

Date of Hearing: April 20, 2022

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Eduardo Garcia, Chair

AB 2700 (McCarty) – As Amended April 7, 2022

SUBJECT: Transportation electrification: electrical distribution grid upgrades

SUMMARY: Requires the California Air Resources Board (CARB) to collect fleet data and share them with electrical corporations and local publicly owned electric utilities to inform electrical grid planning efforts. Specifically, **this bill**:

- 1) Directs CARB to annually collect fleet data from entities subject to its regulation including, but not limited to:
 - a. The vehicle fleet size and composition, including battery electric, hybrid, or fuel cell.
 - b. The fleet location.
 - c. The total anticipated charging capacity at each fleet location.
- 2) Requires electrical corporations to use the fleet data and all other available data to project future electrical vehicle (EV) charging requirements to ensure their distribution systems are upgraded at the times and locations necessary to support the level of EV charging anticipated by several sources including
 - a. Executive Order B-48-18
 - b. Executive Order N-79-20
 - c. The California Energy Commission (CEC) integrated energy policy report (IEPR)
 - d. The CEC Electric Vehicle Charging Infrastructure Assessment
 - e. CARB regulations
 - f. Air quality management plans
 - g. The Transportation Agency Climate Action Plan for Transportation Infrastructure,
 - h. Regional seaport plans
 - i. Regional transportation plans
 - j. Sustainable community strategies
- 3) Requires the Public Utilities Commission (CPUC) to, in reviewing electrical corporation proposals to meet the requirements above, ensure the investments are consistent with preparing the electrical grid to achieve the state's goals and the anticipated need identified by the regulations above and ensure a reasonable cost recovery.

- 4) Requires the CPUC to expedite existing permitting and licensing processes for transmission or distribution grid upgrades necessary to support the level of EV charging anticipated by the state's goals and the regulations above to ensure that electrical corporations can meet the requirements above.
- 5) Requires the PUC to direct electrical corporations to develop an expedited process for grid interconnection for transportation electrification (TE).
- 6) Requires the governing board of a local publicly owned electric utility (POU) to ensure their distribution systems are upgraded at the times and locations necessary to support the level of EV charging anticipated by several sources including
 - a. Executive Order B-48-18
 - b. Executive Order N-79-20
 - c. The California Energy Commission (CEC) integrated energy policy report (IEPR)
 - d. The CEC Electric Vehicle Charging Infrastructure Assessment
 - e. CARB regulations
 - f. Air quality management plans
 - g. The Transportation Agency Climate Action Plan for Transportation Infrastructure,
 - h. Regional seaport plans
 - i. Regional transportation plans
 - j. Sustainable community strategies
- 7) Requires the governing board of a POU to use the fleet data and all other available data to project future electrical vehicle (EV) charging requirements to ensure the distribution grid is capable of supporting the level of EV charging necessary to achieve the state's EV goals and regulations.

EXISTING LAW:

- 1) Requires the CPUC, in consultation with CARB and CEC, to direct investor-owned electric utilities (IOUs) to file for programs and investments to accelerate widespread TE. (Public Utilities Code § 740.12)
- 2) In part requires the CPUC rate-base all infrastructure needed to facilitate EV charging (except the charger) into distribution rates of the state's IOUs. (Public Utilities Code § 740.19)
- 3) Requires each local POU to establish a nonbypassable, usage based charge on local distribution service to fund investments by the utility and other parties in any or all of the following: cost-effective demand-side management services to promote energy efficiency and energy conservation; new investment in renewable energy resources and technologies

consistent with existing statutes and regulations which promote those resources and technologies; research, development and demonstration programs for the public interest to advance science or technology which is not adequately provided by competitive and regulated markets; services provided for low-income electricity customers, including, but not limited to, energy efficiency services, education, weatherization, and rate discounts. (Public Utilities Code § 385(a))

