

**Department of Legislative Services**  
 Maryland General Assembly  
 2024 Session

**FISCAL AND POLICY NOTE**  
**First Reader**

House Bill 1407 (Delegate Wilson)  
 Economic Matters

**County Tier 1 Renewable Sources – Generating Systems, Capacity, and Generation – Prohibition, Studies, and Plans**

This bill prohibits each county and Baltimore City from adopting zoning laws or other regulations that restrict or prohibit the construction or operation of energy generating systems or facilities that are “Tier 1” renewable sources under the State Renewable Energy Portfolio Standard (RPS). The bill also establishes a study and reporting process and requires the Public Service Commission (PSC) to create a renewable energy compliance and oversight plan that ensures each county and Baltimore City meets proportional Tier 1 generation requirements within 10 years. Each county and Baltimore City must conduct a related study and create a local plan in accordance with the PSC plan. In conducting the studies and preparing the reports under the bill, counties may obtain assistance from State units with related expertise.

**Fiscal Summary**

**State Effect:** Special fund expenditures for PSC increase by \$660,600 in FY 2025 and by the amounts shown below in future years; expenditures in FY 2025 and 2027 reflect additional consultant costs. Special fund revenues for PSC increase correspondingly from assessments imposed on public service companies. The Maryland Energy Administration (MEA) advises that it can handle the bill’s requirements with existing budgeted resources.

(in dollars)	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
SF Revenue	\$660,600	\$191,700	\$450,000	\$208,500	\$217,400
SF Expenditure	\$660,600	\$191,700	\$450,000	\$208,500	\$217,400
Net Effect	\$0	\$0	\$0	\$0	\$0

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

**Local Effect:** County/Baltimore City expenditures increase significantly to develop and implement plans. Local revenues may increase from additional renewable energy projects built as a result of the bill. The overall effect on any particular jurisdiction is unknown.  
**This bill imposes a mandate on a unit of local government.**

**Small Business Effect:** Potential meaningful.

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## Analysis

### Bill Summary:

#### *Study and Reporting Process*

*First*, PSC must conduct a study to determine:

- the electricity demand in each county in the State; and
- the amount of capacity of, and energy generation from, Tier 1 renewable sources needed in each county for the State to meet the maximum RPS percentage requirements under current law on a proportional basis (in the Public Utilities Article, “county” includes Baltimore City).

In conducting the study, PSC may determine the amount of energy generation a county would need to provide based on a variety of factors, including residential, commercial, and industrial uses of electricity, and the population of the county.

By October 1, 2025, PSC must report its findings and recommendations to each county and the Senate Education, Energy, and the Environment Committee, the Senate Budget and Taxation Committee, the House Economic Matters Committee, and the House Appropriations Committee.

*Second*, on receipt of the report provided by PSC, each county must conduct a study on how much Tier 1 renewable source generating capacity the county could provide to satisfy its energy generation responsibilities identified in the PSC study. Specified options include:

- current utility-scale electric generation equipment and distributed electric generation equipment in the county;
- current Tier 1 renewable sources being used in the county; and
- plans for the county to (1) attract outside investment for locating Tier 1 renewable sources in the county and (2) establish and coordinate reasonable incentives for county residents and businesses to install or use Tier 1 renewable sources.

By October 1, 2026, each county must report its findings and recommendations to PSC and the same committees of the General Assembly specified above.

*Third*, on receipt of the reports provided by the counties, PSC must create a renewable energy compliance and oversight plan, which must:

- ensure that each county meets its Tier 1 renewable source generation requirements within 10 years;
- establish a reasonable timeline for each county to achieve milestones to keep the county on target to achieve the generation requirements; and
- require that each county report to PSC on the status of meeting the Tier 1 renewable source generation requirements and update its 10-year plan after 5 years.

By October 1, 2027, PSC must submit its plan to the same committees of the General Assembly specified above.

*Fourth*, each county must create a 10-year Tier 1 renewable source generation plan in accordance with the guidelines established in PSC’s renewable energy compliance and oversight plan. Counties may cooperate on a regional basis to achieve the goals and objectives of PSC plan by siting Tier 1 renewable sources that will serve the region, although a county that cooperates on a regional basis is still responsible for ensuring the Tier 1 renewable source generation requirements of that county are met.

#### *Assistance from State Government*

In conducting the studies and preparing the reports under the bill, counties may obtain assistance from PSC, MEA, and other State units with expertise in renewable energy generation, deployment, and financing.

#### **Current Law:**

##### *Land Use – Generally*

State law specifies that it is the policy of the State that (1) the orderly development and use of land and structures requires comprehensive regulation through implementation of planning and zoning controls and (2) planning and zoning controls must be implemented by local government. State law includes various provisions authorizing local governments to regulate the location, size, and use of structures through zoning regulations.

