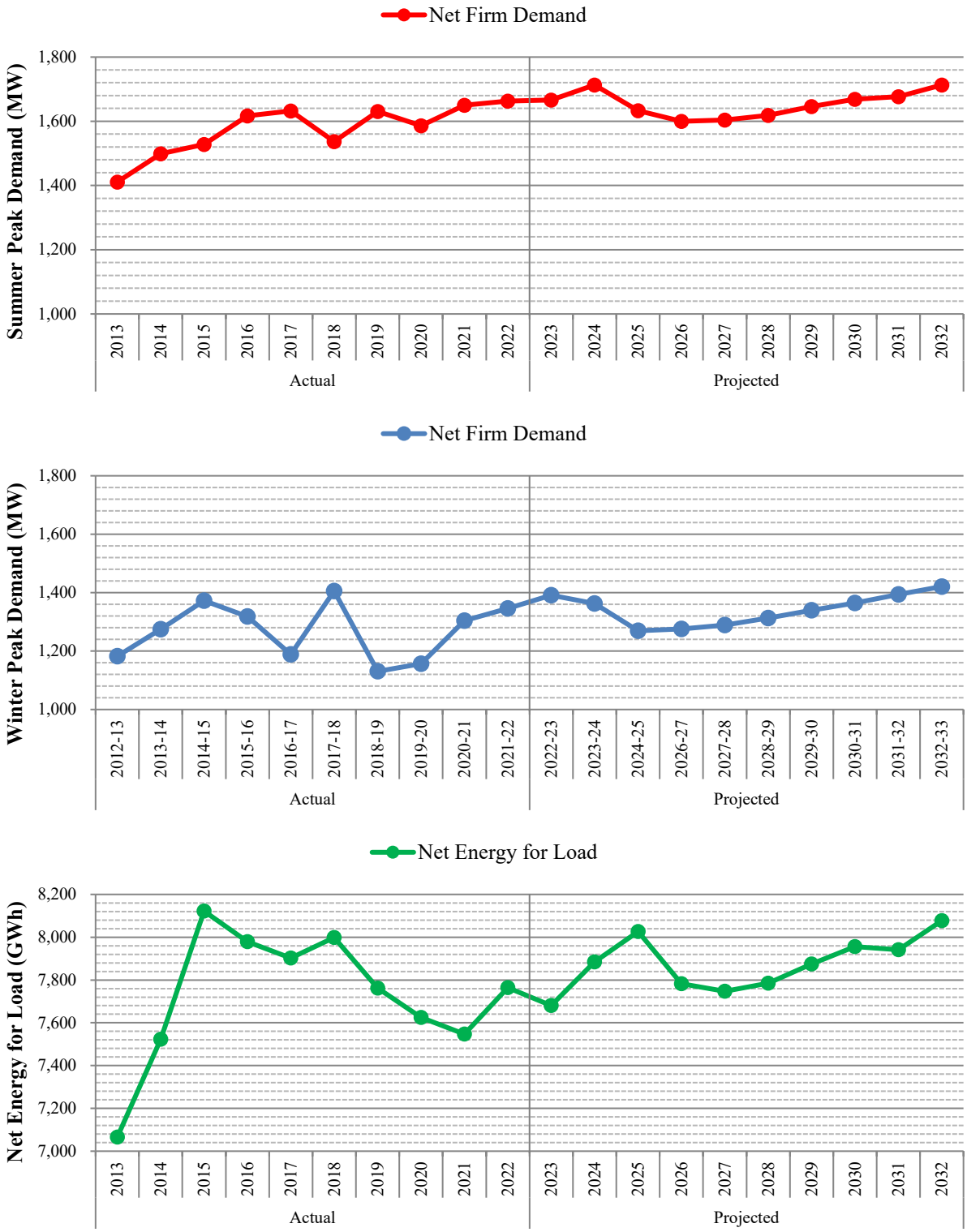
Figure 41: OUC Growth



Source: 2023 Ten-Year Site Plan

The three graphs in Figure 42 show OUC's seasonal peak demand and net energy for load for the historic years of 2013 through 2022 and forecast years 2023 through 2032. These graphs include the impact of the utility's demand-side management programs. While a municipal utility, OUC is subject to FEECA and currently offers energy efficiency programs to customers to reduce peak demand and annual energy consumption. In November 2019, the Commission established demand-side management goals for OUC for the years 2020 through 2024. In June 2020, the Commission approved OUC's plan designed to achieve the 2020-2024 DSM goals. In preparing its 2023 Ten-Year Site Plan seasonal peak demand and energy forecasts, OUC assumes the trends in these goals will be extended through the forecast period (through 2032).

Figure 42: OUC Demand and Energy Forecasts



Source: 2022 Ten-Year Site Plan and Data Responses

Fuel Diversity

Table 27 shows OUC's actual net energy for load by fuel type as of 2022 and the projected fuel mix for 2032. In 2022, approximately 64 percent of OUC's net energy for load was met with natural gas, while coal, the second most-used fuel, met approximately 26 percent of the demand. By 2032, OUC projects an increase in renewable energy generation from almost 5 percent to around 40 percent, the second highest in the state. The remainder of energy primarily comes from natural gas and nuclear, with coal generation completely eliminated.

Table 27: OUC Energy Generation by Fuel Type

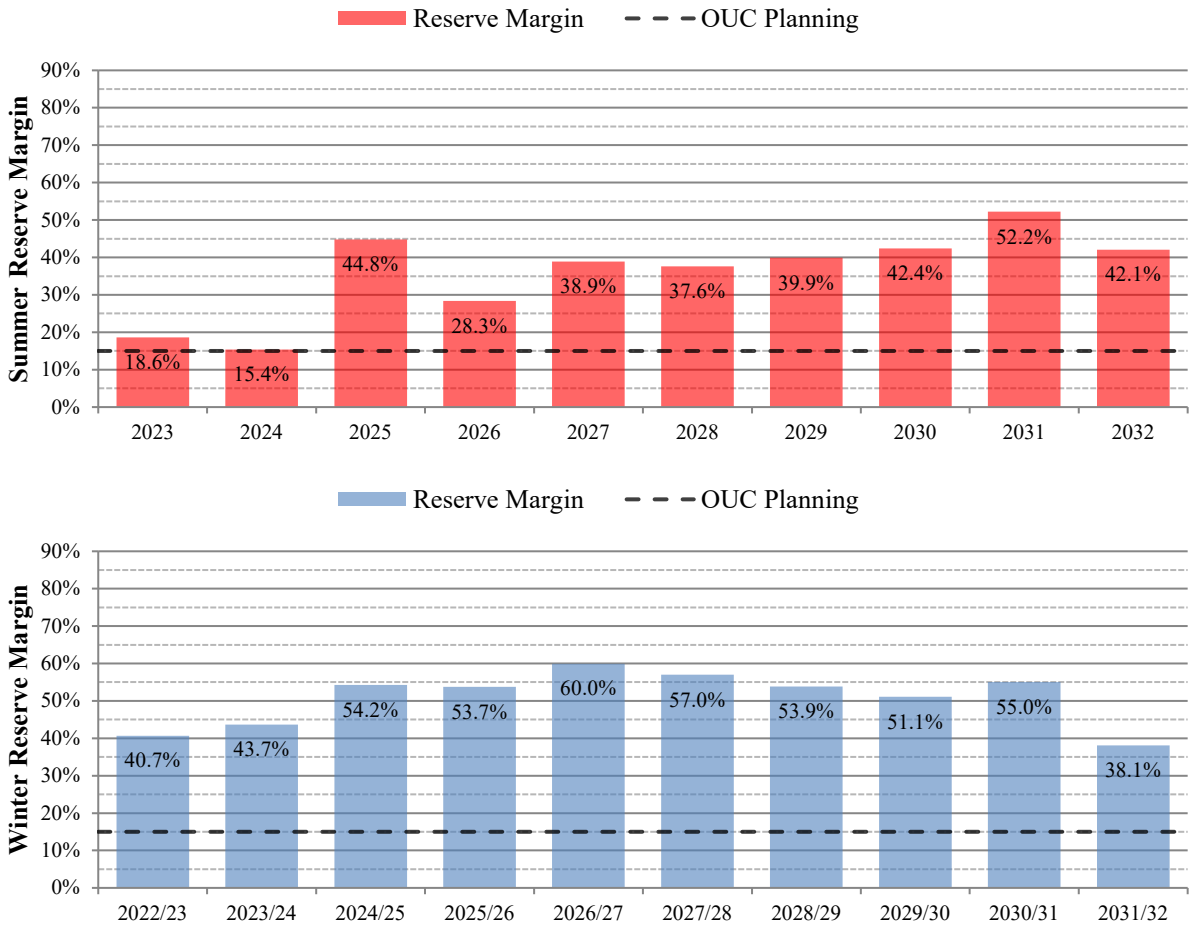
Fuel Type	Net Energy for Load			
	2022		2032	
	GWh	%	GWh	%
Natural Gas	4,953	**63.8%**	4,289	**53.1%**
Coal	1,978	**25.5%**	0	**0.0%**
Nuclear	487	**6.3%**	590	**7.3%**
Oil	0	**0.0%**	0	**0.0%**
Renewable	346	**4.5%**	3,198	**39.6%**
Interchange	0	**0.0%**	0	**0.0%**
NUG & Other	0	**0.0%**	0	**0.0%**
Total	**7,764**		**8,077**	

Source: 2023 Ten-Year Site Plan and Data Responses

Reliability Requirements

OUC utilizes a 15 percent planning reserve margin criterion for seasonal peak demand. Figure 43 displays the forecast planning reserve margin for OUC through the planning period for both seasons, including the impact of demand-side management programs. As shown in the figure, OUC's generation needs are controlled by its summer peak demand.

Figure 43: OUC Reserve Margin Forecast



Source: 2022 Ten-Year Site Plan

Generation Resources

As detailed in Table 28, OUC plans on retiring two units at Stanton Energy Center. OUC plans on retiring Stanton Energy Center Unit 1, OUC's oldest coal-fired unit, no later than 2025 and Stanton Energy Center 2, a natural gas-fired unit by the end of 2027. OUC is purchasing increase ownership of an existing natural gas unit and doing transmission upgrades to gain full benefits from its capacity. OUC anticipates entering into PPAs for a total of 894 MW of solar net capacity and 350 MW of battery storage. OUC has already signed two of these PPAs, with NextEra for a total of 149 MW of solar capacity with a planned in-service year of 2024.

Table 28: OUC Generation Resource Changes

Year	Plant Name & Unit Number	Unit Type	Net Capacity (MW) Sum	Notes
Retiring Units				
2025	Stanton Energy Center 1	BIT-ST	311	
2027	Stanton Energy Center 2	NG-ST	352	
Total Retirements			**663**	
Net Additions			**(663)**	

Source: 2022 Ten-Year Site Plan

Seminole Electric Cooperative (SEC)

SEC is a generation and transmission rural electric cooperative that serves its member cooperatives, and is collectively Florida's fourth largest utility. SEC's generation and member cooperatives are within the FRCC region, with member cooperatives located in central and north Florida. As a rural electric cooperative, the Commission's regulatory authority is limited to safety, rate structure, territorial boundaries, bulk power supply, operations, and planning. Pursuant to Section 186.801(2), F.S., the Commission finds SEC's 2023 Ten-Year Site Plan suitable for planning purposes.

Load & Energy Forecasts

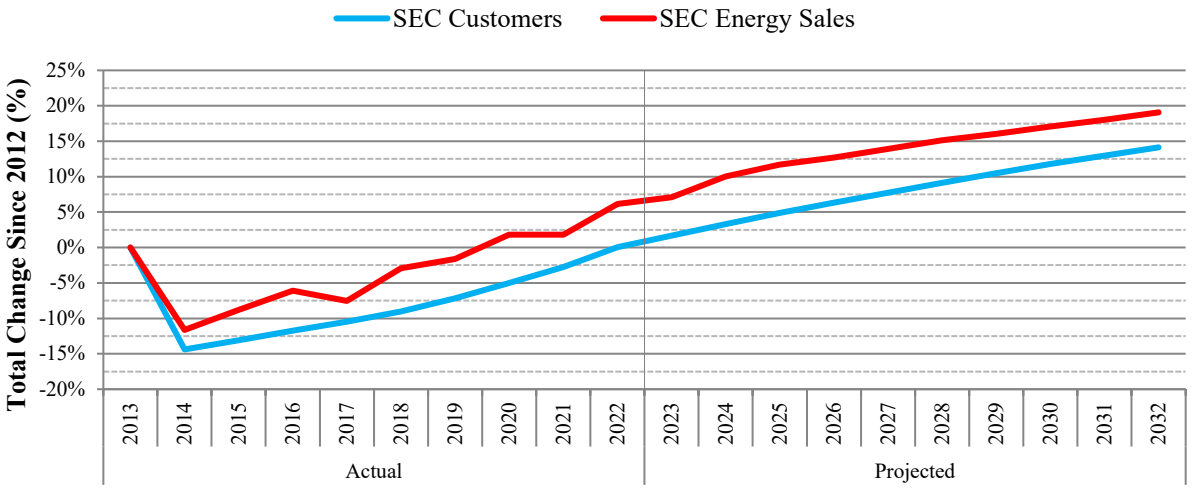
In 2022, SEC member cooperatives had approximately 865,281 customers and annual retail energy sales of 15,566 GWh or approximately 6.7 percent of Florida's annual retail energy sales.

SEC's current TYSP indicated that over the last 10 years, 2013-2022, the utility members' aggregate customer base has decreased by 0.03 percent, compared to a negative 1.61 percent decrease shown in SEC's 2022 TYSP for the 2012-2021 period. The almost flat 10-year customer growth rate is attributed to a substantial growth decline in 2014 when one member cooperative, Lee County Electric Cooperative, elected to end its membership with SEC. In the current TYSP, the utility reported that its retail sales have increased by 6.14 percent over the historical period 2013-2022, compared to 2.27 percent reported in its 2022 TYSP for 2012-2021.

SEC states that historically, consumer growth in the Seminole-Member system has grown at a faster rate than the State of Florida as a whole and this trend is expected to continue. The utility noted that the leading indicators for load growth are Florida's expanding economy and net migration prospects into the state, especially from "baby boomer" retirees, and migration impacts of the pandemic. Customer growth and business activity are expected to drive system growth in a positive direction, while downward pressure is also anticipated. The downward pressure is expected to come from flattening and declining residential end-use which is due to growth in efficient technologies, renewable generation, and alternative resources.

Over the current 10-year forecast horizon, SEC is projecting an average annual growth rate in its customer base of 1.29 percent, and an average annual growth rate in its retail energy sales of 1.19 percent. Figure 44 illustrates historic and prospective forecasted growth rates in customers and retail energy sales for the resource plan SEC filed in its 2023 TYSP.

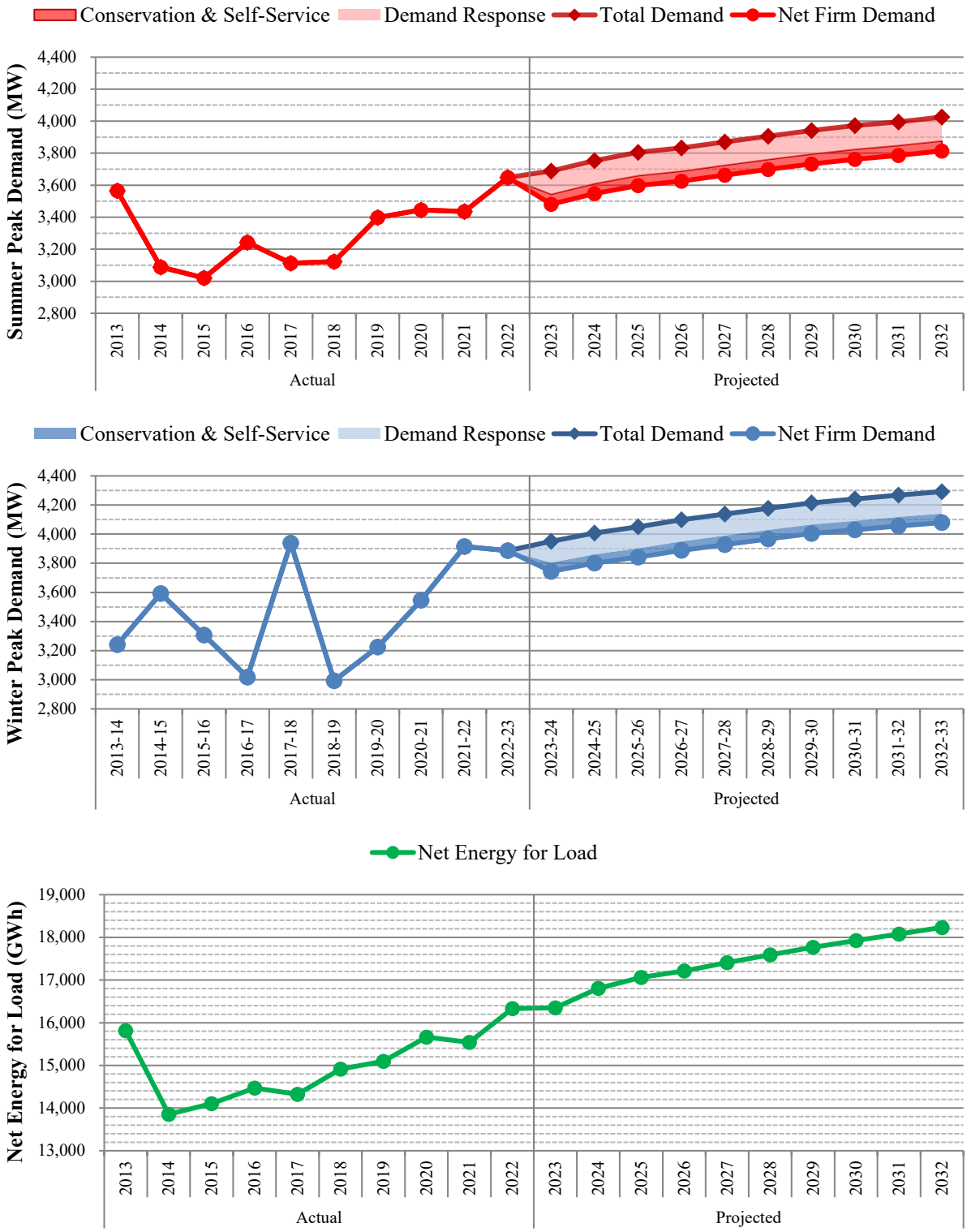
Figure 44: SEC Growth



Source: 2023 Ten-Year Site Plan

The three graphs in Figure 45 show SEC's seasonal peak demand and net energy for load for the historic years 2013 through 2022 and forecast years 2023 through 2032. As SEC is a generation and transmission company, it does not directly engage in energy efficiency or demand response programs. Member cooperatives do offer demand-side management programs, the impacts of which are included in Figure 45.

Figure 45: SEC Demand and Energy Forecasts



Source: 2023 Ten-Year Site Plan and Data Responses

Fuel Diversity

Table 29 shows SEC's actual net energy for load by fuel type as of 2022 and the projected fuel mix for 2032. In 2022, SEC used a mix of natural gas, coal and purchases to meet demand requirements. However, during the planning period, SEC will be switching to mostly self-generation by increasing natural gas usage while reducing coal and purchases. By 2032, natural gas will represent approximately 79 percent of SEC's fuel usage.

Table 29: SEC Energy Generation by Fuel Type

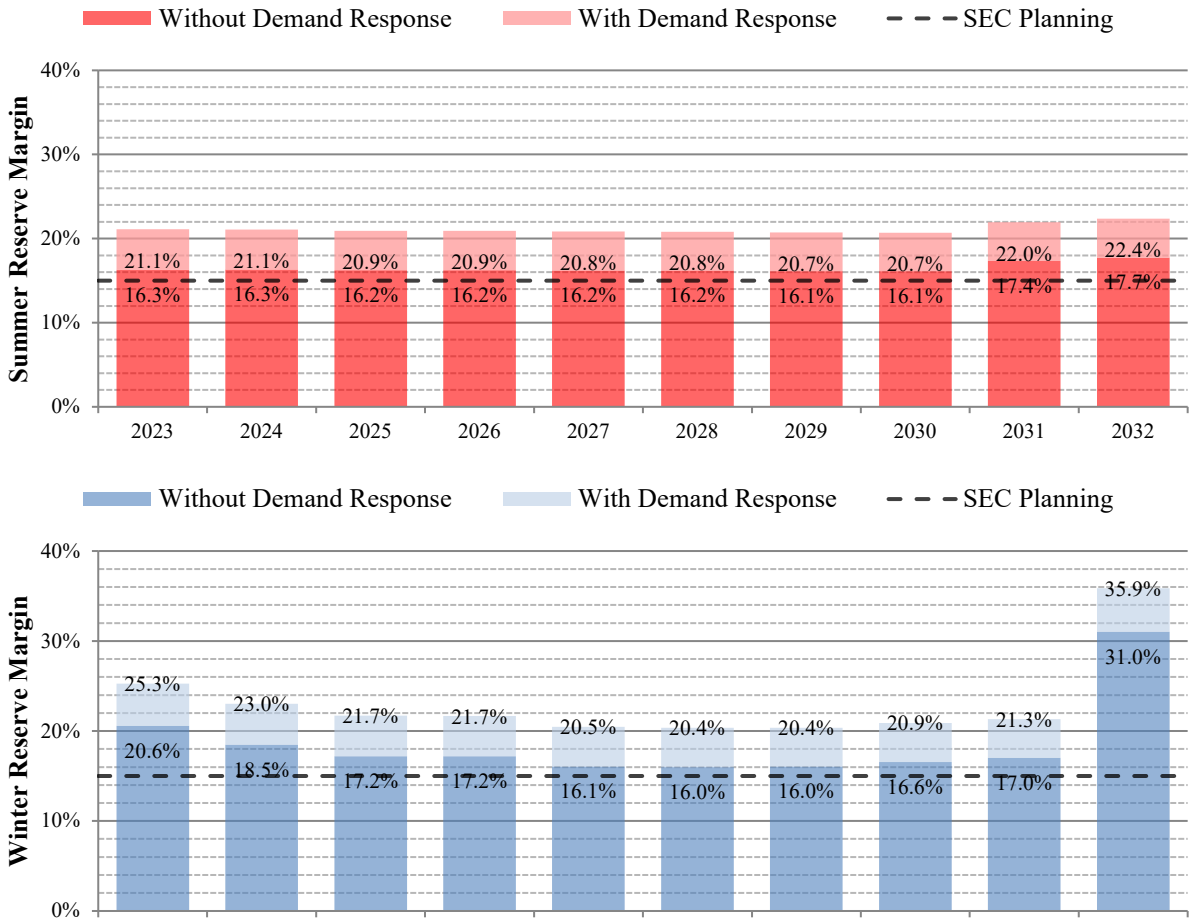
Fuel Type	Net Energy for Load			
	2022		2032	
		%	GWh	%
Natural Gas	3,884	**23.8%**	14,466	**79.3%**
Coal	6,046	**37.0%**	2,456	**13.5%**
Nuclear	0	**0.0%**	0	**0.0%**
Oil	24	**0.1%**	6	**0.0%**
Renewable	463	**2.8%**	740	**4.1%**
Interchange	556	**3.4%**	0	**0.0%**
NUG & Other	5,357	**32.8%**	565	**3.1%**
Total	**16,330**		**18,233**	

Source: 2023 Ten-Year Site Plan and Data Responses

Reliability Requirements

SEC utilizes a 15 percent planning reserve margin criterion for seasonal peak demand. Figure 46 displays the forecast planning reserve margin for SEC through the planning period for both seasons, with and without the use of demand response. Member cooperatives allow SEC to coordinate demand response resources to maintain reliability. As shown in the figure, SEC's generation needs are determined by winter peak demand more often than summer peak demand during the planning period.

Figure 46: SEC Reserve Margin Forecast



Source: 2022 Ten-Year Site Plan

Generation Resources

SEC plans to retire one unit and add seven units during the planning period, as described in Table 30. SEC plans on retiring its remaining coal-fired SGS unit at the end of 2023. In addition, SEC plans to add six natural gas-fired generating resources, four combined cycles and two combustion turbines, during the planning period. SEC considers these as proxy units to meet its reliability criteria due to ending PPA contracts. Due to timing considerations for permitting and construction, it is unlikely a new natural gas-fired combined cycle could be constructed by the 2025 date used for the first proxy unit, but it can serve as a baseline for comparisons for a potential future PPA. Overall, adequate capacity is projected within the state during 2025 for SEC to find a potential capacity seller. SEC anticipates an additional 300 MW of solar generation through PPAs to become commercially operational by the end of 2024.

Table 30: SEC Generation Resource Changes

Year	Plant Name & Unit Number	Unit Type	Net Capacity (MW) Sum	Notes
Retiring Units				
2023	Seminole Generating Station	BIT-ST	573	
Total Retirements			**573**	
New Units				
2023	Seminole Combined Cycle Facility	NG-CC	1099	Docket No. 20170266-EI
2025	Unnamed CC2 Unit 1	NG-CC	571	
2027	Unnamed CT2 Unit 1	NG-CT	317	
2030	Unnamed CT2 Unit 2	NG-CT	317	
2032	Unnamed CC2 Unit 2	NG-CC	571	
Total New Units			**2,875**	
Net Additions			**2,302**	

Source: 2023 Ten-Year Site Plan

City of Tallahassee Utilities (TAL)

TAL is a municipal utility and the second smallest electric utility that files a Ten-Year Site Plan. The utility's service territory is within the FRCC region and primarily consists of the City of Tallahassee and surrounding areas. As a municipal utility, the Commission's regulatory authority is limited to safety, rate structure, territorial boundaries, bulk power supply, operations, and planning. Pursuant to Section 186.801(2), F.S., the Commission finds TAL's 2023 Ten-Year Site Plan suitable for planning purposes.

Load & Energy Forecasts

In 2022, TAL had approximately 127,157 customers and annual retail energy sales of 2,649 GWh or approximately 1.1 percent of Florida's annual retail energy sales. Over the last 10 years, TAL's customer base has increased by 9.90 percent, while retail sales have increased by 3.75 percent.

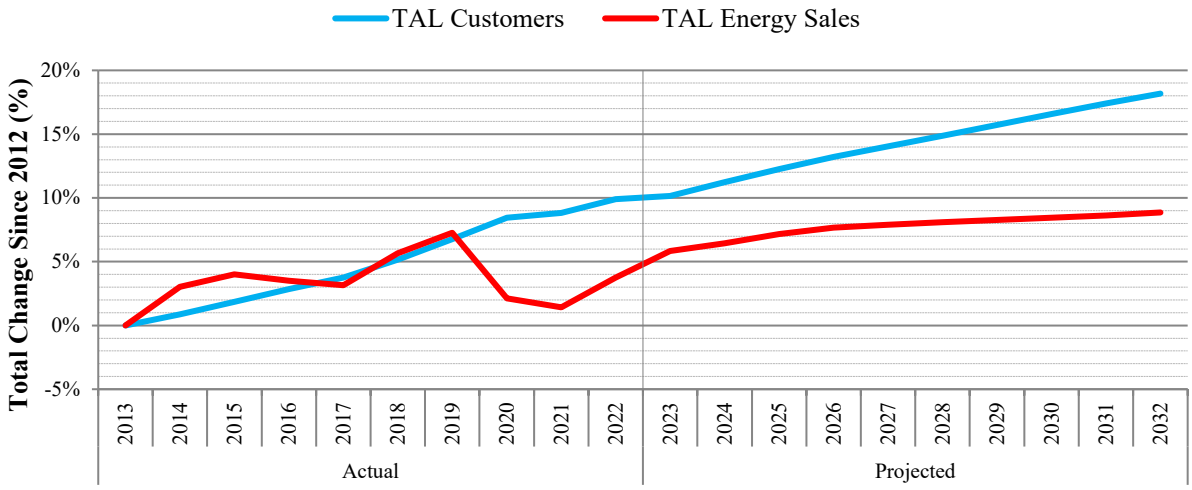
TAL's customer base consists of residential and commercial classes; and, the total energy consumption associated with the commercial class is higher than that associated with the residential class. Over the last decade, the utility's customer count growth has been robust. This growth correlates well to the rate of change in Leon County's population, household formation, and economic activity; such as, the increased rates of household counts, total employment and average real income per household. As a result of the expected continuation of favorable economic conditions in Leon County, TAL expects a continued strong growth in its customer counts.

The utility's residential electricity use per customer has been relatively stable over the last decade, while the commercial class has continued to decline. The flattening of residential average use after several years of decline is believed to be driven primarily from end use efficiency standards, particularly for HVAC systems. The utility noted that improved efficiency standards for HVAC systems have been filtering into the present stock of equipment through replacements and new builds and are believed to be nearly fully diffused into the current residential stock. The utility's commercial electricity use per customer has continued to decline. Average consumption for the commercial class especially has been impacted since early 2020 by the coronavirus pandemic, from which certain large loads are still recovering.

TAL's load forecast reflects the continued impacts of energy efficiency standards and Florida's Energy Efficiency Codes, as well as the utility's DSM and conservation/energy efficiency programs. These impacts are offset by upward pressure on total residential consumption from increasing incomes, increased adoptions of electric vehicle, and other factors, resulting in essentially flat residential sales growth over the forecast horizon.

Over the current forecast horizon, TAL is projecting an average annual growth of 0.78 percent in its total customer counts, and a growth rate of 0.31 percent in its annual retail energy sales. Figure 47 illustrates historic and prospective forecasted growth rates in customers and retail energy sales for the resource plan TECO filed in its 2023 TYSP.

