

Department of Legislative Services
Maryland General Assembly
2012 Session

FISCAL AND POLICY NOTE

House Bill 1011 (Delegates Alston and Vallario)
Health and Government Operations

Procurement - State Motor Vehicles - Purchase Requirement

This bill requires the State to purchase only electric or electric-hybrid vehicles, unless the Secretary of Budget and Management determines that the use of such vehicles endangers public safety. It also requires that, to the extent practicable and feasible, the standards for the purchase of motor vehicles be based on the lowest possible environmental impact of the vehicle.

Fiscal Summary

State Effect: General and special fund expenditures for State vehicles increase significantly, by as much as \$1.4 million to \$6.6 million annually, depending on the mix of vehicle types purchased each year. General and special fund expenditures for fuel likely decline by about 33% annually for each new vehicle purchased, which offsets a portion of the increased purchase costs. The net effect varies by vehicle type, but generally results in a net increase in State expenditures for new vehicles and fuel over the life of each vehicle. Additional expenditures may be needed to build more electric vehicle charging stations throughout the State, costing approximately \$8,000 per station. No effect on revenues.

Local Effect: Potential increase in local expenditures for new vehicles to the extent that local governments can no longer purchase gasoline-powered vehicles through the State's blanket purchase orders.

Small Business Effect: None.

Analysis

Current Law: The Department of General Services (DGS) controls the purchase of motor vehicles for most Executive Branch agencies, subject to standards established by the Secretary of Budget and Management. To the extent practicable and feasible, the standards must be based on the lowest possible life cycle cost.

Chapters 400 and 401 of 2011 established the Maryland Electric Vehicle Infrastructure Council, which is charged with developing an action plan for facilitating the integration of electric vehicles and making recommendations on a number of policy issues with regard to the development of electric vehicle infrastructure and the promotion of electric vehicles.

Electric vehicle infrastructure development in Maryland has also been supported by the enactment of several other laws from the 2011 session. Chapter 402 created a tax credit for 20% of the cost of qualifying electric vehicle recharging equipment, while Chapters 403 and 404 require the Public Service Commission (PSC) to establish a pilot program by June 30, 2013, for electric utility customers to recharge electric vehicles during off-peak hours. In enacting these laws, Maryland joins 27 other states that, as of May 2011, have enacted some form of electric vehicle incentive, according to the National Conference of State Legislatures.

Background: The State vehicle fleet consists of approximately 8,700 light-duty vehicles in 18 different classifications, ranging from standard compact sedans to one-ton cargo vans. Over the last few years, the State has purchased about 300 vehicles annually, but during better economic times, the State averaged closer to 800 vehicle purchases per year. The vehicles are purchased under statewide blanket purchase orders negotiated by DGS with automobile dealers. The blanket purchase orders are available to, and often used by, local governments as well as the State. By leveraging the combined buying power of State and local governments, the prices for the vehicles tend to be substantially below retail.

Of the 18 vehicle classifications, only four have electric or electric-hybrid options available for purchase. They are standard sedan, executive sedan, half-ton pickup truck, and full-size utility truck. Many classifications have flex-fuel options or, in one case, a compressed natural gas option, but not electric. **Exhibit 1** includes the prices for the four classifications that have electric or electric-hybrid options. As the exhibit shows, the price differentials between regular and electric/hybrid options range from about \$4,700 to almost \$22,000, depending on the type of vehicle.

Exhibit 1
State Vehicle Purchase Prices
Fiscal 2012

	<u>Regular</u>	<u>Electric</u>	<u>Hybrid</u>
Class 1 – Standard Sedan	\$14,534	\$36,419	\$19,220
Class 2 – Executive Sedan	17,345	NA	25,920
Class 6 – Half-ton Pickup	14,810	NA	32,449
Class 10 – Full-size Sport Utility	27,621	NA	44,917

Source: Department of Budget and Management, Department of General Services

Gas mileage for electric hybrids varies by vehicle types, and the differentials with gas-powered vehicles also vary by vehicle type and driving conditions. Several models have both gas-powered and hybrid versions, allowing for a straightforward comparison. For instance, the gas mileage differential between the gas-powered and hybrid models of the Chevrolet Tahoe full-size sport utility vehicle is 10% for highway driving and 25% for city driving, and the differential for the two Ford Fusion sedan models is 9% for highway driving and 78% for city driving.

