

**Effect of the Use of
Permits Issued to Plug-In Electric Vehicles on the
Operation of HOV Lanes
(Senate Bill 70, Chapter 139, Acts of 2019)**

A Report to the Governor

and

Maryland General Assembly

Maryland Department of Transportation

State Highway Administration

Motor Vehicle Administration

MSAR# 11874

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The Maryland Department of Transportation State Highway Administration (MDOT SHA) and the Motor Vehicle Administration (MDOT MVA) offer this report in response to language contained in Senate Bill 70, Chapter 139, Acts of 2019. The language states:

On or before January 1 of each year, the Administration and the State Highway Administration jointly shall report to the Governor and, in accordance with § 2–1246 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.

Chapter 139 was passed as a measure to ensure that the State’s policies regarding the high-occupancy vehicle (HOV) lane exemptions for plug-in electric vehicles (PEV) and plug-in hybrid electric vehicles (PHEV) comply with United States Code Title 23 Section 166.

The exemption of PHEVs from HOV lane occupancy requirements provided by federal law concluded on September 30, 2019 and Maryland’s HOV lane occupancy exemptions for PHEVs concluded on September 29, 2019. The HOV lane permits issued to registered PHEVs by the MDOT MVA are no longer valid and no additional permits will be issued to PHEVs.

The statutory expiration of federal law does not pertain to PEVs, which will continue to be exempt from HOV lane occupancy requirements nationally; the MDOT MVA continued to issue HOV lane permits for PEVs registered in Maryland until the statutory sunset on September 30, 2022.

Plug-In Electric Vehicles (PEV)

A PEV must have the following characteristics and/or capabilities:

- Made by a manufacturer;
- Manufactured primarily for use on public streets, roads, and highways;
- Rated at not more than 8,500 pounds unloaded gross vehicle weight;
- Has a maximum speed capability of at least 55 miles per hour;
- 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.
- “Plug-in electric drive vehicle” includes a qualifying vehicle that has been modified from the original manufacturer specifications.

High Occupancy Vehicle (HOV) Lane Restrictions

The use of Maryland’s HOV lanes during designated hours are restricted to buses, motorcycles, and vehicles carrying at least two occupants.

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

Prior to the statutory sunset date of September 30, 2022, the MDOT MVA was authorized to issue a HOV permit to a PEV to allow the driver of the vehicle to lawfully use all HOV lanes within the State at any time, irrespective of the number of occupants in the vehicle. The permit, designed jointly by the MDOT MVA, the MDOT SHA, and the Maryland State Police, was issued in the form of a 4-inch by 4-inch sticker to be affixed to the PEV (see below). The MDOT MVA developed a process to provide HOV stickers to PEV dealerships which were provided to buyers of these vehicles. The MDOT MVA also maintained a supply of stickers to provide to owners of qualifying vehicles that were not purchased at these dealerships.

The law authorized the MDOT MVA to limit the number of HOV permits issued to PEVs based on a recommendation from the MDOT SHA that too many of these vehicles using HOV lanes can degrade HOV lane operations to an unacceptable level.

As of September 30, 2022, HOV permits were issued for 11,691 PEVs out of the 36,166 PEVs currently registered by MDOT MVA in Maryland.

Effect of PEVs on HOV Lanes

A preliminary and conservative analysis of available data shows that 11,691 PEVs with HOV permits should not independently impact HOV lane operations. However, this takes into consideration that the MDOT MVA is no longer issuing both the PEVs and PHEVs permits. If this changes, a more comprehensive analysis may be needed to assess future impacts. Further analysis may include an Origin-Destination analysis of PEV users, more detailed traffic data collection, and traffic operational modeling. As an ongoing measure, the MDOT SHA will continue to monitor the effects of PEVs on Maryland's HOV lanes, especially considering the annual growth in the production and sale of these vehicles.

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

4 x 4 in

