
**SENATE COMMITTEE ON ENERGY, UTILITIES AND
COMMUNICATIONS**

**Senator Steven Bradford, Chair
2023 - 2024 Regular**

| | | | |
|--------------------|-------------------|----------------------|-----------|
| Bill No: | SB 501 | Hearing Date: | 4/18/2023 |
| Author: | Newman | | |
| Version: | 3/20/2023 Amended | | |
| Urgency: | No | Fiscal: | Yes |
| Consultant: | Sarah Smith | | |

SUBJECT: Hydrogen refueling stations: reliability and service quality plan

DIGEST: This bill requires the California Energy Commission (CEC) to develop a specified plan for improving hydrogen refueling stations' reliability, establish a process for ranking hydrogen stations by quality and performance, and this bill requires the California Air Resources Board (CARB) to use Low Carbon Fuel Standard (LCFS) credits to create penalties and bonuses for low and high performing hydrogen stations.

ANALYSIS:

Existing law:

- 1) Establishes the Clean Transportation Program (CTP), which is administered by the CEC to provide grants, loans, and other funding opportunities to develop and deploy innovative fuel and vehicle technologies to support California's climate change policies. Existing law specifies the types of projects eligible for CTP funding and sets criteria the CEC must use to prioritize projects for funding from the CTP. (Health and Safety Code §44272 et. seq.)
- 2) Requires the CEC to allocate \$20 million from the CTP for the purpose of funding hydrogen refueling stations in the state. Existing law establishes a goal of building at least 100 hydrogen refueling stations and requires the CEC to annually assess the state's progress towards meeting that goal. (Health and Safety Code §43018.9)
- 3) Allocates a portion of smog abatement fees to fund the CTP and sunsets the fee on January 1, 2024. (Health and Safety Code §44060.5)
- 4) Requires the CEC to adopt uptime recordkeeping and reporting requirements, which must do all the following:

- a) Apply only to electric vehicle (EV) chargers that received a public- or ratepayer-funded incentive.
 - b) Apply for at least six years – or a longer period determined by the CEC.
 - c) Apply to EV chargers installed on or after January 1, 2024. (Public Resources Code §25231.5)
- 5) Requires the CEC to conduct a specified biennial assessment of EV chargers and authorizes the CEC to adopt additional tools to encourage uptime, including operations and maintenance standards and incentives, uptime requirements, and operation and maintenance requirements. (Public Resources Code §25231.5)

This bill:

- 1) Requires the CEC to do all the following:
 - a) Develop a plan for improving hydrogen stations' reliability, service quality, and uptime.
 - b) Establish a public workshop process to develop specified measures for hydrogen station reliability and service quality, including, but not limited to measures to assess uptime, fuel availability, and technician response times for repairs.
 - c) Collect data on measures of reliability and service quality for any hydrogen station that has received a public grant.
 - d) Direct hydrogen stations to maintain an online customer feedback portal enabling customers to rate the station on various attributes including wait times and cleanliness. This bill would disqualify a station from receiving public grants if it fails to provide a public customer feedback portal.
 - e) Create a public workshop to develop additional measures for the customer feedback portal.
 - f) Use data collected under this bill to establish a ranking system for hydrogen stations to rank each hydrogen station's quality and performance on a numerical scale.
 - g) Create a publicly accessible website with an interactive map for each hydrogen station to publish all the data collected pursuant to this bill. This

bill requires this map to display specified information about each hydrogen station in the state, including information about the number of hydrogen pumps, cost of hydrogen at the station, and information about the frequency of refuelings by hour.

- 2) Requires CARB to establish a penalty for the poorest performing retail hydrogen stations and a bonus for the highest performing stations using LCFS credits. This bill specifies that the penalty must be a withholding of LCFS credits, which must be then awarded as a bonus to the highest performing stations.

Background

California is funding hydrogen stations, but opening for business takes time.

Under existing law, the CEC plays a major role in expanding access to hydrogen refueling infrastructure. Existing law establishes the CTP at the CEC to fund ZEV infrastructure and technology, including hydrogen stations, and existing law also sets goals for creating a network of hydrogen refueling stations to support hydrogen vehicle use. Despite these goals and investments, the number of active hydrogen stations in California remains relatively small. As of December 2022, the CEC funded the creation of at least 153 public hydrogen stations; however, only 69 of these stations are open for operating – 66 of which are public refueling stations for light-duty passenger cars. Higher costs and longer permitting and construction times create a lag between the funding of hydrogen stations and those stations opening for customers. As a result, hydrogen car drivers continue to have a limited number of stations they can use to refuel their vehicles.

Bill is aimed at addressing the extent to which hydrogen station service issues impact drivers. This bill would require the CEC to develop a plan for improving hydrogen stations' reliability, service quality, and uptime. In addition to having fewer refueling options, hydrogen car drivers are also impacted by outages and limited fuel supplies at hydrogen stations. While 66 public refueling stations exist, not all those stations are fully operational at all times. At various times, stations may be closed, suffering from equipment failures, and have a shortage of hydrogen fuel. Some stations may only have a limited number of pumps operating. These outages compound the shortage of refueling options. Reports have indicated that pump outages and limited station options have led hydrogen car drivers in some areas to wait hours in line to refuel their cars.

