HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: PCS for HB 737 Electric Vehicle Transportation Electrification Plan
SPONSOR(S): Tourism, Infrastructure & Energy Subcommittee
TIED BILLS: **IDEN./SIM. BILLS:**

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
Orig. Comm.: Tourism, Infrastructure & Energy Subcommittee		Johnson	Keating

SUMMARY ANALYSIS

In Florida, the Public Service Commission (PSC) regulates the rates, terms, and conditions of retail electric service provided by investor-owned electric utilities (IOUs), including electric vehicle (EV) charging incorporated into an IOU's rate base. A non-utility providing EV charging to the public is not considered the retail sale of electricity and is not subject to PSC regulation. These non-utility EV charging providers pay the commercial electricity rate of the local electric utility.

The bill requires the PSC to adopt rules for an EV transportation electrification plan to facilitate the deployment of EV charging infrastructure in a competitively neutral manner. These rules must be proposed by January 1, 2023, and adopted by January 1, 2024. The PSC's rules must:

- Promote investment in publicly available EV charging stations in a competitively neutral manner prioritizing and encouraging private investment in and private ownership and operation of EV charging infrastructure.
- Establish policies that stimulate innovation, competition, private investment, and customer choice in EV charging infrastructure.
- Establish mechanisms which support the efficient and cost-effective use of the electric grid in a manner that supports EV charging infrastructure.
- Establish incentives that support private investment in EV charging equipment.
- Establish policies on a prospective basis, prohibiting IOUs from using rate base investment in the ownership and operation of EV charging stations and limit cost recovery to distribution level infrastructure on the utility side of the meter.
- Stimulate fair and reasonable electricity pricing through IOUs' tariffs which promote the widespread offering of EV charging.

The bill authorizes an entity that provides EV charging stations to the public to intervene and participate in any PSC proceeding involving rates, terms, or conditions of service for EV charging to be offered to the public.

The bill does not prohibit an IOU from providing EV charging stations directly to the public through a separate, unregulated entity on the same terms and conditions as any other provider of EV charging stations.

The bill does not appear to impact state or local government revenues or expenditures.

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

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Current Situation

Electric Vehicles

Electric vehicles (EVs)[1] offer higher fuel efficiency and improved air quality compared to vehicles with internal combustion engines.[2] Increased interest in EVs is driven by higher gas prices and greenhouse gas emission concerns.[3] However, limited EV range, limited charging infrastructure, and range anxiety[4] have deterred many drivers from considering EVs.[5] As advancements in EV technology continue, EV manufacturing increases, and EV prices become more accessible, representatives in both government and the private sector suggest that successful adoption of EV use is heavily dependent on the accessibility of charging stations.[6]

The U.S. Department of Energy's Alternative Fuels Data Center uses the term "electric-drive vehicles" to collectively refer to the following:

- Hybrid electric vehicles powered by an internal combustion engine that runs on conventional or alternative fuel and an electric motor using energy stored in a battery. The battery is charged through regenerative braking and the internal combustion engine, not by plugging in to charge.
- Plug-in hybrid electric vehicles powered by an internal combustion engine and an electric motor using energy stored in a battery. These vehicles can operate in all-electric mode through a larger battery, which can be plugged in to an electric power source to charge.
- All-electric vehicles use a battery to store the electric energy that is charged by plugging the vehicle into charging equipment. EVs always operate in all-electric mode and have typical driving ranges from 150 to 300 miles.[7]

EV Charging Equipment

EVs are becoming increasingly popular in the United States, prompting a focus on the installation of electric vehicle charging infrastructure. Electric vehicle charging stations have EV supply equipment (EVSE) capable of charging an EV's battery.[8] Charging station site hosts may provide such stations free of charge or collect revenue for electric vehicle charging through subscription, pay-per-charge, or pay-for-parking systems.[9]

EV charging equipment is classified based on the rate of charge.[10] Charging times vary, depending on the depletion level of the battery, how much energy the battery holds, the type of battery, and the type of supply equipment.[11] Charging times can range from less than 20 minutes to more than 20 hours.[12] Potential driving distance ranges from:

---

[1] Section 320.01(36), F.S., defines the term "electric vehicle" to mean a motor vehicle that is powered by an electric motor that draws current from rechargeable storage batteries, fuel cells, or other sources of electrical current.
[2] Federal Highway Administration (FHWA), *FHWA NHTS Brief, Electric Vehicle Feasibility*, July 2016, p. 1, available at http://nhts.ornl.gov/briefs/EVFeasibility20160701.pdf (last visited Feb. 4, 2022).
[3] *Id*.
[4] Range anxiety is the feeling an EV driver has when the battery charge is low and the usual sources of electricity are unavailable, striking a fear of being stranded. J.D. Power, *What is Range Anxiety with Electric Vehicles?* https://www.jdpower.com/cars/shopping-guides/what-is-range-anxiety-with-electric-vehicles (last visited Feb. 4, 2022).
[5] FHWA, *supra* note 2, at 1-2.
[6] *Id*.
[7] U.S. Dept. Energy, Alternative Fuels Data Center, *Hybrid and Plug-In Electric Vehicles*, https://afdc.energy.gov/vehicles/electric.html (last visited Feb. 8, 2022).
[8] *See* U.S. Dept. Energy, *Plug-In Electric Vehicle Handbook for Public Charging Station Hosts* (April 2012), *available at* https://www.afdc.energy.gov/pdfs/51227.pdf (last visited Feb.11, 2022).
[9] *Id*.at p. 9.
[10] U.S. Dept. Energy, AFDC, *Developing Infrastructure to Charge Plug-In Electric Vehicles*, https://afdc.energy.gov/fuels/electricity_infrastructure.html (last visited Feb. 11, 2022).
[11] *Id*.

- Two to five miles of range per one hour of charging for Level 1 supply equipment;
- Ten to twenty miles per one hour of charging for Level 2 supply equipment; and
- Sixty to eighty miles per twenty minutes of charging for direct-charge fast-charge (DCFC) supply equipment.[13]

For most drivers, charging occurs overnight at home, using Level 1 or AC Level 2 charging equipment.[14]

Level 1 Charging

Level 1, typically at-home charging, through a power cord which comes as standard equipment on new EVs, only requires a standard 120-volt outlet, so no additional equipment is required.[15] This can add about 40 miles of range in an eight hour overnight charge for a mid-size EV.[16] Typically, Level 1 charging is used when only a 120 volt-outlet is available, but can easily be enough to supply a typical driver's needs.[17] As of 2020, fewer than 5 percent of public EV charging ports in the United States were Level 1.[18]

Level 2 Charging

Level 2, typically home and public charging, commonly requires a charging unit on a 240-volt circuit, such as one used for home appliances like a clothes dryer.[19]The charging rate depends on the rate at which a vehicle can accept a charge and the maximum current available.[20] This method may require purchasing an at-home charging unit and modifications to a home electric system, but charges from two to eight times faster than a Level 1.[21] These chargers are most common at public charging places like offices, grocery stores, and parking garages.[22] As of January 2022, nearly 80 percent of all public EV charging ports in the United States were Level 2.[23]

Direct Charge Fast Chargers (DCFC)

DCFC, typically public charging, allows for rapid charging along heavy traffic corridors.[24] DCFCs are best used for longer travel distances, vehicles heavily used throughout the day like taxis, and for drivers with limited access to at-home charging, such as multi-unit renters.[25] As of January 2020, over 18 percent of all public EV charging ports in the United States were DCFC.[26] There are three types of DCFC systems, depending on the type of charge port on the vehicle:

- SAE Combined Charging System, allowing a driver to use the same charge port when charging with Level 1, Level 2, or DCFC.
- The CHAdeMO connector, which is the most common.

---

[12] *Id*.
[13] *Id.*
[14] U.S. Dept. Energy, AFDC, *Charging Plug-In Electric Vehicles at Home*, https://afdc.energy.gov/fuels/electricity_charging_home.html (last visited Jan 13, 2022).
[15] AFDC, *Developing Infrastructure to Charge Plug-In Electric Vehicles*, *supra* note. 10.
[16] *Id*.
[17] *Id*.
[18] *Id.*
[19] *Id.*
[20] Union of Concerned Scientists, *Electric Vehicle Charging, Types, Time, Cost and Savings* (March 2018) available at https://www.ucsusa.org/resources/electric-vehicle-charging-types-time-cost-and-savings (last visited Feb. 11, 2022).
[21] *Id*.
[22] *Id.*
[23] *See* U.S. Dept. of Energy, *Alternative Fueling Station Counts by State*, https://www.afdc.energy.gov/fuels/stations_counts.html (last visited Feb.11, 2022).
[24] AFDC, *Developing Infrastructure to Charge Plug-In Electric Vehicles*, *supra* n. 10.
[25] Union of Concerned Scientists, *Electric Vehicle Charging, Types, Time, Cost and Savings*, https://www.ucsusa.org/resources/electric-vehicle-charging-types-time-cost-and-savings (last visited Feb. 11, 2022).
[26] *See* U.S. Dept, Energy, *Alternative Fueling Station Counts by State*, *supra* n. 24.

