

Solar Energy Outlook & Florida Public Service Commission Overview

Presentation to the
2025 Lay of the Land Florida Conference



Mark Futrell
Deputy Executive Director, Technical
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Mission:

*To facilitate the efficient provision of
safe and reliable utility services
at fair prices*



Economic Regulation

- Essential Services
 - Society dependent upon services for quality of life and input to economic activity
 - Demand relatively inflexible
- Natural Monopoly
 - Demand satisfied at lower cost by single provider
 - High capital cost, long-lived assets
 - Duplicative systems wasteful and undesirable



FPSC History

- Florida Railroad Commission was created by the Legislature in 1887 to regulate the railroad industry
- Name changed to Public Service Commission in 1965
- Regulatory authority expanded:
 - Telephone & Telegraph (1911)
 - Motor Carrier Transportation (1929)
 - Investor-owned Electric Utilities (1951)
 - Natural Gas (1952)
 - Water and Wastewater (1959)
 - Airlines (1972)



The FPSC Regulates



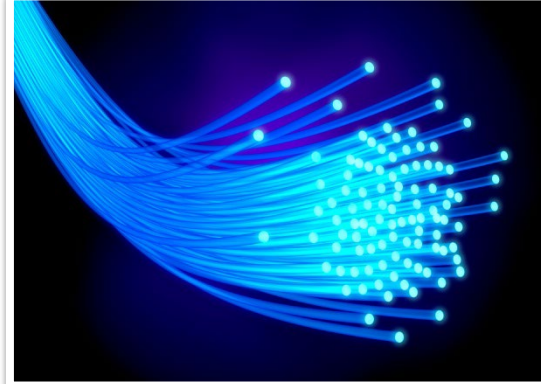
ELECTRIC



NATURAL GAS



WATER & WASTEWATER



TELECOMMUNICATIONS



FPSC Commissioners



Commissioner
**Andrew Giles
Fay**

Commissioner
**Art
Graham**

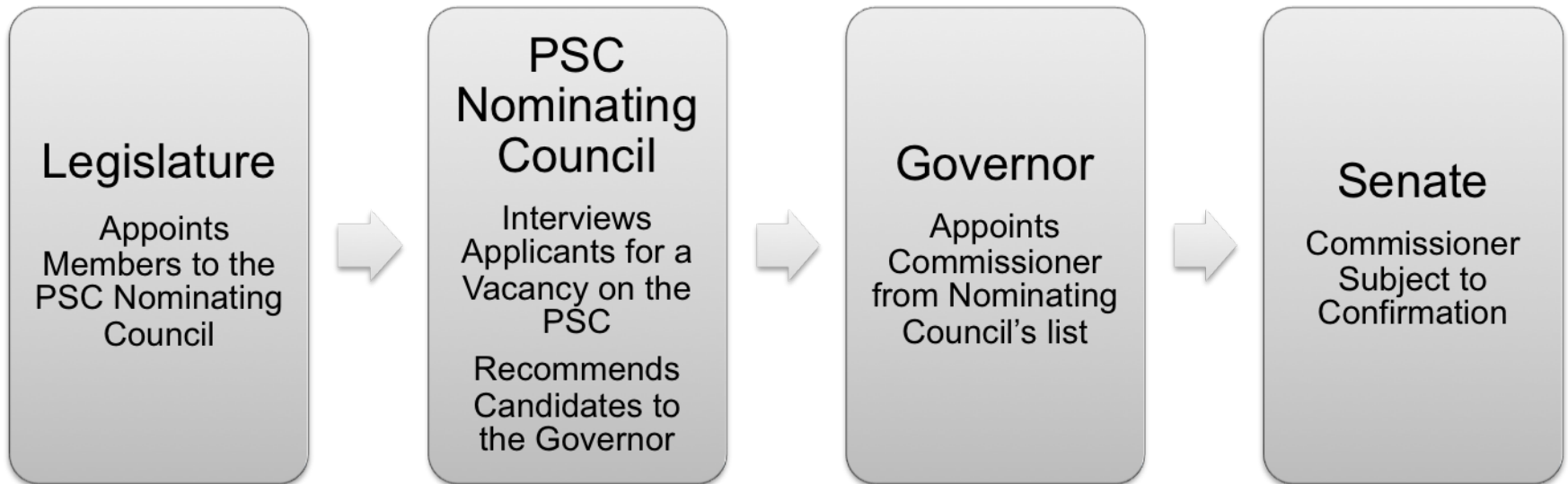
Chairman
**Mike
La Rosa**

Commissioner
**Gary F.
Clark**

Commissioner
**Gabriella
Passidomo Smith**



FPSC Commissioners



- 5 Commissioners serve staggered 4-year terms
- Chairman serves for 2 years



FPSC Regulatory Overview

- The Public Service Commission is a Legislative agency with authority over the rates and service of the state's investor-owned utilities (IOUs)
- Electricity, Natural Gas, and Water & Wastewater:
 - The FPSC regulates the electric and natural gas IOUs, and the water & wastewater IOUs in those counties that have given jurisdiction to the PSC
 - The FPSC also has limited jurisdiction over publicly-owned municipal and rural cooperative utilities
- Telecommunications:
 - The FPSC has regulatory authority over the wholesale relationships of the state's various telecommunications companies, and over certain retail programs such as Lifeline and Relay



