

Testimony on: SB 616 “Renewable Energy Portfolio Standard – Eligible Sources – Waste-to-Energy and Refuse-Derived Fuel”
Committee: Finance
Position: Support with Amendments
Hearing Date: March 15, 2022

As a Washington Gas and PEPCO customer, I SUPPORT SB616, which would make waste-to-energy or refuse-derived fuel ineligible for the creation of credits under the renewable energy portfolio standard, WITH AMENDMENTS. Energy derived from qualifying biomass, methane from the anaerobic decomposition of organic material, certain fuel cells, poultry litter-to-energy, and thermal energy from a thermal biomass system should also be made ineligible for the creation of renewable energy credits.

Removing all of 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 **Importantly, it would not prohibit generation of energy from these sources and thus would not inherently destabilize the reliability energy of the grid or raise energy prices for consumers.** All of these energy sources would still be available to Maryland utility customers and to the grid as long as the energy sources remain economically competitive or necessary without ratepayer subsidies.

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 electricity 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 under two BEPS targets. It then considers separately at the impact of a decarbonized electricity grid.

The report first 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 energy efficiency electrifying space and water heating. Both targets deal with site energy efficiency utilization. The report concludes that a BEPS program could reduce on-site fossil fuel emissions by **46%** (EE target) or **86%** (ZNC target).

The report then switches from on-site energy efficiency to building sector GHG emissions. It indicates that building sector GHG emissions can be reduced by three factors: (i) improved energy efficiency, (ii) replacing fossil-fuel space and water heating with electric appliances. and (iii) decarbonization of the electricity grid. The first two factors impact on-site energy use intensity. The last does not.

The report separately quantifies (i) reductions in GHG emissions connected with programs to increase on-site energy efficiency without any changes to the electricity grid, (ii) reduction in GHG emissions from

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

² MD Code, Environment, §§2-1202(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](#).

decarbonizing the grid without any increases in on-site energy efficiency, and (iii) reduction in GHG emissions when combining both strategies.

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%**.

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 increased site energy use intensity (BEPS) to greening the grid 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 GHG emissions-free energy sources. Methane, regardless of how it is produced, emits GHG when leaking from pipes and when combusted to produce heat. Eliminating ratepayer subsidies of dirty energy sources under the RPS will facilitate creating a cleaner energy grid over time and thus contribute to meeting the State's decarbonization targets. Increasing truly green sources of electricity takes time, so we must start now to incentivize more geothermal, wind, and solar and remove subsidies from strategies that inherently emit GHG.

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)** purchased by Maryland utilities are generated from sources that produce 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

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

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 nitrates into the Chesapeake Bay, thereby injuring several Maryland businesses and their workers that depend on a clean, healthy 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 incineration did not receive renewable energy incentives until 2011, well after the incinerators in Maryland were in operation. Hence, as made clear in the House Economic Matters hearings on March 4, 2022, 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.¹²

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.¹³ 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.¹⁴ Although new trees can be planted, their ability to sequester carbon increases only gradually over many years.¹⁵

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

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; 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](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)

¹² Indeed, in the hearings held March 4, 2022 on HB11 in the House Economic Matters Committee a spokesperson for Covanta, which runs the Montgomery County incinerator, was asked why it was testifying in favor of trash incineration remaining in Tier 1. Because Montgomery County owns that incinerator, the proceeds of the sale of RECs from that generator are paid to Montgomery County, not to Covanta. Covanta, however, operates the incinerator in Lorton, Virginia. Virginia law precludes Covanta from selling those RECs to utilities in Virginia. So Covanta sells those RECs to Maryland utilities. Indeed, Maryland utilities purchase more RECs from the Lorton incinerator than from either the Montgomery County or Baltimore incinerators. As a result, Maryland ratepayers permit lower energy costs for Virginia residents by subsidizing the Lorton incinerator. A representative of the Baltimore incinerator admitted under questioning that it uses the revenues from its sale of RECs to Maryland utilities to help pay for the costly improvements it must make to its dirty incinerator under a recent settlement agreement. So Maryland ratepayers are subsidizing reducing the detrimental health impacts of an inherently dirty producer of electricity rather than subsidizing inherently clean wind, solar or geothermal.

¹³ PEER Report at 6.

¹⁴ PEER Report at 6.

¹⁵ 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>

reduction goals. Since 2008, when the RPS was created, Maryland utilities have paid over \$246 million of ratepayer money to purchase RECs, 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.¹⁶ 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.¹⁷ 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”.¹⁸ 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 SB616 **with amendments** that would not only make waste-to-energy or refuse-derived fuel, **but also qualifying biomass, methane from the anaerobic decomposition of organic material, certain fuel cells, poultry litter-to-energy, and thermal energy from a thermal biomass system** ineligible for the creation of credits under the renewable energy portfolio standard.

¹⁶ PEER Report at 3 and 10.

¹⁷ PEER Report at 5.

¹⁸ PEER Report at 2.