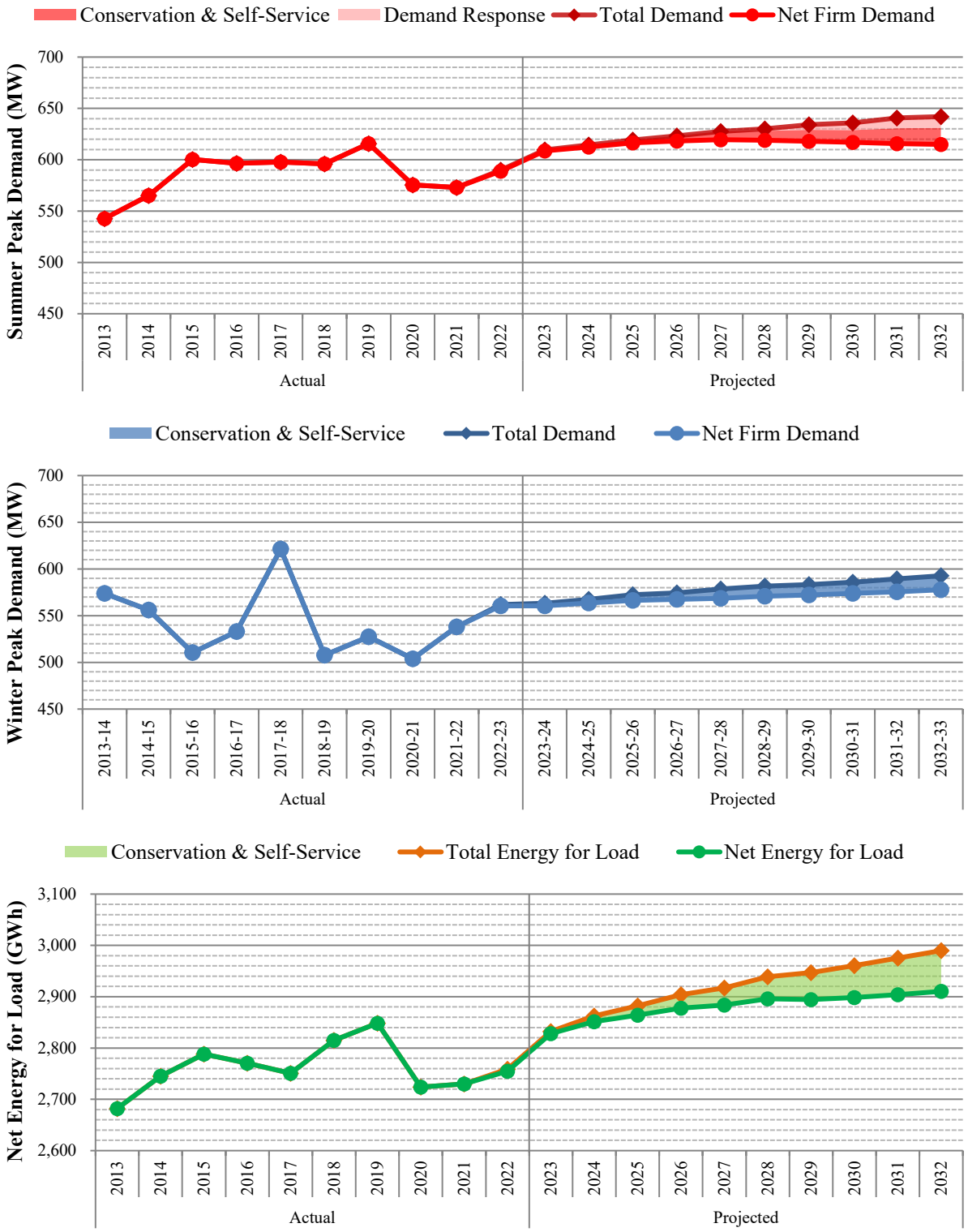
Figure 47: TAL Growth



Source: 2023 Ten-Year Site Plan

The three graphs in Figure 48 shows TAL's seasonal peak demand and net energy for load for the historic years of 2013 through 2022 and forecast years 2023 through 2032. These graphs include the impact of demand-side management, and for future years assume that all available demand response resources will be activated during the seasonal peak. TAL offers energy efficiency and demand response programs to customers to reduce peak demand and annual energy consumption. Currently, TAL only offers demand response programs targeting appliances that contribute to summer peak, and therefore have no effect upon winter peak.

Figure 48: TAL Demand and Energy Forecasts



Source: 2023 Ten-Year Site Plan and Data Responses

Fuel Diversity

Table 31 shows TAL's actual net energy for load by fuel type as of 2022 and the projected fuel mix for 2032. TAL relies almost exclusively on natural gas for its generation, excluding some purchases from other utilities and qualifying facilities. Natural gas is anticipated to remain the primary fuel source on the system. TAL projects it will continue to be a net exporter of energy, primarily of off-peak power during shoulder months due to its generation's operating characteristics.

Table 31: TAL Energy Generation by Fuel Type

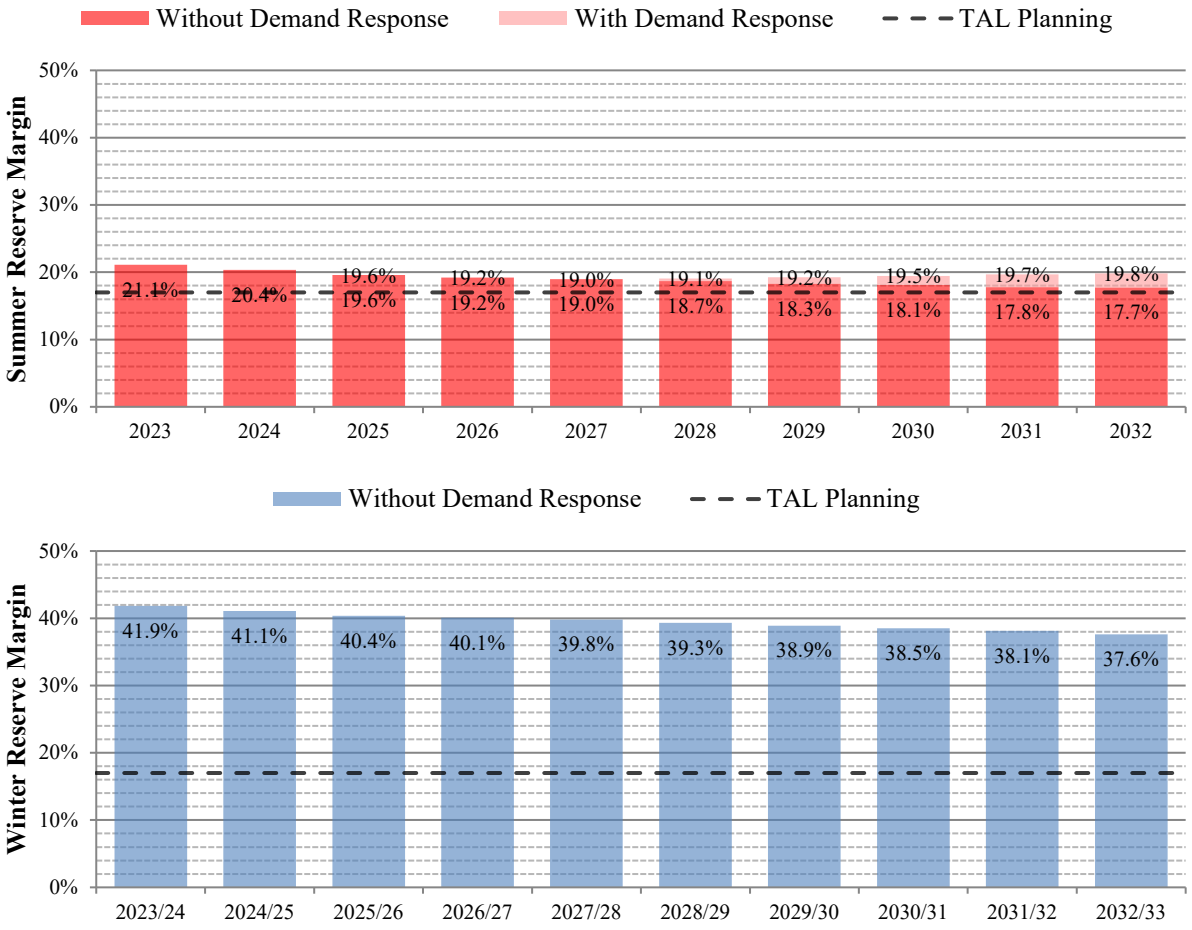
Fuel Type	Net Energy for Load			
	2022		2032	
	GWh	%	GWh	%
Natural Gas	2764	**105.9%**	3,033	**100.5%**
Coal	0	**0.0%**	0	**0.0%**
Nuclear	0	**0.0%**	0	**0.0%**
Oil	2	**0.1%**	0	**0.0%**
Renewable	114	**4.4%**	115	**3.8%**
Interchange	0	**0.0%**	0	**0.0%**
NUG & Other	(269)	**-10.3%**	-130	**-4.3%**
Total	**2,611**		**3,018**	

Source: 2023 Ten-Year Site Plan and Data Responses

Reliability Requirements

TAL utilizes a 17 percent planning reserve margin criterion for seasonal peak demand. Figure 49 displays the forecast planning reserve margin for TAL through the planning period for both seasons, with and without the use of demand response. As discussed above, TAL only offers demand response programs applicable to the summer peak. As shown in the figure, TAL's generation needs are controlled by its summer peak throughout the planning period.

Figure 49: TAL Reserve Margin Forecast



Source: 2022 Ten-Year Site Plan

Generation Resources

TAL plans no unit additions or retirements during the planning period.

Attachment 2

State of Florida

Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

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

DATE: October 30, 2023

TO: Braulio Baez, Executive Director

FROM: Division of Economics (Lang) BTL EJD

RE: Draft Report on Activities Pursuant to the Florida Energy Efficiency and Conservation Act (FEECA). Due March 1, 2024 to the Governor and Legislature.

Critical Information: Please place on the November 9, 2023 Internal Affairs agenda. Commission approval is sought.

Section 366.82(10), Florida Statutes (F.S.), requires the Florida Public Service Commission (Commission) to submit an annual report to the Governor and Legislature on the utilities' progress towards meeting goals established by the Commission pursuant to the Florida Energy Efficiency and Conservation Act. The report is due March 1, 2024.

Furthermore, Section 377.703(2)(f), F.S., requires the Commission to file information on electricity and natural gas energy conservation programs with the Department of Agriculture and Consumer Services.

Staff is seeking Commission approval of the attached draft report. Upon approval, the report will be submitted to the Governor, President of the Senate, Speaker of the House, the Commissioner of Agriculture and Consumer Services, and to the Florida Documents Librarian.

cc: Keith Hetrick, General Counsel
Mark Futrell, Deputy Executive Director, Technical
Apryl Lynn, Deputy Executive Director, Administrative

FEECA

ANNUAL REPORT ON

Activities Pursuant TO THE Florida Energy AND Efficiency Conservation Act

As required by Sections 366.82(10), and 377.703(2)(f), and 355.975, Florida Statutes

DECEMBER 2023

Florida Public Service Commission

Annual Report on Activities Pursuant to

The Florida Energy Efficiency and Conservation Act

As Required by Sections 366.82(10), 377.703(2)(f), and 553.975, Florida Statutes

December 2023

Table of Contents

Tables and Figures

Tables

Figures

List of Acronyms

C/I	Commercial and Industrial (Customers)
Commission or FPSC	Florida Public Service Commission
COVID-19	Coronavirus Disease of 2019
CUC	Chesapeake Utilities Corporation
DEF	Duke Energy Florida, LLC
DOE	U.S. Department of Energy
DSM	Demand-Side Management
ECCR	Energy Conservation Cost Recovery
EV	Electric Vehicle
F.A.C.	Florida Administrative Code
FCG	Florida City Gas
FEECA	Florida Energy Efficiency and Conservation Act
FLBC	Florida Building Code
FPL	Florida Power & Light Company
FPUC	Florida Public Utilities Company
FRCC	Florida Reliability Coordinating Council
F.S.	Florida Statutes
GPR	Gross Power Rating
GRIM	Gas Rate Impact Measure Test
Gulf	Gulf Power Company
GWh	Gigawatt-Hour
HVAC	Heating, Ventilation, and Air Conditioning
IGC	Indiantown Gas Company
IOU	Investor-Owned Utility
JEA	Formerly known as Jacksonville Electric Authority
kWh	Kilowatt-Hour
LDC	Natural Gas Local Distribution Company
MMBtu	One Million British Thermal Units
MW	Megawatt
MWh	Megawatt-Hour
NGCCR	Natural Gas Conservation Cost Recovery
OUC	Orlando Utilities Commission
O&M	Operations and Maintenance
PV	Photovoltaic
PGS	Peoples Gas System
RIM	Rate Impact Measure Test
SGS	Sebring Gas System
SJNG	St. Joe Natural Gas
TECO	Tampa Electric Company
TRC	Total Resource Cost Test

Executive Summary

Purpose

Reducing the growth of Florida's peak electric demand and energy consumption became a statutory objective in 1980, with the enactment of the Florida Energy Efficiency and Conservation Act (FEECA). FEECA emphasizes four key areas: reducing the growth rates of weather-sensitive peak demand and electricity usage, increasing the efficiency of the production and use of electricity and natural gas, encouraging demand-side renewable energy systems, and conserving expensive resources, particularly petroleum fuels. Sections 366.82(2) and 366.82(6), Florida Statutes (F.S.), require the Florida Public Service Commission (FPSC or Commission) to establish goals for the FEECA utilities and review the goals every five years, at minimum. The utilities are required to develop cost-effective demand-side management (DSM) plans that meet those goals and submit them to the Commission for approval.

Energy conservation and DSM in Florida are accomplished through a multi-pronged approach that includes energy efficiency requirements in building codes for new construction, federal appliance efficiency standards, utility programs, and energy education efforts. Utility programs, which are paid for by all customers, are aimed at increasing efficiency levels above building codes and appliance efficiency standards.

The Commission is required by Section 366.82(10), F.S., to provide an annual report to the Florida Legislature and the Governor by March 1 summarizing the adopted goals and the progress made toward achieving those goals. Similarly, Section 377.703(2)(f), F.S., requires the Commission to file information on electricity and natural gas energy conservation programs with the Department of Agriculture and Consumer Services. This report reviews the 2022 annual goal results for each of the FEECA utilities and fulfills these statutory obligations.

The six electric utilities and single natural gas utility subject to FEECA in 2022 are listed below in order of sales:[1]

Electric Investor-Owned Utilities
• Florida Power & Light Company (FPL) • Duke Energy Florida, LLC (DEF) • Tampa Electric Company (TECO) • Florida Public Utilities Company (FPUC)

Municipal Electric Utilities
• JEA • Orlando Utilities Commission (OUC)

Investor-Owned Natural Gas Local Distribution Company (LDC)
• Peoples Gas System (PGS)

[1]Effective January 1, 2022, FPL and Gulf Power Company (Gulf) operationally merged. By Order PSC-2021-0446-S-EI, the Commission approved consolidating the rates and tariffs of FPL and Gulf, and all former Gulf customers became FPL customers.

The Commission regulates the rates and conservation cost recovery of the four electric IOUs and the single FEECA natural gas LDC. The Commission does not regulate the rates or conservation program costs of the two municipal electric utilities for which it sets DSM goals.

Report Layout

This report presents the FEECA utilities' progress towards achieving the Commission-established goals and the Commission's efforts in overseeing these conservation initiatives. This report details these efforts through the following five sections and appendices:

- Section 1 provides a brief history of FEECA and a description of existing tools for increasing conservation throughout the State of Florida.

- Section 2 discusses the DSM goalsetting process and the most recent Commission-established goals set for the FEECA utilities.

- Section 3 reviews the utilities' goal achievements, and information on audit, low-income, and research and development programs. In the 2020 and 2021 reports, additional information in this section was included discussing the program impacts of COVID-19. Because the impact was minimal in 2022, that additional information is no longer included in this section.

- Section 4 provides an overview of the associated 2022 DSM program costs recovered through the Energy Conservation Cost Recovery (ECCR) Clause (as applies to electric IOUs) and Natural Gas Conservation Cost Recovery (NGCCR) Clause (as applies to LDCs).

- Section 5 discusses methods the Commission has used to educate consumers about conservation during the prior period, including a list of related websites.

- Appendices A and B provide a list of the 2022 conservation programs offered by FEECA Utilities and a description of each program's purpose.

2019 Goalsetting Proceeding

In November 2019, the Commission chose to continue with the goals that were established in the 2014 goalsetting proceeding for the period 2020-2024 and directed its staff to review the FEECA process for potential updates and revisions as may be appropriate.[2] In July 2020, a docket was established to consider proposed amendments to Rule 25-17.0021, F.A.C.[3] In 2020, the

[2]Order No. PSC-2019-0509-FOF-EG, issued November 26, 2019, in Docket Nos. 20190015-EG through 20190021-EG, *In re: Commission review of numeric conservation goals.*

[3]See Docket No. 20200181-EU, Proposed amendment of Rule 25-17.0021, F.A.C., Goals for Electric Utilities. Rule development workshops for this docket were conducted in January 2021, May 2021, and November 2022. On May 2, 2023 a Rule Hearing was held, and on May 17, 2023, a Rule Certification Packet was forwarded to the Administrative Code and Register Section of the Florida Department of State. The amendments to Rule 25-17.0021, F.A.C. that were adopted in May 2023 will be used when the DSM goalsetting proceeding is initiated in 2024.

Commission approved the DSM plans proposed by the investor-owned electric utilities and the municipal electric utilities.[4]

The numeric goals are based on estimated energy and demand savings from individual DSM measures that passed the Rate Impact Measure (RIM) and Participants cost-effectiveness tests.[5] These tests are used to ensure that all ratepayers benefit from energy efficiency programs due to downward pressure on electric rates.

Section 366.82(2), F.S., also requires that the Commission adopt goals for increasing the development of demand-side renewable energy systems. The Commission recognized in its 2019 review, that Rule 25-6.065, F.A.C., Interconnection and Net Metering of Customer-Owned Renewable Generation, adopted in 2008, offered an effective means to encourage the development of demand-side renewable energy in the state.

The Commission also established numeric therm savings goals for a natural gas utility for the first time in 2019. In August 2019, the Commission approved 2019-2028 goals for PGS, based upon programs it found were cost-effective.[6] PGS also developed audit programs for its residential and commercial customers as part of the proceedings. The 2019 goalsetting processes for all FEECA utilities are further discussed in Section 2.

2022 Achievements and Related Program Costs

Florida utilities have been successful in reducing the growth rates of winter and summer peak electric demand and reducing annual energy consumption. On a cumulative basis through 2022, statewide totals reflect that summer peak demand has been reduced by 8,156 MW, winter peak demand has been reduced by 7,573 MW, and annual energy consumption has been reduced by 11,975 GWh.[7] During 2022, the electric FEECA utilities offered 103 residential and commercial programs which focused on demand reduction and energy conservation (see Appendices A and B). In addition, FEECA electric utilities performed over 255,000 residential and commercial energy audits in 2022, as shown in Section 3.2. Each FEECA utility's achievements toward the 2022 Commission-approved goals are detailed in Section 3.1.

The Commission has authority, by statute, to allow investor-owned utilities to recover costs related to conservation.[8] The Commission has implemented this authority for electric IOUs through the ECCR clause since 1980. For 2022, Florida's investor-owned electric utilities

[4]Order No. PSC-2020-0140-PAA-EG, issued May 12, 2020, in Docket No. 20200058-EG, *In re: Petition for approval of 2020 demand-side management plan, by Orlando Utilities Commission*; Order No. PSC-2020-0200-PAA-EG, issued June 24, 2020, in Docket No. 20200057-EG, *In re: Petition for approval of 2020 demand-side management plan, by JEA*; Order No. PSC-2020-0274-PAA-EG, issued August 3, 2020, in Docket Nos. 20200053-EG (TECO), 20200054-EG (DEF), 20200055-EG (FPL), 20200056-EG (Gulf), and 20200060-EG (FPUC), *In re: Petition for approval of 2020 demand-side management plans*.

[5]Order No. PSC-14-0696-FOF-EU, issued December 16, 2014 (2014 Goalsetting Order), in Docket Nos. 20130199-EI through 20130205-EI, *In re: Commission review of numeric conservation goals.*

[6]Order No. PSC-2019-0361-PAA-GU, issued August 26, 2019, in Docket No. 20180186-GU, *In re: Petition for approval of demand-side management goals and residential customer assisted and commercial walk-through energy audit programs, by Peoples Gas System.*

[7]FRCC's *2023 Load & Resource Plan* (S-3, S-4, S-5). The demand and energy savings from FEECA utility DSM programs are included in these statewide FRCC totals.

[8]Section 366.05(1), F.S.

recovered approximately $313 million in conservation program expenditures, and the investor-owned natural gas utilities recovered about $33.6 million in conservation program expenditures.

Conclusion

Conservation in Florida is prompted by customer actions to conserve energy, federal appliance efficiency standards, state building codes for new construction, and utility-sponsored DSM programs. Customers can save energy and reduce their bills through behavioral changes and by investing in energy efficient homes, appliances, and equipment. Federal appliance efficiency standards have become more stringent over time, thus increasing the baseline energy efficiency of new appliances and heating, ventilation, and air conditioning (HVAC) equipment available to Florida's consumers. Likewise, changes in the Florida Building Code (FLBC) have resulted in more energy efficient homes. Florida's electric and natural gas utilities also encourage conservation by offering energy audits, customer education, rebates on energy efficient equipment and building envelope improvements, and demand response programs.

Utilities design DSM programs to encourage the installation of appliances and equipment that exceeds levels set by current building codes and minimum efficiency standards. More stringent efficiency standards and building codes, as well as customer actions to implement efficiency outside of utility programs, reduce the potential incremental demand and energy savings available from utility-sponsored DSM programs. The level of realized savings from utility programs is dependent upon voluntary participation and, in some cases, changes in customer behavior.

Because all customers pay for the utility conservation programs as a portion of their monthly utility bills, the Commission focuses on ensuring that all customers benefit from utility-sponsored DSM programs. The Commission also encourages customers to use energy efficiently through its customer education efforts. Overall, reducing Florida's demand and energy usage for electric customers and therm usage for natural gas customers relies on customer education and participation in utility DSM programs, along with each individual's efforts to save electricity.

Conservation and renewable energy will continue to play an important role in Florida's energy future. The Commission is continuing its efforts to encourage cost-effective conservation that defers the need for new electric-generating capacity and reduces the use of fossil fuels. These initiatives support a balanced mix of resources that reliably and cost-effectively meet the needs of Florida's ratepayers.

Section 1. Florida Energy Efficiency and Conservation Act

1.1 FEECA History and Implementation

FEECA emphasizes four key areas: reducing the growth rates of weather-sensitive peak demand and electricity usage, increasing the efficiency of electricity and natural gas production and use, encouraging demand-side renewable energy systems, and conserving expensive resources, particularly petroleum fuels. Pursuant to FEECA, the Commission is required to establish appropriate goals and the FEECA utilities must develop DSM programs to meet those goals.

Upon enactment in 1980, all electric utilities in Florida were subject to FEECA. In 1989, changes were made to the law limiting the requirement to electric utilities with more than 500 gigawatt-hours (GWh) of annual retail sales. At that time, 12 Florida utilities met this threshold requirement and their combined sales accounted for 94 percent of Florida's retail electricity sales. An additional change to the law encouraged cogeneration projects.

In 1996, the Florida Legislature raised the minimum retail sales threshold for municipal and cooperative electric utilities to 2,000 GWh. Retail sales for these utilities were fixed as of July 1, 1993, and two municipal utilities met the threshold of the amended statute: JEA and OUC. In addition to these two utilities, all five Florida investor-owned electric utilities must comply with FEECA regardless of sales levels. No rural electric cooperatives are subject to FEECA.

FEECA also includes natural gas utilities whose annual retail sales volume is equal to or greater than 100 million therms. PGS is the only natural gas utility that meets the therm sales threshold for conservation goals under FEECA, and thus has its own Commission-approved DSM goals.

The statute also allows the Commission to provide appropriate financial rewards and penalties to the utilities over which it has rate-setting authority. The Commission also has the authority to allow an IOU to receive an additional return on equity of up to 50 basis points for exceeding 20 percent of its annual load growth through energy efficiency and conservation measures. To date, the Commission has not awarded financial rewards or assessed penalties for any of the IOUs through FEECA. The Commission does not have rate-setting authority over JEA and OUC and therefore cannot assess financial penalties or provide financial rewards under its authority.

Table 1 lists the seven electric FEECA utilities and shows their 2022 retail electricity sales and the percentage of total statewide electricity sales by each utility. The table also includes the total energy sales for all non-FEECA utilities. Currently, the six electric utilities that are subject to FEECA account for approximately 83.7 percent of all Florida energy sales.

Table 1
Energy Sales by Florida's Electric FEECA Utilities (2022)

Florida's Electric FEECA Utilities	Energy Sales (GWh)	Percent of Total Energy Sales
Florida Power & Light Company	126,450	51.0%
Duke Energy Florida, LLC	40,513	16.3%
Tampa Electric Company	20,467	8.2%
JEA	12,491	5.0%
Orlando Utilities Commission	7,024	2.9%
Florida Public Utilities Company	637	0.3%
Electric FEECA Utilities' Total	**207,582**	**83.7%**
Non-FEECA Utilities' Total	40,547	16.3%
Total Statewide Energy Sales	**248,129**	**100.0%**

Source: FPSC's *Statistics of the Florida Electric Utility Industry* (Table 26), published in October 2023.

Sections 366.82(2) and 366.82(6), F.S., require the Commission to set goals at least every five years for the utilities subject to FEECA. The Commission sets electric goals with respect to summer and winter electric-peak demand and annual energy savings over a ten-year period, with a re-evaluation every five years. Once goals are established, the electric FEECA utilities must submit DSM plans containing programs intended to meet the goals for Commission approval.

In 2008, the Florida Legislature amended the FEECA statute, placing upon the Commission additional responsibilities when adopting conservation goals. These responsibilities included the consideration of the benefits and costs to program participants and ratepayers as a whole, as well as the need for energy efficiency incentives for customers and utilities. The Commission must also consider any costs imposed by state and federal regulations on greenhouse gas emissions.

1.2 FEECA's Influence on the Florida Energy Market

FEECA's mission is important to Florida's overall energy market. Florida's total electric consumption ranks among the highest in the country due to its sizeable population and climate-induced demand for cooling. When compared to the rest of the country, Florida's energy market is unique. The distinction is largely due to the state's climate, the high proportion of residential customers to total customers, and the significant reliance on electricity for heating and cooling.

Florida is typically a summer-peaking state, since the summer peak demand generally exceeds winter peak demand. On a typical summer day, the statewide demand for electricity can increase significantly over a span of hours.[9] Additionally, 87.7 percent of Florida's electricity customers are residential and consume 53.9 percent of the electrical energy produced. In contrast, nationally, residential customers account for 39 percent of total electric sales, while commercial

[9]FPSC's *Review of the 2022 Ten-Year Site Plans of Florida's Electric Utilities* (October 2023).

customers represent 35 percent of electric consumption, and industrial customers represent 26 percent.[10] Table 2 shows the makeup of Florida's electric customers by class and consumption.

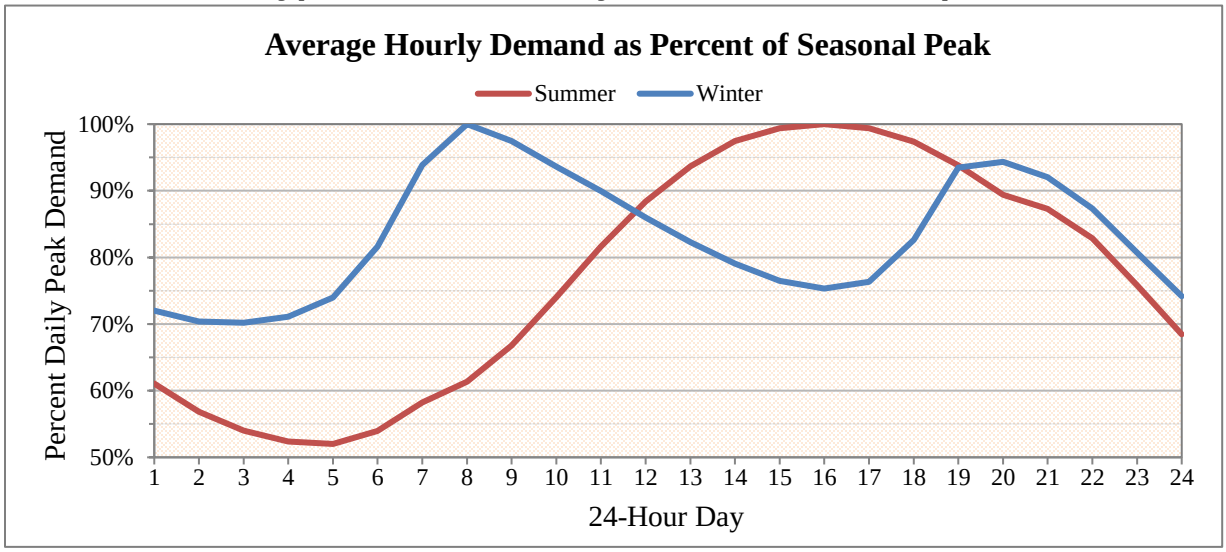
Table 2
Florida's Electric Customers by Class and Consumption (2022)

Customer Class	Number of Customers	Percent of Customers	Energy Sales (GWh)	Percent of Sales
Residential	10,117,256	87.7%	133,791	53.9%
Commercial	1,224,259	10.6%	87,206	35.1%
Industrial	26,885	0.2%	20,494	8.3%
Other*	163,196	1.4%	6,638	2.7%
Total	**11,531,596**	**100.0%**	**248,129**	**100.0%**

*Street and highway lighting, sales to public authorities, and interdepartmental sales.
Source: FPSC's *Statistics of the Florida Electric Utility Industry* (Tables 26 and 33), published October 2023.

Figure 1 shows the daily electric load curves for typical Florida summer and winter day. In the summer, air conditioning demand starts to increase in the morning and peaks in the early evening; a pattern which aligns with the sun's heating of buildings. In comparison, the winter load curve has two peaks—the largest in mid-morning, followed by a smaller peak in the late evening—which correspond to heating loads.

Figure 1
Typical Florida Daily Electric Load Shapes



Source: FPSC's *Review of 2022 Ten-Year Site Plans of Florida's Electric Utilities* published October 2023.

[10]National data as reported for 2022 by the U.S. Energy Information Administration in the annual *Electric Sales, Revenue, and Average Price (ESR)* report (Table 2): https:/www.eia.gov/electricity/sales_revenue_price/

Residential load patterns shift rapidly and have high peak-to-trough variation. In contrast, commercial or industrial loads demonstrate more consistency throughout the 24-hour day and experience fewer spikes in demand.

Utilities dispatch additional generating capacity throughout the day in order to follow the customer load patterns. Peaking generating units, which are dispatched during high demand periods of the day, are less fuel-efficient than baseload or intermediate generating units. Utility DSM programs play a role in reducing energy usage and shifting peak demand, thus reducing the need to dispatch fuel-inefficient generating units.[11] Over time, the need for additional generating capacity has increased in Florida, largely due to population growth. In addition to providing fuel savings at existing generating units, utility-sponsored DSM programs and individual consumer conservation efforts can avoid or defer the need for new electric generating capacity.

Utility-sponsored DSM programs are funded by all ratepayers. Therefore, in order to meet FEECA requirements, the Commission and utilities must ensure that the DSM programs created to reap the benefits of reduced fuel usage and deferred generating capacity are cost-effective, i.e. less costly than generation. The Commission's methodologies to determine the cost-effectiveness of demand-side management programs are explained in detail in Section 2.1.

