HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: PCS for CS/HB 741 Net Metering
SPONSOR(S): Commerce Committee
TIED BILLS: **IDEN./SIM. BILLS:**

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
Orig. Comm.: Commerce Committee		Walsh	Hamon

SUMMARY ANALYSIS

The role of the Florida Public Service Commission (PSC) is to ensure that Florida's consumers receive some of their most essential services in a safe, affordable, and reliable manner. Current law requires the PSC to allow investor-owned electric utilities (IOUs) to recover honestly and prudently invested costs of providing service, including investments in infrastructure and operating expenses used to provide electric service.

Florida law states that a utility's full avoided cost is the incremental cost of electric energy or capacity, which, but for the purchase from a non-utility generator, the utility would have to generate itself or purchase from another source.

Net energy metering, commonly referred to as net metering, is a billing arrangement designed to compensate customers who own on-site renewable energy generation systems and export electricity generated on-site to an electric utility's system. Net metering is most commonly referenced in relation to customer-owned solar panels. Net metering requires customers who own on-site renewable energy generation systems to interconnect with the electric grid.

In 2008, the Legislature required all electric utilities to develop standardized interconnection agreements and a net metering program for customer-owned renewable generation systems. Under Florida's current net metering framework for IOUs, the credit the customer receives on their monthly bill equates the value of the excess energy to the utility's retail rate. As of year-end 2020, less than one percent (90,552) of Florida's 10.5 million electric utility customers had installed renewable generation equipment.

The bill establishes a revised net metering program that credits excess energy delivered to an IOU's system by customer-owned renewable generation in accordance with a graduated schedule as described in the bill. Under the bill, the value of credit a customer who owns or leases renewable generation receives will be determined by the date the customer owned or leased renewable generation was placed into service.

The bill provides that if the PSC finds that the penetration rate of customer-owned or leased renewable generation across all IOU service territories in the state exceeds certain thresholds, the PSC must initiate rulemaking to adopt a new rule. The bill also states that the program requirements referenced in the bill establish minimum requirements for IOU customer-owned or lease renewable generation programs, and that an IOU may petition the PSC at any time for approval to offer a program that is not less favorable to customers who own or lease renewable generation.

The bill permits an IOU to petition the PSC to allow the IOU to recover, through its fuel and purchased power cost recovery charge, lost revenue resulting from the incremental addition of residential customer-owned or leased solar photovoltaic generation within the IOU's service territory between July 1, 2022 and December 31, 2023.

The bill has no fiscal impact on state or local government revenues or expenditures.

The bill provides an effective date of July 1, 2022.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Present Situation

Florida Public Service Commission

The Florida Public Service Commission (PSC) is an arm of the legislative branch of government.[1] The role of the PSC is to ensure that Florida's consumers receive some of their most essential services – electric, natural gas, telephone, water, and wastewater – in a safe, affordable, and reliable manner. In doing so, the PSC exercises regulatory authority over utilities in one or more of three key areas: rate base/economic regulation; competitive market oversight; and monitoring of safety, reliability, and service issues.[2]

Investor-Owned Electric Utilities

The PSC regulates the rates and services of investor-owned electric utilities (IOUs).[3] There are four IOUs in Florida: Florida Power & Light Company (FPL),[4] Duke Energy Florida (Duke), Tampa Electric Company (TECO), and Florida Public Utilities Corporation.[5] Together, these four IOUs serve over 8.1 million customers in Florida.[6] IOU rates and revenues are regulated by the PSC.[7] The IOUs 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.[8]

IOUs must provide sufficient and adequate service to customers.[9] To fulfill that obligation, utilities monitor customer usage patterns in order to plan for future energy needs. Utilities use billing data to predict the future energy needs of customers and make investments in their infrastructure based on these predictions.[10] Current law requires the PSC to allow IOUs to recover honestly and prudently invested costs of providing service, including investments in infrastructure and operating expenses used to provide electric service.[11]

Full Avoided Costs

An IOU's full avoided cost is the incremental cost of electric energy or capacity,[12] which, but for a purchase from a non-utility generator, the IOU would have to generate itself or purchase from another source.[13] Full avoided cost is based upon either the utility's cost to construct and operate its next

