

Department of Legislative Services
Maryland General Assembly
2024 Session

FISCAL AND POLICY NOTE
First Reader

Senate Bill 146 (Senator Lewis Young, *et al.*)
Education, Energy, and the Environment

Renewable Energy Portfolio Standard - Eligible Sources - Alterations (Reclaim
Renewable Energy Act of 2024)

This bill removes waste-to-energy and refuse-derived fuel from eligibility for inclusion in the State Renewable Energy Portfolio Standard (RPS). The bill, which applies to all RPS compliance years starting on or after January 1, 2024, may not be construed to impair an existing obligation or contract right.

Fiscal Summary

State Effect: The Public Service Commission (PSC) can implement the bill with existing budgeted resources. The bill does otherwise materially affect State finances or operations. The potential effect on electricity prices is discussed in the Additional Comments section below.

Local Effect: Beginning as early as FY 2024, revenues potentially decrease for local governments that own and operate facilities that use the energy sources removed from the RPS, as discussed below. The potential effect on electricity prices is discussed in the Additional Comments section below.

Small Business Effect: Minimal. The potential effect on electricity prices is discussed in the Additional Comments section below.

Analysis

Current Law: Waste-to-energy and refuse-derived fuel are eligible Tier 1 resources under the State RPS. The terms are not further defined in statute or regulation. Annual RPS

compliance reports by PSC categorize “waste-to-energy” in statute as “municipal solid waste” – the Maryland facilities being Wheelabrator in Baltimore City and a Montgomery County-owned incinerator.

For general information on the State RPS, including a list of eligible Tier 1 sources and trends in renewable energy credit (REC) prices and sources, see the **Appendix – Renewable Energy Portfolio Standard**.

Local Fiscal Effect: Beginning as early as fiscal 2024, local governments that own and operate either of the specified Tier 1 energy sources (or that will own/operate such facilities in the future) must sell the associated RECs to other states for compliance in other states, rather than Maryland, if they wish to continue receiving revenue. To the extent there are no other buyers for these RECs, or other state REC prices are lower than Maryland’s, local government revenues decrease. However, the net effect on any particular local government cannot be reliably estimated at this time, as prices are unknown.

Montgomery County owns a waste-to-energy incinerator. As a result, the bill’s removal of waste-to-energy as an eligible source of RECs could reduce revenues. About 300,000 to 400,000 RECs from the facility have been retired for RPS compliance annually in recent years.

Montgomery County did not respond to repeated requests for information for this fiscal and policy note; however, separately, the Northeast Maryland Waste Disposal Authority advises that Montgomery County received \$10.3 million in REC revenue from its facility in fiscal 2023 and \$6.5 million in fiscal 2022. Nevertheless, REC prices are volatile, and it is unclear what, if any, revenue waste-to-energy RECs could generate in other states, the net revenue loss cannot be reliably estimated at this time.

This analysis does not include any effects associated with private waste-to-energy companies, such as the Wheelabrator facility in Baltimore City. While not a direct effect of the bill, if that facility were to close, Baltimore City finances and operations as they relate to waste management would be significantly affected.

Additional Comments: According to PSC’s most recent RPS compliance report, municipal solid waste (“waste-to-energy”) accounted for 6.9% of Tier 1 RECs used for compliance in 2022. No RECs from refuse-derived fuel facilities were used. The extent to which their removal increases RPS compliance costs depends on the prices and quantity of available replacement RECs. Most likely, the State will continue the multi-year trend of growing reliance on wind RECs to meet RPS requirements with negligible impacts on REC prices. As a result, the bill likely has a minimal impact on compliance costs and, by extension, a minimal impact on customer electricity rates. Therefore, the impact on expenditures on electricity for State and local governments and small businesses is also anticipated to be small.

Additional Information

Recent Prior Introductions: Similar legislation has been introduced within the last three years. See SB 616 of 2022 and HB 332 of 2021.

Designated Cross File: HB 166 (Delegate Stewart, *et al.*) - Economic Matters.

Information Source(s): Public Service Commission; Department of Public Safety and Correctional Services; Maryland Energy Administration; Northeast Maryland Waste Disposal Authority; Anne Arundel, Baltimore, and Frederick counties; City of Annapolis; Maryland Association of Counties; Maryland Municipal League; Department of Legislative Services.

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rh/lgc

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Appendix – Renewable Energy Portfolio Standard

General Overview

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, offshore wind, and geothermal. Electric companies (utilities) and other electricity suppliers must submit renewable energy credits (RECs) equal to a percentage of their retail electricity sales specified in statute each year or else pay an alternative compliance payment (ACP) equivalent to their shortfall. Historically, RPS requirements have been met almost entirely through RECs, with negligible reliance on ACPs; however, as discussed further below, that has not been the case recently. The Maryland Energy Administration must use ACPs for purposes related to renewable energy, as specified.

