HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: HB 943 Electric Vehicle Charging Stations
SPONSOR(S): Daley & others
TIED BILLS: **IDEN./SIM. BILLS:** SB 452

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Transportation & Infrastructure Subcommittee	11 Y, 0 N	Johnson	Vickers
2) Appropriations Committee	25 Y, 0 N	Davis	Pridgeon
3) State Affairs Committee			

SUMMARY ANALYSIS

Under current law, the provision of electric vehicle charging to the public by a nonutility is not considered the retail sale of electricity, and is not subject to regulation as a public utility. Additionally, the Department of Agriculture and Consumer Services is required to adopt rules regarding electric vehicle charging stations, and is authorized, but not required, to post information on its website relating to alternative fueling stations (including electric vehicle charging stations) that are available for public use in this state.

The bill requires the Department of Transportation, in coordination with other entities to, by July 1, 2020, develop and adopt a master plan for electric vehicle charging stations on the State Highway System. The bill provides goals and objectives for the master plan including identifying locations for charging stations, evaluating types of charging stations and the economic potential for charging stations, and identifying specific projects to meet the above goals. The Department of Transportation must then annually update its master plan.

The bill has an indeterminate negative fiscal impact to state government associated with completing the master plan, but the impact should be absorbed within existing resources. *See* Fiscal Analysis for details.

The bill is effective upon becoming law.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Present Situation

Electric vehicles (EVs) offer a cleaner fuel source, and interest in EV use has been driven in part by their potential for reduction in greenhouse gas emissions. However, their relative high cost compared to conventional fuel-powered vehicles and their relative limited range have restricted the commercial viability of EVs.[1] While advancements in EV-related technology are continuing, EV manufacturing is rising, and EV prices have been dropping, representatives in both the government and the private sector acknowledge that successful adoption of EV use is heavily dependent on the accessibility of charging stations.[2]

Electric Vehicle Charging Equipment

EV charging equipment is generally classified based on the rate at which the equipment charges the EV batteries. 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. According to the Alternative Fuels Data Center (AFDC), charging times can range from less than 20 minutes to 20 hours or more, depending on the identified factors. Potential driving distance ranges from:

- Two to five miles of range per one hour of charging for AC Level 1 supply equipment;
- Ten to twenty miles per one hour of charging for AC Level 2 supply equipment; and
- Sixty to eighty miles per twenty minutes of charging for DC fast charging supply equipment.[3]

According to the AFDC, for most drivers, EV charging currently occurs at home or at fleet facilities.[4]

Level 1 (home) charging cords come as standard equipment on new EVs, only require a standard 120-volt outlet, and can add about 50 miles of range in an overnight charge. Level 1 charging is sufficient for low- and medium-range EV drivers with relatively low daily driving.[5]

Level 2 (home and public) charging commonly requires a charging unit on a 240-volt circuit, with the charging rate dependent on the rate at which a vehicle can accept a charge and the maximum current available. An eight-hour charge adds about 180 miles of range with a typical 30-amp circuit. This method may require the purchase of a home charging unit and modifications to a home electric system, but charges from two to eight times faster than a Level 1, depending on the amperage and the vehicle. These chargers are most commonly found at public charging places like offices, grocery stores, and parking garages.[6]

DC Fast Chargers (public charging) can typically add 50 to 90 miles in 30 minutes, depending on the charging station's power capacity and the make of the EV. These chargers are best used for longer travel distances; vehicles used the major portion of a day, such as taxis; and for vehicles whose drivers have limited access to home charging.[7]

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[1] *See* the Federal Highway Administration's *FHWA NHTS Brief, Electric Vehicle Feasibility*, July 2016, pp. 1-2, available at https://nhts.ornl.gov/briefs/EVFeasibility20160701.pdf (last visited Jan. 6, 2020).
[2] *Id.* at p. 2. *See also* CBS Chicago, *Electric Vehicle Sales on the Rise, But More Charging Stations Needed To Keep the Trend Going*, September 19, 2019, available at https://chicago.cbslocal.com/2019/09/19/electric-vehicles-super-fast-charging-stations/ (last visited Jan. 6, 2020).
[3] *See* the AFDC's website available at: https://www.afdc.energy.gov/vehicles/electric.html. (Last visited Jan. 6, 2020.)
[4] AFDC, *Developing Infrastructure to Charge Electric Plug-In Vehicles*, available at https://afdc.energy.gov/fuels/electricity_infrastructure.html (last visited Jan.6, 2020).
[5] UCSUSA, *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 Jan. 6, 2020).
[6] *Id.*
[7] *Id.*

