

Department of Legislative Services
 Maryland General Assembly
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FISCAL AND POLICY NOTE
 Revised

House Bill 698 (Delegate Stein, *et al.*)
 Health and Government Operations

State-Owned Heavy Equipment and Heating Equipment - Biodiesel Fuel Requirement

This bill requires that, beginning in fiscal 2010, at least half of the State’s heavy equipment and heating equipment that uses diesel fuel must use a blend of fuel that is at least 10% biodiesel.

The bill takes effect July 1, 2009.

Fiscal Summary

State Effect: General fund expenditures by the Department of General Services (DGS) increase by approximately \$5,800 in FY 2010 to supply half of its heavy equipment with B10 fuel instead of B5. Transportation Trust Fund (TTF) expenditures by the Maryland Department of Transportation (MDOT) increase by \$63,200 and nonbudgeted expenditures by the Maryland Transportation Authority increase by \$8,600 in FY 2010. Higher education expenditures may increase somewhat but cannot be estimated. Costs may be less to the extent that B10 fuel is not available in sufficient quantities or if warranties on existing equipment preclude the use of B10. Out-year costs reflect inflation. No effect on revenues.

(in dollars)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Revenues	\$0	\$0	\$0	\$0	\$0
GF Expenditure	5,800	5,800	5,900	6,000	6,000
SF Expenditure	63,200	63,800	64,500	65,100	65,700
NonBud Exp.	8,600	8,700	8,800	8,900	9,000
Higher Ed Exp.	-	-	-	-	-
Net Effect	(\$77,600)	(\$78,400)	(\$79,200)	(\$80,000)	(\$80,800)

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

Local Effect: None.

Small Business Effect: None.

Analysis

Current Law: Chapter 623 of 2007 requires that, beginning in fiscal 2009, at least half of the State's heavy equipment and heating equipment that uses diesel fuel must use a blend of fuel that is at least 5% biodiesel (called B5), subject to availability. It exempts any equipment whose manufacturer's warranty would be voided if the use of biodiesel fuel caused mechanical failure.

Chapter 425 of 2006 requires that at least 50% of diesel-fueled vehicles in the State vehicle fleet use a blend of fuel that is at least B5. It exempts vehicles whose manufacturer's warranties would be voided if the use of biodiesel fuel causes mechanical failure.

Background: Biodiesel fuel offers some advantages over regular petroleum-based diesel fuel (RDF). According to the U.S. Environmental Protection Agency, biodiesel fuel reduces carbon monoxide, sulfur dioxide, and other harmful emissions from diesel-powered engines, although it slightly increases nitrous oxide emissions. Because it is produced from renewable sources such as vegetable oils and animal fat, it is also biodegradable, nontoxic, and less flammable than RDF. Diesel fuel blends consisting of 10% biodiesel fuel (called B10) can be stored in existing diesel fuel storage tanks and used in existing diesel engines without modifications. Increased use of domestically produced renewable fuel can help reduce the nation's dependence on imported oil.

However, biodiesel does have certain performance disadvantages. First, it burns slightly less efficiently than RDF, and it requires a special additive to keep it from congealing during the winter. Also, the cleansing effects of biodiesel loosen accumulated deposits in fuel tanks and lines, and often result in the need to replace fuel filters more often because they get clogged with accumulated deposits that have been loosened. The need to replace fuel filters may diminish with frequent use of biodiesel.

Most diesel engine manufacturers warranty new engines for the use of biodiesel up to a B5 blend; warranties for older engines likely do not address the use of biodiesel or do not warranty them. Warranty coverage for the use of B10 varies by manufacturer and engine age.

State Fiscal Effect: The bill raises the biodiesel blend from B5 to B10 for half of the State's heavy equipment and heating equipment. Industry estimates of the price differential between B5 and B10 range from 5 to 10 cents per gallon; recent price surveys have found a 10-cent per gallon difference in the Baltimore metropolitan area. However, DGS advises that the price difference between B5 and B10 for its current fuel supply contract is 5.4 cents. MDOT obtains all of its diesel fuel through DGS supply contracts to secure the fuel tax exemptions available on DGS fuel purchases. Therefore, Legislative Services assumes a price difference of 5.4 cents on all fuel purchases under this bill. B10 can be stored in the same tanks currently used to store and distribute B5. Thus, there are no infrastructure costs associated with this bill.

Heavy equipment is not defined by the bill, so it is unclear whether the bill applies to the bus fleet and MARC locomotives used by the Maryland Transit Administration (MTA), which are the heaviest consumers of diesel fuel in the State. For its analysis of Chapter 623 of 2007, Legislative Services assumed that the bill did not apply to the bus fleet or locomotives; the same assumption is used for this analysis.

DGS reports that it purchases 214,200 gallons of diesel fuel annually to operate heating equipment in State office buildings. USM cannot provide an estimate because each campus purchases its own fuel. MTA reports using 500,000 gallons annually for heavy equipment and heating. The Maryland Transportation Authority reports that it uses 320,000 gallons annually, the Maryland Port Administration (MPA) uses 340,000 gallons annually, and the State Highway Administration uses 1.5 million gallons.

Therefore, general fund expenditures by DGS increase by \$5,783 beginning in fiscal 2010 to supply half of its heating and heavy equipment with B10 fuel instead of B5. TTF expenditures by MDOT also increase beginning in fiscal 2010 by \$63,180 and nonbudgeted expenditures by the Maryland Transportation Authority increase by \$8,640. Costs may be lower to the extent that B10 is not available in sufficient quantities or if warranties on existing equipment preclude the use of B10. Suppliers indicate that there has been no shortage of biodiesel supply. Maintenance costs may increase slightly during the transition from B5 to B10.

MPA and MTA both report using B5 fuel in all of their heavy equipment. Both administrations as well as the Maryland Aviation Administration express concern about raising the blend to B10 because of the potential for equipment failures, especially in old heating units and from increased maintenance costs stemming from more frequent replacement of fuel filters.

MTA also notes that it uses one blend of diesel fuel for all purposes, so to the extent that it must use B10 in half of its heavy equipment, it may use B10 in all of its buses. In that event, MTA expenditures increase by as much as \$432,000 because MTA purchases

approximately 8.0 million gallons of diesel fuel for its buses annually. For the purpose of this analysis, however, Legislative Services assumes that B10 is used only for the equipment specified by the bill.

Additional Information

Prior Introductions: None.

Cross File: None.

Information Source(s): Energy Management Institute, Board of Public Works, Department of Budget and Management, Department of General Services, Maryland Department of Transportation, University System of Maryland, Department of Legislative Services

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