

Date of Hearing: April 8, 2024

ASSEMBLY COMMITTEE ON TRANSPORTATION

Lori D. Wilson, Chair

AB 2147 (Mathis) – As Amended April 1, 2024

**SUBJECT:** Clean Transportation Program: hydrogen-fueling stations: report: job creation and workforce development

**SUMMARY:** Requires an existing annual report on hydrogen-fueling infrastructure, that the California Energy Commission (CEC) and the California Air Resources Board (CARB) prepare jointly, to include information on progress made on job creation and workforce development in support of a hydrogen-fueling.

Specifically, **this bill:**

- 1) Requires CEC and CARB to report on progress made on job creation and workforce development in support of a hydrogen-fueling that is limited to the construction, operation, and maintenance of hydrogen refueling stations that are funded by active commission agreements.
- 2) Requires the report to include number of related workforce training programs in the state, the number of participants in said workforce training programs, the number of graduates of said workforce training programs, and the number of related jobs in the state that are created annually.

**EXISTING LAW:**

- 1) Establishes the Clean Transportation Program (CTP) to be administered by the CEC in order to develop and deploy zero-emission technology and fuels in the marketplace where feasible and near-zero-emission technology and fuels elsewhere through competitive grants, revolving loans, loan guarantees, loans, or other appropriate funding measures. (Health and Safety Code (HSC) 44271 and 44272)
- 2) Requires the CEC to allocate at least 15% of annual CTP funds appropriated by Legislature to co-fund the development of hydrogen-refueling stations. (HSC 44271 and 43018.9(e)(1))
- 3) Requires the CEC and CARB, on or before December 31, 2015 and annually thereafter, to jointly review and report on progress toward establishing a sufficient hydrogen-fueling network that provides the coverage and capacity to fuel vehicles requiring hydrogen fuel that are being placed into operation in the state, including, but not limited to, the available plans of automobile manufacturers to deploy hydrogen-fueled vehicles in California and their progress toward achieving those plans, the rate of deployment of hydrogen-fueled vehicles, the length of time required to permit and construct hydrogen-fueling stations, the coverage, capacity, and public accessibility of the existing hydrogen-fueling station network, and the amount and timing of growth in the fueling network to ensure fuel is available to these vehicles. (HSC 43018.9(e)(8))

- 4) Requires CEC to collaborate with entities that have expertise in workforce development to implement the workforce development components of CTP, including, but not limited to, the California Workforce Development Board, the Employment Training Panel, the Employment Development Department, and the Division of Apprenticeship Standards. (HSC 44272(o))
- 5) Requires CEC to create and consult with an advisory body to develop an investment plan of priorities for fund allocations and technologies, and requires the advisory body to include representatives from, among others, labor organizations, environmental organizations, community-based justice and public health organizations, workforce training groups, private industry, the Resources Agency, the Transportation Agency, the Labor and Workforce Development Agency, and the California Environmental Protection Agency. (HSC 44272.5)

**FISCAL EFFECT:** Unknown

**COMMENTS:** The Legislature enacted AB 118 (Núñez), Chapter 750, Statutes of 2007 to establish CTP to accelerate deployment of infrastructure for zero-emission vehicles, and to bolster manufacturing and workforce training to meet the state’s needs in growing a clean transportation and fuels market.

Battery electric vehicles (BEVs, but more commonly and simply known as “EVs”) and hydrogen-powered fuel cell electric vehicles (FCEVs) are the two principal zero-emission vehicle technologies that CTP funds have advanced. Among zero-emission (*e.g.*, BEV and FCEV) and near-zero-emission (*e.g.*, plug-in hybrids, or PHEVs) vehicles, BEV adoption has far outpaced FCEV adoption across light-, medium- and heavy-duty sales. According to CARB and DMV, over 750,000 BEVs and over 300,000 PHEVs are registered in California, compared to only approximately 12,000 FCEVs.

Since its inception, CTP has provided state funding for the capital expenses of designing, permitting, constructing, and commissioning hydrogen-fueling stations in support of FCEV adoption. The program has been re-authorized twice—first by AB 8 (Perea), Chapter 401, Statutes of 2013 through July 1, 2024, and, more recently, by AB 126 (Reyes), Chapter 319, Statutes of 2023 through July 1, 2035.

The CTP is funded by surcharges collected on vehicle and vessel registration, vehicle identification plates, and smog abatement fees. Under AB 126, the CEC is required to allocate at least 15% annually (or approximately \$15 million) of CTP moneys for the development of hydrogen-fueling stations in the state. These earmarked funds are disbursed in service of reaching two milestones set by AB 8 and by Executive Order (EO) B-48-18 of former Gov. Jerry Brown. AB 8 set a target for the CEC to award funding for at least 100 publicly available hydrogen-fueling stations by January 1, 2024, whereas EO-B-48-18 set an elevated objective of building 200 total hydrogen-fueling stations by 2025. The majority of hydrogen-fueling stations to date have been built for light-duty FCEVs, though the proposed milestones do not specify or emphasize any particular vehicle size class.

