

Department of Legislative Services
Maryland General Assembly
2007 Session

FISCAL AND POLICY NOTE
Revised

House Bill 660
Economic Matters

(Delegate Cardin, *et al.*)

Biodiesel Renewable Fuel Act

This bill requires retail service station dealers to sell biodiesel fuel as a specific percentage of diesel sales by either a certain date or once the Secretary of Agriculture (Secretary) has determined that biodiesel fuel production in the State is sufficient. This requirement does not apply to aviation fuel. The bill also requires the Maryland Department of Agriculture (MDA) and the Comptroller to jointly establish an advisory committee to facilitate the implementation of this requirement.

Fiscal Summary

State Effect: State expenditures for purchase of diesel fuel could increase or decrease depending on the price of biodiesel fuel. To the extent that the bill results in the construction of additional biodiesel plants within the State, State revenues could increase. Any administrative expenses for MDA and the Comptroller's Office could be handled with existing resources.

Local Effect: Local expenditures for diesel fuel could increase or decrease depending on the price of biodiesel fuel. To the extent the bill results in the construction of additional plants in Maryland, local revenues could increase.

Small Business Effect: Potential meaningful.

Analysis

Bill Summary: Biodiesel fuel must account for 2% of all diesel sold in the State by January 1, 2009, or when the Secretary determines there is sufficient State production. Biodiesel fuel must account for 5% of all diesel sold by January 1, 2012, or upon the

Secretary's determination. Retail service stations must report to MDA and the Comptroller's Office on an annual basis.

The advisory committee must report annually to the Governor and specified legislative committees on:

- implementation of the biodiesel fuel requirement, including logistical, technical and economic issues;
- compliance and enforcement; and
- new advancements in renewable fuels.

Current Law: Diesel is considered special fuel, which is defined as a product usable as fuel in an internal combustion engine that is not gasoline. Diesel is subject to a 24.25 cent per gallon motor fuel tax.

The Renewable Fuels Incentive Board may pay credits for biodiesel produced from December 31, 2007 to December 31, 2017. The credit is up to 20 cents per gallon for biodiesel made from soybean oil and 5 cents per gallon for biodiesel made from other sources. Beginning in fiscal 2008, the State must ensure that half of the diesel-powered vehicles in the State fleet use diesel fuel that consists of at least 5% biodiesel.

Background: According to the U.S. Energy Information Administration, in 2005 the U.S. imported 60% of its oil, this percentage is expected to increase to 66% by the year 2030. The use and production of domestically-produced renewable fuels, such as biodiesel, could help reduce the nation's dependence on foreign oil and have environmental benefits.

Biodiesel is a fuel made for diesel engines from domestically produced renewable fats and oils, such as soybean oil. Blends of 20% biodiesel with 80% petroleum diesel (B20) can be used in unmodified diesel engines. Biodiesel can be used in its pure form (B100), but may require certain engine modifications to avoid maintenance and performance problems. Pure blends of biodiesel may not be suitable for cold climates, as B100 made from soybean oil gels at 32° Fahrenheit, as opposed to 16° Fahrenheit for petroleum diesel.

Biodiesel meets the standards set by the U.S. Environmental Protection Agency (EPA) for ultra-low sulfur diesel. It burns cleaner than traditional diesel, offers significant particulate matter and hydrocarbon reductions over petroleum diesel.

According to the EPA, B20 reduces emissions of particulate matter by about 10%. However, B20 also increases nitrogen oxide emissions by approximately 2%. B100 reduces emissions of particulate matter by roughly 40%.

Biodiesel production is anticipated to grow from 30 million gallons annually to 150 million gallons annually. MDA estimates that as of February 2007, biodiesel costs \$2.70 per gallon to produce. In contrast, the American Trucking Association advised that as recently as January 2007, the New York Mercantile Exchange price (which does not include transportation costs or taxes) for ultra-low sulfur diesel was \$1.62 per gallon.

The federal Energy Policy Act of 2005 contains numerous provisions meant to encourage use of ethanol and other biofuels, including establishing an Advanced Biofuels Technologies Program to develop at least five technologies for coproducing value-added bioproducts while producing biodiesel. In addition, there is a \$1 per gallon biodiesel tax credit that is in effect until 2008.

The State of Washington has mandated that biodiesel account for 2% of all diesel fuel sales by November 30, 2008, or when Washington's feedstock can satisfy a 2% requirement, rising to 5% when Washington's feedstock production and in-state seed crushing capacity can meet a 3% requirement. Minnesota requires 2% of all diesel sold to contain biodiesel.

