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Testimony of Representative Sophie Warren Presenting

L.D. 1130, An Act to Advance Long-duration Energy Storage Within the State

Before the Joint Standing Committee on Energy, Utilities and Technology

Good afternoon, Senator Lawrence, Representative Sachs, and respected colleagues of the Joint Standing Committee on Energy, Utilities and Technology. My name is Sophie Warren, and I represent House district 124. Thank you for the opportunity to present **L.D. 1130, An Act to Advance Long-duration Energy Storage Within the State**.

LD 1130 amends the law governing the state's energy storage goals and existing targets by establishing an additional goal of developing at least 300 megawatts of long-duration battery storage within the State by December 31, 2035.

The reasons for this bill are simple. Long-duration energy battery storage has been identified as a cost-effective option to help get more renewable energy onto the grid while avoiding the need to over-build transmission. Battery storage can be sited near existing loads (near cities and towns), alongside generation, like solar and wind, and close to existing transmission lines.

On economic lines, a target such as the one proposed in LD 1130 will send a message that Maine is a safe place to invest in these technologies that can be sited in or alongside existing industrial development, help get more renewable energy onto the grid, and offer cost-effective options for improving our grid without overburdening ratepayers.

Moreover, this bill builds on strong goals already in statute regarding storage. Maine has pre-existing battery storage targets of 300 megawatts by the end of 2025 and 400 megawatts by the end of 2030. The target year in this bill is 2035, which is a continuation of this natural progression of what already exists in statute, five years later to meet the long-duration targets that LD 1130 would create. This 2035 target is intended to help encourage investment in this space and show that Maine is committed to distributed energy resources that help renewables cost-effectively get onto the electric grid.

We can already see the growth of battery storage in relation to these goals. As of December 2024, Maine has 63 megawatts of grid-connected energy storage capacity, with an additional 175 megawatt project coming to Gorham.[1]

There are additional plans for an 85 megawatt, 100-hour multi-day energy storage system in Lincoln, Maine at the site of the former mill.

[1] https://www.maine.gov/energy/press-release-energy-storage-procurement-recommendations-december-2024

Long-duration battery storge targets have been adopted by multiple states,[2] so while we can position ourselves ahead of some, we so to benefit from the experience of others. Several states have already established similar targets, Massachusetts and Virginia being the most recent. Massachusetts has a goal of 5000 MW of storage, 750 MW of which must be mid duration, and 750 MW of which must be long-duration. Virginia recently expanded their current targets by adding a long-duration battery storage target for their two major utilities, with Appalachian Power adding 520 MW of long duration energy storage by 2045 and Dominion Power adding 3,480 MW of capacity by the same date.[3]

The 300 MW proposed for Maine in this bill represents a compromise. It was developed by looking at what Massachusetts has in statute and making it proportional for Maine based on our existing targets for battery storage and our existing customer load. Developers suggested making it a little higher, GEO suggested making it a little lower, and the middle ground between the two felt appropriate to bring forward in this bill.

This bill is brought forward benefiting from the tremendous volume of work produced by the Governor's Energy Office, who has identified long-duration energy storage in multiple reports over the past few years as an option that can help avoid costly investments in our aging electric grid, and help meet our climate goals without over-burdening ratepayers.

To further illustrate this point, the following are several examples of long-duration battery storage recommendations citing the policy advanced by this bill:

1. In March 2022, the GEO completed a "*Maine Energy Storage Market Assessment*"[4] which found:

> "…long duration energy storage could enable the power sector to avoid costly investments in large amounts of renewables and batteries, and it may lower the costs of achieving a deeply decarbonized grid, as numerous studies across North America, including in New England, have demonstrated."[5]

2. In February 2024, a report from the Governor's Energy Office to this committee titled, "*Long-Duration Energy Storage: A review of technology options, key considerations, costs, and scenarios for the use of long-duration energy storage in Maine pursuant to Public Law 2023, Chapter 374: An Act Relating to Energy Storage and the State's Energy Goals*"[6], found that:

> "[T]o achieve Maine's climate and clean energy goals, the state will need substantial new clean energy resources in the coming decades. As clean energy is deployed, including significant variable renewable resource capacity like solar and wind, ensuring power system reliability,

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[2] California, Massachusetts, Virginia, and New York.
[3] https://www.cesa.org/resource-library/resource/table-of-state-energy-storage-targets-progress-and-comments/
[4] https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/GEO_State%20of%20Maine%20Energy%20Storage%20Market%20Assessment_March%202022.pdf
[5] Page 28, *Id.*
[6] https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/LDES%20Report_Final_0.pdf

resource adequacy, and resilience will be critical. Two- and four-hour storage, primarily served by lithium-ion batteries, will help provide these services in the years to come, but as peak demands shift to winter and net peak loads widen, **longer-duration energy storage resources could play a significant role in providing flexible, clean, firm power at all hours of the day—even during high-demand, low-production periods of time which may occur between days or across several days—and in maximizing the usefulness of investments in new clean resources and new transmission.**"[7]

3. One of the policy considerations and conclusions of the "*Long-Duration Energy Storage"* report was:

"[T]he GEO is tasked by law with periodically evaluating and updating the state's storage goals. **Given the emerging importance of long-duration energy storage in cost-effectively meeting energy needs, the state may consider goals for long-duration storage deployment if appropriate**."[8]

4. In November 2024 "*GEO's Maine Pathways to 2040"* report[9] found that, "long duration battery storage tech is improving and could potentially be more **cost effective** than thermal resources."[10]

5. On January 6, 2023 the Governor's Energy Office and the Distributed Generation Stakeholder Group released a report[11] titled "*Distributed Generation Successor Program in Maine: An Economic Assessment."* The report found that "**if given proper dispatch incentives, battery storage can be deployed in conjunction with solar PV at incremental costs that are significantly less than incremental benefits."[12]**

Long-duration battery storage is not just a technological innovation but a strategic and economical tool for Maine's energy future. As the technology continues to evolve, the potential for long-duration battery storage to meaningfully contribute to Maine's energy landscape only grows, positioning it as a vital component of a more sustainable, reliable, and cost-effective energy system. By adopting this target as part of the state's energy policy, Maine can begin planning now to meet its energy needs in the most cost-effective way, enhancing grid resilience, reducing carbon emissions, and creating economic opportunities.

I appreciate your time and consideration of this bill. I would be happy to answer any questions that you may have.

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[7] Page 24-25, https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/LDES%20Report_Final_0.pdf
[8] Page 25, https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/LDES%20Report_Final_0.pdf
[9] https://www.maine.gov/energy/sites/maine.gov.energy/files/meetings/Maine%20Pathways%20Report%20Draft%20for%20Comment.pdf
[10] Page 74, *Id.*
[11] Prepared by Synapse Energy Economics and Sustainable Energy Advantage.
[12] Page 28, https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/Final%20Report%20of%20the%20DG%20Stakeholder%20Group_with%20appendix.pdf