I. Summary:

CS/CS/SB 1024 amends s. 163.04, F.S., relating to energy devices based on renewable resources, to allow governing entities with a deed restriction, covenant, declaration, or similar binding agreement affecting the alteration of residential dwellings or condominiums to prohibit the installation of solar collectors in locations outside of specifically designated parameters.

The bill also amends s. 366.91, F.S., relating to renewable energy, requiring the Public Service Commission (PSC) to revise its rules on net metering of customer renewable generation.

Under the bill, the PSC must propose a revised net metering rule by January 1, 2023, meeting the following criteria:

- Rate structures and billing must ensure that customers owning or leasing renewable generation systems pay the full cost of electric service and are not subsidized by the general body of ratepayers;
- All energy delivered by the public utility must be purchased at the applicable retail rate;
- All energy delivered by a customer generation system to the public utility must be credited to the customer at:
  - 75 percent of the public utility’s retail rate during the 2024 and 2025 calendar years.
  - 50 percent of the public utility’s retail rate during the 2026 and 2027 calendar years.
  - The public utility’s full avoided cost during the 2028 calendar year.
- Net metering billing may include fixed charges, base facilities charges, electric grid access fees, or monthly minimum bills, to ensure that the public utility recovers the fixed costs of
serving those customers and that the general body of ratepayers does not subsidize customer renewable generation systems.

The bill allows customers who own or lease renewable generation systems before January 1, 2023, to continue under the existing net metering rate design and rates for twenty years. This provision also applies to customers who purchase or lease real property with renewable generation systems installed for all or part of the twenty-year period.

Under the bill, the PSC must require a public utility requesting a change in base rates to report the net metering impact on the public utility’s revenue and cost of service.

The bill is effective July 1, 2022.

II. Present Situation:

Florida Public Service Commission

The Florida Public Service Commission (PSC) is an arm of the legislative branch of government. The role of the PSC is to ensure that Florida’s consumers receive utility services, including electric, natural gas, telephone, water, and wastewater, in a safe, reasonable, and reliable manner. In order to do so, the PSC exercises authority over public utilities in one or more of the following areas: (1) Rate or economic regulation; (2) Market competition oversight; and/or (3) Monitoring of safety, reliability, and service issues.

Public Utilities

A public utility includes any person or legal entity supplying electricity or gas, including natural, manufactured, or similar gaseous substance, to or for the public within the state. The term does not include municipal electric utilities and rural electric cooperatives. Therefore, the PSC does not regulate the rates of publicly owned municipal or cooperative electric utilities.

There are five investor-owned electric utility companies (IOU) in Florida: Florida Power & Light Company (FPL), Duke Energy Florida (Duke), Tampa Electric Company (TECO), Gulf Power Company (Gulf), and Florida Public Utilities Corporation. IOU rates and revenues are regulated by the PSC. These utilities must file periodic earnings reports, which allow the PSC to monitor earnings levels on an ongoing basis and adjust customer rates quickly if a company appears to be overearning.

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1 Section 350.001, F.S.
3 Id.
4 Section 366.02(1), F.S.
5 Id.
7 Id. FPL acquired Gulf in 2019 and merged as of January 3, 2022.
9 PSC, 2020 Annual Report, supra at n. 6, p. 6.
Section 366.041(2), F.S., requires public utilities to provide adequate service to customers. To fulfill that obligation, public utilities monitor customer usage patterns in order to plan for future energy needs. Utilities use billing data to predict and make investments in their infrastructure.  

Section 366.06, F.S., requires the PSC to allow the IOUs to recover honestly and prudently invested costs of providing service, including investments in infrastructure and operating expenses used to provide electric service.  

Renewable Energy

Section 377.803, F.S., defines “renewable energy” to mean “electrical, mechanical, or thermal energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen, biomass, as defined in s. 366.91, F.S., solar energy, geothermal energy, wind energy, ocean energy, waste heat, or hydroelectric power.”  

Section 366.91, F.S., requires utilities whose annual sales are greater than 2,000 gigawatt hours, to continuously offer a purchase contract to renewable energy producers, containing payment provisions for energy and capacity, based on the utility’s full avoided costs, for a minimum of ten years.  

