Testimony of Carl Wilcox, P.E., 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, honorable members of the Energy, Utilities and Technology Committee. My name is Carl Wilcox. I was born and raised in Maine and have lived in Maine in excess of 55-years. I now live in Minot, Maine and am a Maine licensed professional environmental engineer, with over 35 years of experience.

LD 300 is a waste of taxpayer money.

There is a myth that has now continued for more than a decade that Maine has great untapped hydropower resources.

This myth should have been completely expunged by the efforts of Governor Paul LePage.

Circa 2014, the Lepage Administration by the authority of the Maine Legislature contracted with Kleinschmidt of Pittsfield, Maine to conduct a Maine Hydropower Study. Kleinschmidt is a very reputable firm with their hydropower expertise recognized across the US. The 122-page Maine Hydropower Study, prepared for the Maine Governor's Energy Office, was published February 2015.

In Kleinschmidt's professional opinion, Maine has 47 hydro sites with a total combined power capacity of 56 MW. The vast majority of these sites, if not all, are run of the river installations. They produce as much power at 2:00 AM when it is not needed as 2 in the afternoon when power is needed. Plus hydropower production is low in summer and winter when power demand is the greatest.

Additionally, the report states that in New England, run of the river hydropower installations operate at an annual average 38% capacity factor. Thus, over the course of a year the average power output of those 47 sites would be 21 MW producing 184 GWhr per year.

For comparison, from the Maine Solar Dashboard, published by Maine Governor's Energy Office, as of March 18th, 2025, 1,585 MW of installed PV solar in Maine. Nearly all of that has been installed in the last 4-years. In 2024 alone, 653 MW of solar was installed. In Maine PV solar has a capacity factor close to 20%. Over a year, the currently installed PV solar averages 317 MW producing 2,777 GWhr per year.

The solar production installed in the last 4-years produces 15 times the power than the sum of all the 47 hydropower sites identified by Kleinschmidt.

On a sunny day, such as yesterday, March 19th, for several hours around noon, the currently installed solar produces nearly as much power as all of Maine's six natural gas powered plants operating at full capacity.

There may well be justification for a pumped hydro from Wyman Reservoir up to Flagstaff Lake, that was created by a non-hydro dam in the late 1940s. Flagstaff Lake discharges water to Wyman Reservoir to produce power at Wyman Dam and

downstream dams. There is a 647-foot elevation drop from Flagstaff Lake to Wyman Reservoir which is greater than the total drop from Wyman Reservoir to the ocean.

There is significant potential to utilize the combination of Flagstaff Lake and Wyman Reservoir for pumped storage during high solar and wind power production periods.

I suggest the EUT committee revise LD 300 for a focused resolve to support an evaluation of pumped hydro storage utilizing Flagstaff Lake and Wyman Reservoir.