STATE OF MAINE
PUBLIC UTILITIES COMMISSION

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Testimony of the Maine Public Utilities Commission

Neither For Nor Against

LD 300, 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

March 20, 2025

Senator Lawrence, Representative Sachs, and Distinguished Members of the Joint Standing Committee on Energy, Utilities, and Technology (Committee), my name is Deirdre Schneider, testifying neither for nor against LD 300, 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 on behalf of the Public Utilities Commission (Commission).

LD 300 requires the Commission to conduct studies to support the development of a balanced portfolio of energy sources in the State and includes a study that reviews the current operation and opportunities for the expansion of hydroelectric power in the State for the purpose of evaluating methods to revitalize the hydroelectric power industry and a study for the purpose of developing a geothermal power plant in the State.

While the Commission supports the concept of having a balanced portfolio of energy sources in the State, we are unsure if we are the right entity to lead these studies. Based on several factors, including our limited regulatory role over generation, the Commission would recommend that any studies on hydropower be conducted by the GEO, the Maine Department of Environmental Protection (DEP) and the Maine Emergency Management Agency (MEMA). The Commission is not opposed to collaborating with these entities to the extent that we can provide value to the study process, but these entities are better suited to lead this endeavor because of their roles including the GEO's energy planning expertise, the DEP's hydropower program and MEMA's oversight of dam safety.

The Committee may want to consider having parties discuss this Resolve further to define the study parameters, considering past reports produced relating to hydropower and more recent reports relating to Maine's geothermal potential. Furthermore, the report due date of November 4, 2026, represents a time when the membership of the Committee is under transition so a later date may ensure that this report is properly received by the Committee established in the 133rd Legislature. Lastly, if the Commission were to undertake these studies, we would likely require consulting services. Due to an increase in recent studies and funds provided to the GEO our Reimbursement account may not be able to accommodate the cost of a consultant for this study at this time.

Background

Hydropower Reports

According to a 2025 report from the Maine Department of Environmental Protection, in 2024 there were 109 hydropower dams in Maine administered through 93 federal licenses or exemptions authorized by FERC[1]

In 2015, the GEO contracted with consultants to conduct the Maine Hydropower Study.[2] The report assessed new hydropower potential, including conventional hydropower and marine and hydrokinetic industry opportunities. It also assessed the regulatory environment for hydropower. The report noted that hydropower is capital intensive and has a long payback period, making the economics of most new projects marginal. Their analysis identified 110 total sites at powered and non-powered dams with the potential for the installation of 193 MW of additional capacity; however, the report noted "while many existing dam sites have hydroelectric development potential, these opportunities do not appear economic under current market conditions. In addition, when environmental and regulatory considerations are taken into account, 47 sites with 56 MW of potential capacity showed significant development potential for conventional hydropower development." This report may be a good starting point to evaluate whether there have been any significant changes since 2015.

Geothermal

The National Renewable Energy Laboratory (NREL) provided an analysis for developing targets for enhanced geothermal systems.[3] The report included information regarding the total U.S. geothermal resource capacity and identified Maine as having a low potential at less than 0.5 GW. It also included scenarios for geothermal deployments in 2035 and 2050 but did not include any deployments in Maine. While Maine may not be ideal for the development of a geothermal power plant, there may be other more feasible geothermal options to explore including geothermal heat pumps (ground source heat pumps) and more localized geothermal heating and cooling networks (districts)

I would be happy to answer any questions or provide additional information for the work session.

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[1] Pending and Anticipated Water Quality Certification Applications for Hydropower Projects - https://www.maine.gov/tools/whatsnew/attach.php?id=13144870&an=1

[2] https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/001-ME-GEO-Rpt-02-04-15.pdf

[3] https://www.nrel.gov/docs/fy23osti/84822.pdf