

Department of Legislative Services
 Maryland General Assembly
 2026 Session

FISCAL AND POLICY NOTE
First Reader

House Bill 647 (Delegates Ivey and Fennell)
 Environment and Transportation

Power Plant Research Program - Study on Nuclear Energy

This bill requires the Power Plant Research Program (PPRP), within the Department of Natural Resources (DNR), to study and make recommendations on nuclear energy and its role as a renewable energy resource that can effectively combat climate change in the State. By September 30, 2027, PPRP must report its findings and recommendations to the Governor and General Assembly.

Fiscal Summary

State Effect: General/special fund expenditures increase by \$218,800 in FY 2027 and by \$11,600 in FY 2028 to complete the required study and report. Revenues are not affected.

(in dollars)	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
Revenues	\$0	\$0	\$0	\$0	\$0
GF/SF Exp.	218,800	11,600	0	0	0
Net Effect	(\$218,800)	(\$11,600)	\$0	\$0	\$0

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

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

Small Business Effect: None.

Analysis

Bill Summary: In conducting the study, PPRP must:

- evaluate and summarize the current state of nuclear energy in Maryland;
- identify the benefits of nuclear energy use in the State, including its environmental benefits that may help to combat climate change;

- identify the potential for a new nuclear power initiative to be deployed within the State using one or more nuclear technologies, including identifying major barriers to, and a time frame for, deploying a successful nuclear power initiative;
- identify potential locations in the State where State-owned and operated nuclear energy generating stations may be constructed;
- assess the practicality of adding nuclear energy to Maryland’s Renewable Energy Portfolio Standard (RPS); and
- include recommendations regarding initiatives for the State and General Assembly to responsibly and efficiently grow the nuclear energy industry in the State, support new emerging nuclear energy technologies that may improve nuclear energy as a viable renewable energy resource, and utilize nuclear energy as a resource to help the State combat climate change.

Current Law:

2020 Power Plant Research Program Study

Chapter 757 of 2019 required PPRP to conduct a specified study, by January 1, 2020, of nuclear energy and its role as a renewable or clean energy resource that can effectively combat climate change in the State. The report can be found [here](#).

Renewable Energy Portfolio Standard

Maryland’s RPS was enacted in 2004 to facilitate a gradual transition to renewable sources of energy. The RPS includes specified eligible (Tier 1 or Tier 2) sources as well as carve-outs for solar, offshore wind, and geothermal. Nuclear energy does not currently qualify as a Tier 1 or Tier 2 source under the RPS.

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

Next Generation Energy Act

The Next Generation Energy Act of 2025 (Chapters 625 and 626 of 2025):

- establishes that it is the policy of the State to encourage the development of clean, carbon-free nuclear power, including development through innovative designs;
- establishes the General Assembly’s support for the extension or renewal of the federal license for the Calvert Cliffs Nuclear Power Plant’s nuclear reactors in the years 2034 and 2036;
- requires the Maryland Energy Administration (MEA), in coordination with the

Public Service Commission (PSC) and DNR, to pursue (1) cost-sharing agreements with neighboring states to mitigate the risks of developing new nuclear energy generating stations and (2) agreements with federal agencies regarding the siting of small modular reactors on federal land or on or near federal facilities; and

- establishes a process for PSC approval of one or more proposed nuclear energy generation projects funded through electric distribution rates.

By December 1, 2026, MEA must report to the General Assembly on (1) its efforts to pursue cost-sharing and federal agreements, mentioned above, including an assessment of any opportunities to participate with other states, federal agencies, and public or private partners in a multistate procurement of new nuclear technology, and (2) an evaluation and status of the process for PSC approval of one or more proposed nuclear energy generation projects.

State Expenditures: General/special fund expenditures for DNR increase by \$218,821 in fiscal 2027, which accounts for the bill’s October 1, 2026 effective date. This estimate reflects the cost of hiring an independent consultant to complete the study and report, and a part-time contractual site assessor to supplement existing staff, allowing for existing staff to devote time to managing the consultant’s work on the study and report. DNR advises that PPRP cannot complete the required study and report with existing resources and must retain a consultant and part-time contractual staff to do so. The estimate includes a salary, fringe benefits, one-time start-up costs, and ongoing operating expenses.

In general, special funds from the Environmental Trust Fund are used to fund a significant portion of PPRP’s operations. PPRP also receives funding from the Strategic Energy Investment Fund in the fiscal 2027 budget as introduced (see the *Governor’s Fiscal 2027 Budget Books, Volume I*, p. 462). However, PPRP’s workload and costs have been increasing and, to the extent sufficient special funds are not available to cover the costs of the bill, general funds may be required to cover a portion or all of the costs.

