

**Testimony Supporting SB146**  
**Senate Education, Energy, and the Environment Committee**  
**January 25, 2024**

**Position: SUPPORT**

Dear Chair Feldman and Members of the Committee,

Clean Water Action strongly urges you to pass the Reclaim Renewable Energy Act, SB146, in the 2024 legislative session. As the state moves forward with ambitious climate pollution reduction goals requiring significant investments while simultaneously tightening the state's budget, ensuring that we are investing our existing renewable energy money in the right places is more necessary than ever. The Reclaim Renewable Energy Act, by eliminating trash incineration from the Renewable Portfolio Standard and creating space in the program that will be filled by the remaining eligible sources, will create significant new investments in renewable energy without costing the state budget a penny.

**Maryland is wasting an increasing amount of money on the RPS, much of it out of state.**

Analysis of the last three years of [data available from the Public Service Commission](#) shows that the average price per REC from trash incinerators is increasing dramatically, wasting more Maryland money on an energy source that does not put clean energy onto our grid.

|  | <b>2020</b><br>(\$7.99/REC)                    | <b>2021</b><br>(\$15.46/REC)                 | <b>2022</b><br>(\$22.96/REC)                   | <b>Total, 2019-2022</b> |
|--|--|--|--|-------------------------|
| <b>BRESCO</b><br><b>(Baltimore City)</b>       | 257,366 RECs<br>\$2.1 million                  | 319,505 RECs<br>\$4.9 million                | 183,101 RECs<br>\$4.2 million                  | <b>\$11.2 million</b>   |
| <b>Dickerson</b><br><b>(Montgomery County)</b> | 295,613 RECs<br>\$2.4 million                  | 437,489 RECs<br>\$6.8 million                | 382,233 RECs<br>\$8.7 million                  | <b>\$17.9 million</b>   |
| <b>Covanta</b><br><b>(Lorton, VA)</b>          | 882,086 RECs<br>\$7.0 million                  | 205,764 RECs<br>\$3.2 million                | 511,045 RECs<br>\$11.7 million                 | <b>\$21.9 million</b>   |
| <b>TOTAL</b>                                   | <b>1,435,065 RECs</b><br><b>\$11.5 million</b> | <b>962,758 RECs</b><br><b>\$14.9 million</b> | <b>1,076,379 RECs</b><br><b>\$24.7 million</b> | <b>\$51 million</b>     |

Trash incinerators have received an incredible windfall in recent years from Maryland's RPS, while producing no more energy, let alone clean and renewable energy. That windfall is mostly benefiting an out-of-state incinerator in Lorton, VA. This is a terrible waste of Maryland ratepayers' money that could be supporting the renewable energy we need to clean our grid.

**Trash incineration pollutes significantly more than other sources of energy.** The Department of Natural Resources' Power Plant Research Program's [Final Report Concerning the Maryland Renewable Portfolio Standard](#) analyzed the emissions profile of resources used to meet the Maryland RPS in 2017, including the CO2 emitted per MWh by different eligible categories.

**Table 2-8. Emissions Profile of Resources Used to Meet the Maryland RPS, 2017**

|   | Fuel Source                 | RECs <sup>[1]</sup><br>(MWh) | Share | CO <sub>2</sub> /<br>MWh <sup>[2]</sup> | NO <sub>x</sub> /<br>MWh <sup>[2]</sup> | SO <sub>2</sub> /<br>MWh <sup>[2]</sup> |
|---|-----------------------------|------------------------------|-------|---|---|---|
| <b>TIER 1</b>                             | Agr. Biomass                | 345                          | 0.0%  | 0.000                                   | 0.000                                   | 0.000                                   |
|   | Black Liquor                | 1,668,231                    | 18.5  | 506.736                                 | 1.295                                   | 7.513                                   |
|   | Geothermal                  | 1,880                        | 0.0   | 0.000                                   | 0.000                                   | 0.000                                   |
|   | Hydro                       | 882,114                      | 9.8   | 0.000                                   | 0.000                                   | 0.000                                   |
|   | LFG                         | 227,393                      | 2.5   | 111.173                                 | 10.910                                  | 0.394                                   |
|   | MSW                         | 732,424                      | 8.1   | 2,368.188                               | 4.135                                   | 0.493                                   |
|   | Biogas                      | 11,284                       | 0.1   | 55.556                                  | 0.000                                   | 0.000                                   |
|   | Solar (incl. Solar Thermal) | 557,224                      | 6.2   | 0.000                                   | 0.000                                   | 0.000                                   |
|   | Wood Waste                  | 491,627                      | 5.4   | 339.075                                 | 1.266                                   | 0.220                                   |
|   | Wind                        | 3,002,388                    | 33.3  | 0.000                                   | 0.000                                   | 0.000                                   |
| <b>TIER 2</b>                             | Hydro                       | 1,450,950                    | 16.1% | 0.000                                   | 0.000                                   | 0.000                                   |
| <b>TOTAL</b>                              |                             | <b>9,025,860</b>             |       |   |   |   |
| <b>Weighted Average (Tier 1)</b>          |                             |                              |       | <b>366.008</b>                          | <b>1.095</b>                            | <b>1.728</b>                            |
| <b>Weighted Average (Tiers 1 &amp; 2)</b> |                             |                              |       | <b>307.170</b>                          | <b>0.919</b>                            | <b>1.451</b>                            |