FPSC Regulatory Authority

- **Rate Base/Economic Regulation**
 - Analyze requested rate changes
 - Conduct earnings surveillance to ensure that regulated utilities are not exceeding their authorized rates of return
- **Consumer Protection, Safety, Reliability, and Service**
 - Investigate and respond to consumer questions
 - Disseminate consumer education materials
 - Conduct safety inspections of gas systems and electric facilities
 - Oversight of the planning, development, and maintenance of the grid to assure an adequate and reliable source of energy
- **Competitive Market Oversight**
 - Facilitate the development of competitive markets, where directed by statute, and address issues associated with those markets



Rate Base and Rate of Return

- Rate Base = the net investment in facilities, equipment, and other property necessary to provide utility service minus accrued depreciation
- Rate of Return = (r) the % return earned, or allowed to be earned, on the utility's rate base including a return on equity and recovery of debt expense
- Utility systems are capital intensive industries with long lived assets of 40-60 years. Once costs are deemed prudent, cost recovery is permitted
- During a rate case, “base rates” are changed and are fixed until the next rate case



Cost Recovery Clauses

- Base rate cases typically can take up to a year to complete
- The Commission has authority to allow recovery of certain expenses that can vary year-to-year or investments to be recovered through annual adjustment clauses
- Formal hearings held annually to establish rates to recover actual costs
- These include:
 - Fuel costs, including purchased power
 - Energy conservation program costs
 - Environmental compliance costs
 - Storm Protection Plan costs



Electric Utility Planning

- FPSC has authority over all electric utilities for the planning, development, and maintenance of a coordinated electric grid to assure an adequate and reliable supply of energy
- Section 186.801, F.S., requires all major electric generating utilities to submit to the FPSC a Ten-Year Site Plan
- The FPSC performs a preliminary study of each plan and must classify whether a plan is “suitable” or “unsuitable” for planning purposes
- Comments on plans are sought from state, regional and local planning agencies on any areas of concern



Electric Utility Planning

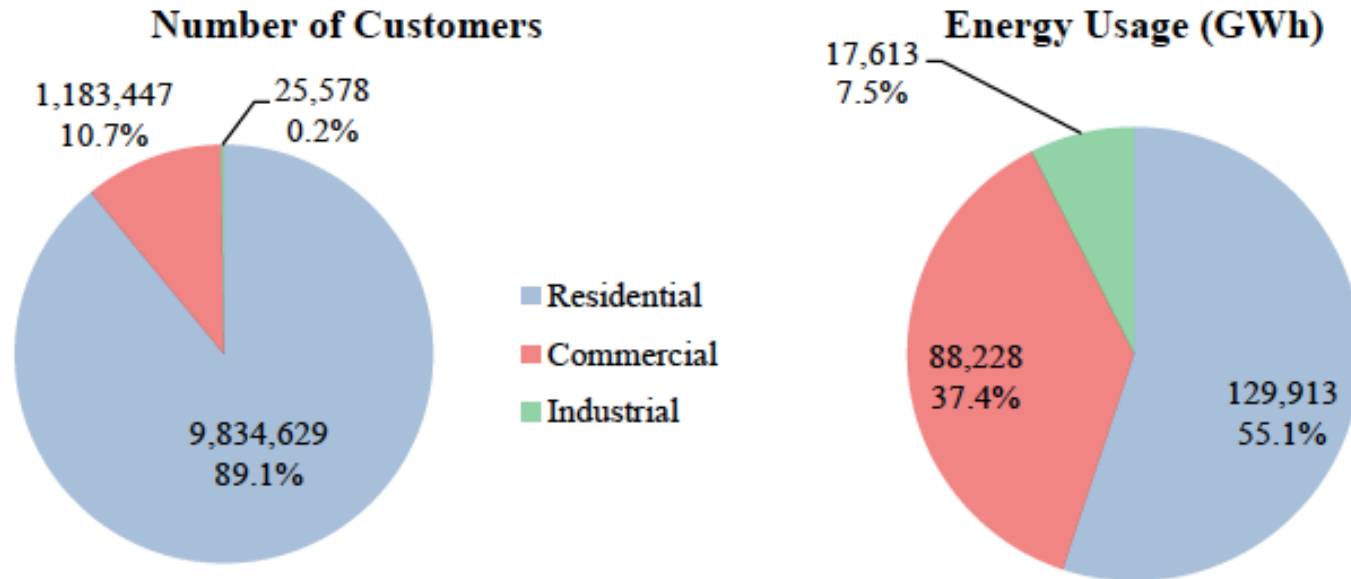
- Ten-Year Site Plans provide state, regional and local planning agencies advance notice of proposed power plants and transmission facilities, including locations
- Provides the results of a utility's integrated resource plan
 - Forecast of customer peak demand and energy requirements
 - Assessment of options to maintain adequate and reliable service
 - Conservation and energy efficiency programs
 - Purchases from other utilities or third parties
 - Modernization of existing generating facilities
 - Construction of new generation and transmission
- The FPSC's classification is not binding as plans are subject to modification due to changes in:
 - Energy policy
 - Fuel costs
 - Customer energy needs
 - Economics of electric generating technologies



