



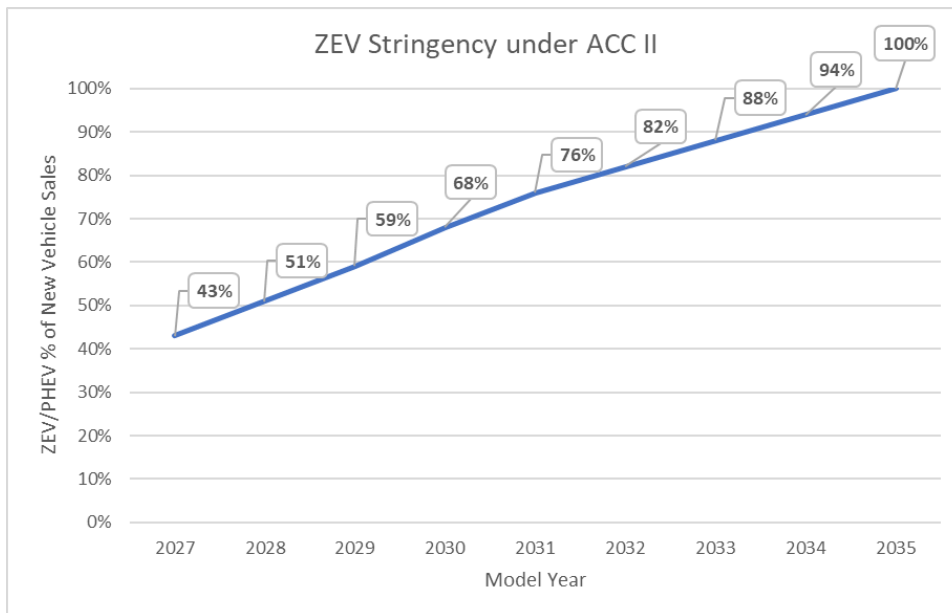
**Meeting Follow-Ups  
 November 6, 2023**

**Question:** Do we have a projection of zero emission vehicles (ZEV) sales through 2031?  
 (Commissioner Tulkin)

**Answer:** Advanced Clean Cars II (ACC II) builds on Maryland's existing Clean Cars Program to require manufacturers to continuously increase the share of vehicles they sell that are electric - reaching 100% of passenger car and light truck sales in model year 2035.

ACC II relies on currently available advanced technologies, including battery-electric, hydrogen fuel cell electric and plug-in hybrids electric vehicles. By adopting ACC II in 2023, Maryland's regulation will apply starting in model year 2027.

**MD ZEV Sales as a Percentage of Total Sales  
 Projected**



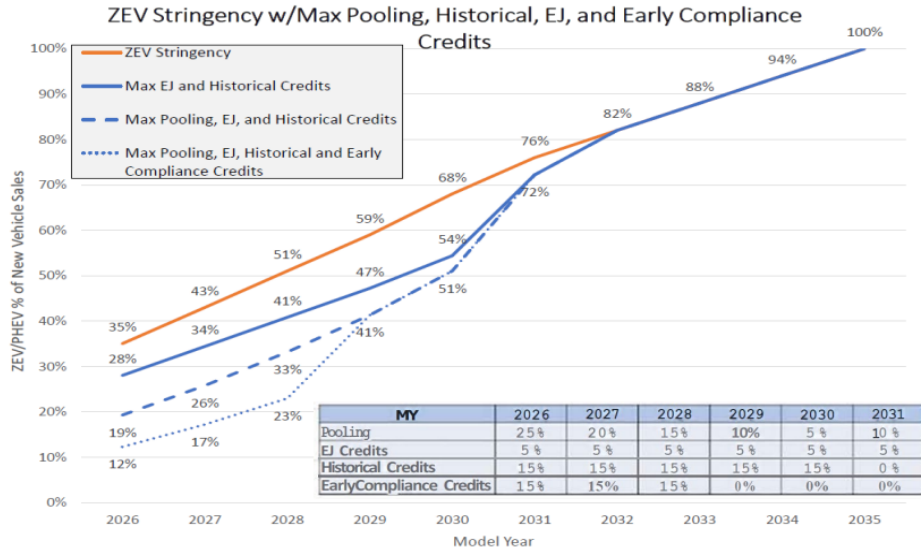
[\\*Source: Maryland Department of the Environment](#)

ACC II also includes increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions.