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[1] S. 350.001, F.S.
[2] Florida Public Service Commission (PSC), http://www.psc.state.fl.us/ (last visited Jan. 17, 2022).
[3] The PSC does not regulate the rates of municipal electric utilities or rural electric cooperatives.
[4] FPL acquired Gulf Power Company in 2019 and merged as of January 3, 2022.
[5] Florida Department of Agriculture and Consumer Services, *Electric Utilities*, https://www.fdacs.gov/Energy/Florida-Energy-Clearinghouse/Electric-Utilities (last visited Jan. 19, 2022).
[6] PSC, *Facts & Figures of the Florida Utility Industry* (2021), p, 4, available at http://www.psc.state.fl.us/Files/PDF/Publications/Reports/General/Factsandfigures/April%202021.pdf (last visited Jan. 19, 2022).
[7] Florida Department of Agriculture and Consumer Services, *Electric Utilities*, *supra* note 5.
[8] PSC, *Florida PSC 2020 Annual Report*, p. 6, available at http://www.psc.state.fl.us/Files/PDF/Publications/Reports/General/Annualreports/2020.pdf (last visited Jan. 19, 2022).
[9] S. 366.03, F.S.
[10] PSC, Agency Analysis of 2022 House Bill 741, p. 2 (Jan. 3, 2022).
[11] S. 366.06, F.S.
[12] 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. 22, 2022).
[13] S. 366.051, F.S.

planned generating unit or the cost of purchasing capacity and energy from generating units owned by other utilities in the wholesale market.[14]

An IOU's full avoided costs is not the same as the rate it pays for energy provided on an as-available basis. Full avoided costs can include avoided capacity and energy costs, while an as-available energy rate only includes avoided energy costs, which are largely comprised of fuel costs.[15] In 2021, as-available energy rates ranged for Florida IOUs from $0.025 to $0.037 per kilowatt hour (kWh).[16]

Peak Demand

An electric utility must supply the power necessary to meet the total demand of all its customers at any given time. Electric utility customers use different amounts of electricity at different times of a day, week, or year, as well as with changes in the weather. Due to the customers' different levels of demand based on these factors, the power the utility must provide changes as well. Peak demand refers to the maximum amount of demand placed on a utility's system over a specific period.[17] Given that customer demand differs based on weather and location, the peak demand may vary for each IOU for any given period of time. Each IOU reports to the PSC its peak demand for summer and winter.

Net Metering

Net energy metering, commonly referred to as net metering, is a billing arrangement designed to compensate customers who own on-site, renewable energy[18] generation systems and export electricity generated on-site to the utility grid.[19] Net metering essentially allows customers to sell excess electricity to an electric utility, and the utility credits the customer's energy bill on a per kWh basis.[20] The compensation structure for utility customers who engage in net metering varies by location depending on state and local policies.[21]

Common customer-owned renewable energy generation sources around the country include solar panels, natural gas micro-turbines, methane digesters, and small wind power generators;[22] however, net metering is most commonly referenced in relation to customer-owned solar panels.

Net metering requires customers who own on-site renewable energy generation systems to interconnect with the electric grid, which allows customers to reliably power their homes even when their systems are not generating enough power to meet their energy needs.[23] The U.S. Department of Energy defines the term "interconnection" as "the technical procedures and legal requirements surrounding energy customers' ability to connect their small-scale renewable energy projects to the

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[14] PSC, *States' Electric Restructuring Activities Update: Wholesale Sales*, http://www.psc.state.fl.us/Publications/ElectricRestructuringDetails#4 (last visited Jan. 22, 2022).
[15] PSC, *supra* note 10, at 2.
[16] Email from Kaley Slattery, Legislative Director, Florida Public Service Commission, Request for information (Feb. 1, 2022).
[17] PSC, *Reducing Electric Costs*, http://www.psc.state.fl.us/Publications/ReducingCosts (last visited Feb. 21, 2022).
[18] "Renewable energy" means electrical energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen produced from sources other than fossil fuels, biomass, solar energy, geothermal energy, wind energy, ocean energy, and hydroelectric power. The term 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. S. 366.91(2)(d), F.S.
[19] National Renewable Energy Laboratory, *Net Metering*, https://www.nrel.gov/state-local-tribal/basics-net-metering.html (last visited Jan. 20, 2022).
[20] *Id.*
[21] *Id.*
[22] National Conference of State Legislatures, *State Net Metering Policies* (Nov. 20, 2017), https://www.ncsl.org/research/energy/net-metering-policy-overview-and-state-legislative-updates.aspx (last visited Jan. 20, 2022).
[23] U.S. Department of Energy, *Grid-Connected Renewable Energy Systems*, https://www.energy.gov/energysaver/grid-connected-renewable-energy-systems (last visited Jan. 22, 2022).