Public Utility Regulatory Policies Act (PURPA)

In 1978, the federal government enacted the Public Utility Regulatory Policies Act (PURPA), which required promotion of energy efficiency and use of renewables. The act required utilities to purchase power from “qualifying facilities,” which fall into two categories: qualifying small power production facilities and qualifying cogeneration facilities. The PURPA directed the Federal Energy Regulatory Commission to implement the provisions, which in turn, directed the states to implement the provisions. In response, the Florida Legislature created s. 366.051, F.S., directing the utilities to purchase power from the cogenerators or small power producers.  

Full Avoided Costs

A utility’s full avoided cost is the incremental costs of electric energy or capacity, which, but for the purchase from cogenerators or small power producers, the utility would have to generate itself or purchase from another source. Traditionally, the PSC has approved electric utilities power purchase contracts that include provisions for payment, capacity, and energy based upon

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10 PSC, Bill Analysis for SB 1024 (Dec. 20, 2021) p. 2 (on file with the Senate Committee on Regulated Industries).
11 Id.
12 Originally enacted by Chapter 2005-259, s. 1, Laws of Fla.
13 Capacity is the maximum electric output, in megawatts, that an electricity generator can produce under ideal conditions. See U.S. Energy Information Administration, What is the difference between electricity generation capacity and electricity generation? https://www.eia.gov/tools/faqs/faq.php?id=101&t=3 (last visited Jan. 9, 2022).
14 See “Full avoided Costs,” on p. 3.
15 Section 366.91, F.S.
16 16 U.S.C. s. 2601 et seq.
18 Id.
19 Chapter 89-292, s. 4, Laws of Fla.
20 Section 366.051, F.S.
either the utility’s cost to construct and operate its next planned generating unit or the cost of purchasing capacity and energy from generating units owned by other utilities in the interchange market.\(^{21}\)

The utility’s full avoided costs and the utility’s as-available tariff rate are not the same. Full avoided costs can include capacity and energy avoided costs, while the as-available rate only includes avoided energy costs, which is largely fuel.\(^{22}\)

**Customer-Owned Renewable Energy Generation Systems**

Customer-owned renewable energy generation systems, primarily solar systems in Florida,\(^ {23}\) allow customers to generate their own electricity.\(^ {24}\) It is defined as an electric generating system located on a customer’s premises that is primarily intended to offset part or all of the customer’s electricity requirements with renewable energy.\(^ {25}\)

Interconnection\(^ {26}\) with the electric grid allows customers to reliably power their homes even when the sun is not shining.\(^ {27}\) When a customer-owned system generates more electricity than needed, the electricity flows onto the electric grid for distribution to another customer and the generating customer receives a credit toward future usage from the utility.\(^ {28}\) Utilities are federally required to purchase excess power from small renewable energy generators.\(^ {29}\)

Utility customers primarily benefit from interconnected renewable generation systems through personal use and reducing the amount of electricity they purchase from the utility.\(^ {30}\) In turn, this effectively lowers the demand for electricity that the utility must meet for these customers.\(^ {31}\)

**Net Metering**

Net metering is a metering and billing methodology whereby customer-owned renewable generation is allowed to offset the customer’s electricity consumption on site.\(^ {32}\) Under net

\(^{21}\) Florida Public Service Commission, *States’ Electric Restructuring Activities Update: Wholesale Sales* [http://www.psc.state.fl.us/Publications/ElectricRestructuringDetails#4](http://www.psc.state.fl.us/Publications/ElectricRestructuringDetails#4) (last visited Jan. 9, 2022).

\(^{22}\) PSC, *SB 1024 Analysis*, supra at n. 10, p. 2.


\(^{25}\) Section 366.91, F.S.


\(^{28}\) Id.

\(^{29}\) Id.


\(^{31}\) Id.

