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

Bill No: AB 1389 **Hearing Date:** 7/5/2021
Author: Reyes
Version: 6/24/2021 Amended
Urgency: No **Fiscal:** Yes
Consultant: Nidia Bautista

SUBJECT: Alternative and Renewable Fuel and Vehicle Technology Program

DIGEST: This bill revises and recasts the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP), also known as the Clean Transportation Program, to expand the purpose of the program to help reduce criteria air pollutants and air toxics, as well as, greenhouse gas (GHG) emissions, when developing and deploying innovative technologies that transform California's fuel and vehicle types. Among its provisions, the bill would require annual increases in investments in medium- and heavy-duty vehicle projects and light-duty electric vehicle (EV) charging, and requirements to invest no less than 50 percent in programs and projects that directly benefit or serve residents of disadvantaged and low-income communities and low-income Californians.

ANALYSIS:

Existing law:

- 1) Establishes the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) (now known as the Clean Transportation Program), administered by the State Energy Resources Conservation and Development Commission (CEC), to provide funding to certain entities to develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change policies. Requires the CEC to give preference to those projects that maximize the goals of the program based on specified criteria and to fund specified eligible projects, including, among others, alternative and renewable fuel projects to develop and improve alternative and renewable low-carbon fuels. Creates the Alternative and Renewable Fuel and Vehicle Technology Fund, to be administered by the CEC, and requires the moneys in the fund, upon appropriation by the Legislature, to be expended by the CEC to implement the program. (Health and Safety Code §44272)

- 2) Provides the California Air Resources Board (CARB) with the responsibility to control air pollution from vehicular sources, except as specified. States that local and regional authorities have the primary responsibility for control of air pollution from all sources other than vehicular sources. (Health and Safety Code §39002)
- 3) States that CARB is the state agency charged with coordinating efforts to attain and maintain ambient air quality standards, and to systematically attack the serious problem caused by motor vehicles, which is the major source of air pollution in many areas of the state. (Health and Safety Code §39003)
- 4) States the intent of the legislature that CARB has the responsibility for control of emissions from motor vehicles and requires CARB to coordinate, encourage, and review the efforts of all levels of government as they affect air quality. (Health and Safety Code §39500)
- 5) Designates CARB as the state agency charged with monitoring and regulating statewide GHG emissions, and requires CARB to ensure that GHG emissions are reduced to at least 40 percent below the 1990 level by December 31, 2030. (Health and Safety Code §38500 et seq.)
- 6) Requires CARB, no later than January 1, 2021, and at least every five years thereafter, in consultation with the Department of Transportation, the (CEC), and the Governor's Office of Business and Economic Development, and in collaboration with relevant stakeholders, to update the comprehensive strategy for the deployment of medium duty and heavy-duty vehicles in the state for the purpose of bringing the state into compliance with federal ambient air quality standards and reducing motor vehicle greenhouse gas emissions from the medium duty and heavy-duty vehicle sector. Requires CARB to recommend reasonable and achievable goals for reducing emissions from medium duty and heavy-duty vehicles by 2030 and 2050. (Health and Safety Code § 43024.2)
- 7) Sets, through the Federal Clean Air Act (FCAA) and its implementing regulations, National Ambient Air Quality Standards (NAAQS) for six criteria pollutants, designates air basins that do not achieve NAAQS as nonattainment, allows only California to set vehicular emissions standards stricter than the federal government, and allows other states to adopt either the federal or California vehicular emissions standards. (42 U.S.C. §7401 et seq.)