Since its enactment, implementation of FEECA has been successful in reducing the growth rate of weather-sensitive electric peak demands, and in conserving expensive resources. These savings have avoided or deferred the need for new generating capacity and offset the use of existing generating units, resulting in savings of fuel, as well as variable operations and maintenance (O&M) costs. During 2022, FEECA utility DSM programs continued contributing to the reduction of statewide energy needs and deferred the need for new generating capacity. Table 3 details statewide cumulative savings for summer peak demand, winter peak demand, and overall energy consumption through 2022, as reported in the Florida Reliability Coordinating Council's (FRCC) 2023 Regional Load & Resource Plan.[12] In 2022, the FEECA DSM programs contributed annual energy savings of 175.3 GWh, which is enough electricity to power approximately 13,089 homes for a year.[13]

[11]Electric generating units are typically categorized as baseload, intermediate, or peaking. Aside from planned and forced outages, baseload units are scheduled to operate continuously. Intermediate units generate power to follow load for periods of time, but are not planned to operate nonstop. Peaking units supplement baseload and intermediate power, operating during high-demand, or peak periods.

[12]The cumulative MW savings for summer peak demand and winter peak demand shown in Table 3 reflect the maximum capability of demand response programs.

[13]This estimate is based on an average annual household energy use of 13,389 kWh for Florida in 2022 as reported by the U.S. Energy Information Administration in the annual *Electric Sales, Revenue, and Average Price (ESR)* report (Table 5.a): https:/www.eia.gov/electricity/sales_revenue_price/

Table 3
Statewide Cumulative Demand and Energy Savings (1980-2022)

Type	Achieved Reduction
Summer Peak Demand	8,156 MW
Winter Peak Demand	7,573 MW
Annual Energy Reduction	11,975 GWh

Source: Florida Reliability Coordinating Council's *2023 Regional Load & Resource Plan* (S-3, S-4, S-5).

In 2022, the electric FEECA utilities offered 103 programs for residential, commercial, and industrial customers (see Appendices A and B). Programs focus on either reducing energy use at a given moment, which shifts/reduces demand, or toward reducing overall energy consumption over a period of time. Utility-sponsored DSM programs are an important means of achieving demand and energy savings and these programs are designed to encourage customer conservation efforts.

Additionally, residential energy audits, required by Section 366.82(11), F.S., serve as an avenue to identify and evaluate conservation opportunities for customers, including their potential participation in utility-sponsored DSM and conservation programs. Energy audits also educate customers about behavioral changes and energy efficiency investments they can make outside of utility-sponsored DSM programs. During 2022, FEECA electric utilities performed 248,398 residential audits. Though FEECA does not require commercial energy audits, FEECA electric utilities also performed 6,931 commercial energy audits in 2022. Additional information about these results is presented in Section 3.

1.3 Recovery of Conservation Expenditures

The IOUs are allowed by Commission Rule 25-17.015, F.A.C., to recover reasonable expenses for DSM programs through the ECCR clause. Such expenses may include administrative costs, equipment, and incentive payments. Before petitioning the Commission to recover costs through the ECCR clause, a utility must provide data on DSM program cost-effectiveness. Utilities must have Commission approval for any new programs or program modifications prior to seeking cost recovery.

Commission Rule 25-17.015, F.A.C., also permits natural gas LDCs to seek recovery for costs related to Commission-approved conservation programs. While PGS is the only natural gas utility subject to FEECA, the other Florida LDCs offer Commission-approved DSM programs without a specific therm savings goal. Natural gas conservation programs have historically focused on providing rebates to residential customers that support the replacement of less efficient appliances with new, energy-efficient gas appliances. However, several LDCs have expanded their rebate programs to commercial customers.[14]

On an annual basis, the Commission conducts financial audits of DSM program expenses that are included in the electric IOUs' and LDCs' cost recovery requests. A full evidentiary hearing is

[14]Order No. PSC-14-0039-PAA-EG, issued January 14, 2014, in Docket No. 130167-EG, *In re: Petition for approval of natural gas energy conservation programs for commercial customers, by Associated Gas Distributors of Florida.*

held to determine the cost recovery factors to be applied to customer bills in the following year. The Commission-approved 2024 conservation cost recovery factors are discussed further in Section 4.

Section 2. DSM Goalsetting

2.1 DSM Program Cost-Effectiveness and Energy Savings

Section 366.81, F.S., emphasizes that it is critical to utilize cost-effective conservation. This statutory provision is codified in Rule 25-17.008, F.A.C., for electric utilities and Rule 25-17.009, F.A.C., for natural gas LDCs. The rules identify the cost-effectiveness methodologies to be used and require that utilities provide cost and benefit information to the Commission when requesting to add a program or make changes or additions to an existing program.

The Commission requires that electric utilities measure cost-effectiveness from three perspectives, at a minimum - the program participant, the utility's ratepayers, and society's overall cost for energy services. The Participants test, the Rate Impact Measure (RIM) test, and the Total Resource Cost (TRC) test capture these viewpoints. The electric FEECA utilities are required to provide the results of all three tests when seeking to add a new program or make changes to an existing program.

Similarly, Rule 25-17.009, F.A.C., requires natural gas LDCs to provide the results of the Participants test and Gas Rate Impact Measure Test (GRIM). The GRIM test is a modified version of the RIM test, specific to gas utilities. Natural gas LDCs are also required to provide the results of these tests when seeking to add a new program or modify an existing program.

Table 4 summarizes the costs and benefits considered in the three Commission-approved electric cost-effectiveness methodologies for electric utilities.

Table 4
Summary of Electric Cost-Effectiveness Methodologies

	Participants	RIM	TRC
Benefits			
Bill Reduction	X		
Incentives Received	X		
Avoided Generation (Capital and O&M)		X	X
Avoided Transmission (Capital and O&M)		X	X
Fuel savings		X	X
Costs			
Program Costs		X	X
Incentives Paid		X	
Lost Revenues		X	
Participant's Costs (Capital and O&M)	X		X

Participants Test

The Participants test analyzes costs and benefits from a program participant's point of view, rather than the impact on the utility and other ratepayers not participating in the program. The Participants test includes the up-front costs customers pay for equipment and costs to maintain

this equipment. Benefits considered in the test include the incentives paid by utilities to the customers and the reduction in customer bills. Failure to demonstrate cost-effectiveness under this test would infer that rational customers would not elect to participate in this program.

Rate Impact Measure (RIM) Test

The RIM test is designed to ensure that all ratepayers, not just the program's participants, will benefit from a proposed DSM program. The RIM test includes the costs associated with incentive payments to participating customers and decreased revenues to the utility. DSM programs can reduce utility revenues due to reduced kilowatt-hour (kWh) sales and reduced demand. The decreased utility revenues typically are recovered from the general body of ratepayers at the time of a rate case. A DSM program that passes the RIM test ensures that all customer rates are the same or lower than rates would be without the DSM program.

Total Resource Cost (TRC) Test

The TRC test measures the overall economic efficiency of a DSM program from a social perspective. This test measures the net costs of a DSM program based on its total costs, including both the participants' and the utility's costs. Unlike the RIM test, customer incentives and decreased utility revenues are not included as costs in the TRC test. Instead, these factors are treated as transfer payments among ratepayers. Moreover, if appropriate, certain external costs and benefits such as environmental impacts may be taken into account. Because incentives and foregone revenues are not treated as "costs," electric rates for all customers tend to be higher for programs implemented solely using the TRC test to judge cost-effectiveness.

Ensuring Cost-Effectiveness

Ensuring utility-sponsored DSM programs remain cost-effective benefits the general body of electric ratepayers. These programs can reduce costs to ratepayers by postponing capital expenditures such as future power plant construction, and reducing current electrical generation costs, including fuel and variable O&M costs. DSM programs can also benefit customers by improving reliability.

When an IOU determines that a DSM program is no longer cost-effective, the utility should petition the Commission for modification or discontinuation of the program. In many instances, programs may need to be modified due to the adoption of a more stringent appliance efficiency standard or building code. In contrast, if new efficiency measures become available that are cost-effective, the utility may petition the Commission for approval of a new program.

2019 Electric DSM Goalsetting Proceeding

Pursuant to Sections 366.82(2) and 366.82(6), F.S., the electric FEECA utilities filed proposed goals for the 2020-2029 period in April 2019. The utilities' proposed goals were lower overall than those established in the 2014 goalsetting proceeding, with some utilities proposing goals of zero or near-zero for the 10-year period. A technical hearing on the proposed goals was held on August 12 and 13, 2019. The Commission heard testimony on cost-effectiveness tests, whether a goal of zero fulfilled statutory requirements, how to account for free ridership, and how to ensure low-income customers are able to effectively participate in DSM programs.

By issuing Order No. PSC-2019-0509-FOF-EG[15] on November 26, 2019, the Commission rejected the goals proposed by the electric FEECA utilities and chose to continue with the 2020-2024 portion of the goals established in the 2014 goalsetting proceeding. While the goalsetting process produces annual goals, the cumulative goals for the entire 10-year period are shown in Table 5 for illustrative purposes.

The Commission also expressed a desire to review the goalsetting process for potential revisions. In July 2020, a docket was established to consider proposed amendments to Rule 25-17.0021, F.A.C.[16] Rule development workshops for this docket were conducted in January 2021, May 2021, and November 2022, and on May 2, 2023 a Rule Hearing was held. On May 17, 2023, a Rule Certification Packet was forwarded to the Administrative Code and Register Section of the Florida Department of State. Rule 25-17.0021, F.A.C., was primarily amended to: (1) make goals based upon projected savings from potential programs offered to customers rather than upon aggregated savings from individual conservation measures; and (2) to require utilities to provide projected savings or goals developed under two cost-effectiveness scenarios, rather than a single cost-effectiveness test, in order to provide a more robust record of evidence. Specifically, the Commission's objective with the updated rule was to bring into the goal-setting phase a greater focus on potential conservation programs that could be offered to customers in order to reach a utility's approved goals.[17] The changes that were adopted in May 2023 will be used when the DSM goalsetting proceeding is initiated in 2024.

Table 5
Cumulative Commission-Approved Electric DSM Goals (2015-2024)

Electric Utility	Summer Demand Goals (MW)	Winter Demand Goals (MW)	Annual Energy Goals (GWh)
FPL	526.1	324.2	526.3
DEF	259.1	419.3	195.0
TECO	56.3	78.3	144.3
Gulf	68.1	36.7	84.2
FPUC	1.3	0.4	2.0
OUC	5.0	8.4	13.0
JEA	10.8	9.7	25.8
Total	**926.7**	**877.0**	**990.6**

Source: Order No. PSC-14-0696-FOF-EU.

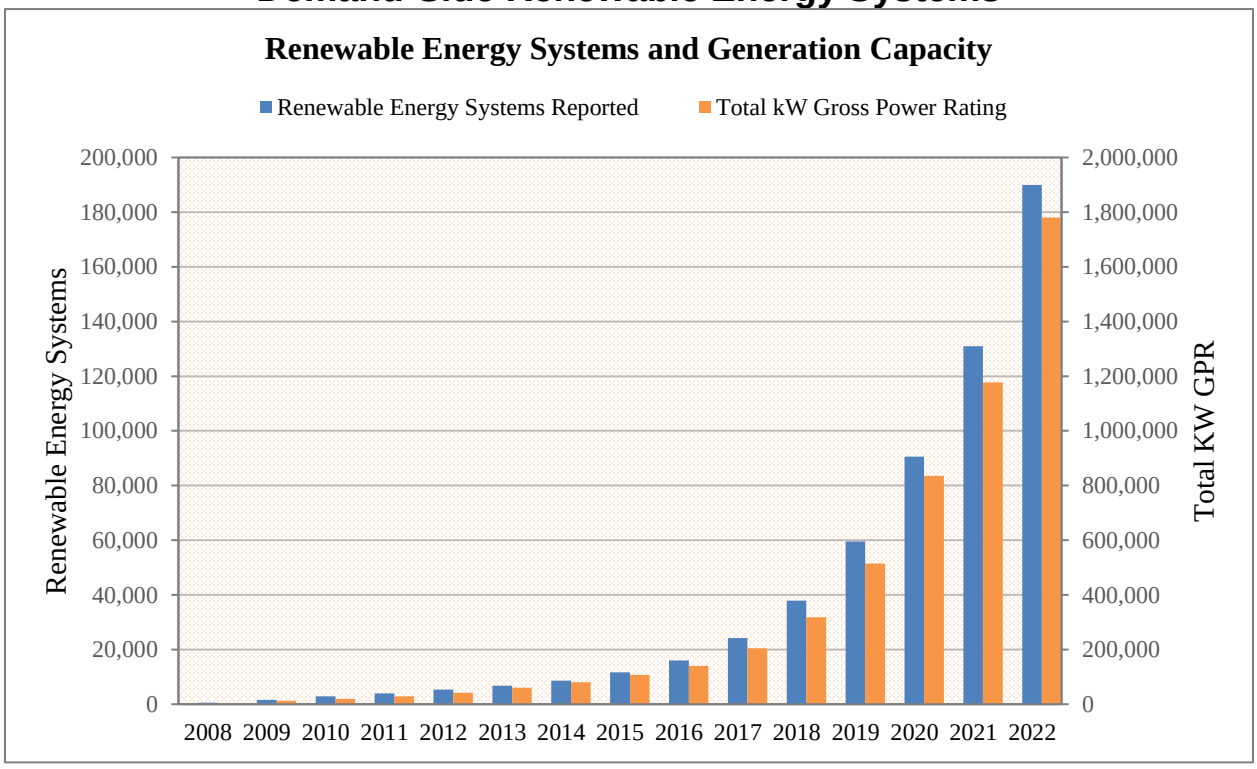
The goals established in 2014 were based upon estimated energy and demand savings from measures that passed both the RIM and Participants cost-effectiveness tests. Measures that pass the Participants test ensure that participating customers' benefits exceed the costs of the measure or program to the participants. Use of the RIM test minimizes subsidies between customers who

[15]Order No. PSC-2019-0509-FOF-EG, issued November 26, 2019, in Docket Nos. 20190015-EG through 20190021-EG, *In re: Commission review of numeric conservation goals.*
[16]See Docket No. 20200181-EU, Proposed amendment of Rule 25-17.0021, F.A.C., Goals for Electric Utilities.
[17]Order No. PSC-2023-0165-FOF-EU, Notice of Adoption of Rule, issued May 18, 2023, in Docket No. 20200181-EU, *In re: Proposed amendment of Rule 25-17.0021, F.A.C., Goals for Electric Utilities.*

participate in DSM programs and those who do not participate but pay for program expenditures. The RIM test also ensures rates would remain the same or lower than otherwise would occur.

As part of its review of goals in 2019, the Commission recognized Rule 25-6.065, F.A.C., (Customer-Owned Renewable Generation Rule) as an effective means of encouraging the development of demand-side renewable energy systems. Figure 2 shows the growth in the number of customer-owned renewable energy systems in Florida, as well as the growth in gross power ratings (i.e., generating capacity) since the Commission's approval of net-metering in 2008.

Figure 2
Demand-Side Renewable Energy Systems



Source: Data compiled from Interconnection and Net Metering Reports provided to the Commission from IOU, municipal, and rural electric cooperative electric companies, 2008-2022.

2.2 Summary of the 2019 Goalsetting Process for Peoples Gas

PGS is the only natural gas utility that meets the therm sales threshold for establishing conservation goals under FEECA.[18] In October 2018, PGS filed a petition for approval of numeric therm reduction goals for the 2019-2028 period. PGS estimated its goals based upon its current Commission-approved DSM programs. Because PGS had existing programs already in place, there is expected to be no additional cost to its customers, aside from the costs of the new

[18]Section 366.82, F.S., provides that a natural gas utility is subject to FEECA requirements if a utility's annual retail sales volume is equal to or greater than 100 million therms.

audit programs. PGS utilized the Participants and GRIM tests to calculate its goals.[19] The Commission approved the goals for PGS in Order No. PSC-2019-0361-PAA-GU, issued on August 26, 2019. Table 6 shows the 10-year therm-savings goals for PGS over the 2019-2028 period.[20]

Table 6
Commission-Approved DSM Goals for PGS (2019-2028)

Cumulative Savings (Therms)		
Residential	**Small Commercial**	**Combined**
3,749,583	2,426,634	6,176,217

Source: Order No. PSC-2019-0361-PAA-GU.

PGS was also required to develop a residential audit program as part of the goalsetting process. However, PGS filed for and was granted a waiver of Rules 25-17.003(3)(a) and (b), F.A.C., which require all FEECA utilities to offer residential customers three different types of on-site audits - Building Energy Efficiency Rating System (BERS) Audits, Computer-Assisted Audits, and Walk-Through Audits. PGS argued that the on-site audits would impose a substantial hardship on the Company and that the purpose of the underlying statute can be achieved by other means. The Commission allowed PGS to offer an electronic, online-only audit in lieu of on-site audits for residential customers. The Commission approved the implementation of the electronic audits for PGS's residential customers, as well as on-site audits for its commercial customers, beginning in 2020. Customers of PGS are still eligible to receive walk-through energy audits through their electricity provider.

In November 2019, a docket was established to consider the petition from PGS for Approval of Demand-Side Management Plan and Program Standards together.[21] In June 2020, PGS informed the Commission of its intention to revise programs in an amended filing. In February 2021, an Amended Petition for Approval of Demand-Side Management Plan was filed. By Order No. PSC-2021-0242-PAA-EG, the revised filing was approved.[22]

2.3 Impact of Outside Factors on FEECA Utility DSM Programs

Conservation in Florida is prompted by customer actions to conserve energy, federal appliance efficiency standards, state building codes, and utility-sponsored DSM programs. Customers can save energy and reduce their bills through behavioral changes and by investing in energy efficient homes, appliances, and equipment. Federal appliance efficiency standards have become more stringent over time, thus increasing the baseline energy efficiency of new appliances and heating and air conditioning equipment available to Florida's consumers. Likewise, changes in the Florida State Building Code (FLBC) have resulted in more energy efficient homes.

[19]Rule 25-17.009, F.A.C., requires natural gas utilities that seek to recover costs for conservation programs to file the cost-effectiveness test results of the Participants test and the GRIM test.
[20]Order No. PSC-2019-0361-PAA-GU, issued August 26, 2019, in Docket No. 20180186-GU, *In re: Petition for approval of demand side management goals and residential customer assisted and commercial walk-through energy audit programs, by Peoples Gas System.*
[21]See Docket No. 20190210-EG, Petition for approval of demand-side management plan, by Peoples Gas System.
[22]Order No. PSC-2021-0242-PAA-EG, issued July 2, 2021, in Docket No. 20190210-EG, *In re: Petition for approval of demand-side management plan, by Peoples Gas System*.

Utilities design DSM programs to encourage conservation that exceeds levels achievable through current building codes and minimum efficiency standards. However, the cost-effectiveness of some DSM measures has declined due to several factors outside of the FEECA utilities' control. More stringent state and federal efficiency standards, building codes, and customer actions to implement efficiency outside of utility programs, reduce the potential incremental demand and energy savings available from utility-sponsored DSM programs.

Federal efficiency standards and state building codes establish a baseline in assessing the cost-effectiveness of a potential DSM program. Florida utility DSM programs offer rebates and incentives for appliances that exceed federally established minimum efficiency standards. However, increases in federal efficiency standards, independent conservation efforts by consumers, and general conservation practices make it more challenging for utilities to achieve demand and energy savings through DSM programs. Moreover, participation rates in the utility programs are driven by the anticipated payback to the participating customer. While utility incentives tend to increase customers' "take rate" in conservation programs, electric rates are also a contributing factor in customers' decisions to invest in more efficient appliances. Thus, low or declining electric rates tend to reduce customer energy efficiency investments, while increasing rates can have the opposite effect. This makes it crucial that the FEECA utilities frequently evaluate conservation programs to ensure that they remain cost-effective. Likewise, the FEECA utilities are also expected to evaluate the potential for new, cost-effective DSM program opportunities as energy-efficiency technologies develop.

State Building Code

At the state level, the FLBC is amended annually to incorporate interpretations and clarifications as well as to update efficiency standards. The Florida Building Commission updates the FLBC with relevant new standards every three years, most recently in 2020 when the 7th Edition (2020) was issued. The 7th Edition (2020) became effective in December 2020. Two Supplements were issued in 2022, and one has been issued to-date in 2023.[23] While there were several changes in both documents that pertain to construction standards, no changes were made to Chapter 11, Energy Efficiency. After review of these resources and the DSM programs that were current when these codes became effective, FEECA utilities reported that the code updates had no impact on the programs that had been established in the 2014 goalsetting process. None of the FEECA utilities made regulatory filings to modify DSM Plans or programs as a result of 2020 or the 2022 FLBC code updates.

Federal Government Efficiency Standards

At the federal government level, the U.S. Department of Energy's (DOE) Building Technologies Office sets energy efficiency standards for more than 60 categories of appliances and other equipment, including HVAC equipment.[24] Within the Building Technologies Office, the

[23]The 2022 Supplements to the 7th Edition added code language for consistency with changes in laws that became effective July 1, 2022. Details of the Seventh Edition (2020) Florida Building Code and all Supplements to it can be found at https://www.floridabuilding.org/fbc/Links_to_Code_Resources.html. In addition, details are provided regarding the new federal standards for central air conditioners, effective January 1, 2023.

[24]Pursuant to Section 553.975, F.S., the Commission must report the effectiveness of state energy conservation standards established by Sections 553.951-553.973, F.S. Florida's appliance efficiency standards are mandatory efficiency improvements but have not been updated since 1993, and therefore have likely been superseded by more recent federal efficiency standards.

Appliances and Equipment Standards Program maintains a multi-year rulemaking schedule that establishes minimum energy efficiency standards and test procedures which are the basis for these standards. The products regulated by DOE standards represent about 90 percent of home, 60 percent of commercial building, and 30 percent of industrial energy use.[25] Some of the consumer products regulated by these Conservation Standards and Test Procedures include laundry appliances, dishwashers, microwave ovens, televisions, and several other common household products. In addition to consumer products, there are categories for lighting, plumbing, and commercial/industrial products.[26]

In January 2021, an executive order from the President of the United States was issued which included direction to address the overdue rule and test procedure reviews.[27] In the August 2021 Report To Congress, the DOE conveyed that since the last Report to Congress (July 2019), 123 rulemaking actions related to energy conservation standards and test procedures have been completed. Of this total, 71 of the actions were related to energy conservation standards rulemaking notices, with 15 being final actions. Examples of the equipment for which final actions were taken include ceiling fans, commercial air compressors, dishwashers, fluorescent light ballasts, and portable air conditioners. The full list, including information on the fifty two rulemaking notices that relate to test procedures, is accessible via the link identified in the footnote below.[28]

Federal standards that change the baseline requirements for a product may have a direct effect on DSM programs. If a DSM program is no longer cost effective as a result of changing federal standards, then the utility should file a petition to modify or discontinue the program.

[25]Federal Appliance and Equipment Standards Program: https://www.energy.gov/eere/buildings/appliance-and-equipment-standards-program

[26]Federal Conservation Standards and Test Procedures: https://energy.gov/eere/buildings/standards-and-test-procedures

[27]Executive Order No. 13990, 86 Federal Register 7037 (January 25, 2021): https://www.govinfo.gov/content/pkg/FR-2021-01-25/pdf/2021-01765.pdf

[28]U.S. Department of Energy, Semi-Annual Report to Congress on Appliance Energy Efficiency Rulemakings, Energy Conservation Standards Activities (August 2021): https://www.energy.gov/sites/default/files/2021-08/EXEC-2019-005022%20-%20Final%20Report%20ksb.pdf

Section 3. FEECA Utilities' Goal Achievements

3.1 Assessing Goal Achievement

Commission rules require separate goals be set for electric residential and commercial/industrial (C/I) classes, assigning context to measuring goal achievement within these two primary customer categories. Each utility's achievements in these categories are also combined and compared against total demand and energy savings goals.

Every FEECA utility must file an annual DSM report pursuant to Rule 25-17.0021, F.A.C., which summarizes demand savings, energy savings, and customer participation rates for each approved program. The report also includes the residential, C/I, and total energy efficiency achievements compared to the approved DSM goals. Each FEECA utility's current (2022) and archived annual DSM reports from prior years can be found on the Commission's website: http://www.psc.state.fl.us/.

Monitoring annual goal achievements enables the Commission to evaluate the effectiveness of each utility's programs. In addition to reviewing the FEECA utilities' annual DSM reports, staff issues discovery requests for additional information from the utilities on their demand and energy saving achievements. Staff's data requests also seek explanations of factors preventing the utilities from achieving projected participation levels. Each FEECA utility's DSM performance in 2022 is discussed below. The utility achievements have been compared to the annual goals established by the Commission in November 2014 and reapplied in November 2019. Table 7 provides a breakdown of each electric utility's goal achievements for the period.

FPL

FPL met 1 of 9 DSM demand and energy savings goals in 2022. FPL met its goal for annual energy reduction in the residential customer class. The company stated lower than projected participation in its Residential On Call program contributed to its failure to achieve all other residential goals. Some shortfalls were significant. For example, FPL's goal for summer demand reduction in this customer class was 35.70 MWs, but FPL recorded 24.17 MWs of summer demand reduction, a shortfall of 48 percent. About 14,000 fewer residential audits were conducted in 2022 (82,631), compared to 2021 (96,612). FPL attributes some of that decline to the impacts of Hurricanes Ian and Nicole in the fall of 2022. Although more C/I audits were conducted in 2022 (5,669) compared with 2021 (4,895), very low participation in the company's C/I Demand Reduction program contributed to FPL missing all of its C/I goals in 2022. FPL missed each of its total demand and energy savings goals by significant margin.

DEF

In 2022, DEF met its residential and total demand and energy savings goals. DEF's 2022 residential demand and energy savings were higher than those of 2021, and DEF conducted significantly more residential energy audits in 2022 (37,725), compared to 2021 (21,732). For the C/I customer class, the company met its goals for Winter Demand Reduction and Annual Energy Savings, but missed achieving its goal for Summer Peak Demand Reduction by a very small margin (1 MW). In 2022, DEF conducted only about half as many C/I audits (146) compared to 2021 (287).

TECO

TECO met its 2022 total goals and all individual customer class goals. In 2022, all demand and energy savings levels were higher compared to 2021, with enhanced participation in audit and other programs appearing to play a significant part in those results. In 2022, TECO conducted significantly more residential audits (114,112, compared to 70,394 in 2021), and also reported higher participation in residential Insulation and Duct Repair programs. In addition, the company conducted 766 audits for C/I customers, up from 206 in 2021.

FPUC

FPUC met all of its 2022 demand reduction and energy savings goals for the residential customer class, and in doing so, also met all of its total winter and summer demand reduction goals. Fewer residential audits were conducted in 2022, compared to 2021, although strong participation in its residential HVAC program contributed to the results achieved in that sector. In 2022, FPUC did not achieve any demand reduction and energy savings or meet any of its goals in the C/I customer class. The company states that a limited number of C/I customers in its service territory is a significant factor for it not contributing any demand reductions or annual energy savings from the C/I sector.

JEA

JEA met all its 2022 individual customer class goals, thus it met its total demand and energy savings goals as well.

OUC

OUC met all its 2022 individual customer class goals, thus it met its total demand and energy savings goals as well.

Table 7
Electric DSM Goals Compared to Annual Achievements (2022)

Utility	Winter (MW)		Summer (MW)		Annual (GWh)	
	Goals	Achieved Reduction	Goals	Achieved Reduction	Goals	Achieved Reduction
FPL*						
Residential	21.80	**16.44**	35.70	**24.17**	34.80	36.46
Commercial/Industrial	17.20	**13.50**	28.00	**25.56**	34.60	**16.87**
Total	39.00	**29.94**	63.70	**49.73**	69.40	**53.33**
DEF*						
Residential	24.50	25.00	12.20	16.00	3.75	49.00
Commercial/Industrial	4.70	5.00	6.00	**5.00**	2.40	3.00
Total	29.20	30.00	18.20	21.00	6.15	52.00
TECO						
Residential	7.40	9.50	3.00	11.10	6.90	30.40
Commercial/Industrial	1.90	7.10	3.30	12.30	10.20	26.60
Total	9.30	16.60	6.30	23.40	17.10	57.00
FPUC*						
Residential	0.034	0.101	0.073	0.174	0.073	0.320
Commercial/Industrial	0.027	**0.000**	0.058	**0.000**	0.202	**0.000**
Total	0.061	0.101	0.131	0.174	0.275	0.320
JEA						
Residential	0.960	1.830	0.940	2.100	2.500	4.110
Commercial/Industrial	0.007	0.260	0.140	0.490	0.080	2.540
Total	0.967	2.090	1.080	2.590	2.580	6.650
OUC						
Residential	0.200	0.581	0.190	0.531	0.720	1.137
Commercial/Industrial	0.780	1.956	0.370	1.985	0.850	4.816
Total	0.980	2.537	0.560	2.516	1.570	5.953

***Bold numbers shown in Table 7 indicate the utility did not meet its annual goals within that category.**

Source: FEECA utilities' 2022 demand-side management annual reports.

PGS

PGS met its 2022 total goals and all individual customer class goals. The annual energy reduction for the residential customer class (450,602 therms) not only exceeded the goal for 2022, but also outpaced the achieved reduction from 2021 (425,798 therms). The annual energy reduction for the Small Commercial customer class (558,218 therms) also exceeded the goal for 2022, but more than doubled the achieved reduction from 2021 (292,210 therms). In both customer classes, 2022 participation levels were higher in New Construction programs.

Table 8 provides a breakdown of the goal achievements for PGS for the period. Therm-savings goals for PGS were first approved in August 2019. PGS met its 2022 total energy reduction goal and its individual customer class goals.

Table 8
DSM Goals Compared to Annual Achievements (2022)

PGS	Annual Energy Reduction (Therms)	
	Goals	Achieved Reduction
Residential	363,728	450,602
Small Commercial	233,833	558,218
Total	597,561	1,008,820

Source: PGS' 2022 demand-side management annual report.

3.2 Information on Audit Programs

Residential energy audits are required by Section 366.82(11), F.S. Energy audits serve as an avenue for utilities to identify and evaluate conservation opportunities for customers. FEECA utilities use energy audits as a gateway to their other DSM programs. For example, some rebate programs require customers to have an energy audit so that the utility can identify existing equipment to determine program eligibility before the customer is eligible to participate. Utilities also use energy audits to educate customers on behavioral changes and energy efficiency investments they can make outside of the utility-sponsored DSM programs.

