HB 567

Department of Legislative Services

Maryland General Assembly
2014 Session

FISCAL AND POLICY NOTE

House Bill 567 (Delegates Bromwell and Kipke)
Health and Government Operations

Procurement - State Vehicle Fleet - Biodiesel or Biofuel Requirements

This bill requires that all diesel-powered vehicles in the State vehicle fleet use a blend of fuel that is at least 10% biodiesel or other biofuel by January 1, 2015, and at least 20% biodiesel or other biofuel by January 1, 2016.

Fiscal Summary

State Effect: Transportation Trust Fund (TTF) expenditures increase by at least $15,300 in FY 2015 and by $31,100 in FY 2016 and each year thereafter to comply with the biodiesel fuel mandate. TTF expenditures may increase by between $1.0 million and $2.0 million if the Maryland Transit Administration (MTA) is required to resume the use of biodiesel in its buses under the bill. Additional costs may be incurred for new storage tanks to the extent that existing tanks are not suitable for 20% biodiesel blends. A shortage of biodiesel suppliers in the region may affect pricing and implementation of the bill. These impacts are not reflected below. No effect on revenues.

(in dollars)	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Revenues	$0	$0	$0	$0	$0
SF Expenditure	15,300	31,100	31,100	31,100	31,100
Net Effect	($15,300)	($31,100)	($31,100)	($31,100)	($31,100)

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

Local Effect: None.

Small Business Effect: None.

Analysis

Current Law: Chapter 425 of 2006 requires that at least 50% of diesel-powered vehicles in the State vehicle fleet use a blend of fuel that is at least 5% biodiesel (known as B5). It exempts from the requirement vehicles whose manufacturer's warranties would be voided if the use of biodiesel fuel caused mechanical failure.

Chapter 623 of 2007 requires that at least half of the State's heavy equipment and heating equipment that uses diesel fuel must use at least B5, subject to its availability. Any equipment whose manufacturer's warranty would be voided if the use of biodiesel fuel caused mechanical failure is exempt from this requirement.

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. 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 can loosen accumulated deposits in fuel tanks and lines, and often result in the need to replace fuel filters more often because they may clog with accumulated deposits that have been loosened. The need to replace fuel filters may diminish with frequent use of biodiesel. These characteristics of biodiesel also can require upgraded storage facilities to prevent lines and dispensers from becoming clogged.

According to the U.S. Department of Energy, biodiesel blends of 20% biodiesel (B20) are the most common biodiesel blends in the United States. B20 blends (or higher) that are used in medium- or heavy-duty vehicles or equipment qualify for biodiesel fuel use credits under the Energy Policy Act of 1992.

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 and B20 varies by manufacturer and engine age.

State Fiscal Effect: The bill applies only to the fuel used by vehicles in the State vehicle fleet and not to the heavy equipment and heating equipment included in Chapter 623 of 2007. The State vehicle fleet has never been defined in any of the legislation affecting fuel requirements, but it is assumed to include light- and medium-duty vehicles, including buses. It has not been assumed to include construction equipment, trains, cranes, and

other industrial equipment that likely falls under the terms of Chapter 623. Three agencies manage vehicle fleets in the State: the Department of Budget and Management (DBM) for most Executive Branch agencies, the Maryland Department of Transportation (MDOT), and the University System of Maryland.

DBM reports that, among the approximately 8,700 vehicles in the fleet it manages on behalf of Executive Branch agencies, only one is diesel-powered. Therefore, the bill has virtually no effect on fuel purchased for DBM's fleet.

By contrast, several of MDOT's modal units use diesel-powered vehicles. As noted above, cranes used at the Port of Baltimore, MARC trains used by MTA, and heavy equipment used for road construction or airport maintenance are not affected by the bill. However, among State vehicles, MTA buses are the largest single consumer of diesel fuel, having used about 7.0 million gallons in the last fiscal year. MTA advises that it used B5 in its buses until 2012, when it stopped doing so for several reasons. According to MTA, B5 consistently clogged the fuel dispensers and bus fuel filters due to bacterial growth, and MTA had difficulty keeping the fuel from gelling during the winter months, even with additives. Finally, the use of biodiesel increased fuel usage by 3% to 4% due to the less efficient burning noted above.

The Department of General Services (DGS) purchases all fuel for the State through a master contract. Under the terms of the contract, B5 is one or two cents more expensive per gallon than RDF; B10 and B20 are not priced in the contract. The State's fuel supplier has indicated that there is a regional shortage of biodiesel above the B5 level that may affect pricing. The most recent pricing survey by the U.S. Department of Energy's Clean Cities Program found a 26-cent price difference between RDF and B20 in the mid-Atlantic region, which is higher than the national average difference of 11 cents. This seems to confirm that there is a regional shortage of suppliers.

Most of the fuel purchased by the State is bulk-ordered directly by agencies and delivered to them for their use. More than 8.0 million gallons of diesel fuel was purchased in this manner, most of it for MTA, with only about 238,000 gallons consisting of B5 and the rest being RDF. In addition, about 3.4 million gallons of diesel fuel was dispensed at the State's fueling stations; the State has 104 fueling stations, but roughly 70 of them dispense diesel fuel. According to DGS, 2.3 million gallons was B5 that went almost exclusively to heavy equipment used by the State Highway Administration and the Maryland Transportation Authority for road construction and maintenance; therefore, that fuel is not affected by the bill. This means that, based on the State's current usage, only 238,000 gallons of B5 fuel currently purchased would have to be upgraded under the bill.

This analysis is based on the following assumptions:

- absent the bill, fuel usage remains constant;
- the price differential between RDF and biodiesel remains constant, even as the underlying prices may fluctuate;
- fuel usage increases by 3% based on the increase from B5 to B10 and again from B10 to B20; and
- based on the findings of the Clean Cities survey, B20 costs 25 cents more than RDF in this region, after accounting for the 1 cent differential between RDF and B5. The price differential for B10 is half that amount, or 12.5 cents.

According to these assumptions, TTF expenditures increase by at least $15,300 in fiscal 2015, which accounts for the January 1, 2015 start date for B10 usage. In fiscal 2016 and each year after, TTF expenditures increase by at least $31,100, which accounts for the January 1, 2016 start date for B20 usage.

If, under the bill, MTA is required to resume use of biodiesel fuel on its buses, the costs may escalate significantly, potentially by between $1.0 million and $2.0 million with full implementation of the B20 requirement. Additionally, maintenance and storage costs may also increase significantly due to the need to replace clogged filters and dispensers as well as storage tanks. These costs have not been factored into this analysis, but they may add at least another $500,000.

Also to the extent that increased demand and/or supply for B20 caused by the bill affects the price differential between B20 and RDF, State costs may increase or decrease accordingly.

Additional Information

Prior Introductions: None.

Cross File: None.

Information Source(s): Department of Budget and Management, Department of General Services, Maryland Department of Transportation, U.S. Department of Energy, National Biodiesel Board, Alternative Fuels Data Center, Department of Legislative Services

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