MASSACHUSETTS
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Massachusetts Clean Energy Center
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Massachusetts Department of Energy Resources
100 Cambridge St, #1020
Boston, MA 02114

RE: Long Duration Energy Storage Study from 2022 Climate Bill (H5060) Section 80

November 9, 2022

Dear Massachusetts Clean Energy Center and Massachusetts Department of Energy Resources,

Thank you for the opportunity to comment on the scope and methodology of your forthcoming study on medium and long duration energy storage (LDES).

The Massachusetts Rivers Alliance is a statewide non-profit organization with over 80 member organizations across the state dedicated to protecting and restoring the Commonwealth's rivers and streams. We support the state's climate resilience goals, including shifting away from environmentally harmful and greenhouse gas- (GHG) intensive sources such as fossil fuels. Please note that hydropower, while renewable, is neither "green" nor low-GHG. Hydropower is extremely damaging to rivers and streams; and reservoirs offgas large quantities of methane,[1] a greenhouse gas more than 25 times more potent than carbon![2] Hydropower—and its accompanying pumped storage—does not belong in a portfolio of green energy strategies.

Our state is fortunate to have over 8,000 miles of rivers. Massachusetts rivers provide us with critical wildlife habitat, a variety of recreational opportunities, and scenic beauty. In recognition of the importance of our rivers, the Commonwealth and many other partners have invested over $20 million during the past ten years to restore rivers back to health by removing dams. The Division of Ecological Restoration, a program under the Department of Fish and Game, has dam removal for river restoration as its primary purpose and activity.

In evaluating long duration energy storage options, we ask MassDEC and DOER to recognize the value of Massachusetts' rivers, as well as the immense harm to our rivers from hydropower. Pursuing any one strategy to address global climate change while failing to recognize its unintended consequences on local environmental quality yields devastating results. The true and full costs—and benefits—of any energy storage option should be carefully weighed, including costs to the local environment.

[1] Zaske, Sarah. Methane emissions from reservoirs are increasing. WSU Insider, Washington State University. September 2022.
[2] USEPA. Importance of Methane. Global Methane Initiative. June 2022.

Mass Rivers staff participated in the LDES office hours on November 4. The following comments are an expansion of what was shared during that meeting, guided by the questions MassCEC and DOER posted for input. We also support and underscore the comments submitted by UMass Amherst Associate Professors Eve Vogel and Regine Spector.

Scope

The only existing energy storage in New England that meets the study's criteria is pumped hydropower storage. Pumped storage is extremely harmful to rivers and streams: the drastic fluctuations in water levels disrupt flows, prevent fish reproduction, destroy habitat, and impede recreation. Pumped storage facilities are also neither emission-free nor even emission-neutral. Pumped storage actually uses more energy than it produces.[3]

We urge MassCEC and DOER to look beyond pumped storage and study *all* storage technologies. The study should also include thorough analysis of the environmental and social costs of each technology. We hope that this study can yield alternatives to the harmful pumped storage currently online, and help the state meet its energy goals *without* devastating impacts to our ecosystems. Any conclusions the study makes should also align with the state's other climate goals for land and water conservation (such as the Resilient Lands Initiative), in addition to greenhouse gas emission reductions.

Methodology

When considering energy use patterns and energy facility siting, the study should use forward-looking climate projections rather than historical trends, which are no longer relevant. Climate change is quickly altering the region's precipitation patterns. Historical averages no longer present a reasonable assumption of streamflows, which determine hydropower energy production potential. The best precipitation data currently available is the National Oceanic and Atmospheric Administration's 14+ projections.

Stakeholder Engagement

Massachusetts is fortunate to have an active conservation and environmental justice community that is engaged and well informed on the region's climate issues, including hydropower and energy storage. The study should work with the following stakeholders and experts, and others: Connecticut River Conservancy; Trout Unlimited; American Whitewater - Northeast Chapter; Hydropower Reform Coalition; Stanford Woods Institute for the Environment Uncommon Dialogue on Hydropower, River Restoration, and Public Safety; the Deerfield River Watershed Association; and the Northeast Climate Adaptation Science Center. Other important stakeholders the study should include are the state's Environmental Justice Council, federally-recognized and state-recognized tribes (Mashpee Wampanoag Tribe, Wampanoag Tribe of Gay Head / Aquinnah, The Massachusett Tribe at Ponkapoag, Nipmuc Nation, Pocasset Wampanoag Tribe, Herring Pond Wampanoag Tribal Council, Stockbridge-Munsee Band of Mohican Indians), and tribal organizations (e.g., Massachusetts Commission on Indian Affairs, United South and Eastern Tribes Inc.; United American Indians Of New England, North American Indian Center of Boston, etc.).

Mass Rivers can serve as a resource and partner in this study. We are also happy to connect MassCEC and DOER with other water, river, climate, and environmental justice experts across the state.

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[3] Roach, John. Yale Environment 360. November 2015.

Process
In matters of complex public policy such as energy storage and climate resilience, a thorough, inclusive, and transparent process yields far more effective results, garners greater public support, and generates significantly less opposition. We encourage MassCEC and DOER to design an open and transparent process with as much public participation as possible throughout every phase of the LDES. We encourage MassCEC and DOER to make public a list of Office Hour participants, a summary of comments received, and responses to those comments. When MassCEC and DOER are ready to issue a Request for Proposals, that draft should be subject to a public review and comment period. We strongly recommend MassCEC and DOER include a stakeholder advisory group to inform the study, including sufficient representation from environmental groups and the environmental justice community, as a requirement of the RFP.

Thank you for the opportunity to comment on the LDES. Please let us know how we can continue to support you and remain involved in this process to advance clean, renewable energy in Massachusetts.

Sincerely,

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