

**Department of Legislative Services**  
 Maryland General Assembly  
 2023 Session

**FISCAL AND POLICY NOTE**  
**Enrolled - Revised**

Senate Bill 224

(Senator Augustine, *et al.*)

Education, Energy, and the Environment

Environment and Transportation

**Department of the Environment - Zero-Emission Medium- and Heavy-Duty  
 Vehicles - Regulations (Clean Trucks Act of 2023)**

This bill requires the Maryland Department of the Environment (MDE), by December 1, 2023, to adopt regulations that, among other things, (1) establish requirements for the sale of new zero-emission medium- and heavy-duty vehicles in the State; (2) update existing regulations and incorporate by reference the California Air Resources Board’s (CARB) Advanced Clean Trucks (ACT) regulations, as revised and updated; and (3) take effect starting with model year 2027 (unless delayed by MDE, as authorized under specified conditions). MDE must also prepare a related needs assessment and deployment plan in consultation with specified State agencies and submit the plan to the General Assembly by December 1, 2024. Finally, the bill increases funding for the Medium-Duty and Heavy-Duty (MHD) Zero-Emission Vehicle (ZEV) Grant Program and makes other changes to the program. **The bill takes effect June 1, 2023.**

**Fiscal Summary**

**State Effect:** No effect in FY 2023. General fund expenditures increase by \$474,200 in FY 2024; out-years reflect ongoing costs and inflation. Special fund expenditures increase by \$5.25 million in FY 2024, reflecting discretionary funding for the MHD ZEV Grant Program; out-years reflect increases in mandated funding through FY 2027. Other potential impacts on State expenditures related to the implementation of the regulations are not reflected in this analysis, as discussed below. State revenues are not directly affected. **This bill increases an existing mandated appropriation from FY 2025 through 2027.**

(in dollars)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenues	\$0	\$0	\$0	\$0	\$0
GF Expenditure	474,200	157,600	164,600	172,000	181,100
SF Expenditure	5,250,000	5,000,000	5,000,000	5,000,000	0
Net Effect	(\$5,724,200)	(\$5,157,600)	(\$5,164,600)	(\$5,172,000)	(\$181,100)

*Note:() = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate increase; (-) = indeterminate decrease*

**Local Effect:** Local government expenditures are likely affected by the regulations adopted under the bill, as discussed below. Local grant revenues and expenditures may be affected by the changes to the MHD ZEV Grant Program, as discussed below.

**Small Business Effect:** Potential meaningful.

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## Analysis

### Bill Summary:

#### *Advanced Clean Truck Regulations and Needs Assessment and Deployment Plan*

“Heavy-duty vehicle” means a vehicle with a gross vehicle weight (GVW) rating equal to or greater than 14,001 pounds (lbs). A “medium-duty vehicle” is a vehicle with a GVW rating of between 8,501 and 14,000 lbs.

MDE, in consultation with the Maryland Department of Transportation (MDOT), the Department of General Services (DGS), MEA, and the Public Service Commission (PSC), must prepare a needs assessment and deployment plan relating to the successful implementation of the regulations. The needs assessment and deployment plan must assess and plan for:

- the additional electrical capacity, transmission, distribution demands, and hydrogen fueling demands that will result from implementing the regulations, and the ability of the State’s electric utilities, grid, and hydrogen infrastructure to meet those demands, based on publicly available information and existing analyses;
- the number of zero-emission medium- and heavy-duty vehicle recharging and refueling stations recommended to implement the regulations, and the costs, permitting processes, and timelines for installing those stations;
- the purchase incentives and other mechanisms recommended to successfully implement the regulations, including incentives for recharging and refueling stations and related infrastructure, and the existing and potential sources of funding for those incentives and mechanisms; and
- the timeline, economic feasibility, and models available for transitioning medium- and heavy-duty vehicles in the State vehicle fleet, including State-contracted medium- and heavy-duty vehicles, to ZEVs.