- Tesla, which is a unique, proprietary connector that works for all Tesla charging levels, including their fast charging option, called Supercharge. Tesla does not have a CHAdeMO port, but Tesla sells an adapter.[27]

EV Charging in Florida

In Florida, investor-owned electric utilities (IOUs) serve exclusive territories and the Public Service Commission (PSC) has broad regulatory authority over rate setting, bulk power grid planning, safety inspection, and service reliability. IOU rates are set based upon the cost of service. However, the PSC does not regulate the rates or service quality for municipal electric utilities or rural electric cooperatives.[28]

Under Florida law, the third-party sale of electricity to a retail customer is not permitted.[29] In 2012, the Legislature created an exemption for EV charging by declaring that the provision of EV charging to the public by a non-utility is not considered a retail sale of electricity. Therefore, the rates, terms, and conditions of EV charging by a non-utility are not subject to PSC regulation.[30]

In 2020,[31] the Legislature required the Department of Transportation (DOT) to coordinate, develop and recommend a Master Plan for the development of EV charging infrastructure along the State Highway System. DOT, in consultation with the Florida Department of Environmental Protection, the PSC, and other state agencies, developed the EV Master Plan (EVMP) with extensive public engagement.[32] The stated goals of the EVMP were to:

- Support both short-range and long-range electric vehicle travel;
- Encourage the expansion of electric vehicle use in the state; and
- Adequately serve evacuation routes in the state.

In July 2021, the EVMP was delivered, providing a comprehensive course of action to efficiently and effectively provide for EV charging infrastructure.[33] The EVMP discusses:

- Benefits of electrified mobility;
- Barriers to adoption and industry trends;
- Installation considerations;
- Fleet considerations and future advancements;
- Utility regulatory considerations;[34]
- Strategies to develop charging supply;
- EV market adoption;
- Impacts to transportation funding;
- Resiliency and emergency evacuations;
- Identification of potential new EVSE locations;
- EV infrastructure on the state highway system; and
- Recommendations.

EV Charging Infrastructure Provided by IOUs

The PSC has approved EV charging programs for three of the four IOUs under its jurisdiction.[35]

Tampa Electric Company

[27] AFDC, *Developing Infrastructure to Charge Plug-In Electric Vehicles*, *supra* n. 12.
[28] *Id* at 15.
[29] *Id* at 16.
[30] Ch. 2012-119, Laws of Fla.; S. 366.94(1), F.S.
[31] Ch. 2020-21, Laws of Fla.
[32] *Id.*
[33] *Id.*
[34] Pages 15-22 of the EVMP discuss utility regulatory considerations.
[35] Public Service Commission (PSC) Agency Analysis of 2022 House Bill 737, p.1. (Dec.15, 2021).

On April 1, 2021, the PSC approved Tampa Electric Company's (TECO) EV charging pilot program. Under its pilot program, TECO will spend up to $2 million to purchase, install, own, and maintain 200 EV charging stations. TECO will pay up to $5,000 per Level 2 charger towards the cost of installation at workplaces, public/retail establishments, and multi-unit dwellings, and the full cost of installation for income-qualified sites and government locations. TECO also plans to install four DCFCs. TECO anticipated it would take approximately 12 months to complete deployment of the EV charging stations, after which the pilot program will run for four years. The PSC authorized TECO to begin recovery of the cost of its pilot program in its rate base.[36]

Florida Power & Light

In 2019, Florida Power & Light Company (FPL)[37] began a three-year pilot program, known as EVolution, which targeted the installation of 1,000 EV charging ports. The program's primary objective was to gather information prior to mass EV adoption to better plan for and design FPL's EV charging investments. In 2020, the PSC approved a new FPL tariff with specific EV charging rates for both utility-owned and non-utility owned charging stations. The PSC required FPL to submit annual reports.[38]

During its 2021 rate case, FPL reached a settlement agreement with other parties to the rate case. The settlement expanded FPL's current EV charging pilot program to include the following: a public fast charging program, a residential EV charging services pilot, a commercial EV charging services pilot, new technologies and software, and education and awareness. On October 26, 2021, the PSC approved FPL's expanded EV pilot programs as a component of the rate case settlement agreement. The total investment is forecast to be $175 million over the four-year period of 2022-2025. Under the terms of the settlement agreement, FPL may include the costs associated with the EV programs in rate base and recover the costs through base rates.[39]

Duke Energy Florida

In 2017, as part of a settlement agreement in Duke Energy Florida's (DEF) rate case, the PSC approved a five-year EV charging pilot program authorizing DEF to invest $8 million to install and own a minimum of 530 charging ports.[40]

In 2021, as part of a subsequent DEF rate case, the PSC approved a new settlement agreement that created a permanent EV charging station program. DEF forecasted a cost of $62.9 million over the four-year period of 2022-2025. Under the permanent EV charging program, DEF plans to implement a residential EV time-of use credit program for off-peak charging, a rebate program for commercial and industrial customer charging stations, and a DEF-owned DCFC program. The DCFC program will allow DEF to install an additional 100 utility-owned DCFC stations and includes a new tariff for a Fast Charge Fee that will be collected from EV drivers using DEF-owned DCFC stations. Reasonable costs of the programs will be included in DEF's rate base and recovered through its base rates.[41]

Public EV Charging Provided by Non-Utilities

As previously stated, the provision of EV charging to the public by a non-utility is not considered a retail sale of electricity and is not regulated by the PSC. However, entities offering EV charging to the public must pay the electric utility for the electricity. EV charging providers typically pay rates as commercial customers.