electricity grid."[24] Utility customers primarily benefit from interconnected renewable generation systems through personal use and reducing the amount of electricity they purchase from the utility.[25]

As of August 2021, thirty-seven states, including Florida, have state-developed mandatory net metering rules for certain utilities, eight states have statewide compensation rules other than net metering, two states have some utilities that allow net metering, and three states offer no form of net metering or compensation.[26]

Net Metering in Florida

In 2008, the Legislature required all electric utilities to develop standardized interconnection agreements[27] and a net metering[28] program for customer-owned renewable generation[29] systems.[30] Under this section, the PSC is tasked with establishing requirements relating to expedited interconnection and net metering of customer-owned renewable generation by IOUs and may adopt rules to accomplish this task.[31, 32]

In response to the net metering requirements passed by the Legislature in 2008, the PSC amended r. 25-6.065, F.A.C.,[33] to expand the applicability of the rule to all renewable energy types up to two megawatts (MW) in capacity.[34] The rule creates a billing mechanism by which net metering customers can offset their usage through self-generated energy, with any excess energy delivered to the IOU's system. The amount of any excess energy delivered to the IOU is applied to the customer's next monthly bill as a kWh credit. At the end of the calendar year, the IOU pays for any remaining unused energy credits at a rate based on the utility's avoided cost of generating electricity.[35]

Under Florida's current net metering framework, the credit the customer receives on their monthly bill equates the value of the excess energy to the utility's retail rate. The retail rates for each of the IOUs range from roughly $0.12 to $0.15 per kWh.[36] A utility's retail rate accounts for its cost to provide power to customers, which includes, but is not limited to, the cost of generation, transmission, distribution, fuel, and operating and maintenance expenses.[37]

IOUs must charge net metering customers the applicable rates and charges for the electricity provided

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[24] U.S. Department of Energy, *Renewable Energy: Distributed Generation Policies and Programs*, https://www.energy.gov/eere/slsc/renewable-energy-distributed-generation-policies-and-programs (last visited Jan. 22, 2022)

[25] PSC, *supra* note 10, at 1.

[26] DSIRE, *Net Metering*, NC Clean Energy Technology Center (August 2021), https://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2021/08/DSIRE_Net_Metering_August2021.pdf (last visited Jan. 20, 2022).

[27] An interconnection agreement is a contract between a customer and a utility to interconnect the customer's renewable generation system to the utility's electric grid. *See e.g.* Florida Public Utilities Company, *Interconnection of Customer-Owned Renewable Generation Systems Application*, p. 1, available at https://fpuc.com/wp-content/uploads/FPU17-123_Interconnection-Form.pdf (last visited Jan. 20, 2022).

[28] S. 366.091(2)(d), F.S., defines the term "net metering" as a metering and billing methodology where customer-owned renewable generation is allowed to offset the customer's electricity consumption.

[29] S. 366.091(2)(c), F.S., defines the term "customer-owned renewable generation" 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.

[30] S. 366.091(5) and (6), F.S.

[31] S. 366.091(5), F.S.

[32] Municipal electric utilities and rural cooperatives are required to develop their own standardized interconnection agreements and net metering programs, but each year they must file a report detailing customer participation in such programs with the PSC. S. 366.91(6), F.S.

[33] This rule was initially promulgated by the PSC in 2002 for the purpose of standardizing and expediting the interconnection of small solar photovoltaic (PV) systems for customers of IOUs. PSC, *supra* note 10, at 1.

[34] *Id.* at 2.

