



THE MARYLAND HOUSE OF DELEGATES
ANNAPOLIS, MARYLAND 21401

HB 397- PUBLIC UTILITIES- THERMAL ENERGY NETWORK SYSTEMS- AUTHORIZATION AND ESTABLISHMENT (WORKING FOR ACCESSIBLE RENEWABLE MARYLAND THERMAL HEAT (WARMTH) ACT)

TESTIMONY OF DELEGATE LORIG CHARKOUDIAN

FEBRUARY 22, 2024

Chair Wilson, Vice Chair Crosby, and Members of the Economic Matters Committee,

The Inflation Reduction Act (IRA) offers time-bound funds that will provide an opportunity for historic investment in Maryland's energy infrastructure. These funds give us the opportunity to fully electrify many low-and-moderate income homes, but not all. In order to best utilize these funds, we must invest them so that we can not only make a big impact on our state's infrastructure but also learn lessons for future electrification from fund sources we have not yet identified.

This legislation engages a portion of Maryland's IRA funds to create community scale networked geothermal heating and cooling systems (GHP). In particular, it requires that each gas company in the state works with community organizations and municipal and county governments to identify pilot communities and propose these projects to the Public Service Commission (PSC). Based on the cost benefit analysis, the PSC will approve the pilots. The gas companies will be responsible for building the systems and collecting significant data once the projects are operational.

This legislation is timely and has many benefits.

1. Decarbonizing to meet Maryland's greenhouse gas reduction goals requires greater electrification of buildings and transportation. As Maryland electrifies, we need to maximize efficiency to limit upgrades needed to the electric grid. Specifically, we need to flatten the projected winter peak energy usage. Coupled with building envelope improvements, networked geothermal systems have been proven to reduce electricity demand.¹
2. A US Department of Energy study finds the "mass deployment of GHPs can electrify the building sector without overburdening the US electric power system. In all GHP deployment scenarios considered, significant reductions are realized in the needed power generation and capacity, energy storage capacity, transmission build-outs, seasonal capacity that can contribute toward resource adequacy, CO2 emissions, and marginal and cumulative system costs of electricity across the United States."²
3. This legislation offers a new business model for gas utilities that relies on 100% clean energy and utilizes existing pipeline workforce skills. In Massachusetts, both Eversource and National Grid have pilot projects through which they will own the networked geothermal system and it will be rate-based in the same way their gas and electric assets are currently rate-based.³ These projects have broken ground and will come on line in

¹ <https://www.energy.gov/eere/articles/us-department-energy-analysis-highlights-geothermal-heat-pumps-pathway-decarbonized>

² page xxiv, <https://www.osti.gov/biblio/2224191>

³ <https://www.eversource.com/content/residential/about/transmission-distribution/projects/massachusetts-projects/geothermal-pilot-project>

the next year. In states such as New York, legislation has been passed in order to remove barriers preventing utility providers from operating networked geothermal systems.⁴

4. Networked geothermal systems are the best opportunity for neighborhood scale shifts to fully electric heating and cooling. By operating on the neighborhood level, the state has the opportunity to implement projects that will move the needle toward our 2031 and 2045 goals. These systems are already operating in areas across the country and providing savings for institutions⁵ and residents⁶.

Lastly, the legislation includes a requirement that these pilot projects will be in neighborhoods with 80% low-and-moderate income residents and prioritize overburdened and underserved communities. And, the labor standards in the bill prioritize maintaining work for those who currently work on gas infrastructure and ensure prevailing wages for construction on the projects. Because GHP work is similar to gas distribution work, minimal additional training ensures job security. Workers on our gas system have kept us safe and warm for decades. We need to ensure their job security in a new clean thermal energy system.

I respectfully request a favorable report on HB 397.

⁴ <https://www.nysenate.gov/legislation/bills/2021/S9422>

⁵ <https://www.coloradomesa.edu/facilities/sustainability/geo-systems.html>

⁶ <https://www.cnbc.com/2022/09/01/geothermal-powered-housing-development-saves-homeowners-big-bucks.html>