This bill:

- 1) Makes numerous findings and declarations concerning criteria air pollution and GHG emissions from the transportation sector, the state's policies and goals to support deployment of zero-emission vehicles (ZEVs), and others.
- 2) Revises and recasts the ARFVTP (also known as the Clean Transportation Program) to expand the purpose of the program to help reduce criteria air pollutants and air toxics, in addition to helping to attain the state's climate change policies.
- 3) Deletes provisions that require the CEC to provide certain project preferences in awarding ARFVTP funding, including several provisions related to petroleum fuel reduction and specific requirements on low-carbon fuels.
- 4) Requires the CEC to ensure the program supports the state's clean transportation, equity, air quality, and climate emission goals, including, but not limited to:
 - a. The state's policy to reduce GHG emissions to 40 percent below the statewide GHG limit no later than December 31, 2030, as established by SB 32 (Pavley, Chapter 249, Statutes of 2016), pursuant to Health and Safety Code §38566.
 - b. The California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program to fund development, demonstration, pre-commercial pilot and early commercial deployment of zero- and near-zero-emission truck, bus and off-road vehicle equipment technologies as established by SB 1204 (Lara, Chapter 524, Statutes of 2014), pursuant to Health and Safety Code §39719.2.
 - c. The state's short-lived climate pollution reduction strategy as established by SB 1383 (Lara, Chapter 395, Statutes of 2017), pursuant to Health and Safety Code §39730.5)
 - d. The Mobile Source Strategy, a comprehensive strategy for the deployment of medium- and heavy-duty vehicles in the state for the purpose of bringing the state into compliance with federal ambient air quality standards and reducing motor vehicle GHG emissions from the medium- and heavy-duty vehicle sector, as required by SB 44 (Skinner, Chapter 297, Statutes of 2019), pursuant to Health and Safety Code §43024.2.
 - e. The Clean Cars 4 All program to achieve reductions of GHGs, improvements in air quality, and benefits to low-income state residents

- through the replacement of high-polluting motor vehicles with cleaner and more efficient motor vehicles or a mobility option, as established by AB 630 (Cooper, Chapter 636, Statutes of 2017), pursuant to Health and Safety Code §44124.5.
- f. The Charge Ahead California Initiative with the goal to place in service at least 1 million ZEVs and near-ZEVs by January 1, 2023, as established by SB 1275 (De Leon, Chapter 530, Statutes of 2014), pursuant to Health and Safety Code §44258.4.
 - g. The statewide strategy to reduce emissions of toxic air contaminants and criteria air pollutants in communities affected by high cumulative exposure burden, as established by AB 617 (C. Garcia, Chapter 136, Statutes of 2018), pursuant to Health and Safety Code §44391.2.
 - h. The California Renewable Energy Standard (RPS) to require at least 60 percent of total retail sales of electricity in California come from eligible renewable energy resources by December 31, 2030, among other requirements, as established by SB 100 (De León, Chapter 312, Statutes of 2018), pursuant to Public Utilities Code §399.11.
 - i. The state's policy to encourage widespread transportation electrification as established by SB 350 (De León, Chapter 547, Statutes of 2015) and AB 841 (Ting, Chapter 372, Statutes of 2020), pursuant to Public Utilities Code §740.12.
 - j. The California Clean Miles Standard and Incentive Program to require reductions of GHG emissions per-passenger miles from transportation network companies (TNCs), as established by SB 1014 (Skinner, Chapter 369, Statutes of 2018), pursuant to Public Utilities Code §5450.
 - k. The statewide assessment of the amount of electric vehicle (EV) infrastructure needed to meet the goals of putting at least five million ZEVs on the road and reducing GHG emissions 40 percent below 1990 levels by 2030, as established by AB 2127 (Ting, Chapter 365, Statutes of 2018), pursuant to Public Resources Code §25229.
- 5) Authorizes the CEC's executive director's designee to approve a contract, grant, loan, or other award, or modify a contract, from the program that receives \$75,000 or less in funds.
 - 6) Deletes the list of projects that the CEC is required to make eligible for funding.
 - 7) Requires the CEC, beginning with the 2022–2025 investment cycle, to ensure program investments support:
 - a. Annually increasing deployment of infrastructure and other projects that advance or support the deployment of medium- and heavy-duty vehicles