In 2024, the requirements are 33.7% from Tier 1 sources, including at least 6.5% from solar and 0.15% from post-2022 geothermal systems, plus 2.5% from Tier 2 sources.

Recent Significant Changes to Overall Percentage Requirements

- 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.
- Chapter 673 of 2021 reduced the amount of solar energy required under the RPS each year from 2022 through 2029, while leaving the nonsolar requirement generally unchanged, before realigning with the previous requirements beginning in 2030. The Act also extended Tier 2 in perpetuity at 2.5%.
- Chapter 164 of 2021 created a carve-out for post-2022 geothermal systems in Tier 1 beginning in 2023.

Limited Applicability to Municipal Electric Utilities and Electric Cooperatives

As RPS percentage requirements have grown over time, legislation has been enacted to limit the effect on municipal electric utilities and electric cooperatives. Tier 1 percentage requirements for municipal electric utilities are limited to 20.4% in total beginning in 2021, including at least 1.95% from solar energy and up to 2.5% from offshore wind. Municipal electric utilities are also exempt from Tier 2 after 2021. Electric cooperatives are exempt

from future increases to the solar carve-out beyond 2.5%, and the RPS does not apply to Choptank Electric Cooperative.

Renewable Energy Credits

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.

Eligible Sources

Tier 1 sources include wind (onshore and offshore); solar (photovoltaic and certain water-heating systems); 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; thermal energy from a thermal biomass system; and raw or treated wastewater used as a heat source or sink for heating or cooling. Tier 2 includes only large hydroelectric power plants.

Chapter 673 of 2021 excluded black liquor, or any product derived from black liquor, from Tier 1 beginning in 2022.

Trends in Compliance Costs, Renewable Energy Credit Prices, and Resources Used

Compliance costs for electricity suppliers totaled \$438.8 million in 2022: \$332.7 million for 15.2 million RECs; and \$77.1 million in ACPs. Costs and RECs are shown in **Exhibit 1**. This continues a multi-year trend of increasing compliance costs and, generally, average REC prices.

In 2021, wind (50.8%), solar (13.2%), black liquor (12.5%), small hydroelectric (8.0%), and municipal solid waste (6.4%) were the primary energy sources used for Tier 1 RPS compliance. This continues a multi-year trend of increasing reliance on wind and solar energy. Maryland facilities generated 5.0 million RECs in 2021: approximately 2.9 million Tier 1 RECs; and 2.1 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.

Exhibit 1
RPS Compliance Costs and REC Prices
2017-2022

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Compliance Costs (\$ Millions)						
Tier 1 Nonsolar RECs	\$50.0	\$56.4	\$79.3	\$99.8	\$187.3	\$246.5
Tier 1 Solar RECs	21.3	27.4	55.2	122.9	144.4	101.4
Tier 2 RECs	0.7	1.0	0.06	0.4	1.0	4.4
ACPs	<u>0.1</u>	<u>0.1</u>	<u>7.7</u>	<u>0.1</u>	<u>77.1</u>	<u>86.6</u>
Total	\$72.1	\$84.9	\$142.3	\$223.2	\$409.8	\$438.8
Average REC Price (\$)						
Tier 1 Nonsolar	\$7.14	\$6.54	\$7.77	\$8.24	\$14.36	\$17.80
Tier 1 Solar	38.18	31.91	47.26	66.10	72.59	57.80
Tier 2	0.48	0.66	1.05	1.06	6.45	7.42

ACP: alternative compliance payment
 REC: renewable energy credit
 RPS: Renewable Energy Portfolio Standard

Note: Numbers may not sum to total due to rounding. The vast majority of ACPs in 2021 and 2022 (\$76.9 million and \$85.9 million, respectively) were due to a shortfall of solar RECs.

Source: Public Service Commission

Related Studies and Reports

PSC must submit an RPS compliance report to the General Assembly each year. The most recent report, which contains historical data through 2022, can be found [here](#).

The Power Plant Research Program (PPRP) in the Department of Natural Resources has frequently been required to conduct RPS studies. PPRP submitted a final report on a comprehensive RPS study in December 2019, which can be found [here](#). PPRP also submitted a related required study on nuclear energy at that time, which can be found [here](#). A supplemental study on the overall costs and benefits of increasing the RPS to a goal of 100% by 2040 was due by January 1, 2024, but has been [delayed](#).

The Department of Legislative Services also issued a report on the RPS in 2023, which can be found [here](#). The report contains additional detail on the program, significant statutory changes, and visualizations of planned and actual RPS percentage requirements over time.