

**Effect of the Use of
Permits Issued to Plug-In Electric Vehicles on the
Operation of HOV Lanes**

**TR § 25-108(e)
HB 123/Ch. 121, 2023**

A Report to the Governor

and

the Maryland General Assembly

**Maryland Department of Transportation
State Highway Administration
Motor Vehicle Administration**

MSAR #14669

January 2024

Overview

This report is prepared in accordance with Chapter 121 of the Acts of 2023, which authorizes a plug-in electric vehicle (PEV) for which a permit has been issued by the Maryland Motor Vehicle Administration (MVA) to use the high-occupancy vehicle (HOV) lanes regardless of the number of passengers in the vehicle, as allowable under 23 U.S.C. § 166. Specifically, the language directs:

“On or before January 1 each year, the Administration and the State Highway Administration jointly shall report to the Governor and, in accordance with § 2–1257 of the State Government Article, the General Assembly on the effect of the use of the plug-in electric drive vehicle permits issued under this section on the operation of HOV lanes in the State.”

Plug-In Electric Drive Vehicles (PEV)

A PEV, as defined in TR § 11-145.1, means a motor vehicle that:

- Is made by a manufacturer;
- Is manufactured primarily for use on public streets, roads, and highways;
- Is rated at not more than 8,500 pounds unloaded gross vehicle weight;
- Has a maximum speed capability of at least 55 miles per hour;
- Is propelled to a significant extent by an electric motor that draws electricity from a battery that:
 - Has a capacity of not less than 4 kilowatt–hours for 4–wheeled motor vehicles and not less than 2.5 kilowatt–hours for 2–wheeled or 3–wheeled motor vehicles; and,
 - Is capable of being recharged from an external source of electricity.

A PEV includes a qualifying vehicle that has been modified from the original manufacturer specifications. Although PEVs, as defined in TR § 11-145.1, must have a maximum speed capability of at least 55 miles per hour, Chapter 121 applies only to a PEV that has a maximum speed capability of at least 65 miles per hour.

High Occupancy Vehicle (HOV) Lane Restrictions

The use of Maryland’s HOV lanes during designated hours is restricted to buses, motorcycles, and vehicles carrying at least two occupants unless a single occupant is traveling in an authorized PEV with an HOV permit.

The following highway segments include designated HOV lanes:

- I-270 southbound, from 0.2 miles south of MD 117 (West Diamond Avenue) to the I-495 (Capital Beltway), including the I-270 Spur, from 6:00 am to 9:00 am;
- I-270 northbound, from the I-495 (Capital Beltway) to MD 121 (Clarksburg Road), including the I-270 Spur, from 3:30 pm to 6:30 pm;

- US 50 eastbound from the I-95/I-495 (Capital Beltway) to US 301/MD 3 (Crain Highway), currently 24 hours per day (2:00 pm to 8:00 pm operational hours to begin when new HOV lane signage reflecting change in hours has been installed); and,
- US 50 westbound from the US 301/MD 3 (Crain Highway) to I-95/I-495 (Capital Beltway), currently 24 hours per day (5:00 am to 11:00 am operational hours to begin when new HOV lane signage reflecting change in hours has been installed).

Permits Issued to PEVs

In accordance with Chapter 121, MVA is authorized to issue an HOV permit to a PEV to allow the driver of the vehicle to lawfully use all HOV lanes within the State at any time and irrespective of the number of occupants in the vehicle. The permit, designed jointly by MVA, SHA, and the Maryland State Police, is attached as Appendix 1 to this report.

MVA developed a process to provide HOV stickers to PEV dealerships, which make them available to buyers of PEVs. Additionally, MVA maintains a supply of stickers to provide to owners of qualifying vehicles that were not purchased at these dealerships. MVA is required to charge a fee for the permit; the fee may not exceed \$20. Currently, the fee for a permit is \$5.

Chapter 121 was preceded by Chapters 491 and 492 of the Acts of 2010. Those session laws were amended several times to extend the statutory sunset, with the final sunset on September 30, 2022. Due to the statutory sunset, existing HOV permits were no longer valid, and MVA ceased to issue new permits. At that time, HOV permits were issued for 11,691 PEVs out of the 36,166 PEVs that were registered by MVA. After approval of Chapter 121, issuance of HOV permits resumed. All customers interested in an HOV permit had to buy a new permit. As of September 30, 2023, HOV permits have been issued for 3,799 PEVs out of the 58,157 PEVs that are currently registered in Maryland. While the number of PEVs with permits declined, the overall number of PEVs registered by MVA increased by 21,991, a 61% increase over levels in September 2022. Additionally, based on previous trends, the number of PEVs with permits grew from 2,760 in 2019 to 11,691 in 2022, so we expect this number to continue to increase annually.

Maryland Motor Vehicle Administration (MVA)	
Counts as of September, 2023	
Number of Registered Plug-In Vehicles	
Plug-In Electric Vehicle (PEV)	58,157
Plug-In Hybrid Electric Vehicle (PHEV)	26,022
Total	84,179
Number of Registered Plug-In Vehicles with HOV Permit	
Plug-In Electric Vehicle (PEV)	3,799
Total	3,799
MVA Office of Data Management	
Source: Customer Connect	

Effect of PEVs on HOV Lanes

Chapter 121 authorizes MVA to limit the number of HOV permits issued to PEVs based on a recommendation from SHA to ensure that HOV lane operations are not degraded to an unacceptable level. In 2023, SHA collected data along the HOV lanes to determine the number of PEVs that utilize the HOV lanes during the peak conditions. Review of the data shows less than 100 PEV vehicles with permit stickers travel in the HOV lanes per hour at any given point. This would indicate that 3,799 PEVs with HOV permits should not independently impact HOV operations. As an ongoing measure, SHA will continue to monitor the effects of PEVs on Maryland's HOV lanes, especially considering annual growth in the production and sale of these types of vehicles.

Further Information on PEV Permits

For further information regarding the issuance of permits for PEVs, representatives of MVA can be reached at 410-787-2978.

Appendix 1

Sample Image of Plug-In Vehicle HOV Plug-In Vehicle HOV Permit/Decal

4 x 4 in

