HB 467

Department of Legislative Services

Maryland General Assembly
2021 Session

FISCAL AND POLICY NOTE
Third Reader - Revised

House Bill 467 (Delegate Rogers)
Economic Matters Rules

Renewable Energy Portfolio Standard - Alterations and Compliance Fees

This bill reduces the amount of solar energy required under the State Renewable Energy Portfolio Standard (RPS) each year from 2022 through 2029, while leaving the nonsolar requirement generally unchanged, before realigning with current law beginning in 2030. The relative difference is more pronounced in the near-term. The bill also increases solar alternative compliance payments (ACPs) beginning in 2023, before gradually returning to near-parity with current law by 2030. Nonsolar ACPs are unchanged. The bill also continues Tier 2 in perpetuity at 2.5% beginning in 2021; Tier 2 is in addition to Tier 1. The bill must be construed to apply retroactively and must be applied to and interpreted to affect all compliance years that begin on or after January 1, 2021. A presently existing obligation or contract right may not be impaired in any way by the bill. **The bill takes effect June 1, 2021.**

Fiscal Summary

State Effect: No effect in FY 2021. The Public Service Commission can handle the bill's requirements with existing budgeted resources. The effect on State expenditures for electricity is discussed in the Additional Comments section below.

Local Effect: The effect on local expenditures for electricity is discussed in the Additional Comments section below. Revenues are not directly affected.

Small Business Effect: Potential meaningful, as discussed in the Additional Comments section below.

Analysis

Bill Summary/Current Law: Changes to the RPS are shown in **Exhibit 1**.

Exhibit 1
Annual Tier 1 RPS Specifications
Curent Law vs. the Bill

	Percentage of Retail Sales				Alternative Compliance Payments[1]			
	Current Law		The Bill		Current Law		The Bill	
Year	Total[2]	Solar	Total	Solar	Nonsolar	Solar	Nonsolar	Solar
2022	33.10%	8.50%	30.10%	5.50%	30.00	60.00	30.00	60.00
2023	35.40%	9.50%	31.90%	6.00%	30.00	45.00	30.00	60.00
2024	37.70%	10.50%	33.70%	6.50%	27.50	40.00	27.50	60.00
2025	40.00%	11.50%	35.50%	7.00%	25.00	35.00	25.00	55.00
2026[3]	42.50%	12.50%	38.00%	8.00%	24.75	30.00	24.75	45.00
2027	45.50%	13.50%	41.50%	9.50%	24.50	25.00	24.50	35.00
2028	47.50%	14.50%	43.00%	11.00%	22.50	25.00	22.50	32.50
2029	49.50%	14.50%	47.50%	12.50%	22.50	22.50	22.50	25.00
2030+	50.00%	14.50%	50.00%	14.50%	22.35	22.35	22.35	22.50

RPS: Renewable Energy Portfolio Standard

[1] Dollars per megawatt-hour.

[2] Total columns include solar and offshore wind and reflect Tier 1 only. The bill also continues Tier 2 at 2.5% beginning in 2021.

[3] New offshore wind capacity is required beginning with at least 400 megawatts in 2026, increasing to at least 800 megawatts in 2028, and to at least 1,200 megawatts in 2030. The bill does not change these requirements.

Source: Department of Legislative Services

Tier 2 of Maryland's RPS first expired at the end of 2018 but was subsequently reinstated by Chapter 757 of 2019. The reinstatement was effective from October 1, 2019, through 2020, which left a nine-month gap. Prior to its expiration, Tier 2 included only large hydroelectric sources. There is one facility in the State that qualifies as Tier 2 – at Conowingo Dam. For more general information, including the historic costs RPS compliance, see the **Appendix – Renewable Energy Portfolio Standard**.

Additional Comments (Electricity Prices): Holding other factors constant, significantly reducing demand for solar renewable energy credits (SRECs) under the bill should also reduce their price, even if the ACP is increased, unless the market is in very short supply. Put another way, the bill should decrease both the quantity and price of SRECs, unless there is such a significant shortage that prices rise as far as ACPs allow. Even so, as shown in **Exhibit 2**, the bill generally reduces the maximum potential solar compliance cost from 2022 through 2029, even at maximum ACPs under both scenarios.

