

Date of Hearing: June 25, 2018

ASSEMBLY COMMITTEE ON TRANSPORTATION

Jim Frazier, Chair

SB 1000 (Lara) – As Amended May 25, 2018

**SENATE VOTE:** 37-0

**SUBJECT:** Transportation electrification: electric vehicle charging infrastructure.

**SUMMARY:** This bill requires the California Energy Commission (CEC) to evaluate the extent to which charging infrastructure is proportionately deployed and use funds to more proportionately deploy electric vehicle (EV) chargers as needed; prohibits cities and counties from restricting EV charging access, and requires the California Public Utilities Commission (CPUC) to explore facilitating the development of technologies related to charging. Specifically, **this bill:**

- 1) Prohibits cities and counties from restricting which types of EVs may access an EV charging station that is both publicly accessible and was at least partly funded by ratepayer or state monies.
- 2) Requires the CEC, in coordination with the Air Resources Board (ARB), to assess whether EV chargers, including direct current fast chargers (DCFC), are disproportionately deployed by population density, geographical area, or population income level, including low, middle, and high income levels. If the CEC determines that chargers are disproportionately deployed, the CEC must use Alternative Fuel and Vehicle Technology Program (ARFVTP) funding and other incentives to more proportionately deploy charging infrastructure.
- 3) Requires the CPUC to consider the following as part of an existing proceeding:
  - a) Facilitating the development of technologies that support grid integration, including technologies that provide sub-metering capabilities to residential charging stations if the CPUC determines that these technologies and sub-metering capabilities are in the best interest of ratepayers.
  - b) Exploring the integration of dynamic pricing models into demand charges, the use of charging stations when and where there is excess grid capacity, and options for waiving demand charges when there is excess grid capacity.
  - c) Adopting a tariff specific to heavy duty electric vehicle fleets or electric trucks and buses that encourages charging station use when there is excess grid capacity.

**EXISTING LAW:**

- 1) Requires ARB, pursuant to California Global Warming Solutions Act of 2006 [AB 32 (Núñez and Pavley), Chapter 488, Statutes of 2006], to adopt a statewide greenhouse gas (GHG) emissions limit equivalent to 1990 levels by 2020, adopt regulations to achieve maximum technologically feasible and cost-effective GHG emission reductions and authorizes ARB to use market-based compliance mechanisms, to comply with GHG

reduction regulations; requires ARB to ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by 2030.

- 2) Establishes the Greenhouse Gas Reduction Fund (GGRF) and requires all moneys, except for fines and penalties, collected by ARB from the auction or sale of allowances pursuant to a market-based compliance mechanism (i.e., the cap-and-trade program adopted by ARB under AB 32) to be deposited in the GGRF and be available for appropriation by the Legislature.
- 3) Requires ARB to administer the Charge Ahead California Initiative to put one million zero and near-zero emission vehicles (ZEVs and NZEVs) on the road by 2030, ensure that ZEVs and NZEVs are a mainstream option for buyers, increase disadvantaged and low to moderate income communities' access to ZEVs and NZEVs, and deploy vehicles in those communities.
- 4) Requires the ARB to develop and publish a study on barriers for low-income customers to zero and near-zero-emission transportation options, including those in disadvantaged communities, as well as recommendations on how to increase access to zero and near-zero-emission transportation options to low-income customers, including those in disadvantaged communities.
- 5) Requires the CPUC to direct investor-owned utilities (IOUs) to file applications for programs and investments supporting widespread transportation electrification to meet California's climate goals and achieve the goals set by the Charge Ahead California Initiative. The CPUC must approve or modify and approve utility investments that meet specified criteria.
- 6) Requires the CEC to administer the ARFVTP to provide grants and other financial incentives to accelerate the development and deployment of clean technologies.
- 7) Requires the CEC to adopt and annually update an investment plan to determine priorities and opportunities for the ARFVTP. The investment plan must establish priorities for investment of funds and technologies to achieve clean transportation goals and describe how funding will complement existing public and private investments, including existing state programs.
- 8) Authorizes cities and counties to adopt zoning requirements that regulate land use, including, but not limited to, the location and size of buildings, the size and use of lots, and requirements for off-street parking and loading.

**FISCAL EFFECT:** Unknown

**COMMENTS:** To reduce mobile source pollution and meet our climate goals, the state is reducing its reliance on gasoline-powered cars and promoting efforts to electrify our transportation sector through the advancement of plug-in EVs, plug in hybrid EVs, and hydrogen fuel cell EVs. Plug-in EVs that run solely on batteries and hydrogen fuel cell EVs are considered ZEV because they result in zero tailpipe emissions. It is estimated that by the end of 2017, more than 360,000 EVs have been sold in California, with the number of EVs in the state increasing by approximately 34%. However, ARB estimates that by mid-century, 87% of cars on the road will need to be full ZEVs, in order for the state to meet its long-term climate goals.

California has looked to expand the sale and use of ZEVs by setting specific goals through legislation and executive orders. In 2012, Governor Brown issued EO B-16-2012 which established the milestone of placing 1.5 million ZEVs on California roadways by 2025. The EO also established ZEV purchase targets for state agencies and required the integration of plug-in electric vehicle charging into the state's electricity grid by 2020. The ZEV Action Plan, which was updated in 2016, established goals for the advancement of ZEVs, outlined strategies to achieve those goals and directed state agencies to expand private investment in ZEV infrastructure, particularly in low income and disadvantaged communities. This year, Governor Brown announced a new goal and issued B-48-2018 which orders the deployment of 5 million ZEVs on California roads by 2030. The 2018 EO also directed all state entities to spur the construction and installation of EV charging and fueling infrastructure, find ways to streamline EV infrastructure installation processes, and carry out additional programs and actions to reach the goal. Specifically, the order establishes a goal of installing 200 hydrogen fueling stations, and 250,000 ZEV chargers, including 10,000 DCFC, by 2025.

