
SENATE COMMITTEE ON APPROPRIATIONS

Senator Anthony Portantino, Chair
2021 - 2022 Regular Session

AB 2061 (Ting) - Transportation electrification: electric vehicle charging infrastructure

Version: August 1, 2022

Policy Vote: E., U. & C. 13 - 0, TRANS.
17 - 0

Urgency: No

Mandate: No

Hearing Date: August 8, 2022

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Bill Summary: This bill would require entities receiving state or ratepayer funding for electric vehicle (EV) infrastructure to report on charging station uptime and excluded time, and would require the California Energy Commission (CEC) to assess this data and consider adopting tools to improve related metrics.

Fiscal Impact:

- The California Energy Commission (CEC) estimates ongoing costs of \$300,000 annually (Alternative and Renewable Fuel and Vehicle Technology Fund).
- The California Public Utilities Commission (CPUC) anticipates no fiscal impact from this bill.

Background:

ZEV deployment goals have accelerated, emphasizing the need for infrastructure. In recent years, California has accelerated its goals for ZEV adoption. Existing law establishes a goal of putting at least five million ZEVs on state roads and reducing GHG emissions to 40 percent below 1990 levels by 2030. In January 2018, Governor Brown issued Executive Order B-48-18, which established a goal of installing 200 hydrogen-fueling stations and 250,000 battery-electric vehicle chargers, including 10,000 direct-current fast chargers, by 2025. In September 2020, Governor Newsom issued Executive Order N-79-20, which established a goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035. The order also stated the goal that 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 for all operations where feasible.

ZEV adoption influences the availability of charging and refueling infrastructure, and infrastructure availability influences ZEV adoption. Generally, a higher ZEV adoption rate corresponds with greater investments in infrastructure for those ZEVs. The absence of needed infrastructure can discourage ZEV purchases, and the decline in purchases further disincentivizes the deployment of infrastructure. To the extent that California intends to reach its ZEV adoption goals, the state will need to make a commensurate effort to deploy infrastructure to ensure that drivers are incentivized to use ZEV vehicles.

Bill addresses lack of data about EV charger reliability. As part of its duties to assess opportunities to encourage EV adoption and more equitable distribution of EV chargers, the CEC has opened a proceeding (Docket 21-TRAN-03) to assess zero emission

vehicle infrastructure barriers and opportunities. In March 2022, the CEC held a workshop and solicited comments from stakeholders about barriers to EV adoption and issues the CEC should address in its Zero Emission Vehicle Infrastructure Plan. Stakeholders identified a variety of barriers to EV adoption and opportunities to incentivize adoption. Several of these stakeholders, including companies that provide software and hardware management services for EV charger providers, identified EV charger outages as a barrier to consumer confidence in EV charging. These stakeholders have recommended that the CEC to develop reliability standards for EV chargers to ensure that fewer service outages occur.

In April 2022, the CEC released its draft staff report for the Zero Emission Vehicle Infrastructure Plan. While the plan acknowledges that state agencies and private entities need to collaborate to address the reliability of EV infrastructure, the plan does not identify downtime barriers directly related to EV chargers. The CEC's report primarily identifies downtime and station reliability as a concern for hydrogen fuel cell electric vehicle (FCEV) adoption.

Anecdotally, EV charger outages may be a barrier for EV use; however little data has been collected to identify the extent to which these outages deter EV adoption. While some chargers may experience outages due to factors outside a provider's control (e.g. vandalism, electric power outages, accidents), other charger outages may be caused by a lack of maintenance. An April 2022 report by researchers at the University of California at Berkeley indicates that charger outages and malfunctions reduce charger availability significantly. The report studied all publicly accessible direct current fast chargers (DCFCs) in the greater Bay Area and found that only 72.5 percent of the chargers had functional electric vehicle service equipment (EVSE). The report states that the following were causes of nonfunctional DCFCs in the study: "The cable was too short to reach the EV inlet for 4.9 percent of the EVSEs. Causes of 22.7 percent of EVSEs that were non-functioning were unresponsive or unavailable screens, payment system failures, charge initiation failures, network failures, or broken connectors." Without more information about the reasons for outages, it is not clear how widespread these outages are and how they can be avoided. To the extent that this bill provides the CEC with sufficient data to identify outages that could be avoided, this bill may improve transparency about EV outages.

Proposed Law: This bill would require entities receiving state or ratepayer funding for EV infrastructure to report on charging station uptime and excluded time, and would require the California Energy Commission (CEC) to assess this data and consider adopting tools to improve related metrics. Specifically, this bill would:

1. Require entities that receive state agency or ratepayer funding to install, own, or operate a charging station to report uptime and excluded time information to the CEC starting July 1, 2023.
 - a. Specify this requirement only applies to charging stations installed after July 1, 2023.
2. Authorize the CEC to develop different reporting requirements for certain types of charging stations, including non-networked charging stations, Level 1 charging stations, and mobile solar charging stations that are feasible and cost-effective.

- a. Allow the CEC to reduce reporting requirements for a technology if it determines that it cannot develop feasible and cost-effective reporting requirements for it.
3. Exempt charging stations at residential properties with four or fewer dwelling units from the bill's reporting requirements.
4. Require the CEC to work with the California Public Utilities Commission (CPUC) to develop a formula to calculate charger uptime and determine what events make a charging station inoperable and therefore can be excluded from the calculation of a charger's uptime. Under this bill, only those events that are beyond a software or hardware provider's control or events needed to ensure equitable infrastructure distribution can be considered exempt from uptime calculations.
5. Require the CEC, starting January 1, 2025, to include an evaluation about the uptime and excluded time of public and ratepayer funded charging infrastructure in the biennial charging infrastructure needs assessments and CTP investment plan assessments about the equitable distribution of EV infrastructure.
6. Require the CEC to consider adopting tools to increase charging station uptime.

Related Legislation:

AB 2703 (Muratsuchi, 2022) would require the CEC to develop a program to provide financial assistance for EV charging by low-income drivers and those who reside in disadvantaged communities. The bill also authorizes the CEC to establish reliability standards for EV chargers that receive state funds.

AB 1424 (Berman, 2019) would have required CARB to modify its EV billing standards to allow a person to pay via a toll-free telephone number to process a credit card payment or via an onsite capacity for credit card payment by a contactless credit card, EMV chip, or magstripe card reader. The bill would have also delayed the adoption of specified interoperability standards for network roaming payment methods for EV charging stations until January 1, 2021. The bill was held in this committee.

SB 1000 (Lara, Chapter 368, Statutes of 2018) required the CEC to assess whether charging station infrastructure is disproportionately deployed by population density, geographical area, or population income level, including low-, middle-, and high-income levels. The bill also requires the CEC to target CTP funds address inequities found by the CEC regarding equitable distribution of EV infrastructure.

AB 2127 (Ting, Chapter 365, Statutes of 2018) required the CEC to conduct a statewide assessment every two years of EV charging infrastructure needed to support the levels of EV adoption required for the state to meet its goals of putting at least five million ZEVs on California roads by 2030, and of reducing emissions of GHG to 40 percent below 1990 levels by 2030.

SB 454 (Corbett, Chapter 418, Statutes of 2013) established the Electric Vehicle Charging Stations Open Access Act, which prohibits EV charger owner-operators from requiring individuals to join clubs or pay subscription fees to use a charger. The bill also authorized the CARB to establish interoperable billing standards for EV chargers if a national organization has not adopted such standards by 2015.

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