According to data from the Maryland Energy Administration, as of the end of summer 2011, there were 80 plug-in vehicle charging stations in Maryland, many of which were established under the Electric Vehicle Infrastructure Program. Many of these stations are not located on the street, but rather in parking lots or garages.

State Fiscal Effect: The bill results in increased expenditures each year for the purchase of electric or electric-hybrid vehicles instead of gas-powered vehicles. The Department of Legislative Services (DLS) cannot reliably predict the mix of vehicle types that are purchased each fiscal year, so a precise estimate of the increased cost is not possible. Assuming 300 vehicle purchases each year and no public safety exceptions, State expenditures for vehicle purchases could increase by between \$1.4 million and \$6.6 million. To the extent vehicles purchased qualify for the public safety exception, the increase in costs would be moderated.

The State will likely realize some savings over time due to lower consumption of gasoline by electric or electric-hybrid vehicles, but likely not enough to fully offset the purchase price differential between standard vehicles and electric or electric-hybrid vehicles. Based on a review of gas mileage differentials for several model types, DLS assumes that, on average, gas mileage for hybrid vehicles is 33% higher than for gas-powered vehicles. Based on gas mileage of 25 miles per gallon, a vehicle that drives

15,000 miles annually uses 600 gallons of gasoline each year; at a cost of \$3.50 per gallon, total fuel costs are \$2,100 annually. Assuming a 33% reduction in gasoline usage for hybrid vehicles, total fuel costs are \$1,407 annually per hybrid vehicle, a savings of \$693 annually. Based on the lowest cost differential of \$4,700 for standard sedans, it would take almost seven years for the State to break even on the increased cost of the hybrid vehicle; the breakeven point would be substantially longer, and often beyond the practical life of a vehicle, for other hybrid models with larger purchase price differentials.

Given the limited number of charging stations for electric plug-in vehicles in Maryland, the State may have to construct additional charging stations to accommodate the use of electric vehicles. According to the Maryland Department of Transportation (MDOT), each charging station costs almost \$8,000 to construct.

DLS also advises that the only exception for the bill's mandate to purchase electric or electric-hybrid vehicles is for public safety reasons; there is no exception made for the model classifications that do not have available electric or electric-hybrid models. Therefore, the State could potentially not be able to purchase replacements for current vehicles in those model classifications.

Local Fiscal Effect: Although the bill's mandate applies only to the State, local governments often purchase vehicles through the State's blanket purchase order agreements with car dealerships. To the extent that the State only enters into contracts for electric or electric-hybrid vehicles, local governments may have to use other contracting methods to purchase gas-powered vehicles. To the extent that those alternative arrangements do not provide the same price advantages available with volume purchases through the State, local government expenditures for vehicle purchases may increase.

Additional Comments: The Department of Budget and Management and MDOT both advise that the federal Energy Policy Act requires that 75% of the State's vehicle purchases be alternative fuel vehicles, including compressed natural gas and flex-fuel vehicles. Electric and electric-hybrid vehicles are not considered alternative fuel vehicles under the federal guidelines, so exclusive purchase of those vehicles would make it impossible for the State to comply with federal requirements.

Additional Information

Prior Introductions: None.

Cross File: None.

Information Source(s): Maryland Department of Agriculture, Maryland Energy Administration, Department of Budget and Management, Department of Natural Resources, Maryland Department of the Environment, Department of General Services, Maryland Department of Transportation, University System of Maryland, Department of Legislative Services

Fiscal Note History: First Reader - March 4, 2012
ncs/rhh

Analysis by: Michael C. Rubenstein

Direct Inquiries to:
(410) 946-5510
(301) 970-5510