

Department of Legislative Services
2010 Session

FISCAL AND POLICY NOTE

Senate Bill 569 (Senator Middleton, *et al.*)

Finance and Education, Health, and
Environmental Affairs

Biomass and Biofuels - In-State Production Incentives

This bill allows an electric utility customer engaging in net energy metering that generates electricity from cellulosic feedstock grown on the customer's premises to recover accrued generation credit for net electricity supplied to the utility at the end of the existing 12-month generation credit accrual period. The bill also requires (1) specified amounts of the total diesel sold by volume in the State to be biodiesel produced from feedstock grown in the United States on or after dates set by the Comptroller not less than one year after specified levels of in-state production of biodiesel are reached; and (2) gasoline sold in the State to contain a specified percentage of cellulosic biofuel one year after a specified level of in-state production of cellulosic biofuel has been reached. The Comptroller must suspend or reduce these requirements under specified circumstances. The bill also establishes specified reporting requirements for the Comptroller and Maryland Department of Agriculture (MDA).

Fiscal Summary

State Effect: General fund expenditures may increase by as much as \$200,000 in FY 2011 for consulting services to develop an infrastructure development plan. To the extent the biofuel content requirements affect fuel costs in the State, State revenues and expenditures may be affected; however, any impact cannot be reliably estimated and may not occur in the near term. To the extent the bill causes in-state economic activity related to the production of biofuels, State tax revenues increase.

Local Effect: To the extent the biofuel content requirements affect fuel costs in the State, local government revenues and expenditures may be affected; however, any impact cannot be reliably estimated and may not occur in the near term. To the extent the bill causes in-state economic activity related to the production of biofuels, local government tax revenues increase.

Small Business Effect: Potential meaningful.

Analysis

Bill Summary: The bill specifies that, of the total diesel fuel sold by volume in the State:

- at least 2% must be biodiesel produced from feedstock grown in the United States on or after dates set by the Comptroller that are more than one year after MDA certifies an in-state production level (defined as annualized volume of in-state production over any three-month period) of biodiesel of at least 12 million gallons;
- at least 5% must be biodiesel produced from feedstock grown in the United States on or after dates set by the Comptroller that are more than one year after MDA certifies an in-state production level of biodiesel of at least 30 million gallons;
- at least 10% must be biodiesel produced from feedstock grown in the United States on or after dates set by the Comptroller that are more than one year after MDA certifies an in-state production level of biodiesel of at least 55 million gallons; and
- at least 20% must be biodiesel produced from feedstock grown in the United States on or after dates set by the Comptroller that are more than one year after MDA certifies an in-state production level of biodiesel of 110 million gallons.

Specified “renewable diesel” produced in the State may be used in place of biodiesel to satisfy up to 25% of the biodiesel content requirements. The content requirements of 10% and 20% biodiesel only apply if the Comptroller, in consultation with the Maryland Department of Transportation (MDOT) and other applicable agencies, determines that manufacturer warranties will not be voided due to the use of biodiesel blends at the required percentages. The Comptroller must adopt regulations that specify the dates and manner in which the biodiesel content requirements are to be met.

In addition to the biodiesel content requirements, gasoline sold or offered for sale in the State must contain at least 5% cellulosic biofuel by volume one year after MDA certifies that the in-state production level of cellulosic biofuel has reached 100 million gallons. Specified “renewable fuel” produced in the State may be used in place of cellulosic biofuel to satisfy up to 25% of the requirement.

The Comptroller, in consultation with MDA and MDOT, must suspend or reduce the biodiesel and cellulosic biofuel content requirements if the requirements (1) would place retailers at a competitive disadvantage or cause economic hardship to consumers; or (2) cannot be met as a result of insufficient supplies or infrastructure.

The Comptroller, after consulting with MDA and MDOT, must report to the General Assembly by January 1 of each year on the status of the State's biodiesel and cellulosic biofuel industries and the implementation of the bill's provisions relating to the biodiesel and cellulosic biofuel content requirements.

