

Department of Legislative Services
Maryland General Assembly
2020 Session

FISCAL AND POLICY NOTE
First Reader

Senate Bill 168
Finance

(Senator Kelley)

Electricity - Renewable Energy Portfolio Standard - Qualifying Biomass

This bill removes mill residue from eligibility for inclusion in the State's Renewable Energy Portfolio Standard (RPS) as a Tier 1 resource. Other eligible sources of qualifying biomass are unchanged. A presently existing obligation or contract right may not be impaired in any way by the bill, which applies to all RPS compliance years beginning January 1, 2021, or later.

Fiscal Summary

State Effect: The Public Service Commission can implement the bill with existing budgeted resources. As discussed below, renewable energy credit (REC) prices are not anticipated to be materially affected and, therefore, neither are State expenditures on electricity. The bill is not anticipated to materially affect special fund revenue from Alternative Compliance Payments.

Local Effect: Minimal.

Small Business Effect: Minimal.

Analysis

Current Law: "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. An electricity supplier receives credit toward meeting RPS for electricity derived from the biomass fraction of biomass co-fired with other fuels.

Background: Much of Maryland’s Tier 1 RPS obligation has historically been met with qualifying biomass – primarily in the form of black liquor and wood waste. However, the proportion has decreased over the past half-decade, with the most recent compliance year data (2018) showing that 15% of Tier 1 RECs were sourced from black liquor. Of those, 91% were from states other than Maryland. For additional information on Maryland’s RPS, see the **Appendix – Renewable Energy Portfolio Standard**.

According to the recent comprehensive [report](#) prepared by the Power Plant Research Program in the Maryland Department of Natural Resources, Maryland is the only state in the region that includes black liquor as an eligible Tier 1 resource besides Pennsylvania, where black liquor facilities must be located in that state to be eligible. Black liquor has a relatively small (1.5% of all qualified RECs) and declining market share in the region and, therefore, it exerts minimal influence over REC prices or the ability to meet RPS requirements.

The sole in-state facility that had produced black liquor RECs used for compliance with Maryland’s RPS, Luke Mill in Allegany County, closed in 2019. Other black liquor RECs have predominantly been sourced from North Carolina, Tennessee, and Virginia – although other states have also contributed.

Additional Information

Prior Introductions: None.

Designated Cross File: HB 98 (Delegate D.E. Davis) - Economic Matters.

Information Source(s): Public Service Commission; Department of Legislative Services

Fiscal Note History: First Reader - January 20, 2020
md/lgc

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Appendix – 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. There are specified eligible (“Tier 1” or “Tier 2”) sources as well as carve-outs for solar and offshore wind. Electric companies (utilities) and other electricity suppliers must submit renewable energy credits (RECs) equal to a percentage specified in statute each year or else pay an alternative compliance payment (ACP) equivalent to their shortfall. Historically, 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.

Chapter 757 of 2019 significantly increased the percentage requirements, which now escalate over time to a minimum of 50% from Tier 1 sources, including 14.5% from solar, by 2030. In 2020, the requirements are 28% for Tier 1 sources, including at least 6.0% from solar, plus 2.5% from Tier 2 sources. Tier 2 terminates after 2020.

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. REC generators and electricity suppliers are allowed to trade RECs using a Public Service Commission (PSC) 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 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. Eligible solar sources include photovoltaic cells and residential solar water-heating systems commissioned in fiscal 2012 or later. 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 11.1 million RECs at a cost of \$84.8 million in 2018. This is a continuation of the significant REC price reduction first observed in the 2017 compliance data, relative to the previous trend, as shown in **Exhibit 1**.

In 2018, wind (50%), black liquor (15%), small hydroelectric (12%), municipal solid waste (12%), and wood and waste solids (6%) were the primary energy sources used for Tier 1 RPS compliance. Maryland facilities generated 5.4 million RECs in 2018, which were used for compliance in Maryland and also in several other states; likewise, Maryland electricity suppliers used RECs from other states for compliance with Maryland’s RPS.

Exhibit 1
RPS Compliance Costs and REC Prices
2014-2018

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Compliance Costs (\$ Millions)					
Tier 1 Nonsolar	\$70.6	\$85.1	\$88.2	\$50.0	\$56.4
Tier 1 Solar	29.4	39.1	45.6	21.3	27.4
Tier 2	<u>4.0</u>	<u>2.6</u>	<u>1.4</u>	<u>0.7</u>	<u>1.0</u>
Total	\$104.0	\$126.7	\$135.2	\$72.0	\$84.8
Average REC Price (\$)					
Tier 1 Nonsolar	\$11.64	\$13.87	\$12.22	\$7.14	\$6.54
Tier 1 Solar	\$144.06	\$130.39	\$110.63	\$38.18	\$31.91
Tier 2	\$1.81	\$1.71	\$0.96	\$0.47	\$0.66

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

REC: renewable energy credit

RPS: Renewable Energy Portfolio Standard

Source: Public Service Commission

Pursuant to Chapter 393 of 2017, the Power Plant Research Program in the Department of Natural Resources has released its final report on a comprehensive study of the RPS. The report contains historical data but also looks at future scenarios. The report can be found [here](#) or on the department’s website.