The aforementioned sales projections assume full implementation of ACC II. Notably, there are some exceptions that automakers can use, which could lower the total % sales. See the difference between 76% new cars sales and ~72% in 2031 in the graphic below.



## ZEV Requirement



Source: <https://mde.maryland.gov/programs/workwithmde/Documents/AQCAC/2023MeetingMaterials/AQCAC%20Presentation%20ACCII.pdf>

Using a more conservative approach, and based on current trends and using sales estimates from the Motor Vehicle Administration, MDOT projected the following EV/PHEV sales to reach a more modest goal of 600K registered EVs/PHEVs by FY 2030.

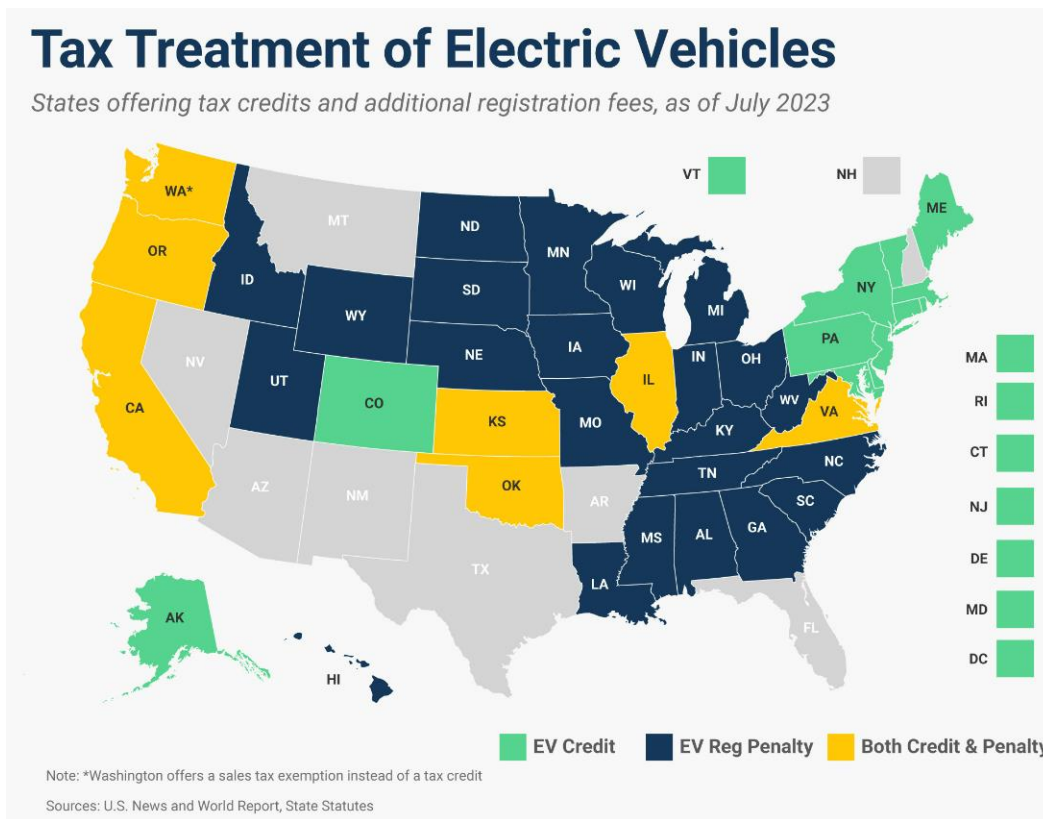
Fiscal Year	EV Sales	% Change
2019	8,729	-
2020	6,885	-21%
2021	13,831	101%
2022	20,771	50%
2023	29,222	41%
2024	38,865	33%
2025	48,582	25%
2026	58,784	21%
2027	69,365	18%
2028	80,463	16%
2029	92,533	15%
2030	104,138	13%

\*Source: MDOT MVA

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**Question:** What is the current incentive structure for purchasing electric vehicles and how do you balance that against imposing electric vehicle fees? (Commissioner Laria)

**Answer:** Qualified EV purchases in Maryland are eligible for a federal tax credit of \$7,500 and a State tax credit of \$3,000. Nationally, 19 states offer an additional incentive (in the form of a rebate or tax credit) in addition to the federal tax credit. These state incentives range from \$750 to \$7,500. Separate from any incentives aimed at reducing the higher purchase price of EVs, 24 states impose a higher annual registration fee ranging from \$50 to \$200 for EVs and some hybrid vehicles and six states have recently implemented a tax on EV charging stations.



