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## **TESTIMONY BEFORE THE ENERGY, UTILITIES AND TECHNOLOGY COMMITTEE**

### **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**

**L.D. 300**

**GOVERNOR'S ENERGY OFFICE  
March 20, 2025**

Senator Lawrence, Representative Sachs, and Members of the Joint Standing Committee on Energy, Utilities and Technology (EUT): My name is Caroline Colan, and I am the Legislative Liaison for the Governor's Energy Office (GEO).

The GEO testifies neither for nor against L.D. 300.

Thank you for the opportunity to provide comment on the proposed studies included in this legislation.

Hydropower has long played an important role in Maine producing reliable electricity and powering industry across the state. According to the U.S. Energy Information Administration (EIA), in 2023 conventional hydroelectric power was the largest source of renewable electricity generation in Maine, accounting for 44 percent of total renewables and more than 30 percent of all in-state utility-scale electricity generation. Maine ranks 15th in the nation in hydroelectric generation, but hydropower's share of in-state utility-scale generation was second after Vermont among the states east of the Mississippi River and 6th among all states.<sup>1</sup>

Currently there are 109 hydropower dams in Maine administered through 93 federal licenses or exemptions authorized by the Federal Energy Regulatory Commission (FERC).<sup>2</sup> These facilities have around 700 megawatts of capacity including about 126 megawatts of capacity from generators over 100 years old.<sup>3</sup>

GEO expects that Maine's hydropower resources will continue to play an important role in Maine's energy portfolio as the state advances efforts to meet a goal of 100 percent clean energy by 2040. Hydropower meaningfully contributes to maintaining and enhancing reliability of Maine's electric grid, and has the potential to provide frequency management, voltage support, and blackstart services as well. GEO does not expect to see new hydropower projects proposed in the state given their capital

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<sup>1</sup> <https://www.eia.gov/state/analysis.php?sid=ME>

<sup>2</sup> <https://www.maine.gov/tools/whatsnew/attach.php?id=13144870&an=1>

<sup>3</sup> U.S. EIA, Monthly Electric Generator Inventory (based on Form EIA-860M).

intensive nature and long payback periods, and limited viable locations that have not been previously dammed or otherwise harnessed. However, we agree that maintaining much of the existing fleet is of value and there may be remaining opportunities to invest in efficiency improvements, enhancements that support grid resilience, and additional improvements to dam safety. In fact, in 2024, \$33.8 million in federal funds were awarded to 21 hydro projects in Maine to support these types of activities.

There are several entities in Maine, in addition to FERC, that have responsibilities related to the permitting, construction, and reconstruction of new or existing hydropower projects in addition to other regulatory topics such as dam safety. Should the committee go forward with this proposed study, we would recommend the study be conducted through a collaborative effort of the GEO, Maine DEP's Hydropower Program, the Maine Emergency Management Agency, and the Public Utilities Commission, and that these entities be consulted prior to passage of the bill to ensure the scope is fully defined and an adequate fiscal note is attached.

This bill contains more limited direction on a proposed study regarding the development of a geothermal power plant in Maine. Geothermal energy—heat from the earth—is a renewable resource that can be tapped for several applications, including for electricity production and heating and cooling for buildings. Naturally occurring and manmade hot water reservoirs below the earth's surface can be accessed by drilling wells into the reservoirs at varying depths up to several miles deep. Much closer to the surface, stable ground temperatures can be used as either a heat sink or heat source depending on aboveground temperatures. Additional clarity on the scope and desired outcome of the study would be helpful, in particular, identification of the primary application of geothermal resources. Given Maine and the northeast's geologic conditions, the most technically feasible geothermal applications in the region are likely geothermal heat pumps and district geothermal systems on campuses or in communities with building density and concentrated heating demand, rather than larger scale geothermal power plants. Should the committee proceed with this study and identify a clear scope, GEO would be interested in participating in or leading the study and evaluation.

Thank you for your consideration.

A handwritten signature in black ink that reads "Caroline Colan". The signature is fluid and cursive, with the first name "Caroline" and last name "Colan" clearly distinguishable.

Caroline Colan, Legislative Liaison  
Governor's Energy Office