- 4) Provides CARB with primary responsibility for control of mobile source air pollution, including adoption of rules for reducing vehicle emissions and the specification of vehicular fuel composition.
- 5) Requires CARB, pursuant to California Global Warming Solutions Act of 2006 [AB 32 (Núñez), Chapter 488, Statutes of 2006], to adopt a statewide greenhouse gas (GHG) emissions limit equivalent to 1990 levels by 2020 and to use market-based mechanisms (cap-and-trade) to achieve compliance with these regulations. (Health and Safety Code § 38500)
- 6) Requires, pursuant to SB 32 (Pavley), Chapter 249, Statutes of 2016, that CARB ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by 2030. (Health and Safety Code § 38566)
- 7) Establishes the Greenhouse Gas Reduction Fund (GGRF) in the State Treasury, requires all moneys, except for fines and penalties, collected pursuant to a market-based mechanism be deposited in the fund and requires the Department of Finance, in consultation with CARB and any other relevant state agency, to develop, as specified, an investment plan for the moneys deposited in the GGRF. (Government Code § 16428.8)
- 8) Establishes the Charge Ahead California Initiative pursuant to SB 1275 (de León), Chapter 530, Statutes of 2014, that, among other things, includes the goal of placing at least one million (ZEVs) and near-zero emission vehicles (NZEVs) into service by January 1, 2023, and increasing access to these vehicles for disadvantaged, low-income, and moderate-income communities and consumers. (Health and Safety Code § 44258)
- 9) Establishes the Air Quality Improvement Program (AQIP), administered by CARB, to fund programs that support the production, distribution, and sale of alternative fuels and vehicle technologies, as well as air emissions reduction efforts. The two primary programs adopted by ARB pursuant to AQIP are the Clean Vehicle Rebate Project and the Hybrid and Zero Emissions Truck and Bus Voucher Incentive Program. (Health and Safety Code § 44274)

FISCAL EFFECT: Unknown. The bill is keyed fiscal and will be referred to the Assembly Committee on Appropriations for their review.

BACKGROUND:

How will fleet electrification affect distribution? – It is widely known that nearly 40% of California's emissions are generated by the transportation sector, which includes both the light-duty (passenger fleet) and medium- and heavy-duty fleets. While cleaning up the entire transportation sector is important, efforts to improve the heavy-duty vehicle fleet is a high priority because this sector contributes greatly to GHG emissions as well as produces a variety of

smog-forming pollutants such as oxides of nitrogen, particulate matter, reactive organic gasses, and other toxic air contaminants that contribute to poor air quality and associated health impacts. These heavy-duty vehicles operate predominantly along major corridors and at freight hubs (such as ports and warehousing districts). As regulations such as CARB's Advanced Clean Trucks and Advanced Clean Fleets move these vehicles toward decarbonization, including through electrification, the state is simultaneously working to meet those zero-emission vehicles (ZEVs) with the electric infrastructure they will need.

With regard to electrical corporations, often referred to as investor-owned utilities (IOUs), projects that aim to support increased demand on the state's electric infrastructure are evaluated through public regulatory processes overseen by the CPUC. In this vein, the CPUC's activities in supporting ZEVs fall into four main categories: electricity rates and costs of fueling, charging infrastructure deployment and incentives, vehicle-grid integration policy and pilots, program evaluation and interagency coordination. Within their charging infrastructure deployment activities, the CPUC has authorized \$1.53B of ratepayer funding to support charging infrastructure programs across the IOUs. Of this amount, nearly \$1.23B is remaining, or "available," because most of these projects are in the implementation or design phase. The CPUC is also engaged in reforming the IOUs' distribution planning processes to account for high levels of electrification and the impacts on the distribution grid through a proceeding known as the "High Distributed Energy Resources" or "High DER" proceeding (R.21-06-017).

With regard to POUs, there are no statewide regulations governing their planning and spending on distribution infrastructure or TE.

How do IOUs decide where and when to upgrade? – Each of the three IOUs has a distribution planning process. For these plans, IOUs are required to use the most recent Integrated Energy Policy Report (IEPR) published by the CEC which contains growth forecasts including EV growth. The forecasts use statewide data, so the IOUs have methods to disaggregate the system-level data to more useful scales, such as circuit-level. These plans usually use a five-year window for planning distribution project initiation but use ten-year forecasts for longer term context. However, in addition to forecasts in the IEPR, which may identify upgrades needed to maintain grid reliability, the IOUs cannot initiate a distribution project without a service request from their customers. When customers submit service requests and apply for interconnection, some needs for infrastructure may be immediately required to interconnect (such as conduit or panel upgrades) but larger upgrades, such as a new or bigger substation, would also be identified by IOU planning staff responding to the service request. These more significant distribution projects take longer than 5 years to complete with transmission line and substation projects having the longest lead times.

How do POUs decide where and when to upgrade? – POUs largely initiate upgrades only when a customer requests interconnection and do not engage in much distribution planning. The POUs conduct interconnection studies that will identify whether the increased load will require more distribution capacity. However, POUs are not all the same. For example, the Los Angeles Department of Water and Power is the largest municipal utility in the United States, and as such they use IEPR forecasts among other resources to produce a Power Infrastructure Plan and other planning documents. In contrast, the City of Banning manages 6 distribution substations and constructing any upgrade without a presently demonstrated need is very likely to result in overcharging ratepayers.

