

**Department of Legislative Services**  
 Maryland General Assembly  
 2021 Session

**FISCAL AND POLICY NOTE**  
**Third Reader - Revised**

Senate Bill 137

(Senator Zucker)

Education, Health, and Environmental Affairs  
 and Budget and Taxation

Environment and Transportation

**Maryland Transit Administration – Conversion to Zero–Emission Buses (Zero–Emission Bus Transition Act)**

This bill prohibits the Maryland Transit Administration (MTA), beginning in fiscal 2023, from entering into a contract to purchase buses for its transit bus fleet that are not zero-emission buses (as defined by the bill); however, MTA may purchase an alternative-fuel bus (as defined by the bill) instead if it determines that no available zero-emission bus meets the performance requirements for a particular use. The bill does not apply to any bus that is part of a locally operated transit system. The bill also requires MTA to submit a report by January 1, 2022, and each January 1 thereafter, regarding the conversion of its bus fleet to zero-emission buses.

**Fiscal Summary**

**State Effect:** Transportation Trust Fund (TTF) expenditures increase by *at least* \$24.8 million annually beginning in FY 2023, assuming zero-emission buses are purchased, as discussed below. Revenues are not affected.

(\$ in millions)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Revenues	\$0	\$0	\$0	\$0	\$0
SF Expenditure	0	24.8	24.8	24.8	24.8
Net Effect	\$0.0	(\$24.8)	(\$24.8)	(\$24.8)	(\$24.8)

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

**Local Effect:** The bill does not directly affect local government operations or finances.

**Small Business Effect:** Minimal.

## Analysis

**Bill Summary:** The full cost of any zero-emission and alternative-fuel buses purchased under the bill must be paid from TTF. MTA must ensure the development of charging infrastructure to support the operation of zero-emission buses in the State transit bus fleet.

The annual report submitted by MTA to specified legislative committees must include:

- a schedule for converting MTA's transit bus fleet to zero-emission buses;
- an evaluation of the charging infrastructure needed for MTA to create and maintain a State transit bus fleet of zero-emission buses;
- a plan for transitioning any State employees adversely affected by the conversion to a zero-emission State transit bus fleet to similar or other employment within MTA or the Maryland Department of Transportation (MDOT) that has commensurate seniority, pay, and benefits;
- in coordination with other appropriate State agencies, an estimate of the reduction in the amount of carbon dioxide emissions, measured in pounds, that will be obtained through the use of zero-emission buses each year until the fleet is fully converted; and
- a financial analysis comparing the projected cost of continuing to operate a diesel-powered transit State bus fleet to the projected cost of purchasing, maintaining, and providing charging infrastructure for the zero-emission State bus transit fleet, as specified.

**Current Law:** MTA is a modal unit within MDOT, and it operates a comprehensive transit system throughout the Baltimore-Washington metropolitan area, including more than 50 local bus lines in Baltimore and other services, such as the light rail, Baltimore Metro subway, commuter buses, Maryland Area Regional Commuter trains, and mobility/paratransit vehicles. With the exception of the District of Columbia Metrorail system, MDOT and MTA are generally the agencies responsible for the construction and operation of transit lines in the State.

**State Expenditures:** MTA's bus fleet is comprised of about 775 total buses. MTA is currently studying the feasibility of converting the bus fleet to zero-emissions vehicles with a focus on the cost of the vehicles, the reliability of the vehicles, and the infrastructure necessary to accommodate such a fleet.

MTA advises that it is currently in the middle of a contract for the purchase of 70 clean diesel buses each year through fiscal 2022. MTA plans to sign a new contract for the purchase of 70 buses each year from fiscal 2023 through 2027 in order to replace many of the older buses in its fleet.

For purposes of this analysis, it is assumed that MTA maintains its current plan but purchases 70 new electric buses annually instead of diesel buses as a result of the bill. As MTA’s fleet is comprised of two types of buses (standard 40-foot long buses and articulated 60-foot long buses), it is also assumed that 10 of the 60-foot long buses and 60 of the 40-foot long buses are purchased each year; this projection is based on how many of each type of bus MTA currently owns.

Therefore, TTF expenditures increase by approximately \$24.8 million annually beginning in fiscal 2023 to purchase electric buses instead of diesel buses; however, costs may vary to the extent that MTA purchases any alternative-fuel buses, as authorized by the bill under specified conditions. **Exhibit 1** illustrates the cost difference for MTA between purchasing a diesel bus and an electric bus of each type. The estimate includes the cost of charging equipment for each bus, which, while not included with the bus purchase, is necessary to be able to recharge the buses when not in use.

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**Exhibit 1**  
**Estimated MTA Purchasing Cost**  
**Diesel Bus vs. Electric Bus**

	<u>Cost Per</u> <u>Diesel Bus</u>	<u>Cost Per</u> <u>Electric Bus</u>	<u>Difference</u>
40-foot Bus	\$570,000	\$850,000	\$280,000
Charging Equipment	0	98,750	98,750
<b>Total</b>	<b>\$570,000</b>	<b>\$948,750</b>	<b>\$378,750</b>
60-foot Articulated Bus	\$840,000	\$950,000	\$110,000
Charging Equipment	0	98,750	98,750
<b>Total</b>	<b>\$840,000</b>	<b>\$1,048,750</b>	<b>\$208,750</b>

MTA: Maryland Transit Administration

Source: Maryland Transit Administration; Department of Legislative Services

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The estimate does not include additional costs for MTA to (1) upgrade or retrofit its four bus garages to accommodate charging stations (the cost of doing so ranges from \$55 million to \$225 million per garage) or (2) train existing staff or hire new staff to maintain and repair the new buses. Accordingly, costs are higher than the minimum estimate provided above.

Additionally, the estimate does not include any difference in other operating costs (such as electricity or diesel fuel) for MTA or the Department of General Services (which provides fuel for MTA's bus fleet) that cannot be reliably estimated at this time.

MTA can complete the annual report using existing budgeted resources. Other appropriate agencies can assist MTA with the report using existing budgeted resources.

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### **Additional Information**

**Prior Introductions:** HB 432 of 2020, a similar bill, passed the House with amendments and was referred to the Senate Education, Health, and Environmental Affairs Committee and the Senate Budget and Taxation Committee, but no further action was taken. Its cross file, SB 423, a similar bill, received a hearing in the Senate Education, Health, and Environmental Affairs Committee, but no further action was taken.

**Designated Cross File:** HB 334 (Delegate Korman) - Environment and Transportation and Appropriations.

**Information Source(s):** Maryland Department of Transportation; Department of General Services; Department of Natural Resources; Maryland Energy Administration; Department of Legislative Services

**Fiscal Note History:** First Reader - January 24, 2021  
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