Rule 25-17.0021, F.A.C., requires that all FEECA utilities offer a Walk-Through Audit, a Building Energy-Efficiency Rating System (BERS) Audit, and a Computer-Assisted Audit to their residential customers. All FEECA electric utilities offer Walk-Through Audits for their commercial customers as well. In addition to the required audits, FEECA utilities also offer online and phone audits which have become increasingly popular with customers. While online and phone audits are not as thorough as Walk-Through Audits, they give customers access to much of the same information on their own time, without the need to schedule appointments with their utility. These audits also typically have lower administrative costs than Walk-Through Audits.

As a part of its goalsetting process, PGS was granted a waiver which exempts the company from the requirement to offer Walk-Through Audits. The Commission allowed PGS to offer an electronic, online-only audit in lieu of on-site audits for residential customers. In April 2020, PGS launched its Residential Customer Assisted Audit program as an online audit program for residential customers. In 2022, a total of 12,834 audits of this type were conducted. In addition, PGS launched its Commercial Walk-Through Energy Audit program in July 20, 2023.

Residential Audits

As shown in Table 9 below, the FEECA electric utilities performed a total of 248,398 residential audits in 2022, which was about 41,000 more residential audits compared to 2021 when 207,066 audits were conducted.[29]

Table 9
Residential Audits by Type (2022)

Utility	In-Person	Virtual		Total
	Walk-Through, BERS, and Computer-Assisted	Online	Phone	
FPL	13,824	53,446	15,361	82,631
DEF	8,598	25,919	3,208	37,725
TECO	4,310	109,802	0	114,112
FPUC	18	56	0	74
JEA	4,758	7,629	0	12,387
OUC	1,469	0	0	1,469
Total	**32,977**	**196,852**	**18,569**	**248,398**

Source: FEECA utilities' 2022 demand-side management annual reports.

By type, the FEECA electric utilities were less restricted in 2022 to offer in-person audits compared to 2021, when periods of suspensions and restrictions occurred as a result of COVID. Collectively, the number of in-person audits conducted in 2022 rose by about 61 percent (32,977 in 2022 compared to 20,476 in 2021). For virtual audits, the overall number of online audits rose in 2022, while the number of audits by phone declined slightly. Across all FEECA electric utilities, the number of online audits conducted in 2022 rose by about 18 percent (196,852 in 2022, compared with 166,823 in 2021), while the number of audits by phone fell by about 6 percent (18,569 in 2022 compared to 19,767 in 2021).

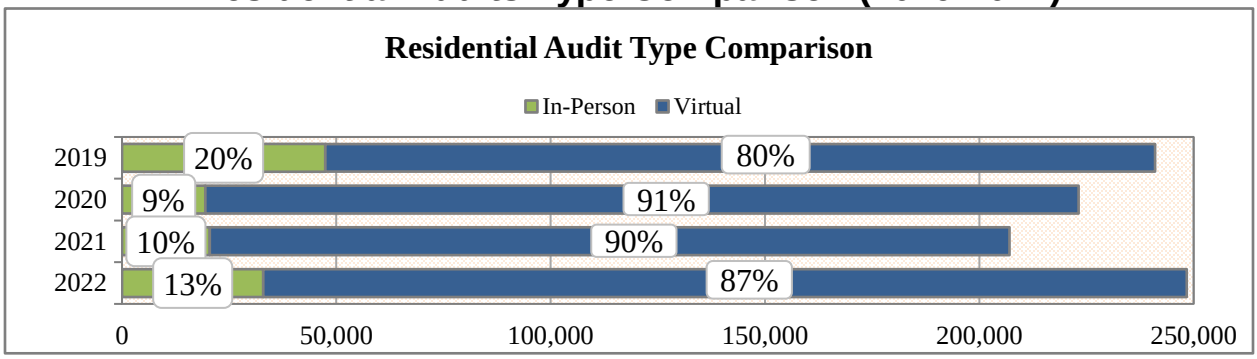
Overall, DEF, TECO, FPUC and JEA all reported that more audits were conducted in 2022, compared to 2021. FPL reported more in-person and phone audits, but fewer online audits were conducted in 2022 compared to 2021, which resulted in a lower number of audits overall for 2022. FPL stated that two significant storm events in the fourth quarter of 2022 (Hurricanes Ian and Nicole) impacted the number of residential customers that requested audits. For OUC, the utility conducted more in-person audits (1,469 in 2022, compared to 1,229 in 2021), but reported no virtual audits for 2022, which resulted in an overall decline for the year. OUC's decline in virtual audits conducted in 2022 was attributable to the change in reporting by the utility to clarify the distinction between an energy survey and an energy audit.[30]

In 2019, before the onset of COVID-related program suspensions, approximately 80 percent of all residential audits were conducted virtually, and the balance were conducted in person. For 2020, when periods of suspensions were experienced, not only did the overall number of audits

[29]Walk-Through, BERS, and Computer-Assisted audits all require a utility auditor to physically inspect the customer's premises, and therefore are consolidated for the purposes of Figures 3 and 4. On a percentage basis, the number of residential audits conducted in 2022 grew by about 20 percent, compared with 2021.
[30]Although not reflected in Table 9, OUC conducted 1,185 online energy surveys for residential customers in 2022.

decline, but a proportional shift was observed, with virtual audits growing from 80 percent of total audits to 91 percent, and in-person audits declining from 20 percent of total audits to 9 percent, as shown in Figure 3 below. For 2021, the proportional relationship remained similar to 2020, even though fewer total audits were conducted. For 2022, the proportional relationship between in-person audits and virtual audits moved in the direction of pre-pandemic levels, with increased in-person audits. In addition, the overall number of audits was higher than the three previous years.

Figure 3
Residential Audits Type Comparison (2019-2022)



Source: FEECA utilities' 2019-2022 demand-side management annual reports.

Commercial / Industrial Audits

On an overall basis, Table 10 below shows that the FEECA electric utilities performed 6,931 commercial/industrial energy audits in 2022, compared to 5,591 such audits in 2021. Although in 2021, FPL, DEF, TECO, and Gulf all offered C/I audits through in-person and virtual means, only DEF and primarily FPL continued the practice of offering virtual audits in 2022. For TECO, JEA, and OUC, all of the audits conducted for this customer class in 2022 were conducted by site visits as in-person audits. FPUC does not offer an audit program for commercial/industrial customers.

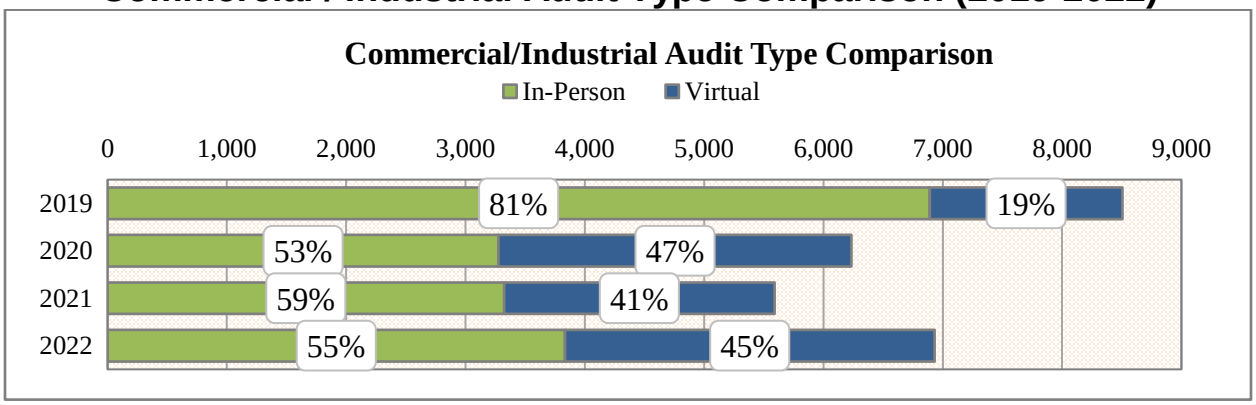
Table 10
Commercial / Industrial Audits by Type (2022)

Utility	In-Person	Virtual		Total
	Walk-Through, BERS, and Computer-Assisted	Online	Phone	
FPL	2,574	536	2,559	5,669
DEF	143	0	3	146
TECO	766	0	0	766
FPUC	0	0	0	0
JEA	320	0	0	320
OUC	30	0	0	30
Total	**3,833**	**536**	**2,562**	**6,931**

Source: FEECA utilities' 2022 demand-side management annual reports.

Figure 4 below shows that a higher number of C/I audits were conducted in 2019, prior to all of the periods of suspensions that occurred at different times in 2020 and 2021. In 2019, about 81 percent of all commercial/industrial audits were conducted as on-premises (in-person) audits, with the balance conducted virtually. In 2020, a pronounced shift to this proportion was observed, such that on-premises audits in that year declined to 53 percent of total commercial/industrial audits. In 2021, that shift reversed slightly, when the on-premises audits as a percentage of total audits rose to 59 percent. The total number of commercial/industrial audits declined significantly in 2020, and a smaller decrease was noted in 2021. In 2022, the total number of commercial/industrial audits increased compared to 2021, although the proportional number of virtual audits is dominated by the results from one utility (FPL).

Figure 4
Commercial / Industrial Audit Type Comparison (2019-2022)



Source: FEECA utilities' 2019-2022 demand-side management annual reports.

3.3 Low-Income Programs

The 2014 DSM Goals Order[31] states, "When the FEECA utilities file their DSM implementation plans, each plan should address how the utilities will assist and educate their low-income customers, specifically with respect to the measures with a two-year or less payback."[32] In accordance with this Order, each electric FEECA utility has implemented programs within its DSM plan that address low-income conservation. Low-income customer participation in energy conservation programs furthers the intent of FEECA by encouraging potential demand and energy reduction in Florida. Customers that participate in these programs benefit through increased knowledge of conservation opportunities and through rebates on energy saving equipment, resulting in potential bill reduction.

Low-income programs mainly focus on efforts to provide energy efficiency information, weatherization opportunities and the installation of energy efficient measures to residential homes. In many cases, the utilities have established partnerships with government and non-profit agencies. They work together to help identify low-income neighborhoods and educate customers on conservation opportunities through energy audits, bill inserts, presentations, and other measures.

[31]The 2014 DSM Goals Order references electric utilities only.
[32]Order No. PSC-14-0696-FOF-EU, issued December 16, 2014, in Docket Nos. 20130199-EI through 20130205-EI, *In re: Commission review of numeric conservation goals.*

Since 2015, all of the electric FEECA utilities have submitted programs in their DSM plans tailored to offer assistance to qualifying customers. Each FEECA utility's conservation efforts with respect to low-income customers during 2022 are discussed below.

FPL

Through its Low Income Weatherization program, FPL leverages its partnerships with Weatherization Assistance Providers throughout its territory to offer these providers rebates for installation of program measures in qualifying homes.[33] In 2022, FPL focused on direct outreach to income qualified communities by coordinating with property managers for large income qualified communities, as well as to individuals who have requested a home energy survey in income qualified zip codes. In it Northwest Florida service territory, FPL uses former Gulf Power vendor Honeywell International to deliver this program.

There are three ways a qualified customer can enroll in FPL's Low Income Weatherization program. First, when a customer in an income qualified zip code initiates contact with the company with a high bill concern or an energy survey request, the customer is encouraged to schedule an in-home energy survey. During that field service visit, the FPL representative conducting the energy survey will install program measures. Second, income qualified neighborhoods are identified and targeted for canvassing by FPL representatives who offer installation of program measures in a proactive manner. Finally, FPL customers can contact Weatherization Assistance Providers for direct assistance. The Weatherization Assistance Providers are responsible for qualifying customers who approach them for direct assistance, and would receive rebates directly from FPL when providing measure to customers.

DEF

DEF's Low Income Weatherization Assistance program is operated through weatherization agencies. The company and participating agencies, including the State of Florida's Department of Economic Opportunity, forge agreements to address direct payments from DEF to those entities upon the installation of weatherization measures. From DEF's website, customers must select a link requesting financial assistance, and thereafter, must make a selection for the "Low Income Energy Assistance program." Once that selection is made, customers must follow an additional website link to reach partnering agencies to obtain information on qualifying for this program. The company meets directly with participating agencies and organizations to share information about their Low Income Weatherization Assistance program and offers assistance in getting incentives through the program. In addition, DEF conducts Energy Education workshops for both agencies and their customers. DEF does not use advertising resources to promote this program.

In 2022, DEF worked with the Pinellas County Urban League, Mid-Florida Community Services, Osceola Council on Aging and other social service organizations to ensure these entities are aware of the benefits available to low-income customers. Currently, DEF is finalizing the arrangements for the Pinellas County Housing Authority to offer the program. DEF believes that this move will help increase participation in its Low Income Weatherization program.

[33]The Weatherization Assistance Program offered by FPL and other investor-owned electric utilities in Florida is a United States Department of Energy program that is administered at the state and local levels. Resource links are provided at this website: https://www.energy.gov/scep/wap/how-apply-weatherization-assistance

TECO

After periods of COVID-related suspensions in 2021, TECO's Neighborhood Weatherization (Low Income) program experienced a large increase in participation in 2022. (Participation in this program rose from 2,923 in 2021 to 9,159 in 2022.) In 2022, TECO used social media outlets (Facebook and Twitter) to promote this program and also to announce energy education and awareness events in their service territory. As in prior years, TECO partnered with and provides resources and training on an ongoing basis to different social service agencies regarding access to this and all of the company's DSM programs. In 2022, TECO customers learned about the program through direct contact with call center employees, or through referrals through social service agencies. After such referrals, company personnel were directly involved in determining if customers qualified for enrolling in the Neighborhood Weatherization program.

Although unrelated to it Neighborhood Weatherization program, TECO also began an energy equity initiative with the American Council for an Energy Efficient Economy to develop energy scorecards for measuring and benchmarking energy equity. TECO started a three year study through the Consortium for Energy Efficiency to characterize and define hard to reach audiences and to ensure the program administrators are equitably serving all their customers. TECO began sponsoring the Distributed Energy Financial Group's Executive Advisory Panel of the Equity in the Clean Energy Economy, which examines the impacts of distributed and renewable energy on the grid with particular attention provided to ensure that at-risk customers share the benefits of the transition to a clean energy economy. This sponsorship focuses on improving customer options, experience, and service to low income customers through the Low Income Energy Issues Forum. Also in 2022, TECO also joined a new partnership with the Center of Economic Development Organization to create awareness and provide education to veterans, disabled customers, seniors, and low income homeowners.

FPUC

FPUC does not offer a low income program, although it conducts outreach programs to all customers, including low-income customers, through the company's website, customer contact centers, billboards, and other forms of advertising in its service territory. From the company's website, all customers can access an on-line tool, Energy Expert, which provides energy-related tips, advice, articles, videos, blog content, and other downloadable materials. Via the Energy Expert program, FPUC customers learn about basic and advanced energy efficiency and conservation. FPUC also provides a downloadable reference file containing contact information for all Special Assistance Programs and Agencies within its operating territory. This on-line energy conservation resource features an "Ask the Energy Expert" feature which allows customers to submit energy-related questions to the company and receive a direct response from FPUC personnel.

JEA

JEA's specific program for low-income customers called its Neighborhood Energy Efficiency Program. This program included free installation of conservation products and provides energy education packets that give customers energy-saving ideas and information about JEA's other DSM programs. JEA also promotes the availability of nonprofit community-based utility bill assistance programs, including its Neighbor to Neighbor donation program. These programs are found on the JEA website and amplified through social media and direct email promotions.

In 2022, JEA continued its partnership with multiple government and non-profit agencies that provide direct and indirect financial assistance to customers in its service territory. In addition, JEA developed and presented conservation based educational resources designed to help homeowners understand the biggest users of energy and water inside and outside the home, and how to better manage usage.

OUC

In 2022, OUC continued its Project Care and Efficiency Delivered programs to assist low-income customers in conserving energy and demand. Project Care assists customers in paying their energy bills and implementing energy efficiency measures. OUC donates $2 for every $1 donated to the program. In the income-based Efficiency Delivered program, OUC pays for 85 percent of the costs for energy and water efficiency upgrades up to a cap of $2,500 per installation. Income qualified participants pay the remaining 15 percent over the first 24 months, interest free.

In 2022, OUC worked with contractors to send out energy reports to over 40,000 customers every month with tips and suggestions on ways to save energy. And although unrelated to specific program, the utility also enabled a Google Translate feature on its main website (OUC.com) in order to mitigate any language barriers for customers that speak languages other than English or Spanish.

3.4 Investor-Owned Utility Research and Development Programs

In addition to specific DSM programs that provide measurable demand and energy savings, the four electric IOUs conduct conservation research and development initiatives to evaluate emerging DSM opportunities. In these programs, Florida's electric IOUs often partner with universities or established industry research organizations. With the arrival of new electricity-consuming products and new technologies, research and development by Florida's electric IOUs creates opportunities to identify emergent options to conserve electricity. The recent initiatives undertaken by the electric IOUs are discussed below.

FPL

In 2022, FPL did not formally launch any new research initiatives, although it began exploring the prospect of retro-commissioning as a vehicle to expand the application of technologies such as energy recovery ventilators, demand control ventilators, and variable speed drives. FPL hopes to initiate a scoping project in the northwest portion of its service territory. A candidate customer facility has been identified, local engineering expertise has been retained, and the scoping study has started.

In 2022, FPL continued to develop their Smart Panel Customer pilot program started in 2020. After reviewing proposals from multiple existing and emerging equipment providers, FPL acquired small samples of three technologies to evaluate in employee homes. FPL continues to monitor and support these installations and incorporated early leanings into the subsequent Smart Panel Customer Pilot. FPL also continues dialogue with the Florida Solar Energy Center (FSEC) and the building science and engineering departments of several Florida universities. FPL continued its participation in Electric Power Research Institute (ERPI) and E-source research initiatives.

DEF

In 2022, DEF launched a project to evaluate the demand response capability of the Ford Lightning Electric Pickup Truck in a Vehicle-to-Grid (V2G) configuration. The pilot will consist of lab testing of the vehicle, electric vehicle charger and home integration system. DEF will also test the system in four employee volunteer homes. This project will focus on the capabilities of the Ford Lightning EV to provide V2G demand response, Vehicle-to-Home backup power and EV charging control. These systems could be used as a part of DEF's Demand Response Program. The project is expected to conclude in 2024.

In 2022, DEF continued a research project with the University of Central Florida (UCF) to document the value of long-duration customer-side energy storage systems, and with the University of South Florida (USF) to leverage customer-sited solar PV and energy storage. DEF continued a pilot to develop software, firmware, and applications for a Smart Home Gateway to evaluate the potential for a future home energy management program and its ability to enhance the Company's future energy efficiency and DR programs. In this pilot, capabilities are being developed and tested to enable appliance demand response using CTA-2045 (EcoPort) local control and also circuit breaker devices that can monitor and respond to changes in demand in real time. The Smart Home Gateway can also potentially be used to engage customer awareness of how energy is being used in the home. In addition, DEF continued the Electric Power Research Institute (EPRI) Solar DPV project for data collection to document customer solar resources with a focus on larger PV arrays with and without energy storage. DEF also continued participation in an EPRI project to study the potential of using customer demand response to compensate for variable loads and intermittent renewable generation resources.

In 2022, DEF completed the EPRI Energy Management Circuit Breaker (EMCB) Project. This project explored the potential for developing a program for customer circuit breakers that include communication, metering, and remote operation for potential applications including EE, DR, and integration of distributed energy resources. The EMCB hardware and software in the field pilot program collected operational data from appliances in 9 customer homes. The hardware from this project is being utilized in other ongoing Technology Development pilots including the V2G Project and the Smart Home Gateway Project. The commercial version of the EMCB-EV (a self-contained electric vehicle charger) is still being studied for potential opportunities for controlled charging for EVs and Demand Response capabilities. This data will be used to document the operation of these breakers and assess the cost-effectiveness for potential EE and DR programs.

TECO

TECO did not initiate any new projects in 2022. TECO, although it continued several, including its Light Emitting Diode (LED) Street and Outdoor Lighting program and also its Integrated Renewable Energy System (IRES) program that was initiated in 2021. The IRES program is gathering data from an array featuring an 862 kW photovoltaic system located on five carports, five commercial-sized power pack batteries capable of storing 1,160 kWh of energy, six dual headed level "2" electric vehicle charging systems, and 10 industrial truck battery charging stations.

In 2022, TECO also continued a research project with the University of South Florida (USF) to evaluate small to mid-size commercial battery storage installations through research and field study with at least one battery being installed at a commercial/industrial customer's facility.

FPUC

FPUC did not initiate any new research projects in 2022, although it continued work on its Powerhouse Project that began in 2021. This research study has been extended through 2023 at the request of the participant, an industrial customer in the Company's service territory. The Powerhouse Project gathers usage data and uses an engineered apparatus to moderate the amount of energy used by reducing the reactive power delivered to the customer. Results from the Powerhouse Project research are being analyzed by the manufacturer of the apparatus, by the utility, and also by the industrial customer. This project is expected to run through December 2023.

Section 4. Conservation Cost Recovery

Florida's IOUs are allowed to recover reasonable expenses for Commission-approved DSM programs through cost recovery clauses. For electric IOUs, the recovery mechanism is the ECCR clause. For natural gas LDCs, the recovery mechanism is the NGCCR clause. These costs include utility expenses such as administrative costs, equipment, and incentive payments to customers. Before requesting recovery of costs through the ECCR clause, an electric IOU must provide data on DSM program cost-effectiveness. The Commission conducts a financial audit each year prior to approving cost recovery of these expenses.

4.1 Electric IOU Cost Recovery

From 2010 through 2014, annual electric utility expenditures to fund conservation programs grew due to additions and modifications of these programs. However, total annual costs recovered from customers through the ECCR clause after 2014 have declined for most IOUs due to DSM program modifications. In addition, these utilities have reported that 2020 and 2021 COVID-related impacts have resulted in lower levels of customer participation in DSM programs, contributing to the more recent decline in DSM expenditures. Table 11 shows the annual DSM expenditures recovered by Florida's IOUs from 2013-2022.

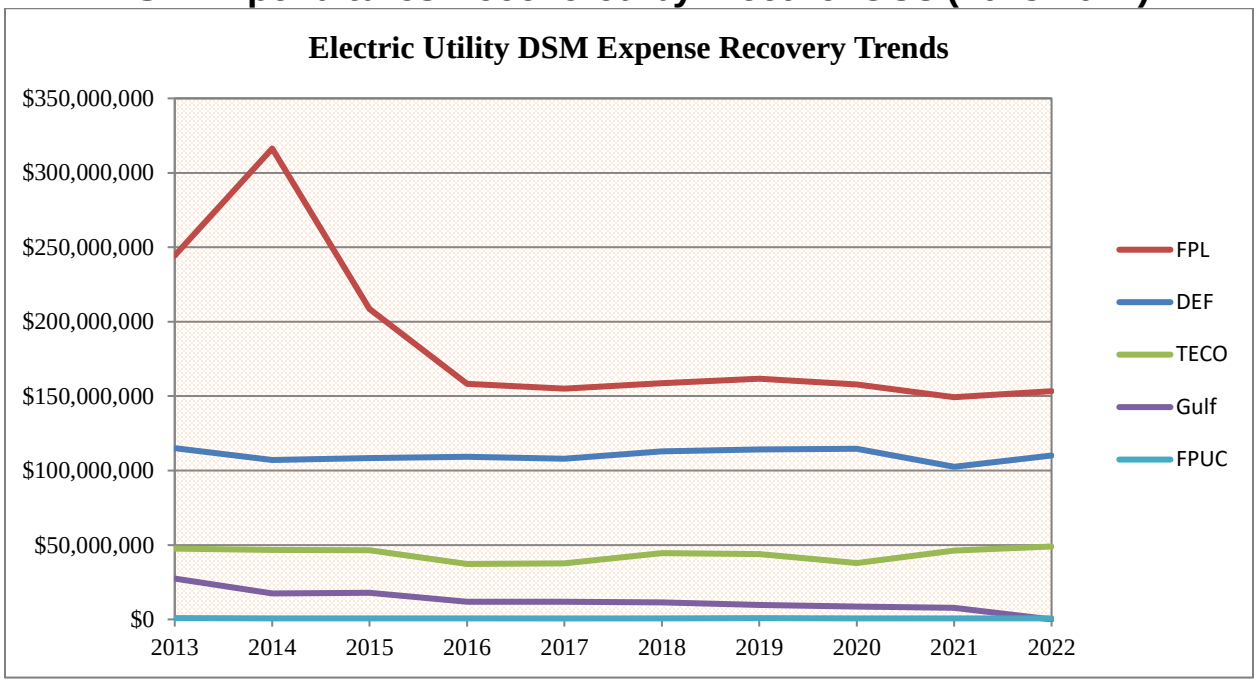
Table 11
DSM Expenditures Recovered by IOUs (2013-2022)

	FPL	DEF	TECO	Gulf	FPUC	Total
2013	$244,443,534	$115,035,455	$47,502,652	$27,431,962	$806,698	$435,220,301
2014	$316,311,166	$107,033,335	$46,620,508	$17,412,618	$772,612	$488,150,239
2015	$208,643,788	$108,455,141	$46,516,401	$17,961,885	$718,616	$382,295,831
2016	$158,174,787	$109,155,438	$37,242,148	$11,915,459	$687,590	$317,175,422
2017	$154,916,595	$107,890,962	$37,585,598	$11,854,558	$640,996	$312,888,709
2018	$158,735,829	$112,863,333	$44,558,717	$11,399,250	$656,154	$328,213,283
2019	$161,738,898	$114,084,224	$43,988,528	$9,607,262	$865,843	$330,284,755
2020	$157,892,907	$114,692,900	$37,850,526	$8,637,394	$782,143	$319,855,870
2021	$149,275,934	$102,542,901	$46,328,538	$7,852,934	$751,683	$306,751,990
2022	$153,282,683	$110,172,154	$48,985,457	*	$668,543	$313,108,837
Total						**$3,220,836,400**

Source: Docket Nos. 20140002-EG through 20230002-EG, Schedules CT-2 from the IOUs' May testimonies.
*Effective January 1, 2022, FPL and Gulf Power Company (Gulf) operationally merged.

Figure 5 shows trends in annual DSM expenditures for the five electric IOUs from 2013 to 2022.[34]

Figure 5
DSM Expenditures Recovered by Electric IOUs (2013-2022)



Source: Docket Nos. 20140002-EG through 20230002-EG, Schedules CT-2 from the IOUs' May testimony.
*FPL's 2014 recovery included a one-time $56.3 million payment to Solid Waste Authority of Palm Beach County related to a construction project to expand the capacity of an existing waste-to-energy facility. See DN 20110018-EU.

During the annual ECCR clause proceedings, the Commission approves the ECCR factors, by customer class, which each utility will apply to the energy and demand portions of customer bills. These factors are set using each IOU's estimated conservation costs for the next year and reconciliation for any actual conservation cost over- or under-recovery amounts associated with the current and prior years.

In November 2023, the Commission set the ECCR factors for the period January through December 2024. Table 12 illustrates the approved ECCR factors and the monthly bill impact for a residential customer. For illustrative purposes, these factors are applied to a monthly residential bill based on 1,000 kilowatt-hours (kWh) per month energy usage.

[34]Because Table 5 incorporates the dollar amounts for DSM expenditures between the largest (FPL) and smallest (FPUC) investor-owned electric utilities, the scale for the X-axis (dollars) must accommodate very small and very large data points. As such, the data points in the line graph for FPUC appears as near zero values, although the actual values range between $640,000 and $870,000.

Table 12
Residential Energy Conservation Cost Recovery Factors (2024)

Utility*	ECCR Factor (Cents per kWh)	Monthly Bill Impact (Based on usage of 1,000 kWh)
FPL	0.124	$1.24
DEF	0.330	$3.30
TECO	0.215	$2.15
FPUC	0.144	$1.44

Source: Order No. PSC-2023-XXXX-FOF-EG, Docket No. 20230002-EG.
*While JEA and OUC fall under the FEECA Statute, the Commission does not regulate electric rates for municipal utilities.

4.2 Natural Gas Cost Recovery

Commission Rule 25-17.015, F.A.C., establishes a mechanism for recovery of reasonable costs attributed to natural gas conservation programs. While PGS is the only natural gas utility subject to FEECA, the other LDCs covered in this section offer Commission-approved DSM programs without a specific therm savings goal. As it does for the electric IOUs, the Commission also conducts financial audits of the LDCs' conservation expenditures on a yearly basis and adjusts the LDCs' cost recovery factors to allow for recovery of actual and projected program-related costs. Table 13 shows the amounts each LDC recovered in natural gas conservation program expenditures from 2013-2022.