New electric vehicles generally have a higher average purchase price than gas-powered vehicles (\$53,469 vs. \$48,334), although this price difference is narrowing. Incentives to reduce the purchase price of electric vehicles are intended to narrow, or even eliminate, the price difference. Conversely, ownership costs for electric vehicles are typically less than gas-powered vehicles due to lower maintenance costs. A 2020 Consumer Reports study estimates the average maintenance and repair costs for an EV is 3 cents per mile driven over the course of its lifetime — half the cost of the gas-powered vehicle average.

Electric vehicle fees are often imposed under the basis that all vehicles, regardless of engine type, utilizing the roadway network must share in the upkeep and maintenance of the roadways. In Maryland, drivers contribute over three-fourths of the funding to operate and maintain not

only the highway system, but also two major transit systems and the Motor Vehicle Administration as well. Operating expenses for the Maryland Aviation Administration and Maryland Port Administration are paid primarily from user fees generated by users of those facilities. Motor fuel taxes are the largest single source of revenue for the Transportation Trust Fund – providing just over one-third of all revenues, and is declining over time as a result of increasing vehicle fuel efficiency and increasing ownership of electric vehicles.

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**Question:** Do any states use EV registration fee revenue to fund transit systems and/or transit electrification? (Commissioner Korman)

**Answer:** According to a [recent article from the National Conference of State Legislatures](#), revenue from EV registration fees:

*“is most often directed toward a state transportation fund. However, a few states also allocate some fee revenue to support electric vehicle infrastructure or other priorities. For example, Alabama allocates \$50 of its \$200 fee for new electric vehicle infrastructure and Washington added an additional \$75 fee in 2019 to support charging stations. Colorado dedicates \$20 of the \$50 EV fee to the Electric Vehicle Grant Fund to support charging stations. Some, such as Louisiana, direct a portion of these revenues to local governments to support local transportation and infrastructure funds. Kentucky splits revenues between the road account and the state’s general fund.”*

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**Question:** Are EV registration fees calibrated for commercial vs personal use? (Commissioner Laria)

**Answer:** Some states levy separate fees for commercial versus personal vehicles. This is most evident in varying fees between light-, medium-, and heavy-duty vehicles. Specifically, fees are often aligned with gross vehicle weight rating (GVWR). Examples of states with commercial and/or GVWR-based fees are Colorado, Georgia, and Missouri.

In September 2021, Colorado enacted the [Sustainability of the Transportation System](#) law that provided for one-time transfers to fund transportation projects in FY 2021-2022 followed by the creation and adjustments of state fees and funds in FY 2022-2023. Fees impacted include a per gallon fee on gasoline and diesel fuel with future indexing to the national highway construction costs index, retail delivery fees, passenger ride fees, electric vehicle registration fees, short-term rental vehicle fees, and a study on road user vehicle mileage study.

Effective July 1, 2023, Colorado’s commercial EV fee structure is as follows:

Fiscal Year	FY 2022-23	FY 2023-24
Plug-In Electric Vehicle Registration Fee	\$51.88	\$54.47
Commercial Electric Road Usage 10,000 to 16,000 lbs	\$50	\$52.50
Commercial Electric Road Usage 16,000 to 26,000 lbs	\$100	\$105
Commercial Electric Road Usage More than 26,000 lbs	\$150	\$157.50

*\*Source: Colorado Department of Revenue Division of Motor Vehicles Sustainability of the Transportation System Act (SB 21-260)*

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**Question:** Please provide a copy of MDOT’s report on EV fees in other states that was submitted to the legislature earlier this year. (Commissioner Laria)

**Answer:** In response to a request from the budget committee during the 2023 legislative session, MDOT submitted a report in September 2023 that includes a review of fees for zero- and low-emission vehicles in other states. The full report is available at: [https://dlslibrary.state.md.us/publications/JCR/2023/2023\\_70.pdf](https://dlslibrary.state.md.us/publications/JCR/2023/2023_70.pdf).

In January 2022, the Kansas Legislative Research Division published a report, [States’ Fees for Electric and Hybrid Vehicles](#), that provide additional overview information on actions by other states.

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**Question:** What is the total number of EV registrations by county? (Commissioner Ali)

**Answer:** The Motor Vehicle Administration provides monthly updates to the total number of EV and plug-in hybrid vehicles with active Maryland registrations by county at the following link: <https://opendata.maryland.gov/Transportation/MDOT-MVA-Electric-and-Plug-in-Hybrid-Vehicle-Regis/qtcv-n3tc>.