Solar Energy Outlook



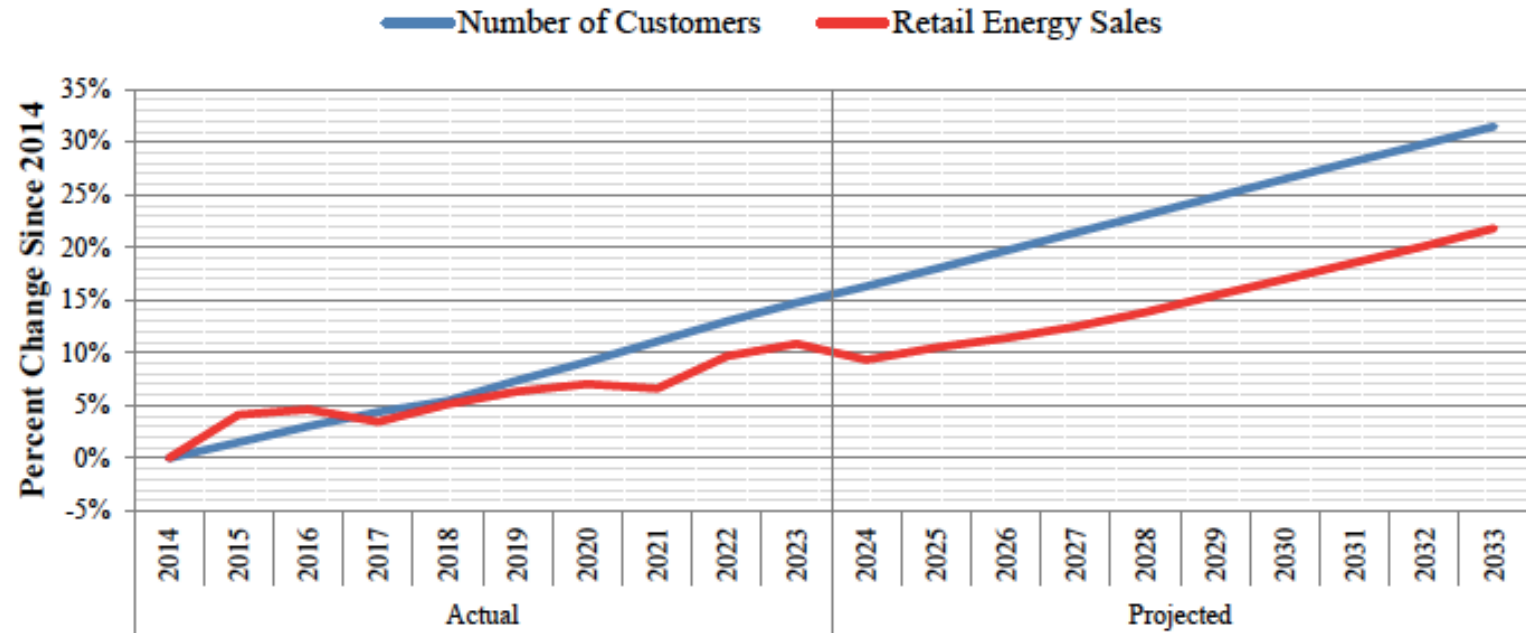
Florida Electric Customer Profile 2023



Source: FRCC 2024 Regional Load and Resource Plan



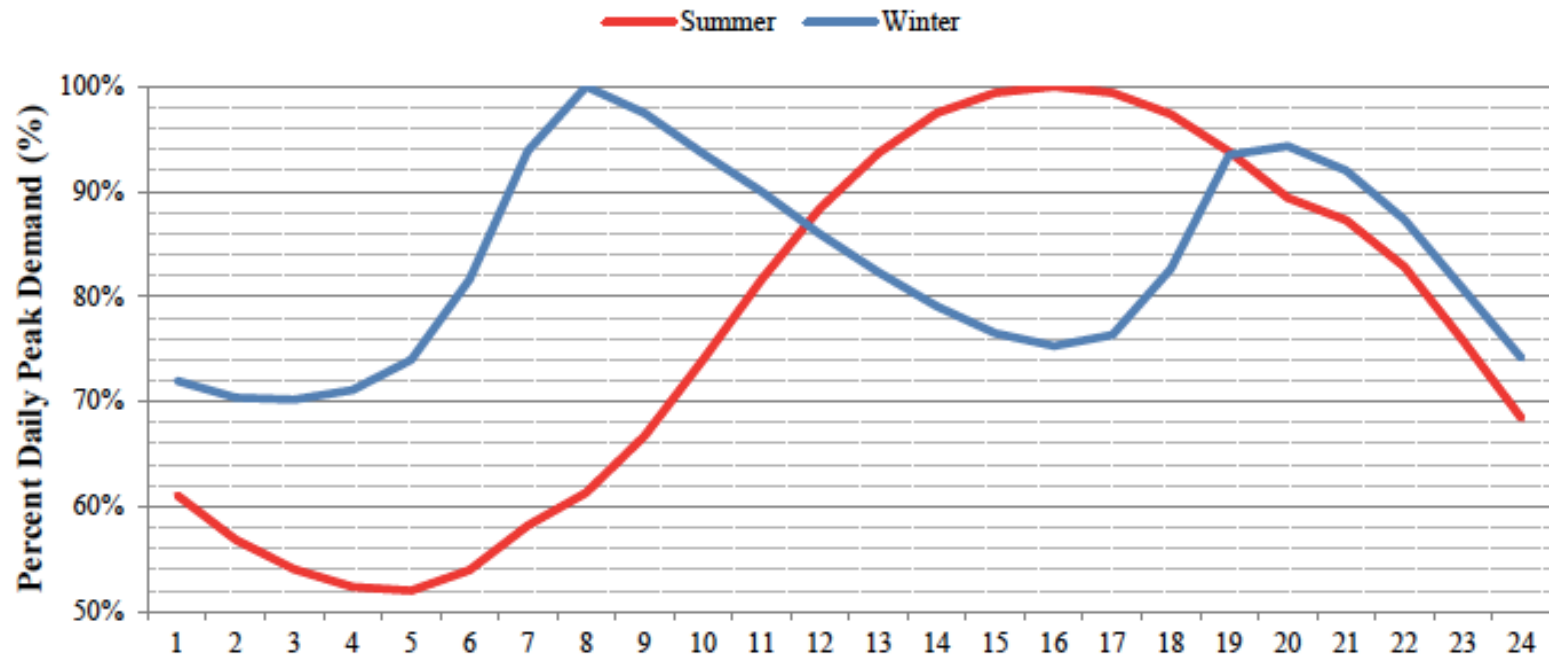
Florida Electric Customers & Sales



