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FISCAL AND POLICY NOTE
First Reader

Senate Bill 867
Finance

(Senator Nathan-Pulliam)

Public Utilities - Renewable Energy Portfolio Standard - Eligible Sources

This bill prohibits specified energy sources from being eligible for inclusion in the State's renewable energy portfolio standard (RPS) beginning January 1, 2018. The specified sources are (1) qualifying biomass; (2) methane from the anaerobic decomposition of organic materials in a landfill or wastewater treatment plant; (3) a fuel cell that meets specified requirements; (4) poultry litter-to-energy; (5) waste-to-energy; (6) refuse-derived fuel; and (7) thermal energy from a thermal biomass system. Renewable energy credits (RECs) generated by these sources before January 1, 2017, may be used for RPS compliance (RECs have a three-year life span). The bill also alters the definition of "geothermal heating and cooling system" to mean a system that replaces a combustion-based fuel source, rather than a system that replaces a nonnatural gas fuel source. The bill applies only prospectively and may not be applied or interpreted to have any effect on or application to any contract for RECs that existed before the effective date of the bill.

Fiscal Summary

State Effect: The bill does not materially affect State finances or operations.

Local Effect: Beginning as early as FY 2019, local governments that own and operate facilities (or that will own/operate in the future) that use the specified energy sources must sell the associated RECs to other states for compliance in those states, rather than Maryland. To the extent there are no other buyers for the RECs, or other state REC prices are lower, local government revenues decrease due to foregone revenues. The amount in any year cannot be reliably estimated at this time.

Small Business Effect: Meaningful. Small businesses that own, operate, or install the specified systems are negatively affected by the exclusion from RPS eligibility – and potentially some or all of the associated revenue stream from the sale of RECS – under the bill.

Analysis

Current Law: If energy sources meet other specified requirements, they are eligible for inclusion in the State RPS in perpetuity. Tier 1 of the State RPS does not sunset; Tier 2 sunsets at the end of 2018.

“Qualifying biomass” for Tier 1 RPS compliance means a nonhazardous, organic material that is available on a renewable or recurring basis, and is waste material that is segregated from inorganic waste material and is derived from sources including:

- mill residue, except sawdust and wood shavings;
- precommercial soft wood thinning, slash, brush, or yard waste;
- a pallet or crate;
- agricultural and silvicultural sources, including tree crops, vineyard materials, grain, legumes, sugar, and other crop by-products or residue;
- gas produced from the anaerobic decomposition of animal waste or poultry waste; or
- a plant cultivated exclusively for the purpose of being used as a renewable source to produce electricity.

Qualifying biomass does not include old growth timber, unsegregated solid waste or postconsumer wastepaper, or invasive exotic plant species.

“Thermal biomass system” means a system that (1) uses primarily animal manure, including poultry litter, and associated bedding to generate thermal energy, and food waste or qualifying biomass for the remainder of the feedstock; (2) is used in the State; and (3) complies with all applicable State and federal laws and regulations, as determined by the appropriate regulatory authority. Energy from a thermal biomass system is eligible for inclusion in meeting the RPS requirements under specified conditions.

Background: For additional information on Maryland’s RPS, see the **Appendix – Maryland’s Renewable Energy Portfolio Standard**.

According to an RPS comparison [document](#) on the website of PJM Environmental Information Services, Inc., the energy sources removed from Maryland's RPS can potentially be accepted for compliance in one or more other states in the PJM region.

Local Revenues: Beginning as early fiscal 2019, local governments that own and operate facilities (or that will own/operate in the future) that use the specified energy sources must sell the associated RECs to other states for compliance in those states, rather than Maryland. For example, in 2014, 538,000 RECs generated by municipal solid waste facilities owned by Montgomery County were retired for compliance with Maryland's RPS. Landfill gas facilities may also be owned by local governments. The average REC price used for compliance in 2014 was \$11.64.

To the extent there are no other buyers for these RECs, or other state REC prices are lower, local government revenues decrease due to foregone revenues. Montgomery County estimates the maximum revenue loss to the county is \$5.9 million annually – which reflects a complete loss of revenue. However, as noted above, the revenue loss may be mitigated if the county can find another buyer for some or all of its RECs. Therefore, the net effect on local governments cannot be reliably estimated at this time.