[35] *Id.*

[36] PSC, *Florida Investor-Owned Electric Utilities Total Cost for 1,000 Kilowatt Hours – Residential Service*, available at http://www.psc.state.fl.us/Files/PDF/Utilities/Electricgas/BillingAdjustments/ba_total-2022.pdf (last visited Feb. 1, 2022).

[37] *Id.*

by the utility.[38] The applicable rates and charges are dependent on the rate class the customer falls under, and these rates and charges can include a fixed monthly customer charge or base facility charge, volumetric rates based on consumption, demand rates based on the maximum electric demand in a monthly billing cycle, or a combination of the above.[39] Additionally, FPL and Duke were recently authorized to charge customers a monthly minimum bill of $25 and $30 respectively.[40]

In 2020, Florida electric utilities reported 90,552 customer-owned renewable generation interconnections, reflecting more than 30,000 new interconnections since the 59,508 interconnections reported in 2019.[41] Of the 90,552 customer-owned renewable generation interconnections reported in 2020, Florida's four IOUs accounted for 71,567 of those interconnections.[42] Almost all customer-owned renewable generation installations in Florida are solar.[43] As of year-end 2020, less than one percent of Florida's 10,504,960 electric utility customers had installed renewable generation equipment.[44]

Concerns of cross-subsidization of customers who partake in net metering by non-net metering customers have been raised before the PSC.[45] There is debate as to the components of the utility's cost of service that are offset by energy generated by net metering customers and, accordingly, the appropriate credit to provide for such energy.[46]

Net Billing

Net billing is similar to net metering in that the owner of a customer-owned renewable energy generation system can consume electricity generated by their system in real time and export any excess energy generated to the utility grid. However, net billing differs from net metering because customers who own renewable energy generation systems may not bank energy within a billing cycle to offset future consumption. Instead, all net energy exports are metered and credited to the customer at a predetermined rate at the moment the energy is sent to the grid.[47] At the end of a billing cycle, the total amount credited is netted against the total amount billed for service from the utility to establish the balance due from the customer.

Effect of the Bill

The bill establishes a revised net metering program that credits excess energy delivered to an IOU's system by customer-owned renewable generation in accordance with a graduated schedule as described below.

Under the bill, IOU net metering programs must provide that all electricity used by a customer in excess of the generation supplied by the customer's owned or leased renewable generation is billed by the IOU under normal billing practices. The value of credit a customer who owns or leases renewable generation receives will be determined by the date the customer-owned or leased renewable

[38] R. 25-6.065, F.A.C.
[39] PSC, *supra* note 10, at 2.
[40] Florida Power & Light Company, *Building a more resilient and sustainable energy future*, EnergyNews (January 2022), available at https://www.fpl.com/#home (last visited Feb. 1, 2022); Sam Sachs, *Duke Energy Florida customers to have minimum $30 bills*, News Channel 8 (Jan. 28, 2022), https://www.wfla.com/news/florida/duke-energy-florida-customers-to-have-minimum-30-bills/ (last visited Feb. 1, 2022).
[41] PSC, *Review of the 2021 Ten-Year Site Plans of Florida's Electric Utilities* (Oct. 2021), p. 29, available at http://www.psc.state.fl.us/Files/PDF/Utilities/Electricgas/TenYearSitePlans/2021/Review.pdf (last visited Jan. 20, 2022).
[42] PSC, *Interconnection and Net Metering of Customer-Owned Renewable Generation* (2020), available at https://www.floridapsc.com/Files/PDF/Utilities/Electricgas/CustomerRenewable/2020/2020%20Net%20Metering%20Summary%20Spreadsheet/2020%20Net%20Metering%20Report.pdf (last visited Jan. 20, 2022).
[43] PSC, *supra* note 42.
[44] PSC, *supra* note 10, at 3.
[45] *Id.* at 4.
[46] *See 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.").
[47] Owen Zinaman et al., *Grid-Connected Distributed Generation: Compensation Mechanism Basics*, National Renewable Energy Laboratory, https://www.nrel.gov/docs/fy18osti/68469.pdf (last visited Feb. 21, 2022).

generation was placed into service. Excess electricity produced by customer-owned or leased renewable generation delivered to the IOU's electric grid must be credited to the customer's energy consumption for the next month's billing cycle as follows:

