

Department of Legislative Services  
Maryland General Assembly  
2009 Session

FISCAL AND POLICY NOTE

Senate Bill 555 (Senator Middleton, *et al.*)

Finance and Education, Health, and  
Environmental Affairs

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**Biomass and Biofuels - In-State Production Incentives**

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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 includes specified biodiesel and cellulosic biofuel content requirements for diesel and gasoline, respectively, sold or offered for sale in the State for use in a motor vehicle, that are conditioned upon specified levels of in-state production of biodiesel and cellulosic biofuel.

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**Fiscal Summary**

**State Effect:** State expenditures may increase for the purchase of diesel fuel and/or gasoline, to the extent the bill's biodiesel and/or cellulosic biofuel content requirements become effective. To the extent the bill encourages production of biodiesel and/or cellulosic biofuel production, State tax revenues may increase. The bill's requirements of the Maryland Department of Agriculture (MDA) and the Comptroller can be handled with existing resources.

**Local Effect:** Local government expenditures for the purchase of diesel fuel and/or gasoline may increase to the extent biodiesel or cellulosic biofuel content requirements above any content levels already used by local governments become effective under the bill. Local tax revenues may also increase.

**Small Business Effect:** Potential meaningful.

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## Analysis

**Bill Summary:** With certain exceptions, the bill specifies that diesel fuel sold or offered for sale in the State for use in a motor vehicle must contain:

- at least 2% biodiesel by volume 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 5 million gallons;
- at least 5% biodiesel by volume one year after MDA certifies an in-state production level of biodiesel of 10 million gallons;
- at least 10% biodiesel by volume one year after MDA certifies an in-state production level of biodiesel of 15 million gallons; and
- at least 20% biodiesel by volume one year after MDA certifies an in-state production level of biodiesel of 30 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), determines that manufacturers of diesel motor vehicles sold in the State will not void engine warranties due to the use of biodiesel blends at the required percentages.

In addition to the biodiesel content requirements, gasoline sold or offered for sale in the State must contain at least 10% cellulosic biofuel by volume one year after MDA certifies that the in-state production level of cellulosic biofuel has reached 25 million gallons.

Specified “renewable fuel” may be used in place of cellulosic biofuel to satisfy the requirement.

The Comptroller, in consultation with MDA and MDOT, may suspend or reduce the biodiesel or cellulosic biofuel content requirements if the requirements would substantially increase costs to consumers or cannot be met as a result of insufficient supplies of biodiesel or cellulosic biofuel or because the necessary infrastructure, including distribution systems for biodiesel and cellulosic biofuel, does not exist.

The Comptroller, after consulting with MDA and MDOT, must report to the General Assembly 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.

## **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, or leases and operates, a biomass, solar, or wind electric generating facility located on the customer's premises, 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 year 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.

**Background:** Biofuel production in the United States is predominately made up of corn-based ethanol. The production and use of biofuels in the United States has increased significantly in recent years, but makes up a relatively small amount of the transportation fuel used in the United States.

The federal Energy Independence and Security Act of 2007, however, established a Renewable Fuel Standard (RFS) that requires increasing amounts of biofuels to be included in the transportation fuel used in the United States, reaching 36 billion gallons in 2022. In 2007, 6.5 billion gallons of ethanol and 450 million gallons of biodiesel were produced in the United States. There are considered to be limits on the amount of U.S. corn that can be used for ethanol production and, under RFS, increasing amounts of the required biofuel use will need to be made up of “advanced biofuels,” including cellulosic biofuels, that are derived from other feedstocks such as perennial grasses, woody material, and crop residue.

Very little biofuel production has occurred in Maryland to this point, with a small number of biodiesel production facilities in the State and, according to MDA, no known projects under development in the State that would result in cellulosic biofuel production sufficient to trigger the content requirement under the bill. A recent report released by the Chesapeake Bay Commission and the Commonwealth of Pennsylvania (*Next Generation Biofuels: Taking the Policy Lead for the Nation*, September 2008), however, indicates that the Chesapeake Bay region has the opportunity to take the lead in the

development of cellulosic and advanced biofuels production and makes various recommendations for regional and state actions that could help achieve that goal. Encouragement of local or on-farm use of biomass and setting of an incremental statewide biofuel production goal, either by aggregate mass/volume or percentage of fuel mixture, were among those recommendations.