Level 1, Level 2, and DCFC are the most widely deployed classes of chargers. In broad terms, this classification pertains to the charger's power, and reflects charging speed. A more powerful charger results in much shorter charging times. According to the CPUC, "Level 1 chargers are used in a residential setting, and Level 2 chargers are used in both a residential and commercial setting. Due to higher power requirements, DCFC stations are only suited to commercial settings". More than 10,000 Level 2 and 1,500 DCFC connectors have been deployed across the state. CEC estimates that between 226,000 and 278,000 EV chargers will be necessary to support 1.5 million ZEVs in 2025.

Significant EV charging investments have been made in California. As part of the ARFVTP, CEC has funded 64 new or upgraded hydrogen refueling stations, 7,695 installed or planned charging stations for plug-in electric vehicles, including 4,343 private charging stations at homes, fleet yards, and workplaces; 3,046 public Level 2 charging stations; and 306 DCFC. The CEC tracks the degree to which charging infrastructure, including higher speed infrastructure, is deployed in disadvantaged communities. Approximately 12% of all ARFVTP EV chargers have been installed in disadvantaged communities. Approximately 19% of ARFVTP's DCFC installations have been made in disadvantaged communities. This year, the administration intends to revamp the ARFVTP to have a greater focus on EV charging infrastructure and the ARFVTP 2018-19 Investment Plan proposes approximately \$134 million in EV infrastructure investments. Additionally, administered largely by ARB, the 2016 Volkswagen settlement requires \$800 million to be spent in mostly EV fueling infrastructure in California for the coming decade. Both ARB and CEC are using state funding (such as ARFVTP and GGRF) to fund the electrification of heavy-duty trucks and buses as well.

In addition to other EV market acceleration investment programs throughout California state agencies, in 2015 the Legislature passed SB 350 (de León), Chapter 547, Statutes of 2015, which set 2030 GHG reduction targets to be achieved through a variety of measures, including widespread transportation electrification. In 2015, CPUC directed California's three investor owned utilities (IOUs) to submit applications proposing projects aimed at achieving the transportation electrification goals in SB 350. CPUC has since proposed two decisions authorizing utility investments in transportation electrification, including in November 2017, authorizing the three IOUs to spend up to \$42.8 million on 15 pilot projects aimed at accelerating EV adoption, improving air quality and reducing GHG emissions; and in March

2018 approving four IOU projects, totaling approximately \$589 million, aimed at installing EV charging infrastructure.

Efforts to deploy EV charging infrastructure at the local level has also taken place. Local governments zoning codes regulate land use, including the allocation of parking for specific land uses. Zoning codes can be used to support and expand access to charging infrastructure. They can also be used to restrict the use of certain electric vehicle charging spaces for certain types of vehicles. For example, a local government may restrict the use of EV charging to plug-in hybrid EVs and instead, only allow plug-in EVs to use the charging infrastructure.

According to the author, “The purpose of SB 1000 is to improve access to charging infrastructure and enable further electric truck development. Access to charging is similar to access to broadband internet. A basic level of speed is necessary and a basic level of proximity is necessary. For Californians to choose electric vehicles, charging has to become more accessible, and the aim of SB 1000 is to promote investments that democratize fast charging station.” The author also notes, “Certain local governments have adopted a local ordinance or may be considering adopting a local ordinance to exclude plug-in hybrid cars from publicly accessible charging stations. Plug-in hybrids are important cars for luring people into the EV Market, and most commuters with these plug -in hybrids are only using their battery power. Excluding them from charging is in conflict with California’s electric vehicle goals, air quality goals, and is also unfair. Therefore, where state money or ratepayer money is used to build a station that station has to be accessible to plug-in hybrids and full EVs alike”.

*Committee Comments:* California is investing millions of dollars to deploy EV charging stations across the state and is aggressively pursuing to put more EVs on the road. To ensure these efforts are equitable, it seems prudent that state agencies work together, gather data and advance efforts to secure a basic level of charging stations and speeds in different regions and communities. Electrifying the transportation sector, both in the light- and heavy- duty sector, will result in a huge demand and consumption of electricity and will affect California’s power grid (in positive or negative way). In theory, the state can entice drivers to charge during times where there is excess electricity and discourage drivers to charge during “high-demand” times. This bill will help state agencies develop a plan to manage electricity demands and the costs associated with this demand, while considering the impacts on our power grid.

*Double Referral:* This bill will be referred to the Assembly Utilities and Energy Committee should it pass out of this committee. A more detailed discussion on energy issues will be had in that committee.

*Previous Legislation:* SB 350 (de León), Chapter 547, Statutes of 2015, establishes new clean energy, clean air, and GHG reduction goals and requires utilities to make investments supporting widespread transportation electrification to meet California’s climate goals.

SB 1275 (de León), Chapter 530 of 2014, established the Charge Ahead California Initiative (Initiative) to provide incentives that increase the availability of ZEV and NZEVs, particularly in disadvantaged and low-and-moderate-income communities.

AB 8 (Perea), Chapter 401, Statutes of 2013, extended the ARFVTP until January 1, 2024, and requires CEC to allocate \$20 million of the ARFVTP’s annual funding to support the construction of hydrogen fueling stations until 100 publicly available stations exist in California.

AB 118 (Núñez), Chapter 750, Statutes of 2007, established the ARFVTP at CEC to develop and deploy innovative technologies that transform California's fuel and vehicle types to support the state's climate change policies. The ARFVTP is funded through an increase in smog abatement fees.

**REGISTERED SUPPORT / OPPOSITION:**

**Support**

The Alliance of Automobile Manufacturers

**Opposition**

None on file

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