

Date of Hearing: June 27, 2018

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Chris Holden, 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 Public Utilities Commission (CPUC) to consider several rates and metering arrangements for the charging of electric vehicles (EVs); requires the California Energy Commission (CEC) to evaluate the extent to which charging infrastructure and funding is proportionately deployed; and prohibits cities and counties from restricting EV charging access. Specifically, **this bill:**

- 1) 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; and
  - 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.
- 2) 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.
- 3) Requires the CEC, in coordination with the California Air Resources Board (CARB), 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.

**EXISTING LAW:**

- 1) Requires that all charges demanded or received by any public utility for any product, commodity or service be just and reasonable, and that every unjust or unreasonable charge is unlawful. (Public Utilities Code § 451)

- 2) Requires the CPUC to establish rates using cost allocation principles that fairly and reasonably assign to different customer classes the costs of providing service to those customer classes, consistent with the policies of affordability and conservation. (Public Utilities Code § 739.6)
- 3) Defines “interests” of ratepayers, for the purposes of transportation electrification, to mean direct benefits that are specific to ratepayers, consistent with both safer and more reliable service or less costly gas or electrical service including due to either improved use of the electric system or improved integration of renewable energy generation and any other benefits, as specified. (Public Utilities Code § 740.8)
- 4) Requires the CPUC to evaluate and implement policies to promote the development of equipment and infrastructure needed to facilitate the use of electric power and natural gas to fuel low-emission vehicles and specifically authorize IOUs to develop equipment or infrastructure needed for electric-powered and natural gas-fueled low-emission vehicles. (Public Utilities Code § 740.3)
- 5) Requires IOUs to file applications for programs and investments to accelerate widespread transportation electrification which seek to minimize overall costs and maximize overall benefits, and requires the CPUC to approve, or modify and approve, programs and investments in transportation electrification, including charging infrastructure, through a reasonable cost recovery mechanism, if they do not unfairly compete with nonutility enterprises, include performance accountability measures, and are in the interests of ratepayers. (Public Utilities Code § 740.12)
- 6) Requires CARB to identify and adopt appropriate policies, rules, or regulations to remove regulatory disincentives preventing retail sellers and local publicly owned electric utilities from facilitating the achievement of greenhouse gas (GHG) emission reductions in other sectors through increased investments in transportation electrification. Policies to be considered shall include, but are not limited to, an allocation of GHG emissions allowances to retail sellers and local publicly owned electric utilities, or other regulatory mechanisms, to account for increased GHG emissions in the electric sector from transportation electrification. (Health & Safety Code § 44258.5)

**FISCAL EFFECT:** According to the Senate Appropriations Committee, this bill results in ongoing costs of approximately \$300,000 (Utility Reimbursement Account) to the CPUC to manage the proceeding and develop materials.

**BACKGROUND:**

*CPUC Electrification Efforts* – The CPUC has an ongoing proceeding to develop policies to ensure that EVs efficiently integrate with the utility grid and have access to fair rates that encourage electrification. The utilities are in different phases of program development but all have EV charging rates for residential customers which allow EV drivers to fuel their vehicle for less than the equivalent cost of gasoline.

Commercial rates for charging vehicles appear to be in different phases of development including pilots. There are no EV charging rates specific to heavy duty vehicle fleets or electric truck and buses as proposed by this bill.

Two of the three utilities (Pacific Gas & Electric [PG&E] and Southern California Edison [SCE]) have charging infrastructure programs, funded through increases in distribution rates for all customers, for “make-ready” charging infrastructure to support fleets of medium- and heavy-duty vehicles which includes municipal bus transit depots.

PG&E, for example, will provide make-ready infrastructure for non-light-duty electric vehicles for customers who commit to purchasing electric vehicles at 700 sites for up to 8,800 charging points. PG&E would own, operate and maintain the make-ready infrastructure, but not the charging equipment (EVSE). The make-ready includes every component from the distribution circuit up to the stub for the EVSE or idle-reduction equipment. PG&E will provide a new service connection with meters and panels exclusively for the make-ready installation.

## COMMENTS:

- 1) Author’s Statement. SB 1000 promotes access to speed in all communities by including proximity to fast charging as part of the criteria in our public investments. This will help prevent the scenario where some communities in our state have access to very fast charging, while others get left behind. SB 1000 also ensures access to all types of EVs when we make public investments in EV infrastructure. Plug-in hybrids are essential to our clean air goals and a pathway for people to get used to the idea of a zero emission vehicle. The third component of SB 1000 is to address barriers to heavy duty fleets and promote strategic charging for the heavy duty sector. We are looking ahead at years of investments in charging infrastructure to meet our 2030 goals, and SB 1000 will help ensure that we democratize fast-chargers and promote access to charging infrastructure in all communities.
- 2) Double Referral. This bill was heard in the Assembly Transportation Committee on June 25<sup>th</sup> where a more detailed discussion of the EV charging infrastructure and planning issues occurred. Consequently, this analysis will focus on the ratemaking issues related to the charging of EVs.
- 3) EV Charging Rates. The IOUs have established EV rates for residential and commercial customers. Fundamentally, the rates are time-of-use rates which incent the customer to charge off-peak (currently at night) and result in a cost of fuel for the EV which is less than gasoline would be for a car.