Electric Vehicle Charging in Florida

Under Florida law, the provision of electric vehicle charging to the public by a nonutility is not considered the retail sale of electricity, and is not subject to regulation as a public utility.[8] Additionally, the Department of Agriculture and Consumer Services (DACS) is required to adopt rules to provide definitions, methods of sale, labeling requirements, and price-posting requirements for electric vehicle charging stations to allow for consistency for consumers and the industry.[9]

Section 377.815, F.S., authorizes, but does not require, DACS to post information on its website relating to alternative fueling stations (including electric vehicle charging stations) that are available for public use in this state. DACS' website contains addresses by city and county for EV charging station locations in Florida. The website identifies 930 charging station locations by specific address.[10]

Clean Cities Coalitions

Established in 1993 as part of the U.S. Department of Energy's Vehicle Technologies Office, the Clean Cities Coalitions have funded hundreds of transportation projects nationwide in furtherance of their mission to foster the nation's economic, environmental, and energy security by working locally to advance affordable, domestic transportation fuels, energy efficient mobility systems, and other fuel-saving technologies and practices.[11] There are four Florida Clean Cities Coalitions: North Florida, Central Florida, Tampa, and Southeast Florida.[12]

Department of Agriculture and Consumer Services Office of Energy Electric Vehicle Roadmap

DACS' Office of Energy is currently working on an EV Roadmap with the goals of:

- Identifying EV charging infrastructure impacts on the electric grid.
- Identifying solutions for any negative impacts.
- Locating areas that lack EV charging infrastructure.
- Identifying best practices for siting EV charging stations.
- Identifying technical or regulatory barriers to expansion of EV charging infrastructure.[13]

Effect of the Bill

The bill defines the term "master plan for electric vehicle charging station" or "master plan" as a comprehensive plan of the Department of Transportation (DOT) which describes current and future plans for the development of electric vehicle charging stations on the State Highway System (SHS).[14]

The bill requires DOT to, by July 1, 2021, in coordination with DACS' Office of Energy and the Clean Cities Coalitions or other appropriate public or private entities, develop and adopt a master plan for electric vehicle charging stations on the SHS.

The master plan's goals and objectives include, but are not limited to:

- Identifying optimal locations on the SHS for the development of EV charging stations as a means of facilitating EV short-range and long-range travel and adequately serving as evacuation routes.
- Identifying locations that would serve existing EVs or encourage the expansion of EV use.

[8] Section 366.94(1), F.S.
[9] Section 366.94(2), F.S.
[10] *See* the Florida Department of Agriculture and Consumer Services website, select *Electricity*, available at https://www.fdacs.gov/Energy/Florida-Energy-Clearinghouse/Transportation (last visited Jan. 6, 2020).
[11] Clean Cities Coalition, *available at* https://cleancities.energy.gov/, (last visited Jan. 10, 2020).
[12] Florida Department of Agriculture and Consumer Services, Agency Analysis of 2020 Senate Bill 452, p.2. (Oct. 9, 2019)
[13] *Id.*
[14] Section 334.03(24), F.S., defines the term "State Highway System" as the interstate system and all other roads within the state which were under the jurisdiction of the state on June 10, 1995, and roads constructed by an agency of the state for the State Highway System, plus roads transferred to the state's jurisdiction after that date by mutual consent with another governmental entity, but not including roads so transferred from the state's jurisdiction. These facilities shall be facilities to which access is regulated.

- Evaluating and comparing the types of EV charging stations available at present and in the future, including the technology and infrastructure incorporated in such stations, for the purpose of identifying any advantages to developing a particular type of station.
- Evaluating the economic potential for EV charging stations and consider strategies to develop that potential, including methods for building partnerships with local governments, other state and federal entities, electric utilities, the business community, and the public in support of EV charging stations.
- Identifying specific projects that will accomplish the above goals and objectives.

After its adoption, DOT must annually, by July 1, update its master plan.

B. SECTION DIRECTORY:

Section 1 creates s. 339.287, F.S., relating to electric vehicle charging stations.

Section 2 provides that the bill is effective upon becoming a law.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

The bill does not appear to impact state government revenues.

2. Expenditures:

The bill has an indeterminate negative fiscal impact to DOT associated with staff workload completing the master plan. DACS may incur a negative fiscal impact associated with assisting DOT in preparing its master plan. The departments should be able to absorb the impacts within existing resources.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

The bill does not appear to impact local government revenues.

2. Expenditures:

The bill does not appear to impact local government expenditures.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

None.

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 does not provide a grant of rulemaking authority, nor does it require rulemaking.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES

None.