Contractual Position	0.5
Salary and Fringe Benefits	\$35,722
Consultant Expenses	175,000
Other Operating Expenses	<u>8,099</u>
Total FY 2027 DNR Expenditures	\$218,821

This estimate assumes that (1) the contractual position terminates September 30, 2027 (concurrent with PPRP’s deadline to submit the report), resulting in a relatively small amount of expenditures in fiscal 2028, and (2) the cost of the consultant is incurred in fiscal 2027 only.

This estimate does not include any health insurance costs that could be incurred for specified contractual employees under the State's implementation of the federal Patient Protection and Affordable Care Act.

Additional Information

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

Designated Cross File: None.

Information Source(s): Department of Natural Resources; Department of Legislative Services

Fiscal Note History: First Reader - February 16, 2026
jg/sdk

Analysis by: Ralph W. Kettell

Direct Inquiries to:
(410) 946-5510
(301) 970-5510

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 more recently. Generally, the Maryland Energy Administration must use ACPs for purposes related to renewable energy, as specified.

In 2026, the requirements are 38.0% from Tier 1 sources, including at least 8.0% from solar and 0.50% 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 five-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; 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 excluded black liquor, or any product derived from black liquor, from Tier 1 beginning in 2022, although some black liquor RECs remain eligible through the duration of certain contracts. Chapters 625 and 626 of 2025 removed waste-to-energy and refuse-derived fuel from RPS eligibility. The exclusion generally applies to all RPS compliance years starting on or after January 1, 2025, except for a facility owned by a public instrumentality of the State (*i.e.*, Montgomery County), which applies beginning July 1, 2026.

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

Compliance costs for electricity suppliers totaled \$616.9 million in 2024: \$254.7 million for 7.0 million RECs and \$362.3 million in ACPs. This continues a multi-year trend of increasing overall compliance costs, reliance on ACPs, and REC prices. Of note, 2024 continues the trend of 2023 that ACPs have been used in a significant way for general Tier 1 compliance. In fact, 2024 had the fewest RECs retired since 2014. ACP prices were in many instances less expensive than REC prices and, as a result, suppliers chose to pay the ACP rather than retire RECs. Compliance costs and REC prices for the most recent five-year period are shown in **Exhibit 1**.

Exhibit 1
RPS Compliance Costs and REC Prices
2020-2024

Compliance Costs (\$ Millions)	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
RECs					
Tier 1	\$99.8	\$187.3	\$246.5	\$124.9	\$90.1
Tier 1 Solar	122.9	144.4	101.4	109.6	150.4
Tier 1 Geothermal	n/a	n/a	n/a	0.1	2.2
Tier 2	<u>0.4</u>	<u>1.0</u>	<u>4.4</u>	<u>9.3</u>	<u>12.0</u>
<i>RECs Subtotal</i>	<i>\$223.1</i>	<i>\$332.7</i>	<i>\$352.3</i>	<i>\$243.8</i>	<i>\$254.7</i>
ACPs					
Tier 1	\$0.0	\$0.2	\$0.7	\$262.4	\$319.4
Tier 1 Solar	0.0	76.9	85.9	56.0	37.2
Tier 1 Geothermal	n/a	n/a	n/a	1.6	4.4
Tier 2	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.4</u>	<u>1.3</u>
<i>ACPs Subtotal</i>	<i>\$0.1</i>	<i>\$77.1</i>	<i>\$86.6</i>	<i>\$320.4</i>	<i>\$362.3</i>
Total	\$223.2	\$409.8	\$438.9	\$564.2	\$616.9
Average REC Price (\$)					
Tier 1	\$8.24	\$14.36	\$17.80	\$24.61	\$27.09
Tier 1 Solar	\$66.10	\$72.59	\$57.80	\$56.67	\$58.56
Tier 1 Geothermal	n/a	n/a	n/a	\$94.47	\$94.04
Tier 2	\$1.06	\$6.45	\$7.42	\$10.50	\$11.16

ACP: alternative compliance payment
n/a: not applicable
REC: renewable energy credit
RPS: Renewable Energy Portfolio Standard

Note: Numbers may not sum to total due to rounding. The post-2022 geothermal system carve-out became effective in 2023.

Source: Public Service Commission

Approximately 45% of RECs used for compliance in 2024 came from in-state resources, up from 35% in 2023. RECs derived from three fuel types, solar (43.4%), black liquor (16.2%), and wind (15.1%), were the predominant sources of Tier 1 compliance in 2024. Maryland facilities generated approximately 5.7 million RECs in 2024: 1.5 million Tier 1

nonsolar RECs, 2.4 million Tier 1 SRECs, and 1.8 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.

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 2024, 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](#). PPRP's supplemental study on the overall costs and benefits of increasing the RPS to a goal of 100% by 2040 can be found [here](#).

The Department of Legislative Services also issued an RPS report in 2025, 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.