- to meet to ensure the program supports the state's clean transportation, equity, air quality, and climate emission goals and to ensure program investments support specified requirements.
- b. Annually increasing deployment of light-duty electric vehicle charging infrastructure to fill deployment gaps identified pursuant to Public Resources Code §25231.
 - c. Multi-year market development strategies.
- 8) Requires the CEC, beginning with the 2022–2025 investment cycle, to expend at least 50 percent of the moneys appropriated to the program for projects that directly benefit or serve residents of disadvantaged and low-income communities and low-income Californians, and would require at least 50 percent of funding for tangible location-based investments to be expended in disadvantaged and low-income communities. Provides that eligible programs and projects that meet the equity criteria may include:
- a. Programs that fill gaps in the equitable distribution of light-duty charging infrastructure, including those deployed at low-income residential and multiunit dwelling locations.
 - b. Programs deploying publicly accessible charging or refueling stations serving low-income customers who reside in areas of high air pollution.
 - c. Infrastructure for public transportation and school bus electrification programs.
 - d. Programs that support the deployment of clean medium- and heavy-duty vehicles, including infrastructure deployment.
 - e. Financing assistance and vehicle purchase incentives for underserved customers.
- 9) Requires the CEC, beginning with the 2022-2025 investment cycle, in awarding grants, to prioritize projects that:
- a. Provide non-state matching funds, as currently required by the program.
 - b. Provide economic benefits for California by promoting California-based technology firms, jobs, and businesses, especially in disadvantaged communities.
 - c. Transitions workers to, or promotes employment in, the alternative fuel and vehicle technology sector.
 - d. Provide GHG emissions and criteria air pollution reductions in areas classified as non-attainment areas pursuant to the Federal Clean Air Act.
- 10) Requires the CEC to consult with the disadvantaged community advisory group established pursuant to Public Utilities Code §400 (as adopted in SB 350 (De León, 2016)) and the advisory board created pursuant to Health and Safety Code § 44272.5 (ARFVTP Advisory Committee).

Background

Mobile source emissions. Mobile sources and the fossil fuels that power them continue to contribute a majority of emissions of diesel particulate matter as well as smog- and particulate-forming pollutants such as oxides of nitrogen (NO_x), and the largest portion of GHG emissions in California (over 40 percent of the state's GHG emissions). Many parts of the state, including the South Coast Air Basin and San Joaquin Valley, have air quality that fails to meet the federal National Ambient Air Quality Standards (NAAQS) for ozone (commonly understood as smog), and particulate matter (commonly understood as soot). Additionally, some communities bear a higher burden of toxic air pollution due to the emissions from mobile sources in their community, especially from vehicles operating on diesel fuel, including many communities alongside heavy-duty truck congested roads, freeways, highways, sea ports, rail yards, and warehouses.

Clean Transportation Program (CTP). The CTP, previously known as the ARFVTP, was established in 2007 by AB 118 (Nuñez, Chapter 750, Statutes of 2007) to provide funding to specified entities to develop and deploy technologies and alternative and renewable fuels in the marketplace, without adopting any one preferred fuel or technology, in order to help attain the state's climate change policies (and specifically to support the development of low-carbon fuels). Funding was reauthorized in 2013 by AB 8 (Perea, Chapter 401, Statutes of 2013) at then-existing levels until January 1, 2024. Over the 13 years of the program, the CTP has provided nearly a billion dollars to projects covering a broad spectrum of alternative fuels and technologies. Using funds collected from vehicle (\$2) and vessel registration (\$5/10), vehicle identification plates (\$2.50), and smog abatement fees (\$4), the program:

- Expedites development of conveniently located fueling and charging infrastructure for low- and zero-emission vehicles (ZEVs).
- Accelerates advancement and adoption of alternative fuel and advanced technology vehicles, including low- and zero-emission medium- and heavy-duty vehicles.
- Expands in-state production of alternative, low-carbon renewable fuel.
- Supports manufacturing and workforce training to help meet the needs of the state's growing clean transportation and fuels market.

In administering the CTP, the CEC is required to provide preferences to projects meeting any of twelve criteria, specifically:

- a) Helps transition from the use of petroleum fuels.
- b) Consistency with climate change policy.
- c) Reduces air pollutants.

