HB0718
Renewable Energy Portfolio Standard - Eligible Sources - Alterations (Reclaim Renewable Energy Act of 2023)
Economic Matters
March 9, 2023
FAVORABLE (SUPPORT)

Chesapeake Physicians for Social Responsibility supports of HB0718 because it would stop subsidizing polluting energy sources that are currently subsidized through the Renewable Portfolio Standards (RPS) and that are making Marylanders sick.
HR0718 alters the definitions of "qualifying biomass", "thermal biomass system", and "Tier 1 renewable source" for purposes of excluding energy derived from certain forest-related resources, animal manure, waste, and refuse and gas produced from the anaerobic decomposition of animal waste or poultry waste from being eligible for inclusion in the renewable energy portfolio standard.

Chesapeake Physicians for Social Responsibility (CPSR) is statewide evidenced-based, organization of over 900 physicians. other health professionals and supporters, that addresses the existential public health threats: nuclear weapons, the climate crisis and the issues of pollution and toxics' effect on health as seen through the intersectional lens of environmental, social and racial justice. As an organization founded by physicians, we understand that prevention is far superior to treatment in reducing costs; death, illness, injury, and suffering.

Incineration must come out of the RPS portfolio and should never have been there in the first place. Waste-to-energy incineration is more polluting and produces more C02 per unit of energy than even coal fire power plants.[1] Why should ratepayers pay for an inefficient, climate forcing, health compromising incineration just because it is called "renewable."

[1] https://web.archive.org/web/20131217055632/http://www.environmentalintegrity.org/documents/FINALWTEINCINERATORREPORT-101111.pdf

Baltimore's BRESCO municipal waste incinerator was identified as the single largest industrial polluter in Baltimore in 2017.[2] It emits mercury, dioxin, nitrogen oxides and is an important source of the fine and ultrafine particulate matter (PM2.5). One year's direct and indirect health costs from PM2.5 in Maryland was estimated to be nearly $22 million.[3] In 2016, it was the 5th largest stationary source of nitrogen oxides (NOx) emissions in the State.[4] Incinerators, including BRESC0 release several times more mercury per unit energy as Maryland's largest coal fire power plants.[5]

There are other dirty energy sources that should come out of the RPS and are excluded with this bill which would end ratepayer subsidy under RPS for health-harming pollutants from dirty energy sources. For example, biomass generating plants emit high levels of particulate matter (PM), nitrogen oxides (NOX), carbon monoxide (CO), sulfur dioxide (SO2), lead, mercury, and other hazardous air pollutants.[6] Burning "urban" wood is a particularly polluting source of energy comparable to burning coal in its harms to health.[7]

One form of biomass generation is anaerobic decomposition which generates methane a more potent greenhouse gas emitter than CO2. [8] It makes no sense to call any source of energy clean that produces significant greenhouse gases if we are trying to mitigate the climate crisis with the RPS.

Poultry waste to energy emits pollutants that include: dioxins, nitrogen oxides, and sulfur dioxide.[9]

While we are reducing C02 by only 0.8% with the current RPS, how well are we reducing methane and we are not reducing air pollutants such as nitrogen oxides and sulfur dioxide.[10]

HEALTH EFFECTS of POLLUTANTS that are emitted from waste-to-energy sources that do not belong in the RPS

1) **PM2.5:** Hundreds of articles" have established an association between PM2.5 and poor health outcomes, including asthma, ischemic heart disease, lung cancer and all-cause mortality especially in urban populations.[11] These very small particles combine with carcinogenic chemicals and heavy metals and can deliver them, once inhaled, deep into the lungs and cross into the bloodstream where they are carried around the body and cause damage. Heavy metals

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[2] https://www.baltimoresun.com/news/environment/bs-md-trash-incineration-20171107-story.html
[3] https://www.cbf.org/document-library/cbf-reports/thurston-wheelabrator-health-impacts-2017.pdf
[4] https://www.who.int/water_sanitation_health/medicalwaste/en/smincinerators4.pdf
[5] https://web.archive.org/web/20131217055632/http:/www.environmentalintegrity.org/documents/FINALWTEINCINERATORREPORT-101111.pdf
[6] https://peer.org/wp-content/uploads/2021/01/1_28_21-Maryland-Dirty-Energy-Report-Final.pdf
[7] https://www.pfpi.net/air-pollution-2/
[8] https://www.epa.gov/anaerobic-digestion/basic-information-about-anaerobic-digestion-ad