<sup>[1]</sup> Source: Maryland PSC 2018 *Renewable Energy Portfolio Standard Report*.

<sup>[2]</sup> Source: PJM-GATS.

This analysis shows that the trash incinerators in Maryland’s RPS produce the most CO<sub>2</sub> per megawatt-hour by far compared to anything else subsidized in the RPS. **The trash incinerators subsidized by Maryland’s RPS emitted more than 4 times more CO<sub>2</sub> per megawatt-hour than the black liquor sources subsidized at the time**, which the General Assembly wisely already eliminated from the RPS because black liquor is not clean, renewable energy. Neither is trash incineration

The same report also found that “the Maryland RPS has resulted in modest greenhouse gas reductions but may be working at cross-purposes with the state’s efforts to reduce nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) emissions.” The report credited Maryland’s RPS with only “a small role” in PJM-wide CO<sub>2</sub> emissions reductions, finding that 2017 CO<sub>2</sub> emissions were only 0.8% lower than they would have been absent Maryland’s RPS - with the generous assumption that all retired RECs supported resources that would not have operated otherwise. Trash incineration’s outsized CO<sub>2</sub> emissions contribute to this lack of emissions reduction. The report also found that “the SO<sub>2</sub> and NO<sub>x</sub> emissions profiles of Maryland RPS resources, on average, are equal to or slightly higher than net Maryland and net PJM generation since 2010,” due in part to “eligibility of black liquor, LFG, and MSW to meet Maryland RPS requirements.” The legislature wisely eliminated black liquor from the RPS in 2021; it is now time to eliminate MSW (municipal solid waste, or trash incineration).

A recent study in the peer-reviewed journal PLOS Climate, “[Waste incinerators undermine clean energy goals](#),” came to similar conclusions, demonstrating that “incinerators emit more greenhouse gas emissions per unit of electricity produced (1707 g CO<sub>2</sub>e/kWh) than any other power source (range: 2.4 to 991.1 g CO<sub>2</sub>e/kWh). They also emit more criteria air pollutants than replacement sources of energy.” Figure 1 from this report demonstrates how much more

greenhouse-gas-intensive trash incinerators are per unit of electricity produced, compared even to coal.

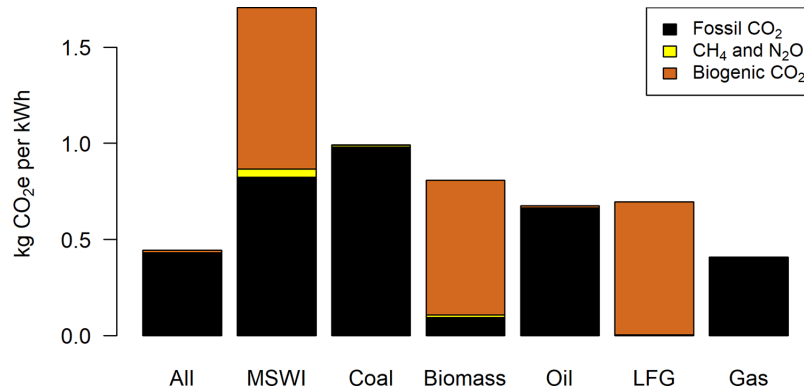


Fig 1. Generation-weighted mean national GHG emissions intensity by major fuel type for electricity. “MSWI” is municipal solid waste incineration, “LFG” is landfill gas, and “Gas” is natural gas.

