

Testimony on: HB 011 “Renewable Energy Portfolio Standards – Tier 1 Renewable Source- Alterations (Reclaim Renewable Energy Act of 2022)”

Position: Support

Hearing Date: March 4, 2022

As a Washington Gas and PEPCO customer, I support HB011, which would exclude from the definition of “Tier 1 renewable source” energy derived from qualifying biomass, methane from the anaerobic decomposition of organic material, certain fuel cells, poultry litter-to-energy, waste-to-energy, refuse-derived fuel and thermal energy from a thermal biomass system. Removing these energy sources from the definition of “Tier 1 renewable source” would preclude energy generated from these sources from counting toward meeting the state’s renewable energy portfolio standard (RPS) and would free utility customers from having to subsidize dirty energy.¹ It would, however, not prohibit generation of energy from these sources.

Maryland Greenhouse Reduction Goals: Maryland currently is required to reduce greenhouse gas (GHG) emissions by 40 percent from 2006 levels by 2032 and envisions reducing these emissions by up to 90% from 2006 levels by 2050.² The General Assembly is considering amending current law to reduce GHG emissions by 60 percent from 2006 levels by 2032 and accelerating additional reductions.³

To achieve these goals requires decarbonizing our electric grid. A recent report on Montgomery County’s draft Building Energy Performance Standards (“BEPS”) for existing commercial buildings (including multi-family housing) by Steven Winter Associates, Inc. quantifies the overwhelming importance of a green grid.⁴ The report quantifies on-site fossil fuel emissions from two BEPS targets – (i) an energy efficiency (“EE”) target emphasizing efficient use of energy but permitting fossil fuel emitting sources for space and water heating and (ii) a zero net carbon (“ZNC”) target which adds to that electrifying space and water heating. The report indicates that a BEPS program could reduce on-site fossil fuel emissions by **46%** (EE target) or **86%** (ZNC target).

The report indicates that building sector GHG emissions can be reduced by improved energy efficiency, replacing fossil-fuel space and water heating with electric appliances and decarbonization of the electricity grid. The report shows that if the electricity supply is maintained at today’s level of CO₂-e emissions/kWh, the EE target would provide total GHG reductions of only **19%** and the ZNC target would provide total GHG reductions of only **26%**-a far cry from the *on-site* fossil fuel reductions of **46%** or **86%**.

Finally, the report isolates the impact of a carbon-free electricity supply on GHG emissions from the building sector. Greening the electricity grid alone, without any BEPS regulation, would reduce CO₂-e emissions/kWh from the existing commercial building stock by a whopping **70%**. Adding BEPS could result in an **83%** reduction under the EE standard and a **94%** reduction with electrification of space and water heating.

Clearly, we must decarbonize the state’s electricity grid to meet our GHG reduction targets. To do that we must quickly and significantly increase emissions-free energy sources. Eliminating ratepayer subsidies of dirty energy sources under the RPS will contribute materially to this goal and thus contribute to meeting the State’s decarbonization targets.

¹ MD Code, Public Utilities, §7-704(a)(1).

² MD Code, Environment, §52-1202(4); 2-1204.1; 2-1205.

³ S.B. 135; S.B. 528; H.B. 708.

⁴ <https://www.montgomerycountymd.gov/green/Resources/Files/energy/Montgomery%20County%20Performance%20Ordinance%20-%20Building%20Energy%20Performance%20Standards%20Report%20-%20final.pdf>. The technical report is also available for download from the DEP BEPS website.

Maryland's Renewable Portfolio Standard, established in 2004, sets goals for Maryland's transition to renewable energy and determines which energy sources can be used to meet that target. Currently, the RPS includes as renewable energy many energy sources that create unhealthy local air pollution and emit greenhouse gases. This undermines the original intent of the RPS, which is to use ratepayer subsidies for Tier 1 "renewable" energy to accelerate Maryland's transition to clean renewable energy.

Renewable Energy Is Not Necessarily Clean Energy: Many energy sources deemed "renewable" under Maryland law⁵ produce substantial amounts of greenhouse gases. **Thus, not all energy sources defined as "renewable" under Maryland law are emissions free, i.e., "clean" renewable energy.** Many renewable sources are dirty sources. Indeed, almost 25% of the renewable energy credits (RECs) received by Maryland utilities still are based on sources that generate GHG emissions, including landfill gas, anaerobic digestion of chicken litter, trash incinerators, and biomass.⁶

Methane from Landfills: Decomposition of organic material in an anaerobic landfill generates methane, an extremely potent landfill gas.⁷ Most landfills use gas capture systems that typically capture 75 percent of landfill gas. Landfills that sell methane to pipelines tend to manage the landfill to produce more gas. As a result, the landfill operates less efficiently, causing more methane to escape than with flaring.⁸ Subsidizing methane sale thus encourages increased methane production and emissions.

Anaerobic Digestion of Chicken Litter: Anaerobic digestion of chicken litter to generate methane can emit higher levels of GHG and toxic chemicals than coal plants, and the pipelines that transport this gas inevitably leak additional methane into the air.⁹ Moreover, turning biomass into methane does not eliminate the chicken litter. Rather, it concentrates the litter in a water slurry that gets spread on agricultural fields and leaks concentrated forms of phosphates and nitrates into the Chesapeake Bay.

Trash incineration: In addition to generating CO₂, trash incineration releases other air pollutants, including dioxin, mercury, lead, nitrogen oxides, carbon monoxide, small particulate matter and sulfur dioxide, all of which significantly impair public health.^{10,11} Moreover, trash

⁵ MD Code, Public Utilities, §7-701(s).