Bill would require the CEC to set performance standards for hydrogen stations and rank stations. Prior legislation (AB 2061, Ting, Chapter 345, Statutes of 2022) established a framework for the CEC to assess the extent to which EV

chargers that receive taxpayer and ratepayer incentives are operational and available for use. While this bill includes provisions similar to existing law that requires the CEC to establish data reporting for EV charger uptime, this bill differs from existing law by requiring the CEC to set standards that will be used to publicly measure the relative performance of each hydrogen station in California. This bill would require the CEC to develop performance standards for hydrogen stations, collect data regarding those measures, and use the data collected pursuant to this bill to rank all the stations.

Is there an app for that? This bill requires the CEC to establish a public website containing specified information about hydrogen stations in the state. However, much of the information that this bill requires the CEC to publish is already published on a website maintained by the Hydrogen Fuel Cell Partnership. Currently, the Hydrogen Fuel Cell Partnership has a public website that tracks information for retail hydrogen stations, including an interactive map of the stations, the number of pumps, the operational status of the station, potential wait times for refueling, the amount of hydrogen supply, and the extent to which vehicles can fully re-fuel at the station. The website also features customer service contact information, and crowd-sourced data on the number of vehicles in line for pumps. The CEC also requires hydrogen refueling stations that receive grants from the CTP to report specified information about the status of the station on a regular basis to the CEC.

Bill's customer service portal requirements may duplicate efforts of existing service station rules. In addition to requiring the CEC to collect information about the performance of hydrogen refueling stations, this bill requires the CEC to direct hydrogen stations to establish customer feedback portals. This bill specifies that these feedback portals must allow customers to rate the station on certain customer service indicators including wait times and cleanliness. While many of this bill's provisions pertain to the reliability of fuel supply at hydrogen stations, this bill's customer service portal focuses on the customer's experience at the service station, which may include factors unrelated to the fuel supply. For example, cleanliness of the station may not be substantially related to refueling ability. Many hydrogen pumps are located at existing gasoline stations, which are subject to local oversight and governed by Business and Professions Code requirements for service stations.

Bill would use LCFS credits to incentivize better hydrogen station performance. Under existing law, CARB administers the LCFS to provide a market-based incentive to shift California's fuel supply to cleaner sources. While it is a relatively small portion of the overall LCFS market, certain zero-emission vehicle (ZEV) refueling and charging infrastructure operators, including hydrogen refueling stations, receive a portion of these credits based on the capacity of fuel

they can supply and the amount of fuel they dispense. This bill would require CARB to withhold LCFS credits from the poorest performing hydrogen stations and award those credits to the highest performing hydrogen stations. While some hydrogen performance issues may be within the control of the hydrogen station operator, other barriers impacting performance may be beyond the control of the station operator. In some circumstances, hydrogen stations have suffered outages stemming from a shortfall in the hydrogen supply chain. Many hydrogen stations rely on hydrogen transported by fuel trucks. Weather-related disasters can limit these trucks' ability to make timely deliveries. It is unclear if withholding LCFS credits can address hydrogen shortfalls that contribute to outages.

Need for amendments. As currently written, this bill requires the CEC to establish a website for specified information about hydrogen stations, rank hydrogen stations, and direct hydrogen stations to create customer feedback portals. These requirements may be duplicative of existing efforts and may not address underlying barriers to hydrogen station performance improvement. This bill also requires CARB to penalize and award hydrogen station performance using LCFS credits, which may not effectively address the factors driving poor hydrogen station performance. *As a result, the author and committee may wish to amend this bill to instead require the CEC to work with stakeholders to do the following as part of this bill's requirement to develop a plan for improving hydrogen station performance:*

- *Identify barriers to improved hydrogen station performance*
- *Establish metrics to measure hydrogen station performance*
- *Recommend resources to address customer concerns regarding these stations*
- *Analyze mechanisms, including the use of LCFS credits, to incentivize better hydrogen station performance and provide recommendations on what mechanisms would improve stations' performance.*

Dual Referral. Should this bill be approved by this committee, it will be re-referred to the Senate Committee on Environmental Quality.

Prior/Related Legislation

AB 1626 (McCarty, 2023) would require the CEC to gather aggregated information about hydrogen fleets to allow the public sector to estimate the total anticipated hydrogen fueling capacity at each fleet location, as specified. The bill is pending in the Assembly.

AB 1349 (Irwin, 2023) would require the CEC to develop a publicly accessible open data portal with live data on ZEV charging stations. The bill would require

charging stations owned by individuals who have received public funding for charging infrastructure to participate in the open data portal. The bill is pending in the Assembly.

AB 2061 (Ting, Chapter 345, Statutes of 2022) required the CEC to establish definitions to calculate the “uptime” during which an electric vehicle EV charger is operational. The bill also required the CEC to adopt reporting and recordkeeping requirements for public and ratepayer-funded chargers to assess the uptime and accessibility of these chargers. The bill also authorized the CEC to adopt certain tools to encourage EV charger reliability.

AB 2703 (Muratsuchi, 2022) would have required the CEC to develop a program to provide financial assistance for EV charging by low-income drivers and those who reside in disadvantaged communities. The bill also would have authorized the CEC to establish reliability standards for EV chargers that receive state funds. The bill was held in the Senate Appropriations Committee.

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

SUPPORT:

None received

OPPOSITION:

None received

ARGUMENTS IN SUPPORT: According to the author:

The current, problematic operation of stations within California’s statewide hydrogen refueling network poses a substantial risk to California’s overall strategy for achieving a zero-emission vehicle fleet, and makes meeting our 2035 obligations all the more challenging. SB 501 will establish a sorely-needed accountability regime that increases transparency for frustrated users and incentivizes investment to improve station conditions and performance.

-- END --