Exhibit 2
Maximum Potential Compliance Costs, Solar Carve-out
Current Law vs. the Bill

	Current Law	The Bill	Difference	$/Megawatt-hour
2022	$306,000,000	$198,000,000	-$108,000,000	-$1.80
2023	256,500,000	216,000,000	-40,500,000	-0.68
2024	252,000,000	234,000,000	-18,000,000	-0.30
2025	241,500,000	231,000,000	-10,500,000	-0.18
2026	225,000,000	216,000,000	-9,000,000	-0.15
2027	202,500,000	199,500,000	-3,000,000	-0.05
2028	217,500,000	214,500,000	-3,000,000	-0.05
2029	195,750,000	187,500,000	-8,250,000	-0.14
2030+	194,445,000	195,750,000	1,305,000	0.02

RPS: Renewable Energy Portfolio Standard

Note: Maximum compliance cost is estimated using the percentage each year that must come from solar under the RPS and the maximum theoretical price of each SREC (the ACP). Energy use is assumed to be 60 million megawatt-hours annually. The average residential household uses one megawatt-hour of electricity per month. The Department of Legislative Services cannot advise on the likelihood of the State approaching the maximum potential compliance cost in any year under either current law or the bill.

Source: Department of Legislative Services

The SREC effect begins mid-fiscal 2022 and continues through mid-fiscal 2030; however, the Department of Legislative Services cannot advise on the likelihood of any particular reduction in actual compliance costs due to the bill. Still, based on the potential maximum compliance costs for solar over the next several years, the effect is potentially significant/meaningful for State and local governments and small businesses. Historically, the cost of Tier 2 has had a negligible effect on rates.

For illustrative purposes only, in 2022, accounting for the three percentage point reduction in overall SREC demand, if the bill reduces SREC prices from $60 (the maximum theoretical amount) to $45, overall compliance costs would be reduced by $158 million, or about $2.63 per megawatt-hour. The State government uses about 1.5 million megawatt-hours of electricity each year.

Additional Information

Prior Introductions: None.

Designated Cross File: SB 316 (Senator Klausmeier, *et al.*) - Finance.

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

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Analysis by: Stephen M. Ross

Direct Inquiries to:
(410) 946-5510
(301) 970-5510

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 2021, the requirements are 30.8% for Tier 1 sources, including at least 7.5% from solar. Tier 2, which has been extended several times, terminated 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, when it was in effect, eventually included only large hydroelectric power plants.

RPS Compliance

According to the most recent RPS compliance report on PSC's website, electricity suppliers retired 11.4 million RECs at a cost of $134.5 million in 2019, as average REC prices rose from their 2018 levels, as shown in **Exhibit 1**.

Exhibit 1
RPS Compliance Costs and REC Prices
2015-2019

	2015	2016	2017	2018	2019
Compliance Costs ($ Millions)					
Tier 1 Nonsolar	$85.1	$88.2	$50.0	$56.4	$79.3
Tier 1 Solar	39.1	45.6	21.3	27.4	55.2
Tier 2	2.6	1.4	0.7	1.0	.06
Total	**$126.7**	**$135.2**	**$72.0**	**$84.8**	**$134.5**
Average REC Price ($)					
Tier 1 Nonsolar	$13.87	$12.22	$7.14	$6.54	$7.77
Tier 1 Solar	$130.39	$110.63	$38.18	$31.91	$47.26
Tier 2	$1.71	$0.96	$0.47	$0.66	$1.05

REC: renewable energy credit
RPS: Renewable Energy Portfolio Standard

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

Source: Public Service Commission

In 2019, wind (43%), black liquor (23%), small hydroelectric (11%), municipal solid waste (11%), and wood and waste solids (7%) were the primary energy sources used for Tier 1 RPS compliance. Maryland facilities generated 4.7 million RECs in 2019: approximately 2.5 million Tier 1 RECs and 2.2 million Tier 2 RECs. Many RECs can be used for compliance in both Maryland and other surrounding states, although there are geographic and energy source restrictions.

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.