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**SENATE COMMITTEE ON ENERGY, UTILITIES AND  
COMMUNICATIONS**  
**Senator Ben Hueso, Chair**  
**2021 - 2022 Regular**

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**Bill No:** AB 2700 **Hearing Date:** 6/21/2022  
**Author:** McCarty  
**Version:** 4/27/2022 Amended  
**Urgency:** No **Fiscal:** Yes  
**Consultant:** Sarah Smith

**SUBJECT:** Transportation electrification: electrical distribution grid upgrades

**DIGEST:** This bill requires the California Air Resources Board (CARB) to provide electric utilities with specified information about fleets and requires these utilities to incorporate this fleet data and other specified electric vehicle (EV) deployment policies into their distribution planning to support vehicle electrification goals. This bill authorizes electrical corporation to recover reasonable costs for distribution investments made pursuant to this bill.

**ANALYSIS:**

Existing law:

- 1) Requires the California Public Utilities Commission (CPUC) to direct investor-owned utilities (IOUs) to file applications for investments to accelerate transportation electrification, reduce reliance on petroleum, and meet certain climate goals. The CPUC may approve or amend applications for transportation electrification investments. IOUs are authorized to recover reasonable costs for approved investments from ratepayers if they are consistent with certain requirements. (Public Utilities Code §740.12(b))
- 2) Requires the CPUC to review data related to current and future transportation electrification adoption and charging infrastructure prior to allowing an IOU to collect new program costs from ratepayers. (Public Utilities Code §740.12(c))
- 3) Requires each publicly owned utility (POU) with an annual electrical demand exceeding 700 gigawatt hours to adopt an integrated resources plans (IRP) that helps ensure that the POU will meet climate goals for the electricity sector. An IRP must be updated at least once every five years and must address procurement plans for the following:
  - a) Energy efficiency and demand response resources,
  - b) Energy storage requirements,

- c) Transportation electrification,
  - d) A diversified energy resource procurement portfolio, and
  - e) Resource adequacy requirements. (Public Utilities Code §9621)
- 4) Requires the CPUC to establish EV-grid integration strategies for certain load-serving entities (LSEs). POU's must consider EV-grid integration strategies in their IRPs and community choice aggregators (CCA) must report specified information to the CPUC regarding EV-grid integration activities. (Public Utilities Code §740.16)
- 5) Requires the California Energy Commission (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. To the extent that the CEC finds that charging infrastructure is inequitably distributed, the CEC must target Clean Transportation Program (CTP) funding opportunities to address identified disparities. (Public Resources Code §25231)
- 6) Requires 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 zero-emission vehicles (ZEVs) on California roads by 2030, and of reducing emissions of greenhouse gases (GHG) to 40 percent below 1990 levels by 2030. (Public Resources Code §25229)
- 7) Requires the CEC to adopt an Integrated Energy Policy Report (IEPR) every two years, with updates every other year, to report on specified major energy trends facing the state. Existing law specifies the contents the IEPR must contain, including but not limited to, supply, demand, pricing, reliability, efficiency, and impacts on public health and safety, the economy, resources, and the environment. (Public Resources Code §25300 et. seq.)

This bill:

- 1) Requires CARB to collect data from medium and heavy-duty fleets subject to CARB regulations and report information needed for distribution grid planning to electrical corporations and POU's, including at least the following data:
- a) The vehicle fleet size and fuel source, including battery electric, hybrid, or fuel cell.
  - b) The fleet location.
  - c) The total anticipated charging capacity at each fleet location.

- 2) Requires each electrical corporation and POU to incorporate the fleet data provided by CARB into their distribution planning processes to support the level of electric vehicle charging anticipated by the following policies:
  - a) 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.
  - b) 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.
  - c) EV infrastructure deployment goals in the IEPR.
  - d) The CEC's biennial assessment of the EV infrastructure needed to meet state EV deployment goals.
  - e) CARB regulations.
  - f) Air quality management plans.
  - g) Regional seaport plans.
  - h) Regional transportation plans.
  - i) Sustainable community strategies.
- 3) Requires the CPUC to ensure electrical corporations' proposed distribution investments under this bill are consistent with state ZEV deployment goals and provide reasonable cost recovery for these distribution investments.

