

Department of Legislative Services
Maryland General Assembly
2019 Session

FISCAL AND POLICY NOTE
First Reader

House Bill 601 (Delegate D.E. Davis)
Economic Matters

Renewable Energy Portfolio Standard - Tier 1 Eligibility

This bill adds hydroelectric sources formerly eligible for Tier 2 of the State’s Renewable Energy Portfolio Standard (RPS) into Tier 1. Specifically, hydroelectric sources of any size, except for pumped storage, that otherwise meet standard eligibility requirements qualify as a Tier 1 resource under the bill. **The bill takes effect July 1, 2019, and applies to all RPS compliance years beginning January 1, 2020.**

Fiscal Summary

State Effect: The addition of large hydroelectric sources as a Tier 1 resource likely reduces renewable energy credit (REC) prices and, therefore, State expenditures on electricity, beginning in FY 2020; however, the amount cannot be reliably estimated at this time. The bill does not otherwise materially affect State finances or operations.

Local Effect: Local governments may benefit from reduced expenditures on electricity beginning in FY 2020; however, the amount cannot be reliably estimated at this time.

Small Business Effect: Potential meaningful. Small businesses may benefit from reduced expenditures on electricity; however, the amount cannot be reliably estimated at this time.

Analysis

Current Law/Background: Maryland’s RPS requires that renewable sources generate specified percentages of Maryland’s electricity supply each year, increasing to 25% by 2020, including 2.5% from solar energy. Eligible (“Tier 1”) energy sources remain eligible for inclusion in the State RPS in perpetuity. For additional information on Maryland’s RPS, see the **Appendix – Maryland’s Renewable Energy Portfolio Standard.**

Hydroelectric sources must be less than 30 megawatts to be a Tier 1 resource. Larger hydroelectric sources other than pumped storage used to be eligible for Tier 2; however, Tier 2 terminated at the end of 2018. Prior to termination, Tier 2 compliance was comprised solely of RECs from large hydroelectric sources.

As of June 2018, there were approximately 8,300 megawatts of hydroelectric in the PJM region – the primary geographic eligibility area for the RPS.

State Fiscal Effect: The addition of large hydroelectric sources as a Tier 1 resource likely reduces REC prices and, therefore, State expenditures on electricity, beginning in fiscal 2020; however, the amount cannot be reliably estimated at this time. The State uses about 1.5 million megawatt-hours of electricity per year, out of a statewide total of about 60 million megawatt-hours. While it is unknown how much the bill will ultimately decrease electricity prices, for every \$30 million decrease in total electric costs in the State (50 cents per megawatt-hour), State expenditures for electricity decrease by about \$750,000.

Additional Information

Prior Introductions: None.

Cross File: SB 350 (Senator Klausmeier, *et al.*) - Finance.

Information Source(s): Public Service Commission; Federal Energy Regulatory Commission; PJM Interconnection, LLC; Department of Legislative Services

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sb/lgc

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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. There are specified eligible (“Tier 1”) 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.

The percentage requirements gradually increase to a minimum of 25%, including 2.5% from solar sources, by 2020. In 2019, the requirements are 20.4%, including at least 1.95% from solar energy.

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-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.

Prior to 2019, there was also a Tier 2 in the RPS, with separate percentage requirements (2.5% annually). Tier 2, which eventually included only large hydroelectric power plants, provided a smaller monetary incentive than Tier 1 and terminated at the end of 2018.

RPS Compliance

According to the most recent RPS compliance [report](#) on PSC’s website, electricity suppliers retired approximately 9.0 million RECs at a cost of \$72.0 million in 2017. This is a significant decrease in costs and a deviation from the previous trend, as shown in **Exhibit 1**. Costs in 2016 and 2017 were based on a comparable total number of RECs; the decrease in compliance cost was due to REC prices. The price of nonsolar RECs used for compliance decreased from \$12.22 to \$7.14 during those years. Solar RECs prices decreased even more substantially, from \$110.63 to \$38.18.

In 2017, wind (43%), black liquor (24%), small hydroelectric (13%), municipal solid waste (10%), and wood and waste solids (7%) were the primary energy sources used for RPS compliance. Maryland facilities generated about 4.3 million RECs in 2017, 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 Cost of RECs for RPS Compliance (\$ in Millions)

	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Tier 1 Nonsolar	\$12.5	\$32.7	\$70.6	\$85.1	\$88.2	\$50.0
Tier 1 Solar	11.3	21.4	29.4	39.1	45.6	21.3
Tier 2	<u>0.7</u>	<u>2.8</u>	<u>4.0</u>	<u>2.6</u>	<u>1.4</u>	<u>0.7</u>
Total	\$24.5	\$56.8	\$104.0	\$126.7	\$135.2	\$72.0

Note: Numbers may not sum to total due to rounding. Tier 2 terminated at the end of 2018.

REC: renewable energy credits

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 December 2018 interim 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.