Source: FRCC 2024 Regional Load and Resource Plan



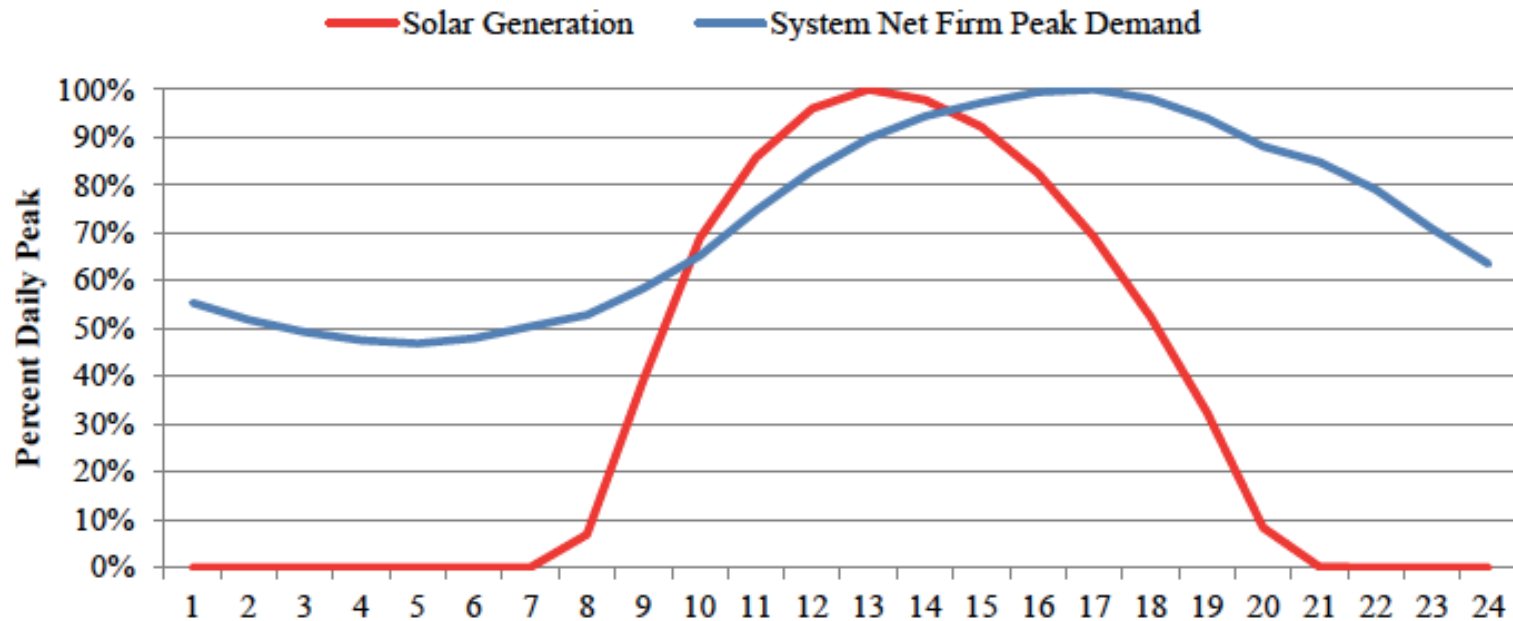
Florida Seasonal Peak Load Profile



Source: TYSP Utilities' Data Responses



Summer Peak Day & Solar Generation



Source: FPSC, "Ten-Year Site Plan Review, 2024"



