

Department of Legislative Services
Maryland General Assembly
2020 Session

FISCAL AND POLICY NOTE
First Reader

House Bill 494 (Delegate Cox, *et al.*)
Economic Matters

Renewable Energy Portfolio Standard - Solar Energy - Municipal Electric
Utilities

This bill limits the annual percentage of the State’s Renewable Energy Portfolio Standard (RPS) that must be derived from solar energy for municipal electric utilities to 2.5%. **The bill takes effect June 1, 2020.**

Fiscal Summary

State Effect: No effect in FY 2020. The Public Service Commission can implement the bill with existing budgeted resources. Solar renewable energy credit (SREC) prices are not anticipated to be materially affected, and, therefore, neither are State expenditures on electricity – although there is a slight downward pressure on SREC prices. The bill is not anticipated to materially affect special fund revenue from Alternative Compliance Payments.

Local Effect: Local expenditures for SRECs by municipal electric utilities in Frederick, Talbot, Washington, and Worcester counties decrease minimally in FY 2020, by \$1.8 million annually from FY 2021 through 2023, by \$2.2 million in FY 2024, and by \$2.5 million in FY 2025. Local revenues are not directly affected.

Small Business Effect: Minimal.

Analysis

Current Law: Municipal electric utilities are not exempt from Maryland’s RPS – the solar carve-out or otherwise. Electric cooperatives are exempt from future increases to the solar portion beyond 2.5%. The RPS also does not apply to a customer served by an electric

cooperative under an electricity supplier purchase agreement that existed on October 1, 2004, until the expiration of the agreement, as the agreement may be renewed or amended (*i.e.*, a customer of Choptank Electric Cooperative). For other electricity suppliers, the solar requirement is 6.0% in 2020. That amount increases over time, eventually reaching 14.5% in 2030 and later.

Background: There are five municipal electric utilities in the State: Berlin (Worcester County), Easton (Talbot County), Hagerstown (Washington County), Thurmont (Frederick County), and Williamsport (Washington County). Combined, these five utilities are forecast to supply about 735,000 to 750,000 megawatt-hours of electricity annually over the coming decade. For context, that is about 1.2% to 1.3% of the State's estimated energy sales in those years. For additional information on Maryland's RPS, see the **Appendix – Renewable Energy Portfolio Standard**.

Local Expenditures: Limiting the solar requirement to 2.5% reduces the number of SRECs that municipal electric utilities must purchase for RPS compliance each year. Using forecast SREC prices from a recent comprehensive [report](#) prepared by the Power Plant Research Program in the Department of Natural Resources, combined local expenditures decrease minimally in fiscal 2020, by \$1.8 million annually from fiscal 2021 through 2023, by \$2.2 million in fiscal 2024, and by \$2.5 million in fiscal 2025. Expenditures also continue to be less than they otherwise would have been thereafter. These effects are shown in **Exhibit 1**.

Exhibit 1
Combined SREC Expenditures by Municipal Electric Utilities
Fiscal 2021-2025

<u>Calendar Year</u>	<u>Solar % Difference</u>	<u>Energy Sales (Mwh)</u>	<u>SRECs Required</u>	<u>SREC Price (\$)</u>	<u>Calendar Year (\$)</u>	<u>Fiscal Year</u>	<u>Fiscal Year (\$)</u>
2021	-5.0%	738,000	-36,900	\$55.00	-\$2,029,500	2021	-\$1,754,344
2022	-6.0%	740,000	-44,400	37.50	-1,665,000	2022	-1,847,250
2023	-7.0%	743,000	-52,010	38.33	-1,993,543	2023	-1,829,271
2024	-8.0%	745,000	-59,600	39.17	-2,334,532	2024	-2,164,037
2025	-9.0%	748,000	-67,320	40.03	-2,694,820	2025	-2,514,676

Mwh: Megawatt-hour
SREC: solar renewable energy credit

Notes: There are five municipal electric utilities in the State: Berlin (Worcester County), Easton (Talbot County), Hagerstown (Washington County), Thurmont (Frederick County), and Williamsport (Washington County). Calendar-to-fiscal year conversion splits annual compliance costs evenly between fiscal years. Fiscal 2021 cost includes the second half of calendar 2020.

Source: Public Service Commission; Department of Natural Resources; Department of Legislative Services

Additional Information

Prior Introductions: None.

Designated Cross File: None.

Information Source(s): Public Service Commission; Office of People’s Counsel; Department of Natural Resources; Maryland Municipal League; Department of Legislative Services

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an/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.