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**Question:** Instead of focusing only on registration fees for electric vehicles, what is the impact of an increase in the vehicle registration fee for all vehicles? (Commissioner Henninger)

**Answer:** For illustrative purposes, an increase of \$10 in the vehicle registration fee generates approximately \$45 million in annual revenues.

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**Question:** How will the growth in EVs impact highway user revenue (HUR) grants?  
 (Commissioner Winstead)

**Answer:** The funding for HUR grants is established in State law and is based on an allocation of revenues collected from the following sources, after required statutory deductions:

- 100% of the base motor fuel tax (23.5 cents per gallon);
- 100% of MDOT’s portion of the corporate income tax;
- 100% of vehicle registration fees;
- 80% of MDOT’s portion of the rental car sales tax; and
- 67% of the vehicle titling tax.

The largest portion of HUR grants comes from motor fuel tax revenues. The share of motor fuel tax revenues directed to HUR grants will be impacted by the same erosion of revenue capacity from vehicles that are increasingly fuel efficient and the increased adoption of electric vehicles that is impacting MDOT. This trend will accelerate with Maryland’s implementation of the California motor vehicle emissions standards, ZEV production and sales requirements.

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**Question:** Do we have data on how much EVs and improved fuel economy contribute to decreasing motor fuel tax revenue? (Commissioner Feldmark)

**Answer:** Based on projected EV registrations in Maryland, foregone (lost) motor fuel tax revenues from the sale and use of EVs alone could be upwards of \$135M annually by FY 2030.

The increasing fuel efficiency of vehicles also has a significant impact on motor fuel tax revenues. An increase in average fuel efficiency decreases motor fuel tax revenue per vehicle. The chart below highlights the average motor fuel tax revenue per vehicle based on various miles-per-gallon and annual mileage driven scenarios:

Annual Mileage	MPG									
	15	20	25	30	35	40	45	50	55	60
10,000	\$313	\$235	\$188	\$157	\$134	\$118	\$104	\$94	\$85	\$78
12,000	\$376	\$282	\$226	\$188	\$161	\$141	\$125	\$113	\$103	\$94
14,000	\$439	\$329	\$263	\$219	\$188	\$165	\$146	\$132	\$120	\$110

From 1990 to 2010, the U.S. corporate average fuel economy (CAFÉ) requirements for passenger cars was 27.5 miles per gallon. Since 2011, that rate steadily increased to 46.1 miles per gallon in 2021. In 2022, the U.S. Department of Transportation’s National Highway Traffic Safety Administration announced a CAFÉ standard of 49 miles per gallon for model year 2026 vehicles. To put the CAFÉ standard improvements in perspective compared to impacts on revenues, for an average vehicle that is driven 12,000 miles per year, the increase in CAFÉ standards from 2010 to 2026 will provide annual consumers savings, and conversely reduce annual motor fuel tax generated. from a single vehicle nearly in half – from \$207 to \$113.

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**Question:** What are other states doing in regard to applying a fee to home charging infrastructure? (Commissioner Tulkin)

**Answer:** Most home charging stations utilize the same usage meter as the rest of the home, so establishing a fee for electricity usage of home charging stations has generally not occurred. Many states, including Maryland, incentivize the installation of home charging stations through tax credits.

In recent years, six states adopted taxes on public charging stations:

- Utah [imposes](#) a tax on retail sales of electric current from electric vehicle charging stations (enacted March 2023);
- Iowa [imposes](#) a \$0.026 per kilowatt-hour tax on public EV charging stations (effective July 2023);
- Montana imposes a tax of \$0.03 per kilowatt hour or its equivalent on electric current from public electric vehicle charging stations (effective July 2023). Public charging stations already in operation have until July 2025 to install meters to collect the tax. To relieve the tax burden on in-state electric vehicle owners, [B. 55](#) reduces electric vehicle registration fees by 30 percent starting in 2028;
- Oklahoma [implemented](#) an electric vehicle charging tax (effective November 2023);
- Kentucky will [impose](#) a tax of \$0.03 per kilowatt hour on electric vehicle power distributed by an electric power dealer (effective January 2024); and
- Georgia will [require](#) stations to track kilowatt-hour usage and collect a tax for every 11 kilowatt-hours (effective January 2025).

