

Date of Hearing: March 21, 2022

ASSEMBLY COMMITTEE ON TRANSPORTATION

Laura Friedman, Chair

AB 2350 (Grayson) – As Introduced February 16, 2022

SUBJECT: Vehicular air pollution: Zero-Emission Aftermarket Conversion Project

SUMMARY: Requires the California Air Resources Board (CARB) to establish the Zero-Emission Aftermarket Conversion Project (ZACP) to provide an applicant with a rebate for the aftermarket conversion of a motor vehicle into a zero-emission vehicle.

Specifically, **this bill:**

- 1) Defines “motor vehicle” with the same meaning as defined in Section 415 of the Vehicle Code.
- 2) Defines “zero-emission vehicle” (ZEV) with the same meaning as defined in Section 44258 of the Health and Safety Code.
- 3) Requires CARB to establish ZACP by allocating money available upon appropriation by the Legislature, to provide an applicant with a rebate for the aftermarket conversion of a motor vehicle into a zero-emission vehicle.
 - a. A rebate issued under ZACP shall be limited to one per vehicle
 - b. CARB shall establish minimum eligibility criteria for an applicant to be eligible.
- 4) Requires CARB to allocate up to \$2 million dollars annually for ZACP from the Clean Vehicle Rebate Project (CVRP).
- 5) Requires CARB to limit rebates to one per vehicle and a value up to \$2,000.
- 6) Requires CARB to coordinate ZACP with the enhanced fleet modernization program, the Charge Ahead California Initiative, and CVRP.

EXISTING LAW:

- 1) Defines “zero-emission vehicle” as a vehicle that produces no emissions of criteria pollutants, toxic air contaminants, and greenhouse gases (GHGs).
- 2) Establishes Clean Vehicle Rebate Program (CVRP) which provides applicants with a rebate for the purchase of a zero-emissions vehicle.
- 3) Establishes the Zero-Emission Assurance Project (ZAP) which provides an applicant with a rebate for the replacement of a battery, fuel cell, or related component or a vehicle service contract related to these components.

FISCAL EFFECT: Unknown

COMMENTS:

ZEV climate goals. Transitioning California's transportation system away from gasoline to ZEVs is a fundamental part of the state's efforts to reduce GHG emissions and help meet the state's goals to reduce GHG emissions 40 percent below 1990 levels by 2030. Governor Newsom's Executive Order (EO) N-79-20, dated September 23, 2020, establishes the goal that 100% of in-state sales of new passenger cars and trucks will be zero-emission by 2035. The EO further requires that 100% of medium- and heavy-duty vehicles in the State be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks.

One strategy the state has used to increase the sales of ZEVs is to provide consumer incentives such as rebates through CVRP, Clean Cars 4 All Program (CC4A), and the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP). These incentives have mainly been funded with cap-and-trade auction revenues. Revenues from the state's cap-and-trade allowance auction, authorized under AB 32 (Nuñez), Chapter 488, Statutes of 2006, and reauthorized by SB 32 (Pavley), Chapter 249, Statutes of 2016, are deposited in the Greenhouse Gas Reduction Fund and used for California Climate Investments. Roughly half of the passenger ZEVs sold in California have received incentives from these programs. Overall, the Legislature has appropriated \$2.2 billion for low carbon transportation investments.

CVRP Successes. Through January 2022, CVRP has provided rebates for over 450,000 vehicles totaling about \$1.04 billion since the project's launch in 2010. Since March 2016, over 30,000 increased rebates have been issued to low-income consumers totaling over \$128 million. About 65% of rebates issued went to battery electric vehicles (BEVs), 32 percent to PHEVs, and about 2% to fuel cell electric vehicles (FCEVs) and zero-emission motorcycles (ZEMs).

ZEV Cost. According to Kelley Blue Book, the average cost of a new ZEV is \$56,437, approximately \$10,000 more than the cost of a new internal combustion engine (ICE) vehicle. Even with the monies available from the above mentioned incentive programs, this cost is prohibitive for many Californians. A number of large automotive manufacturers, including Ford and Chevrolet, have released electric crate motors, which when installed properly, can convert a conventional ICE vehicle into a ZEV. Ford's Eluminator Mach E Electric Motor costs approximately \$4,000. The engine, however, is not the only component that must be replaced to convert an ICE vehicle to a ZEV. The Ford Eluminator Mach Electric Motor specifies that it does not include a traction inverter, control system or battery. Of these additional components, the battery carries the largest financial investment. According to Bloomberg NEF, batteries for EVs have decreased significantly in cost over the past decade. Currently, typical batteries in EV's cost anywhere from \$2,500 to \$20,000, depending on the electric capacity of the battery, which translates directly to the distance an EV can travel on a single charge.

