

It's Time to Clean up Maryland's Clean Energy Program *Dirty "Renewables" Cost Maryland Money and Jobs*

January 27, 2021

Summary

In 2019, dirty energy sources made up about 40% of Maryland's "clean energy" under the state's Tier 1 Renewable Portfolio Standard (RPS). This is up from 33% in 2018. These dirty sources include black liquor, a sludgy byproduct of the pulping process that paper mills burn to power their operations; woody biomass, most of it also burned at paper mills; and municipal solid waste burned to produce electricity.

To comply with Maryland's renewable energy requirements, state energy providers paid over \$32 million to buy "credits" from these dirty energy sources in 2019 and over \$200 million since 2008 (See Fig. 1, Page 2). These costs were then passed on to Maryland ratepayers, likely with huge mark

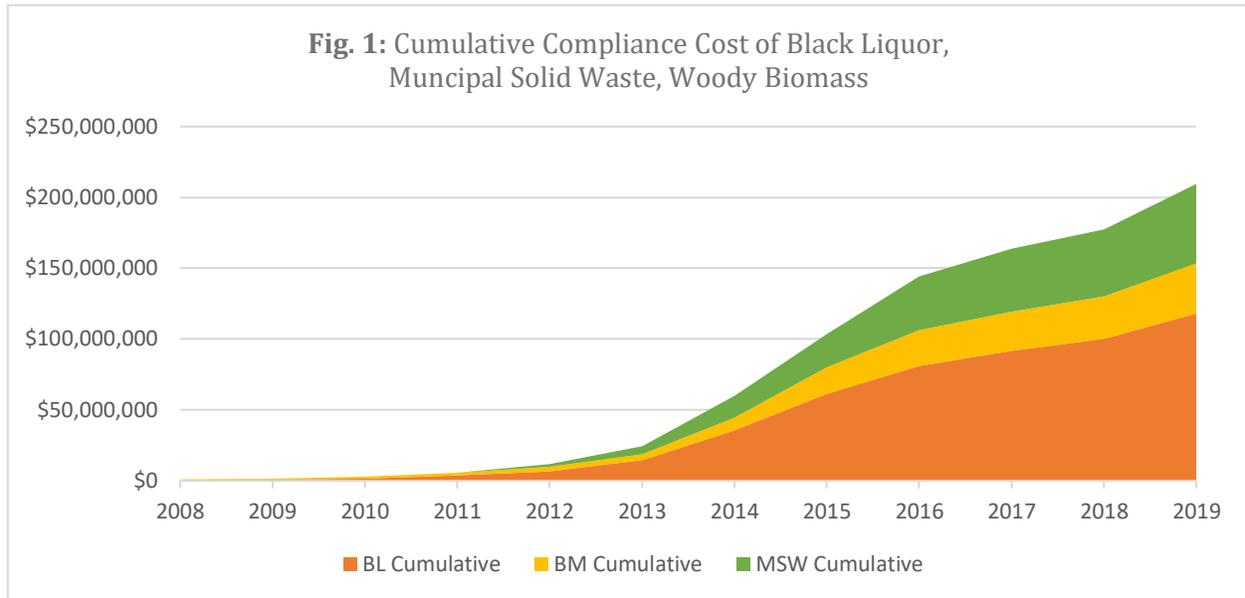
ups. Public Service Commission reports also indicate that out-of-state producers are profiteering under this system, and that Virginia is the big financial winner. Since 2008, Maryland energy providers have paid more than \$108 million to buy dirty renewable energy credits generated in Virginia (see Table 2, Page 6).

These dirty sources include black liquor, a sludgy byproduct of the pulping process that paper mills burn to power their operations; woody biomass, most of it also burned at paper mills; and municipal solid waste burned to produce electricity.

Worse yet, records obtained by PEER show that Maryland ratepayers typically pay more for dirty energy sources than clean sources, such as wind and small hydropower (see Appendix A), and that these dirty energy facilities have terrible environmental records.

Today, the Maryland economy is under tremendous pressure from the COVID-19 pandemic, and many residents struggle to pay utility bills. That is why PEER is calling on Governor Hogan, Senate President Bill Ferguson, and House Speaker Adrienne A. Jones to work together to get these dirty energy sources out of the Renewable Portfolio Standard (RPS).