Florida Renewable Energy Resources

Existing Renewables 2013

Renewable Type	MW	% Total
Municipal Solid Waste	398	24.6%
Waste Heat	308	19.0%
Solar	218	13.5%
Hydro	64	3.9%
Wind	0	0.0%
Solid Biomass	581	35.9%
Landfill Gas	49	3.1%
Total of All	1,617	100.0%

Planned Renewables 2014-2023

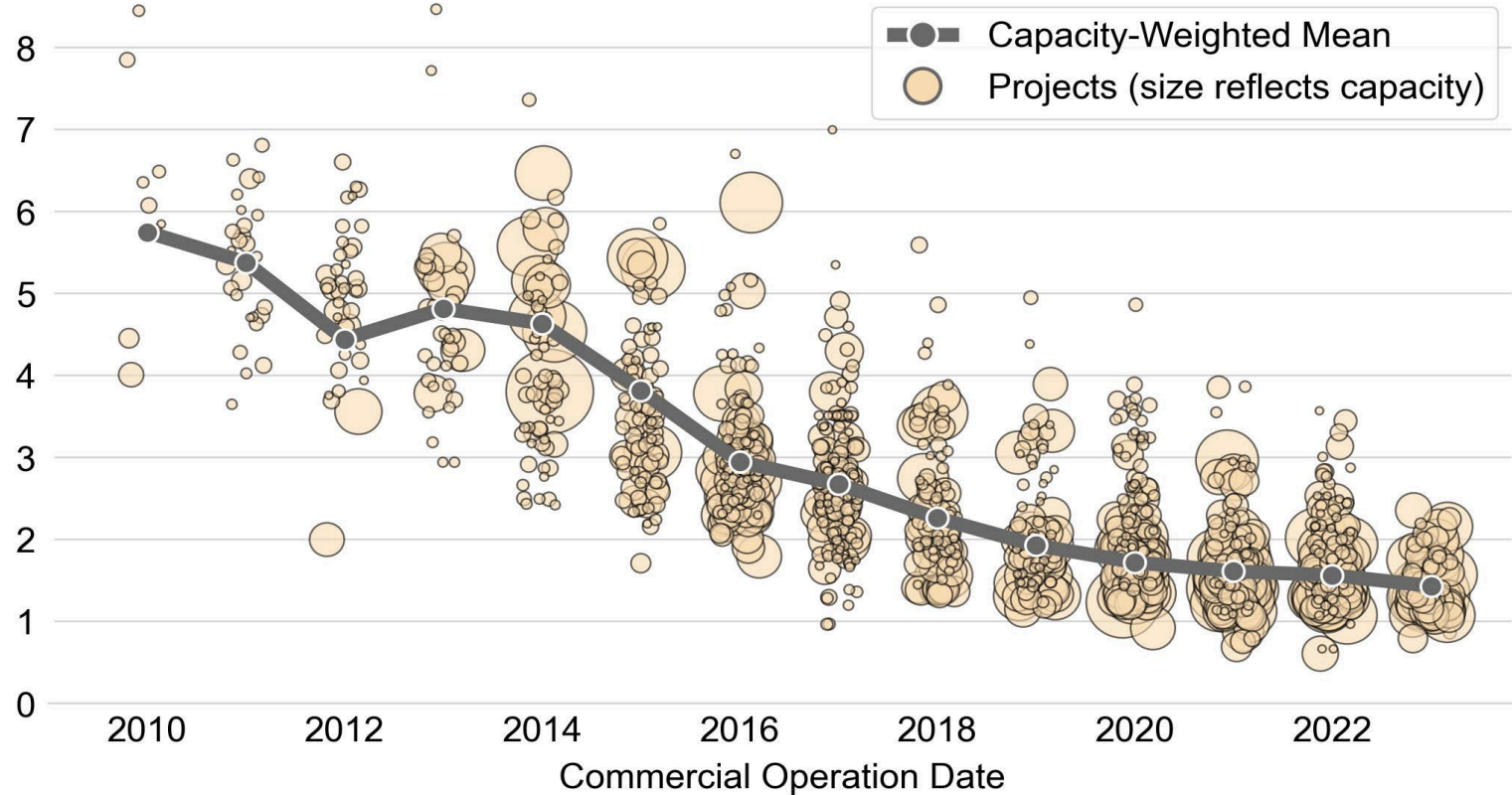
Renewable Type	MW	% Total
Municipal Solid Waste	90	12.4%
Waste Heat	0	0.0%
Solar	332	46.1%
Hydro	0	0.0%
Wind	0	0.0%
Solid Biomass	272	37.6%
Landfill Gas	28	3.9%
Total of All	722	100%

