Department of Legislative Services

Maryland General Assembly
2022 Session

FISCAL AND POLICY NOTE
Third Reader - Revised

Senate Bill 526 (Senator Feldman)
Finance Economic Matters

Renewable Energy Portfolio Standard and Renewable Energy Credits - Offshore Wind

This bill modifies the Offshore Wind Renewable Energy Credit (OREC) collection mechanism under Maryland's Renewable Energy Portfolio Standard (RPS) such that each *electric company*, instead of each *electricity supplier*, must purchase ORECs to meet the State's RPS requirements. Under such a system, electric companies recover costs associated with the purchase of ORECs through a nonbypassable surcharge paid by all distribution customers. The bill makes other conforming changes that allow electric companies to purchase ORECs to meet the State's RPS requirements in the same manner that electricity suppliers do under current law.

Fiscal Summary

State Effect: Special fund expenditures increase by $350,000 over a three-year period (from the second quarter of FY 2023 through the first quarter of FY 2026). Special fund revenues increase correspondingly from assessments imposed on public service companies.

Local Effect: Local government finances and operations may be affected, as discussed below.

Small Business Effect: Minimal. Small businesses that operate as electricity suppliers no longer need to purchase ORECs.

Analysis

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 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.

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

Electric Companies and Electricity Suppliers

Current law distinguishes between an "electric company," which physically transmits or distributes electricity in the State to retail electric customers, and an "electricity supplier," which sells electricity, electricity supply, billing, or metering services, or which purchases, brokers, arranges, or markets electricity supply services for sale to a retail electric customer. The Electric Customer Choice and Competition Act of 1999 (Chapters 3 and 4) facilitated the restructuring of the electric utility industry in Maryland. The resulting system of customer choice allows the customer to purchase electricity from a competitive supplier or to continue receiving electricity under standard offer service (SOS). Default SOS electric service is provided by a customer's *electric company*. Competitive electric supply is provided by *competitive electricity suppliers*. In either case, the electric company delivers the electricity and recovers the costs for delivery through distribution rates. SOS customers pay for RECs indirectly through their SOS rates. Municipal electric utilities have the option to participate in customer choice (but do not).

Offshore Wind Renewable Energy Credits

"OREC" means a renewable energy credit equal to the generation attributes of one megawatt-hour of electricity that is derived from offshore wind energy. An OREC differs from other Tier 1 RECs in that the "generation attributes" of a Tier 1 nonsolar REC in Maryland generally only include the environmental attributes (*i.e.*, not the energy). ORECs are bundled with the energy, capacity, ancillary services, and environmental

attributes, whereas other Tier 1 nonsolar RECs are generally "unbundled," meaning the energy, capacity, and ancillary services are not included in the price of the REC.

Pursuant to Chapter 3 of 2013, under Maryland's RPS, beginning in 2017, State electricity sales must include an amount derived from offshore wind energy. The amount is set by the Public Service Commission (PSC) each year, based on the projected annual creation of ORECs by qualified offshore wind projects, and may not exceed 2.5% of total retail sales. Chapter 757 of 2019 significantly increased the RPS percentage requirements and established additional offshore wind carve-outs beginning in 2027. In Order No. 88192, PSC established specific offshore wind carve-outs from 2021 through 2042, ranging from 0.6% to 2.03%, as described in PSC's Renewable Energy Portfolio Standard Report for 2020.

As required by Chapter 3, PSC adopted regulations to establish an escrow account to ensure the transparent transfer of ORECs and revenues between an offshore wind generator and electric suppliers. The process established by current law is as follows:

- The offshore wind generator delivers ORECs to an escrow agent associated with the actual output of the facility and is paid the established OREC price for the number of ORECs in the pricing schedule.

- Electricity suppliers buy ORECs from the escrow agent to meet their offshore wind RPS obligation. The OREC cost is recovered through customer energy charges.

- The offshore wind generator sells all of the energy, capacity, and ancillary services associated with the creation of ORECs directly into Pennsylvania, New Jersey, and Maryland Interconnection, Inc. markets.

- The offshore wind generator delivers to the escrow agent all revenues associated with energy, capacity, and ancillary service sales.

- The escrow agent refunds the revenue associated with the offshore wind generator's sale of its energy, capacity, and ancillary services to the electric companies, who in turn refund the revenue through a credit to ratepayers subject to RPS.

- The electricity suppliers apply the ORECs toward their annual RPS compliance, as established by PSC.

As required by Chapter 3, PSC also established regulations regarding the transfer and expiration of ORECs created in excess of the OREC pricing schedule.

Offshore Wind Project Approval

PSC is also responsible for reviewing and approving proposed new offshore wind projects. In addition to certain siting and interconnection requirements, Chapter 3 established an application and review process administered by PSC for proposed offshore wind projects and required PSC to determine an OREC pricing schedule. Chapter 757 bifurcated the application and approval process for offshore wind into "Round 1" (the process established by Chapter 3) and a new "Round 2" process to allow for new applications with different specifications.

State Fiscal Effect: PSC advises that it needs to conduct a new rulemaking process to allow electric companies to purchase ORECs in the same manner that electricity suppliers do under current law. PSC further advises that this process requires expertise in offshore wind energy and, therefore, necessitates an offshore wind consultant. Based on the cost of PSC's current offshore wind consultants, PSC advises that retaining an offshore wind consultant under the bill is anticipated to cost approximately $350,000 over the next three years from the bill's October 1, 2022 effective date. Special fund revenues increase correspondingly from assessments imposed on public service companies.

Relatedly, the Maryland Energy Administration advises that, while its workload may increase to work on any rulemaking resulting from the bill's changes, it can likely handle any increase in workload with existing resources.

Any impact on special fund revenues from ACPs is anticipated to be negligible.

Local Fiscal Effect: Municipal electric utilities fall under the definition of "electric company" and, therefore, must purchase ORECs to meet the State's RPS requirements and impose surcharges on distribution customers to recover associated costs.

Additional Comments: Currently, the payment for ORECs is to be collected from all electricity suppliers, including electric companies offering SOS as a supply option. Under the bill, electricity suppliers no longer need to purchase ORECs required to fulfill the State's RPS or the cost of meeting the alternative compliance payment. Therefore, electricity suppliers will no longer recover OREC costs through customer energy charges. However, the net effect on customer bills, including the effect on State agencies, local governments, and small businesses, is negligible, as electric companies will instead impose a nonbypassable surcharge of the same amount on all distribution customers to recover the costs associated with the purchase of ORECs.

Additional Information

Prior Introductions: None.

Designated Cross File: HB 622 (Delegate Brooks) - Economic Matters.

Information Source(s): Maryland Energy Administration; Office of People's Counsel; Public Service Commission; 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

	2016	2017	2018	2019	2020
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	1.4	0.7	1.0	0.06	0.4
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.