



**Testimony in Support of LD 300, a Resolve, to Direct the Public Utilities Commission to Study Expanding the Use of Hydroelectric Power and the Development of a Geothermal Power Plant in the State**

**To the Committee on Energy, Utilities and Technology  
by Jack Shapiro, Climate and Clean Energy Program Director  
March 20, 2025**

Senator Lawrence, Representative Sachs, members of the Energy, Utilities and Technology Committee, my name is Jack Shapiro, and I am the Climate and Clean Energy Director at the Natural Resources Council of Maine (NRCM). NRCM is a nonpartisan membership organization that has been working for more than 65 years to protect, restore, and conserve Maine’s environment, now and for future generations. On behalf of our nearly 24,000 members and supporters across the state, NRCM testifies in support of LD 300, a Resolve, to Direct the Public Utilities Commission to Study Expanding the Use of Hydroelectric Power and the Development of a Geothermal Power Plant in the State

The core strategy in Maine’s efforts to combat climate change is moving from expensive and polluting fossil fuels to more affordable and efficient electrified technologies for heating and transportation, and adding new electricity generation resources that do not emit carbon pollution. LD 300 proposes two studies of additional resources that could help meet those needs, Maine-based hydroelectricity, and geothermal power.

Our testimony today does not take a position on the proposed hydroelectricity study but offers for consideration that in 2015 a study was conducted for the Governor’s Energy Office evaluating potential additional hydropower resources that could be developed in Maine at the time. As of 2015, that study identified “47 sites with 56 megawatts (MW) of potential capacity [that] showed significant development potential for conventional hydropower development.”<sup>1</sup>

However, we testify in support of the proposed geothermal study. Geothermal power generation technology is distinct from ground source heat pumps (sometimes referred to as geothermal heat pumps) or thermal energy networks, which we understand will be the subject of other legislation this session. Geothermal power generation uses the high temperatures underground to generate

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<sup>1</sup> Governor’s Energy Office. *Maine Hydropower Study*. February 2015.  
<https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/001-ME-GEO-Rpt-02-04-15.pdf>

steam to turn an electric turbine. This approach has been around since the turn of the 20<sup>th</sup> century, but in recent years “advanced geothermal” technology has seen significant investment and new promise.<sup>2</sup> Advanced drilling technology coming onto the market is allowing access to deeper, hotter rocks, potentially allowing power generation in geographies where it was not previously viable.

Current geothermal resource maps are very low resolution and may not capture local opportunities across Maine’s geography and geology.<sup>3</sup> A more detailed understanding of the land use requirement and any potential air or water pollution impacts could be considered by the study as well to better inform our energy policy conversations.

Competing with the plummeting costs and technological maturity of renewable energy technologies like solar, wind, and offshore wind will be difficult for nascent technologies like advanced geothermal, but we should be open to the possibility that it could potentially play a role as a balancing resource, while being mindful of the scope of the study to ensure it is conducted at a reasonable cost.

In our view, there is not currently enough information to determine whether or not geothermal power generation could represent a viable additional resource to provide affordable clean energy in Maine, which is why we encourage the Committee to support LD 300’s geothermal study.

Thank you.

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<sup>2</sup> U.S. Department of Energy. Enhanced Geothermal Systems. Accessed March 18, 2025.

<https://www.energy.gov/eere/geothermal/enhanced-geothermal-systems>

<sup>3</sup> National Renewable Energy Labs. *Geothermal Resources of the United States: Identified Hydrothermal Sites and Favorability of Deep Enhanced Geothermal Systems (EGS)*. February 22, 2018.

[https://www.nrel.gov/docs/libraries/gis/high-res-images/geothermal-identified-hydrothermal-and-egs.jpg?sfvrsn=94d5211\\_1](https://www.nrel.gov/docs/libraries/gis/high-res-images/geothermal-identified-hydrothermal-and-egs.jpg?sfvrsn=94d5211_1)