

Department of Legislative Services  
Maryland General Assembly  
2020 Session

FISCAL AND POLICY NOTE  
First Reader

House Bill 438

(Delegate Mosby, *et al.*)

Economic Matters

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Renewable Energy Portfolio Standard - Eligible Sources

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This bill removes waste-to-energy and refuse-derived fuel from eligibility for inclusion in the State’s Renewable Energy Portfolio Standard (RPS) as a Tier 1 resource, effective October 1, 2020. A presently existing obligation or contract right may not be impaired in any way by the bill, which applies to all RPS compliance years beginning after December 31, 2020.

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Fiscal Summary

**State Effect:** The Public Service Commission can implement the bill with existing budgeted resources. As discussed below, renewable energy credit (REC) prices are not anticipated to be materially affected and, therefore, neither are State expenditures on electricity. The bill is not anticipated to materially affect special fund revenue from Alternative Compliance Payments.

**Local Effect:** Beginning in FY 2021, revenues potentially decrease for local governments that own and operate facilities (or that will own/operate in the future) that use the energy sources removed from the RPS, as discussed below. Expenditures are not affected.

**Small Business Effect:** Minimal.

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Analysis

**Current Law/Background:** Much of Maryland’s Tier 1 RPS obligation has historically been met with municipal solid waste – the “waste-to-energy” source removed by the bill. However, the proportion has decreased over time as wind and solar sources have been built, with the most recent compliance year data (2018) showing that 12% of Tier 1 RECs were

sourced from municipal solid waste. For context, in 2012, municipal solid waste was the source of 32% of Tier 1 RECs. There are two such facilities in the State – the private company Wheelabrator in Baltimore City and a county-owned facility in Montgomery County. There are no “refuse derived fuel” facilities. For additional information on Maryland’s RPS, see the **Appendix – Renewable Energy Portfolio Standard**.

According to the recent comprehensive [report](#) prepared by the Power Plant Research Program in the Maryland Department of Natural Resources, the effect on REC prices of removing municipal solid waste from Maryland’s RPS is likely to be small. Municipal solid waste is also accepted as a Tier 1 resource in Ohio and Michigan and accepted as a Tier 2 resource in several other states. Additionally, municipal solid waste has a relatively small (1.2% of all qualified RECs in 2018) market share in the region.

**Local Fiscal Effect:** Beginning in fiscal 2021, local governments that own and operate waste-to-energy or refuse-derived fuel facilities (or that will own/operate such facilities in the future) must sell the associated RECs to other states for compliance in those states, rather than Maryland, if they wish to continue receiving revenue. To the extent there are no other buyers for these RECs, or other state REC prices are lower than Maryland’s, local government revenues decrease. However, the net effect on a particular local government cannot be reliably estimated at this time, as prices are unknown. For context, about 300,000 to 350,000 RECs from Montgomery County’s municipal solid waste facility have been used annually for compliance with Maryland’s RPS in recent years.

This analysis does not include any effects associated with private waste-to-energy companies, such as the Wheelabrator facility in Baltimore City. While not a direct effect of the bill, if that facility were to close, Baltimore City finances and operations as they relate to waste management would be significantly affected.

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## **Additional Information**

**Prior Introductions:** SB 548 of 2019 received a hearing from the Senate Finance Committee, but no further action was taken. Its cross file, HB 961, received a hearing from the House Economic Matters Committee, but no further action was taken.

**Designated Cross File:** SB 560 (Senator Hough, *et al.*) - Finance.

**Information Source(s):** Public Service Commission; Office of People’s Counsel; Department of Natural Resources; Baltimore City; Harford, Montgomery, and Prince George’s counties; Northeast Maryland Waste Disposal Authority; Department of Legislative Services

**Fiscal Note History:** First Reader - February 12, 2020  
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## Appendix – Renewable Energy Portfolio Standard

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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.

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**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>
<b>Compliance Costs (\$ Millions)</b>					
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>
<b>Total</b>	<b>\$104.0</b>	<b>\$126.7</b>	<b>\$135.2</b>	<b>\$72.0</b>	<b>\$84.8</b>
<b>Average REC Price (\$)</b>					
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

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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.