## Background

*Recent policies have accelerated the state's ZEV deployment goals.* Prior legislation (AB 2127, Ting, Chapter 365, Statutes of 2018) codified the goal of putting at least five million ZEVs on state roads and reducing GHG emissions to 40 percent below 1990 levels by 2030. In 2018, Executive Order B-48-18 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 2020, Executive Order N-79-20 established a goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035 and 100 percent of medium- and heavy-duty vehicles in the state will be zero-emission by 2045 where feasible. In response to Executive Order N-79-20, CARB is in the process of adopting the Advanced Clean Fleets rules to establish regulations for medium and heavy-duty zero-emission fleets, encouraging ZEV deployment in the medium and heavy-duty transportation sector.

*Bill encourages distribution upgrades to accommodate accelerated transportation electrification.* This bill requires CARB to transmit information regarding fleets to electric utilities to help utilities plan distribution upgrades to accommodate more EV load demands. Recent assessments show that accelerated EV deployment will require grid upgrades and better charging integration. In addition to codifying ZEV deployment goals, AB 2127 also required the CEC to conduct a biennial assessment of the EV infrastructure needed to meet state EV deployment goals. In its 2021 assessment, the CEC noted that the EV make ready and distribution infrastructure planning for accelerated EV deployment required special attention due to the unpredictable nature of the time and costs required for this infrastructure. The CEC's assessment noted that the deployment of EV fleets under CARB's Advanced Clean Fleets rule may pose specific challenges for distribution infrastructure due to significant electrical load fluctuation from many large vehicles charging at certain times. The CEC's assessment states:

Moreover, as medium- and heavy-duty electrification progresses (especially with CARB's new Advanced Clean Trucks and Innovative Clean Transit rules), existing make-ready infrastructure may need to serve higher-than-anticipated levels of charging load. Preliminary research suggests that most electric utilities in California have enough capacity in urban areas along the Interstate 5 corridor to support new medium-duty vehicle charging, but many rural areas and most heavy-duty charging stations will require local distribution grid upgrades, often including dedicated substations.

While the CEC may obtain limited data on future fleet EV adoption plans, the CEC already receives data regarding operational EV deployment. The CEC incorporates this data along with other data sources to create projections of EV infrastructure needs in statewide assessments and databases showing geographic-specific needs. The CEC is currently using CTP funds to develop the HEVI-Pro tool with Lawrence Berkeley National Labs (LBNL). The HEVI-Pro tool is intended to help identify charging needs for medium and heavy-duty EV deployment. Both EVI-Pro and HEVI-Pro are data sources that the CEC uses to target EV infrastructure based on vehicle deployment while minimizing impacts to the electrical grid and identifying distribution needs.

*Bill requires utilities to incorporate a large variety EV goals into distribution planning.* This bill specifies a large variety of EV policies that electrical corporations and POU's must incorporate into distribution planning processes to support accelerated EV deployment. Many of these policies establish goals for EV deployment that may conflict and may not match actual purchases and driving behavior in utilities' service territories. Data on EV purchases indicates that a gap exists between state goals for EV deployment and actual EVs registered and

operational in California. While total in-state EV sales have exceeded one million vehicles and California has the highest number of EV purchases in the nation, data from the CEC show that the number of light duty battery electric and hybrid plug in vehicles on California's roads by the end of 2021 totaled 522,445 cars. CEC data also show that total number of electric medium- and heavy-duty vehicles on the road by the end of 2021 was 1,555. The CEC's data demonstrate that EV concentrations are not evenly distributed across the state. Of these 1,555 medium- and heavy-duty EVs on the road, over 53 percent are located in five counties (Los Angeles, San Francisco, Santa Clara, Orange, and Sacramento).

Different utility service territories will likely experience large variations in EV distribution infrastructure needs based on the concentration and types of EVs deployed within their service territories. Linking utility investments to actual need and ratepayer benefits can help prevent stranded assets. To the extent that this bill encourages utilities to make ratepayer-funded distribution investments in infrastructure that does not match actual EV adoption trends, this bill could inadvertently lead to higher ratepayer costs without a commensurate ratepayer benefit.

*Distribution upgrades may already be addressed in utility transportation electrification investments.* This bill requires the CPUC to ensure that electrical corporations receive reasonable cost recovery for distribution upgrades conducted pursuant to the bill. Existing law requires electrical corporations to make investments to support transportation electrification. Under existing law, POUs also make transportation electrification investments that are included in their IRPs, which are reviewed by the CEC. While most utility transportation electrification investments may not be focused on distribution upgrades, consideration of distribution needs are already discussed in CPUC proceedings regarding utilities' transportation electrification proposals. To the extent that the CPUC approves an electrical corporation's proposal, reasonable cost recovery is also provided to the utility. As of October 2021, the CPUC authorized over \$1.8 billion in ratepayer-funded transportation electrification investments.