State Fiscal Effect: To the extent that the retail price of diesel rises to reflect any increased cost of biodiesel over petroleum diesel, State expenditures for diesel fuel would increase; however, this effect cannot be reliably predicted. Advances in renewable fuels production technology could lead to a drop in the cost of biodiesel relative to petroleum diesel or oil prices could increase; in that case, expenditures for diesel fuel would decrease.

To the extent that the bill results in the construction of additional biodiesel plants within the State, or increased income for producers of biodiesel feedstocks, State tax revenues would increase.

MDA could handle any additional administrative expenditures for the Advisory Committee and monitoring biodiesel production in the State with existing resources. Assuming that retail service stations only needed to report to the Comptroller's Office on sales once a year, the Comptroller's Office could handle any administrative expenses with existing resources.

Local Fiscal Effect: Depending on the price of petroleum diesel versus biodiesel, local jurisdictions could have increased or decreased expenditures for diesel fuel. To the

extent the bill results in the construction of additional biodiesel plants in Maryland, local tax revenues could increase.

Small Business Effect: Depending on the price, the lower transportation costs for local biodiesel and biodiesel feedstocks could make it more cost-effective than out-of-state biodiesel or feedstocks. Therefore, mandating biodiesel usage could benefit local biodiesel producers and farmers by increasing demand for their products.

MDA advises that there is only one producer of bio-diesel in the State, who produces 500,000 gallons annually, with capacity to expand to 1 million gallons. MDA estimates that approximately 12 million gallons of biodiesel would need to be produced annually to meet the 2% blend requirement. Demand for local biodiesel would encourage new producers to enter the market.

Producing that amount of biodiesel from soybeans would require 7.5 million bushels of soybeans. MDA advised that there are more than 2,000 soybean farmers in the State, and that in 2006 they produced 15.8 million bushels. If locally produced biodiesel used Maryland feedstocks, demand for soybean oil would increase, as would prices, benefiting those farmers. In addition, producers of other fats and oils used for feedstocks could benefit similarly as well.

However, the bill does not specify that the feedstocks used for biodiesel must be locally produced; in addition, local production may not be high enough by 2009 to meet the 2% requirement, requiring imports from out-of-state.

Biodiesel would need to be stored in separate tanks from petroleum diesel due to its solvent properties and different gel point. In addition, if the biodiesel or biofuel is stored in its pure form, these tanks may need to be heated in winter to keep the biodiesel from gelling.

MDA advises that the preferred method of biodiesel distribution would be to have the biodiesel blended at the terminals where fuel is distributed. These terminals are owned by businesses that do not fit the State criteria for a small business. However, if the biodiesel were not blended into the diesel fuel at the terminal, or was sold for retail in its B100 form, retail service stations would need to install additional tanks, pumps, and potentially heaters at significant expense. In addition, retail service stations would need to implement a system to report to the Comptroller's Office on sales; however depending on the nature of the reporting requirement, this may not be a significant expenditure.

The American Trucking Association advises that the trucking industry is the single largest consumer of diesel nationwide, and is projected to consume an estimated

38 billion gallons of diesel fuel this year; however numerous other industries use diesel in large quantities, especially the construction industry. In order to meet the 2% biodiesel requirement, small businesses owning vehicles and equipment requiring diesel would have higher costs per gallon for fuel (depending on the type of biodiesel used). This would impact costs of shipping and receiving goods, and various other overhead costs for companies. To the extent that companies were not able to pass these costs on to their customers, small business profits and expenditures would be affected.

Additional Comments: In November of 2006, the National Biodiesel Board advised that one-third of biodiesel samples sampled between November 2005 and July 2006 were out of specifications for incomplete processing. This can affect significantly fuel quality and engine performance. The National Biodiesel Board advised that the industry has asked government agencies to adopt fuel quality standards for biodiesel and enforce them.

Additional Information

Prior Introductions: None.

Cross File: SB 261 (Senator Garagiola, *et al.*) – Finance.

Information Source(s): Mid-Atlantic Petroleum Dealers Association, National Biodiesel Board, American Trucking Association, U.S. Environmental Protection Agency, U.S. Energy Information Administration, Comptroller's Office, Maryland Department of Agriculture, Department of Legislative Services

Fiscal Note History: First Reader - February 14, 2007
ncs/hlb Revised - Correction - March 7, 2007
Revised - Clarification - March 9, 2007

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