AB 8 requires the CEC and CARB to provide a joint report each December with an update on the hydrogen-fueling network and FCEV sales, as well as on the cost, timing, and other operational aspects of building and operating hydrogen-fueling stations in California. AB 126 largely maintains these reporting requirements and additionally requires the evaluation of the cost and time to achieve a “sufficient network” of hydrogen-fueling stations, rather than the 100-station

metric outlined in AB 8, and to reevaluate whether further CTP funding is needed in support of establishing a hydrogen-fueling network.

The construction of hydrogen-fueling stations has been slower than anticipated. At the end of 2023, there were 68 active hydrogen-fueling stations statewide. In the latest 2023 Annual Hydrogen Evaluation Report, previous projections that 100 stations would be fully operational by the end of 2023 have now been pushed back to 2025, based on input from station developers. Several planned fueling stations have been canceled by station developers, and there have been closures of some existing stations for light-duty passenger vehicles by station operators.

Station developers cite many factors for the reduced roll-out and closures of hydrogen-fueling stations, including political and economic uncertainty as well as practical challenges with construction, operation, and hydrogen fuel sourcing. On the construction side, the 2023 Report notes that “securing site access, permitting timelines, utility connection timelines, and other site-specific issues appear to remain barriers to rapidly deploying hydrogen-fueling stations.” There also appear to be hiring difficulties related to the tight labor market, *e.g.*, the limited availability of skilled contractors with specialized experience in hydrogen permitting and construction as well as personnel trained to work with high-pressure hydrogen. Station equipment reliability also remains a challenge. Across operational fueling stations, consumers frequently experience long wait times and occasional equipment failures. Station owners are evaluating strategies ranging from equipment improvements to changes in operational strategies and even workforce development to improve consumer experiences with hydrogen-fueling.

Looking ahead, California’s efforts to deploy hydrogen-fueling infrastructure will be further bolstered by federal funds. In October 2023, the U.S. Department of Energy awarded \$1.2 billion to California’s Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) through the Regional Clean Hydrogen Hub Program created under the Bipartisan Infrastructure Law. ARCHES is a statewide public-private partnership led by the Governor’s Office of Business and Economic Development (GO-Biz), the University of California, the California State Building Trades Council and the Renewables 100 Policy Institute Energy to produce and create a market for renewable hydrogen. The program is expected to focus on hydrogen infrastructure projects in support of three hard-to-decarbonize sectors: heavy-duty vehicles, power plants, and ports.

*According to the author:* “Existing law requires that the State Energy Resources Conservation and Development Commission to annually review and report on the progress made towards establishing a hydrogen-fueling network. AB 2147 expands the contents of the annual review and report to now include information on the progress made on job creation and workforce development in support of hydrogen-fueling. In doing so, this measure provides the necessary data and information to monitor current employment rates within the industry, and allows for more efficient future policy to be developed.”

*Committee Comments:* This bill requires progress on job creation and workforce development in service of construction, operation and maintenance of hydrogen-fueling infrastructure to be included in the CEC and CARB’s annual report and restricts these reporting requirements to projects being actively funded through CTP.

The low adoption of light duty passenger FCEVs and slow deployment of hydrogen fueling stations currently present a chicken-and-egg problem for California’s hydrogen-fueling station network. Consumers are reluctant to commit to FCEVs in view of limited hydrogen-fueling infrastructure, and station developers hesitant to build out capacity based on BEV dominance.

However, demand for hydrogen is expected to increase as medium- and heavy-duty fleets transition to zero-emission technology and with the anticipated influx of federal dollars to support the growth of a renewable hydrogen market in California.

The recent re-authorization of CTP and the award of federal funds to ARCHES signal renewed state and federal commitment to establishing hydrogen fuel technologies in California. As CTP funds continue to drive the development of hydrogen-fueling infrastructure and federal funds are deployed in parallel, it makes sense to assess job creation and workforce development. The proposed reporting requirements serve not only as a quantifiable metric to gauge how effectively CTP funds are being used but also as means to diagnose deficiencies in labor supply and use that information to preempt labor mismatches going forward in both CTP- and ARCHES-funded projects.

*Related Legislation:* AB 118 (Nuñez), Chapter 705, Statutes of 2007 establishes the Alternative and Renewable Fuels and Vehicle Technology Program (ARFVTP), now known as the Clean Transportation Program (CTP), and the Alternative and Renewable Fuels and Vehicle Technology Fund (ARFVTF) to develop and deploy technology and alternative and renewable fuels in the marketplace, without adopting any one preferred fuel or technology.

AB 8 (Perea), Chapter 401, Statutes of 2013 extends the program through January 1, 2024, and required annual allocation of \$20 million, but not to exceed 20% of total moneys appropriated by the Legislature from the ARFVTF, to fund deployment of hydrogen-fueling stations. AB 8 creates a requirement for two annual reports—one by CARB and the other jointly by CARB and the CEC—to evaluate the status of FCEV adoption and hydrogen-fueling station deployment. AB 8 also established a target for the CEC to award co-funding for at least 100 stations by 2023.

AB 126 (Reyes), Chapter 319, Statutes of 2023 formally establishes CTP, extends the program until July 1, 2035, and adjusts the minimum annual allocation required to go towards hydrogen-fueling infrastructure to be at least 15% of CTP funds.

## **REGISTERED SUPPORT / OPPOSITION:**

### **Support**

None on file

### **Opposition**

None on file

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