**State Fiscal Effect:** State expenditures may increase for the purchase of diesel fuel and/or gasoline, to the extent the bill's biodiesel and/or cellulosic biofuel content requirements become effective.

MDA indicates that the State already has sufficient production capacity for 5 million and possibly 10 million gallons of biodiesel and therefore the necessary in-state production levels for the 2% and 5% biodiesel content requirements to become effective may be met in fiscal 2010. As mentioned earlier, MDA indicates, however, that there are no known projects under development in Maryland that would result in the necessary in-state production level of 25 million gallons for the 10% cellulosic biofuel content requirement to become effective.

Any impact in the near term, therefore, is likely to result from the biodiesel content requirements, and those requirements are subject to potential exceptions based on the effect biodiesel content levels might have on engine warranties (only with respect to the 10% and 20% content levels) or costs to consumers, or the inability of the requirements to be met due to insufficient supplies or necessary infrastructure. In addition, as mentioned above under Current Law, at least 50% of the State fleet vehicles using diesel fuel are already required to use a blend that is at least 5% biodiesel.

According to MDA, recent prices provided by a Maryland-based distributor of biodiesel blends indicate a cost difference of 5.578 cents per gallon for a 5% biodiesel blend, but future price relationships between biodiesel and diesel fuel cannot be projected with certainty.

MDA also notes that analysis of any fiscal effect of the content requirements under the bill is complicated by the federal RFS, which also mandates biofuel use, and it is difficult to project and differentiate between any future cellulosic biofuels use resulting from RFS and from the bill's content requirements (to the extent they become effective).

To the extent the bill encourages the construction or expansion of biodiesel or cellulosic biofuel production facilities in the State, or increases income for producers of biodiesel and cellulosic biofuel feedstocks, State tax revenues will increase. Any potential tax revenue benefit from recovery of accrued generation credit by any eligible customer-generators that generate electricity from cellulosic feedstock grown on the customer's premises is uncertain.

The bill's requirements of MDA and the Comptroller can be handled with existing resources.

**Local Fiscal Effect:** Local government expenditures for the purchase of diesel fuel and/or gasoline may similarly increase to the extent biodiesel or cellulosic biofuel content requirements above any content levels already used by local governments become effective under the bill. Local tax revenues similarly may also increase.

**Small Business Effect:** Small businesses in the State engaged in, or that benefit from (such as farmers producing biodiesel feedstock), biodiesel production may benefit to the extent the biodiesel content requirements under the bill become effective and increase demand for biodiesel produced in Maryland. Similarly, small businesses that may engage in biodiesel or cellulosic biofuel production in the future, and small businesses that may benefit from such production, may also be positively affected by the bill's content requirements to the extent they become effective and increase in-state demand for biodiesel and/or cellulosic biofuel.

Small businesses using considerable amounts of diesel fuel and those involved with the distribution of diesel fuel may be affected to the extent the biodiesel content requirements under the bill become effective and result in an increase in fuel or infrastructure costs for those businesses – that cannot otherwise be passed on to customers. Presumably the cellulosic biofuel content requirement, to the extent it becomes effective, may have similar effects.

Small businesses, such as farms or forestry operations may benefit, to the extent they are able to generate electricity from cellulosic feedstock grown on the business' premises.

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### **Additional Information**

**Prior Introductions:** None.

**Cross File:** HB 1379 (Delegate Hubbard, *et al.*) - Rules and Executive Nominations.

**Information Source(s):** Maryland Department of Agriculture, Department of General Services, Comptroller's Office, Maryland Energy Administration, Public Service Commission, Maryland Department of Transportation, Renewable Fuels Association, National Biodiesel Board, Department of Legislative Services

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