- For energy credits produced from customer-owned or leased renewable generation placed in service before January 1, 2023, the customer's energy usage shall be offset by the entire amount credited.
- For energy credits produced from customer-owned or leased renewable generation placed in service between January 1, 2023, and December 31, 2025, the customer's energy usage shall be offset by 75 percent of the amount credited.
- For energy credits produced from customer-owned or leased renewable generation placed in service between January 1, 2026, and December 31, 2026, the customer's energy usage shall be offset by 60 percent of the amount credited.
- For energy credits produced from customer-owned or leased renewable generation placed in service between January 1, 2027, and December 31, 2028, the customer's energy usage shall be offset by 50 percent of the amount credited.

Under the bill, these customers who own or lease renewable generation placed into service before January 1, 2029, pursuant to a standard interconnection agreement with an IOU, will be granted 20 years to continue to use the net metering design and rates that applied at the time the renewable generation was placed into service. The bill provides that the 20-year period applies to customers who purchase or lease real property upon which customer-owned or leased renewable generation is installed for all or part of that 20-year period.

The bill requires the PSC to adopt new rules to establish a new program design to become effective January 1, 2029, for customers who own or lease renewable generation that is placed into service after that date. The new program design must ensure that:

- IOU customers who own or lease renewable generation pay their full cost of electric service and are not cross-subsidized by the general body of ratepayers;
- All energy delivered by the IOU is purchased at its applicable retail rate;
- All energy delivered by the customer-owned or leased renewable generation to the IOU is credited to the customer at the IOU's full avoided costs; and
- The program may include any combination of fixed charges, including base facilities charges, electric grid access fees, or monthly minimum bills that the commission determines are necessary to ensure that the IOU recovers the fixed costs of serving customers who own or lease renewable generation

The bill provides that if the PSC finds that the penetration rate of customer-owned or leased renewable generation across all IOU service territories in the state exceeds 6.5 percent, or the actual penetration rate of customer-owned or leased renewable generation across all IOU service territories in the state increases, on an absolute basis, by more than 1 percentage point over the course of a calendar year, the PSC must initiate rulemaking to adopt a new rule that complies with the program requirements the bill lays out for customers who own or lease renewable generation that is place into service after January 1, 2029. The bill states that the penetration rate shall be calculated by dividing the aggregate total summer peak demand of all IOUs in the state by the aggregate gross power rating (alternating current) of all in-service customer-owned or leased renewable generation across all IOU service territories.

The bill states that the above referenced program requirements are minimum requirements for IOU net metering programs, and that an IOU may petition the PSC at any time for approval to offer a net metering program that is not less favorable to customers who own or lease renewable generation.

The bill permits an IOU to petition the PSC for recovery, through the IOU's fuel and purchased power cost recovery charge, lost revenue resulting from the incremental addition of residential customer-owned or leased solar photovoltaic generation within the IOU's service territory between July 1, 2022, and December 31, 2023. In order to do so, this additional customer-owned or leased solar photovoltaic generation must be above the level that such generation was estimated to be installed within the IOU's service territory during the same period. The bill requires an IOU seeking recovery of lost revenues to

demonstrate that the relief requested does not cause the IOU to exceed the rate of return on equity authorized by the PSC in the IOU's most recent rate proceeding.

B. SECTION DIRECTORY:

Section 1: Amends s. 366.91, F.S., relating to renewable energy.

Section 2: Provides an effective date of July 1, 2022.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

2. Expenditures:

The bill requires the PSC to adopt new rules implementing and establishing new program designs for customers that own or lease renewable generation systems. However, the PSC can absorb the costs within existing resources.[48]

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

The bill may have an indeterminate impact on private businesses that install customer-owned or leased renewable generation systems.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

Not applicable. The bill does not appear to impact county or municipal governments.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

The bill requires the PSC to adopt a revised rules new rules implementing and establishing new program designs for customers that own or lease renewable generation systems. Existing section 366.91(5), F.S., provides PSC sufficient rulemaking authority.

[48] PSC, *supra* note 10, at 3.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/COMMITTEE SUBSTITUTE CHANGES

Not applicable.