SUBMITTED ELECTRONICALLY

March 25, 2024

Ms. Caroline Colan
Maine Governor's Energy Office
caroline.colan@maine.gov

Re: Comments by Clean Energy States Alliance (CESA) Regarding Draft Assessment of Storage Procurement Mechanisms and Cost-effectiveness in Maine; Maine Energy Storage Program Development Pursuant to P.L. 2023, ch. 374

Dear Ms. Colan:

The Clean Energy States Alliance (CESA) is pleased to submit these comments to the Maine Governor's Energy Office (GEO) in response to Maine's Opportunity for Comment Regarding Draft Assessment of Storage Procurement Mechanisms and Cost-effectiveness in Maine.

Founded in 2002, CESA is a leading US coalition of state energy organizations working together to advance the rapid expansion of clean energy technologies and bring the benefits of clean energy to all. CESA is a national, member-supported nonprofit that works with its members to develop and implement effective clean energy policies and programs. It should be noted that these comments are submitted by CESA staff and do not necessarily reflect the views and opinions of CESA's members or its funders.

Regarding Question 1, "Comment on the attached Draft Assessment of Storage Procurement Mechanisms and Cost effectiveness in Maine prepared by Synapse Energy Economics and Sustainable Energy Advantage, LLC dated March 12, 2024. Comments regarding the methodology, assumptions, and implications for program design are encouraged," we submit the following comments:

CESA agrees with the Maine GEO Project Team's recommendation of "a storage incentive structure utilizing a fixed up-front incentive paired with a performance payment based on dispatch in critical hours." The up-front incentive will help energy storage developers to manage the capital costs of building new projects, while the performance payment (or requirement) will ensure that storage installed under this procurement program is operated in such a manner as to provide grid services supportive of Maine's climate and clean energy policy goals.

CESA also applauds the Maine GEO for assessing cost-effectiveness of energy storage resources using both the Utility Cost Test (UCT) and a jurisdictional societal cost test (SCT). The use of the SCT is particularly important because it shows the value of societal benefits, such as reduced greenhouse gas (GHG) emission impacts, that may not be captured in the UCT and may not be

monetizable by energy storage owners. These non-monetizable benefits are nonetheless valuable and can help provide the basis for incentive rate setting.

CESA would encourage the Maine GEO to additionally consider the societal benefits of non-GHG air emission reductions that may be achieved if energy storage capacity is procured with the intent of displacing fossil fuel peaker plant capacity. There are several aging gas peakers in Maine that should retire soon; replacing these with energy storage will significantly reduce production of nitrogen oxides, sulfur oxides and fine particulates, which cause both environmental and human health damage. Because peaker plants are often located close to densely populated areas, these benefits can be substantial.

In addition, because low-income and historically underserved communities are often overburdened with polluting resources like fossil fuel peakers, replacing these aging, inefficient peaker plants with clean battery storage provides additional equity benefits. The value of these environmental, human health and equity benefits is significant and should be considered in Maine's application of the SCT. Please refer to CESA's report titled "Energy Storage Procurement for Peaker Replacement in Maine" for more information on the importance and value of these peaker-replacement benefits. This report was submitted to the GEO on February 9, 2024, as stakeholder input.

Regarding Question 2, "P.L. 2023 ch. 374 §2 sub-§1 (A) states in part that the energy storage program must be likely to achieve "the development of up to 200 megawatts of incremental energy storage capacity." a. How should the GEO consider the allocation of up to 200 megawatts of incremental energy storage capacity, e.g. between energy storage systems connected to the transmission system or the distribution system? b. Comment on the interplay between such allocations, if any, and the objectives established for the program in P.L. 2023 ch. 374 §2. c. Should any capacity be reserved for pilot programs or novel applications of commercially available technologies?", we submit the following comments:

Regarding the allocation of 200 MW of procured energy storage capacity between transmission-connected vs. distribution-connected systems, CESA notes that it is generally better to support a diverse energy storage market, meaning both transmission- and distribution-connected systems should be procured. While it may seem that larger, transmission-connected systems are more cost-effective, we note that distribution-connected systems may offer a larger range of locationally-determined benefits because they are sited closer to load. Some of these locational benefits may not be monetizable in existing markets – for example, resilience and emissions-reduction benefits to the surrounding community; however, such non-monetizable benefits should still be considered when assessing the costs and benefits of distribution-connected systems. This is especially true when Maine's program objectives can be achieved by distribution-connected energy storage systems.

Regarding the question of reserving capacity for pilot programs or novel applications, CESA suggests the following:

1. As mentioned above, Maine has a very good current opportunity to procure battery storage capacity to replace aged, soon-to-retire, gas peaker plants. This can be economically achieved with commercially available lithium-ion battery systems, as shown in CESA's analysis and report referenced above. Therefore, CESA encourages Maine GEO to consider devoting a significant portion of the upcoming 200 MW procurement program to this application.
2. In the future, longer duration energy storage systems will be needed to support the advancement of state decarbonization goals. Currently, Maine has statutory greenhouse emissions reduction targets requiring a 45 percent reduction in carbon emissions below 1990 levels by 2030, at least 80 percent reductions by 2050, and carbon neutrality by 2045. Sandia National Laboratories is currently seeking state partners for long duration and non-lithium energy storage demonstration projects, a program in which CESA is a partner. CESA encourages Maine GEO to consider opportunities to leverage federal support for a long duration, non-lithium energy storage demonstration project. Such a project would require reserving only a small fraction of the 200 MW procurement target and would help to inform future advances in energy storage for longer-duration applications in Maine.

Conclusion

Overall, CESA supports the findings and recommendations of the Maine GEO's project team, including the following:

- Up to 200 MW of storage in Maine is likely to be cost-effective for ratepayers, from both utility ratepayer and societal perspectives
- Both transmission and distribution-connected resources can be cost-effective
- A procurement program should include a competitive solicitation overseen by a neutral third party
- Storage incentives should include both an upfront incentive and a performance incentive and/or requirement that allows for storage dispatch during critical periods that best achieve ratepayer value
- A procurement program should include ongoing review and evaluation of actual program performance and impacts

CESA commends the Maine GEO on its work in developing this Draft Assessment of Storage Procurement Mechanisms and Cost-effectiveness in Maine. CESA will be happy to discuss or answer questions about these comments with Maine GEO upon request.

Respectfully submitted,

Todd Olinsky-Paul
Senior Project Director
Clean Energy States Alliance