How does TE permitting work? – Permitting and licensing for the actual construction and building of TE projects and other distribution upgrades falls largely under the purview of the Authority Having Jurisdiction (AHJ), i.e. the city, county, or other local governance of the place at which the upgrade is being constructed. The CPUC and the utilities do have roles in ensuring projects meet required standards, such as through interconnection rules. To accelerate the resolution of disputes in the interconnection process, AB 2861 (Ting, Chapter 672, Statutes of 2016) authorized the CPUC to develop an expedited distribution grid interconnection dispute resolution process. AB 841 (Ting, Chapter 372, Statutes of 2020) offered an optional alternative to existing rules for Service Line Extensions for separately metered EV charging with the intention of fast-tracking EV charging infrastructure. Such alternatives do not exist for Distribution Line Extensions and IOUs are not permitted to proactively upgrade their distribution system without receiving a request from customers.

COMMENTS:

- 1) *Author's Statement.* 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.”
- 2) *Fleet Data.* There is no formalized definition of fleet data and, interpreted broadly, this may include passenger vehicle fleets, off-road fleets such as forklifts, school buses, medium-duty trucks, heavy-duty trucks, etc. Electrification of some of these fleets may be more impactful to the distribution system than others, while some of these fleets may already be well-accounted for in existing distribution planning. For example, light-duty passenger fleets would likely be captured in the new EV registration data that IOUs track. If necessary, a narrowing of the fleet data that should be included and may be an appropriate consideration for the Assembly Transportation Committee, to which this bill is next referred.
- 3) *Privacy Concerns.* Transfer of one business’ operational data to a state agency and then to a different business may introduce privacy and market manipulation concerns.
- 4) *Projections versus Planning.* When asked for input, all three large IOUs mentioned the system-level forecasts in the IEPR requiring disaggregation to useful, distribution-circuit-level scales would be helpful in their distribution planning. They likewise argued that receiving more data from fleets on their short term electrification plans would augment their existing planning tools. However, considering that the IEPR is a forecast of future electric load, and a significant undertaking by a state agency, requiring IOUs and POUs to project future EV charging needs—as proposed in this bill—using “all available data” is likely duplicative and unnecessary. *Instead, the committee may wish to consider amendments that require IOUs and POUs to incorporate fleet data and other available data into their distribution planning processes.*
- 5) *Expediting Permitting and Licensing.* There are state-level efforts underway to assist local jurisdictions to streamline the permitting process for TE projects but, as site permitting is handled by the AHJ, the expeditions requested in this bill may be outside

the regulatory authority of the CPUC. Additionally, the provision for IOUs to develop an expedited process for TE interconnections may bump TE ahead of other interconnections, which are also necessary to maintain grid reliability and achieve state goals. Finally, given that IOUs recoup a rate of return from distribution infrastructure, careful consideration should be given to measures that may affect CPUC review. *As such, the committee may wish to consider striking the provisions for expedited permitting and licensing.*

6) *Prior Legislation.*

SB 437 (Weickowski) requires each large POU to provide details of its electric service rate design to support transportation electrification. Status – Chapter 138, Statutes of 2021

AB 641 (Holden, 2021) sought to require each POU to develop and adopt a TE plan and to include certain information to support the level of EV adoption required for the state to meet specified goals. Status – Died, Senate Committee on Appropriations

AB 841 (Ting) required each IOU to file an advice letter and required the CPUC to approve a new tariff or rule that authorizes each IOU to deploy electrical distribution infrastructure to support EV charging and to employ cost recovery as specified. Status – Chapter 372, Statutes of 2020

AB 2127 (Ting) requires the CEC, working with CARB and the CPUC to prepare a biennial statewide assessment of the EV charging infrastructure needed to meet specified state goals. Status – Chapter 365, Statutes of 2018

AB 2861 (Ting) authorized the CPUC to establish an expedited distribution grid interconnection dispute resolution process. Status – Chapter 672, Statutes of 2016

7) *Double Referral* – This bill is double-referred; upon passage in this Committee, this bill will be referred to the Assembly Committee on Transportation.

REGISTERED SUPPORT / OPPOSITION:

Support

Amplify Power
Coalition of California Utility Employees
Edison International and Affiliates, Including Southern California Edison
LAANE (Los Angeles Alliance for A New Economy)
Natural Resources Defense Council (NRDC)
Sierra Club

Oppose Unless Amended

California Municipal Utilities Association

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