

Date of Hearing: March 20, 2023

ASSEMBLY COMMITTEE ON TRANSPORTATION

Laura Friedman, Chair

AB 591 (Gabriel) – As Amended March 13, 2023

SUBJECT: Electric vehicle service equipment: universal connectors and public accessibility

SUMMARY: Requires any installed or substantially retrofitted electric vehicle service equipment (EVSE) to be publicly accessible and include universal connectors. Specifically, **this bill:**

- 1) Requires EVSE to be publicly accessible including, but not limited to, enabling a person to pay via credit card.
- 2) Excludes EVSE installed or substantially retrofitted for private use at a single-family or multi-family residence from the public accessibility requirement.
- 3) Specifies that the requirements apply to EVSE that is capable of charging a light-duty EV.
- 4) Eliminates the option of allowing a person utilizing an EV charging station to pay via mobile technology.
- 5) Defines “universal connector” as a plug that enables any EV to charge using the EVSE.
- 6) Defines “substantially retrofitted” to mean either onsite work was performed on the EVSE or the EVSE was fixed after malfunctioning, being broken, or otherwise being inoperable for at least 30 days.
- 7) Removes “a parking space provided by a producer of EVs as a service” as an exemption from the definition of “publicly available parking space.”

EXISTING LAW:

- 1) Authorizes the California Air Resources Board (CARB), in the absence of a national standard by January 1, 2015, to adopt interoperability billing standards for network roaming payment methods for EV charging stations. (Health and Safety Code (HSC) 44268.2 (d))
- 2) Requires, if CARB adopts interoperability standards, that all EV charging stations that require payment, meet the imposed interoperability standards within one year. (HSC 44268.2 (d))
- 3) Requires CARB, when adopting interoperability standards for EV charging stations, to consider industry-developed interoperability billing standards and authorizes CARB to adopt interoperability billing standards promulgated by outside authoritative bodies. (HSC 44268.2 (d))
- 4) Requires an EV charging station that requires payment of a fee to allow a person using the station to pay by credit card or mobile technology, or both. (HSC 44268.2 (a))

- 5) Defines “EV charging station” as one or more publicly available parking spaces served by EVSE. (HSC 44268 (c))
- 6) Defines “publicly available parking space” as a parking space that has been designated to be available to the public and may include on-street parking spaces and parking spaces in surface lots or parking garages. (HSC 44268 (g))
- 7) Exempts from the definition of “publicly available parking space” a parking space that is part of, or associated with, a private residence, a parking space that is reserved for the exclusive use of an individual or vehicle or for a group of drivers or vehicles, such as employees, tenants, visitors, residents of a common interest development, or residents of an adjacent building, or a parking space provided by a producer of electric vehicles as a service. (HSC 44268 (g))

States that provisions related to the Open Access Charging Act do not limit the ability of an owner or lessee of a publicly available parking space whose primary business is other than EV charging from restricting use of the parking space, such as limiting use to customers and visitors of the business.

FISCAL EFFECT: Unknown

COMMENTS: The Legislature has set a number of goals to reduce greenhouse (GHG) emissions and address climate change. The Global Warming Solutions Act of 2006. AB 32 (Nunez) Chapter 488, Statutes of 2006 and subsequent companion legislation SB 32 (Pavley) Chapter 249, Statutes of 2016 requires California to reduce statewide GHG emissions to 40% below the 1990 level by 2030. AB 1279 (Muratsuchi) Chapter 337, Statutes of 2022 establishes the policy of the state to achieve carbon neutrality as soon as possible, but no later than 2045. CARB is responsible for developing a Scoping Plan to detail how the state will achieve its mandated GHG emissions reduction targets across sectors.

Nearly 40% of California's GHG emissions are generated by the transportation sector, which includes both light-duty (passenger) and medium- and heavy-duty fleets. Heavy-duty diesel trucks also contribute to unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, oxides of nitrogen (NO_x), and sulfur dioxide, affecting local air quality. In the transportation sector, measures to reduce GHG emissions include requiring the use of low carbon fuels, cleaner vehicles, and strategies to promote sustainable communities and improved transportation choices that reduce growth in number of vehicle miles traveled.

