

HB0561 - FAV - Renewable Energy Portfolio Standard

Uploaded by: Fahrig, Landon

Position: FAV



Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Mary Beth Tung, Director

TO: Members, Senate Finance Committee
FROM: Mary Beth Tung – Director, MEA
SUBJECT: HB0561 - Renewable Energy Portfolio Standard - Wastewater Heating or Cooling System
DATE: March 30, 2021

MEA POSITION: FAV

House Bill 561 will allow the use of thermal energy provided by wastewater heating and cooling to qualify for Renewable Energy Credits (RECs) under the Renewable Portfolio Standard (RPS).

Under the bill, wastewater will be eligible to provide thermal energy in a manner similar to that of ground loop heat pumps. This novel approach will further diversify the clean energy options available to Marylanders, while helping to ensure in-state benefits.

The technology that would be eligible to produce RECs in HB561 is consistent with the goals of the RPS under PUA §7–702; helping to reduce greenhouse gas emissions and offsetting carbon-fueled electricity generation. For these reasons, MEA urges the committee for a **favorable report**.

CLPP HB561 FAV.pdf

Uploaded by: Goldberg, Donald M.

Position: FAV

Committee: Finance
Testimony on: HB561 Renewable Energy Portfolio Standard – Wastewater, Heating or Cooling System
Submitted by: Donald M. Goldberg, Executive Director
Position: Favorable
Hearing Date: March 30, 2021

Dear Chairwoman Kelley and Members of the Committee:

On behalf of the eleven undersigned organizations, Climate Law & Policy Project submits this testimony in support of HB561. We believe it would provide significant climate, clean energy and economic benefits with no discernible negative environmental impacts. It would give Tier 1 status in the Maryland Renewable Portfolio Standard to technologies that use wastewater from sewage treatment plants, residential and commercial buildings and other sources of wastewater as an energy source or sink for heating and cooling systems. A wastewater thermal energy system is very similar to a geothermal system. It makes use of heat pumps and, unlike several other Tier one technologies, such as waste incineration, black liquor and biomass, is non-polluting (it releases no GHGs or other pollutants into the environment).

Wastewater no longer should be treated as something merely to be disposed of. Heat energy can be recovered from wastewater with a range of technologies for a variety of purposes, including heating and cooling of buildings. One study of wastewater heat recovery potential in buildings showed a 59% decrease in energy consumption compared to conventional heating and cooling.

The key to wastewater heat's energy saving potential is that sewer water is consistently around 60 degrees in the winter—much warmer than the outside temperature—making it a potential heat source, and about 78 degrees in the summer—much cooler than the outside temperature—making it a potential heat sink.

Wastewater heat recovery has been utilized in Europe and elsewhere for many years but has only recently been introduced in the United States. It is now in use in the District of Columbia, in DC Water's new state-of-the-art (LEED Platinum) 170,000 square foot headquarters, on the bank of the Anacostia River.

Another Washington landmark, the American Geophysical Union, integrated a wastewater energy recovery system into a complete retrofit of its 25 year old building. The AGU building's designers concluded that wastewater heat recovery could reduce heating energy consumption by about 85% and cooling consumption by about 35%. Utilizing an array of clean energy technologies, the completed building exceeds planners' original goals of net zero energy consumption, achieving net positive energy, which would have been impossible without the wastewater thermal energy system. The result is a building that creates more energy than it consumes!



3405 Shepherd St. Chevy Chase, MD 20815
202-390-3050
www.clpproject.org
Contact: donald@clpproject.org

We believe wastewater used as a heat source or sink for heating and cooling systems would be a desirable addition to Maryland's Renewable Portfolio Standard and urge a favorable vote on HB561.