Emissions Benefits and Target Market. Older vehicles already emit more emissions than newer vehicles partly because Bureau of Automotive Repair (BAR) takes into consideration the age of the vehicle when imposing smog check emission standards on vehicles. BAR takes into consideration the model-year, vehicle make and model and gross weight of the vehicle. Older cars have less stringent standards than newer ones. According to BAR, "no older vehicle is ever held to the same standards as newer, more technologically advanced vehicle. Allowances are made for normal wear and tear in a vehicle's emission control system as it ages." Typically, older vehicles have the highest smog check failure rates. According to BAR's 2020 data,

vehicles model years 1976-1982 have an average smog check failure rate of 24.0%. This is concerning because once a vehicle is exempt from the smog check program there is little to no incentive for its owner to continue to maintain emission control equipment or any mechanism to assure that such equipment has not been modified or removed.

According to supporters of this bill, the likely market for ZEV conversion kits is among automobile collectors and hobbyists. The vehicles owned by collectors and hobbyists are often the vehicles described above that have the highest smog check failure rate. Providing this population with access to incentives that would allow them to convert their highly polluting vehicles to ZEVs could help California reduce GHG emissions and local air pollution. This type of vehicle conversion is highlighted by Chevrolet's Project X: a 1957 Chevy outfitted with an all battery-electric powertrain.

Author's Statement: "The transportation sector is responsible for nearly 40% of California's greenhouse gas emissions, more than any other single sector. Within this sector, light-duty vehicles are responsible for 70% of carbon emissions. Tackling passenger vehicle emissions is integral to meeting the state's ambitious greenhouse gas reduction goals. However, many Californians still cite cost as a key barrier to obtaining a new ZEV. Additionally, the ZEV industry is relatively young, and there are few second-hand ZEVs available on the market for consumers in search of a more affordable option. To meet California consumers' demand for more affordable clean transportation options, the state needs new and creative ways to make ZEV ownership more accessible.

Consumers and the car industry have developed increasing interest in the after-market conversion of gasoline-powered vehicles into hydrogen or electric ZEVs. AB 2350 will create the Zero-Emission After Market Conversion Project (ZACP) to provide consumer rebates for the conversion of gasoline- and diesel-powered cars to zero-emission vehicles. This will help the state meet its ambitious climate goals by providing California consumers with one more pathway towards ownership of a climate-friendly vehicle."

Supporters' Comments: According to the Specialty Equipment Market Association, "In recent years, California has implemented various programs, such as the Clean Vehicle Rebate Program, to promote the purchase and use of new zero-emission vehicles (ZEVs). However, none of the programs offer benefits for vehicles that started their life with an internal combustion engine but were later converted to ZEV.

The adoption of ZEVs by consumers and industry is quickly accelerating, as is the demand for aftermarket technology that can convert used gasoline-powered vehicles into hydrogen or electric ZEVs. This trend was on full display at the 2021 SEMA Show in Las Vegas, where electric vehicle conversions, such as the Chevrolet Project X, stole the show. Ford recently introduced its own electric crate motor, which will cost the consumer \$3,900, far less than the cost of a new ZEV."

Committee Comments: This bill requires CARB to issue rebates of up to \$2,000 per vehicle. This amount is equivalent to the value of the rebate CARB currently offers under CVRP for a standard rebate for BEVs. The authors may consider eliminating a rebate value from this bill and instead direct CARB to use their current framework under CVRP to determine an appropriate incentive amount under ZAP. The authors may also consider language regarding certification of the vehicle, post-conversion. CARB is currently required to certify vehicles as ZEV, however,

they do not certify the integrity of ZEVs. As the ZEV conversion kits necessitate more than just replacement of the engine, it may be important for converted vehicles to be certified for safety.

Related and previous legislation:

AB 118 (Nunez) Chapter 750, Statutes of 2007. This law established the Fleet Modernization Program, the Alternative and Renewable Fuel and Vehicle Technology Program, and the Air Quality Improvement Program.

AB 745 (Gipson) 2021, died in Assembly Appropriations Committee. This bill would have required CARB to take specified action by January 1, 2024 to meet the goals of Clean Cars 4 All Program.

AB 220 (Voepel) 2021, died in Assembly Appropriations Committee. This bill would have expanded smog check exemptions from pre-1976 vehicles to pre-1983 vehicles.

Double Referral. This bill has been double referred to the Committee on Natural Resources.

REGISTERED SUPPORT / OPPOSITION:

Support

Electric GT, LLC
Specialty Equipment Market Association (SEMA)

Opposition

None on file

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