**EPA does not consider trash incineration to be a solution to methane emissions from landfills.** Landfill methane emissions are a significant climate concern, and are being addressed through many means: federal regulations, state regulations, and increased organic waste diversion through food waste reduction and food waste and yard waste composting. The decomposition of organic matter like food waste in landfills produces methane because of landfills’ anaerobic environment. In its new Wasted Food Scale published this spring, EPA made clear that while there are many solutions to divert food waste from landfills to avoid methane emissions and other impacts, trash incineration is not one of the solutions. The wasted food scale finds landfilling or incinerating food waste equally unacceptable, not one a solution to the other.



**Analysis by the Department of Legislative Services and the Department of Natural Resources' Power Plant Research Program demonstrates that this bill will not have negative impacts on ratepayers.** The [fiscal note](#) for this legislation explains:

*“According to PSC’s most recent RPS compliance report, municipal solid waste (“waste-to-energy”) accounted for 6.9% of Tier 1 RECs used for compliance in 2022. No RECs from refuse-derived fuel facilities were used. The extent to which their removal increases RPS compliance costs depends on the prices and quantity of available replacement RECs. Most likely, the State will continue the multi-year trend of growing reliance on wind RECs to meet RPS requirements with negligible impacts on REC prices. As a result, the bill likely has a minimal impact on compliance costs and, by extension, a minimal impact on customer electricity rates. Therefore, the impact on expenditures on electricity for State and local governments and small businesses is also anticipated to be small.”*

The Department of Natural Resources' Power Plant Research Program's [Final Report Concerning the Maryland Renewable Portfolio Standard](#) provides further detail about how the regional nature of REC markets means that the effect of any individual state's actions is likely to be small. In the chapter, "Assessment of Potential Changes to the Maryland RPS," the report states:

*"REC availability and pricing equilibrate across all of PJM, reducing the effect of changes on any one state RPS policy." (337)*

*"Eliminating land-based wind, small hydro or MSW from the Maryland RPS would have limited impact on REC availability because displaced RECs would be absorbed in other states within PJM and replaced by other eligible resources." (337)*

*"The removal of MSW would have an impact measuring somewhere in between black liquor and the more prevalent RPS eligible resources, including wind, solar, and small hydro. In addition to Maryland, MSW is accepted as a Tier 1 RPS eligible resource in Ohio and Michigan, as a Tier 2 RPS eligible resource in Pennsylvania and New Jersey, and as part of Virginia's and Indiana's voluntary renewable energy goal. However, both Maryland and New Jersey require that the MSW resource be connected with the electric distribution system serving each state, respectively. Although the limited eligibility of MSW among states in PJM could reduce the ability to transfer MSW RECs (albeit to a lesser extent than black liquor), **the effect of removing MSW from Maryland RPS eligibility is still likely to be small.** MSW makes up a smaller share of Maryland's REC retirements (8.9% of all RECs in 2018) and overall PJM-GATS certified renewable generation (1.2% in 2018) than black liquor. MSW also has greater potential to serve RPS requirements in other states than black liquor." (344)*

*"Meeting Current and Future Targets **After Excluding Resources**: The above characterization of the PJM market is consistent with the interim report, which indicates that Maryland can meet, or come very close to meeting, its current and future RPS requirements, both at the previously applicable 25% by 2020 level and at the 50% by 2030 level." (344)*

Additionally, the report explains that Alternative Compliance Payments provide a cap on how high REC prices will go:

*"States may require LSEs to pay an ACP for each REC that it is short of its RPS requirement during a given compliance period. Funds generated from the ACP can be used for a variety of purposes, such as providing grants and loans for the development of renewable energy resources. **The ACP operates as a de facto ceiling for REC prices.** That is, LSEs are willing to purchase or create RECs up to the point that REC costs exceed the ACP." (58)*

## **Conclusion**

Trash is not a renewable resource, as it consists of organic waste that could be composted, plastic waste made from fossil fuels, and other materials made of finite resources. Energy created from trash is not renewable energy, and subsidizing energy production from trash incineration withholds subsidies from the truly renewable, emissions-free energy that we need.

Please pass the Reclaim Renewable Energy Act and invest more of Maryland's money in the truly renewable energy that we actually need to fight climate change, drive down emissions long-term, and create a healthier environment.

Thank you,

Jennifer Kunze  
Maryland Organizing Director  
Clean Water Action