In addition, MDA, in consultation with the Comptroller, the Maryland Energy Administration, the Chesapeake Bay Commission, MDOT, and the Department of Business and Economic Development, must develop a specified plan that includes findings and recommendations for infrastructure development that will support the biodiesel and cellulosic biofuel content requirements. MDA must report to the Governor and the General Assembly on its plan, findings, and recommendations by January 1, 2011.

Current Law:

Net Energy Metering

“Net energy metering” is defined as measurement of the difference between the electricity that is supplied by an electric company and the electricity that is generated by an eligible customer-generator and fed back to the electric company over the eligible customer-generator's billing period. An “eligible customer-generator” is a customer that owns and operates, leases and operates, or contracts with a third party that owns and operates a biomass, micro combined heat and power, solar, or wind electric generating facility located on the customer's premises or contiguous property, interconnected and operated in parallel with an electric company's transmission and distribution facilities, and intended primarily to offset all or part of the customer's own electricity requirements.

Currently, an eligible customer-generator can accrue generation credit, for a period of up to 12 months, for excess electricity distributed back to the grid. That credit can then be applied to use of electricity supplied by the grid during that 12-month period, but at the end of the period, any remaining accrued generation credit reverts to the electric company. A customer-generator, however, owns the renewable energy credits associated with any electricity produced by its electric generating system.

Biofuels Policies

Existing biofuels policies in State law include:

- Biofuels Production Credits – Chapter 332 of 2005 authorized the payment of credits for the production of ethanol and biodiesel that meets specified requirements. Production credits of \$0.20/gallon are available for ethanol produced from small grains (*e.g.*, wheat, rye, triticale, oats, and hulled or hull-less barley) and biodiesel produced from soybean oil produced in a new or expanded facility. Production credits of \$0.05/gallon are available for ethanol produced from other agricultural products and biodiesel produced from other feedstock.

The Renewable Fuels Incentive Board reviews production credit certification applications and pays production credits. The board may not certify ethanol production credits for more than a total of 15 million gallons per calendar year, of which at least 10 million gallons must be produced from small grains. The board also may not certify biodiesel production credits for more than a total of 5 million gallons per calendar year, of which at least 2 million gallons must be from soybean oil produced in a new or expanded facility.

- Cellulosic Ethanol Research and Development Tax Credit – Chapter 139 of 2008 established a State income tax credit for cellulosic ethanol technology research and development conducted in the State. The amount of the tax credit is equal to 10% of the eligible expenses incurred; unused amounts can be carried forward 15 tax years. The total amount available annually for all applicants is limited to \$250,000.
- Bio-Heating Oil Tax Credit – Chapter 140 of 2008 established a State income tax credit of \$0.03 per gallon up to \$500 for the purchase of bio-heating oil for space and water heating. To qualify, the bio-heating oil must contain at least 5% biodiesel. The tax credit applies to tax years 2008 through 2012.
- State Fleet and Equipment Biofuels Use Requirements – In accordance with State Finance and Procurement §14-408, at least 50% of the State fleet vehicles using diesel fuel must use a blend that is at least 5% biodiesel fuel. In addition, at least 50% of the heavy equipment owned by the State using diesel fuel and at least 50% of the heating equipment in State buildings that uses normal or #2 heating oil must use, subject to availability, a blend that is at least 5% biodiesel fuel.

A 2001 Executive Order (01.01.2001.02) requires the State to ensure that State fleet units operating bi- or flex-fuel vehicles use an average of 50% alternative fuel.

Background: U.S. production and use of biofuels has increased significantly in recent years, but makes up a relatively small amount of overall transportation fuel use. Biofuels have been promoted as having the potential to lessen the United States' dependence on oil, reduce greenhouse gas emissions, and support rural development, among other things. A federal Renewable Fuel Standard (RFS) requires U.S. consumption of biofuels by the transportation sector to increase to 36 billion gallons per year by 2022; the majority of the 36 billion gallons must be made up of advanced (non-corn-based) biofuels, including cellulosic biofuels. The U.S. Environmental Protection Agency (EPA) recently finalized regulations for the RFS program for 2010 and future years.