[9] https://journals-sagepub-com.proxy1.library.jhu.edu/doi/abs/10.2190/NS.21.1.g
[10] https://dnr.maryland.gov/pprp/Documents/FinalRPSReportDecember2019.pdf
[11] https://www.nejm.org/doi/full/10.1056/NEJMe1706865

attached to fine particulate matter have been found to travel up to the frontal lobe in animals and raise the possibility that they may be a factor in degenerative brain diseases in humans like Parkinson's and Alzheimer's disease.[12] Recent studies have found a positive association between historic pm2.5 levels and mortality from Covid-19.[13]

2)Nitrogen Oxides (NOX): Increase in nitrogen oxide levels are associated with worsening of asthma, emergency room visits and hospitalization. Nitrogen oxide is an important component of ozone. Ozone pollution can put active children who play outside at increased risk of developing asthma.[14] This is important in Baltimore where we have more than double the emergency room and hospitalization rates for asthma as the rest of Maryland.[15] Reducing NOX emissions is an important way to reduce ozone pollution. Both ozone and nitrogen oxide have been associated with increased mortality.[16] Nitrogen dioxide and fine and very fine particulate matter (PM2.5) have been associated with reduced lung function in children and most importantly with improvement in lung function when levels of these two pollutants are reduced. [17]

3)DIOXIN: Dioxin is created in the smokestack and is one of the most notorious families of toxic substances.[18] It has been designated by the World Health Organization as a known human carcinogen: capable of causing cancer. [19] It is considered one of the "dirty dozen" persistent organic pollutants because of its long half-life. It accumulates in the environment where animals graze, it gets concentrated up the food chain where we are on top. It is concentrated in our body fat as we eat: meat, fish and dairy products. In addition to being a carcinogen, it is linked to diseases of the immune system, endocrine system, nervous system and reproductive system.[20]

4)SULFUR DIOXIDE: Children exposed to S02 pollution may have breathing problems as they get older, make more emergency room visits for asthma treatment, and may get more respiratory illnesses than other children.[21] It contributes to particulate matter pollution which of course has very serious health effects.[22]

5)MERCURY: It gets into streams and lakes and is concentrated in fish which we then eat. Mercury is toxic to the developing brain of fetuses, infants and children and is associated with abnormalities in cognition, thinking, memory, and language that can be severe if exposure is significant.[23]

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[12] https://www.jstor.org/stable/j.ctt5vjr8g https://www.cbf.org/document-library/cbf-reports/thurston-wheelabrator-health-impacts-2017.pdf
[13] https://projects.iq.harvard.edu/covid-pm/home
[14] https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(02)07597-9/fulltext
[15] https://www.environmentalintegrity.org/wp-content/uploads/2017/12/Baltimore-Asthma.pdf
[16] https://www.hsph.harvard.edu/news/press-releases/permissible-concentrations-air-pollution-mortality-risk/
[17] https://www.nejm.org/doi/full/10.1056/NEJMoa1414123
[18] https://phys.org/news/2014-09-unforeseen-dioxin-formation-incineration.html
[19] https://www.who.int/ipcs/assessment/public_health/dioxins/en/
[20] https://www.who.int/water_sanitation_health/medicalwaste/en/smincinerators4.pdf (page 28)
[21] https://www.atsdr.cdc.gov/toxfaqs/tfacts116.pdf
[22] https://www.epa.gov/so2-pollution/sulfur-dioxide-basics
[23] https://docs.house.gov/meetings/IF/IF02/20190521/109556/HHRG-116-IF02-Wstate-LandriganMDMScP-20190521.pdf

6)LEAD: Lead is associated with hypertension and cardiovascular disease in adults and in children in causes neurological deficits including loss of cognitive function, reduced IQ, attention deficit, anti-social behavior. There is no safe level of lead and the damage can be irreversible.[24]

These are just a few of the notorious elements of the toxic stew emitted in the air from waste-to-energy trash, poultry waste, and woody biomass burning. Then there are the **climate harms of methane** generated from anaerobic digestion of animal and poultry waste, all considered Tier 1 by the RPS. Meanwhile according to Clean Water Action, cleaning up the RPS means redirecting subsidies from these facilities that totaled $17 million in 2020. That **money from Maryland ratepayers could be redirected to either bring down rates and used to help us reach our clean energy goals.**

Chesapeake Physicians for Social Responsibility supports H0718, removing the above sources of dirty energy from the Maryland RPS. We will save ratepayers money and more importantly we will protect their health and the environment.

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[24] http://ugspace.ug.edu.gh/bitstream/handle/123456789/31420/The Lancet Commission on pollution and health.pdf?sequence=1