This bill has three goals relative to the rates for charging different EV types and metering arrangements and those related to public charging stations:

- a. *Facilitate the development of submetering for residential charging*. This would require the IOU to have two separate meters at a residence. One which separately meters the charging of the car and one which meters the remaining household use. Implicit in submetering is the thought that EV charging should be treated differently than other household needs. The residential rates established by the IOUs, and approved by the CPUC, thus far are based on time-of-use (TOU) which appears to be the best structure for appropriately charging EV customers for the costs they impose on the electric system, while ensuring the charging/discharging

behavior meets other policy objectives (i.e. doesn't exacerbate system peak demand). The TOU rates will be less at night (roughly 9:00 p.m. to 7:00 a.m. when demand is less therefore driving EV charging to this same time frame. As rate structures are aligned with the cost of electricity (which is higher as demand is higher) it is expected that EV charging will naturally fall into alignment and sub-metering will not be necessary.

However, there is an ongoing residential submetering pilot. The results will be evaluated by a third party, but the CPUC will need to work with stakeholders to determine whether those pilot results are adequate to develop and adopt a submetering protocol that could apply to all EV charging applications. This bill does not mandate the use of submetering unless the CPUC finds that it is in the best interests of ratepayers.

- b. *Explore dynamic pricing models (time-of-use rates) for public charging stations.* The committee is not aware of any public charging stations with varying prices for electricity. It could be done but submetering would be required. The end goal is consistent with current rate design. However, if a driver is in a public place, the practicality of waiting to charge several hours is not apparent. To the degree that the public charging station does have a cost to the EV driver, it could incent the driver to charge at home and off-peak. Some charging stations have no cost, some have volumetric pricing. This can affect a driver's charging behavior.

This section is not a mandate to implement but is a mandate to "explore."

- c. *Establishing a rate specifically for heavy duty vehicle fleets or electric truck and buses.* Two of the three large IOUs have medium-and heavy-duty EV charging infrastructure programs. All three IOUs have commercial EV rates but they are not specific to the types of vehicles or fleets. The IOUs continue to pilot and develop new EV charging rates as well as infrastructure deployment. However the rates called for in this bill have not yet been developed. The need is not yet clear since TOU pricing generally addresses EV charging needs because the rates are lower overnight which generally aligns when the vehicles are being charged. For commercial customers however, demand charges are of concern and the charging of large fleets of EVs could trigger higher demand charges depending on how the rates are designed.

There is an outstanding question as to whether the commercial EV rates will meet the needs of fleets.

- 4) Free Ride for Community Choice Aggregators (CCAs). A growing number of IOU customers, particularly in urban areas and coastal counties have moved to CCAs as their electricity provider. The specialized transit rates for the charging of electric buses mandated by this bill would not apply to CCAs. The CCAs are not required to offer any specialized rates.

This leaves a schism – IOUs have fewer and fewer customers across which the costs of special rate treatment can be shifted. Moreover, it should not go unnoticed that some municipalities are starting to cherry-pick. The county board of supervisors or city council

votes to establish or join a CCA in their region which triggers a default enrollment for all customers in the municipality. They are given the opportunity to opt-out of the CCA. Some municipal customers exercise that opportunity and remain with the IOU where rates have been designed to serve specific needs.

5) Related Legislation.

SB 1434 (Leyva) Requires IOUs to file rate design applications with the CPUC for transit agencies to support and accelerate the deployment of zero-emission transit buses. Status: Set for hearing in the Assembly Communications & Conveyance Committee June 27<sup>th</sup>.

SB 1479 (Stern) Adopts electricity billing requirements applicable to the Los Angeles County Metropolitan Transportation Authority that are similar to the requirements applicable to Bay Area Regional Transit (BART), but would also impose those requirements applicable to an electrical corporation in the BART statute on a local publicly owned electric utility. Status: Held in Senate Energy, Utilities & Communications Committee.

**REGISTERED SUPPORT / OPPOSITION:**

**Support**

Alliance of Automobile Manufacturers

**Support If Amended**

Plug In America

**Opposition**

None on file.

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