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Joint Standing Committee on Energy, Utilities, and Technology
RE: LD 1130—An Act to Advance Long-Duration Energy Storage Within the State

Senator Lawrence, Representative Sachs, and members of the Joint Standing Committee on Energy, Utilities, and Technology, my name is Karen Blakelock and I work as the climate and energy policy advisor for the Nature Conservancy in Maine. **I appreciate this opportunity to testify in support of LD 1130.**

The Nature Conservancy (TNC) is a nonprofit conservation organization dedicated to conserving the lands and waters on which all life depends. Guided by science, we create innovative, on-the-ground solutions to our world's toughest challenges so that both nature and people can thrive. We work in more than 70 countries, and we use a collaborative approach that engages local communities, governments, the private sector, and other partners.

I'd like to thank the sponsor, Representative Warren for working with us to bring forward this bill, which we felt was necessary for several reasons:

- 1. Long-duration battery storage has been identified in numerous reports by the state of Maine as a cost-effective option to help get more renewable generation onto the grid.**

In January 2022 the Governor's Energy Office and the Distributed Generation Stakeholder Group released a report titled **"Distributed Generation Successor Program in Maine: An Economic Assessment."** The report, prepared by Synapse Energy Economics and Sustainable Energy Advantage, 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."**¹

In March 2022, GEO completed a **Maine Energy Storage Market Assessment**² 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."**

In February 2024, a report from the Governor's Energy Office to the Energy, Utilities, and Technology committee of the Maine Legislature titled, **"Long-Duration Energy Storage: A review**

¹

<file:///C:/Users/karen.blakelock/Downloads/Maine%20DG%20Successor%20Program%20Evaluation%20Synapse%20Energy.pdf>

² https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/GEO_State%20of%20Maine%20Energy%20Storage%20Market%20Assessment_March%202022.pdf

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"³, 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, 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.**"

Additionally, 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."⁴

In November 2024 GEO's Maine Pathways to 2040 report⁵ found that, "long duration battery storage tech is improving and could potentially be more cost effective than thermal resources."

2. Storage can be sited alongside existing development, avoiding the need to impact more of Maine's natural areas.

Gorham's Cross Town Energy Storage Project is sited near an existing substation, on an industrially zoned parcel in the Gorham Industrial Park,⁶ and the Lincoln project would see 85 megawatts of storage capacity on part of the 400-acre site of the Lincoln pulp mill, which has been fully closed for nearly a decade.⁷ Battery storage can be co-located with solar and wind developments, near existing transmission, and close to load centers to minimize the need for disrupting undeveloped areas of our state.

3. Battery storage increases grid flexibility, reliability, and resilience in a cost-effective manner.

³ https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/LDES%20Report_Final_0.pdf

⁴ https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/LDES%20Report_Final_0.pdf

⁵ <https://www.maine.gov/energy/sites/maine.gov.energy/files/meetings/Maine%20Pathways%20Report%20Draft%20for%20Comment.pdf>

⁶ <https://www.crosstownenergystorage.com/about>

⁷ <https://apnews.com/article/maine-energy-storage-paper-mill-8aab57b818ae02555dfa10f295cb0596>

Maine has committed to reducing our greenhouse gas emissions by converting to renewable and low-carbon sources of energy generation, but solar and wind present a problem in their variability—it isn't always windy, and it isn't always sunny. Short-duration storage, most commonly lithium-ion batteries, are capable of storing power for ~4 hours, allowing the solar we store up on a sunny day to be used in the evening when the sun goes down—but not much longer than that. Long-duration battery storage allows for increased reliability and resilience.

Additionally, with widespread adoption of renewables, Maine would have to *overbuild* our electric grid. We'd have to build to a capacity that would allow the peak production of wind and solar to be captured to meet the generation of our windiest and sunniest days. However, most of the time, wind and solar won't be generating at max capacity—meaning we've built our grid infrastructure to meet that highest level, only to be used a few days a year. **Storage allows grid operators to balance peak generation with peak demand—and this flexibility is what we need to achieve a cleaner and more resilient energy system.**⁸

In 2024, power providers added a record 10.3 GW of new battery storage capacity and EIA projects this growth could almost double to an addition of 18.2 GW in 2025.⁹ The 2035 date proposed in the bill allows ample time for Maine to meet the target and sends a signal to a growing industry that Maine is a safe place to invest in this rapidly growing industry.¹⁰

Thank you for the opportunity to comment in **support of LD 1130**. I'm happy to answer any questions now or in the future.

⁸ <https://www.weforum.org/stories/2025/01/grid-flexibility-for-resilient-equitable-digital-energy-future/>

⁹ https://www.utilitydive.com/news/solar-and-battery-storage-will-lead-new-generation-in-2025-eia/740742/?utm_source=Sailthru&utm_medium=email&utm_campaign=Issue:%202025-02-24%20Utility%20Dive%20Newsletter%20%5Bissue:70718%5D&utm_term=Utility%20Dive

¹⁰ https://www.canarymedia.com/articles/energy-storage/chart-us-is-set-to-shatter-grid-battery-records-this-year?utm_source=substack&utm_medium=email