Additional Information

Prior Introductions: None.

Cross File: HB 1287 (Delegate Waldstreicher, *et al.*) - Economic Matters.

Information Source(s): Public Service Commission; Office of People's Counsel; Baltimore and Montgomery counties; Maryland Association of Counties; Pennsylvania, New Jersey, Maryland Interconnection, LLC; Department of Legislative Services

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Appendix – Maryland’s Renewable Energy Portfolio Standard

Maryland’s Renewable Energy Portfolio Standard (RPS) was enacted in 2004 to facilitate a gradual transition to renewable sources of energy. Maryland’s RPS operates on a two-tiered system with carve-outs for solar energy and offshore wind energy and corresponding renewable energy credits (RECs) for each tier. Electric companies (utilities) and other electricity suppliers must submit RECs equal to a percentage specified in statute each year or else pay an alternative compliance payment (ACP) equivalent to their shortfall. Over the past few years, the requirements have been met almost entirely through RECs, with negligible reliance on ACPs. The Maryland Energy Administration must use ACPs to support new renewable energy sources.

The percentage requirements gradually increase to a minimum of 20%, including 2% from solar sources, by 2022. The Tier 2 requirement remains constant at 2.5% each year until ending after 2018. In 2016, the requirements are 12.7% for Tier 1 renewable sources, including at least 0.7% from solar energy, and 2.5% from Tier 2 renewable sources.

Generally, a REC is a tradable commodity equal to one megawatt-hour of electricity generated or obtained from a renewable energy generation resource. In other words, a REC represents the “generation attributes” of renewable energy – the lack of carbon emissions, its renewable nature, etc. A REC has a three-year life during which it may be transferred, sold, or redeemed. RECs are classified as Tier 1 or Tier 2, depending on the energy source. Solar and offshore wind are accounted for separately but are considered part of Tier 1. REC generators and electricity suppliers are allowed to trade RECs using a Public Service Commission-approved system known as the Generation Attributes Tracking System, a trading platform designed and operated by PJM Environmental Information Services, Inc. that tracks the ownership and trading of RECs.

Tier 1 sources include wind (onshore and offshore); qualifying biomass; methane from anaerobic decomposition of organic materials in a landfill or wastewater treatment plant; geothermal; ocean, including energy from waves, tides, currents, and thermal differences; a fuel cell that produces electricity from specified Tier 1 renewable sources; a small hydroelectric plant of less than 30 megawatts; poultry litter-to-energy; waste-to-energy; refuse-derived fuel; and thermal energy from a thermal biomass system. Tier 1 Solar sources include photovoltaic cells and residential solar water-heating systems commissioned in fiscal 2012 or later. Following the transfer of several sources to Tier 1, Tier 2 includes only large hydroelectric power plants.

RPS Compliance

According to the most recent RPS compliance [report](#) on PSC's website, electricity suppliers retired approximately 7.8 million RECs at a cost of \$104.0 million for compliance with the 2014 RPS requirements. Of that amount, the Tier 1 Nonsolar cost was \$70.6 million, the Tier 1 Solar cost was \$29.4 million, and the Tier 2 cost was \$4.0 million. The total cost of RPS compliance has increased dramatically since 2009, as shown in **Exhibit 1**. In 2014, the average Tier 1 Nonsolar REC price was \$11.64, and the average Tier 1 Solar REC price was \$144.06.

In 2014, black liquor (29.4%), wind (27.4%), small hydroelectric (17.4%), municipal solid waste (13.6%), and wood and waste solids (5.8%) were the primary energy sources used for RPS compliance.

Exhibit 1 Cost of RECs for RPS Compliance (\$ in Millions)

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Tier 1 Nonsolar	\$1.3	\$1.9	\$6.2	\$12.5	\$32.7	\$70.6
Tier 1 Solar	1.1	5.1	7.8	11.3	21.4	29.4
Tier 2	<u>0.6</u>	<u>0.6</u>	<u>0.6</u>	<u>0.7</u>	<u>2.8</u>	<u>4.0</u>
Total	\$3.1	\$7.6	\$14.7	\$24.5	\$56.8	\$104.0

Note: Numbers may not sum to total due to rounding.

Source: Public Service Commission
