

Department of Legislative Services  
Maryland General Assembly  
2023 Session

FISCAL AND POLICY NOTE  
Enrolled - Revised

Senate Bill 469

(Senators Elfreth and Guzzone)

Budget and Taxation

Ways and Means

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Task Force to Study Solar Incentives

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This bill establishes a Task Force to Study Solar Incentives, staffed by the Maryland Energy Administration (MEA). Among other things, the task force must study the impact of existing solar incentives and make recommendations regarding measures and incentives needed to ensure that (1) the State meets the solar energy goals established in the State's renewable energy portfolio standard (RPS) and (2) specified other objectives are met. The task force is required to report its findings and recommendations to the General Assembly by December 15, 2023. **The bill takes effect July 1, 2023, and terminates June 30, 2024.**

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Fiscal Summary

**State Effect:** MEA can staff the task force and provide any expense reimbursements for task force members with existing budgeted resources. No effect on revenues.

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

**Small Business Effect:** None.

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Analysis

**Bill Summary:** The task force must study:

- the impact of solar grant programs, tax credits and exemptions, classification of solar energy property for assessment purposes, solar renewable energy credits, and other financial incentives on the State's ability to meet the solar energy goals established in the RPS;

- the impact of federal solar energy incentives and how to maximize the benefit of federal solar energy incentives in Maryland;
- how the solar alternative compliance fee under the RPS is calculated and its market relationship to the value of solar renewable energy credits; and
- whether different levels or types of incentives should exist for different types of solar development, including customer-sited residential and nonresidential, aggregated net metered, community, and utility scale, based on cost variance and other factors.

The task force must make recommendations regarding measures and incentives needed to ensure (1) that the State meets the solar energy goals established in the RPS; (2) minority business enterprise participation in solar development in the State; (3) that solar development in the State creates good quality, family-sustaining jobs with training and outreach focused on the communities in which solar development is occurring; (4) equitable access to renewable energy in the State; and (5) the efficient use of land in the State by maximizing the production of solar energy on previously developed property, including rooftops, parking canopies, and brownfields sites or energy or transportation rights of way.

To the extent practicable, the membership of the task force must reflect the racial, gender, ethnic, and geographic diversity of the State. Members of the task force may not receive compensation but are entitled to reimbursement for expenses under the standard State travel regulations. The Director of MEA must designate the chair of the task force.

### **Current Law:**

#### *Solar Incentives*

There are various State and federal solar energy incentives. The Database of State Incentives for Renewables & Efficiency lists [47 State and federal solar incentives](#) that are applicable in Maryland or have been in the recent past, including both financial incentives and regulatory policies. State financial incentives include sales and use tax and property tax incentives, as well as grant and rebate programs funded by the [Strategic Energy Investment Fund](#) (SEIF). Chapters 127 and 128 of 2008 created the Maryland Strategic Energy Investment Program and the implementing SEIF to decrease energy demand and increase energy supply to promote affordable, reliable, and clean energy. SEIF is funded through the proceeds from the auction of carbon allowances under the Regional Greenhouse Gas Initiative, and the fund also receives revenues from compliance fees – often referred to as alternative compliance payments (ACPs) – generated under the RPS.

## *Renewable Energy Portfolio Standard and Alternative Compliance Payments*

Maryland's RPS requires that renewable sources generate specified percentages of Maryland's electricity supply each year, including specified percentages that must be generated specifically from solar energy. Electric companies (utilities) and other electricity suppliers must submit renewable energy credits equal to these percentages in each year or else pay an ACP equivalent to the shortfall. ACP revenues are deposited into SEIF and may only be used to make loans and grants to support the creation of new Tier 1 renewable energy sources in the State that are owned by or directly benefit low-income residents of the State. Solar ACPs must be accounted for separately in the fund and may only be used to make loans and grants to support the creation of new solar energy sources in the State that are owned by or directly benefit low-income residents of the State.

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

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### **Additional Information**

**Prior Introductions:** Similar legislation has not been introduced within the last three years.

**Designated Cross File:** None.

**Information Source(s):** Maryland Energy Administration; Database of State Incentives for Renewables & Efficiency (operated by the North Carolina Clean Energy Technology Center at North Carolina State University); Department of Legislative Services

**Fiscal Note History:** First Reader - February 17, 2023  
km/sdk Third Reader - March 21, 2023  
Revised - Amendment(s) - March 21, 2023  
Enrolled - May 10, 2023  
Revised - Amendment(s) - May 10, 2023

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# Appendix – Renewable Energy Portfolio Standard

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## *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, beginning in 2023, new geothermal systems. 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 was not the case in 2021. The Maryland Energy Administration must use ACPs for purposes related to renewable energy, as specified.

In 2023, the requirements are 31.9% from Tier 1 sources, including at least 6.0% from solar and 0.05% 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 \$409.8 million in 2021: \$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.

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**Exhibit 1**  
**RPS Compliance Costs and REC Prices**  
**2017-2021**

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

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 (\$76.9 million out of \$77.1 million in total) were due to a shortfall of solar RECs.

Source: Public Service Commission

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*Related Studies Reports*

PSC must submit an RPS compliance report to the General Assembly each year. The most recent report, which contains historical data through 2021, 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 is due by January 1, 2024.