- d) Decreases the discharge of water pollutants.
- e) Does not adversely impact the sustainability of the state's natural resources.
- f) Provides non-state matching funds.
- g) Promotes California-based firms and jobs.
- h) Uses existing or proposed fuel infrastructure.
- i) Reduces GHG emissions by at least 10 percent.
- j) Uses alternative fuel blends of at least 20 percent.
- k) Drives new technology.
- l) Transitions workers to alternative and renewable fuel and vehicle technology sectors.

Limits CTP funding only to projects that meet any of the following 13 criteria:

- a) Develop and improve alternative and renewable low-carbon fuels.
- b) Optimize alternative and renewable fuels for existing engine technologies.
- c) Produce alternative and renewable low-carbon fuels.
- d) Decrease the impact of the alternative and renewable fuel life-cycle carbon footprint.
- e) Develop alternative and renewable fuel infrastructure.
- f) Develop and improve technology for all vehicles that provide better fuel efficiency and lower GHG emissions.
- g) Accelerate the commercialization of alternative and renewable fuels.
- h) Retrofit medium- and heavy-duty vehicles for higher fuel efficiency.
- i) Promote alternative and renewable fuel infrastructure development.
- j) Workforce training programs related to technologies that transform fuels and vehicles.
- k) Block grants and incentive programs administered by public entities and not-for-profit technology entities.
- l) Assessments performed by state agencies to determine the impacts of increasing the use of low-carbon transportation fuels and technologies.
- m) Funding for homeowners to offset costs to supply plug-in electric vehicles.

Program Outcomes. As of April 26, 2021, the CEC has awarded nearly \$1 billion through the CTP (\$989 million). Per the April 2021 CEC CTP Investment Plan Update, the largest category of expenditures is refueling infrastructure (44 percent) followed by alternative fuel vehicles (25 percent), alternative fuel production (17 percent), and related needs, including manufacturing (14 percent). The CEC notes roughly 49 percent of CTP funding has been awarded for projects within disadvantaged or low-income communities. Based on the report, among its accomplishments, the CTP has funded:

- Over 13,000 EV chargers (including 6,688 public and shared private, and 4,277 at multi- and single-family homes Level 2 and Level 1 chargers; and

1,227 public direct-current fast chargers and 248 Level 2 chargers along highway corridors).

- 83 new or upgraded publicly available hydrogen-fueling stations, plus approval to fund an additional 73 stations based on deployment progress (in addition to 23 privately funded stations under development, for a total of 179 hydrogen fueling stations).
- 27 manufacturing projects supporting in-state economic growth while reducing the supply-side barriers for alternative fuels and advanced technology vehicles.

Executive Order N-79-20. On September 23, 2020, Governor Newsom signed Executive Order (EO) N-79-20 which established a goal that 100 percent of California sales of new passenger car and trucks be zero-emission by 2035. In addition, the Governor's order set a goal to transition all drayage trucks to zero-emission by 2035, all off-road equipment to zero-emission where feasible by 2035, and the remainder of medium- and heavy-duty vehicles to zero-emission where feasible by 2045. Under the order, CARB is tasked to work with other state agencies to develop regulations to achieve these goals taking into account technological feasibility and cost effectiveness.

Mobile Source Strategy. On April 23, 2021, CARB released an updated draft Mobile Source Strategy that demonstrates how California can determine the pathways forward for the various mobile sectors that are necessary in order to achieve California's numerous air quality and climate goals and targets over the next 30 years. The 2020 Strategy intends to maximize the criteria pollutant reductions by going to zero-emission where feasible. Specifically, the 2020 Strategy calls for the deployment of approximately 1.4 million medium- and heavy-duty ZEVs in California by 2045. Per the strategy, "Moving forward, the concepts contained in the 2020 Strategy will be translated into federally-enforceable measures and commitments that will be included in the next State Implementation Plan strategy being developed for the 70 parts per billion (ppb) 8-hour ozone standard."

