
SENATE COMMITTEE ON ENVIRONMENTAL QUALITY

Senator Allen, Chair

2021 - 2022 Regular

Bill No: AB 363

Author: Medina

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Urgency: No

Fiscal: Yes

Consultant: Eric Walters

SUBJECT: Carl Moyer Memorial Air Quality Standards Attainment Program

DIGEST: Requires the California Air Resources Board (ARB) to, upon an appropriation by the Legislature, develop project grant criteria and guidelines for a new On-Road Heavy-Duty Vehicle Incentive Program (VIP2), which may include specified expansions of existing VIP eligibility.

ANALYSIS:

Existing federal law:

- 1) 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.)

Existing state law:

- 1) Establishes ARB as the air pollution control agency in California and requires ARB, among other things, to control emissions from a wide array of mobile sources and coordinate, encourage, and review the efforts of all levels of government as they affect air quality. (Health and Safety Code (HSC) §39500 et seq.)
- 2) Establishes the Carl Moyer Memorial Air Quality Standards Attainment Program (Moyer Program), to provide grants to offset the incremental cost of projects that reduce covered emissions from covered sources in California. (HSC § 44280)
- 3) Defines disadvantaged communities (DACs) through a process conducted by the California Environmental Protection Agency based on geographic, socioeconomic, public health, and environmental hazard criteria. (HSC §

39711)

- 4) Establishes local air districts to, among other things, control emissions from stationary sources and to, subject to the powers and duties of ARB, adopt and enforce rules and regulations to achieve and maintain the state and federal ambient air quality standards in all areas affected by emission sources under their jurisdiction. (HSC §40000 et seq.)

This bill:

- 1) Requires ARB to, upon an appropriation by the Legislature, develop project grant criteria and guidelines for a new On-Road Heavy-Duty Vehicle Incentive Program (VIP2) that will provide additional incentives to eligible projects deployed in DACs.
- 2) Stipulates that VIP2 may allow eligibility of the following to participate:
 - a) Existing engines or vehicles, regardless of model year;
 - b) All on-road heavy-duty vehicles (HDVs) regardless of type or application;
 - c) Existing engines being replaced with new engines that have lower emissions;
 - d) Existing vehicles registered outside of the state, so long as they have operated at least 75% of the time each year for the past 2 years; and
 - e) Any size fleet, though ARB may limit the number of vouchers issued per year per fleet.

Background

- 1) *Air quality goals.* Over 12 million Californians breathe unhealthy air, and several areas of the state are still in non-attainment for federal ozone NAAQS. Exposure to ozone and particulate matter leads to a range of respiratory and cardiovascular health impacts, including exacerbations of asthma and heart disease, and is estimated to contribute to approximately 7,500 premature deaths in California, and millions globally, each year. While significant improvements have been made in both the South Coast Air Basin and the San Joaquin Valley, these areas still represent the greatest challenges to meeting our air quality goals. Both air basins are designated as areas of Extreme Nonattainment and are approaching attainment deadlines in 2023 and 2024, respectively. Controlling the emissions of oxides of nitrogen (NO_x) and of particulate matter (PM) are important approaches to reaching ozone NAAQS attainment.
- 2) *Carl Moyer Program.* Since 1998, ARB has administered the Carl Moyer Program, which provides grants through the state's 35 local air quality

management and air pollution control districts (local air districts) for deployment of engines, equipment, and emission-reduction technologies that are cleaner than required by current laws or regulations. According to ARB, the Moyer Program provides about \$60 million for projects each year statewide. The program pays up to 85% of the cost to repower engines, and funds are awarded on a first-come, first-served basis. Maximum grant amounts vary for purchase of new vehicles and equipment. The Moyer Program is funded by vehicle registration surcharges adopted by local air districts in nonattainment areas.

- 3) *VIP*. According to ARB's guidelines, the On-Road Heavy-Duty Vehicles Voucher Incentive Program (VIP) provides a streamlined approach to use Moyer Program funds to reduce emissions by replacing existing, high-polluting vehicles with newer, lower-emission vehicles. VIP provides real emission benefits by retiring the high-polluting vehicle earlier than would have been expected through normal attrition or by regulation. Moyer Program funds for voucher projects are used to offset part of the cost of the replacement vehicle.