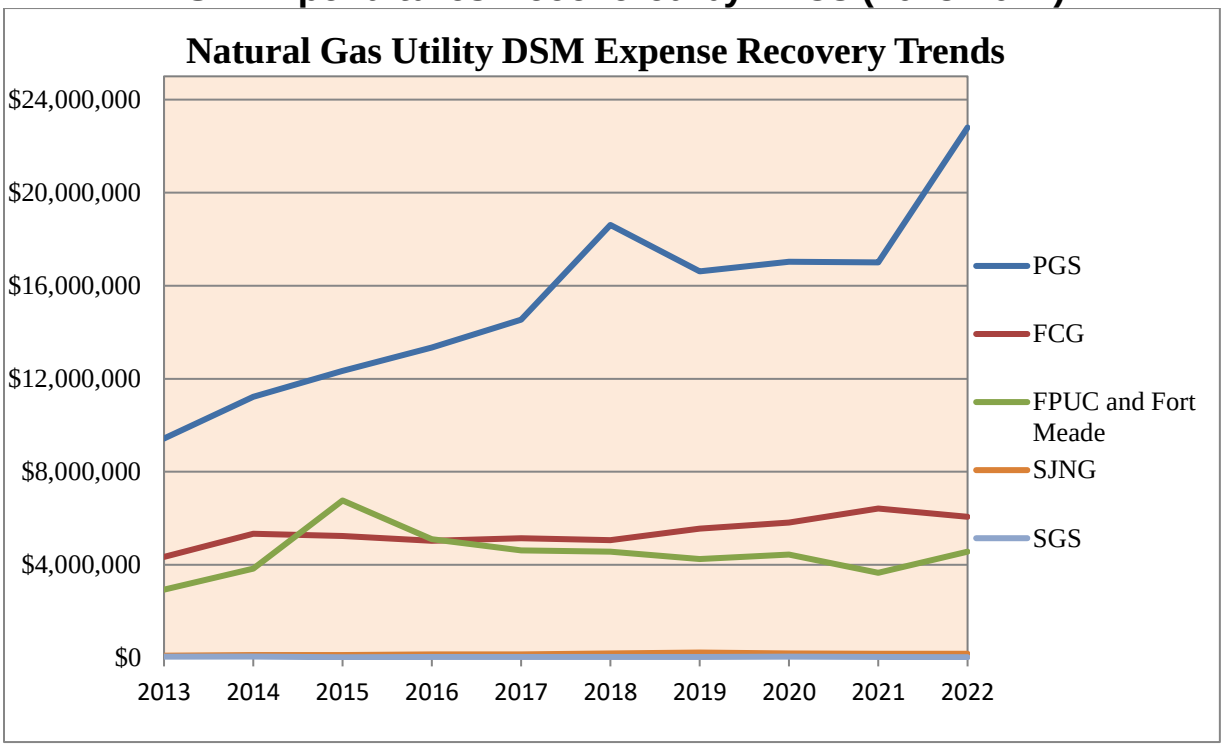
Table 13
DSM Expenditures Recovered by LDCs (2013-2022)

	PGS	FCG	FPUC Consolidated Companies			SJNG	SGS	Total
			FPUC and Fort Meade	Chesapeake	Indiantown			
2013	$9,432,551	$4,342,603	$2,935,140	$742,412	$10,222	$96,575	$53,967	$17,613,470
2014	$11,229,211	$5,343,191	$3,844,386			$128,000	$58,382	$20,603,170
2015	$12,335,245	$5,240,383	$6,768,175			$123,400	$33,563	$24,500,766
2016	$13,345,716	$5,037,863	$5,098,245			$156,250	$36,801	$23,674,875
2017	$14,543,555	$5,149,573	$4,617,501	*	*	$144,900	$42,237	$24,497,766
2018	$18,605,532	$5,067,917	$4,562,021			$190,625	$47,126	$28,473,221
2019	$16,619,336	$5,564,237	$4,252,769			$231,600	$46,184	$26,714,126
2020	$17,031,280	$5,824,651	$4,447,010			$189,625	$52,162	$27,544,728
2021	$16,999,771	$6,421,893	$3,653,829			$179,450	$40,411	$27,295,354
2022	$22,801,408	$6,070,844	$4,573,742			$173,225	$30,841	$33,650,060
Total								**$254,567,536**

Source: Docket Nos. 20130004-GU through 20230004-GU, Schedules CT-2 from LDCs' May testimonies.
*Spending combined with FPUC.

Figure 6 shows the trends in annual conservation expenditures for all LDCs from 2013 to 2022.[35] In 2013, the Commission approved the LDCs' Commercial Conservation programs, resulting in additional overall conservation expenditures.[36]

Figure 6
DSM Expenditures Recovered by LDCs (2013-2022)



Source: Docket Nos. 20130004-EG through 20230004-EG, Schedules CT-2 from the LDCs' May testimony.
*Note that since 2014, DSM expenditures for CUC and IGC were consolidated with FPUC-Fort Meade, and reported as FPUC Consolidated Companies.

In November 2023, the Commission set the natural gas LDC conservation cost recovery factors for the 2024 billing cycle. Table 14 provides the LDCs' residential cost recovery factors for 2024 and the impact on a residential customer bill using 20 therms of natural gas per month.

[35]Because Table 6 incorporates the dollar amounts for DSM expenditures between the largest (PGS) and smallest (SGS) investor-owned natural gas utilities, the scale for the X-axis (dollars) must accommodate very small and very large data points. As such, the data points in the line graph for SGS and SJNG appear as near zero values, although the actual values range between $30,000 and $58,000 for SGS and $96,000 and $231,000 for SJNG. The upward-sloping trend line shown for PGS in 2022 was due to an under-recovery of actual costs primarily attributable to new construction activity in its service territory.
[36]Order No. PSC-14-0039-PAA-EG, issued January 14, 2014, in Docket No. 130167-EG, *In re: Petition for approval of natural gas energy conservation programs for commercial customers, by Associated Gas Distributors of Florida.*

Table 14
Residential Natural Gas Conservation Cost Recovery Factors in 2024

Utility	Cost Recovery Factor (Cents per Therm)	Monthly Bill Impact (Based on usage of 20 Therms)
PGS	21.579	$4.32
FCG	29.484	$5.90
FPUC – Consolidated	13.035	$2.61
SJNG	33.922	$6.78
SGS	12.985	$2.60

Source: Order No. PSC-2023-XXXX-FOF-GU, Docket No. 20230004-GU.

Section 5. Educating Florida's Consumers on Conservation

5.1 Commission Consumer Education Outreach

While the Commission has statutory authority to require conservation efforts by regulated utilities, as part of the agency's outreach program, the Commission complements utility efforts with its conservation-related activities. To effectively reach as many consumers as possible, the Commission's consumer education program uses a variety of platforms to share conservation information, including the Commission website, public events, brochures, press releases and articles, E-Newsletters, YouTube, LinkedIn, and X (formerly Twitter). Most of the data in this section covers October 2022 through August 2023.

Conservation information is also available through other governmental and utility websites. Section 5.2 lists related websites for state and federal agencies, investor-owned electric utilities, and local gas distribution companies to assist consumers further.

Triple E Award

Every four months, the Commission recognizes a small business for implementing Commission-approved, cost-effective conservation programs. Covering the state's five major geographic areas, the Commission presents its Triple E Award─for Energy Efficiency Efforts─to a local business that has accomplished superior energy efficiency by working with its local utility to help reduce its energy footprint. Triple E Award recipients receive an award plaque, are highlighted statewide via a press release and on X (@floridapsc), and are featured and archived on the FPSC website, www.FloridaPSC.com, under Consumer Information/Consumer Portal.

Website Outreach Resources

In January 2023, the Commission launched its new and improved consumer-friendly website, www.FloridaPSC.com. There is an assortment of energy conservation brochures, publications, and other free resources to help consumers save energy on the new FPSC website. Conservation brochures may be viewed and printed directly from FloridaPSC.com/publications, ordered online, or requested by mail or phone. The Commission received almost 50,000 requests for its publications during the reporting period, and according to Google Analytics, Consumer Assistance website page views reached nearly 525,000.

Newsletters

Recently redesigned and updated, the Commission's quarterly Consumer Connection Newsletter (CCN) features current energy and water conservation topics, consumer tips, and general Commission information. Conservation-related information highlighted through video and text during the reporting period includes: *Chairman Andrew Fay Demonstrates Drone Technology Used by Utilities, How to Spot a Scam, New Mini Guide on Transportation Electrification,* and *Conquer the Chill with a Lower Electricity Bill*. The CCN is available under Consumer Assistance on the Commission's homepage and distributed to consumers via X (@floridapsc) or by subscribing to the free newsletter online.

National Consumer Protection Week

National Consumer Protection Week (NCPW), March 5-11, 2023, highlights consumer protection and education. The Commission joins the annual Federal Trade Commission effort to promote conservation education to help protect consumers' bottom line. Chairman Andrew Fay recognized the 25th Annual NCPW by raising awareness and education on scams targeting utility customers that oftentimes offer erroneous home energy audits.

For NCPW 2023, the Commission presented information to consumers in Bay, Duval, and Leon Counties, showing them how to save money through energy and water conservation and avoid scams. A virtual meeting was also held with a housing authority in Pasco County. For more than a decade, the FPSC has joined government agencies, advocacy organizations, and private sector groups nationwide to highlight NCPW.

Older Americans Month

Each May, the Commission participates in Older Americans Month, a national project to honor and recognize older Americans for their contributions to families, communities, and society. "Aging Unbound" was the theme for Older Americans Month 2023. The FPSC partnered with community centers in Clay, Lake, and Leon Counties to meet with seniors in person and discuss FPSC information. A virtual meeting was also held with a housing authority in Collier County.

Energy Awareness Month

Each October, the U.S. Department of Energy sponsors National Energy Awareness Month to promote smart energy choices and highlight economic and job growth, environmental protection, and increased energy independence. In 2022, the FPSC shared daily conservation tips on X (@floridapsc) during the month, including its Conservation House, Conserve Your World and related outreach information with consumer energy saving tips.

Community Events

FPSC Commissioners are active in communities around the state and present energy conservation information to students at area schools, seniors and low-income residents at local community centers, and county and city businesses at meetings or other events. Through ongoing partnerships with governmental entities, consumer groups, and many other service organizations, the Commission regularly distributes energy and water conservation materials. The FPSC also actively seeks new community events, venues, and opportunities where conservation materials can be distributed and discussed with consumers. In-person outreach events resumed during the 2022-2023 reporting period and virtual events continued, with more public meetings and events scheduled in the future.

In-person events where conservation information was shared from October 2022 through August 2023 included:

- Ft. Braden Community Center Lunch and Learn
- Dixie County Senior Center
- Gilchrist County Client Senior/Service Center
- Levy County Client Senior Services - Chiefland
- Chaires Community Center Lunch and Learn
- Miccosukee Community Center Lunch and Learn

- Holmes County Council on Aging
- Bradfordville Community Center Lunch and Learn
- Baker County Council on Aging
- Mary Sue Rich Community Center
- 8th Avenue Adult Activity Center
- Bay County Council on Aging, First Baptist Church
- Bay County Council on Aging, Coulliette Senior Center
- Frances Padgett Senior Center
- Mary L. Singleton Senior Center
- Woodville Community Center
- Suwannee County Health and Wellness Fair
- Hernando County Day at the Capitol
- Washington County on Aging 2023 Senior Expo
- Holmes County Council on Aging 2023 Health Fair
- William M. Beam Senior Center
- Weigel Senior Center
- Leesburg Senior Center
- Southside Umatilla Community Center
- Grandparents as Parents (GaP)
- Woodville Community Center
- Jefferson County Senior Citizens Center
- Hamilton County Senior Service Center
- Madison County Senior Citizens Counsel

Virtual meetings where conservation information was shared from October 2022 through August 2023 included:

- Bradford County Senior Center
- Hendry County State Housing Initiatives Program
- Flagler County Board of County Commissioners, Social Services/Senior Division
- Mid-Florida Community Services, Inc.
- Tampa Housing Authority
- Pasco County Housing Authority
- Okeechobee County Housing Authority
- Collier County Housing Authority
- Nassau County State Housing Initiatives Program
- Nassau County Council on Aging
- Osceola Council on Aging

Hearings and Customer Meetings

As an ongoing outreach initiative, the Commission supplies conservation brochures to consumers at FPSC service hearings and customer meetings across the state. Over the past few years, most service hearings and customer meetings have become virtual for the convenience of utility customers, limiting one-on-one educational opportunities. Outreach is achieved through an FPSC

Rate Case Overview, which all participating customers receive, that answers FAQs on the utility's rate increase request and includes Commission website links to consumer information. Two in-person service hearings during the reporting period allowed FPSC staff to share and discuss conservation brochures with attending customers.

Library Outreach Campaign

Each August, the Commission provides educational packets, including FPSC conservation materials, to Florida public libraries across the state for consumer distribution. The Commission's electronic Library Outreach Campaign reached 617 state public libraries and branches in 2023. Following the Campaign, many libraries request hard copies of FPSC brochures throughout the year.

Media Outreach

News releases are posted to the website and distributed via email and X (formerly Twitter) on major Commission decisions, meetings, and public events. The FPSC also issues news releases or posts videos to X and LinkedIn, urging energy and water conservation during annual outreach programs, such as Energy Awareness Month and NCPW. Water conservation was highlighted in March with a release on Fix a Leak Week, sponsored by the Environmental Protection Agency, and in May for National Drinking Water Week, sponsored by the American Water Works Association. FPSC articles on conservation are also featured in *Aging Outlook*, the biannual digital newspaper of the Florida Department of Elder Affairs.

Youth Education

The Commission supports conservation education for Florida's young consumers. Through the FPSC's student resource booklet, Get Wise and Conserve Florida!, children can learn about energy and water conservation through engaging puzzles and games. The booklet is promoted to all public libraries through the Library Outreach Program, is available at all Commission outreach events, and continues to be a favorite during senior events.

5.2 Related Websites

State Agencies and Organizations

- Florida Public Service Commission – http://www.floridapsc.com/
- Florida Department of Environmental Protection – http://www.dep.state.fl.us
- The Office of Energy – https://www.fdacs.gov/Divisions-Offices/Energy
- Florida Solar Energy Center – https://energyresearch.ucf.edu/
- Florida Weatherization Assistance – https://www.benefits.gov/benefit/1847
- Florida's Local Weatherization Agencies List - https://floridajobs.org/community-planning-and-development/community-services/weatherization-assistance-program/contact-your-local-weatherization-office-for-help

U.S. Agencies and National Organizations

- U.S. ENERGY STAR Program – https://www.energystar.gov/
- U.S. Department of Energy – Energy Efficiency and Renewable Energy Information http://www.eere.energy.gov/
- National Energy Foundation – https://nef1.org/

Florida's Utilities Subject to FEECA

- Florida Power & Light Company – http://www.fpl.com/
- Duke Energy Florida, LLC – http://www.duke-energy.com/
- Tampa Electric Company – http://www.tampaelectric.com/
- Florida Public Utilities Company – http://www.fpuc.com/
- JEA – http://www.jea.com/
- Orlando Utilities Commission – http://www.ouc.com/
- Peoples Gas System – http://www.peoplesgas.com/

Florida's Investor-Owned Natural Gas Utilities

- Florida City Gas – http://www.floridacitygas.com/
- Florida Division of Chesapeake Utilities – http://www.chpk.com/companies/chesapeake-utilities/
- Florida Public Utilities Company – http://www.fpuc.com/
- Florida Public Utilities Company – Ft. Meade Div. – http://www.fpuc.com/fortmeade/
- Florida Public Utilities Company – Indiantown Div. – http://www.fpuc.com/about/fpufamily
- Peoples Gas System – http://www.peoplesgas.com/
- Sebring Gas System – http://www.sebringgas.com/
- St. Joe Natural Gas Company – http://www.stjoenaturalgas.com/

Appendix A. 2022 FEECA Utility Conservation Programs

Electric IOUs

Florida Power & Light Company	
Residential Programs	Residential Home Energy Survey Residential Load Management (On Call®) Residential Air Conditioning Residential New Construction (BuildSmart®) Residential Ceiling Insulation Residential Low-Income Weatherization
Commercial/Industrial Programs	Business Energy Evaluation (BEE) Business On Call® Commercial/Industrial Demand Reduction (CDR) Commercial/Industrial Load Control (CILC) Business Heating, Ventilating, and Air Conditioning (HVAC) Business Lighting Business Custom Incentive (BCI) Curtailable Load
Other	Conservation Research and Development (CRD) Cogeneration & Small Power Production

Duke Energy Florida, LLC	
Residential Programs	Home Energy Check Residential Incentive Neighborhood Energy Saver Low-Income Weatherization Assistance Residential Load Management
Commercial/Industrial Programs	Business Energy Check Smart $aver Business (f/k/a Better Business) Commercial Energy Management Smart $aver Custom Incentive Interruptible Service Curtailable Service Standby Generation
Other	Technology Development Qualifying Facilities

Tampa Electric Company	
Residential Programs	Residential Energy Audits (4 Programs) Residential Ceiling Insulation Residential Duct Repair Energy Education, Awareness, and Agency Outreach ENERGY STAR for New Multi-Family ENERGY STAR for New Homes ENERGY STAR Pool Pumps ENERGY STAR Thermostats Residential Heating and Cooling Neighborhood Weatherization (Low-Income) Residential Price Responsive Load Management (Energy Planner) Residential Prime Time Plus (Residential Load Management) Residential Window Replacement
Commercial/Industrial Programs	Commercial/Industrial Energy Audits (2 Programs) Commercial Chiller Cogeneration Conservation Value Commercial Cooling Demand Response Facility Energy Management System Industrial Load Management (GSLM 2&3) Street and Outdoor Lighting Conversion Lighting Conditioned Space Lighting Non-Conditioned Space Lighting Occupancy Sensors Commercial Load Management (GSLM 1) Commercial Smart Thermostats Standby Generator Variable Frequency Drive for Compressors Commercial Water Heating
Other	Conservation Research and Development Integrated Renewable Energy System Renewable Energy

Florida Public Utilities Company	
Residential Programs	Residential Energy Survey Residential Heating and Cooling Efficiency Upgrade
Commercial/Industrial Programs	Commercial Energy Consultation Commercial Heating and Cooling Efficiency Upgrade Commercial Chiller Upgrade Commercial Reflective Roof
Other	Conservation Demonstration and Development Low-Income Energy Outreach

Electric Municipal Utilities

JEA	
Residential Programs	Residential Energy Audit Residential Solar Water Heating Neighborhood Efficiency (Low-Income) Residential Efficiency Upgrade Energy Efficient Products MyWay Prepaid Program
Commercial/Industrial Programs	Commercial Energy Audit Commercial Prescriptive Lighting Program Commercial Prescriptive Small Business Direct Install Custom Commercial

Orlando Utilities Commission	
Residential Programs	Home Energy Survey Duct Repair Rebate Ceiling Insulation Rebate High-Performance Windows Rebate Efficient Electric Heat Pump Rebate New Home Rebate Heat Pump Water Heater Rebate Efficiency Delivered (Low-Income)
Commercial/Industrial Programs	Energy Audit Efficient Electric Heat Pump Rebate Duct Repair Rebate Ceiling Insulation Rebate Cool/Reflective Roof Rebate Indoor Lighting Billed Solution Indoor Lighting Rebate Custom Incentive

Natural Gas LDC

Peoples Gas System	
Residential Programs	Residential Customer Assisted Energy Audit Residential New Construction Residential Retrofit Residential Retention
Commercial/Industrial Programs	Commercial Walk-Through Energy Audit Commercial New Construction Commercial Retrofit Commercial Retrofit Combined Heat & Power Commercial Retrofit Electric Replacement Commercial Retention
Other	Conservation Research and Development

Appendix B. 2022 FEECA Utility Conservation Program Descriptions

Electric FEECA IOUs

A. Florida Power & Light Company

Residential Programs

- **Residential Home Energy Survey**
  The Residential Home Energy Survey Program educates customers on energy efficiency and encourages implementation of recommended energy efficiency measures, even if they are not included in FPL's DSM programs. The Residential Home Energy Survey Program is also used to identify potential candidates for other FPL DSM programs. FPL offers in-home, phone-assisted, and online audits for its residential customers.

- **Residential Load Management (On Call)**
  The Residential Load Management Program allows FPL to turn off certain customer-selected appliances using FPL-installed equipment during periods of extreme demand, capacity shortages, or system emergencies.

- **Residential Air Conditioning**
  The Residential Air Conditioning Program encourages customers to install high-efficiency central air conditioning systems.

- **Residential New Construction (BuildSmart®)**
  The Residential New Construction Program encourages builders and developers to design and construct new homes that achieve BuildSmart® certification and move towards ENERGY STAR® qualifications.

- **Residential Ceiling Insulation**
  The Residential Ceiling Insulation Program encourages customers to improve their homes' thermal efficiency.

- **Residential Low-Income Weatherization**
  The Residential Low-Income Weatherization Program assists low-income customers through state Weatherization Assistance Provider (WAP) agencies and FPL-conducted Energy Retrofits.

Commercial/Industrial Programs

- **Business Energy Evaluation (BEE)**
  The Business Energy Evaluation Program educates customers on energy efficiency and encourages implementation of recommended practices and measures, even if these are not

included in FPL's DSM programs. The Business Energy Evaluation is also used to identify potential candidates for other FPL DSM programs. FPL offers the Business Energy Evaluation in on-site or online formats.

- **Business On Call®**
  The Business On Call® Program allows FPL to turn off customers' direct expansion central air-conditioning units using FPL-installed equipment during periods of extreme demand, capacity shortages, or system emergencies.

- **Commercial/Industrial Demand Reduction (CDR)**
  The Commercial/Industrial Demand Reduction Program allows FPL to control customer loads of 200 kW or greater during periods of extreme demand, capacity shortages, or system emergencies. FPL installs a load management device at the customer's facility and provides monthly credits to customers. Unlike the CILC program, the CDR program is still open to new customers.

- **Commercial/Industrial Load Control (CILC)**
  The Commercial/Industrial Load Control Program allows FPL to control customer loads of 200 kW or greater during periods of extreme demand, capacity shortages, or system emergencies. The CILC Program was closed to new participants as of 2000, but is available for existing participants who entered into a CILC agreement as of March 1996.

- **Business Heating, Ventilating, and Air Conditioning (HVAC)**
  The Business HVAC Program encourages customers to install high-efficiency HVAC systems.

- **Business Lighting**
  The Business Lighting Program encourages customers to install high-efficiency lighting systems.

- **Business Custom Incentive (BCI)**
  The Business Custom Incentive Program encourages customers to install unique high-efficiency technologies not covered by other FPL DSM programs.

- **Curtailable Load**
  The Curtailable Load program provides qualifying customers capacity payments for electric load which could be curtailed during certain conditions. This program was closed for new enrollment as of January 1, 2022.

Other Programs

- **Conservation Research and Development (CRD) Project**
  This project consists of research studies designed to: identify new energy efficient technologies; evaluate and quantify their impacts on energy, demand, and customers; and where appropriate and cost-effective, incorporate an emerging technology into a DSM program.

- **Cogeneration & Small Power Production**
  The Cogeneration and Small Power Production Program facilitates the interconnection and administration of contracts for cogenerators and small power producers.

B. Duke Energy Florida, LLC

Residential Programs

- **Home Energy Check**
  The Home Energy Check is a residential energy audit program that provides residential customers with an analysis of their energy consumption and educational information on how to reduce energy usage and save money. The Home Energy Check Program is the foundation for other residential demand-side management programs and offers walkthrough, online, phone-assisted, and Home Energy Rating audits for its residential customers. Participants in the program may receive a residential Energy Efficiency Kit that contains energy-saving measures that can be easily installed and utilized by the customer.

- **Residential Incentive**
  The Residential Incentive Program provides incentives to residential customers for energy efficiency improvements in both existing and new homes. This includes incentives for measures such as duct testing, duct repair, attic insulation, replacement of windows, high-efficiency heat pump replacing resistance heat, high-efficiency heat pump replacing a heat pump, and newly constructed Energy Star homes.

- **Neighborhood Energy Saver**
  The Neighborhood Energy Saver Program installs energy conservation measures, identified through an energy assessment, in the homes of customers in selected neighborhoods where at least 50 percent of households have incomes equal to or less than 200 percent of the poverty level established by the U.S. government.

- **Low-Income Weatherization Assistance Program**
  The Low-Income Weatherization Assistance Program works with the Florida Department of Economic Opportunity and local weatherization providers to deliver energy education, efficiency measures, and incentives to weatherize the homes of income-eligible families. DEF assists by providing energy education materials and financial incentives to weatherize the homes of low-income families.

- **Residential Load Management**
  The Residential Load Management Program is a voluntary program that uses direct control of customer equipment to reduce system demand during winter and summer peak capacity periods by controlling service to select customer appliances.

Commercial/Industrial Programs

- **Business Energy Check**
  The Business Energy Check Program is a commercial energy audit program that provides commercial customers with an analysis of their energy usage and information about energy-saving practices and cost-effective measures that they can implement at their facilities.

- **Smart $aver Business (f/k/a Better Business**
  Smart $aver Business is an umbrella efficiency program that provides incentives to existing C/I and government customers for HVAC, ceiling and roof insulation upgrades, duct leakage and repair, demand-control ventilation, and cool roof coating.

- **Commercial Energy Management**
  The Commercial Energy Management Program uses direct control of customer equipment to reduce system demand during winter and summer peak capacity periods. The Commercial Energy Management Program was closed to new participants in 2000, but is still open for existing participants.

- **Smart $aver Custom Incentive**
  The Smart $aver Custom Incentive Program is designed to encourage C/I customers to make capital investments for energy-efficiency measures which reduce peak demand and provide energy savings. This program provides incentives for projects which are cost-effective but not otherwise addressed through DEF's incentive programs.

- **Interruptible Service**
  Interruptible Service is a direct load control program that allows DEF to reduce system demand by interrupting electrical service during times of capacity shortage during peak or emergency conditions. In return, customers receive a monthly bill credit.

- **Curtailable Service**
  Curtailable Service is an indirect load control program that reduces system demand through customer contracts to curtail all or a portion of their electricity demand at times of capacity shortage during peak or emergency conditions. In contrast to the Interruptible Service Program, the customer is able to control whether their appliances are turned off during times of stress on the grid. In return, customers receive a monthly bill credit.

- **Standby Generation**
  The Standby Generation Program is a demand control program that allows DEF to reduce system demand by dispatching the customer's standby generator. This is a voluntary program available to C/I customers who have on-site generation capability and are willing to reduce demand on DEF's system when requested for system reliability purposes.

Other Programs

- **Technology Development**
  The Technology Development Program allows DEF to investigate technologies that support the development of new demand response and energy-efficiency programs. DEF is investigating hardware and software to manage residential loads, the value of long-duration customer-side energy storage systems, precision temperature measurement and analysis, solar resources, and data and patterns related to charging electric vehicles.

- **Qualifying Facilities Program**
  This program develops standard offer contracts, negotiates, enters into, amends and restructures nonfirm energy, and firm energy and capacity contracts entered into with qualifying cogeneration, small power producers, and renewable facilities.

C. Tampa Electric Company

Residential Programs

- **Residential Energy Audit Programs**
  Tampa Electric offers four Residential Energy Audits Programs, including walk-through free energy audits, customer assisted energy audits, and also computer assisted audits.

- **Residential Ceiling Insulation**
  The Residential Ceiling Insulation Program offers rebates to existing residential customers to install additional ceiling insulation in existing homes.

- **Residential Duct Repair**
  The Residential Duct Repair Program encourages residential customers to repair leaky duct work of central air conditioning systems in existing homes.

- **Energy Education, Awareness, and Agency Outreach**
  The Energy Education, Awareness, and Agency Outreach Program engages and educates groups of customers and students on energy efficiency in an organized setting. Also, participants receive an energy savings kit with energy saving devices and information.

- **ENERGY STAR for New Multi-Family Residences**
  The ENERGY STAR for Multi-Family Residences Program utilizes a rebate to encourage construction of new multi-family residences that meet the requirements to achieve the ENERGY STAR certified apartments and condominiums label.

- **ENERGY STAR for New Homes**
  The ENERGY STAR for New Homes Program incentivizes residential home builders to build homes that qualify for the ENERGY STAR award by achieving energy efficiency levels greater than current Florida building code baseline practices.

- **ENERGY STAR Pool Pumps**
  The ENERGY STAR Pool Pumps Program offers customer rebates for installing high efficiency ENERGY STAR rated pool pumps to help reduce their energy consumption while reducing TECO's weather sensitive peak demand.

- **ENERGY STAR Thermostats**
  The ENERGY STAR Thermostats Program offers customer rebates for installing an ENERGY STAR certified smart thermostat to help reduce their energy consumption while reducing TECO's weather sensitive peak demand.

- **Residential Heating and Cooling**
  The Residential Heating and Cooling Program offers rebates to residential customers for installing high-efficiency heating and cooling equipment in existing homes.

- **Neighborhood Weatherization (Low-Income)**
  The Neighborhood Weatherization Program provides for the installation of energy efficient measures for qualified low-income customers.

- **Residential Price Responsive Load Management (Energy Planner)**
  The Residential Price Responsive Load Management (Energy Planner) Program reduces weather-sensitive loads through an innovative price responsive rate. The price responsive rate encourages residential customers to make behavioral or equipment usage changes by pre-programming HVAC, water heating, and pool pumps.

- **Residential Prime Time Plus (Residential Load Management)**
  The Residential Prime Time Plus (Residential Load Management) is a residential load management program designed to alter the Utility's system load curve by reducing summer and winter demand peaks. Customers participating in Prime Time Plus will receive monthly incentive credits on their electric bill. This program is an enhancement of a retired program with a similar name (Residential Prime Time).

- **Residential Window Replacement**
  The Residential Window Replacement Program offers rebates to existing residential customers to install window upgrades in existing homes.

Commercial Programs

- **Commercial/Industrial Energy Audit Programs**
  Tampa Electric offers two C/I Energy Audits Programs, one free, and the other a more comprehensive audit that a customer pays for.

- **Commercial Chiller**
  The Commercial Chiller Program offers rebates to C/I customers for installing high efficiency chiller equipment.

- **Cogeneration**
  The Cogeneration Program incentivizes large industrial customers with waste heat or fuel resources to use their onsite energy to avoid fuel waste and install electric generating equipment. The large industrial customers may sell their surplus electric generation to TECO.

- **Conservation Value**
  The Conservation Value Program offers rebates to C/I customers to invest in energy conservation measures that are not in other C/I programs.

- **Commercial Cooling**
  The Commercial Cooling Program encourages C/I customers to install high efficiency direct expansion commercial air conditioning cooling equipment.

- **Demand Response**
  The Demand Response Program incentivizes C/I customers to reduce electricity demand at certain peak times.

- **Facility Energy Management System**
  The Facility Energy Management System Program offers customer rebates for installing a facility energy management system that provides real time operational, production and energy consumption information which enables the customer to reduce their energy consumption and demand and reducing TECO's peak demand.

- **Industrial Load Management (GSLM 2&3)**
  The Industrial Load Management Program incentivizes large industrial customers to allow TECO to interrupt part or all of their electrical service during periods of peak grid stress.

- **Street and Outdoor Lighting Conversion**
  The Street and Outdoor Lighting Conversion Program is designed to encourage the conversion from Non-Light Emitting Diode ("LED") street and outdoor lighting luminaires to eligible LED luminaires in a five-year program. The goal of this program is to install energy efficient LED street and outdoor lighting technology to reduce the energy consumption and demand and reducing TECO's peak demand.

- **Lighting Conditioned Space**
  The Lighting Conditioned Space Program encourages C/I customers to invest in more efficient lighting technologies in existing conditioned areas of C/I facilities.

- **Lighting Non-Conditioned Space**
  The Lighting Non-Conditioned Space Program encourages C/I customers to invest in more efficient lighting technologies in existing non-conditioned areas of C/I facilities.

- **Lighting Occupancy Sensors**
  The Lighting Occupancy Sensors Program encourages C/I customers to install occupancy sensors to control C/I lighting systems.

- **Commercial Load Management**
  The Commercial Load Management Program incentivizes C/I customers to allow TECO to control weather-sensitive heating, cooling, and water heating systems to reduce the associated weather-sensitive peak demand.

- **Commercial Smart Thermostats**
  The Commercial Smart Thermostats Program offers customer rebates for installing smart thermostats to help reduce their demand while reducing TECO's weather sensitive peak demand.
- **Standby Generator**
  The Standby Generator Program incentivizes C/I customers to use available emergency electrical generation capacity to reduce weather-sensitive peak demand on the grid.

- **Variable Frequency Drive for Compressors**
  The Variable Frequency Drive for Compressors Program offers customer rebates for installing variable frequency drives to their new or existing refrigerant or air compressor motors to help reduce their demand while reducing TECO's weather sensitive peak demand.