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**Question:** Please provide historical information on the Maryland Transportation Authority’s (MDTA) operating budget split between operations and maintenance (51%) and general administrative and enforcement costs (49%). (Commissioner Winstead)

**Answer:** As shown in the table below, facility operations and maintenance expenses have generally comprised, on average, about 56% of MDTA’s total operating budget. On a combined

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basis, law enforcement and general and administrative expenses have generally totaled, on average, about 44% of the budget. It should be noted that in FY 2024, the reduction in facility operations and maintenance expenses and the corresponding increase in general and administrative expenses was due to the shifting of *E-ZPass*<sup>®</sup> credit card reciprocity fees between these two categories.

	FY 2019		FY 2020		FY 2021	
	Budget	% of Budget	Budget	% of Budget	Budget	% of Budget
Facility Ops. & Maint.	\$ 185.8	57%	\$ 190.4	56%	\$ 176.0	56%
General & Administrative	42.1	13%	45.1	13%	38.6	12%
Law Enforcement	<u>96.5</u>	<u>30%</u>	<u>101.7</u>	<u>30%</u>	<u>100.7</u>	<u>32%</u>
Total	\$ 324.4	100%	\$ 337.2	100%	\$ 315.3	100%
	FY 2022		FY 2023		FY 2024	
	Budget	% of Budget	Budget	% of Budget	Budget	% of Budget
Facility Ops. & Maint.	\$ 204.2	57%	\$ 222.2	57%	\$ 204.2	51%
General & Administrative	47.8	13%	50.5	13%	71.1	18%
Law Enforcement	<u>108.8</u>	<u>30%</u>	<u>114.5</u>	<u>30%</u>	<u>124.8</u>	<u>31%</u>
Total	\$ 360.8	100%	\$ 387.2	100%	\$ 400.1	100%

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**Question:** Do we have trend data of in-state vs out-of-state tollpayers? (Commissioner Flora)

**Answer:** The data below reflects in-state versus out-of-state trends following the tolling system conversion in 2021. In short, over the last two fiscal years, the percentage of in-state *E-ZPass* transactions increased from 64% to 68%. During this timeframe, the percentage of in-state video toll transactions invoiced declined from 75% to 69%. On a combined basis, the percentage of in-state transactions increased from 66% to 68%.

Transaction Date Range	<i>E-ZPass</i> Transactions		Video Toll Transactions		Total <i>E-ZPass</i> + Video	
	% of In-State	% of Out-of-State	% of In-State	% of Out-of-State	% of In-State	% of Out-of-State
Jul. 21 - Dec. 21	64%	36%	75%	25%	66%	34%
Jan. 22 - Jun. 22	66%	34%	72%	28%	67%	33%
Jul. 22 - Dec. 22	66%	34%	69%	31%	66%	34%
Jan. 23 - Jun. 23	68%	32%	69%	31%	68%	32%

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**Question:** Do we have data on safety and the reduction of congestion as a result of electronic tolling implementation? (Commissioner Ali)

**Answer:** Crash report data and vehicle probe data show that customers are experiencing less crashes and less congestion delays at the location of MDTA’s former toll plazas. At the four locations where toll plazas have been removed highway speed toll collection has been implemented (Bay Bridge, Key Bridge, Hatem Bridge, and Kennedy Highway), there has been a combined reduction of 77% in the crash rate at the former toll plazas. The former toll plazas are experiencing reduced travel times during all periods of the day, and generally experience reduced duration and severity of congestion during peak periods where congestion occurs for reasons other than the toll plaza.

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**Question:** Is there data available on how much revenue was lost during the toll reductions over the last few years? (Commissioner Chang)

**Answer:** Toll reductions in 2015 reduced MDTA’s revenue by more than \$500 million in anticipated toll revenues over the past eight fiscal years. In May 2015, when the MDTA Board approved the toll and fee reductions, it also approved a 1-2% reduction in MDTA’s capital program (approximately \$6 million annually) and a 4% reduction in the annual operating budget (approximately \$10 million annually). Since that time, the COVID-19 pandemic and high inflation have negatively impacted the MDTA’s financial position.

