SB 326

Department of Legislative Services

Maryland General Assembly
2006 Session

FISCAL AND POLICY NOTE

Senate Bill 326 (Senator Brochin, *et al.*)
Education, Health, and Environmental Affairs

Procurement - State-Owned Vehicles - Hybrid Vehicles

This bill requires that, by fiscal 2015, at least 75% of the State's vehicle fleet be hybrid vehicles. It creates one exception for emergency vehicles.

Fiscal Summary

State Effect: State expenditures for all funds could increase by $5.0 million in fiscal 2007. This reflects the higher cost of hybrid vehicles and fuel savings. Future expenditures account for inflation in fuel costs and the compounded effect of fuel savings.

(in dollars)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Revenues	$0	$0	$0	$0	$0
GF/SF/FF Exp.	4,968,800	4,662,100	4,352,300	4,039,400	3,723,300
Net Effect	($4,968,800)	($4,662,100)	($4,352,300)	($4,039,400)	($3,723,300)

Note:() = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate effect

Local Effect: None.

Small Business Effect: None.

Analysis

Current Law: Under federal law, the Environmental Protection Agency (EPA) requires that 75% of new vehicle purchases by State agencies must be alternative fuel vehicles (AFVs). Gas/electric hybrids do not qualify as AFVs under EPA standards. The federal Energy Tax Incentive Act of 2005 created tax credits for purchasers of hybrid vehicles

ranging from $400 to $3,400, depending on the vehicle's gas mileage under city driving conditions. This tax credit took effect January 1, 2006 and expires December 31, 2010. However, the credit is phased out gradually for each car manufacturer once the manufacturer sells 60,000 hybrid vehicles, regardless of model. Therefore, the tax credit may not be available on certain models before it expires at the end of 2010.

Background: Gas/electric hybrid vehicles run on both electric and gas-powered engines. Hybrid vehicles typically get better gas mileage than gasoline-only vehicles because the electric battery is charged by the car's brakes rather than by gasoline. For this reason, the electric battery tends to power the car under conditions that require frequent braking (normally city driving). The gasoline engine is typically used for highway driving. The design of hybrid cars allows them to make the transition from one power source to the other seamlessly, with no action required by the driver and no noticeable interruption in driving.

State Fiscal Effect: The Maryland Department of Transportation (MDOT) estimates that hybrids cost $10,000 more than conventional vehicles. The Department of Legislative Services compared vehicle models that offer both conventional and hybrid engine types to determine the cost differential between them. Honda and Ford both offer vehicle models with either conventional or hybrid engines. The Manufacturer's Suggested Retail Price (MSRP) for the Honda Civic Hybrid is about $5,000 more than the conventional Civic model; the Honda Accord Hybrid is almost $11,000 more than the conventional Accord. Meanwhile, Ford's Hybrid Escape has an MSRP about $7,500 more than the conventional Escape model, which is roughly halfway between the other two models. Therefore, this analysis uses $7,500 as the price differential between conventional and hybrid cars.

For the Civic and Escape models, EPA gas mileage estimates for the hybrid models are 63% higher in city driving than their conventional counterparts. The Civic Hybrid gets 28% better gas mileage in highway driving than the conventional Civic, while the Ford Escape Hybrid gets 19% better gas mileage in highway driving than the conventional Escape model. EPA mileage estimates for the Honda Accord Hybrid are identical to the gas mileage estimates of its conventional counterpart. This analysis uses values that lie in the middle of these ranges. On average, hybrids get 40 miles per gallon more than conventional vehicles in city driving and 20 miles per gallon more in highway driving.

Although federal tax credits are available for hybrid vehicles through 2010, this analysis assumes that the State would not be eligible for any such credit since the State does not file federal income tax returns. Accordingly, calculating the fiscal effect of this bill must take into consideration the higher cost of hybrid vehicles and fuel cost savings stemming from improved gas mileage.

According to the Department of General Services (DGS), there are 8,459 light- and heavy-duty vehicles in the State fleet. The Department of Budget and Management (DBM) advises that 17 of those are hybrid vehicles. Under this bill, 6,344 of the State's vehicles would have to be hybrids by 2015. To meet that goal, the State would have to purchase an average of 703 hybrid cars annually between now and then. DGS reports that the normal life span for a State vehicle is 100,000 miles, although vehicles that are in good operating condition may be kept longer. The minimum annual mileage requirement for a State vehicle is 10,000 miles.

At an average cost of $7,500, State expenditures to purchase replacement vehicles in the fleet would increase $5.27 million in fiscal 2007.

If the average vehicle logs 12,000 miles annually and achieves 20 miles per gallon, it would require 600 gallons of fuel annually. At a current cost of $2.40 per gallon, it costs $1,440 to fuel the average car. Assuming a 30% savings in fuel costs for each hybrid, the State would save $432 in fuel costs for each car, or $303,696 in fiscal 2007.

Therefore, the total cost to the State in fiscal 2007 is $5.0 million, as shown below:

Hybrid cost differential	$5,272,500
Fuel savings	- 303,696
Total	**$4,968,804**

Additional Comments: Fulfilling this bill's requirement could be problematic for three reasons. First, the bill does not define vehicle, so in addition to the light- and heavy-duty vehicles used for this analysis, the bill could apply to off-road vehicles such as diesel-powered MARC trains and construction equipment owned by the State, for which there are no hybrid options. Second, heavy-duty hybrids are available but rare; they tend to offer greater horsepower than conventional models, but no gas mileage benefits (much like the Honda Accord Hybrid) at a substantially higher price. Third, the federal mandate that 75% of new vehicle purchases be AFVs could prove to be a substantial obstacle, since hybrid vehicles do not qualify as AFVs under EPA standards.

Additional Information

Prior Introductions: None.

Cross File: HB 1471 (Delegate Trueschler) – Health and Government Operations.

Information Source(s): Department of General Services, Maryland Department of Transportation, Department of Budget and Management, Department of Legislative Services

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