- **Commercial Water Heating**
  The Commercial Water Heating Program encourages C/I customers to install high efficiency water heating systems.

Other Programs

- **Conservation Research and Development**
  The Conservation Research and Development Program allows TECO to explore DSM measures that have insufficient data on cost-effectiveness and the impact on TECO's ratepayers.

- **Integrated Renewable Energy System (Pilot Program)**
  The commercial/industrial Integrated Renewable Energy System is a five-year pilot program to study the capabilities and DSM opportunities of a fully integrated renewable energy system. The integrated renewable energy system will also be used as an education platform for commercial and industrial customers.

- **Renewable Energy**
  The Renewable Energy (Sun to Go) Program delivers renewable energy options to TECO's customers through program administration, renewable electricity generation, evaluation of potential new renewable sources, and market research.

D. Florida Public Utilities Company

Residential Programs

- **Residential Energy Survey**
  In the Residential Energy Survey Program, FPUC offers in-home and online audits which provides the customer with specific whole-house energy efficiency recommendations, a list of blower-door test contractors who can check for duct leakage, and a conservation kit.

- **Residential Heating and Cooling Efficiency Upgrade**
  The Residential Heating and Cooling Upgrade Program incentivizes customers operating inefficient heat pumps and air conditioners to replace them with more efficient units.

Commercial Programs

- **Commercial Energy Consultation**
  In the Commercial Energy Consultation Program, FPUC energy conservation representatives conduct commercial site visits to assess the potential for applicable DSM programs, educate customers about FPUC's commercial DSM programs, conduct a bill review, offer energy savings suggestions, and inform customers about commercial online resources and tools.

- **Commercial Heating and Cooling Efficiency Upgrade**
  The Commercial Heating and Cooling Upgrade Program provides rebates to small commercial customers (customers with a maximum of 5-ton units) if the customers install a high-efficiency central air conditioner or heat pump with a minimum 15 SEER.

- **Commercial Reflective Roof**
  The Commercial Reflective Roof Program provides rebates to non-residential customers and contractors who convert or install a new cool roof on existing facilities or on new building construction. The roofing material must be Energy Star Certified.

- **Commercial Chiller Upgrade**
  The Commercial Chiller Upgrade Program offers commercial customers who replace existing chillers with a more efficient system, an incentive of up to $100 per kW of additional savings above the minimum efficiency levels.

Other Programs

- **Conservation Demonstration and Development**
  The Conservation Demonstration and Development Program researches energy efficiency and conservation projects to identify, develop, demonstrate, and evaluate promising end-use energy efficient technologies across a wide variety of applications. In 2019, FPUC installed two battery storage systems to improve customer electric system reliability and resiliency, and has extended this study with completion expected in 2021.

- **Low-Income Energy Outreach**
  The Low-Income Energy Outreach Program partners with Department of Economic Opportunity approved Low-Income Weatherization Program operators to offer Residential Energy Surveys, host energy conservation events, and distribute conservation materials.

Electric FEECA Municipal Utilities

A. JEA

Residential Programs

- **Residential Energy Audit**
  In the Residential Energy Audit Program, utility auditors examine homes, educate customers, and makes recommendations on low-cost or no-cost energy-saving practices and measures.

- **Residential Solar Water Heating**
  The Residential Solar Water Heating Program pays a financial incentive to customers to encourage the use of solar water heating technology.

- **Neighborhood Efficiency (Low-Income)**
  The Neighborhood Efficiency Program offers education on the efficient use of energy and water as well as the direct installation of an array of energy and water efficiency measures at no cost to income qualified customers.

- **Residential Efficiency Upgrade**
  The Residential Efficiency Upgrade Program provides incentives to encourage the use of high efficiency HVAC and water heating. This program has not been approved by the Commission and is not part of JEA's FEECA goalsetting process. Nevertheless, JEA maintains that this program creates demand and energy savings.

- **Energy Efficient Products**
  The Energy Efficient Products Program provides incentives to encourage the use of high efficiency lighting and efficient appliances. This program has not been approved by the Commission and is not part of JEA's FEECA goalsetting process. Nevertheless, JEA maintains that this program creates demand and energy savings.

- **MyWay Prepaid Program**
  The MyWay Prepaid Program offers an option for all customers, especially those who prefer to prepay for services versus being billed monthly. It is consumer-focused experience for environmentally conscious consumers who like to keep their consumption in mind. This program has not been approved by the Commission and is not part of JEA's FEECA goalsetting process. Nevertheless, JEA maintains that this program creates demand and energy savings.

Commercial Programs

- **Commercial Energy Audit**
  In the Commercial Energy Audit Program, JEA examines businesses, educates customers, and makes recommendations on low-cost or no-cost energy-saving practices.

- **Commercial Prescriptive Lighting Program**
  Commercial Prescriptive Lighting Program pays a financial incentive to customers to encourage the use of high efficiency lighting technology.

- **Commercial Prescriptive**
  The Commercial Prescriptive Program provides incentives to encourage the use of high efficiency HVAC, lighting, cooking, and water heating products. This program has not been approved by the Commission and is not part of JEA's FEECA goalsetting process. Nevertheless, JEA maintains that this program creates demand and energy savings.

- **Small Business Direct Install**
  The Small Business Direct Install Program promotes the use of high efficiency HVAC, lighting, water heating, and appliances in the small business sector. This program has not been approved by the Commission and is not part of JEA's FEECA goalsetting process. Nevertheless, JEA maintains that this program creates demand and energy savings.

- **Custom Commercial**
  The Custom Commercial Program promotes the use of custom efficiency measures based on specific applications for each customer. This program has not been approved by the Commission and is not part of JEA's FEECA goalsetting process. Nevertheless, JEA maintains that this program creates demand and energy savings.

B. Orlando Utilities Commission

Residential Programs

- **Home Energy Survey**
  The home energy walk-through surveys were designed to provide residential customers with recommended energy efficiency measures and practices customers can implement, and to encourage participation in various OUC rebate programs. OUC provides participating customers specific tips on conservation and details on customer rebate programs.

- **Duct Repair Rebate**
  This rebate program is designed to encourage residential customers to repair leaking ducts on existing systems. Qualifying customers must have an existing central air conditioning system, within certain limits and ducts must be sealed with mastic and fabric tape or any other Underwriters Laboratory (UL) approved duct tape.

- **Ceiling Insulation Rebate**
  The Ceiling Insulation Rebate Program is offered to residential customers to encourage the upgrade of attic insulation.

- **High-Performance Windows Rebate**
  The High Performance Windows Rebate Program encourages customers to improve energy efficiency in their homes by purchasing ENERGY STAR® rated energy efficient windows.

- **Efficient Electric Heat Pump Rebate**
  The Efficient Electric Heat Pump Rebate Program provides rebates to customers in existing homes who install heat pumps having a seasonal energy efficiency ratio (SEER) of 15.0 or higher.

- **New Home Rebate**
  The New Home Rebate Program offers rebates for cool/reflective roofs, block wall insulation, ceiling insulation upgrades to R-38, heat pumps, ENERGY STAR washing machines, ENERGY STAR heat pump water heaters, and solar water heaters.

- **Heat Pump Water Heater Rebate**
  The program provides rebates for the heat pumps commonly known as hybrid electric heat pump water heaters for qualifying installations

- **Efficiency Delivered (Low-Income)**
  The Efficiency Delivered Program is income based and provides up to $2,500 of energy and water efficiency upgrades based on the needs of the residential customer's home. An OUC Conservation Specialist visits the home, performs a home survey, and recommends which home improvements have the most potential of lowering utility bills.

Commercial Programs

- **Energy Audit**
  The Energy Audit Program includes a free survey consisting of a physical walk-through inspection of the commercial facility performed by experienced energy experts. The customer receives a written report detailing cost-effective recommendations to make the facility more energy and water efficient.

- **Efficient Electric Heat Pump Rebate**
  The Efficient Electric Heat Pump Rebate Program provides rebates to qualifying customers in existing buildings who install heat pumps having a seasonal energy efficiency ratio (SEER) of 15.0 or higher.

- **Duct Repair Rebate**
  This program for commercial customers provides a rebate to repair leaking ducts on existing systems. Qualifying customers must have an existing central air conditioning system of

within certain limits and ducts must be sealed with mastic and fabric tape or any other UL approved duct tape.

- **Ceiling Insulation Rebate**
  The Ceiling Insulation Rebate Program for commercial customers aims to increase building resistance to heat loss and gain. Participating commercial customers receive a rebate for upgrading their attic insulation up to R-30.

- **Cool/Reflective Roof Rebate**
  The Cool/Reflective Roof Rebate Program for commercial customers aims to lower roof surface temperature while increasing the lifespan of the roof. OUC provides rebates for ENERGY STAR cool/reflective roofing that has an initial solar reflectance greater than or equal to 0.70.

- **Indoor Lighting Billed Solution Program**
  The Indoor Lighting Billed Solution Program assists commercial customers with investments in new lighting technologies. The program is a cash-flow neutral billed solution where the savings pay for the project's cost over the pay-back period or term.

- **Indoor Lighting Rebates Program**
  The Indoor Lighting Rebates Program offers commercial customers that upgrade the efficiency of their indoor lighting a rebate if they meet certain requirements. Participation is open to facilities located within OUC's service area that receive electric service under an OUC commercial rate.

- **Custom Incentive Program**
  Through the Custom Incentive Program, commercial customers receive incentives based on the reduction in peak demand their projects achieve plus the first-year energy savings.

Natural Gas FEECA Utility

A. Peoples Gas System

Residential Programs

- **Residential Customer Assisted Energy Audit**
  The Residential Customer Assisted Audit is designed to save energy by increasing residential customer awareness of natural gas use in personal residences. Recommendations provided to the customer include an estimated range of energy savings including insightful advice on how to manage their overall energy usage. This audit is only available in an online format.

- **Residential New Construction**
  The Residential New Construction Program is designed to save energy for new homeowners by offering incentives to builders and developers who construct new single family and multi-family homes with the installation of energy efficient natural gas appliances.

- **Residential Retrofit**
  The Residential Retrofit Program offers rebates to encourage customers to make cost-effective improvements in existing residences by replacing existing electric appliances with energy efficient natural gas appliances.

- **Residential Retention**
  The Residential Retention Program offers rebates to encourage new and current natural gas customers to make cost-effective improvements in existing residences by replacing existing natural gas appliances with energy efficient natural gas appliances.

Commercial/Industrial Programs

- **Commercial Walk-Through Energy Audit**
  This program is designed to reduce demand and energy consumption of C/I facilities by increasing customer awareness of the energy use in their facilities.

- **Commercial New Construction**
  The Commercial New Construction Program is designed to save energy for new commercial facility owners by offering incentives to commercial customers for the installation of natural gas appliances.

- **Commercial Retrofit**
  The Commercial Retrofit Program is designed to encourage commercial customers to make cost-effective improvements in existing facilities by replacing electric appliances with energy efficient natural gas appliances.

- **Retrofit Combined Heat and Power (CHP)**
  The Retrofit CHP Program is designed to encourage commercial customers to make cost-effective improvements in existing facilities by the installation of an energy efficient on-site natural gas-fired combined heat and power system for the simultaneous production of mechanical and thermal energy.

- **Commercial Electric Replacement**
  The Commercial Electric Replacement Program is designed to encourage commercial customers to make cost-effective improvements in existing facilities by replacing electric resistance appliances with energy efficient natural gas appliances.

- **Commercial Retention**
  The Commercial Retention Program is designed to encourage current natural gas commercial customers to make cost-effective improvements in existing residences by replacing existing natural gas appliances with energy efficient natural gas appliances.

Other Programs

- **Conservation Research and Development (R&D)**
  The Conservation R&D Program is designed to encourage Peoples Gas System and other natural gas LDCs to pursue opportunities for individual and joint research, including testing of technologies to develop new energy conservation programs.

Attachment 3

State of Florida

Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

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

DATE: October 26, 2023

TO: Braulio L. Baez, Executive Director

FROM: Office of Industry Development & Market Analysis (Fogleman, Deas, Day, Mallow) CH
Office of Consumer Assistance & Outreach (Muir, Thompson) CM

RE: 2023 Annual Lifeline Report Regarding the Number of Customers Subscribing to Lifeline Service and the Effectiveness of any Procedures to Promote Participation.

CRITICAL INFORMATION: ACTION IS NEEDED – Please place on the November 9, 2023 Internal Affairs agenda. **Commission approval of the draft Lifeline Report is sought.** The 2023 Lifeline Report is due to the Governor, President of the Senate, and Speaker of the House by December 31, 2023.

Staff is seeking Commission approval of the draft 2023 Annual Lifeline Report regarding the number of customers subscribing to Lifeline Service and the effectiveness of any procedures to promote participation. The report details state and federal regulatory action impacting the Lifeline program and Lifeline Awareness promotions in Florida.

Section 364.10(2)(h), Florida Statutes, requires the FPSC to provide this report to the Governor, President of the Senate, and Speaker of the House of Representatives by December 31 of each year.

Attachment

cc: Mark Futrell, Deputy Executive Director, Technical
Apryl Lynn, Deputy Executive Director, Administrative
Keith Hetrick, General Counsel

DRAFT

A report to the
Governor
President of the Senate
Speaker of the House of Representatives

December 2023

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List of Acronyms

ACP	Affordable Connectivity Program
C.F.R.	Code of Federal Regulations
DCF	Department of Children and Families
ETC	Eligible Telecommunications Carrier
FCC	Federal Communications Commission
FPSC	Florida Public Service Commission
F.S.	Florida Statutes
GB	Gigabytes
Mbps	Megabits per second
NARUC	National Association of Regulatory Utility Commissioners
NCPW	National Consumer Protection Week
SNAP	Supplemental Nutrition Assistance Program (formerly Food Stamps)
SSI	Supplemental Security Income
USAC	Universal Service Administrative Company
U.S.C.	United States Code
USF	Universal Service Fund

Executive Summary

The Florida Lifeline Assistance report is prepared pursuant to the requirements in Section 364.10(2)(g), Florida Statutes (F.S.). The Florida Public Service Commission (FPSC or Commission) is required to report to the Governor, the President of the Senate, and the Speaker of the House of Representatives each year on the number of customers subscribing to Lifeline service and the effectiveness of procedures to promote participation in the program.

The Lifeline program is designed to enable low-income households to obtain and maintain basic telephone and broadband services by offering qualifying households a discount on their monthly bills. Alternatively, consumers can choose to receive monthly wireless minutes and/or measured data service from certain wireless providers. This report presents Lifeline participation data from July 2022 through June 2023, and evaluates procedures put in place to strengthen the Lifeline program.

As of June 30, 2023, there were 300,229 Florida households participating in the Lifeline program. This represents approximately 1 of every 29 Florida households.[1] The Supplemental Nutrition Assistance Program (SNAP) continues to be the largest qualifying program for Lifeline assistance in Florida. However, only 18 percent of SNAP participants subscribe to Lifeline as of June 2023.[2] Using SNAP participation as a proxy for the number of Lifeline eligible households suggests that there continues to be significant growth opportunities for Lifeline enrollment. However, it should be noted that only carriers that have been designated as an eligible telecommunications carrier (ETC) are permitted to provide the Lifeline discount. If a customer's preferred carrier is not an ETC, they may be less likely to participate in the program if it requires switching providers.

"*Stay Connected Florida*" was the slogan for Florida's 2023 Lifeline Awareness Week, held on September 11-15. This year's Lifeline Awareness Week continued efforts to increase awareness and enrollment in the Lifeline program.

[1] Florida Legislature Office of Economic and Demographic Research, Demographic Estimating Conference, Florida Households, released on July 11, 2023, http://edr.state.fl.us/Content/conferences/population/ConferenceResults.pdf, accessed on October 6, 2023, p. 3, Households 8,975,766.
[2] Florida DCF, Access Florida: Standard Data Reports, https://www.myflfamilies.com/services/public-assistance/additional-resources-and-services/ess-standard, accessed on October 6, 2023.

I. Lifeline Program

The Lifeline program has provided phone service discounts for qualifying low-income consumers since 1985. The Lifeline program would later be codified with the passage of the Telecommunications Act of 1996. Initially, the program goal was to ensure that all Americans had the opportunity and security that basic phone service provides. In 2016, that goal was expanded by the FCC to include broadband service.

One of the principles of the universal service program as described in the Telecommunications Act of 1996 is that consumers in all regions of the Nation, including low-income consumers and those in rural or high cost areas, should have reasonably comparable access to telecommunications and information services at rates that are reasonably comparable to those charged in urban areas.[3] The federal Lifeline program supports the goal of universal service by providing a monthly discount for services to qualifying households, thereby ensuring that low-income households have access to modern communications networks capable of providing voice and broadband service.[4]

Qualifying households can receive up to a $9.25 discount on their monthly phone or broadband bills from wireline service providers that have been designated as ETCs. Alternatively, consumers can choose to receive monthly wireless minutes and/or measured data service from designated wireless ETCs. Although some of Florida's wireless ETCs offer a free cell phone along with Lifeline service, the distribution of wireless devices is not funded by the Lifeline program.

Support for the Lifeline program comes from the federal Universal Service Fund (USF), which also provides funding for the high-cost, rural healthcare, and schools and libraries programs. Lifeline is available to eligible low-income households in every state and territory, as well as federally recognized Tribal lands.

The rules governing the Lifeline program are established by the FCC; however, the FCC has designated the Universal Service Administrative Company (USAC), an independent not-for-profit corporation, as the program's administrator. USAC is responsible for data collection, maintenance, support calculation, and disbursement of support for the Lifeline program along with other federal USF programs. USAC also administers the National Verifier, which determines customer eligibility for the Lifeline discount. The FPSC has oversight over the Lifeline program in Florida pursuant to Section 364.10, F.S.

A. Eligibility

Consumers can qualify to participate in the Lifeline program either through program-based or income-based eligibility standards. Program-based eligibility is determined by a customer's

[3] 47 U.S.C. § 254(b)(3).
[4] FCC, Third Report and Order, WC Docket No. 11-42, FCC 11-42, released on April 27, 2016, https://docs.fcc.gov/public/attachments/FCC-16-38A1.pdf, accessed on October 6, 2023.

enrollment in specific qualifying programs that were selected by the FCC. Customers can qualify for the Lifeline program by being enrolled in any one of the following programs:

- SNAP
- Medicaid
- Federal Public Housing Assistance
- Supplemental Security Income
- Veterans or Survivors Pension Program
- Bureau of Indian Affairs Programs: Tribal Temporary Assistance to Needy Families, Head Start Subsidy, and National School Lunch Program

Consumers whose total household income is less than 135 percent of the Federal Poverty Guidelines can participate in the Lifeline program under the income-based standard. The Federal Poverty Guidelines are updated annually and can be found in Appendix A. Consumers can enroll in the Lifeline program through income-based eligibility by providing qualifying documentation to the National Verifier.

B. Application Process

Consumers have several methods by which they can apply to receive Lifeline benefits:

- Through USAC's website using the National Verifier consumer portal
- In person with certain ETCs using the National Verifier service provider portal
- By mailing their application to USAC's Lifeline Support Center
- Through ETC websites that have access to the National Verifier

Eligibility is validated by the National Verifier through available automated eligibility data sources. Applications are checked to confirm identity, verify that the consumer is not already a Lifeline participant, and ensure compliance with all program rules. If eligibility cannot be validated through automated sources, customers can upload supporting documentation to the National Verifier portal or mail it to the Lifeline Support Center. Those that qualify must then contact a participating provider in their area to enroll in the Lifeline program.

In Florida, USAC's National Verifier is connected to the Florida Department of Children and Families (DCF) database to confirm customer eligibility through SNAP and Medicaid. Nationally, the National Verifier is also connected to the U.S. Department of Housing and Urban Development and the U.S. Department of Veterans Affairs.[5] When both federal and state

[5] USAC, Eligibility Verification, https://www.usac.org/lifeline/national-verifier/eligibility-verification/, accessed on October 6, 2023. Florida also benefits from both a federal and state connection for Medicaid verification.

databases are used to confirm eligibility, USAC estimates that the automated eligibility pass rate is 68 percent nationwide.[6]

C. Minimum Service Standards

To be eligible for USF support, ETC's are required to provide broadband access that meets minimum service standards established by the FCC, unless they are granted forbearance from this obligation. These standards are reviewed annually through an FCC update mechanism to ensure that Lifeline customers continue to receive viable service options as technology improves.[7] The minimum service standards include:

- 1,000 minutes per month of mobile voice
- 4.5 gigabytes per month of mobile broadband
- Fixed broadband speed of 25 megabits per second (Mbps) downstream and 3 Mbps upstream, with 1.28 terabytes per month of data usage

D. Duplicate Lifeline Support

Eligible consumers can only receive one Lifeline-supported service per household.[8] If there are two households residing at one address and each desire to participate in the Lifeline program, each applicant must complete USAC's Household Worksheet form. This form is used to demonstrate that each applicant is living in a separate economic unit and not sharing income or living expenses (bills, food, etc.) with another resident.[9]

To prevent waste in the program, the FCC created a National Lifeline Accountability Database (NLAD) and mandated its use to ensure that multiple ETCs do not seek and receive reimbursement for the same Lifeline subscriber.[10] The NLAD conducts a nationwide real-time check to determine if the consumer or another person at the address of the consumer is already receiving Lifeline service. States have read-only access to this database to help prevent waste, fraud, and abuse of the Lifeline program.

E. Non-Usage Rule

In general, wireless ETCs offer Lifeline service for no additional cost beyond the support provided by the universal service program. While customers can elect to purchase additional minutes or data usage at their discretion, the program pays ETCs to provide a basic level of service.

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[6] USAC, National Verifier Annual Report and Data, released on January 31, 2023, https://www.usac.org/wp-content/uploads/lifeline/documents/nv/reports/National-Verifier-Annual-Report-January-2023.pdf, accessed on October 6, 2023, p. 7.

[7] FCC, Public Notice, WC Docket No. 11-42, DA 23-621, released on July 2921, 2023, https://docs.fcc.gov/public/attachments/DA-23-621A1.pdf, accessed on October 6, 2023.

[8] 47 C.F.R. § 54.409(c).

[9] USAC Household eligibility pre-screening tool, www.lifelinesupport.org, accessed on October 6, 2023.

[10] FCC, Report and Order, WC Docket No. 11-42, FCC 12-11, released on February 6, 2012, https://docs.fcc.gov/public/attachments/FCC-12-11A1.pdf, accessed on October 6, 2023.

To address potential waste that could occur if support is received for cell phones that are no longer functional or that may have been owned by a customer who is now deceased, the FCC has established rules regarding support for Lifeline connections with no usage. Specifically, if an ETC does not assess or collect a monthly fee from the customer over and above the support received from USF, the Lifeline customer must use the Lifeline-supported service at least once every 30 days. Usage is defined by the FCC as the customer completing one of the following:

- Completing an outgoing call or using data
- Sending a text message
- Buying minutes or data to add to the subscriber's service plan
- Answering an incoming call (calls from the customer's Lifeline service provider, Lifeline service customer's agent, or representative do not apply)
- Responding to direct contact from the customer's Lifeline service provider to confirm the subscriber wants to continue receiving Lifeline service

If the Lifeline customer does not use their service for 30 consecutive days (non-usage), the ETC must give the customer a 15-day notice that if they do not use the service in a further 15 days, their service will be terminated. ETCs must de-enroll those Lifeline customers who do not meet the usage requirement within the final 15-day grace period. Consumers de-enrolled from the Lifeline program for non-usage may reapply at any time by submitting an application to USAC. Recent waivers relating to the FCC's non-usage rules are discussed in Chapter II.

II. Federal Communications Commission Activities

A. Affordable Connectivity Program

On December 31, 2021, the FCC launched the Affordable Connectivity Program (ACP).[11] The ACP provides a discount of up to $30 per month toward Internet service for households that are eligible. Those eligible can also receive a one-time credit of up to $100 to purchase a connected device, provided they contribute between $10 and $50 toward the cost of purchase. Enrollment in the ACP is open for households with at least one member qualifying under the following criteria:

- Income is at or below 200 percent of the federal poverty guidelines
- Participates in certain assistance programs, such as Lifeline, SNAP, Medicaid, Federal Public Housing Assistance, SSI, or Supplemental Nutrition Program for Women, Infants, and Children
- Participates in Tribal specific programs, such as Bureau of Indian Affairs General Assistance or Food Distribution Program on Indian Reservations
- Is approved to receive benefits under the free and reduced-price school lunch program or the school breakfast program, including through the United States Department of Agriculture Community Eligibility Provision
- Received a Federal Pell Grant during the current award year
- Meets the eligibility criteria for a participating provider's existing low-income program

The ACP allows consumers to choose the service plan that best meets their needs, without early termination fees if they change providers. Participants can gain broadband access regardless of credit status or prior debt with a broadband provider. Only one monthly service discount and device credit is allowed per household.[12] While the ACP is distinct from the Lifeline program, wireless ETCs frequently utilize the ACP to provide broadband service to their Lifeline customers. Funding for the ACP program is expected to exhaust by April of 2024.[13]

B. Phase Out of Voice-Only Support

On April 27, 2016, the FCC released its Lifeline Modernization Order.[14] This Order was primarily established to modernize the Lifeline program by including broadband as a supported service, designating minimum service standards for Lifeline services, and establishing the National Verifier. Implementation of this Order continues to have an impact on the federal Lifeline program.

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[11] FCC, News Release, released on January 4, 2022, https://docs.fcc.gov/public/attachments/DOC-378908A1.pdf, accessed on October 6, 2023.

[12] USAC, Affordable Connectivity Program, https://www.affordableconnectivity.gov/, accessed on October 6, 2023.

[13] Testimony of FCC Chairwoman Rosenworcel before the Senate Appropriations Subcommittee, https://www.fcc.gov/document/chairwoman-rosenworcel-house-appropriations-subcommittee, accessed on October 6, 2023.

[14] FCC, Third Report and Order, WC Docket No. 11-42, FCC 16-38, released on April 27, 2016, https://docs.fcc.gov/public/attachments/FCC-16-38A1.pdf, accessed on October 6, 2023.

In the Order, the FCC established a timeline to gradually phase out support for voice-only services to further its goal of transitioning to a broadband-focused Lifeline program. On December 1, 2019, the support provided for voice-only services was reduced to $7.25 per Lifeline customer. Support for voice-only Lifeline service was scheduled to be completely phased out on December 1, 2021. However, the FCC has delayed the complete phase out of voice-only Lifeline support several times.

Pursuant to its most recent Order, support for voice-only Lifeline services will continue to be available through November 30, 2024.[15] In this Order, the FCC stated this year's pause is due in part to the need for additional time to carefully consider the impact of the Affordable Connectivity Program (ACP) on Lifeline subscribers' use of their Lifeline benefit.

In addition, the FCC has concerns about how the elimination of voice-only support will affect the 350,000 Lifeline participants that continue to subscribe to a voice-only plan, and whether this population will be able to retain an affordable voice service plan.[16] Broadband services that include a voice service will continue to be eligible to receive Lifeline support after the new phase-out date. Table 1 outlines the FCC's revised phase down schedule.

Table 1
Lifeline Support Transition Schedule

Effective Dates	Fixed Voice	Mobile Voice	Fixed Broadband	Mobile Broadband
From 12/1/19 to 11/30/20	$7.25	$7.25	$9.25	$9.25
From 12/1/20 to 11/30/24	$5.25	$5.25	$9.25	$9.25
After 11/30/24	$0	$0	$9.25	$9.25

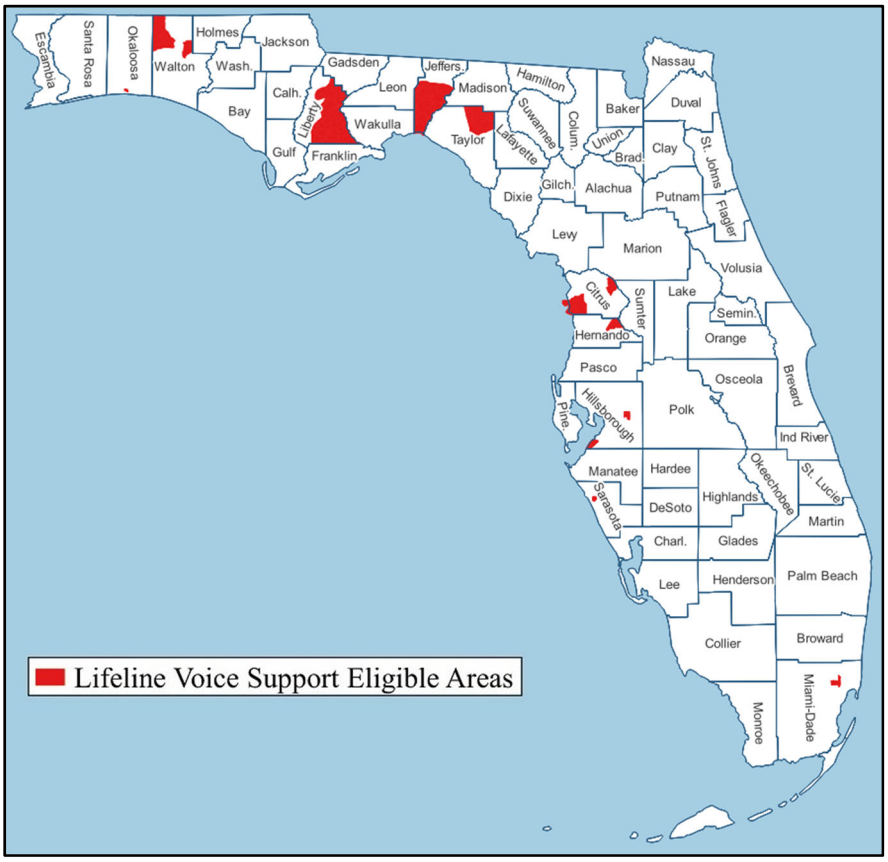
Source: FCC, Order (DA 23-589)

The 2016 Lifeline Modernization Order included an exception to the complete phase-down of voice-only support in census blocks where there is only one Lifeline provider. On June 2, 2021, the FCC released a public notice identifying the census blocks eligible to continue receiving the $5.25 support amount for voice-only Lifeline service.[17] The list of eligible census blocks will be evaluated annually by the FCC. If a census block is determined to be served by more than one Lifeline provider, the discount will be discontinued on December 1st of that year.

In Florida, 4,389 census blocks qualify for the continued voice-only support. The FCC has not updated the census block data since the complete phase-down of voice-only support was postponed. Figure 1 highlights the areas eligible to continue receiving voice-only support at this time.

