

Department of Legislative Services
Maryland General Assembly
2022 Session

FISCAL AND POLICY NOTE
First Reader

Senate Bill 902
Finance

(Senator Hershey)

Dams With Hydroelectric Power Plants – Annual Compensation Fee

This bill requires, beginning January 1, 2023, that the owner of a dam associated with a hydroelectric power plant that has a generating capacity of at least 30 megawatts and is connected with the electric distribution grid serving Maryland pay a specified annual compensation fee to the Maryland Department of the Environment (MDE) for the use of State land and waterways. The owner of the dam may not apply to or petition the Public Service Commission (PSC) to increase the hydroelectric power plant's electricity rates as a means of offsetting the cost of the compensation fee. MDE must transfer revenue generated from the compensation fee to the Chesapeake Bay Trust (CBT) to be used for the administration of grants for aquatic species restoration and for grants to county oyster committees for purchasing or obtaining native Chesapeake Bay oyster shells. PSC and MDE must adopt regulations to implement the bill.

Fiscal Summary

State Effect: The bill does not directly affect State finances, as discussed below.

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

Small Business Effect: Potential meaningful.

Analysis

Bill Summary: The compensation fee must be calculated on an annual basis and computed by multiplying (1) the megawatt-hours (MWh) of electricity generated by the hydroelectric power plant during the previous year; (2) the average price of a Tier 2 renewable energy

credit (REC) for the previous Renewable Energy Portfolio Standard (RPS) compliance year, as determined by PSC; and (3) 80%. The compensation fee paid in 2023 must include a fee for the use of State land and waterways in the 2020 and 2021 calendar years based on the same formula, but using electricity generated during those years, respectively, and the average Tier 2 REC prices for those RPS compliance years, respectively.

By January 1, 2023, and by each January 31 thereafter, PSC must determine the average price of a Tier 2 REC for the previous RPS compliance year. PSC must also determine the average price of a Tier 2 REC for the 2020 and 2021 RPS compliance years by January 31, 2023.

MDE must transfer fee revenue to CBT such that 25% of the revenue is used for the administration of grants for aquatic species restoration and 75% of the revenue is used as grants to county oyster committees for purchasing or obtaining native Chesapeake Bay oyster shells.

Current Law:

Renewable Energy Portfolio Standard – Generally

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, offshore wind, and, beginning in 2023, new geothermal systems. Electric companies (utilities) and other electricity suppliers must submit 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.

In 2022, the requirements are 30.1% from Tier 1 sources (including at least 5.5% from solar) and 2.5% from Tier 2 sources. Only hydroelectric power other than pump storage generation qualifies as a Tier 2 renewable source. Chapter 673 of 2021 extended Tier 2 in perpetuity at 2.5%.

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

Chesapeake Bay Trust

CBT is a nonprofit grant-making organization dedicated to improving the watersheds of the Chesapeake Bay, the Maryland Coastal Bays, and the Youghiogheny River. Created in 1985 by the General Assembly, CBT’s goal is to increase stewardship through grant programs, special initiatives, and partnerships that support K-12 environmental education, on-the-ground watershed restoration, community engagement, and the underlying science

of these three realms. Grantees include schools, local governments, community groups, faith-based groups, watershed organizations, and other not-for-profit entities.

County Oyster Committees

DNR must have licensed oystermen in each tidewater county of the State select committees of oystermen (referred to as “county oyster committees”) to confer with DNR concerning oyster propagation conducted by the department in each county.

State Fiscal Effect: State finances are assumed to not be directly affected by the bill, since MDE only collects and transfers the compensation fee revenue to CBT. PSC and MDE can both implement the bill with existing resources.

Small Business Effect: Small business commercial oyster harvesters may meaningfully benefit to the extent grants made to county oyster committees lead to increased harvest.

Additional Comments: The Conowingo Dam owned by Constellation Energy is the only dam in the State that meets the criteria in the bill. According to PSC’s [2020 RPS report](#), the average price of a Tier 2 REC in 2020 was \$1.06, and Constellation Energy’s website indicates that the Conowingo Dam produces 1.6 million MWh of electricity annually. The annual compensation fee under the bill, calculated from those figures, would be \$1.4 million.

Additional Information

Prior Introductions: None.

Designated Cross File: None.

Information Source(s): Maryland Department of the Environment; Department of Natural Resources; Public Service Commission; Chesapeake Bay Trust; Constellation Energy Corporation; Department of Legislative Services

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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, 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. The Maryland Energy Administration (MEA) must use ACPs for purposes related to renewable energy, as specified.

In 2022, the requirements are 30.1% from Tier 1 sources, including at least 5.5% from solar, and 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 an additional 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); 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.

Chapter 673 of 2021 excluded black liquor, or any product derived from black liquor, from Tier 1 beginning in 2022. Chapter 691 of 2021 included raw or treated wastewater used as a heat source or sink for heating or cooling in Tier 1 beginning in 2021.

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

Electricity suppliers retired 14.3 million RECs at a cost of \$223.2 million in 2020, as shown in **Exhibit 1**. This continues a multi-year trend of increasing compliance costs and, generally, average REC prices. Notably, the solar carve-out (\$122.9 million) cost was higher than the remaining Tier 1 requirement (\$99.8 million) – the first time since 2011.

In 2020, wind (56.7%), municipal solid waste (11.8%), black liquor (11.5%), and small hydroelectric (8.5%) were the primary energy sources used for Tier 1 RPS compliance. This continues a multi-year trend of increasing reliance on wind energy. Maryland facilities generated 4.3 million RECs in 2019: approximately 2.7 million Tier 1 RECs and 1.7 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
2016-2020

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Compliance Costs (\$ Millions)					
Tier 1 Nonsolar	\$88.2	\$50.0	\$56.4	\$79.3	\$99.8
Tier 1 Solar	45.6	21.3	27.4	55.2	122.9
Tier 2	<u>1.4</u>	<u>0.7</u>	<u>1.0</u>	<u>0.06</u>	<u>0.4</u>
Total	\$135.2	\$72.0	\$84.8	\$134.5	\$223.2
Average REC Price (\$)					
Tier 1 Nonsolar	\$12.22	\$7.14	\$6.54	\$7.77	\$8.24
Tier 1 Solar	110.63	38.18	31.91	47.26	66.10
Tier 2	0.96	0.47	0.66	1.05	1.06

REC: renewable energy credit

RPS: Renewable Energy Portfolio Standard

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

Source: Public Service Commission

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 2020, 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.

Chapter 164 of 2021 required MEA to staff a new Geothermal Energy Workgroup and complete a technical study on the potential impact of expanding and incentivizing the use of geothermal heating and cooling systems in the State. The Act required a related report to be submitted to the General Assembly by December 1, 2021.