This would allow the state to redirect spending to clean renewable sources that create new jobs and meet consumer expectations that the premium they pay for renewable energy reduces pollution rather than subsidizing it.



Source: Data from *PSC Reports 2008-2019* and Public Information Act requests of Renewable Energy Credit Pricing.

1. “Clean” Energy That Pollutes

Maryland’s RPS requires electricity providers to buy a steadily increasing number of renewable energy credits (RECs) from facilities using renewable sources of energy. Eligible fuel sources under Maryland’s Tier 1 RPS include wind, solar and hydro, as well as black liquor, municipal solid waste, and woody biomass, which is wood and waste solids. Solar and Maryland offshore wind are in a separate Tier and not included in this report.

PEER reviewed 12 years of compliance records to determine how large a role these dirty sources play in the Maryland Renewable Portfolio Standard (RPS), and what it is costing customers. Public Service Commission records reveal in 2019 these dirty sources made up more than 40% of all RECs used to meet the Tier 1 renewable energy goals, up from 33% in 2018. The number of Black Liquor RECs grew from 15% of the Tier 1 RPS in 2018 to 23% in 2019.

What is a Renewable Energy Credit?

RECs are not themselves electricity; they are the added value ascribed to electricity produced from renewable sources. Crucially, they can be bought and sold separately from the electricity itself. Matching one megawatt-hour of electricity produced from a non-renewable source with one REC representing the renewable “attributes” of a megawatt-hour of electricity produced from a qualifying source legally transforms the non-renewable electricity into renewable electricity. This legal fiction is how electricity generated and used at a paper mill in Virginia produces RECs that a Maryland electricity supplier can buy to comply with the RPS.

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In addition, the black liquor and biomass facilities are all located outside of Maryland, and most provide no electricity to the grid. U.S. EPA records show many of these facilities have [poor environmental compliance records](#), further undercutting the claim of “clean” energy.

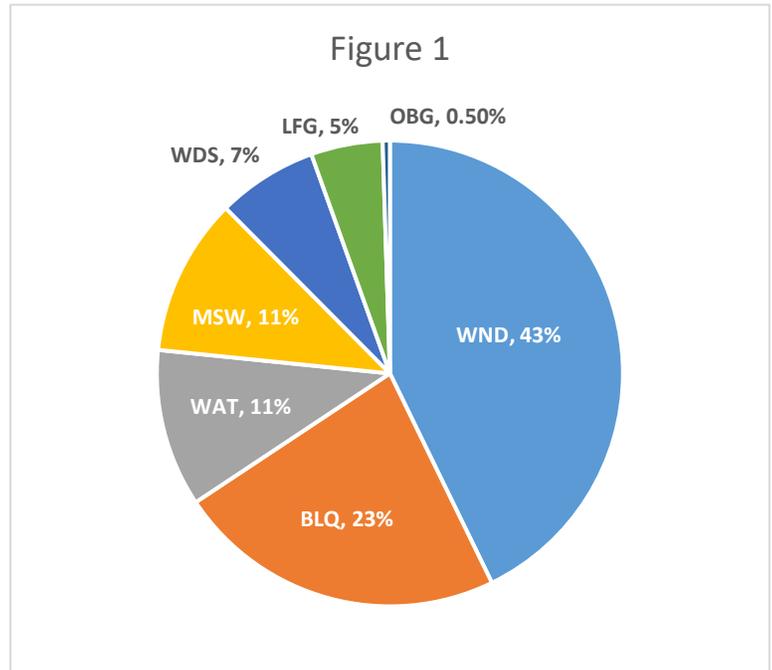
These dirty sources sell RECs that electricity suppliers would otherwise have bought from sellers of clean renewables like wind and solar. As a result, although Maryland consumers pay more than \$100 million annually in higher electricity bills to buy RECs, a December 2019 [report](#) from the Maryland Department of Natural Resources (DNR) found that clean energy jobs had not increased in Maryland.