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**Question:** Does MDTA have reciprocity agreements with other states to enforce the collection of tolls on out-of-state drivers. (Commissioner Hershey)

**Answer:** The MDTA does not have any reciprocity agreements with other states. In 2019, the MDTA submitted a report to the legislative budget committee in response to a request in the Joint Chairmen’s Report entitled [\*Multi-jurisdictional Reciprocal Toll Enforcement Agreements\*](#). The report noted that there are multiple challenges associated with entering into these types of agreements. Recently the primary strategy for reducing in-state and out-of-state uncollected toll balances has been increasing *E-ZPass*<sup>®</sup> usage and thereby reducing the number of customers that utilize video tolling and the need to mail Notice of Toll Due (invoice) and pursue collections. At a state level, customer options such as converting a Video Toll to a lower toll when opening an *E-ZPass* account and providing a new payment method has reduced Video Toll transactions substantially. At a regional level, efforts are underway to expand the acceptance of *E-ZPass* through the acceptance of toll mobile applications and expanding interoperability with other tolling regions outside of the *E-ZPass* region.

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**Question:** What is the process to add additional toll locations across the state instead of increasing fees at existing toll facilities that are disproportionately located in certain areas of the state? (Commissioner Henninger)

**Answer:** Title 23 of the United States Code deals with Highways and generally prohibits the imposition of tolls on federal-aid highways, with certain exceptions for tolling through one of four federal programs. Under the Section 129 program, tolling may be allowed for certain types of toll-financed construction, including new highways, new lanes added to existing highways (without a reduction in existing toll-free lanes), reconstruction of highways (non-interstate only), replacement or reconstruction of bridges or tunnels, and capital improvements of existing toll facilities. Under the Section 166 program, the tolling of high-occupancy toll lanes is authorized. In addition, there are two tolling pilot programs, the Interstate System Reconstruction and Rehabilitation Pilot Program and the Value Pricing Pilot Program that are limited in the number of states that may participate and require execution of a toll agreement with the Federal Highway Administration. The use of toll revenues generated is subject to limitations in federal law.

In accordance with Maryland law, approval of certain local governments may be needed depending on the location of the facility and an extensive public outreach effort must be followed before setting toll rates. If the new toll facility will be included under MDTA’s trust agreement, other financial metrics must be met and administrative processes followed.

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**Question:** Do other states (specifically, New York, Pennsylvania, and Virginia) use toll revenue to support other transportation needs? Did former Governor Hogan propose using toll revenue from the American Legion Bridge for other transportation purposes? (Commissioner Korman)

**Answer:** Yes, other states use toll revenue for other transportation purposes. The Port Authority of New York and New Jersey was created in 1921 as a multimodal transportation entity using a consolidated funding model that receives revenues from airports, port terminals, transit services, and toll facilities, and supports the operations of those same facilities. Much like Maryland’s Transportation Trust Fund was created as a consolidated fund for airports, ports, highways, and transit (with toll facilities excluded by design), New York and New Jersey created a similar consolidated fund composed of other modes. The Port Authority is a financially self-supporting entity that does not receive tax revenues from any state or local jurisdictions.

In Pennsylvania, Act 44 of 2007 required the Pennsylvania Turnpike Commission to provide the Pennsylvania Department of Transportation with \$450 million annually to fund highways, bridges, and transit. In 2013, Act 89 modified this requirement to dedicate the full amount to public transit. In 2019, the Southeast Pennsylvania Partnership for Mobility (Partnership) – a collaboration between the Pennsylvania Turnpike Commission (PTC) and Southeastern Pennsylvania Transportation Authority (SEPTA), in coordination with the Pennsylvania Department of Transportation – released [a report](#) detailing why the reliance on toll revenues from the Pennsylvania Turnpike Commission to fund transit was an unsustainable model. Beginning

in 2022, the amount of funding required from the Pennsylvania Turnpike Commission was reduced to \$50 million per year and funding of \$450 million from the State's General Fund was dedicated to transit to replace the toll revenues. As a result of the funding requirements under Act 44, the Pennsylvania Department of Transportation received \$8 billion in funding and the Pennsylvania Turnpike Commission increased toll rates for 15 years in a row, the Commission's outstanding debt rose more than 500% to \$13 billion in 2023 from \$2 billion in 2007, the Commission's debt was downgraded by credit rating agencies, and the Commission reduced capital investments in its own toll facilities.

In Virginia, as part of public-private partnership agreements for I-395 and I-66 Outside the Beltway, the private operator is contractually required to make annual payments for improved mobility options through transit improvements in the same region as the toll roads. Similar to Virginia, former Governor Larry Hogan's plan was to utilize toll revenue generated under a public-private partnership model from the imposition of a new toll at the American Legion Bridge to fund transit improvements in the same region as the toll road.