So long as an air district follows all VIP guidelines published by ARB, they are empowered to administer VIP and offer vouchers as they see fit. Air districts also have the discretion to set certain local eligibility requirements based on local priorities, though they are not allowed to limit project criteria further than ARB's guidelines. According to ARB's website, only 5 of the state's 35 air districts currently implement VIP: South Coast Air Quality Management District (AQMD), Bay Area AQMD, North Coast Unified AQMD, San Diego County Air Pollution Control District (APCD), and Siskiyou County APCD.

- 4) *HVIP and its recent update*. Launched by ARB in 2009, the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) uses Greenhouse Gas Reduction Fund (GGRF) money to advance early commercial clean vehicle technologies. Since its inception, more than \$589 million has been allocated to HVIP, and in recent years its budget was exceeded by voucher requests. As of October 2019, nearly as many vouchers had been issued to low NO_x engines (3,200) as zero-emission trucks and buses (3,400). There are currently no diesel fueled engines certified to meet the low NO_x standard; all low NO_x certified engines are natural gas or liquefied petroleum gas (propane) fueled engines. However, not all new natural gas or propane engines are certified to the low NO_x standard.

In December of 2020, ARB updated HVIP implementation guidelines. One notable change was the removal of the low NO_x 0.02 g/bhp-hr NO_x natural gas internal combustion engines from voucher eligibility. Given the program's

oversubscription, a narrowing of eligible technologies to even cleaner technologies makes sense. While HVIP will still issue vouchers for natural gas engines meeting the more stringent 0.01 g/bhp-hr standard, no such engine has yet been certified by ARB.

- 5) *Executive Order N-79-20.* In Executive Order N-79-20, Governor Newsom established a goal that 100% of medium and heavy-duty (MHD) vehicles be zero-emission vehicles (ZEVs) by 2045. Supporting this are several programs at ARB, including the Advanced Clean Truck regulation that requires an increasing percentage of MHD trucks sold to be ZEVs beginning in 2024, HVIP, and a rule expected later this year to require fleets to purchase ZEVs. The executive order repeatedly mentioned ZEVs but made no mention of natural gas powered vehicles.

Comments

- 1) *Purpose of Bill.* According to the author, “Reducing NOx and greenhouse gas emissions (GHGs) continues to be a priority for California. This bill addresses the former while providing a substantial co-benefit to the latter. AB 363 complements Executive Order N-79-20 by providing near-term emissions reductions that are not included. Furthermore, heavy duty vehicles are also a dominant source of harmful air pollution, which disproportionately impacts disadvantaged communities, especially those located along freight hubs. These communities need clean air sooner rather than later.”
- 2) *VIP vs VIP2.* Using the broadest eligibility criteria authorized by AB 363, VIP2 would encompass considerably more projects than VIP currently does. The following table compares the provisions in AB 363 to existing VIP guidelines.

Eligibility characteristic	VIP	VIP2
Model years	Must be 2009 or older, replaced with an engine 2013 or newer	Any year
Vehicle type	>14,000 lbs gross vehicle weight, not covered by specified sector-specific regulations	Any type and application

Replacement engine emission standards	Made 2013 or later, meets CARB 2010 engine-emissions standards (0.20 g/bhp-hr NO _x & 0.01 g/bhp-hr PM)	Any lower emissions
In-state vehicles	Must be registered in CA and operate ≥75% of the year	Must operate in CA ≥75% of the year
Fleet size	Under 10 vehicles	Any size fleet

Removing many of the program’s eligibility limitations would presumably make it simpler to evaluate if applicants meet program requirements. However, expanding the pool of eligible vehicles and applicants could lead to program oversubscription. It is not immediately clear exactly what impacts VIP2 would have on where Moyer Program funds are awarded and how quickly they are disbursed.

- 3) *Who stands to benefit?* This bill is sponsored by the Natural Gas Vehicle Coalition, and the relaxation of eligibility standards from VIP to the proposed VIP2 serve in part to include natural gas vehicles. Given that these vehicles were recently excluded from HVIP eligibility, this effort makes sense.

The bill also specifically makes eligible under VIP2 several vehicle applications (solid waste collection vehicles, vehicles owned or operated by municipalities, drayage trucks, and transit vehicles) that are not currently eligible under VIP. The omission of these vehicle classes from VIP likely stems from the fact that Moyer Program is intended to incentivize cleaner-than-required upgrades, and some vehicles in those classes are subject to more sector-specific ARB regulations.