Budget action. The Governor's fiscal year 2021-22 budget proposal released in January included extending the sunset for AB 8 fees until 2046 and securitizing CTP revenue to accelerate funding for ZEV infrastructure. However, the Governor's May Budget Revision eliminated the securitization feature and replaced with additional funding from the General Fund. The May Revision builds on the Governor's Budget and proposes \$826 million in additional investments that accelerate the state toward meeting climate and transportation goals established in Executive Order N-79-20 and consistent with California's Zero Emission Vehicle Market Development Strategy. The legislature has thus far declined to extend the

AB 8 fees, proposing such an extension can be done at a later time before the fees expire on January 1, 2024. As a result, the proposed changes in this bill would effect the two remaining years of the program.

AB 1389. Similar to the proposed direction in SB 726 (Gonzalez, 2021), this bill would recast the CTP to address the most polluted communities and help address the largest source of criteria and GHG emissions – medium- and heavy-duty vehicles. In doing so, these bills attempt to better integrate the state plethora of air quality and GHG emissions policies with the efforts to provide incentives to reduce pollution and GHGs from mobile sources. This bill would require the CEC to expend at least 50 percent of the moneys appropriated to the program on programs and projects that directly benefit or serve residents of disadvantaged and low-income communities and low-income residents, with at least 50 percent of the funds to tangible location-based projects. This bill would recast the CTP, beginning with the 2022-2025 investment cycle, to focus on investments to reduce pollution from the medium- and heavy-duty sector and support expansion of light-duty electric vehicle charging.

Vehicles v. fueling infrastructure. The CTP program is the state's key program and funding to support investments in alternative fuel infrastructure, including public and fleet EV chargers and hydrogen fueling stations. Whereas there are investments made by other entities, including those from applications submitted by electrical corporations to the CPUC or the Volkswagen settlement agreement related to their violations of emissions standards, these other programs have limitations regarding their use and projects that can be funded. For example, electrical corporation applications can only be approved for projects that are in the interest of the electric utility's ratepayers. Additionally, rising concerns regarding affordability of electric utility rates and bills, including to support EV charging, placed serious concerns and limitations on the sustainability of having electric ratepayers absorb costs for EV charging infrastructure. As such, direction from the legislature regarding the priority for CTP funding given the demand to support more fueling infrastructure would be useful. While some funding for vehicles could be beneficial, the state has other programs that help fund vehicle deployment, in particular several programs administered by CARB. In this regard, the CTP should be primarily (if not exclusively) focused on deploying fueling infrastructure, in order to maximize the public's invested dollars.

Annually increase? As drafted, this bill would require the CEC, beginning in 2022, to annually increase funding for: (1) deployment of infrastructure for medium- and heavy-duty vehicles and (2) deployment of light-duty EV charging for specified communities/areas. The CTP has allocated \$30 million for the 2021-22 investment plan allocations for each light-duty EV charging infrastructure and medium- and

heavy-duty ZEV infrastructure. Since the program is currently scheduled to sunset at the end of 2023, and this bill is not proposing to extend the AB 8 fees, the requirement to annually increase funding for the specified projects would be for one additional year. However, if funding is extended beyond 2023, through this bill or a different or future bill, the legislature may wish to adjust this requirement to account for the years of the extension and whether an annual increase or increasing percentage may be a better metric to ensure the requirements do not become impractical to apply.

Definitions needed. As drafted, this bill mentions “disadvantaged communities,” “low-income communities,” “underserved communities,” “low-income Californians,” in relation to investments for the CTP program. However, the bill does not include any definitions for these terms. Given the definitions provided in the statute (e.g. definition for disadvantaged communities in Health and Safety Code Section 39711), the author should include definitions to ensure the CTP’s progress towards achieving the goals of the bill can be more clearly measured.