Black Liquor

Paper mills have burned black liquor for the better part of a century. Burning it allows them to power part of their own operations on site, but doing so produces a stew of [toxic air pollutants](#) that include sulfur oxides, nitrogen oxides, particulate matter, arsenic and lead, and as much carbon pollution as coal.

Most black liquor RECs in 2019 [came from](#) paper mills located in Virginia, North Carolina, Pennsylvania, Tennessee, Kentucky and Ohio. Disturbingly, these paper companies have extremely poor records of pollution and environmental noncompliance.

For example, a paper mill in Covington, Virginia, owned by paper giant WestRock, regularly ranks as the largest emitter of toxic air pollution in Virginia, according to [EPA data](#), ahead of every coal plant in the state. The resource center [Good Jobs First](#) reported that WestRock has paid almost \$26 million in fines since 2000 for offenses including wage and hour violations, environmental violations, labor relations violations, employment discrimination and workplace safety and health violations.



Abbreviations: Black Liquor (BLQ), Landfill Gas (LFG), Municipal Solid Waste (MSW), Other Biomass Gas (OBG), Small Hydroelectric (WAT), Woods and Solid Waste (WDS), Wind (WND)

Source: Data from [PSC Reports 2008-2019](#) and Public Information Act requests of Renewable Energy Credit Pricing.

Table 1: Estimated Compliance Cost 2019

Facilities	Compliance Cost
Municipal Solid Waste	\$8,535,694
Black Liquor	\$18,050,642
Biomass	\$5,456,793
	\$32,043,130

Source: 2019 PSC RPS [Report](#)

This pattern is repeated with paper companies operating in other states. EPA data also shows a North Carolina paper mill operated by Canadian company Domtar violated environmental laws repeatedly over the course of more than a decade.

Biomass (Wood & Wood Waste)

In addition to black liquor, many of the same paper mills sell biomass RECs to Maryland electricity suppliers. Once again, the biomass (consisting of waste wood) is used to power onsite operations, not to put power onto the grid.

As with black liquor, burning wood for electricity produces as much or more pollution than fossil fuels, including coal.

Another source of biomass RECs sold to Maryland is a Virginia power plant owned by Northern Virginia Electric Cooperative (NOVEC), which uses the electricity to supply its own customers. Selling the RECs represents savings for NOVEC's Virginia customers, paid for by Maryland customers.

As with black liquor, burning wood for electricity produces as much or [more pollution than fossil fuels](#), including coal. Biomass generating plants emit high levels of particulate matter (PM), nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), lead, mercury, and other hazardous air pollutants. These pollutants have serious impacts on human health, causing illnesses including asthma, heart disease, lung disease and cancer.

While trees are a renewable resource, experts have concluded that burning them for energy is [not a climate solution](#). Burning trees releases CO₂ into the air immediately, and the carbon isn't

recaptured unless and until newly-planted replacement trees grow to maturity over many decades.

The Covanta plant in Lorton, Virginia, which sells its RECs to Maryland, is one of the largest sources of air pollution in the Washington, DC area, a problem exacerbated by its location in a community of color.

Municipal Solid Waste - Incineration

Burning garbage—municipal solid waste (MSW) or incineration—for electricity is equally problematic

from an environmental standpoint, as these facilities are major emitters of [toxic air pollution](#). According to the [Energy Justice Network](#), the Wheelabrator facility in Baltimore is the city's largest air polluter. Similarly, the incinerator in Dickerson, Maryland is Montgomery County's largest source of air pollution. The Covanta plant in Lorton, Virginia, which sells its RECs to Maryland, is [one of the largest sources of air pollution](#) in the Washington, DC area, a problem exacerbated by its location in a community of color.

2. Undermining Clean Energy Goals

Black liquor, biomass and municipal solid waste all undercut the purpose of Maryland's RPS. In its [2019 report](#), the Maryland Department of Natural Resources found that Maryland RPS sources actually had worse pollution profiles for SO₂ and NO_x than non-RPS generation in the years since 2010, due to the eligibility of black liquor and MSW as well as landfill gas.

Meanwhile, the report found the RPS contributed to a decline in Maryland's electric sector carbon emissions of less than one percent.