\(^{32}\) Section 366.91, F.S.
metering, customers are credited for excess energy produced which flows back to the grid. A meter is used to record both electricity drawn from the grid and excess electricity that flows to the grid from the customer-owned system.\(^{33}\)

Florida’s net metering rule was established in 2008 requiring IOUs to offer a standardized interconnection agreement for expedited interconnection and net metering of customer-owned renewable generation up to two megawatts.\(^{34}\) The rule’s purpose is to:

Promote the development of small customer-owned renewable generation, particularly solar and wind energy systems; diversify the types of fuel used to generate electricity in Florida; lessen Florida’s dependence on fossil fuels for the production of electricity; minimize the volatility of fuel costs; encourage investment in the state; improve environmental conditions; and, at the same time, minimize costs of power supply to investor-owned utilities and their customers.\(^{35}\)

Under the rule, customers are categorized into tiers, with varying requirements, based on system capacity:\(^{36}\)

- Tier 1 Systems, have a capacity of 10 kilowatts or less; there is no application fee, no interconnection study requirement, no insurance requirement, and no manual disconnect switch requirement.
- Tier 2 Systems, have a capacity greater than 10 kilowatts and less than 100 kilowatts; there is an application fee if approved by the PSC, no interconnection study requirement, a $1 million insurance requirement, and a manual disconnect switch requirement.
- Tier 3 Systems, are greater than 100 kilowatts and less than 2 megawatts; there is an application fee if approved by the PSC, an interconnection study may be required, a $2 million insurance requirement, and a manual disconnect switch requirement.

All electric utilities, as defined in s. 366.02(2), F.S., must annually report the total:

- Number of customer-owned renewable generation interconnections;
- Kilowatt capacity of the interconnections;
- Kilowatt hours received by interconnected customers from the utility;
- Kilowatt hours received by the utility from the interconnected customers;
- Energy payments made to interconnected customers energy generation delivered to the utility for the previous calendar year; and
- Energy payments made since the implementation of the net metering rule.\(^{37}\)

In 2008, there were 577 customer-owned renewable generation interconnections.\(^{38}\) As of December 31, 2020, Florida electric utilities reported a total of 90,552 interconnections, of which 90,518 were solar; and 71,567 interconnections were for IOU customers, of which 71,541 were solar.\(^{39}\) Less than one percent of Florida’s electric customers have installed renewable generation

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\(^{38}\) PSC, SB 1024 Analysis, supra at n. 10, p. 2.

\(^{39}\) PSC, 2020 Interconnection and Net Metering Report, supra at n. 23.
equipment as of the 2020 Report. In comparison, there were 10,504,960 electric utility customers in Florida, as of January 1, 2021.

**Net Metering Billing**

When net metering customers generate excess energy that is delivered to the IOU’s grid, they receive an excess energy credit toward their energy consumption for the next month’s billing cycle. The value of the excess energy is equivalent to the utility’s retail rate that includes the cost of generation, transmission, distribution, fuel, operating and maintenance expenses and other costs. Excess energy credits may be carried over to credit energy usage in subsequent months, but not for more than twelve months. At the end of each calendar year, the IOU pays the customer for any unused excess energy credits at an average annual rate based on the “IOU’s as-available energy tariff.” The utility’s full avoided costs and the utility’s as-available tariff rate are not the same. “Full avoided costs” can include capacity and energy avoided costs, while the “as-available rate” only includes avoided energy costs, which is largely fuel.

Net metering customers still receive a monthly bill, regardless of their energy usage from the grid. Net metering customers must pay any applicable customer charge and the applicable demand charge. This may include a fixed monthly customer charge, a base facility charge, volumetric rates for cents per kilowatt hour based on the customer’s energy consumption, or demand rates based upon the maximum kilowatt demand in a monthly billing cycle.

**PSC Workshop on Net Metering**

On September 17, 2020, the PSC held an informational workshop on customer-owned renewable generation, for the purpose of evaluating the effect of the current net metering policy. The

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40 PSC, SB 1024 Analysis, supra at n. 10, p. 3.
43 PSC, SB 1024 Analysis, supra at n. 10, p. 2.
45 *Id.* According to the PSC, as-available energy is purchased by the utility at a rate, in cents per kilowatt-hour, not to exceed the utility’s avoided energy cost.
46 PSC, SB 1024 Analysis, supra at n. 10, p. 2.
48 *Id.*
49 PSC, SB 1024 Analysis, supra at n. 10, p. 2.
workshop included presentations by PSC staff,50 Vote Solar,51 Southern Alliance for Clean Energy,52 Florida Solar Energy Industries Association,53 and Florida Sunrun.54