MDE must submit the needs assessment and deployment plan to the General Assembly by December 1, 2024. MDE may delay implementation of the regulations by one or more model years if, after consulting with MDOT, DGS, MEA, and PSC, MDE determines, based on criteria identified through the needs assessment and deployment plan, that implementation of the regulations is not yet feasible.

#### *Medium-Duty and Heavy-Duty Zero-Emission Vehicle Grant Program*

The bill replaces requirements that the Governor, in each of fiscal 2024 through 2027, include, in the annual budget bill, appropriations from the Strategic Energy Investment Fund (SEIF) of (1) at least \$1.0 million for grants under the MHD ZEV Grant Program for qualified medium-duty or heavy-duty ZEVs and (2) at least \$750,000 for grants under the program for zero-emission heavy equipment property. The requirements are replaced with a single requirement that the Governor, in each of fiscal 2024 through 2027, include in the annual budget bill an appropriation from SEIF of at least \$10.0 million for grants under the program for qualified newly manufactured medium-duty or heavy-duty ZEVs or zero-emission heavy equipment property. Under existing law and under the bill, the appropriations must be made irrespective of existing provisions specifying the allocation of SEIF revenues from the sale of the Regional Greenhouse Gas Initiative (RGGI) allowances among various uses.

The bill modifies a limit on the amount of individual grants awarded under the program for qualified medium-duty or heavy-duty ZEVs and zero-emission heavy equipment property and eliminates the availability of grants for qualified medium- or heavy-duty zero-emission vehicle supply equipment under the program. Under the bill, for each of fiscal 2024 through 2027, a person or unit of local government may apply to MEA for a grant for up to 75% of *the incremental cost* (rather than the existing limit of 20% of the cost) of a qualified medium-duty or heavy-duty ZEV or zero-emission heavy equipment property. “Incremental cost” means the difference in price of (1) a conventional model vehicle and a zero-emission model that is attributable to the functional features of the vehicle or (2) conventional heavy equipment property and zero-emission heavy equipment property that is attributable to the functional features of the equipment. The bill also modifies the definition of a “qualified medium-duty or heavy-duty zero-emission vehicle” so that it means a motor vehicle that is rated at more than *10,000 pounds gross vehicle weight* (rather than 8,500 pounds unloaded gross weight) and powered by electricity that is stored in a battery or produced by a hydrogen fuel cell.

The bill also establishes that the MHD ZEV Grant Program applies only to vehicles and equipment intended for commercial or industrial use. In addition, in issuing program grants, MEA must give preference to:

- qualified medium-duty or heavy-duty ZEVs that are (1) expected to be primarily domiciled and operated in the State and (2) to be owned or operated by an entity engaged in business activity that impacts public health, the environment, or infrastructure in an overburdened or underserved community; and
- zero-emission heavy equipment property that is expected to be used primarily at locations in the State.

“Overburdened community” and “underserved community” have the meanings stated under existing provisions of the Environment Article of the Maryland Code that establish and govern the Commission on Environmental Justice and Sustainable Communities. “Overburdened community” means any census tract for which three or more of specified environmental health indicators are above the seventy-fifth percentile statewide. “Underserved community” means any census tract in which, according to the most recent U.S. Census Bureau Survey (1) at least 25% of the residents qualify as low-income; (2) at least 50% of the residents identify as nonwhite; or (3) at least 15% of the residents have limited English proficiency.

### **Current Law:**

#### *The Federal Clean Air Act and California’s Clean Car Program*

Pursuant to the federal Clean Air Act (CAA), vehicles sold in the United States must be certified under one of two certification programs: (1) the federal program (Tier 2); or (2) the California program (the Clean Car Program). Section 177 of the CAA Amendments of 1990 provides states the ability to adopt the California program in lieu of the federal program as long as the adopted state program is *identical* to the California program and the state allows two model years lead time from adoption to implementation.