Hydrogen fueling stations. In opposition to the bill, the Alliance for Automotive Innovation (AAI) and California Hydrogen Coalition (CHC) express concerns regarding the annual increase requirements proposed by this bill. They note that a number of fleets and individuals utilize hydrogen fuel-cell vehicles. The CHC contends 50 percent of the CTP funding should be dedicated to light- and heavy-duty hydrogen fueling. The AAI contends 50 percent of the CTP funding should be directed at light-duty ZEV charging (including hydrogen and EV infrastructure).

Double referred. This bill has been double-referred to the Senate Committee on Transportation.

Prior/Related Legislation

SB 726 (Gonzalez, 2021) revises the CEC ARFVTP in many ways mirroring the changes proposed by this bill, and requires the development of a sustainable transportation strategy by the CEC and the CARB. The bill is pending in the Assembly Committee on Transportation.

SB 44 (Skinner, Chapter 279, Statutes of 2019) required CARB to update the 2016 Mobile Source Strategy by January 1, 2021, and every five years thereafter. Specifically, SB 44 required CARB to include a comprehensive strategy for the deployment of medium and heavy-duty vehicles for the purpose of meeting air quality standards and reducing GHG emissions.

AB 8 (Perea, Chapter 401, Statutes of 2013) extended until January 1, 2024, extra fees on vehicle registrations, boat registrations, and tire sales in order to fund the

AB 118 (Núñez, Chapter 750, Statutes of 2007) enacts the California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007. Establishes the Enhanced Fleet Modernization Program and the Air Quality Improvement Program.

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

SUPPORT:

CALSTART, Sponsor

ABB, Inc.

ABC Companies

Advanced Energy Economy

AMPLY Power

Anaheim Transportation Network

Antelope Valley Transit Authority

Arrival

Ballard Power Systems

California Electric Transportation Coalition

Center for Sustainable Energy

Ceres

Chanje Energy

Coalition for Clean Air

Cruise, if amended

Electric Transportation Community Development Corporation

Electric Vehicle Charging Association, if amended

eNow

GreenPower Motor Company

Momentum Dynamics Corporation

Motiv Power Systems

Nikola Corporation

Odyne Systems, LLC

Phoenix Motorcars

Proterra

SEA Electric

SunLine Transit Agency

The Lion Electric Co.

Veloce Energy

Volvo Group North America

OPPOSITION (unless amended):

Alliance for Automotive Innovation
California Hydrogen Coalition

ARGUMENTS IN SUPPORT: According to the author:

The CEC's Clean Transportation Program, formerly known as Alternative and Renewable Fuel and Vehicle Technology Program, has been a critical tool to advance clean vehicle technology since its inception. However, the program has not been updated since its reauthorization in 2013. Since then, there have been a number of climate change goals and policies as well as developments in the clean transportation industry that necessitate a discussion on what the priorities for this program should be.

AB 1389 will incorporate program changes that will focus investments in the emerging medium- and heavy-duty freight industry, dedicate funding to projects in and benefiting disadvantaged communities, align the program to meet newer climate goals, and provide project preferences for projects that reduce emissions and particulate matter in our most polluted areas. The pollutants emitted from the transportation sector leave communities like mine with dirty air and public health hazards. Cleaning up the transportation sector is critical to demonstrating that environmental justice and economic development not only can co-exist but are complimentary to each other.”

ARGUMENTS IN OPPOSITION: In opposition to this bill, the California Hydrogen Coalition, contends:

Currently, the CTP requires 20 percent of annual program dollars (\$200M total) be directed toward hydrogen fueling. Except for eligibility under the Low Carbon Fuel Standard, the CTP is the only program supporting the development of hydrogen fueling infrastructure in the state. Conversely, the build-out of charging infrastructure receives support from a number of sources including well-above 20 percent of the CTP, investor and publicly-owned utilities, the Low Carbon Fuel Standard as well as the NRG and Volkswagen settlements which when combined, total well above \$2.4 billion.

For these reasons, we oppose AB 1389 unless amended to dedicate 50 percent of program dollars toward supporting the development of hydrogen fueling infrastructure for the light and heavy-duty markets as well as transit districts.

-- END --