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The Honorable Sandra Pappas
Chair, Committee on Capital Investment
Minnesota Senate Building Room 2113
95 University Ave W
Saint Paul, MN 55155

Chair Pappas and Committee Members,

My name is Margaret Cherne-Hendrick and I am writing to you today on behalf of Fresh Energy. Fresh Energy is a 30-year-old, Minnesota based non-partisan, non-profit organization that is working to achieve equitable, carbon neutral economies by 2050. We appreciate the opportunity to support Senate File 2450.

Minnesota has made progress reducing emissions for our power and transportation sectors. However, to avoid the worst impacts of climate change, we must now turn our attention to other sectors of the economy, like buildings. Buildings are one of the largest contributors to greenhouse gas emissions and account for about 40 percent of emissions nationally

We believe that geothermal district energy systems represent a cost-effective, scalable solution to help meet our climate challenge, improve public health, and provide equitable and reliable heating and cooling to Minnesota's buildings. A geothermal district energy system is a heating or cooling system that uses the constant temperature of the Earth to heat or cool multiple buildings connected through a piping network.

By comparison, geothermal district energy systems that utilize ground-source heat pump systems are up to eight times more energy efficient than natural gas systems. Because geothermal district energy systems distribute heat and not carbon-based fuels, they are carbon- and pollutant-free. Of particular note, these systems work especially well in cold climates because they rely on the constant temperature of the Earth, therefore providing heating and cooling reliably through extreme heat in summers and extreme cold in winters. Their vastly superior efficiency also confers lower energy bills and puts less pressure on the electric grid as we see electrification across other sectors of the economy continue to advance.

Fresh Energy believes investing in geothermal district energy systems, like the municipal district heating and cooling energy distribution system proposed in Rochester, is extremely important. These types of systems are already being deployed at utility-scale by National Grid, Eversource Energy, and NYSERDA on the East Coast. We know we must decarbonize our building sector to meet Minnesota's greenhouse gas reduction goals, align with the Governor's Climate Action Framework, and stave off the worst impacts of climate change.

Deployment of geothermal district energy systems in Minnesota will also help chart the path for a *just labor transition*. Workers currently managing buried infrastructure that moves carbon-based fuels like natural gas have a clear path to management of very similar systems that instead move around heat. Geothermal district energy systems are safer and healthier for pipeline workers and

building residents, reducing explosive accidents and exposure to pollutants. The lower energy bills, cleaner air, and reliable service conferred by geothermal district energy systems also contribute to a *just energy transition* in Minnesota's building sector, especially so in under-resourced and overburdened communities.

We must invest in innovative energy infrastructure projects like the one proposed in the City of Rochester to demonstrate the climate, energy, workforce, and public health benefits of district energy systems. Initial investment now will de-risk future investments and allow systems like this to be deployed at scale across the state.

Fresh Energy supports Senate File 2450 and we appreciate the opportunity to weigh-in on this important issue. Thank you for your time.

Sincerely,

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