Source: FPSC, "Ten-Year Site Plan Review, 2014"



Installed Cost of Solar Photovoltaic

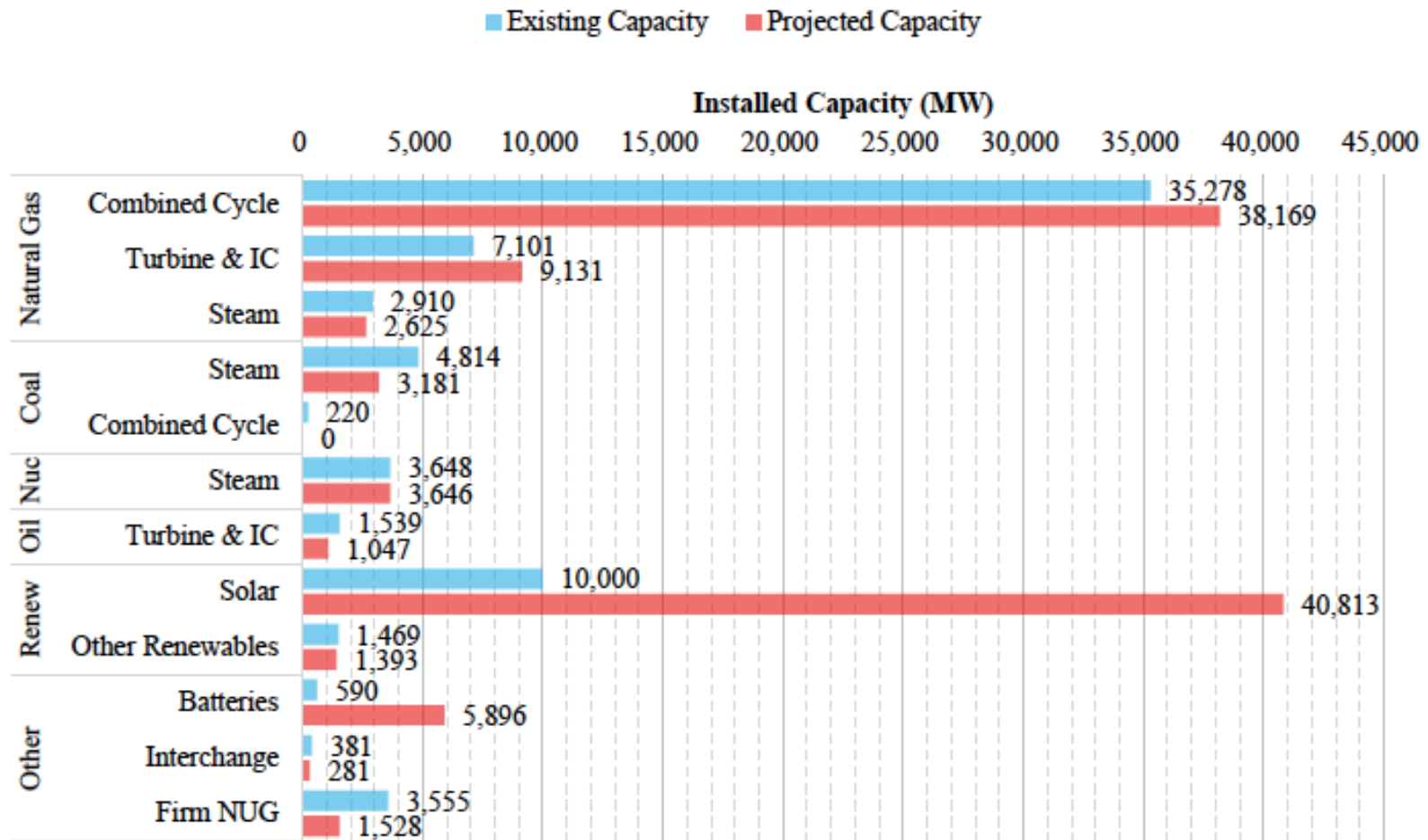
Installed Project Capex (2023\$/W_{AC})



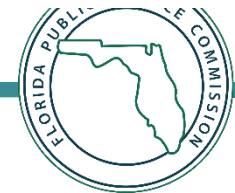
Source: Lawrence Berkeley National Laboratory, "Utility Scale Solar, 2024"



