

Department of Legislative Services
 Maryland General Assembly
 2020 Session

FISCAL AND POLICY NOTE
 First Reader

House Bill 1349 (Delegate Adams)
 Economic Matters

Clean Energy Attribute Credits and Procurement

This bill repeals specified requirements under the State’s Renewable Energy Portfolio Standard (RPS) and establishes a Clean Energy Attribute Credit Standard in their place, subject to specified requirements and defined terms, including an annual cost cap determined by the social cost of carbon. The bill establishes several related findings of the General Assembly. The Public Service Commission (PSC), after issuing a request for proposals, must appoint an independent administrator to implement the standard. All clean energy attribute credits are cleared in a competitive auction format. A presently existing obligation or contract right may not be impaired in any way by the bill. **The bill takes effect January 1, 2021.**

Fiscal Summary

State Effect: Special fund expenditures increase by at least \$150,000 in FY 2021 and by at least \$300,000 annually thereafter. Special fund revenues increase correspondingly from assessments imposed on public service companies. Special fund revenues for the Strategic Energy Investment Fund (SEIF) may decrease beginning in FY 2021 from foregone alternative compliance payments (ACPs). Other State agencies may also be affected. The effect on electricity prices paid by the State is unknown, but could be significant, as discussed below.

(in dollars)	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
SF Revenue	\$150,000	\$300,000	\$300,000	\$300,000	\$300,000
SF Expenditure	\$150,000	\$300,000	\$300,000	\$300,000	\$300,000
Net Effect	\$0	\$0	\$0	\$0	\$0

Note: () = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate increase; (-) = indeterminate decrease

Local Effect: The effects on local revenues and expenditures are discussed below.

Small Business Effect: Meaningful.

Analysis

Bill Summary:

Defined Terms

“Clean energy attribute credit” or “credit” means a credit equal to the environmental attributes of one megawatt-hour of energy reduction or generation produced from a clean energy resource. “Clean energy resource” means a battery storage project, a carbon capture resource, a nuclear resource, a qualified offshore wind project, a Tier 1 renewable source, or a Tier 2 renewable source, as those terms are defined. It also includes any other resources that PSC approves as producing net zero-carbon emission energy.

Clean Energy Attributes Standard

After issuing a request for proposals, PSC must appoint an independent administrator to carry out its responsibilities under the Clean Energy Attribute Credit Standard, subject to specified requirements. The administrator is authorized to collect costs of conducting procurement auctions and related activities.

The delivery year for clean energy attribute credits begins June 1. Beginning June 1, 2021, the annual target procurement of clean energy attribute credits (1) is subject to a cost cap based on the social cost of carbon, as specified; (2) is equal to a percentage of total electricity consumption reported for each electricity supplier in the State; and (3) increases annually, starting with at least 50% in 2021 and reaching 100% by 2040 and later. The bill specifies processes for establishing various administrative procedures and creates an initial implementation period.

Subject to the cost cap, the independent administrator must attempt to procure clean energy attribute credits in a quantity that meets or exceeds the annual target procurement for each delivery year. All clean energy attribute credits must be cleared in a competitive auction format, under terms and conditions as specified. There are processes established for purchasing additional credits in a given delivery year and for voluntary credit purchases.

If PSC finds it to be in the public interest, the independent administrator may procure clean energy attribute credits in a combined auction or within a different centralized auction.

Social Cost of Carbon

PSC must set the social cost of carbon, which may not be lower than \$20 per megawatt-hour in 2021, must increase by 4.0% each year through 2025, and may

be adjusted thereafter for good cause based on specified criteria. The social cost of carbon is net of specified internalized costs in electricity market prices. Prices awarded for clean energy attribute credits to satisfy the Clean Energy Attribute Credit Standard are subject to a price cap, which is equal to 1.5 times the social cost of carbon. The price cap, multiplied by the target procurement volume each year, is the maximum program cost for that year.

Eligibility

The owner of a clean energy resource is eligible to participate in the clean energy attribute credit procurement auctions conducted by the independent administrator under the bill if the clean energy resource meets all applicable requirements that the independent administrator establishes and PSC approves.

All alternative energy credits or clean energy credits secured under prior law must be converted into their equivalent clean energy attribute credits by the independent administrator and applied to meet the targeted procurement goal for the applicable delivery year under the Clean Energy Attribute Credit Standard.

Generally, a clean energy attribute credit may be procured from any person that owns a clean energy resource that is located in the State or interconnected with the electric distribution grid serving the State. However, a qualified offshore wind project (as defined) is eligible and a nonnuclear clean energy resource that is located outside the State but located within the PJM region is also eligible.

Other Conforming Changes

The bill also makes various stylistic and conforming changes to incorporate the Clean Energy Attribute Credit Standard and associated clean energy attribute credits into certain remaining administrative provisions of the RPS.

Current Law/Background: 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 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 ACP equivalent to their shortfall. 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. Specific sections of the RPS affected by the bill are discussed separately below; for more general information, see the **Appendix – Renewable Energy Portfolio Standard**.

State Fiscal Effect: PSC must appoint an independent administrator to administer the Clean Energy Attribute Credit Standard. PSC estimates the cost of doing so at \$300,000 annually, beginning in fiscal 2021. Accordingly, special fund expenditures increase by \$150,000 in fiscal 2021, which accounts for the bill's January 1, 2021 effective date, and by \$300,000 annually thereafter. Special fund revenues increase correspondingly from assessments imposed on public service companies, as authorized under current law. Special fund expenditures for the Office of People's Counsel (OPC) also increase for consultants and other costs associated with monitoring the implementation of the standard. The amount cannot be estimated at this time; however, any approved OPC costs are also collectible via assessment from public service companies.

Special fund revenues for SEIF may decrease beginning in fiscal 2021 from foregone ACPs. Other State agencies may also be affected, such as the Department of Natural Resources, but costs, if any, are unknown at this time.

Relative Compliance Costs and the Effect on Electricity Costs

The Department of Legislative Services (DLS) is unable to estimate the effect on electricity prices under the bill at this time, as there are too many unknown costs – both related to those under the existing RPS and those under the Clean Energy Attribute Credit Standard. DLS also notes that no State agency provided an estimate.

Net of existing in-state nuclear energy, overall percentage requirements are a little less than the existing RPS for the next several years, before approaching parity by 2030 and then exceeding the final 50% RPS percentage. The difference in compliance costs will depend largely on the relative prices of RECs under current law versus clean energy attribute credits under the bill. Based on current REC prices and the bill's cost of carbon, the annual overall price cap is unlikely to be a substantially limiting factor. Nevertheless, the impact on State expenditures could be significant, as the State purchases approximately 1.5 million megawatt-hours of electricity per year.

Local Fiscal Effect: As discussed above, DLS is unable to estimate the effect on electricity prices under the bill at this time; however, local governments are affected, potentially significantly, by changes to electricity prices. Local governments that own clean or renewable energy generation facilities may also experience higher or lower revenues under the bill.

Small Business Effect: As discussed above, DLS is unable to estimate the effect on electricity prices under the bill at this time; however, small businesses are also affected, potentially significantly, by changes to electricity prices. Separately, small businesses in clean and renewable energy industries are affected by potential revenue redistributions under the bill, which will undoubtedly be meaningful for some small businesses.

Additional Information

Prior Introductions: None.

Designated Cross File: SB 890 (Senator Hershey) - Finance.

Information Source(s): Public Service Commission; Office of People's Counsel, Department of Natural Resources, Maryland Department of the Environment; Maryland Energy Administration; Department of Commerce; Department of Legislative Services

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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.