##### *Limitations on Local Zoning Conditions for Projects Issued a Certificate of Public Convenience and Necessity*

PSC is the lead agency for licensing the siting, construction, and operation of power plants and related facilities in the State through Certificates of Public Convenience and Necessity (CPCNs). The Supreme Court of Maryland, in *Bd. of Cty. Commissioners of Washington* HB 1407/ Page 3

*Cty. v. Perennial Solar, LLC*, 464 Md. 610 (2019), held that State law impliedly preempts local zoning regulation of generating stations that require a CPCN issued by PSC.

Generally, facilities with generating capacities of up to 2 megawatts do not require a CPCN. There are also CPCN exemptions for larger facilities permissible under State law, which are frequently used for solar projects. Facilities granted authority to construct from PSC under the CPCN exemption process must still comply with other State and local regulatory requirements.

For additional information on the CPCN process and exemptions from it, see **Appendix 1 – Certificate of Public Convenience and Necessity**.

### *Renewable Energy Portfolio Standard*

Tier 1 RPS 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.

RPS percentage requirements escalate over time to a minimum of 50% from Tier 1 sources, including 14.5% from solar, by 2030.

For general information on the State RPS, including a list of eligible Tier 1 sources and trends in renewable energy credit prices and sources, see **Appendix 2 – Renewable Energy Portfolio Standard**.

**State Fiscal Effect:** PSC advises that it requires two additional staff to assist counties in developing their required reports and plans and anticipates consultant costs of \$500,000 to complete the demand study and \$250,000 to complete the compliance and oversight plan. As plans must be updated every five years, PSC staff are assumed to be permanent. Consultant costs are assumed to be incurred in fiscal 2025 and 2027; actual timing may vary and span multiple fiscal years.

Accordingly, special fund expenditures for PSC increase by \$660,628 in fiscal 2025, which accounts for the bill's October 1, 2024 effective date. This estimate reflects the cost of hiring one engineer and one regulatory economist to assist counties in developing their required reports and plans. It includes salaries, fringe benefits, one-time start-up costs,

ongoing operating expenses, and \$500,000 in consultant costs associated with the demand study.

Positions	2.0
Salaries and Fringe Benefits	\$141,616
Contractual Services	500,000
Other Operating Expenses	<u>19,012</u>
<b>Total FY 2025 State Expenditures</b>	<b>\$660,628</b>

Future year expenditures reflect full salaries with annual increases and employee turnover as well as annual increases in ongoing operating expenses. Expenditures in fiscal 2027 also reflect \$250,000 in consultant costs associated with the compliance and oversight plan.

Generally, PSC is funded through an assessment on the public service companies that it regulates. As a result, special fund revenues for PSC increase correspondingly from assessments imposed on public service companies.

**Local Fiscal Effect:** Expenditures increase significantly for counties and Baltimore City to conduct the required studies and to develop and implement plans to reach renewable energy source generation requirements as determined by PSC. While the exact fiscal and administrative impact is difficult to quantify, the Maryland Association of Counties (MACo) advises that the associated staff time, technology, consulting, and other related expenses likely exceed \$1.0 million per jurisdiction. These costs are not inclusive of any financial incentives necessary to ensure renewable energy source development in a particular jurisdiction, which are also likely to be significant.

These costs may be moderated to some extent due to the bill’s provision that authorizes counties to obtain assistance from PSC, MEA, and other State units in conducting the studies and preparing the reports.

Local revenues increase over time from taxes associated with renewable energy generation sources, although there are several existing tax benefits available for certain renewable energy sources that mitigate the revenue effect.

MACo also notes that Tier 1 sources include some facilities with siting and environmental concerns, such as waste-to-energy facilities, that counties could not restrict with zoning laws or regulations under the bill. The Department of Legislative Services (DLS) advises that such facilities would likely go through the CPCN process and still be subject to State permitting.

**Small Business Effect:** The bill likely results in significant new spending on renewable energy generation sources in the State, benefitting small businesses in the affected industries.

**Additional Comments:** DLS notes that the bill contemplates a scenario where there is enough in-State renewable energy generation to meet the RPS, which has never been the case in practice. The only significant Tier 1 source met entirely with in-State facilities has been solar.

The effect of the bill on electricity prices cannot be determined at this time.

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### **Additional Information**

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

**Designated Cross File:** None.

**Information Source(s):** Public Service Commission; Maryland Energy Administration; Office of People’s Counsel; Maryland Department of Planning; Anne Arundel, Baltimore, and Frederick counties; Maryland Association of Counties; Department of Legislative Services.

**Fiscal Note History:** First Reader - February 28, 2024  
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# Appendix 1 – Certificate of Public Convenience and Necessity

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## *General Overview*

The Public Service Commission (PSC) is the lead agency for licensing the siting, construction, and operation of power plants and related facilities in the State through Certificates of Public Convenience and Necessity (CPCN). The CPCN process is comprehensive and involves several other State agencies, including the Department of Natural Resources (and its Power Plant Research Program), and the Maryland Department of the Environment. Subject to limited exemptions described below, a person may not begin construction in the State of a generating station, overhead transmission line, or qualified generator lead line unless a CPCN is first obtained from PSC.

