

Department of Legislative Services  
Maryland General Assembly  
2007 Session

FISCAL AND POLICY NOTE  
Revised

Senate Bill 595

(Senator Garagiola)

Finance

Economic Matters

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Electricity - Net Energy Metering - Renewable Energy Portfolio Standard - Solar  
Energy

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This bill requires the Public Service Commission (PSC) to take certain steps to improve the State's use of solar energy. Updated requirements of the Renewable Energy Portfolio Standard (RPS) include increased amounts of Tier 1 renewable energy to match a required solar generation component. The bill also alters existing limits on customer generators by both increasing the allowed size of a customer-generator, increasing the amount of customer-generated power that electricity suppliers are required to purchase through a standard contract, and ensuring that a customer-generator has the right to renewable energy credits produced.

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**Fiscal Summary**

**State Effect:** Potential decrease in electricity and sales tax revenues. To the extent that electricity rates are impacted, State government expenditures on electricity will be affected.

**Local Effect:** To the extent that electricity rates are impacted, local government expenditures on electricity will be affected.

**Small Business Effect:** An increase in RPS requirements will benefit businesses producing equipment or providing services in the renewable energy industry.

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## Analysis

### **Bill Summary:**

#### *Renewable Energy Portfolio Standard*

The bill increases the percentages of Tier 1 renewable energy to match a newly required Tier 1 solar generation component, commonly known as a “solar band.” An electricity supplier will no longer receive double credit toward meeting the RPS standard for energy derived from solar energy. An electricity supplier that purchases solar credits directly from a solar on-site generator must enter into a contract of at least 15 years, although this does not limit the ability to vary the price of credits over time in any manner. In the case of a small generator, under 10 kilowatts, the electricity supplier must purchase credits with a single up-front payment at a rate consistent with the contract term as determined by PSC. PSC is required to develop a method for estimating annual production from a solar generating facility and a method to determine the rate for a payment made to a solar generating facility consistent with the duration of the contract.

In order to relieve strains on the State’s transmission and distribution facilities in the face of forecasted load growth outstripping the commissioning of new in-State generation and transmission facilities, the bill requires that solar renewable energy credits may only be applied to the renewable energy portfolio standard if they are derived from equipment connected with Maryland’s distribution grid, starting January 1, 2012. The bill also requires the owner of a solar credit who chooses to sell the credit to offer it first to an electricity supplier or electric company to be applied to satisfy the renewable energy portfolio standard in Maryland.

### Renewable Energy Portfolio Standards

<u>Year</u>	<u>Tier 1 Current RPS</u>	<u>Tier 1 RPS SB 595</u>	<u>Tier 1 Solar Component SB 595</u>
2006	1.0%	1.000%	
2007	1.0%	1.000%	
2008	2.0%	2.005%	0.005%
2009	2.0%	2.010%	0.010%
2010	3.0%	3.025%	0.025%
2011	3.0%	3.040%	0.040%
2012	4.0%	4.060%	0.060%
2013	4.0%	4.100%	0.100%
2014	5.0%	5.150%	0.150%
2015	5.0%	5.250%	0.250%
2016	6.0%	6.350%	0.350%
2017	6.0%	6.550%	0.550%
2018	7.0%	7.900%	0.900%
2019	7.5%	8.700%	1.200%
2020	N/A	9.000%	1.500%
2021	N/A	9.350%	1.850%
2022	N/A	9.500%	2.000%

#### *Renewable Energy Fund Compliance Fees*

In accordance with new solar energy component requirements, the bill establishes compliance fees. Compliance fees are still paid to the Maryland Renewable Energy Fund, but any shortfall charges for the solar energy component must be accounted for separately in the fund and may only be used to make loans and grants to support the creation of new solar energy sources in the State. The Maryland Energy Administration must report by February 1 of each year on the status of the fund, including evaluation criteria for grants and loans, amounts received and disbursed, allocation of development grants and loans between solar and other Tier 1 renewable sources, and similar pertinent information. An electricity supplier may request a delay of one year of the scheduled increases in solar energy requirements if the compliance fees are greater than or equal to 1% of the supplier's annual electricity sales revenue.

Compliance fees for solar energy other than that used for industrial process load are \$0.45 per kilowatt-hour in 2008 decreasing every other year by \$0.05 to equal \$0.05 per kilowatt-hour in 2023 and later. Compliance fees for industrial process load and for nonsolar Tier 1 and Tier 2 energy remain the same.

### *Requirements of PSC*

Beginning January 1, 2008, PSC must designate an individual to oversee the fulfillment of enacted solar energy component requirements and develop a program to meet solar energy requirements. The individual will also provide education and outreach to promote the use of solar energy and make policy recommendations to PSC about improving the State's use of solar energy. Clear, simple, and straightforward forms, requirements, and procedures must be developed to facilitate the participation of homeowners and small businesses in development of solar generation in the State.

PSC must convene a small generator interconnections workgroup to facilitate and encourage a simplified connection of small distributed generators to the grid in a manner that ensures the safe and reliable operation of the grid. By November 1, 2007, PSC must revise the State's interconnection standards and procedures to be consistent with nationally adopted standards and procedures.

As part of its annual report due February 1, 2014, PSC must report its findings and recommendations for modification, if any, to RPS requirements based on results of RPS requirements through 2013. PSC must also determine the realized and projected availability of solar renewable energy credits in Maryland, whether intended goals of the RPS provisions are being met, consider the impact of RPS on developing renewable energy in the State, and consider the cost implications of continuing the RPS requirements beyond 2014.