Net Metering Customer Demographics
The following demographic information has been identified by FPL and Gulf,55 respectively, among their net metered customers:
- Average Age: 54 years and 47 years.
- Percentage of Homeowners: 96% and 80%.
- Average Length of time in their Residence: 12 years and 9 years.
- Household Income greater than $50,000: 67% and 59%.
- Household Income greater than $100,000: 34% and 22%.56

Cross-Subsidization
Concerns of cross-subsidization of net metered customers by non-net metered customers have been raised before the PSC.57 Questions relate to the components of the utility’s cost of service that are offset by energy generated by net metered customers.58 These questions are partly based on net metered customers purchasing less energy from the grid,59 because a utility is statutorily entitled to recoup its “honestly and prudently invested costs of providing electric service to its customers,” regardless of customer use patterns.60

There is disagreement among stakeholders as to the question of cross-subsidization and how to quantify it. Notably, the Solar Energy Industries Association states that “[s]ome level of cross-subsidization is inherent in all rate designs, particularly for large diverse classes of ratepayers an independent finding of a material cost shift should be required before regulators authorize substantial changes to rates or rate design.”61

55 Now merged.
57 PSC, SB 1024 Analysis, supra at n. 10, p. 4.
58 Id. “For example, questions have been raised as to whether the excess energy offsets the utility’s cost of power plants, given that power plants must be available to meet a renewable energy customer’s electric needs when their systems are not operating or when their demand exceeds the capability of their renewable energy system.” Id.
59 Id.
60 Section 366.06, F.S.; PSC, SB 1024 Analysis, supra at n. 10, p. 4.
According to Vote Solar, Florida’s current level of solar adoption results in a negligible impact on customer rates.\textsuperscript{62} Projections for cross subsidization among the general body of ratepayers for four of Florida’s IOUs result in estimates of a cumulative cross-subsidy of over $700 million by 2025.\textsuperscript{63}

**Energy Devices Based on Renewable Resources**

Current law expressly prohibits ordinances by governing bodies which prohibit the installation of solar collectors, clotheslines, or other energy devices based on renewable resources.\textsuperscript{64} Deed restrictions, covenants, declarations, or similar binding agreements may not prohibit such devices from being installed on buildings erected on the lots or parcels covered by binding agreements.\textsuperscript{65} However, governing entities may determine the specific location of solar collectors installed on roofs, within an orientation to the south or within 45° east or west of due south, so long as it does not impair the devices effective operation.\textsuperscript{66} These provisions are intended to encourage the development and use of renewable resources and prevent the adoption of measures that ultimately drive up the costs of owning and operating commercial or residential property.\textsuperscript{67}

**III. Effect of Proposed Changes:**

**Section 1** amends s. 163.04, F.S., relating to energy devices based on renewable resources, to allow governing entities with a deed restriction, covenant, declaration, or similar binding agreement affecting the alteration of residential dwellings or within the boundaries of a condominium unit to prohibit the installation of solar collectors in locations outside of specifically designated parameters.

**Section 2** amends the legislative findings, under s. 366.91, F.S., relating to renewable energy, to state that:

- The continued development of renewable energy resources in a fair and equitable manner to all public utility customers is in the public interest.
- A net metering rule redesign is supported by the development and maturity of the industry, the decline in solar panel costs, and increased customer-owned/leased renewable generation.
- Customer owned/leased renewable generation is not available to public utility customers lacking financial resources or otherwise residing in multitenant buildings.
- The industry’s growth has resulted in increased cross-subsidization of electric service costs onto the general body of ratepayers.
- The redesigned net metering rate structures must ensure that customers who own or lease renewable generation pay the full cost service.