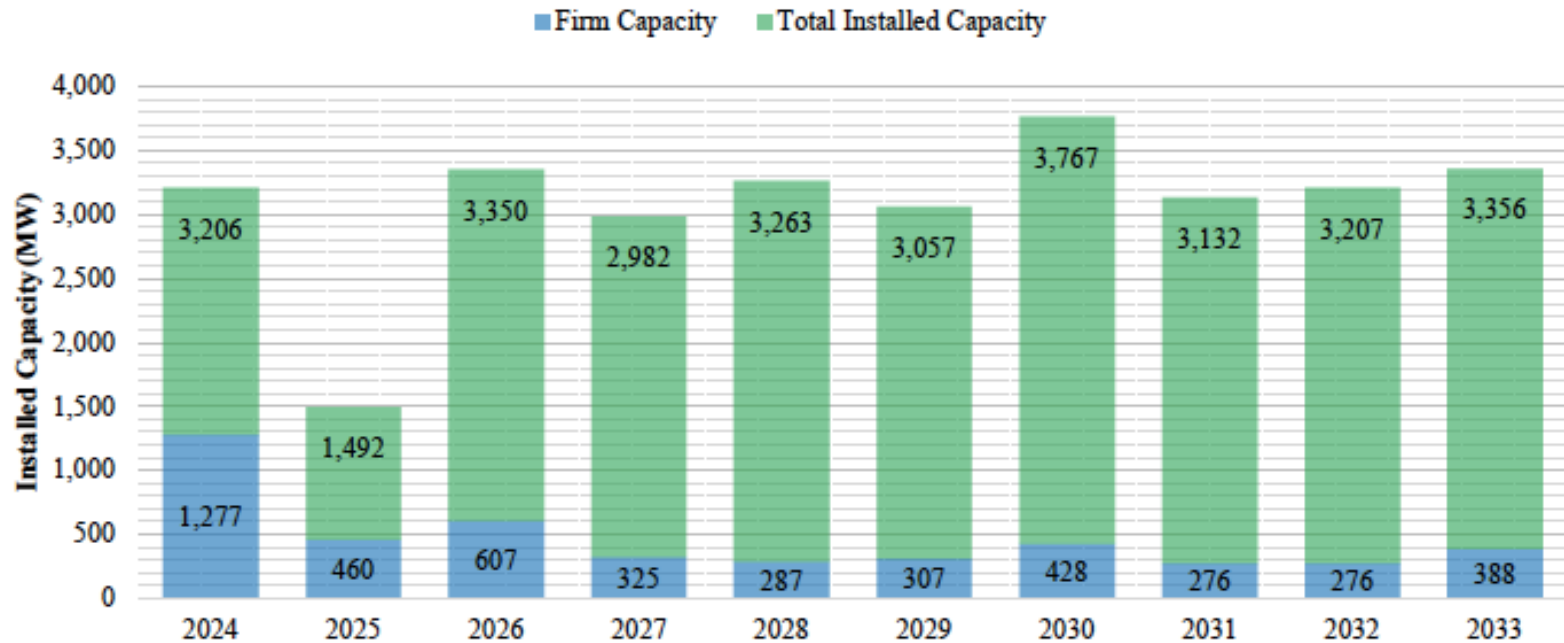
Florida Electric Generating Capacity



Source: FRCC 2024 Regional Load and Resource Plan and TYSP Utilities' Data Responses



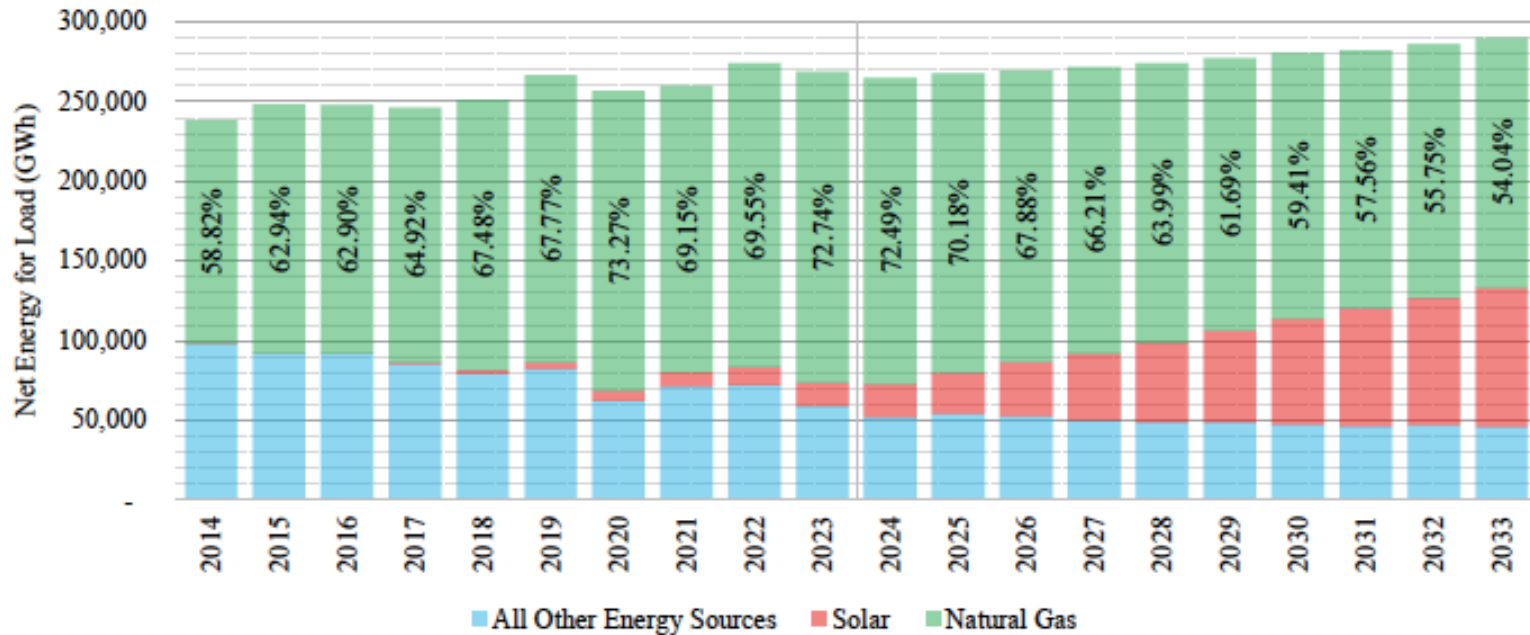
Florida Planned Solar Photovoltaic Installations