*Need for Amendments.* As currently drafted, this bill requires CARB to provide electric utilities with information to support fleet electrification. While CARB regulates fleets, the CPUC and CEC establish policies and regulate utility grid and transportation electrification investments. Existing law already assigns duties to project EV needs to the CEC, and the CEC is in the process of building a tool to identify medium and heavy-duty charging needs. This bill also requires utilities to incorporate a variety of potentially conflicting EV deployment goals into their distribution planning processes and plan for EV deployment based on state goals instead of EV purchasing and driving behavior in utility service territories. The

bill also requires the CPUC to ensure that electrical corporation distribution investments made under this bill receive reasonable cost recovery; however, existing law already authorizes reasonable cost recovery for distribution upgrades.

*For these reasons, the author and committee may wish to amend this bill to do the following:*

- *Require the CEC to incorporate fleet electrification data into new and existing projections of the EV and distribution infrastructure needed to meet ZEV deployment goals.*
- *Require the ARB to help the CEC conduct outreach to fleets covered by the Advanced Clean Fleets regulations.*
- *Delete the existing list of policies utilities must incorporate into distribution planning and instead require electrical corporations and POUs to identify how distribution upgrades support transportation electrification goals for their respective service territories as part of their IRPs.*
- *Delete the requirement for the CPUC to provide ensure reasonable cost-recovery outside of existing infrastructure applications and rate cases.*

*Double Referral.* This bill is also referred to the Senate Committee on Environmental Quality.

### **Prior/Related Legislation**

SB 676 (Bradford, Chapter 484, Statutes of 2019) required the CPUC to establish EV-grid integration strategies for certain LSEs. The bill also required POUs to consider EV-grid integration strategies in their IRPs and required CCAs to report specified information to the CPUC regarding EV-grid integration activities.

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 required 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 GHG emissions to 40 percent below 1990 levels by 2030.

**FISCAL EFFECT:** Appropriation: No Fiscal Com.: Yes Local: Yes

**SUPPORT:**

Natural Resources Defense Council, Sponsor  
350 Sacramento  
AMPLY Power, if amended  
BlueGreen Alliance  
California Electric Transportation Coalition, if amended  
CALSTART  
Coalition for Clean Air  
Coalition of California Utility Employees  
Electric Vehicle Charging Association, if amended  
Los Angeles Alliance for a New Economy  
Sierra Club California  
Southern California Edison  
The Greenlining Institute

**OPPOSITION, unless amended:**

California Cotton Ginners and Growers Association  
California Distributors Association  
California Farm Bureau Federation  
California Fresh Fruit Association  
California Fuels and Convenience Association  
California Municipal Utilities Association  
California Poultry Federation  
California Retailers Association  
California Trucking Association  
Harbor Trucking Association  
Western Agricultural Processors Association  
Western States Trucking Association

**ARGUMENTS IN SUPPORT:** According to the author:

California leads the nation in setting and maintaining air quality and emissions standards. However, the transportation sector remains the primary driver of pollution and greenhouse gas (GHG) emissions in the state. Transitioning to zero-emission vehicles (ZEVs) is critical to protect public health and stem the effects of climate change, but it will put new demands on California's electrical grid. AB 2700 is a common-sense step that aligns California's grid planning efforts with the state's ZEV, air quality, and climate goals.

**ARGUMENTS IN OPPOSITION:** Opponents argue that this bill would lead to significant new costs to state regulators and higher ratepayer costs. A coalition of opponents, including the California Retailers Association states:

AB 2700 would create burdensome new regulatory provisions that would require costly engineering work and expose proprietary trade secrets of tens of thousands of California businesses. Furthermore, the voluminous information exchange and rate basing called for in the bill is done with little to no transparency to the legislature regarding ratepayer impacts.

The California Municipal Utilities Association (CMUA) is opposed to this bill unless it is amended to exempt or modify the bill's requirements for POU's. CMUA's letter states the following:

A law directing POU's to project future EV charging needs and to make system upgrades is not necessary and could pose challenges. POU's are already using the tools at their disposal to understand how increased penetration of EV's may impact their electric load profile and the physical operation of their distribution grid.

**-- END --**