PSC must investigate the benefits to residential customers of using a regulatory rate-making mechanism that separates electric company distribution sales from electric company distribution profits, including a mechanism that allows electric companies to recover fixed distribution costs on a flat rate basis instead of on a consumption basis, a mechanism sometimes referred to as "decoupling."

### *Net Energy Metering*

The capacity limit on the net generation program is increased from 34.722 megawatts to 1,500 megawatts and increases the standard limit on generating capacity for an individual customer-generator from 200 kilowatts to 2 megawatts. The bill provides that the eligible customer-generator owns the renewable energy credits associated with the generation equipment and clarifies that electricity credits accumulated from excess generation expire after 12 months. PSC must consider the generating capacity of the eligible customer-generator when determining whether or not to require installation of dual meters. By February 1 of each year, PSC must report to the Governor and to the General Assembly on the status of the net metering program.

## **Current Law:**

### *Renewable Energy Portfolio*

RPS was established with the intent of recognizing the economic, environmental, fuel diversity, and security benefits of renewable energy resources, establishing a market for electricity from those resources in Maryland, and lowering consumers' cost for electricity from renewable sources. RPS is implemented by PSC and applies to all retail electricity sales in the State by electricity suppliers, subject to certain exceptions.

An electricity supplier must meet RPS by accumulating renewable energy credits (commodities equal to the renewable energy generation attributes of one megawatt-hour of electricity) created from various renewable energy sources classified as Tier 1 and Tier 2 renewable sources. Tier 1 renewable sources include solar, wind, qualifying biomass, methane from the anaerobic decomposition of organic materials in a landfill or wastewater treatment plant, and geothermal sources. Tier 2 renewable sources include hydroelectric power other than pump storage generation, incineration of poultry litter, and waste-to-energy sources.

Electricity suppliers not able to accumulate enough renewable energy credits must pay a specified amount per kilowatt hour for any shortfall from RPS. These compliance fees are paid into the Maryland Renewable Energy Fund, the money from which is intended to be used to make loans and grants for the creation of renewable energy sources in the State. Electricity companies have been allowed to apply for retroactive renewable energy credits for Tier 1 or Tier 2 energy generated in 2004 or 2005. These renewable energy credits can be banked for up to three years, so they can be used for compliance year 2007.

### *Net Energy Metering*

“Net energy metering” is the 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 billing period. An “eligible customer-generator” means a customer that owns and operates a biomass, solar, or wind electrical generating facility that (1) is located on the premises; (2) is interconnected and operated in parallel with an electric companies transmission and distribution facilities; and (3) is intended primarily to offset all or part of the customer's own electricity requirements.

An eligible customer is given credit for the electricity it generates on its monthly bill from the electric company and is billed for the net energy supplied by the electric company. A customer may carry a generation credit if the customer produces more

electricity than used. A generation credit can be held for up to 12 months, but the electric company is not required to pay if the customer's electric generation exceeds the electricity supplied by the grid. The maximum capacity of an electric generating system used for net metering may not exceed 200 kilowatts unless a petition to increase that, not to exceed 500 kilowatts, is filed with and granted by PSC.

**Background:** RPS was established by Chapters 487 and 488 of 2004 and was first applicable to electricity sales in 2006. The Maryland Energy Administration is required to publish an update on the status of the implementation of RPS by February 1 of each year. The first compliance year of RPS concluded on December 31, 2006. Data from electricity suppliers is due by April 1, 2007 so annual compliance and accompanying fees cannot be evaluated at this time.

PSC advises that the cost of renewable energy credits is well below the cost of compliance fees that would have to be paid for a shortfall and therefore expects most electricity suppliers to meet RPS rather than pay compliance fees in fiscal 2007. This is partially due to the availability of retroactive credits. Collection of compliance fees in fiscal 2008 and future years should generally depend on the market price and availability of renewable energy credits.

A recent analysis by the Department of Natural Resources' Power Plant Research Program of available Tier 1 and Tier 2 resources indicates that there are ample Tier 1 and Tier 2 resources in PJM's adjacent states to satisfy Maryland's requirements through 2019. However, beginning in 2011 for Tier 1 and in 2012 for Tier 2, there may be insufficient resources in PJM to satisfy the combined requirements of Pennsylvania, New Jersey and Delaware, especially if New Jersey moves forward with plans to increase its RPS to 18% by 2020.

**State Fiscal Effect:** Electricity customers who generate their own electricity to consume on-site greatly reduce their purchases from their local utility. Since all electric customers pay .062 cents in a tax for each kilowatt hour delivered, any proposals that increase on-site generation will decrease revenues to the general fund. Additionally, nonresidential electricity customers also pay a sales tax of 5% on their purchases of electricity. To the extent that this legislation increases on-site generation for commercial and industrial customers, sales tax receipts will decrease.

**Small Business Effect:** Increasing the solar energy requirements will benefit some businesses in the State. British Petroleum Solar recently completed a \$25 million expansion of its Frederick, Maryland manufacturing facility, doubling its capacity.

## Additional Information

**Prior Introductions:** None.

**Cross File:** None.

**Information Source(s):** Department of Natural Resources, Maryland Energy Administration, Public Service Commission, Department of Legislative Services

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