To further these efforts, at the end of 2020, Governor Newsom issued Executive Order (EO) N-79-20 which requires 100% of in-state sales of new passenger cars and trucks to be zero-emission by 2035. EO N-79-20 charges CARB with developing and proposing passenger vehicle and truck regulations requiring increasing volumes of new zero-emission vehicles sold in the State towards that goal. EO-N-79-20 also tasked the State Energy Resources Conservation and Development Commission (also known as the Energy Commission or CEC) to update the biennial statewide assessment of zero-emission vehicle infrastructure required by AB 2127 (Ting) Chapter 365, Statutes of 2018 to support the level of EV adoption required by the EO.

State needs significantly more EV chargers to meet projected EV needs. Based on the AB 2127 analysis, CEC projects that approximately 700,000 to 1.2 million public and shared-private chargers will be needed by 2030 to support 5 million to 8 million light-duty ZEVs, respectively. According to the Zero-Emission Vehicle Infrastructure Plan, 80,000 light-duty public and shared-private EV chargers currently operate statewide, with another estimated 17,000 on the way.

Types of charging technology. In North America, every EV manufacturer (except Tesla) uses the SAE J1772 connector, also known as the J-plug, for Level 1 (120 volt) and Level 2 (240 volt) charging. Level 1 and 2 charging are slower than DC fast chargers (DCFC). Tesla provides a Tesla charger adapter cable with every car it sells that allows the Tesla to use charging stations that have a J1772 connector. Every EV sold in North America can use any Level 1 or 2 charging station that comes with the standard J1772 connector.

Tesla's proprietary connector accepts all voltage, so it is compatible for Level 1, Level 2, and DCFCs. Historically, only Tesla vehicles have been allowed to use the Tesla DCFC network.

The EV Charging Stations Open Access Act. CARB adopted the EVSE Standards Regulation to implement SB 454 (Corbett) Chapter 418, Statutes of 2013 and establish requirements for EVSE to build driver confidence in accessing public charging infrastructure. Under the regulations developed by CARB, EVSE must be accessible to drivers regardless of membership in an Electric Vehicle Service Provider (EVSP) network. EVSPs must operate a credit card reader device physically located on either the EVSE unit or a nearby kiosk. The credit card reader device must accept, at a minimum, the Euro MasterCard Visa (EMV) chip and, at a minimum, one of the following credit card types: Visa, MasterCard, or American Express. A DCFC installed on or after January 1, 2022 must comply with the open access requirements. Existing DCFCs must comply when replaced, but no later than July 1, 2033. New Level 2 EVSEs have a compliance deadline of July 1, 2023, but existing Level 2s have the same retrofit date.

National Electric Vehicle Infrastructure (NEVI) standards and requirements. On November 15, 2021, the President signed into law the Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act (IIJA), (Pub. L. 117-58). The BIL authorized a new NEVI Program, which includes a total of up to \$7.5 billion in dedicated funding to help make EV chargers accessible to all Americans for local to long-distance trips.

On February 15, 2023 the federal government released its final rule establishing regulations that set minimum standards and requirements for projects the NEVI program will fund, including requirements for connector types, availability, and payment types, as detailed in the table below.

Federal Requirements for Various Charging Network Features

Category	Federal Requirement/Standard
Connector Type	Each DCFC port must have a CCS Type 1 connector
Availability (along Alternative Fuel Corridors (AFC))	Charging station must be available 24 hours per day, 7 days per week
Availability (not along AFCs)	Charging station must be available for use, and accessible to the public, at least as frequently as the business operating hours of the site host
Payment methods	<p>Charging station must provide a contactless payment method accepting major credit/debit cards</p> <p>Must accept payment through either an automated toll-free phone number or short message/messaging system</p>

This bill was introduced prior to the federal standards release. This bill intends to codify CARB’s current regulation and eliminate the requirement for an EV charging customer to be able to pay via mobile technology. This bill maintains the requirement for a credit card payment option, although it does not specify whether the credit card payment needs to be via chip reader or tap/contactless. As part of the Governor’s proposed 2023-24 budget, the administration proposed legislation requiring an EV charging station that requires payment of a fee to include a contactless payment method that accepts major debit and credit cards. The legislation also authorizes CARB, by regulation, to add or subtract from the required payment methods as appropriate as technologies change. There will need to be reconciliation if both this bill and the Governor’s proposal continues to move through the process.