Source: FRCC 2024 Regional Load and Resource Plan and TYSP Utilities' Data Responses



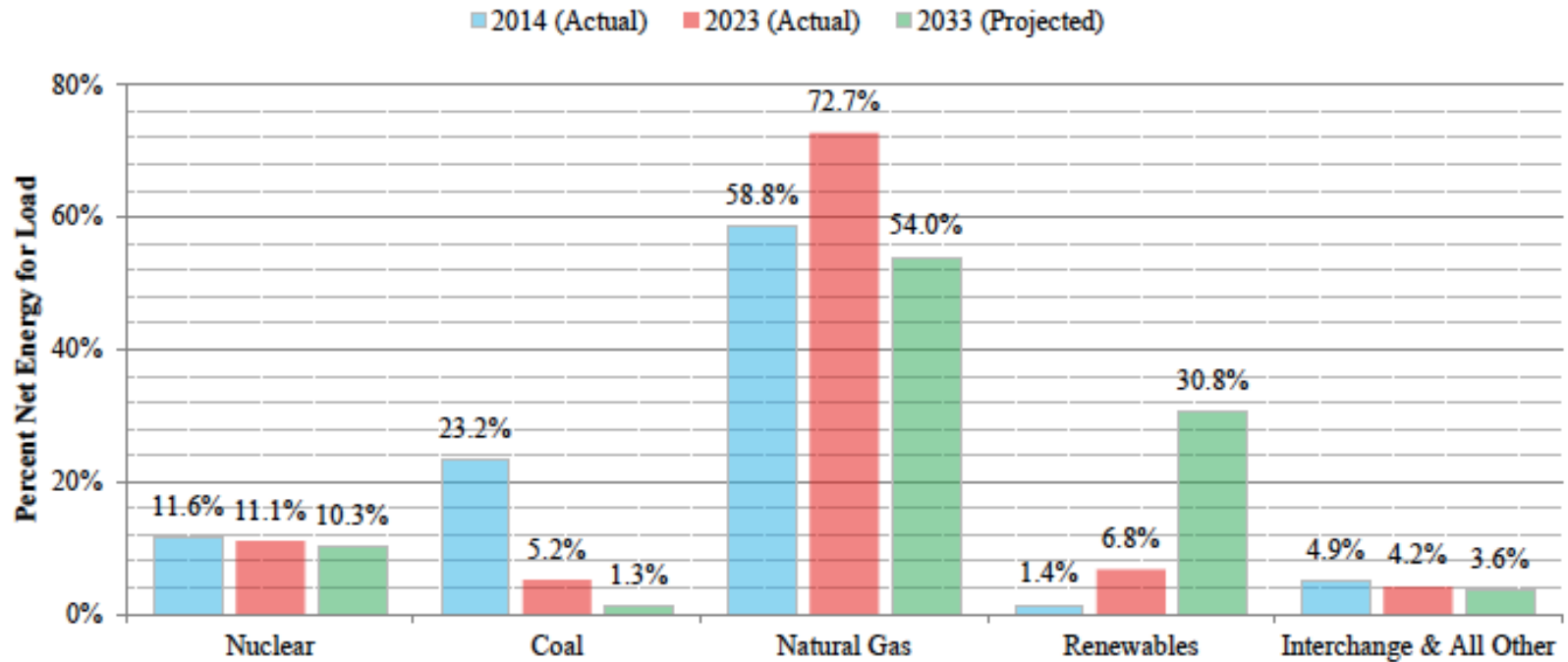
Florida Electricity Generation Sources



Source: FRCC 2015-2024 Regional Load and Resource Plans



Electric Generation by Fuel Type



Source: FRCC 2015-2024 Regional Load and Resource Plan



Thank you

Questions?

mfutrell@psc.state.fl.us

