Department of Legislative Services

Maryland General Assembly
2020 Session

FISCAL AND POLICY NOTE
First Reader

Senate Bill 1032 (Senator Klausmeier)
Finance

Renewable Energy Portfolio Standard - Hydroelectric Power

This bill doubles the maximum size of hydroelectric sources eligible for "Tier 1" of the State's Renewable Energy Portfolio Standard (RPS), from 30 megawatts to 60 megawatts; other eligibility requirements are unchanged. The bill also indefinitely extends "Tier 2" of the RPS beyond its current expiration at the end of 2020. The current Tier 2 percentage requirement is maintained at 2.5%, which makes the combined RPS total 2.5 percentage points more than under current law beginning in 2021.

Fiscal Summary

State Effect: The bill does not materially affect State finances or operations; the effects on electricity prices are likely minimal.

Local Effect: The bill does not materially affect local government finances or operations.

Small Business Effect: Minimal.

Analysis

Current Law/Background: Maryland's 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 a fee equivalent to their shortfall. 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, which includes only large hydroelectric sources, terminates after 2020.

According to PSC, the bill expands Tier 1 eligibility to 27 additional hydroelectric facilities, none of which are in Maryland. The Department of Legislative Services advises that increasing the supply of Tier 1 RECs places downward pressure on Tier 1 REC prices and, therefore, overall compliance costs. The effects are most likely minimal.

Costs associated with Tier 2 compliance averaged about $2.1 million annually from 2013 through 2018, with a low of $0.7 million and a high of $4.0 million. In total, the State uses about 60 million megawatt-hours of electricity per year, making the compliance cost of Tier 2 roughly 3.5 cents per megawatt-hour over that time. The average residential customer uses approximately one megawatt-hour of electricity per month.

There are two Tier 1 hydroelectric facilities and one Tier 2 facility in the State – both under current law and the bill. In 2018, 78% of Tier 1 hydroelectric RECs and 66% of Tier 2 RECs used for RPS compliance were generated out-of-state.

For more general information, see the **Appendix – Renewable Energy Portfolio Standard.**

Additional Information

Prior Introductions: HB 601 of 2019, a similar bill as amended, passed the House as amended and passed second reading in the Senate as amended, but no further action was taken.

Designated Cross File: None.

Information Source(s): Public Service Commission; Office of People's Counsel; Department of Legislative Services

Fiscal Note History: First Reader - March 10, 2020
mr/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.

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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

	2014	2015	2016	2017	2018
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	4.0	2.6	1.4	0.7	1.0
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

REC: renewable energy credit
RPS: Renewable Energy Portfolio Standard

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

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.