⁶ Report issued by The Public Employees for Environmental Responsibility (PEER Report). <https://www.marylandmatters.org/wp-content/uploads/2022/02/PEER-Report-Maryland-RPS-2.4.22-Final-w-links1.pdf>

⁷ Landfill gas can be reduced by diverting organics from the waste stream, particularly through composting of yard trim and food waste.

⁸ See links to resources on landfill gas emissions in the top and sidebar at www.energyjustice.net/lfg and recommendations for better landfill management in the Zero Waste Hierarchy at www.energyjustice.net/zerowaste/hierarchy

⁹ https://foodandwaterwatch.org/wp-content/uploads/2021/03/fs_1510_md-poultry-incineration-web.pdf

¹⁰ <https://www.peer.org/maryland-clean-energy-program-has-big-dirty-component/>; https://www.who.int/ipcs/assessment/public_health/dioxins/en/; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5637250/>; American Lung Association, "Sulfur Dioxide," Feb. 12, 2020. www.lung.org/clean-air/outdoors/what-makes-air-unhealthy/sulfur-dioxide

¹¹ Sulfur dioxide aggravates asthma, causing wheezing, shortness of breath, chest tightness and other problems, especially during exercise or physical activity. American Lung Association, "Sulfur Dioxide," Feb. 12, 2020. www.lung.org/clean-air/outdoors/what-makes-air-unhealthy/sulfur-dioxide; Small particulate matter can cause eye, nose, throat and lung irritation, affect lung function and worse medical conditions such as asthma and heart disease, with studies suggesting that long-term exposure may be associated with chronic bronchitis, reduced lung function and increased mortality from lung cancer and heart disease. [https://www.health.ny.gov/environmental/indoors/air/pmq_a.htm#:~:text=How%20can%20PM2.5%20affect,nose%20and%20shortness%20of%20breath](https://www.health.ny.gov/environmental/indoors/air/pmq_a.htm#:~:text=How%20can%20PM2.5%20affect,nose%20and%20shortness%20of%20breath;); Of the various pollutants emitted by trash incineration, no safe dose has been established for dioxins, lead, mercury and small particulate matter. "No evidence of dioxin cancer threshold," *Environmental Health Perspectives* 2003 Jul; 111(9): 1145-1147; www.ncbi.nlm.nih.gov/pmc/articles/PMC1241565/; "Lead in the environment: No safe dose," Harvard University excerpt of *The Lancet* (Sept. 11, 2010); www.hsph.harvard.edu/news/multimedia-article/lead/ "Mercury Exposure and Children's Health," *Current Problems in Pediatric and Adolescent Health Care*, 2010 September; 40(8): 186-215. www.ncbi.nlm.nih.gov/pmc/articles/PMC3096006/; World Health Organization, "Ambient (outdoor) air pollution," May 2, 2018; [www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](http://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)

incineration did not receive renewable energy incentives until 2011, well after the incinerators in Maryland were in operation. Hence, Tier 1 subsidies of trash incineration merely prop up an existing polluting energy source, wasting limited ratepayer subsidies on existing dirty energy sources rather than incentivizing new clean energy sources.

Woody biomass: Burning woody biomass results in an immediate release of carbon and eliminates a long-term carbon sink. Indeed, burning wood for electricity produces as much or more pollution than fossil fuels, including coal.¹² In addition, biomass generating plants emit high levels of particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide, lead, mercury and other hazardous air pollutants that cause asthma, heart disease, lung disease and cancer.¹³ Although new trees can be planted, their ability to sequester carbon increases only gradually over many years.¹⁴

Ratepayers should not be required to subsidize dirty energy sources under the RPS. Doing so is inconsistent with the purpose of Tier 1 under the RPS and with Maryland's GHG emission reduction goals. Since 2008, when the RPS was created, Maryland utilities have paid over \$246 million of ratepayer money to purchase renewable energy credits, primarily from out of state companies, to satisfy Maryland's renewable energy requirements. Maryland utilities paid over \$30 million to purchase these credits in 2020 alone.¹⁵ In many cases, out-of-state companies that generate the RECs that get sold to Maryland utilities use the electricity to power their own operations and do not even put electricity on the grid. For example, most of the biomass RECs that Maryland utilities purchase are generated from out-of-state paper mills that burn black liquor and wood waste to power their own operations.¹⁶ Other biomass gas RECs are purchased from the Blue Plains wastewater treatment plant in Washington, D.C which produces fertilizer containing high levels of PFAS, so-called "forever chemicals".¹⁷ In other words, Maryland ratepayer money is creating out-of-state jobs rather than local jobs, not even providing electricity to Maryland businesses and residents, and subsidizing some of the dirtiest industries rather than the wind, solar, small hydro and geothermal energy that consumers understandably believe they are subsidizing. Maryland ratepayers should not be forced to subsidize GHG-emitting energy sources. Instead, ratepayers should subsidize only clean, emissions free energy sources.

In summary, subsidizing dirty energy sources that emit greenhouse gases undermines Maryland's goal of significantly reducing these emissions quickly. Therefore, I respectfully request a favorable report on HB 011.

¹² PEER Report at 6.

¹³ PEER Report at 6.

¹⁴ According to an article in *Mongabay*, <https://news.mongabay.com/2019/05/tall-and-old-or-dense-and-young-which-kind-of-forest-is-better-for-the-climate> an international team of researchers found in 2014 that a typical tree's growth continues to accelerate throughout its lifetime. The team recorded growth measurements from multiple trees representing over 400 tree species from tropical, subtropical and temperate regions across six continents. They found that the growth rate for most species "increased continuously" as they aged. <https://www.nature.com/articles/nature12914>

¹⁵ PEER Report at 3 and 10.

¹⁶ PEER Report at 5.

¹⁷ PEER Report at 2.