Biofuel production in Maryland has been very limited to this point relative to national production and leading biofuel producing states, with only a few small-scale commercial production facilities in the State. Economic viability and the ability to raise capital have been challenges for companies operating or looking to locate facilities in the State. Based on the production capacities of known commercial facilities and available actual production volumes for some facilities, total commercial biofuel production in the State appeared to be under 10 million gallons as of July 2009. There are currently no known commercial ethanol facilities in the State and a limited number of commercial biodiesel production facilities.

Similar to national consumption, ethanol is used widely in the State in a low percentage blend with conventional gasoline (E10 – 10% ethanol and 90% gasoline) and to a much lesser extent in the higher, E85 blend which can only be used in flexible fuel vehicles. The State government fleet also uses relatively significant amounts of the low percentage biodiesel blend B5 (5% biodiesel and 95% petroleum diesel). Information on the volume of biodiesel consumed in Maryland as a whole is not readily available.

The Renewable Fuels Association and the Chesapeake Bay Commission indicate that a number of states have state-level renewable fuels standards. Pennsylvania, in 2008, for example, enacted biodiesel and cellulosic ethanol content requirements based on specified levels of in-state production of the fuels that are somewhat similar in design to the requirements proposed in the bill, but with higher production thresholds. The state has reached the first production threshold of 40 million gallons of biodiesel triggering a requirement, effective May 1, 2010, that all diesel fuel sold or offered for sale to consumers in on-road compression ignition engines must contain at least 2% biodiesel by volume.

State Fiscal Effect:

Administrative Costs/Reporting

General fund expenditures may increase by as much as \$200,000 to hire a consultant to assist MDA in developing the required plan for infrastructure development that will support the biodiesel and cellulosic biofuel content requirements of the bill. To the extent a less comprehensive study is conducted, utilizing readily available information, costs may be less. MDA, however, advises the department does not have existing resources or the full expertise to develop the required plan without the assistance of a consultant. Certification of in-state production levels of biodiesel and cellulosic biofuel is expected to be handled by MDA with existing resources.

The Comptroller's Office is expected to handle the requirements of the bill with existing resources.

Potential Impacts of Biodiesel/cellulosic Biofuel Content Requirements

It appears that it may be a number of years before the biodiesel and cellulosic biofuel in-state production thresholds that would trigger the biodiesel/cellulosic biofuel content requirements may be met. As mentioned above, as of July 2009, total biofuel production in the State appeared to be under 10 million gallons, made up of a small number of biodiesel facilities and a facility that produces a type of biofuel that serves as a diesel replacement and is marketed for power-generation, heating fuel and other applications, but not on-road vehicle use.

A regulatory impact analysis accompanying EPA's recent final rule for the federal RFS indicates there is considerable excess production capacity in the biodiesel industry nationwide, and a drop in production in 2009 apparently caused only approximately 17% of the production capacity of the industry to be utilized. While not necessarily indicative of the future of the biodiesel industry in Maryland, the analysis projects that the number of production facilities nationwide will contract in future years, but that higher percentages of the production capacity of the remaining plants will be used, increasing production levels. While potentially only a temporary concern, a federal biodiesel tax incentive also expired at the end of 2009 and has not been extended, which is expected to have a negative impact on the industry.

Cellulosic biofuels are generally not yet commercial fuels, with the main focus of existing production facilities being research and development and not commercial production. EPA, in its final rule for the RFS, reduced the amount of cellulosic biofuel required to be included in the transportation fuel sold or introduced into commerce in the

U.S. in 2010 to 6.5 million gallons (reduced from the 100 million gallons originally required in 2010 under the Energy Independence and Security Act of 2007). EPA notes, however, that a number of companies and projects appear set to expand production over the next several years. There are not known to be any cellulosic biofuels facilities in Maryland.