[15]FCC, Order, WC Docket No. 11-42, DA 23-589, released on July 7, 2023, https://docs.fcc.gov/public/attachments/DA-23-589A1.pdf, accessed on October 6, 2023.
[16] Ibid.
[17] FCC, Public Notice, DA 21-640, https://docs.fcc.gov/public/attachments/DA-21-640A1.pdf, accessed on September 19, 2023.

Figure 1
Areas in Florida Eligible for Continued Voice-Only Lifeline Support



Source: FCC, Shape file by Census Tracts

C. Lifeline Rule Waivers

On August 30, 2023, Hurricane Idalia struck Florida's Gulf Coast causing damage to power lines, homes, buildings, and infrastructure, resulting in over 300,000 residents throughout the region losing power. To mitigate the disruption to affected Lifeline consumers, the FCC on its own motion ordered that the Lifeline non-usage, recertification, and reverification requirements for subscribers residing in the affected disaster areas be waived through November 30, 2023.[18]

D. FCC Proposed Rulemaking

On February 17, 2023, the FCC released a Notice of Proposed Rulemaking seeking to implement certain provisions in the Safe Connections Act that support survivors of domestic abuse.[19] The FCC sought comment on whether the Lifeline program or the ACP would be an appropriate means for providing eligible survivors with emergency communications support for up to six months. The FCC has not released an order regarding this issue.

[18] FCC, Order, WC Docket No. 21-450, DA 23-805, released on September 1, 2023, https://www.fcc.gov/document/fcc-waives-usf-broadband-program-rules-response-idalia, accessed on October 6, 2023.
[19] FCC, Notice of Proposed Rule Making, WC Docket No. 22-238, FCC 23-9, released on February 17, 2023, https://docs.fcc.gov/public/attachments/FCC-23-9A1.pdf, accessed on October 6, 2023.

III. Florida Public Service Commission Activities

A. Prevention of Waste, Fraud, & Abuse of the Universal Service Fund

Florida continues to enforce safeguards to prevent waste, fraud, and abuse of the USF. The FPSC strives to protect the integrity of the Lifeline program in Florida and takes appropriate enforcement action when necessary. The FPSC has statutory authority to grant wireline ETC designations and can also revoke ETC status when warranted.

Unlawful and inappropriate federal USF disbursements are inconsistent with public trust and negatively impact all contributors to the fund. This is especially true for states like Florida that contribute more into the USF than it receives. Therefore, the FPSC monitors federal USF disbursements to Florida ETCs to ensure that funds are being disbursed and expended according to state and federal regulations and guidelines.

B. Lifeline Promotion Process

In 2007, Florida implemented the Lifeline Electronic Coordinated Enrollment Process. This process involved a computer interface between the FPSC and DCF to process Lifeline applications for people who were approved for the Medicaid and SNAP programs. Prior to the National Verifier, customers identified through this process would be automatically considered eligible and enrolled in Lifeline service by a selected ETC. However, since eligibility is now determined only by the National Verifier, this process is used as a promotional tool for the Lifeline program and has been renamed the "Lifeline Promotion Process."

The Lifeline Promotion Process provides information to Medicaid and SNAP participants interested in receiving the Lifeline discount. This process requires the DCF client to first indicate an interest in receiving the Lifeline discount and choose an ETC. The selected ETC then contacts the customer to determine if they have already been approved for the Lifeline program through the National Verifier. If the customer has been approved, the ETC will provide the customer with the Lifeline discount. For those customers who have not yet applied for Lifeline, the ETC or the FPSC sends instructions on how to apply through the National Verifier. Between January and October 2023, the FPSC sent 14,348 such letters to eligible households.

C. Lifeline Promotion Activities

Promotional activities in 2023 featured National Lifeline Awareness Week and National Consumer Protection Week, and ongoing "grassroots" efforts to increase awareness and enrollment in the Lifeline program. The FPSC works with state commissions, the National Association of Regulatory Utility Commissioners (NARUC) and the FCC to promote National Lifeline Awareness Week and educate consumers on the nationwide application process through the National Verifier. The national effort also ensures that low-income families and individuals are aware of the Lifeline program and understand the eligibility requirements. The shared goal is for all eligible households to be enrolled and receive Lifeline program benefits.

The FPSC seeks existing community events as well as new venues and opportunities where Lifeline educational materials can be distributed and discussed with consumers. For the past few

years, the FPSC has held both virtual and in-person Lifeline events to accommodate many of Florida's senior and community centers that continue to operate with restrictions.

1. National Lifeline Awareness Week

NARUC and the FCC have designated the first week after Labor Day in September each year as National Lifeline Awareness Week. "*Stay Connected Florida!*" was the slogan for Florida's 2023 Lifeline Awareness Week, September 11-15. In addition to increasing awareness among eligible citizens, Lifeline Awareness Week continued educating residents about the discount on voice and broadband services. This year, Florida's outreach focused on senior and community centers and area agencies on aging in Nassau, Columbia, St. Lucie, and Sarasota Counties. Lifeline information is also available on the FPSC's website.[20]

2. National Consumer Protection Week

National Consumer Protection Week (NCPW), March 5-11, 2023, provided a good opportunity for Lifeline outreach activities. An annual Federal Trade Commission consumer education campaign, NCPW encourages consumers to take advantage of their consumer rights. For more than a decade, the FPSC has joined government agencies, advocacy organizations, and private sector groups nationwide to highlight NCPW.

Chairman Andrew Fay recognized the 25th Annual NCPW by highlighting Lifeline, and the importance of sharing educational information to help consumers. For NCPW 2023, the FPSC met with consumers in Bay, Duval, and Leon Counties. A virtual meeting was also held with a housing authority in Pasco County.

3. Older Americans Month

Each May, the Commission participates in Older Americans Month, a national project to honor and recognize older Americans for their contributions to families, communities, and society. "*Aging Unbound*" was this year's theme. The FPSC partnered with centers in Clay, Lake, and Leon Counties to meet with seniors in-person and distribute information on Lifeline and utility bill reduction strategies. A virtual meeting was also held with a housing authority in Collier County.

4. Library Outreach Campaign

Each year, the FPSC provides educational packets, including FPSC publications and Lifeline brochures and applications in English and Spanish, to Florida public libraries across the state for consumer distribution. The FPSC's Library Outreach Campaign reached 617 state public libraries and branches via e-mail in 2023. Following the Campaign, many libraries request additional hard copies of FPSC publications throughout the year.

5. Ongoing Lifeline Outreach

Ensuring easy access to Lifeline information through the agencies and organizations having regular interaction with eligible consumers is crucial to the Lifeline awareness effort. The FPSC

[20] FPSC, Lifeline Assistance Webpage, https://www.psc.state.fl.us/lifeline-assistance-program, accessed October 6, 2023.

partners with many agencies year-round to make sure eligible consumers know about Lifeline and know how to apply. Each month, the FPSC sends a cover letter and informational packet to two organizations to encourage continued Lifeline outreach to their eligible clientele. The FPSC continues to conduct in-person and virtual monthly meetings or train-the-trainer events to promote Lifeline.

Every four months, the FPSC also names a valued partner agency or organization as a "Helping Hand," for helping raise public awareness about the Lifeline program, energy and water conservation, and utility impersonation scams. Helping Hands named in 2023 include: Hendry County State Housing Initiative Partnership (SHIP) Program, Bay County Council on Aging, and the Okeechobee County SHIP Program.

6. Lifeline Partners

The local, state, and federal agencies, organizations, businesses, and telecommunications companies listed in Appendix B are involved in the collaborative effort to increase awareness and participation in the Lifeline program. These Lifeline Partners have continued to develop new partnerships, participate in local community events, offer training sessions, provide updates about program changes, and supply brochures and applications.

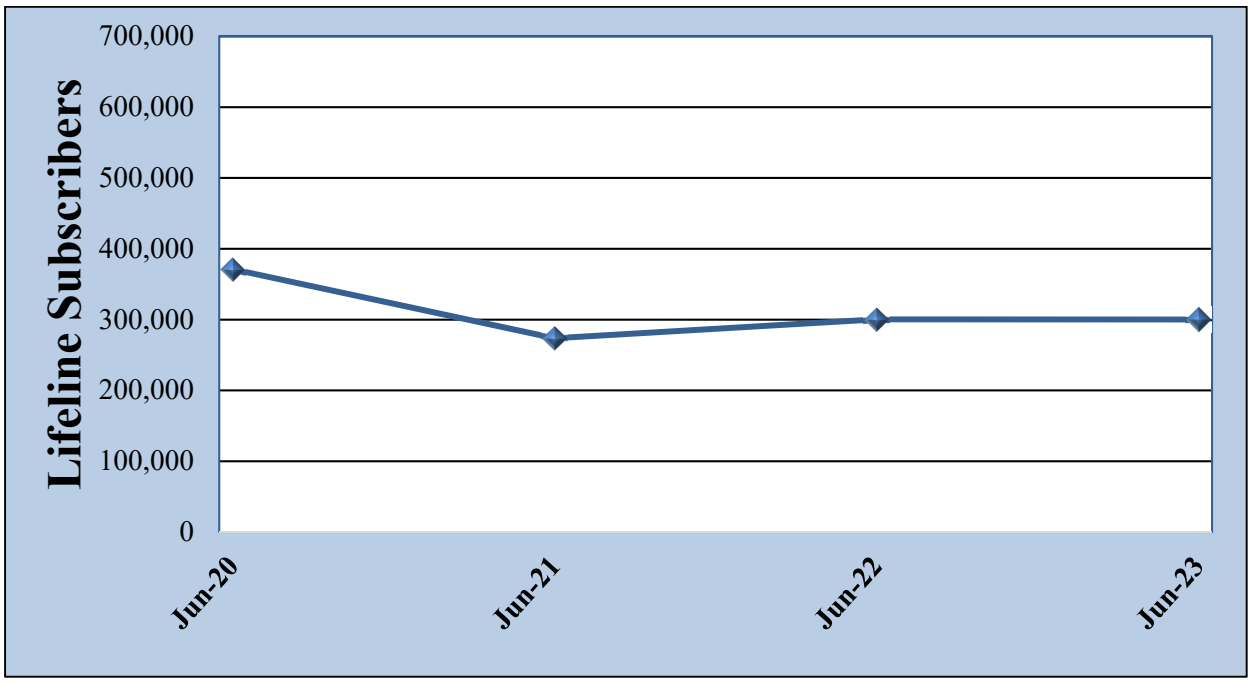
IV. Lifeline Participation

A. Participation

There were 300,229 subscribers enrolled in Lifeline as of June 30, 2023. During the 2022-2023 reporting period, Lifeline subscribership decreased by 56, which represents a less than one percent decrease from the number of subscribers the previous year. All but three companies experienced a loss in Lifeline subscribers, which was attributed by some of these companies to the continued transition of customers to wireless service. The ETCs that experienced Lifeline subscriber growth in 2023 were SafeLink Wireless, ITS Fiber and Frontier South.

Figure 2 shows annual Lifeline subscribership for June 2020 through June 2023. A drop in subscribers was observed in June 2021, which can be attributed to the FCC's COVID waiver expiring. After the initial drop in 2021, subscribership has remained relatively constant.

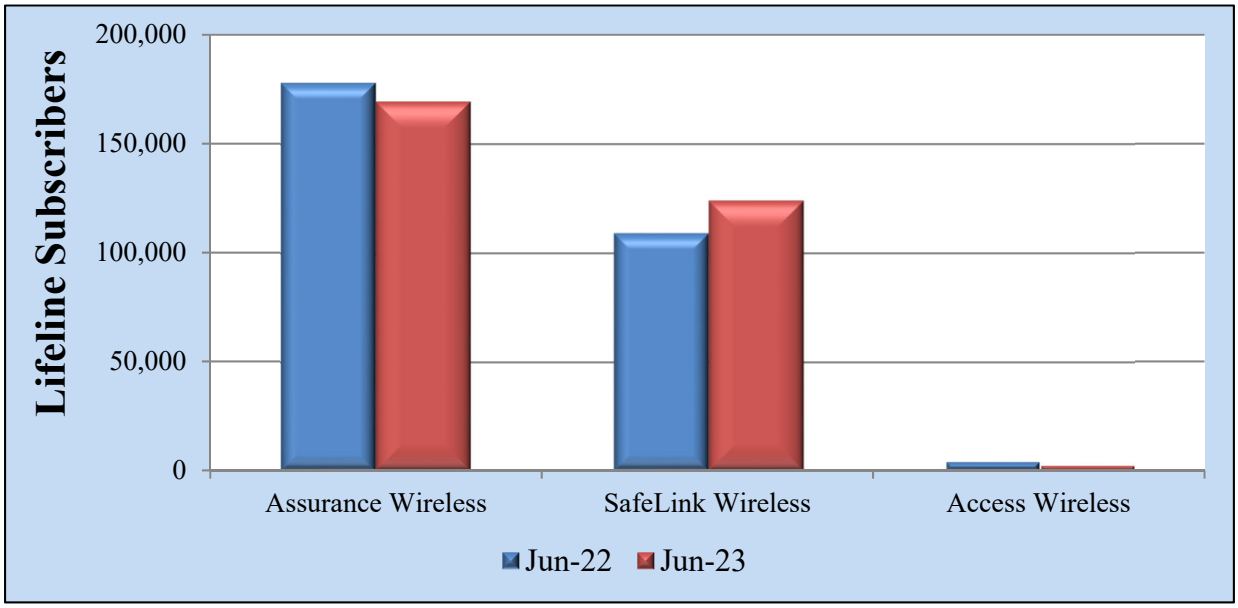
Figure 2
Florida Lifeline Subscribership
(For Fiscal Years 2020-2023)



Source: Industry Responses to FPSC Data Requests (2020-2023) and USAC

Figure 3 shows the three Florida ETCs with the most Lifeline subscribers for June 2022 and 2023. Assurance Wireless remains the ETC with the highest number of Lifeline subscribers, with a decrease of 8,673 Lifeline subscribers in Florida from June 2022 to June 2023. SafeLink Wireless, the second largest Lifeline provider, had an increase of 14,798 Lifeline subscribers. For fiscal year 2022-2023, these two largest Lifeline providers represented more than 97 percent of the Florida Lifeline market.

Figure 3
Top Three Florida Lifeline ETCs



Source: Industry Responses to 2023 FPSC Data Requests

Table 2 compares the number of households enrolled in Lifeline with the estimated number of Lifeline eligible households based upon SNAP participation. Using SNAP participation as a proxy for the number of Lifeline eligible households suggests there are still significant growth opportunities for Lifeline enrollment. However, it should be noted that only carriers that have been designated as an ETC are permitted to provide Lifeline. If a customer's preferred carrier is not an ETC, they may be less likely to participate in the program if it requires switching providers. This is especially true when a customer is required to pay an early contract termination fee to make such a switch.

Table 2
Lifeline Participation Rate in Eligible Florida Households

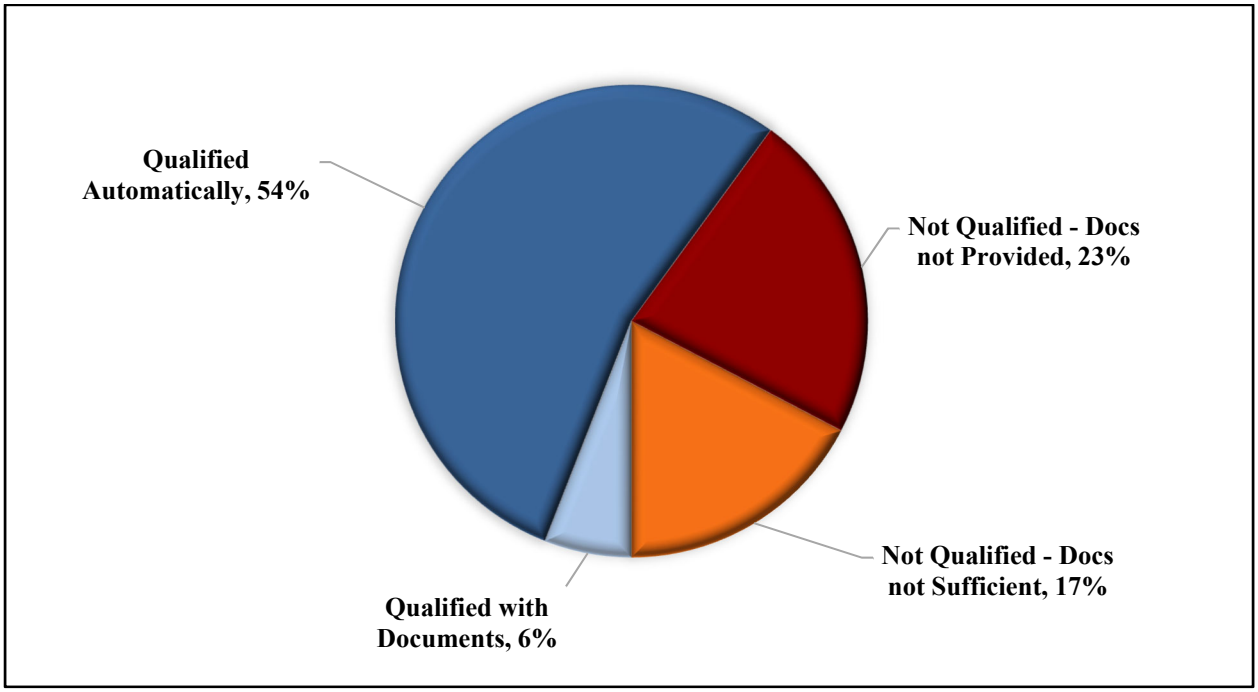
Year	Lifeline Enrollment	Eligible Households	Percent Participation Rate
June 2019	604,693	1,540682	39.25%
June 2020	371,180	2,151,503	17.25%
June 2021	273,641	1,882,842	14.53%
June 2022	300,285	1,590,216	18.88%
June 2023	300,229	1,658,694	18.10%

Source: Florida DCF, Access Florida: Standard Data Tables

While there was a minimal decrease in subscribership during fiscal year 2022-2023, the number of Lifeline eligible households increased by 68,478.[21] As a result, the participation rate as of June 2023 declined slightly to 18.10 percent. The current participation rate in the Lifeline program in Florida compared to the number of Lifeline eligible households demonstrates the continued need for Lifeline outreach.

For the first half of fiscal year 2022-2023, the National Verifier received 712,477 applications from Florida. Figure 4 illustrates that 60 percent of all applications qualified for Lifeline. Most of the applications, 54 percent, were approved by USAC automatically by verifying consumers eligibility through databases of qualifying programs. In Florida, these databases include those managed by DCF and other federal agencies. Among the 40 percent of applications that were not approved, 23 percent did not provide any documents to support their applications within 45 days.

Figure 4
National Verifier Qualification Results in Florida



Source: USAC Lifeline Program Data (3Q 2022 to 4Q 2022)

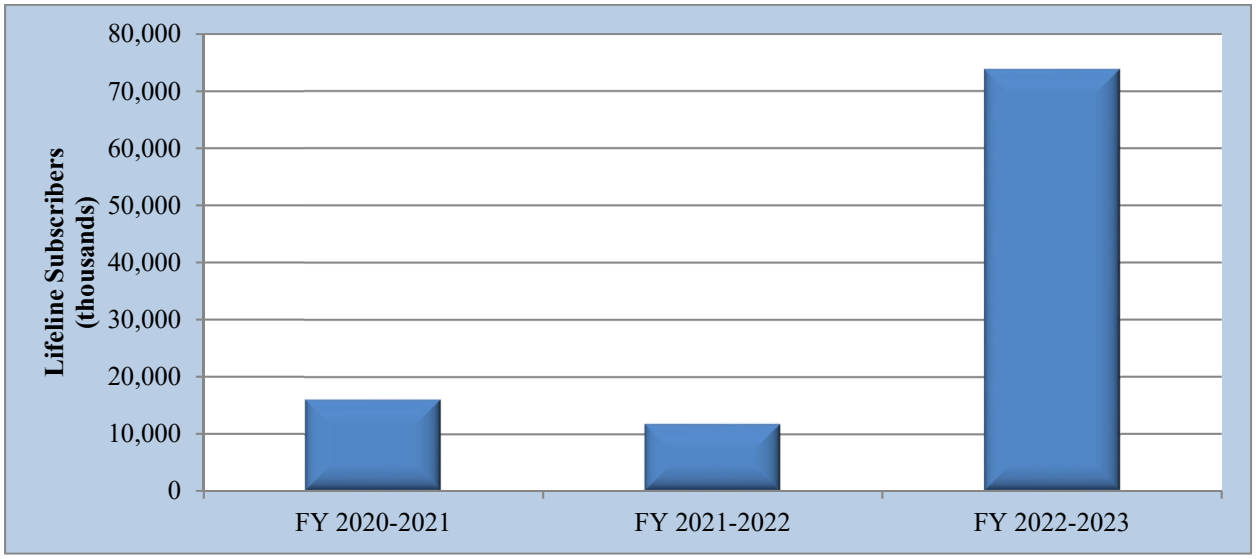
B. Transitional Lifeline

Transitioning from the Lifeline program usually occurs when a customer's socio-economic status has improved, thus advancing them beyond the qualifying eligibility criteria. As required by Section 364.105, F.S., customers who no longer qualify for Lifeline are eligible to receive a 30 percent discount on the residential basic local service rate for one year. For example, a former Lifeline customer with a $25 phone bill would receive a $7.50 monthly discount for one year.

[21] Florida DCF, Access Florida: Standard Data Reports by Caseload, https://www.myflfamilies.com/services/public-assistance/additional-resources-and-services/ess-standard, accessed on October 6, 2023.

Figure 5 represents the average monthly number of Transitional Lifeline customers of Florida ETCs from fiscal year 2020-2021, through fiscal year 2022-2023. This fiscal year, the average number of monthly customers receiving the Transitional Lifeline benefit was 73,784, which represents a significant increase over the previous year. Most of that increase in Transitional Lifeline, according to Assurance Wireless, can be attributed to the expiration of the FCC's COVID waiver. The COVID waiver permitted customers that no longer qualified for Lifeline assistance to remain enrolled in the program.

Figure 5
Average Monthly Transitional Lifeline Participants
(For Fiscal Years 2020-2023)



Source: Industry Responses to FPSC Data Requests (2020-2023)

Rather than offer a transitional discount, to comply with Section 364.105, F.S., TracFone offers its former Lifeline customers a 30 percent discount on the customer's chosen prepaid wireless service rates for at least one-year after termination of their Lifeline benefits. TracFone does not track Transitional Lifeline customers participating in this manner and, therefore, is not included in Figure 5.

V. Lifeline Providers

Congress has granted state commissions the authority to designate carriers as ETCs if they meet certain requirements.[22] Conversely, state commissions may rescind ETC designation should a company fail to follow the Lifeline program requirements. In instances where a state commission lacks jurisdiction to grant ETC status, the FCC may make the designation.[23]

To qualify as an ETC, a telecommunications carrier must offer services supported by federal USF program.[24] The services can be provided either using its own facilities or a combination of its own facilities and another carrier's resold service, and they must advertise the availability of such services and charges. A company applying for designation as an ETC must demonstrate good management and legitimate business practices to successfully provide Lifeline service.[25]

When the Telecommunications Act of 1996 was initially implemented, all ETCs were eligible to participate in the high-cost program and were required to offer Lifeline services. Since then, the FCC has revised its rules to allow companies to request ETC designation to participate in the Lifeline program only and forgo participation in the high-cost programs. Currently, the FPSC only evaluates ETC applications from wireline telecommunication carriers. Applications by wireless carriers in Florida are evaluated by the FCC.[26]

A. Recent ETC Designations

The most recent ETC designations in Florida were approved between 2019 and 2022. Each of the six companies that were granted ETC status sought to participate in the federal high-cost program, which required buildout obligations and offering Lifeline in the underserved areas they were designated.

Among these six companies, four – Bright House, Conexon, Viasat, and Mediacom – are new ETCs in Florida. The remaining two, CentryLink and Windstream, were existing ETCs that expanded their previously established ETC service areas. A map of these recent ETC designations can be found in Figure 6.

Bright House began offering Lifeline services in January 2022, while both Viasat and Conexon began offering Lifeline services in December 2022. All other newly designated ETCs are obligated to offer service to no less than 40% of their designated service areas by the conclusion of 2024, with full deployment within their designated areas anticipated by the conclusion of 2027.[27]

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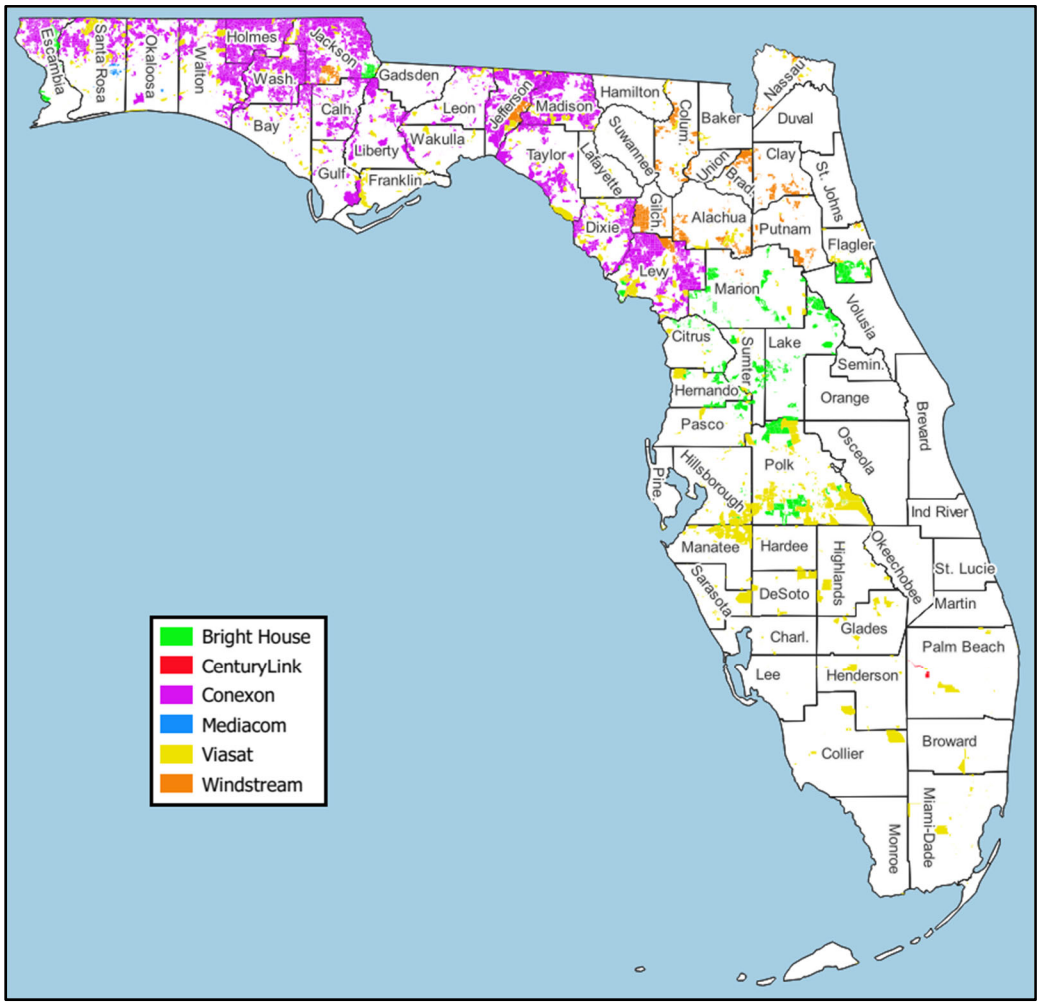
[22] 47 U.S.C. § 214(e)(2).
[23] 47 U.S.C. § 214(e)(6).
[24] 47 C.F.R. § 54.101.
[25] 47 C.F.R. § 54.201(h).
[26] In 2011, the Florida Legislature passed HB 1231, removing FPSC authority to designate wireless ETC providers. Effective July 1, 2012, wireless providers must directly apply for Florida ETC designation with the FCC.
[27] FCC, Public Notice, DA 21-1287, released October 14, 2021, https://docs.fcc.gov/public/attachments/DA-21-1287A1.pdf, accessed October 6, 2023.

Figure 6
Map of Recent ETC Designations



Source: USAC Census Data

Table 3 identifies the seventeen ETCs that offer Lifeline service in Florida as of June 30, 2023. Additional details can be found in Appendix C which provides Lifeline enrollment figures for each ETC between 2020 and 2023.

Table 3
ETCs Offering Lifeline in Florida

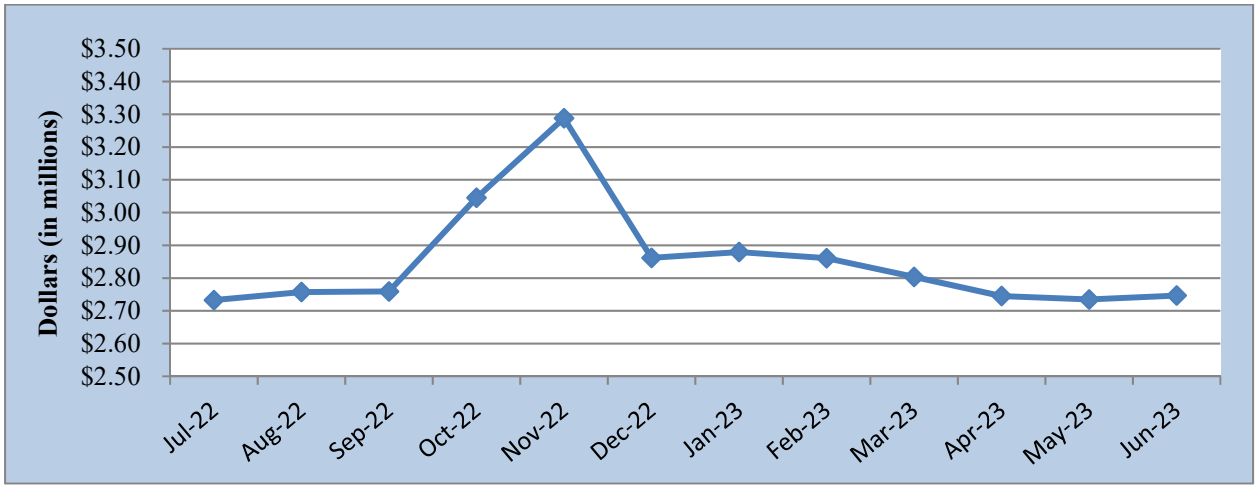
Access Wireless (i-wireless)	Conexon Connect*	Smart City Telecom
Assurance Wireless (T-Mobile)	Frontier Communications of the South	TDS (Quincy Telephone Com.)
Blue Stream Fiber (ITS)	Frontier Florida, LLC	Windstream
Bright House (Charter)*	NEFCOM (Northeast Florida Telephone Co.)	WOW! (Knology of Florida, Inc.)
CenturyLink	Phone Club Corporation	Viasat*
Consolidated Communications (GTC)	SafeLink Wireless (TracFone)	

Source: Industry Responses to 2023 FPSC Data Requests *Recently Designated ETC

B. Funding Distributions

Only carriers that have been designated as an ETC can be reimbursed for the Lifeline discount from the USF. Figure 7 reflects USAC Lifeline disbursements to ETCs in Florida during fiscal year 2022-2023. The total amount disbursed during these 12 months was $34,214,745, with an average of $2.85 million per month. This compares to an average of $2.75 million per month last year. These amounts include prior period support corrections. As shown in Figure 7, the monthly disbursements to Florida ETCs peaked at $3,288,276. This peak was due to the FCC's waiver for recertification, reverification, and non-usage requirements to address the impacts of Hurricane Ian, which resulted in more customers remaining in the Lifeline program than would have occurred otherwise.[28]

Figure 7
Low-Income Disbursements to Florida ETCs



Source: USAC Disbursements Florida July 2022-June 2023; 2023 Industry Responses to FPSC Data Requests for companies that have not filed current USAC reimbursement requests.