Intervention in PSC Proceedings

[36] *Id.*
[37] FPL acquired Gulf Power in 2019. These IOUs merged for ratemaking purposes as of January 3, 2022.
[38] PSC *supra* note 36 at 1-2.
[39] *Id.* at 1-2.
[40] *Id.* at 2.
[41] *Id.* at 2.

Pursuant to Rule 28-106.205, F.A.C.,[42] persons, other than the original parties to a pending proceeding, who have a substantial interest in the proceeding and who desire to become parties may move for leave to intervene in a PSC proceeding. Motions for leave to intervene must include allegations sufficient to demonstrate that the intervenor is entitled to participate in the proceeding as a matter of constitutional or statutory right or pursuant to PSC rule, or that the intervenor's substantial interests are subject to determination or will be affected through the proceeding. [43]

To have standing in a PSC proceeding, an intervenor must meet a two-prong standing test. The intervenor must show that it will suffer injury in fact which is of sufficient immediacy to entitle it to a formal administrative hearing, and that the substantial injury is of a type or nature which the proceeding is designed to protect.[44,45]

Effect of the Bill

The bill requires the PSC to adopt rules for an EV transportation electrification plan that facilitates the deployment of EV charging infrastructure in a competitively neutral manner. The PSC must propose its rules by January 1, 2023, with final adoption by January 1, 2024. The PSC's rules must:

- Promote investment in publicly available Level 2 and DCFC stations in a competitively neutral manner prioritizing and encouraging private investment in and private ownership and operation of EV charging infrastructure.
- Establish policies stimulating innovation, competition, private investment, and customer choice in EV charging infrastructure, including equipment and networks.
- Establish mechanisms, including incentives, supporting the efficient and cost-effective use of the electric grid in a manner that supports EV charging infrastructure.
- Establish incentives supporting private investment in charging equipment.
- Establish policies, to be applied on a prospective basis, prohibiting IOUs from using rate base investment in owning and operating of EV new charging stations and limiting public utility cost recovery to distribution level infrastructure on the utility side of the meter.
- Stimulate fair and reasonable electricity pricing through IOUs' tariffs promoting the widespread offering of EV charging.

The bill provides that, an entity that provides EV charging stations to the public may intervene and participate in any IOU's ratemaking proceeding or any other PSC proceeding involving rates, terms, or conditions of service, including the rate structure paid by or proposed to be paid by customers for EV charging to be offered to the public.

The bill does not prohibit an IOU from providing new EV charging stations directly to the public through a separate, unregulated entity on the same terms and conditions as any other provider of EV charging stations.

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

B. SECTION DIRECTORY:

Section 1 Creates s. 366.945, F.S., relating to an electric vehicle transportation electrification plan.

Section 2 Provides an effective date.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

[42] Rule 28-106, F.A.C., relates to decisions determining substantial interests.
[43] PSC Order No. PSC-2021-0189-PCO-EI, in Docket No. 20210015, May 26, 2021. available at https://www.floridapsc.com/library/filings/2021/04266-2021/04266-2021.pdf (last visited Feb. 9, 2022).
[44] *Agrico Chemical Company v. Department of Environmental Regulation*. 406 So. 2d 478, 482 (Fla. 2d DCA 1981).
[45] PSC *supra* note 36

1. Revenues:

   None.

2. Expenditures:

   None.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

   None.

2. Expenditures:

   None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

The bill may reduce costs to some EV charging station owners.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

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

2. Other:

   None.

B. RULE-MAKING AUTHORITY:

The bill requires the PSC to adopt rules for an EV transportation electrification plan meeting specified requirements. These rules must be proposed by January 1, 2023, and adopted by January 1, 2024.

C. DRAFTING ISSUES OR OTHER COMMENTS:

The PSC asserts that neither current law, nor the bill, give it jurisdiction over non-utilities that provide EV charging. It is not clear as to whether the PSC, through rulemaking, could prioritize and encourage private investment, or stimulate competition and customer choice in the EV charging market since such functions are outside of its statutory jurisdiction.[46]

IV. AMENDMENTS/COMMITTEE SUBSTITUTE CHANGES

Not applicable.

[46] PSC *supra* note 36 at 2.