



OFFICE OF MANAGEMENT & BUDGET

State Budget Office

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State Fiscal Note for Bill Number:

2024-H 7859

Date of State Budget Office Approval: Wednesday, May 8, 2024

Date Requested: Friday, March 1, 2024

Date Due: Thursday, April 4, 2024

<i>Impact on Expenditures</i>		<i>Impact on Revenues</i>	
FY 2024	N/A	FY 2024	N/A
FY 2025	\$1,250,680	FY 2025	N/A
FY 2026	\$1,250,680	FY 2026	N/A

* *Estimate reflects light-duty fleet only, mid- to heavy-duty vehicles excluded from analysis.

Explanation by State Budget Office:

This act would require all government owned vehicles at the end of service life be replaced with a zero-emission vehicle (ZEV). H-7859 specifies that a waiver can be utilized to purchase an alternative vehicle if a gasoline-powered vehicle cannot be replaced with a ZEV due to limited supply or inadequate replacement. The bill limits waivers to three (3) per agency, per calendar year. Additionally, if a waiver is granted, the bill specifies that the governmental body must lease or purchase an alternative-fueled vehicle until a time when a ZEV is available. This bill codifies into law the following definitions for both vehicle types:

1. "Zero-emission vehicle" means a vehicle which produces no emissions from the on-board source of power.
2. "Alternative-fueled vehicle" means a vehicle that can have a combination of a small combustion engine, electric motors, and battery packs, or is powered by hydrogen fuel-cells.

This act would take effect on January 1, 2025.

Summary of Facts and Assumptions:

In determining an estimate for H-7859, OMB considers two major areas of costs 1) vehicle acquisition costs and 2) charging station infrastructure.

Vehicle Purchases

According to the Department of Administration (DOA), there are 106 Zero-Emission Vehicles (including electric vehicles and plug-in hybrid vehicles) in the State fleet as of February 2024. This comprises approximately 12.3 percent of the state's light-duty fleet. State Fleet defines "light-duty" as two categories of the State's vehicle code classifications, 1. Passenger Cars and 2. Van/Pickup/SUV. These categories represent 30 percent of all vehicle purchases in the State from 2021 to date.

Other vehicle classifications have historically been excluded from analysis associated to the States electrification goals. Heavy-duty classifications include larger maintenance trucks, construction machinery, tractors, public transit buses, trailers, State Police vehicles, etc. These classifications have



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specific use requirements and, in many cases, ZEV or Hybrid vehicle models are not yet available on the market. Limiting State agencies that rely on heavy-duty machinery and vehicles to three (3) replacements per year may be detrimental to the State's ability to perform key duties; specifically, agencies with core functions associated to State infrastructure and public safety. Agencies would not be able to purchase machinery necessary to fulfill core functions or would have to operate with an increasingly ageing fleet. For the purposes of this fiscal note, OMB assumes that this bill targets general purpose vehicles for the State (i.e. classifications 1. Passenger Cars and 2. Van/Pickup/SUV) rather than the medium- to heavy-duty vehicles. OMB assumes that the provision of H-7859 that allows agencies to continue to purchase gasoline powered vehicles if they prove that no zero-emission vehicles are available would be widely used in cases of specialty medium and heavy-duty vehicles.

As background, the Division of Capital Asset Management & Maintenance State Fleet management already requires State agencies to consider electric and hybrid models when purchasing a vehicle. Agencies are currently required to submit a waiver when alternative options are unavailable. H-7859 changes the current practice by limiting waivers to (3) per agency per year.

State Fleet reports fuel type under the following categories: Gas, Alternative Fuel (ethanol and B20 Deisel), Hybrid, Plug In, and Electric. For this analysis, OMB assumes Zero-emissions vehicles (ZEV) as defined in this bill are comparable to all vehicles indicated as plug in or electric vehicles. Vehicles indicated as Hybrid are the assumed "Alternative-fueled vehicle" type for when a waiver is granted. Under H-7859, other fuel types indicated above would no longer be allowable starting January 1, 2025.

In 2023, the State purchased sixty (60) vehicles within the Passenger Cars and Van/Pickup/SUV classifications. Thirty (30) of the vehicles were Hybrid, an additional seven (7) were ZEV, and the remaining twenty-three (23) were gas. Additionally, in a sample of vehicle purchases from 2021 to date, Crossover's consist of fifty-three percent, SUV/Vans thirty-two percent, and Light Duty Trucks consist of fifteen percent of vehicles purchases.

ZEVs are available in all light duty vehicle types and are more accessible today than the last few years, therefore OMB assumes the State can purchase ZEVs for all Light Duty vehicles moving forward. OMB assumes the State will purchase sixty vehicles with a similar distribution by vehicle type in FY 2025 and FY 2026, consistent with the purchasing trends of 2023. Rather than the current distribution by fuel type, OMB assumes all sixty vehicles will be ZEV, which is an additional fifty-three (53) ZEVs added to State fleet annually under H-7859.

The price difference between gas and electric vehicles varies. The States average cost by fuel type is not a realistic depiction of the increased costs associated to electrification. For example, of the twenty-three (23) gas vehicles purchased in 2023, ten (10) were trucks and thirteen (13) were SUVs whereas a majority of Hybrid and ZEV purchases were smaller, crossover vehicles. Trucks and SUVs are typically more expensive than crossovers, regardless of fuel type, so this skews historic actuals.