State law provides that a “generating station” excludes a facility with up to 2 megawatts of capacity if it meets other specified requirements. Additionally, pursuant to Chapter 460 of 2023, a generating station excludes a combination of two or more co-located or adjacent facilities used for electricity production from solar photovoltaic systems or specified eligible customer-generators that have a maximum cumulative capacity of 14 megawatts (including maximum individual capacities of 2 megawatts) and meet other requirements.

The CPCN process, detailed further below, involves the notification of specified stakeholders, the holding of public hearings, the consideration of recommendations by State and local government entities, and the consideration of the project’s effects on various aspects of the State infrastructure, economy, and environment.

In December 2020, PSC initiated a rulemaking (RM 72) to revise regulations governing CPCNs for generating stations. Updated regulations became effective in September 2021. Among other changes, the regulations contain additional information requirements – to assist in project evaluation – and allow for electronic submission and distribution of application materials.

## *Notification Process*

Upon receipt of a CPCN application, PSC – or the CPCN applicant, if required by PSC – must immediately provide notice to specified recipients, including the executive and governing body of affected local governments, affected members of the General Assembly, and other interested persons. When providing the notice, PSC must also forward the CPCN application to each appropriate unit of State and local government for review, evaluation, and comment and to each member of the General Assembly who requests a copy.

### *Public Hearing and Comment*

PSC must provide an opportunity for public comment and hold a public hearing on a CPCN application in each county and municipality in which any portion of the construction of a generating station, overhead transmission line, or qualified generator lead line is proposed to be located. PSC must hold the hearing jointly with the governing body of the county or municipality and must provide weekly notice during the four weeks prior to the hearing, both in a newspaper and online, and must further coordinate with each local government to identify additional hearing notification options. PSC must ensure presentation and recommendations from each interested State unit and must allow representatives of each State unit to sit during the hearing of all parties. PSC must then allow each State unit 15 days after the conclusion of the hearing to modify the unit's initial recommendations.

### *Public Service Commission Considerations*

PSC must take final action on a CPCN application only after due consideration of (1) recommendations of the governing body of each county or municipality in which any portion of the project is proposed to be located; (2) various aspects of the State infrastructure, economy, and environment; and (3) the effect of climate change on the project. For example, PSC must consider the effect of the project on the stability and reliability of the electric system and, when applicable, air and water pollution. There are additional considerations specifically for a generating station or an overhead transmission line. For example, PSC must consider the impact of a generating station on the quantity of annual and long-term statewide greenhouse gas emissions.

### *Generating Station Exemptions*

There are three general conditions under which a person constructing a generating station may apply to PSC for an exemption from the CPCN requirement:

- the facility is designed to provide onsite generated electricity, the capacity is up to 70 megawatts, and the excess electricity can be sold only on the wholesale market pursuant to a specified agreement with the local electric company;
- at least 10% of the electricity generated is consumed onsite, the capacity is up to 25 megawatts, and the excess electricity is sold on the wholesale market pursuant to a specified agreement with the local electric company; or
- the facility is wind-powered and land-based, the capacity is up to 70 megawatts, and the facility is no closer than a PSC-determined distance from the Patuxent River Naval Air Station, among other requirements.

However, PSC must require a person who is exempted from the CPCN requirement to obtain approval from the commission before the person may construct a generating station as described above. The application must contain specified information that PSC requires, including proof of compliance with all applicable requirements of the independent system operator.

## Appendix 2 – 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 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 recently. The Maryland Energy Administration must use ACPs for purposes related to renewable energy, as specified.

In 2024, the requirements are 33.7% from Tier 1 sources, including at least 6.5% from solar and 0.15% 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 \$438.8 million in 2022: \$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**  
**2017-2022**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
<b>Compliance Costs (\$ Millions)</b>						
Tier 1 Nonsolar RECs	\$50.0	\$56.4	\$79.3	\$99.8	\$187.3	\$246.5
Tier 1 Solar RECs	21.3	27.4	55.2	122.9	144.4	101.4
Tier 2 RECs	0.7	1.0	0.06	0.4	1.0	4.4
ACPs	<u>0.1</u>	<u>0.1</u>	<u>7.7</u>	<u>0.1</u>	<u>77.1</u>	<u>86.6</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>\$438.8</b>
<b>Average REC Price (\$)</b>						
Tier 1 Nonsolar	\$7.14	\$6.54	\$7.77	\$8.24	\$14.36	\$17.80
Tier 1 Solar	38.18	31.91	47.26	66.10	72.59	57.80
Tier 2	0.48	0.66	1.05	1.06	6.45	7.42

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 and 2022 (\$76.9 million and \$85.9 million, respectively) were due to a shortfall of solar RECs.

Source: Public Service Commission

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*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 2022, 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 was due by January 1, 2024, but has been [delayed](#).

The Department of Legislative Services also issued a report on the RPS in 2023, 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.