In 2019, PEER and the Energy Justice Network [asked the Maryland Attorney General and the PSC to take action](#), citing the long history of environmental violations at many of the facilities selling these dirty RECs. To date, neither the AG nor the PSC has responded.

The COVID pandemic adds particular urgency to this issue now because of the [clear association](#) of air pollution with higher COVID mortality.

3. Hurting Maryland's Economy

Maryland's subsidies for out-of-state dirty energy sources mean fewer clean energy jobs in the state and higher energy prices for Maryland ratepayers.

The biggest beneficiary of this loophole is Virginia. PSC data consistently show more RECs come from Virginia than from any other state, including Maryland. What puts Virginia into first place is the number of black liquor, biomass and MSW RECs sold by companies in the state.

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Although the cost of the RPS to individual customers is small, the dollars add up. The PSC reports that suppliers paid a total of \$134,545,520 for RECs in 2019. More than half of that—over \$79 million—represents non-solar Tier 1 RECs, overwhelmingly purchased from out of state.

Buying dirty RECs from out of state displaces purchases of RECs from clean sources and sources within Maryland.

4. RPS reform and economic opportunity in the time of COVID

Maryland could achieve the equivalent of a major new jobs program without new spending simply by removing dirty sources from RPS eligibility. The millions of dollars currently flowing from Maryland customers to polluting industries would be redirected to clean energy sources and other climate programs, stimulating demand for new projects and creating much-needed jobs.

Table 2: Estimated Amount Spent on Dirty Renewable Energy Credits by Maryland Energy Providers 2008-2019

Facilities	Black Liquor	Incineration	Woody Biomass	Total Dirty RECs
Virginia	\$71,021,418	\$8,846,228	\$28,498,750	\$108,366,397
Maryland	\$6,784,516	\$46,928,276	\$369,333	\$54,082,126
North Carolina	\$14,544,711		\$1,168,634	\$15,713,346
Tennessee	\$10,378,091		\$1,197,151	\$11,575,243
Pennsylvania	\$7,024,759		\$207,622	\$7,232,382
Ohio	\$123,336		\$663,469	\$786,806
Michigan	\$123,336		\$409,130	\$532,467
Kentucky			\$280,695	\$280,695
Wisconsin	\$32,419		\$4,950	\$37,370
				\$198,606,835

Source: 2019 PSC RPS [Report](#)

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Appendix A

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PUBLIC SERVICE COMMISSION

October 7, 2020

Timothy Whitehouse
Executive Director
Public Employees for Environmental Responsibility
962 Wayne Avenue
Suite 610
Silver Springs, MD 20910

Re: Public Employees for Environmental Responsibility (PEER) – Public Information Act Request for additional information on Maryland’s Renewable Portfolio Standard - ML 231066

Dear Mr. Whitehouse:

This letter is in response to your July 9, 2020 Public Information Act request for additional information on Maryland’s Renewable Energy Portfolio Standard (“RPS”) program. Your letter stated: "With respect to the RSC Report, RENEWABLE ENERGY PORTFOLIO STANDARD REPORT, with Data for Calendar Year 2018, I am requesting to know the aggregate price data for 2018 RECs by fuel source."

The Maryland Public Service Commission’s Energy Analysis and Planning Division, the unit with primary responsibility for overseeing the RPS program, has reviewed your inquiry and provided the response below.

If you have any further questions, you may contact Deirdre Lynch at Deirdre.Lynch@maryland.gov.

Sincerely,

/s/ Andrew S. Johnston

Andrew S. Johnston
Executive Secretary

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Fuel	Avg. REC Price.
Agricultural Biomass (AB)	\$6.15
Black Liquor (BLQ)	\$6.06
Geothermal (GEO)	\$46.89
Landfill Gas (LFG)	\$4.99
Municipal Solid Waste (MSW)	\$3.12
Other Biomass Gas (OBG)	\$15.79
Solar Thermal (STH)	\$211.87
Solar PV (SUN)	\$54.71
Small Hydroelectric (WAT)	\$2.13
Wood and Waste Solids (WDS)	\$5.01
Wind (WND)	\$3.99