Respectfully Submitted,

Climate Law & Policy Project
Maryland Legislative Coalition
Do the Most Good
WISE
Maryland League of Conservation Voters
Indivisible Howard County
Sierra Club Lower Eastern Shore
Cedar Lane Environmental Justice Ministry
Environmental Justice Ministry of the
Unitarian Universalist Church
MLC Climate Justice Wing

Climate Law &
Policy Project

3405 Shepherd St. Chevy Chase, MD 20815

202-390-3050

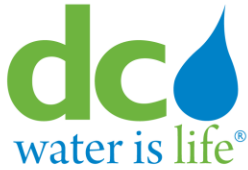
www.clpproject.org

Contact: donald@clpproject.org

HB0561_DCWater_Kinter_FAV.pdf

Uploaded by: Kinter, Saul

Position: FAV



TESTIMONY: HB 561

POSITION: Favorable

January 29, 2021

My name is Saul Kinter, Program Manager for Energy Initiatives, and I am appearing today on behalf of the District of Columbia Water and Sewer Authority, also known as DC Water. DC Water distributes drinking water and collects and treats wastewater for more than 700,000 residents and 17.8 million annual visitors in the District of Columbia. We also provide wholesale wastewater treatment services for 1.6 million people in Maryland and Virginia. To treat wastewater, DC Water operates the Blue Plains Advanced Wastewater Treatment Plant, the largest advanced wastewater treatment facility in the world.

I thank the Committee for the opportunity to testify on this important issue. I am here to bring your attention to two sources of renewable energy and recommend that Maryland recognize them as Tier 1 renewable sources in the Renewable Portfolio Standard, or RPS by passing House Bill 561. The first source is wastewater thermal energy, where wastewater is used for heating or cooling. The second is renewable steam, which is steam generated by burning biogas, a renewable fuel.

An untapped resource flows beneath the streets of every city: wastewater. The wastewater in our sewer systems is relatively cool in the summer and warm in the winter, and can therefore serve as a highly efficient source of thermal energy. The science behind this is identical in principle to the use of geothermal, an already recognized Tier 1 source of renewable energy. The technology to harness wastewater thermal is well-proven in Europe and Canada, and DC Water is confident that, when responsibly built, it poses no threat to the sewer system.

In Washington, DC, four systems are in operation that make use of wastewater for heating or cooling, including at the headquarters of the American Geophysical Union in Dupont Circle, where the building is entirely heated and cooled by wastewater drawn out of the adjacent sewer main. The Council of the District of Columbia revised its renewable portfolio standard to include wastewater thermal energy in 2016, and the Public Service Commission of the District of Columbia has certified at least three of these systems already.

The potential for this technology in Maryland is significant. Wastewater is present in large quantities in every city and town, and buildings use large amounts of natural gas and fossil fuel-derived electricity for heating and cooling. Recognition as a Tier 1 resource would enable building owners who heat and cool with wastewater thermal systems to generate and sell Renewable Energy Credits (or RECs) in the Maryland REC market. Since economic cost is presently a barrier to adoption, REC income would incentivize and speed adoption of the technology. As more buildings convert to wastewater thermal, less energy and especially less

fossil fuel will be needed to heat and cool them, ultimately contributing to the decarbonization of Maryland's building sector. Thus, passing HB 561 will help reduce greenhouse gas emissions and contribute to achieving Maryland's goal of 50% renewable energy by 2030.

In addition to wastewater thermal, HB 561 recognizes another valuable renewable energy source: biogas. Biogas is a proven renewable fuel. Biogas is generated from decomposition of organic products, usually at a landfill or wastewater treatment plant. It can be burned like natural gas, but due to its organic origin, it does not result in an increase in atmospheric greenhouse gases. Maryland has already recognized the benefits of biogas and it is classified as a Tier 1 resource in the Maryland RPS today.

Unfortunately, Maryland's existing RPS language is ambiguous. It does not clearly state whether energy from biogas is considered renewable regardless of the form in which it is used. As a result, the Maryland Public Service Commission has interpreted the RPS such that only electricity generated from biogas qualifies as Tier 1 renewable energy. Biogas can be used for purposes other than electricity, just like natural gas; indeed, in many places, it already is. For example, biogas can be used to generate mechanical energy and drive vehicles. Or it can be used to generate thermal energy in the form of hot water or steam.