Regardless of whether the new vehicle is powered by natural gas, batteries, or hydrogen fuel cells, the removal of a diesel truck from the road benefits the health of Californians. Diesel engines emit a complex mixture of pollutants, including very small carbon particles, or "soot" coated with numerous organic compounds, known as diesel PM. Diesel exhaust also contains more than 40 cancer-causing substances, most of which are readily adsorbed onto the soot particles. ARB estimates that diesel PM contributes to approximately 1,400 premature deaths from cardiovascular disease every year in California alone.

There are significant equity considerations in exposure to all transportation

emissions, diesel PM included. An analysis of 2014 Environmental Protection Agency data by the Union of Concerned Scientists found ample evidence of these inequities in California. The study found that, along racial lines, African American, Latino, and Asian Californians are exposed to more transportation PM emissions than white Californians, by 43%, 39%, and 21%, respectively. Geographically, people living in Los Angeles County are exposed to 60% more vehicle pollution than the state average. And with regards to wealth disparities, Californians with household incomes under \$20,000 are exposed to greater than 25% more PM air pollution than those making over \$200,000 annually.

While the longer-term transition to ZEVs in the state will serve to reduce these disparities, supporters of natural gas vehicles contend that these inequities deserve to be addressed immediately by transitioning diesel-powered engines to natural gas-powered ones. Notably, the owners and operators of those vehicles will likely soon experience pressure to shift to fully zero-emission vehicles in line with state decarbonization and air pollution reduction goals. Despite this, there is no question that getting diesel trucks off the road delivers important air quality benefits.

- 4) *VIP efficiency?* Supporters of the bill contend that broadening eligibility criteria will improve VIP efficiency. A coalition of supporters has written to the committee that the current application, evaluation and award process can take 18 months, making it ineffective in achieving near-term reductions and serves to eliminate fleet participation. However, according to a VIP brochure produced by South Coast AQMD, their VIP features a rapid response time of 15 days from application submittal to notification of funding. As with the discussion of eligibility pools in a previous comment, it is not immediately clear exactly what impacts the proposed VIP2 eligibility criteria would have on where Moyer Program funds are awarded and how quickly they are disbursed.
- 5) *Optional program.* Ultimately, AB 363 requires ARB to develop VIP2, but it only directs them to consider including the specified eligibility criteria. If ARB were to include all of the proposed changes to eligibility criteria, it would drastically expand the number of projects eligible for Moyer Program funding. However, based on their own analysis of the associated air quality considerations and Moyer Program guidelines, they could still develop a VIP2 with narrower eligibility criteria.

Regardless of ARB's possible criteria and guidelines developed pursuant to AB 363, implementation still comes down to air district discretion; the current VIP is only offered in 5 of the 35 air districts. As such, VIP2 as proposed by AB 363 may be thought of as another tool in air districts' arsenal, rather than a

mandate to fund the purchase of vehicles that are not the cleanest available, but undoubtedly cleaner than diesel vehicles.

Related/Prior Legislation

AB 1589 (Salas, 2019) would have made farm equipment powered by an uncontrolled gasoline engine eligible for using Carl Moyer Program money to be replaced with a diesel engine certified to the cleanest available emission level. AB 1589 died in the Assembly Appropriations Committee.

SB 216 (Galgiani, 2019) would have added a heavy-duty truck exchange as an eligible project for funding under the Carl Moyer Program. SB 216 died in the Assembly Appropriations Committee.

DOUBLE REFERRAL:

If this measure is approved by the Senate Environmental Quality Committee, the do pass motion must include the action to re-refer the bill to the Senate Transportation Committee.

SOURCE: Natural Gas Vehicle Coalition

SUPPORT:

Bioenergy Association of California
Brightmark
California Compost Coalition
California Natural Gas Vehicle Coalition
California Waste Haulers Council
Clean Energy
Clean Fleets
Cummins Westport
E.j. Harrison and Sons, INC.
Frontline Bioenergy
Hexagon Agility
Inland Empire Disposal Association
Los Angeles County Sanitation Districts
Momentum Fuel Technologies
Mustang Renewable Power Ventures
Natural Gas Vehicles for America
Republic Services - Western Region
Resource Recovery Coalition of California
Rush Enterprises

San Joaquin Renewables, LLC
Trillium USA Company, LLC D.b.a. Trillium Cng
Trustar Energy
Tss Consultants
USA Renewable Energy
Western Propane Gas Association

OPPOSITION:

None received

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