The bill requires the PSC to propose a revised net metering rule by January 1, 2023. The revised rule must meet the following criteria:

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\textsuperscript{62} See Vote Solar Post Workshop Comment.
\textsuperscript{63} FPL and Gulf Post-Workshop Comments, supra at n. 50, p. 7.
\textsuperscript{64} Section 163.04(1), F.S.
\textsuperscript{65} Section 163.04 (2), F.S.
\textsuperscript{66} Id.
\textsuperscript{67} Section 163.04(4), F.S.
• Rate structures and billing must ensure that customers owning or leasing renewable generation pay the full cost of electric service and are not subsidized by the general body of ratepayers.
• Ensure that all energy delivered by the public utility is purchased at the applicable retail rate.
• Ensure that all energy delivered by customer generation to the public utility is credited to the customer as follows:
  o During calendar years 2024 and 2025, the credit is 75 percent of the public utility’s retail rate;
  o During calendar years 2026 and 2027, the credit is 50 percent of the public utility’s retail rate; and
  o During calendar year 2028, the credit is the public utility’s full avoided costs to the public utility’s full avoided cost.
• Net metering may include fixed charges, base facilities charges, electric grid access fees, or monthly minimum bills, to ensure that the public utility recovers the fixed costs of serving those customers and that the general body of ratepayers does not subsidize customer renewable generation.

The bill allows customers who own or lease renewable generation before January 1, 2023, to continue under the existing net metering rate design and rates for twenty years from that date. This provision also applies to customers who purchase or lease real property with renewable generation systems installed for all or part of the twenty-year period.

Under the bill, the PSC must require a public utility requesting a change in base rates under s. 366.06, F.S., to report the net metering impact on the public utility’s revenue and cost of service.

Section 3 provides that the bill is effective July 1, 2022.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:
   None.

B. Public Records/Open Meetings Issues:
   None.

C. Trust Funds Restrictions:
   None.

D. State Tax or Fee Increases:
   None.
E. Other Constitutional Issues:

None.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

There may be an indeterminate impact on the solar installation and manufacturing industry if fewer customers purchase rooftop solar as a result of the redesigned net metering rate structure.\(^{68}\)

Decreasing the credit amount from the retail rate to the full avoided cost may impact a customer’s decision to install a renewable generation system.\(^{69}\) The average full life of renewable energy generating equipment is approximately 20 years.\(^{70}\) Customers who have already installed systems under the current net metering rule may find that they will have a lower return on their investment than initially predicted.\(^{71}\)

Decreasing the credit amount from retail to the full avoided cost may have a positive impact on the IOUs, where projections of the cumulative cross-subsidy to be absorbed by non-net metered customers of FPL, Gulf, TECO, and Duke for 2020 through 2025 total $719 million.\(^{72}\)

C. Government Sector Impact:

None.

VI. Technical Deficiencies:

The provision prescribing the renewable generation credit rates from the public utility to the customer is silent as to the appropriate credit rate after the 2028 calendar year, in which the applicable credit is the public utility’s full avoided costs. Clarification is needed as to whether the utility’s full avoided costs is the applicable rate after 2028.

VII. Related Issues:

None.

\(^{68}\) PSC, SB 1024 Analysis, supra at n. 10 p. 5.
\(^{69}\) Id.
\(^{70}\) Id.
\(^{71}\) Id.
\(^{72}\) FPL and Gulf Post-Workshop Comments, supra at n. 50, p. 7.
VIII. Statutes Affected:

This bill substantially amends sections 366.91 and 163.04 of the Florida Statutes.

IX. Additional Information:

A. Committee Substitute – Statement of Substantial Changes:

(Summarizing differences between the Committee Substitute and the prior version of the bill.)

**CS/CS by Community Affairs on February 8, 2022:**
The CS provides that energy delivered by a customer to the public utility will be credited at 75 percent of the utility’s retail rate in 2024 and 2025, 50 percent in 2026 and 2027, and credited at the public utility’s full avoided costs in 2028. The amendment also extends the grandfathering provision for existing interconnection agreements from 10 to 20 years.

**CS by Regulated Industries on January 11, 2022:**
The CS amends s. 163.04(3), F.S. to allow governing entities with a deed restriction, covenant, declaration, or similar binding agreement affecting the alteration of residential dwellings or within the boundaries of a condominium unit to prohibit the installation of solar collectors in locations outside of the parameters specified in s. 163.04(2)(a), F.S

B. Amendments:

None.

This Senate Bill Analysis does not reflect the intent or official position of the bill’s introducer or the Florida Senate.