The Maryland Clean Cars Act of 2007 (Chapters 111 and 112) requires MDE to adopt regulations implementing the California Clean Car Program (also referred to as the California Low Emissions Vehicle Program, or CAL LEV) in Maryland. Maryland’s implementing regulations adopted, through incorporation by reference in COMAR 26.11.34.02, the applicable California regulations. The CAL LEV program is a dynamic, changing program in which many of the relevant California regulations are continuously updated. To retain California’s standards, Maryland must remain consistent with its regulations, which means when California updates its regulations, Maryland must

reflect those changes by amending State regulations. Of note, on August 25, 2022, CARB adopted the Advanced Clean Cars II regulation requiring that all new cars and light trucks sold in California be ZEVs, including a certain percentage of plug-in hybrid electric vehicles, by 2035.

### *California's Truck Emissions Programs*

CARB updated its ACT Rule in March 2021. Broadly, the rule requires manufacturers of medium- and heavy-duty trucks to sell an increasing number of ZEV trucks in California (as opposed to diesel or gasoline vehicles). The emissions reductions requirements begin in 2024 and increase through 2035. ACT includes ZEV sales requirements for any manufacturer that certifies on-road vehicles over 8,500 lbs for sale in California.

CARB adopted the Heavy-Duty Engine and Vehicle Omnibus Regulation (Omnibus Regulation) on September 9, 2021; it is an emissions reduction regulation designed to cut smog-forming nitrogen oxides (NO<sub>x</sub>) from conventional heavy-duty engines. The regulation went into effect December 22, 2021. According to CARB, the Omnibus Regulation significantly increases the stringency of NO<sub>x</sub> emissions standards and will also lengthen the useful life and emissions warranty of heavy-duty diesel engines for use in vehicles with a GVW rating greater than 10,000 lbs. The new NO<sub>x</sub> emission standards begin with the 2024 model year engines and become more stringent with 2027 and subsequent model year engines.

### *Federal Clean Trucks Plan*

On August 5, 2021, the U.S. Environmental Protection Agency (EPA) announced plans to reduce greenhouse gas emissions and other harmful air pollutants, including ozone and particulate matter, from heavy-duty trucks through a series of rulemakings over the next three years. According to EPA, the Clean Trucks Plan would result in significant emissions reductions from new medium- and heavy-duty vehicles and represents a major step toward improving air quality and addressing the climate crisis.

In January 2023, EPA published a [final rule](#) creating a new standard for NO<sub>x</sub> emissions for heavy-duty trucks starting with model year 2027. Of note, EPA is reviewing a CAA waiver request from the federal NO<sub>x</sub> emissions standards from California for CARB's Omnibus Regulation. It is anticipated that, as part of the Clean Trucks Plan and to compliment the new emissions standards, EPA will also publish ZEV sales requirements in the next few years. However, the current NO<sub>x</sub> regulations do not include a ZEV sales standard.

### *Medium-Duty and Heavy-Duty Zero-Emission Vehicle Grant Program*

Chapter 234 of 2022 established the MHD ZEV Grant Program. Chapter 234, for fiscal 2024 through 2027, and subject to available funding, authorizes a person or unit of local government to apply to MEA for a grant of up to 20% of the cost of a qualified medium-duty or heavy-duty ZEV, qualified medium-duty or heavy-duty ZEV supply equipment, or zero-emission heavy equipment property.

A qualified medium-duty or heavy-duty ZEV is a motor vehicle that is (1) rated at more than 8,500 pounds unloaded gross weight and (2) powered by electricity that is stored in a battery or produced by a hydrogen fuel cell. Qualified medium-duty or heavy-duty ZEV supply equipment is property in the State that is used for recharging or refueling medium-duty or heavy-duty ZEVs or zero-emission heavy equipment property. Zero-emission heavy equipment property is construction, earthmoving, or industrial heavy equipment, including any attachment for the equipment, that is mobile and does not use an internal combustion engine.