If the thresholds for in-state biodiesel or cellulosic biofuel production are met in future years, the biodiesel/cellulosic biofuel content requirements could affect fuel costs in the State, which presumably could affect State costs to purchase fuel and/or the amount of fuel purchased in the State and the corresponding amount of motor fuel taxes paid in relation to those purchases, affecting State revenues. It does not appear, however, that any impact can be reliably estimated. It presumably may also be difficult to distinguish impacts of the State biodiesel/cellulosic biofuel content requirements from impacts of the federal RFS. The bill's provisions requiring the reduction or suspension of the requirements under specified circumstances presumably would prevent any significant fuel cost increases.

To the extent the bill encourages the construction or expansion of biodiesel or cellulosic biofuel production facilities in the State, or otherwise increases economic activity related to biofuel production, State tax revenues increase.

In addition, to the extent this bill results in the greater use of existing incentives related to biofuels, State finances could be further affected.

Local Fiscal Effect: If the thresholds for in-state biodiesel or cellulosic biofuel production are met in future years, local governments could be impacted by any effect the content requirements may have on fuel costs. Local government costs to purchase fuel and local highway user revenues (generated partially from the motor fuel tax) may be affected. As mentioned above, however, it does not appear that any impact can be reliably estimated and may be difficult to distinguish from impacts of the federal RFS. The bill's provisions requiring the reduction or suspension of the requirements under specified circumstances also presumably would prevent any significant fuel cost increases.

To the extent the bill encourages the construction or expansion of biodiesel or cellulosic biofuel production facilities in the State, or otherwise increases economic activity related to biofuel production, local government tax revenues increase.

Small Business Effect: Small businesses in the State that are involved or will be involved in the construction or operation of biodiesel or cellulosic biofuel production facilities, producing biofuel feedstock, or other activities relating to the in-state production

of biodiesel and cellulosic biofuel may benefit to the extent the bill increases access to capital investment for facilities and ensures a future in-state market for biofuels.

Small business fuel suppliers and/or retailers could be affected, if the biodiesel content requirements become effective, by any infrastructure or other costs associated with accommodating the required amount of biodiesel. In addition, biodiesel blends can require certain handling and use to ensure equipment and infrastructure is not adversely affected. Increasing the levels of biodiesel that small business fuel suppliers and/or retailers will need to distribute may increase the possibility of such adverse effects occurring.

Small businesses, such as farms and forestry operations may benefit to the extent they are able to generate electricity from cellulosic feedstock grown on the business' premises and recover net-metering generation credit. The Chesapeake Bay Commission indicates that the generation of electricity from cellulosic feedstocks is not currently a prevalent practice in the State. However, a recent report by the Chesapeake Bay Commission and Commonwealth of Pennsylvania addressing the future of cellulosic biofuels in the Chesapeake Bay region (*Chesapeake Biofuel Policies: Balancing Energy, Economy, and the Environment*, 2010) indicates that, in the near future, it is likely that biomass will be more widely used for the local generation of heat, electricity and other bio-power options, and over time, be directed increasingly to biofuel production as refining and marketing structures for biofuels emerge.

Additional Information

Prior Introductions: SB 555 of 2009, a similar bill, passed the Senate with amendments, but no further action was taken. Its cross file, HB 1379, received a hearing in the House Economic Matters Committee, but no further action was taken.

Cross File: HB 827 (Delegate Hubbard, *et al.*) - Economic Matters.

Information Source(s): Maryland Department of Agriculture, Comptroller's Office, Maryland Energy Administration, Maryland Department of Transportation, Public Service Commission, Office of People's Counsel, Department of General Services, Chesapeake Bay Commission, Mid-Atlantic Petroleum Distributor's Association, Maryland Petroleum Council, Maryland Clean Energy Center, U.S. Environmental Protection Agency, National Renewable Energy Laboratory, Renewable Fuels Association, National Biodiesel Board, Pennsylvania Department of Agriculture, Department of Legislative Services

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