Tesla recently announced changes to its private charging network. Tesla owns and operates a global, fast charging network of more than 40,000 DCFC that only Tesla’s can use. On February 15, 2023, coinciding with the federal NEVI guidance release, Tesla announced that it will make at least 7,500 of its United States’ DCFC and Level 2 chargers publically accessible to non-Tesla EVs by the end of 2024. Tesla currently has around 17,000 total chargers in the United States and 1100 chargers in California. The open chargers will be distributed along highway corridors and at locations like hotels and restaurants in urban and rural locations. This action allows Tesla to be eligible for federal NEVI grants (discussed above). In addition, currently, Tesla is not eligible for state funding because its charging network is not open to non-Teslas.

Committee comments: This bill requires newly installed, or substantially retrofitted, EVSE to include universal connectors and be publicly accessible. While Tesla’s recent actions are a step in the direction this bill requires, the details of Tesla’s agreement are limited. Even if Tesla fulfills its promise to open 7,500 chargers nationwide, there is still a much larger Tesla network that could potentially be opened up.

The author should consider adjusting the definition of “substantially retrofitted” to ensure that the bill does not violate the Takings Clause of the Fifth Amendment to United States Constitution. A taking is when the government seizes private property for public use, and can come in two forms. The taking may be physical, which means that the government literally takes the property from its owner). Or the taking may be constructive (also called a regulatory taking), which means that the government restricts the owner's rights so much that the governmental action becomes the functional equivalent of a physical seizure. The Fifth Amendment provides that the government may only exercise this power if they provide just compensation to the property owners; “Nor shall private property be taken for public use, without just compensation.”

This bill defines and requires the use of a universal connector. However, most, but not all EVs, specifically Tesla and the Nissan Leaf, use the same plugs. The author may need to clarify what is meant by a universal connector, in coordination with CEC and auto manufacturers, as this bill proceeds to ensure that the accessibility goal is reached.

According to the author, “[This bill] will address “range anxiety” and bolster consumer confidence by requiring all new and retrofitted EV chargers in California to be accessible to all brands of light-duty of EVs. In particular, [this bill], will mandate that all new and retrofitted EV chargers—other than those in private residences—include universal connectors and be publicly accessible to all types of EVs.”

In support, the Greenlining Institute writes, “California set an ambitious requirement that all new cars sold in the state must be a zero-emission vehicle by 2035. In order to be on track to meet this goal, and support older EVs with different connection types, public infrastructure must be vast, and easily accessible to drivers for daily commutes, and longer excursions. However, charging infrastructure remains fragmented across the state, with most of these public chargers only available in wealthier communities, or in freeway corridors designed to support traveling drivers. Direct current connectors are exclusive to select passenger vehicles, meaning this efficient charging option is only available to few. Drivers who only have access to Level 1 and Level 2 chargers must locate a station with a connector that is compatible with their vehicle. This inconsistency creates confusion, is a barrier for communities in adopting EV technology and delays statewide electric vehicle infrastructure integration.”

Related and previous legislation: AB 1424 (Berman) of 2019 would have required EV charging stations 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 interoperability standards for network roaming payment methods for electric vehicle charging stations until January 1, 2021. AB 1424 was held in the Senate Appropriations committee.

AB 2127 (Ting) Chapter 365, Statutes of 2018 requires CEC, working with CARB and the Public Utilities Commission (CPUC), to prepare and biennially update a statewide assessment of the EV charging infrastructure needed to support the levels of EV adoption required for the state to meet its goals of putting at least 5 million zero-emission vehicles on California roads by 2030 and of reducing emissions of greenhouse gases to 40% below 1990 levels by 2030.

SB 454 (Corbett), Chapter 418, Statutes of 2013, establishes the EV Charging Stations Open Access Act which among other things, prohibits the provider of an EV charging station from requiring a subscription or membership as a condition of using the station; requires the total

actual charges for the use of an EV charging station, including any network roaming charges be disclosed at the point of sale; requires that an EV charging station accept payment by credit card or mobile technology, or both; and authorizes CARB to adopt interoperability billing standards for network roaming payment methods for EV charging stations.

REGISTERED SUPPORT / OPPOSITION:

Support

350 Bay Area Action
350 Sacramento
California New Car Dealers Association
Greenlining Institute
Sustainable Rossmoor

Opposition

None on file

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