Chapter 234 specifies that – irrespective of existing provisions specifying the allocation of SEIF revenues from the sale of RGGI allowances among various uses – in fiscal 2024 through 2027, the Governor must include in the annual budget bill an appropriation from SEIF of at least \$1.75 million for the program, including (1) at least \$1.0 million for grants for qualified medium-duty or heavy-duty ZEVs and (2) at least \$750,000 for grants for zero-emission heavy equipment property.

### **State Expenditures:**

#### *Maryland Department of the Environment Administrative Expenditures*

MDE advises that, even in the absence of the bill, it is considering promulgating CARB's ACT regulations. However, a decision to do so has not yet been made, and MDE has not yet begun to implement any such action. MDE further advises that in order to promulgate CARB's ACT regulations, MDE needs to hire two regulatory and compliance engineers (whether it promulgates the regulations pursuant to its existing authority or in response to the bill's requirements). *Additional* MDE administrative and contractual costs, which are discussed below, arise from related actions MDE must take under the bill that go beyond the standard regulatory process. This analysis reflects the *full cost for MDE to promulgate CARB's ACT regulations as required by the bill*. However, the Department of Legislative Services (DLS) notes that because MDE is considering promulgating the ACT regulations even in the absence of the bill, the *staffing* costs included in the estimate below may be incurred regardless of the bill.

General fund expenditures increase by \$474,167 in fiscal 2024, which accounts for a 30-day start-up delay; there is no effect in fiscal 2023. This estimate reflects the cost of hiring two regulatory compliance engineers to (1) develop the regulations; (2) facilitate the hiring of a contractor to conduct outreach and get input from stakeholders; (3) establish a compliance program; (4) track new truck sales and credits; and (5) oversee the administration of the ZEV Truck Credit, Banking, and Trading Program, a component of ACT. It includes salaries, fringe benefits, one-time start-up costs (including contractual costs), and ongoing operating expenses. The information and assumptions used in calculating the estimate are stated below:

- MDE adopts portions of California’s ACT rule by regulation to satisfy the bill’s requirement;
- adopting the required regulations necessitates an extensive stakeholder outreach process prior to adoption to inform the regulated community of ACT requirements and to determine the baseline for the credit, banking, and trading program;
- MDE does not have sufficient staff to complete the stakeholder process or prepare the needs assessment and deployment plan, so it must hire a third-party contractors to conduct the work; and
- to implement ACT, MDE needs to establish and implement a compliance program for medium- and heavy-duty truck manufacturers to ensure ZEV truck credit requirements are met each vehicle model year.

Positions	2.0
Salaries and Fringe Benefits	\$158,819
Contractual Costs	300,000
Other Operating Expenses	<u>15,348</u>
<b>Total FY 2024 MDE Admin. Costs</b>	<b>\$474,167</b>

Future year administrative expenditures reflect salaries with annual increases and employee turnover as well as annual increases in ongoing operating expenses.

*Medium-Duty and Heavy-Duty Zero-Emission Vehicle Grant Program*

SEIF expenditures increase by \$5.25 million in fiscal 2024 and \$5.0 million annually from fiscal 2025 through 2027, reflecting the difference between (1) appropriations to the MHD ZEV Grant Program, under the bill, of at least \$10.0 million in fiscal 2024 through 2027 (with the fiscal 2024 appropriation being discretionary and the fiscal 2025 through 2027 appropriations mandated) and (2) appropriations to the program, in the absence of the bill, of \$4.75 million in fiscal 2024 (the amount included for the program in the fiscal 2024

budget as passed by the General Assembly) and \$5.0 million in fiscal 2025 through 2027 (the amount MEA indicates is an approximate minimum amount of annual funding needed to sustain a viable program). While current law only mandates a minimum of \$1.75 million for the program, this analysis assumes that, in the absence of the bill, the amount included in the fiscal 2024 budget as passed by the General Assembly (\$4.75 million) is appropriated in fiscal 2024 and the minimum amount needed for a viable program (\$5.0 million) is appropriated in fiscal 2025 through 2027.