When biogas is used for these purposes, it is no less and no more renewable than when used to generate electricity. It typically displaces an equivalent amount of fossil fuel – usually natural gas – regardless of the form of the energy. Therefore, a homeowner who buys biogas for their furnace should be just as eligible for Tier 1 status as a power plant that switches their fuel source. The statutory language should be clarified to state that energy generated from biogas in any useful form is Tier 1 renewable.

Ensuring that mechanical and thermal uses of biogas are eligible for certification as Tier 1 renewable in addition to the existing certification when used to generate electricity will incentivize the use of biogas to generate these forms of energy. Every wastewater treatment plant in the state of Maryland can install a digester and produce biogas; every landfill can capture it. But cost is often a barrier, and RECs are a valuable incentive. In cases where electricity generation is not a viable option, generation of heat could be. In others, an electric-only power plant might be able to generate more renewable energy as a combined heat and power facility. Income from RECs will push plant managers to invest in more digesters and to extract every useful therm, kWh, or Btu from each cubic foot of renewable fuel. In a time of climate crisis, we should not continue to watch this resource be less than fully utilized due to nothing more than a lack of clear legislative language.

House Bill 561 would add wastewater thermal energy to Maryland's RPS as a Tier 1 renewable source and make clear that any energy generated from biogas, not just electricity, qualifies as Tier 1. Adding these two powerful methods to Maryland's arsenal would help us fight climate change and achieve our goal of 50% renewable energy by 2030. Maryland has an opportunity to lead the states in recognizing these two valuable energy sources as Tier 1, and on behalf of DC Water, I urge the Maryland House of Delegates to do so by passing House Bill 561. Thank you very much for your time today.

HB0561_INFORMATION_Stanek.pdf

Uploaded by: Stanek, Jason

Position: INFO

COMMISSIONERS

STATE OF MARYLAND

JASON M. STANEK
CHAIRMAN

MICHAEL T. RICHARD
ANTHONY J. O'DONNELL
ODOGWU OBI LINTON
MINDY L. HERMAN



PUBLIC SERVICE COMMISSION

March 30, 2021

Chair Delores G. Kelley
Senate Finance Committee
3 East, Miller Senate Office Building
Annapolis, MD 21401

**RE: HB0561 – INFORMATION - Renewable Energy Portfolio Standard -
Wastewater, Thermal, and Other Renewable Sources - Information**

Dear Chairman Kelley and Committee Members:

Last year, on January 30, 2020, District of Columbia Water and Sewer Authority (“DC Water”) filed an application with the Maryland Public Service Commission for certification as a Renewable Energy Facility (“REF”) for its Water Blue Plains Wastewater Treatment Plant. On June 3, 2020, the Commission considered the application and heard testimony from DC Water and the Commission’s Technical Staff.

Despite the merits of DC Water’s application, the Commission had no option but to deny DC Water’s application because the thermal energy created from the biogas produced at DC Water’s facility is not listed as an eligible resource under *Public Utilities Article* §7- 701(r) or (s). The Commission explained to DC Water that a statutory change would be necessary to allow its facility to be eligible for certification as an REF. Upon review of HB 561, I find that DC Water’s particular situation would be addressed by including its thermal energy as an eligible resource under the law.

Thank you for considering this information. Please contact the Commission’s Director of Legislative Affairs Lisa Smith at (410) 336-6288 if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jason M. Stanek".

Jason M. Stanek
Chairman

WILLIAM DONALD SCHAEFER TOWER • 6 ST. PAUL STREET • BALTIMORE, MARYLAND 21202-6806

410-767-8000

Toll Free: 1-800-492-0474

FAX: 410-333-6495

MDRS: 1-800-735-2258 (TTY/Voice)

Website: www.psc.state.md.us