To determine an estimates price point by fuel type, State fleet provided quotes for popular vehicle models and the following increased cost per vehicle is assumed for this analysis:



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Crossover, \$4,745	(Variance between Hybrid and ZEV)
SUV, \$12,643	(Variance between the Average of Gas/Hybrid and ZEV)
Light Duty Truck, \$13,429	(Variance between Gas and ZEV)

Utilizing the same distribution by vehicle type, the increased costs of fifty-three ZEVs is \$455,681 annually. This is only for general purpose or light duty vehicles (i.e. classifications 1. Passenger Cars and 2. Van/Pickup/SUV). The remaining seventy percent of State Fleet is mid- to heavy duty vehicles.

The costs to electrify the entire fleet is indeterminate. OMB provides the following example for context:

Due to the States electrification goals, many State Agencies and quasi organizations already prioritize alternative fuel sources, including vehicles with heavy-duty classifications. For example, the Rhode Island Public Transit Authority (RIPTA) has purchased seventeen (17) electric buses at an average increased cost of \$400,000 per bus. Electric buses are approximately \$1,200,000 million as compared to standard fuel models closer to \$800,000 million. RIPTA's current maintenance schedule replaces approximately twenty-four (24) buses per year. H-7859 would increase cost for RIPTA by alone by \$9.6 million annually.

Charging Station Infrastructure

According to the Office of Energy Resources (OER), the State plans to add forty to fifty (40-50) charging stations in FY 2024 and an additional fifty (50) charging stations in FY 2025. The location for the charging stations have yet to be determined but are anticipated for public use rather than State Fleet. OER confirms under H-7859, the current ZEV infrastructure plan would not accommodate an additional fifty-three (53) ZEVs annually. Additional charging stations would be required at various State administrative office buildings to support this level of ZEV growth.

OER asserts that meeting the State's demand for charging station infrastructure is the most difficult aspect of transitioning to an electric fleet due to limited information available for planning and a limited fiscal resources. Determining the number of charging stations required is influenced by the relative capabilities of the infrastructure: number of vehicles able to be serviced simultaneously, charge level, availability to other users than state employees, etc. However, there is little reliable data on average daily mileage traveled, current vehicle uses cases at individual agencies, or prevalence of pool vehicles as a part of agency fleets (multiple users per unique vehicle).

While the State continues to increase the number of charging stations it maintains, OER claims the State also needs to understand the optimal use of electric vehicles in its fleet, including quantity, location, and type. An inefficient number of electric vehicles per charging station could yield delays in carrying out state business or higher operating costs if charging is required mid-trip at non-state-owned stations. The State continues to evaluate fleet and charging station data with the aim of better understanding the States ZEV infrastructure needs moving forward.

As a general guideline, accommodating approximately three ZEVs per-charging port is considered reasonable according to OER. The state observes an average installation cost of \$35,000-\$45,000



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for a Level 2 charger and \$300,000-\$400,000 for a Level 3. These estimates include the cost of equipment, installation, and approximately five (5) years maintenance. Equipment and maintenance costs are relatively stable, but the costs of installation vary significantly depending on the location.

Due to limited resources, OER has prioritized Level 2 chargers. Additionally, Level 2 chargers accommodate ZEV and Hybrids whereas Level 3 chargers only support ZEVs. For the purpose of this analysis, OMB assumes all Level 2 chargers would be implemented at a cost of \$45,000 per charger. Assuming the ratio of three (3) vehicles per charging station, the State would need eighteen (18) new charging stations at various State administrative office buildings to support H-7859, at an estimated cost of \$795,000.

As a final consideration, this analysis focuses on the upfront costs to provide an estimate for FY 2025 and FY 2026. It should be noted that electric vehicles may cost less to operate and maintain than gas-powered vehicles overtime. The U.S. Department of Energy's Argonne National Laboratory found that maintenance costs for electric vehicles are 40 percent less than gas-powered, however, we do not have data to support long term cost savings and impacts at the State level.

OMB assumes this act would take effect on July 1, 2025.

Comments on Sources of Funds:

State Fleet and State Agencies purchase vehicles utilizing all sources of funds and OMB assumes Agencies would utilize funding sources roughly proportionate to current purchases practices under H-7859. According to the Office of Energy Resources (OER), the State has continued to prioritize federal grant opportunities to invest in the State's Electric Vehicle (EV) charging station infrastructure. However, OMB assumes investments beyond the scope of the current EV infrastructure plan would require additional general revenue to implement.

Summary of Fiscal Impact:

FY 2024: No fiscal impact reported due to timing of passage.

Expenditures:

FY 2025: \$1,250,680

FY 2026 \$1,250,680

Revenue:

FY 2025: N/A

FY 2026 N/A

*Estimate reflects light-duty fleet only, mid- to heavy-duty vehicles excluded from analysis.



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Budget Office Signature: _____

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Codega Jr.
Date: 2024.05.09 08:58:39 -04'00'

Fiscal Advisor Signature: _____