### *Impact of Adopting California's Advanced Clean Trucks Rule*

Adopting portions of California's ACT rule likely has an impact on State expenditures (all/multiple fund types) for State agencies that purchase medium- and heavy-duty vehicles. According to MDE, pursuant to ACT, ZEV requirements are phased in (they increase from model year 2025 through 2035 and remain constant thereafter). There may also be the need to hire new (or train existing) technicians to maintain the ZEVs and to install charging equipment. MDE advises that, compared to conventional trucks, ZEV trucks are generally more expensive to purchase but have lower operating costs. The ACT standards only affect the purchase of new vehicles, so any impact occurs when existing vehicles are replaced or new vehicles are purchased. DLS does not have sufficient information to provide an estimate of the fiscal impacts associated with implementing ACT. DLS also notes that since MDE may promulgate the ACT regulations even in the absence of the bill, the potential impacts on State expenditures may be incurred anyway.

**Local Expenditures:** Similar to the potential impacts on State agencies from adopting California's ACT rule, local government expenditures are likely affected by the adoption of portions of ACT. DLS notes that since MDE may promulgate the ACT regulations even in the absence of the bill, the potential impacts on local expenditures may be incurred anyway.

As eligible applicants under the MHD ZEV Grant Program, local governments may benefit from the bill's increase in funding for the program and increased individual grant amounts under the program. This analysis assumes that the bill's provision establishing that the program applies only to vehicles and equipment intended for commercial or industrial use is not intended to eliminate the availability of the program to local governments, since local governments are still authorized to apply to MEA for a grant under the program.

**Small Business Effect:** Similar to the State and local impacts described above, small businesses that purchase medium- and heavy-duty vehicles are likely affected by the adoption of portions of ACT. Also, as eligible applicants under the MHD ZEV Grant



Program, small businesses may benefit from the bill's increase in funding for the program and increased individual grant amounts under the program.

Additionally, small businesses that sell, service, or provide other services or parts (including charging equipment) for zero-emission medium- and heavy-duty vehicles may see an increase in the demand for their services and/or products. Conversely, small businesses that sell, service, or offer other services or parts, equipment, or fuels for conventional medium- and heavy-duty vehicles may see a decline in the demand for their services (although this likely does not occur until the out-years as the ZEV requirements are phased in).

As noted above, since MDE may promulgate the ACT regulations even in the absence of the bill, the potential impacts on small businesses related to the ACT regulations may be incurred anyway.

**Additional Comments:** MDE advises that the authorization to delay implementation of the ACT regulations injects a level of uncertainty into Maryland's air quality program that the CAA does not allow. This uncertainty means that the State would not be able to incorporate the estimated reductions from the regulations into the State's State Implementation Plan (SIP); instead, the State would need to incorporate required reductions from other air quality reduction actions. Other reductions are generally unavailable for on-road diesel sources, as the State's authority to regulate on-road diesel sources under CAA is limited. SIPs are a required component under CAA and are the mechanism that states use to demonstrate that they are meeting CAA obligations. Any effects from any impacts to the State's SIP resulting from the bill have not been addressed in this analysis.

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### **Additional Information**

**Prior Introductions:** Similar legislation has not been introduced within the past three years.

**Designated Cross File:** HB 230 (Delegate Love, *et al.*) - Environment and Transportation.

**Information Source(s):** Maryland Association of Counties; Maryland Municipal League; Maryland Department of the Environment; Department of General Services; Maryland Department of Transportation; Maryland Energy Administration; Department of Budget and Management; California Air Resources Board; U.S. Environmental Protection Agency; Department of Legislative Services

**Fiscal Note History:**

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