C. Lifeline Service Obligations by Technology

ETCs can meet their Lifeline service obligations either through offering voice, broadband, or a combination of both services. Table 4 shows the percent of Lifeline subscription by service type and by type of underlying carrier. Currently, incumbent and competitive wireline carriers meet their Lifeline obligation predominantly through the provision of voice services. By comparison, wireless ETCs primarily offer bundled services that meet the federal standards for both voice and broadband.

SafeLink is the only wireless carrier that provides a stand-alone voice service. This legacy voice-only service, however, is not available to new customers or existing customers with voice and data plans. Customers receiving voice-only service represents about one percent of SafeLink's customers. Appendix D provides percentage of Lifeline subscriptions by service type for each carrier.

[28] FCC, Order, WC Docket No. 11-42, DA 22-1063, released October 4, 2022, https://docs.fcc.gov/public/attachments/DA-22-1063A1.pdf, accessed October 6, 2023.

Table 4
Lifeline Subscription by Service Type
(As of June 2023)

Carrier Type	Voice	Broadband	Bundled
Wireless	0.6%	19.6%	79.8%
Incumbent Wireline	61.3%	9.4%	29.3%
Competitive Wireline	76.3%	14.9%	8.8%

Source: USAC Disbursements Florida

D. Wireless Service Standards

All wireless ETCs in Florida meet the minimum FCC standards by offering either a minimum of 1,000 voice minutes or 4.5 GB of data to Lifeline subscribers. While wireless carriers only have to meet either the voice or the data standard, carriers frequently offer some voice or data along with the service that meets the FCC's standard. Table 5 outlines different Lifeline services currently offered by wireless ETCs in Florida and how they qualify with the federal standards. Plans offered by Access Wireless, Assurance, and SafeLink are fully covered by the Lifeline subsidy, at no cost to the Lifeline consumer. Customers of these companies only have to pay for additional voice minutes or data beyond their phone plan as needed.

Table 5
Lifeline Wireless Qualification Standard by Carrier
(As of September 2023)

Wireless ETC	Minimum Standards Met	Voice	Data
Access Wireless	Voice/Data	1,000 Minutes	4.5 GB
Assurance	Voice/Data	1,000 Minutes	4.5 GB
SafeLink	Data	350 Minutes	4.5 GB

Source: ETC's websites

Customers of Access Wireless, Assurance, and Safelink may also combine Lifeline discounts with ACP discounts. When Lifeline customers participate in both programs, they receive unlimited voice and data services. Eligibility for this service necessitates that customers are not concurrently utilizing their ACP entitlement for alternative services, such as internet access.

E. Satellite Service Provider

In 2019, the FCC granted Viasat, a satellite broadband company, ETC status in select areas in Florida to receive high-cost support.[29] Viasat upgraded its network and began to offer Lifeline

[29] FCC, Order, WC Docket No. 10-90, DA 19-925, released on September 18, 2019, https://docs.fcc.gov/public/attachments/ DA-19-925A1.pdf, accessed on October 6, 2023.

services in at least 40 percent of its designated service area by December 2022.[30] It is expected to achieve comprehensive coverage of its designated service areas by the conclusion of 2025.[31] The fee for Viasat's least-cost "Viasat Voice plan" is $58.99 per month before the $5.25 Lifeline Voice discount.[32] By comparison, Lifeline consumers can subscribe to either a broadband service for $89.99 or a bundled voice and broadband service for $124.99, before the $9.25 Lifeline discount and $30.00 ACP discount.[33] All of these plans also require a $15 equipment lease fee. As of June 2023, Viasat has no Lifeline customers in Florida.

[30] FCC, Order, WC Docket No. 10-90, DA 20-108, Released January 27, 2020, https://docs.fcc.gov/public/attachments/DA-20-108A1_Rcd.pdf, accessed October 6, 2023.
[31] FCC, Public Notice, DA 22-1203, released November 17, 2022, https://docs.fcc.gov/public/attachments/DA-22-1203A1.pdf, accessed October 6, 2023.
[32] Viasat, Discount Advertisement, https://www.viasat.com/content/dam/us-site/residential/documents/1740029-CAF-II-Global-One-Pager-012.pdf, accessed on October 6, 2023.
[33] Viasat's broadband service includes a monthly cap of 600 GB capacity at download speeds up to 25 Mbps.

Appendix A
2023 U.S. Poverty Guidelines

Persons in Family/Household	2023 U.S. Federal Poverty Guidelines	135% of Federal Poverty Guidelines	Monthly Income at 135% of Federal Poverty Guidelines
1	14,580.00	19,683.00	1,640.25
2	19,720.00	26,622.00	2,218.50
3	24,860.00	33,561.00	2,796.75
4	30,000.00	40,500.00	3,375.00
5	35,140.00	47,439.00	3,953.25
6	40,280.00	54,378.00	4,531.50
7	45,420.00	61,317.00	5,109.75
8	50,560.00	68,256.00	5,688.00

Source: Department of Health and Human Services, Annual Update of the Department of Health and Human Service Poverty Guidelines. Federal Register Notice, January 19, 2023, https://www.federalregister.gov/documents/2023/01/19/2023-00885/annual-update-of-the-hhs-poverty-guidelines, accessed on October 3, 2023.

Appendix B
Agency, Organization, and Business Lifeline Partners

Florida Lifeline Partners	
1000 Friends of Florida, Inc.	Community Legal Services
A Caring Hand Home Care	Community Partnership Group
AARP–Florida Chapter	Corporation to Develop Communities of Tampa, Inc.
Ability Housing of Northeast Florida	Deaf & Hard of Hearing Services of NW Florida, Inc.
ACCESS Florida Community Network Partners	Disability Rights Florida
Agency for Health Care Administration	Elder Options
Agency for Persons with Disabilities	Elder Source
Aging Matters in Brevard County	Faith Radio Station and other Florida radio stations
Aging Solutions, Inc.	Federal Social Security Admin - Tallahassee District
Aging True Community Senior Services	Feeding South Florida
Aging With Dignity	First Quality Home Care
Alliance for Aging, Inc.	Florida Alliance for Information and Referral Services
America's Second Harvest of the Big Bend, Inc.	Florida Assisted Living Association
Area Agencies on Aging	Florida Association for Community Action
ASPIRE Health Partners	Florida Association of Community Health Centers
Big Bend 2-1-1 and other 2-1-1 Agencies	Florida Association of Counties
Boley Centers, Inc.	Florida Association of County Human Service Admin
Braille and Talking Book Library	Florida Association of Food Banks
Brain Injury Association of Florida, Inc.	Florida Assoc. of Housing & Redevelopment Officials
Bridges at Riviera Beach	Florida Association of the Deaf, Inc.
Bridgeway Center, Inc.	Florida Coalition for Children
Broward County Elderly & Veterans Services Division	Florida Coalition for the Homeless
Bureau of Indian Affairs Programs	Florida Council on Aging
Capital Area Community Action Agency, Inc.	Florida Deaf Services Centers Association
CARES of Florida	Florida Dep. of Business and Professional Regulation
Carrfour Supportive Housing	Florida Department of Children and Families
Catholic Charities of Central Florida	Florida Department of Economic Opportunity
Center for Hearing and Communication	Florida Department of Education
Centers for Drug Free Living	Florida Department of Elder Affairs
Centers for Independent Living	Florida Department of Revenue
Central Florida Community Action Agency	Florida Department of Veterans' Affairs
City and County Consumer Assistance Departments	Florida Developmental Disabilities Council
City and County Housing Authorities	Florida Elder Care Services
City and County Social Programs	Florida Highway Safety and Motor Vehicles
Coalition of Florida Farmworker Organizations, Inc.	Florida Home Partnership
Communities In Schools Foster Grandparent Program	Florida Hospital Association

Florida Lifeline Partners (continued)	
Florida Housing Authorities	Monroe County Social Services
Florida Housing Coalition	NAACP (Florida Associations)
Florida Housing Finance Corporation	National Church Residences
Florida League of Cities, Inc.	Nu-Hope of Highlands County
Florida Low Income Housing Associates	Nursing Homes Administrators
Florida Nurses Association	One-Stop Career Centers
Florida Office of Public Counsel	Osceola County Corrections Department
Florida Ombudsman Program	Palm Beach Community Action Agency
Florida Public Libraries	Refuge House of the Big Bend
Florida Public School Districts	Second Harvest of the Big Bend
Florida Rural Legal Services, Inc.	Seminole County Community Development
Florida Schools for the Deaf and Blind	Senior Connection Center, Inc.
Florida Senior Medicare Patrol	Senior Friendship Centers
Florida Senior Program	Senior Medicare Patrol
Florida Telecommunications Relay, Inc.	Senior Resource Alliance
Florida Voters League	Senior Solutions
Gateway Community Outreach	Seniors First
Good News Outreach	SHINE Program
Goodwill Industries of Central Florida	South East American Council, Inc.
Habitat for Humanity – Florida	Suwannee River Economic Council
HANDS of Central Florida	Tallahassee Memorial Hospital
Hemophilia Foundation of Greater Florida	Tallahassee Urban League
Hispanic Office for Local Assistance	Tampa Vet Center
HOPE Community Center	Three Rivers Legal Services, Inc.
HOPE Connection	U.S. Department of Housing and Urban Development
HOPE Partnership	United Home Care Services
League for the Hard of Hearing	United Way of Florida
Leon County School Board	Urban Jacksonville
Little Havana Activities and Nutrition Centers	Urban Leagues of Florida
Living Stones Native Circle	Wakulla County Senior Citizens Council
Marion Senior Services	Walton County Council on Aging
Miccosukee Tribe of Indians of Florida	Washington County Council on Aging
Mid-Florida Housing Partnership, Inc.	We Care-Jacksonville

Appendix C
Lifeline Enrollment and Year-to-Year Net Growth Rate

	ETCs	June 2020	June 2021	Net Growth Rate	June 2022	Net Growth Rate	June 2023	Net Growth Rate
Wireless	Assurance Wireless	222,128	155,848	-30%	177,982	14%	169,309	-5%
	SafeLink Wireless	130,362	100,463	-23%	109,128	9%	123,926	14%
	Access Wireless	8,740	7,566	-13%	4,136	-45%	2,271	-45%
	T-Mobile	3,307	3,523	7%	3,608	2%	0*	-100%
Incumbent Wireline	CenturyLink	3,056	2,652	-13%	2,153	-19%	1,844	-14%
	Windstream	1,274	1,289	1%	1,361	6%	1,142	-16%
	Frontier Florida	1,405	1,478	5%	1,249	-15%	1,102	-12%
	Consolidated Communications	275	255	-7%	189	-26%	163	-14%
	NEFCOM	179	169	-6%	138	-18%	131	-5%
	TDS Telecom	98	88	-10%	77	-13%	68	-18%
	Blue Stream Fiber (ITS)	58	37	-36%	30	-19%	54	80%
	Frontier of the South	21	19	-10%	17	-11%	32	88%
	Smart City	4	3	-25%	6	100%	6	0%
	AT&T	70	58	-17%	0*	-100%	0*	0%
Competitive Carrier	Phone Club	158	138	-13%	138	0%	138	0%
	WOW!	45	55	22%	73	33%	43	-41%
	Bright House	0*	0*	0%	0	0%	0	0%
	Conexon	0*	0*	0%	0*	0%	0	0%
	Viasat	0*	0*	0%	0*	0%	0	0%
	Total	371,180	273,641	-26%	300,285	10%	300,229	0%

Source: FPSC Data Requests 2020-2023 *Not offering Lifeline

Appendix D
Lifeline Subscription by Service Type
(as of June 2023)

	ETCs	Voice	Broadband	Bundled
Wireless	Assurance Wireless	0.00%	0.00%	100.00%
	SafeLink Wireless	1.41%	46.71%	51.88%
	Access Wireless	0.00%	0.00%	100.00%
Incumbent Wireline	CenturyLink	89.32%	2.44%	8.24%
	Windstream	14.80%	15.94%	69.26%
	Frontier Florida	70.97%	11.52%	17.51%
	Consolidated Communications	68.71%	4.29%	27.00%
	NEFCOM	22.90%	0.76%	76.34%
	TDS Telecom	27.94%	72.06%	0.00%
	Blue Stream Fiber (ITS)	7.41%	20.37%	72.22%
	Frontier of the South	65.63%	15.63%	18.74%
	Smart City	16.67%	16.67%	66.66%
Competitive Carrier	Phone Club	100%	0.00%	0.00%
	WOW	0.00%	62.79%	37.21%
	Bright House	0.00%	0.00%	0.00%
	Conexon	0.00%	0.00%	0.00%
	Viasat	0.00%	0.00%	0.00%
	Total	1.55%	19.44%	79.01%

Source: FPSC Data Request 2023

II. Outside Persons Who Wish to Address the Commission at Internal Affairs

Note: The records reflect that no outside persons addressed the Commission at this Internal Affairs meeting.

III. Supplemental Materials for Internal Affairs

Note: The records reflect that there were no supplemental materials provided to the Commission during this Internal Affairs meeting.

IV. Transcript

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

PROCEEDINGS: INTERNAL AFFAIRS

COMMISSIONERS PARTICIPATING: CHAIRMAN ANDREW GILES FAY
COMMISSIONER ART GRAHAM
COMMISSIONER GARY F. CLARK
COMMISSIONER MIKE LA ROSA
COMMISSIONER GABRIELLA PASSIDOMO

DATE: Thursday, November 9, 2023

TIME: Commenced: 11:00 a.m.
Concluded: 11:19 a.m.

PLACE: Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: DEBRA R. KRICK
Court Reporter and
Notary Public in and for
the State of Florida at Large

PREMIER REPORTING
TALLAHASSEE, FLORIDA
(850) 894-0828

P R O C E E D I N G S

CHAIRMAN FAY: All right. It looks like 11 o'clock here. We will go ahead and begin the Internal Affairs meeting here today. We will start by recognizing our Employee of the Month, which Sakina Deas.

So Sakina is a Utility Analyst III in the Office of Industry Development & Market Analysis. She has been with the Commission since 2007.

She performs her duty -- her duties consistently and at a very high level. She actually worked on something which I find very interesting, the North American Numbering Plan administered to ensure that we had the numbering resources available to make adjustments, which has been a hot topic these past few years. So she's really just a team player, and we are fortunate to have her as part of the Commission team.

So with that, I would like to recognize Sakina Deas as our Employee of the Month.

(Applause from the audience.)

CHAIRMAN FAY: And poor Sakina has gotten to know my extension in the office all too commonly with some of the issues that we have worked on, so I appreciate you always answering the phone,

Sakina.

All right. Commissioners, with that, we will move to our Internal Affairs agenda for this morning. We will begin by taking up the Draft 2023 Ten-Year Site Plans of Florida Electric Utilities. We will have a presentation on that item.

Yes, Mr. Davis, when you are ready.

MR. DAVIS: All right. Good morning, Commissioners. I am Greg Davis with the Commission staff in Engineering.

Item No. 1 is the Draft Review of the 2023 Ten-Year Site Plans of Florida's Electric Utilities. This year's review is in the same format and contains similar content as last year's review.

Staff reviewed each of the utilities' site plans in the state as a whole. Overall, reserve margins for summer and winter have been met by the electric utilities statewide.

Natural gas continues to provide most of the net energy for load, but its contribution is forecasted to decrease from 70.3 percent in 2022 to 56.4 percent in 2032. These declines are offset by an increase in renewables, primarily solar, which will increase from 5.3 percent to 28.7 percent in

2032.

The state is projected to add almost 28,000 megawatts of net generation of solar, and over 20 -- 2,800 megawatts of batteries.

Staff seeks the Commission's approval of the Draft Review of the 2023 Ten-Year Site Plans, which will find each utility's plans suitable for planning purposes.

If the Commission approves the draft as suitable, the review and any comments received will be provided to the Department of Environmental Protection for consideration in future need determination proceedings, and the Department of Agricultural and Consumer Services regarding fuel and load forecasts.

Staff also seeks administrative authority to make minor edits as needed.

Staff is available for any questions.

CHAIRMAN FAY: Great. Thank you, Mr. Davis. I know a lot goes into this report, so I appreciate your work on this.

Commissioners, we will take up any questions or comments if you have on this. No, showing none, Mr. -- yeah.

COMMISSIONER CLARK: I will make --

CHAIRMAN FAY: Yeah.

COMMISSIONER CLARK: I will make a couple of observations, Mr. Chair.

CHAIRMAN FAY: Yes.

COMMISSIONER CLARK: I appreciate the staff's diligence and work on putting the plan together, and I continue to have always every -- every time we sit down and review this, it kind of troubles me a little bit. I have a little bit of heartburn giving approval to a plan that is -- I understand it's for planning purposes, but we continue to look at the document, and I see so much investment in the renewable aspect that I have some uncertainty about, and some concerns about.

And I just would remind the Commission that as we come up and actually review things as they are actually in the development stage, that, you know, there is a lot of cost considerations, and there is a lot of other things that go into the integrated resource planning process. And I looked at the site -- excuse me, the capacity -- the firm capacity ratings on the solar, and I guess I will throw this out to one of you guys to kind of help me with.

As I looked at contributions from solar

capacity into firm capacity, I have asked every utility that's come before us with a new solar plan what percentage of their total capacity was going toward firm, and I usually get somewhere in the 50 percent range.

But as I looked at the numbers, and on all of the new proposed installations, I don't see anything near the 50-percent capacity range. Can anybody explain to me why there is such a load difference? If you look, I saw 22, 32, 40 percent firm capacity allocations out of total capacity.

CHAIRMAN FAY: Mr. Ellis, you are recognized.

MR. ELLIS: Yes. Phillip Ellis with staff.

They are -- each utility has a slight difference in variation in how they consider the firm component of solar, and it usually is associated with the amount of solar that is already existing on their system, so most of them have a declining basis. So as they add solar, less and less is considered to be firm.

So currently, many of the systems are including about 50 percent towards summer peak only. Only FPL, I believe, includes any winter contribution, and that's just due to the geography, and even that is declining over time.

Now, in this report, we are also seeing the addition of batteries and combined batteries with solar systems that provide an increased capacity contribution for those systems, both in summer as well as in winter for some of the solar facilities. But overall, we are seeing a declining trend in the firm contribution.

There is also, generically, operational concerns that are raised by the increasing amount of solar within the system, and kind of how that will be handled during peak. But overall, it does shift the peak later and later to where you are getting those diminishing returns from your solar facilities in the evening.

COMMISSIONER CLARK: Mr. Ellis, you led me into the second question.

One of the things I didn't really understand was there was no allocation to firm capacity given to any of the proposed battery installations, is that because of duration?

MR. ELLIS: It varies. There is contribution towards them for most of them, but some of them, it's built into the solar megawatt. So it's attached to the solar plant and, therefore, the solar facility is considered to be firm capacity.

In other instances, if it's a stand-alone battery on the system, you will have a contribution for that. Even those, though, just due to charging and other factors, it may not be 100 percent of nameplate capacity. Some of them are a little lower than 100 percent to reflect those concerns.

COMMISSIONER CLARK: And so just to clarify, the reason that I am seeing such differences in the percent allocation to firm in each of the site installations has to do with the impact of their overall system? It's, again, goes back to part of integration.

MR. ELLIS: Correct. Each of the utilities is a slightly different space with regards to the amount of solar and the amount of batteries on their system. They are taking the lessons learned from each other and kind of going forward in terms of planning. And so each one of them has got kind of a different standpoint as to what firm percentage they will consider. But generically, the trend has been, the more solar on the system, each incremental unit of solar will have a smaller and smaller firm contribution.

COMMISSIONER CLARK: Great. Thank you very much, Mr. Ellis.

Thank you, Mr. Chairman.

CHAIRMAN FAY: Okay. Commissioner La Rosa, you are recognized.

COMMISSIONER LA ROSA: Thank you, Chairman.

Can you help maybe kind of direct a little bit on the EPA rule? I know that that's not necessarily finalized, but how would that impact this, and maybe not necessarily, you know, this -- today's plan, but maybe what this plan would look like moving forward, or maybe what -- and also what we could expect as that rule continues to become finalized.

MR. ELLIS: My understanding is with a shift to more hydrogen-based generation, and replacing natural gas with hydrogen, would have a significant impact on the system. I think in next year's report we will probably start having some greater discussions in terms of the details of how that will be impacting the specifics.

I do not know at this time kind of what those impacts would be right now based on this report, but it definitely would have a significant impact upon their ability to generate. The main factor would be costs, you know, of conversion of availability of fuel, all those sorts of things,

but I think that's also addressed within the concept of the rule as well. So I unfortunately can't provide a more specific answer at this stage.

COMMISSIONER LA ROSA: No, I appreciate that. And that was -- that was a good answer, and I knew that there couldn't be, you know, a solid response, but that's -- that certainly sets the stage. I appreciate that. Thank you.

CHAIRMAN FAY: Great. Any other questions?

Okay. With that, Commissioners, seeing no other questions or comments, we take up the -- this report as, by statute, as either suitable or unsuitable, so I will take up a motion on the suitability of this report.

COMMISSIONER PASSIDOMO: Move approval of suitable, Mr. Chairman.

CHAIRMAN FAY: Okay.

COMMISSIONER LA ROSA: If there was only something in between, then it would make it a little bit easier. I am a little bit reluctant, but I am seconding because I know, you know, I know what we have to do to obviously move this forward, so I second the motion.

CHAIRMAN FAY: Okay. We have a motion and a second.

All that approve say aye.

(Chorus of ayes.)

CHAIRMAN FAY: All right. Show that approved.

All right. Commissioners, we will next take up Item No. 2 on the agenda for Internal Affairs this morning, which is the Draft 2023 Report on Activity Pursuant to the Florida Energy Efficiency and Conservation Act. This will be under attachment two of your folder. We will take up a presentation of this report, and then any questions or comments that we may have at this time.

So whenever you are ready.

MR. LANG: Good morning, Commissioners. I am Bailey Lang with Commission staff.

Item 2 this morning is the Draft Annual Report on Activities Pursuant to the Florida Energy Efficiency and Conservation Act, also known as the FEECA report.

Section 366.82(10), Florida Statutes, requires the Commission to submit this report annually to the Governor and the Legislature by March 1st. This report summarizes each utility's achievements towards meeting goals for the 2022 calendar year, and the cost recovery for the related programs.

Staff is seeking approval of this FEECA

report, and asks for the ability to correct any scrivener's errors that are identified.

In addition, we request permission to work with the Chairman and Executive Director's offices on the distribution letters that go with the report to the Governor and other parties.

Staff is here to answer any questions, and subject matter expert representatives from the FEECA utilities are available as well.

Thank you.

CHAIRMAN FAY: Okay. Great. Thank you, Mr. Lang.

All right. Commissioners, we will take up any questions or comments on this report.

Commissioner Clark, you are recognized.

COMMISSIONER CLARK: Thank you, Mr. Chairman. Again, we have back to back things to do I don't like today.

One question that I had in the report. Good job on the record. You guys always do a tremendous job with it, but on page 11, we made reference to the Commission-approved cost-effectiveness methodologies, and I struggle to recall the Commission approving the three -- the three different tests.

I am totally opposed to the TRC method, and I don't remember -- I may have voted no, but I don't remember the Commission ever making an approval on the three tests as cost-effectiveness methods. Am I missing, or did we? Or is it just something that we do from a perspective, we are including all of these just for informational purposes, is that --

MR. FUTRELL: Commissioner, Mark Futrell with staff. I will respond to that.

Those three tests are a part of the information that's required by Rule 25-17.008, that references a cost-effectiveness manual that is to be -- that lays out the components of each test and establishes essentially the minimum requirements for the utility to provide information to the Commission to get perspectives of cost-effectiveness from different viewpoints, the individual participants, the overall group of customers and those customers who might not participate that might have impacts on rates. And so that's where that comes from. It's --

COMMISSIONER CLARK: It's out -- it's actually out of a rule that we will include the TRC methodology --

MR. FUTRELL: Yes, sir.

COMMISSIONER CLARK: -- in the evaluation?

MR. FUTRELL: And then how the Commission weighs that information in its decisions and --

COMMISSIONER CLARK: Sometimes.

MR. FUTRELL: -- in their dockets is at the discretion of the Commission. But this is a requirement to file that information pursuant to those three tests at a minimum.

COMMISSIONER CLARK: You answered my question. That's where it comes from. It wasn't something that -- it's been in the rule for some time?

MR. FUTRELL: Yes, sir.

COMMISSIONER CLARK: Okay. Thank you.

CHAIRMAN FAY: Great. Thank you, Commissioner Clark.

Any other questions or comments for the FEECA report?

All right. Seeing none, we will -- would we do need a motion for approval of the report.

COMMISSIONER PASSIDOMO: Move approval of the draft FEECA report.

COMMISSIONER LA ROSA: Second.

CHAIRMAN FAY: Okay. We have a motion and a second.

All that approve say aye.

(Chorus of ayes.)

CHAIRMAN FAY: All right. Show that report approved.

All right. Commissioners, we will move next to our final report, which is the Lifeline Assistance Report. We will give Ms. Deas a minute to get set up here.

We should have gotten you, like, a gold, you know, thing with your name on it for Employee of the Month there to --

MS. DEAS: I know, right? Next time.

Okay. Good morning, Commissioners. Sakina Deas with the Office of Industry Development & Market Analysis.

Item 3 is staff's draft 2023 Lifeline Report to go to the Governor and Legislature. It details Lifeline participation trends, regulatory actions impacting the Lifeline program, as well as Lifeline awareness promotions in Florida.

Staff requests editorial privileges to address any non-substantive changes and updates. Also, staff is -- we are seeking approval of this report, and we are available for questions.

CHAIRMAN FAY: Okay. Great. Thank you, Ms. Deas.

Commissioners, do you have any questions for Ms. Deas on this report? Seeing any comments?

Okay. Showing none, we will take up a motion for approval of the report.

COMMISSIONER PASSIDOMO: Move approval of the Lifeline Assistance Report.

CHAIRMAN FAY: Okay. We have a motion. Do we have a second?

COMMISSIONER LA ROSA: Second.

CHAIRMAN FAY: We have a second.

All that approve say aye.

(Chorus of ayes.)

CHAIRMAN FAY: Show that report approved.

Thank you, Ms. Deas. I appreciate it.

All right. Next we will move into our internal reports, General Counsel's Report. Mr. Hetrick, you are recognized.

MR. HETRICK: Yeah. Thank you, Mr. Chairman. Good morning, Commissioners.

No report other than just a reminder of the fair market rule -- fair market value rule workshop next Tuesday, on the 14th. This is in response to legislation passed last session. That's my report, Mr. Chair. And that's been noticed.

CHAIRMAN FAY: Do you know what time it is?

MR. HETRICK: 9:30.

CHAIRMAN FAY: Okay. All righty. Thank you, Mr. Hetrick.

Mr. Hetrick, how many points is FSU going to win by on Saturday?

MR. HETRICK: I never predict a Miami game.

CHAIRMAN FAY: Yeah. I will definitely have more pie in the face if we lose that game now because this is public record, so we will see what happens.

All right. Next we will move to Mr. Baez for our Executive Director's Report.

MR. BAEZ: I just want to -- the University of Miami hereby thanks you for the curse.

Commissioners, I have got a few brief legislative updates. Nothing terribly specific, but we are finishing up special session this week, and then we have a piggyback committee week next week, which should be pretty active for us here at the agency and those abroad as well.

There is -- various bills are in-house for analysis, though nothing -- no major legislation concerning the Commission at this point.

Our agency bills are now paired up. I had mentioned House Bill 229 prior, and now it has a

companion in the Senate, Senate Bill 364. So thank you to Representative Payne and Senator Collins for taking up our cause this session.

Actually, it's going to be heard next week -- the House bill is going to be heard next week. It's got its first stop at the Energy Subcommittee, so it made the agenda there.

Also of note, staff is participating in a panel at the Commerce Committee meeting also on November 14th. So November 14th is a busy day for us all. They are going to be discussing grid issues generally, with some focus on impacts of EV, EV infrastructure and whatnot.

There is still some persistent talk of an energy package coming out of the House, but no real details right now. Right now it's all real -- really wild speculation, if you can use the term wild at all to discuss -- or to describe the utility world. I am not sure that I would.

Finally, we are going to start having formal legislative updates with the next coming Internal Affairs, which is right now scheduled for December 19th. But as always, staff generally is available, all of us are available to discuss any legislation that may interest you or that you may have

questions about, so please let us know.

And with that, unless you have questions.

CHAIRMAN FAY: Okay. Great.

Is the HB 229 you mentioned, the companion --

MR. BAEZ: Yes, sir.

CHAIRMAN FAY: -- that's the same bill that passed last year through the Senate?

MR. BAEZ: It is, with a slight modification, clarification. Yeah.

CHAIRMAN FAY: It's still affixed to the --

MR. BAEZ: Yes, it is.

CHAIRMAN FAY: Okay. Gotcha. Okay.

Any other questions?

All right. Seeing none, Mr. Baez, anything else?

MR. BAEZ: No. That's it.

CHAIRMAN FAY: Okay. With that, Commissioners we will take up any other matters before we adjourn.

Seeing none, I hope everybody has a wonderful Thanksgiving, and we will see you in December. Thanks.

(Proceedings concluded.)

CERTIFICATE OF REPORTER

STATE OF FLORIDA)
COUNTY OF LEON)

I, DEBRA KRICK, Court Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the action.

DATED this 27th day of November, 2023.

DEBRA R. KRICK
NOTARY PUBLIC
COMMISSION #HH31926
EXPIRES AUGUST 13, 2024