



SB 570 – Working for Accessible Renewable Maryland Thermal Heat (WARMTH) Act

Senate Education, Energy, and Environment Committee
February 29th, 2024

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Position: Support

Mr. Chairman and Honorable Members of the Committee:

Advanced Energy United ('United') is writing in support of House Bill 397, the Working for Accessible Renewable Maryland Thermal Heat (WARMTH) Act. This legislation represents a crucial step forward for Maryland, requiring gas companies to develop pilot thermal energy network systems.

United is a national industry association that educates and advocates for policies that allow our member companies to compete to repower our economy with clean, reliable, and affordable energy. We represent over 100 businesses working across the energy sector, including large-scale and distributed renewables, geothermal, energy storage, energy efficiency, transmission developers, electric vehicle (EV) manufacturers, charging infrastructure providers, and more.

The decarbonization of buildings is crucial to Maryland's ambitious but achievable clean energy and Climate Solutions Now Act goals. As we navigate evolving technology, market trends, and policies related to our gas and electric utilities, Thermal Energy Networks (TENS) have emerged in states like Massachusetts, New York, and Illinois as an attractive clean resource option to heat and cool our homes and businesses. As such, United believes that this bill to add TENS to Maryland's clean energy toolkit is important and timely.

TENS are an Attractive Replacement for Fossil Fuel Use in Buildings

TENS offer an appealing alternative to fossil fuel use in buildings, providing clean, renewable, and efficient energy directly sourced from the earth. By replacing the reliance on fossil fuel natural gas, TENS contribute to emissions reduction, enhance indoor and outdoor air quality, and can – under the right framework – increase heating and cooling affordability. The WARMTH

Act intentionally seeks to gather data from diverse pilot project designs to best understand the framework that will be most beneficial to Marylanders.

TENs Offer a New Approach for Gas Utilities and Workers

The current gas utility business model – to deliver fossil fuel through long-lived pipeline infrastructure, cannot continue indefinitely under Maryland’s climate and clean energy commitments. It is also threatened by market forces, including competition from high-performing, non-combustion clean appliances and rising and volatile costs of natural gas and natural gas infrastructure. Acknowledging this, TENs provide an innovative path forward for gas utilities and their workforce, capitalizing on existing skills and expertise within the gas utility sector.

TENs are a “Grid-Ready” Electrification Solution

TENs that leverage ground source (or “geothermal”) heat pumps offer extremely energy-efficient heating and cooling without adding significant load on the electric grid by relying on very consistent ground temperatures throughout the year. A recent study by the Oak Ridge National Laboratory and National Renewable Energy Laboratory found that if approximately 70% of buildings in the country were retrofitted with ground source heat pumps and building envelope improvements, electric demand would be 13% lower (with 24,500 fewer miles of transmission needed) compared to decarbonization without ground source heat pumps. These results translate into billions of dollars of savings for energy customers, on the order of \$19 billion per year by 2050¹. Of note, these figures do not consider additional efficiencies of networked geothermal systems.

TENs Promote Inclusiveness and Diversity

The WARMTH Act recognizes the importance of inclusiveness and diversity in the development of thermal energy network systems by authorizing municipal corporations, counties, and community organizations to submit neighborhoods for consideration, by requiring coordination with community groups in pilot system design, and by providing grants to community-based organizations to do participant outreach. This approach reflects a commitment to energy equity within the gas transition.

For these resources, United strongly supports Senate Bill 570. By embracing this legislation, Maryland has the potential to be part of a leading cohort of states in the development of thermal energy network systems. We respectfully request a favorable vote from this Committee.

¹ Oak Ridge National Laboratory, *Grid Cost and Total Emissions Reductions Through Mass Deployment of Geothermal Heat Pumps for Building Heating and Cooling Electrification in the United States*. November 2023. Available at: <https://info.ornl.gov/sites/publications/Files/Pub196793.pdf>

