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TO:
Jeffrey N. Roy, House Chair, Joint Committee on Telecommunications, Utilities, and Energy
Tackey Chan, House Chair, Joint Committee Consumer Protection and Professional Licensure
Bradley H. Jones, Jr., House Minority Leader
Michael J. Barrett, Senate Chair, TUE
Cynthia S. Creem, Senate Majority Leader
Bruce E. Tarr, Senate Minority Leader

Cc: Sen. Jo Comerford, Reps. Mindy Domb, Lindsay N. Sabadosa

July 8, 2022

RE: MA Climate and Energy Bills: provisions on storage, distributed energy, tribes

Dear members of the Climate Conference Committee,

We are professors at UMass Amherst who work on electricity policy, markets, politics, sustainability, and environmental justice. We commend the crafters of the two clean energy bills for thinking broadly about an energy transition.

We are writing with concerns and recommendations about storage provisions (H.4524 SECTION 26 and S.2842 SECTION 55). In these sections, ecology, economic development, cost-effectiveness, accountability to ratepayers, and social justice are not adequately addressed, and **the bills risk significant negative impacts**. Additionally and relatedly, we offer recommendations on distributed energy and tribes.

<u>Findings and principles that guide our recommendations</u>:

a) Electric storage, demand response, and distributed energy can provide tremendous benefits to the grid and to an energy transition, helping to balance and firm up electric supply as we transition to an increasing proportion of variable generation, and reducing the need for polluting “peaker” plants. Currently natural gas generation plays the most important balancing / flexibility role, so as we transition away from gas generation, storage technologies will be increasingly important and valuable.

b) BUT storage, especially large utility-scale storage, can also cause significant negative ecological, community, and environmental justice impacts. This is already apparent with the one kind of utility-scale we have on the grid today, pumped-storage hydropower. **Pumped storage hydropower has major negative impacts:** it regularly sucks more water out of the Connecticut River than the entire flow of the river, and then releases it back in again, literally

causing the river to flow backwards for part of its length, and also causing large fluctuations in depth that impact myriad species, the river ecosystem, streambank erosion on riverside properties, and local communities' ability to access the river. Similar impacts are felt on the Deerfield River. Other utility-scale storage may have large impacts, and to a lesser extent small-scale storage and distributed energy can also cause negative impacts.

c) Future market revenues for storage are bright. Once variable generation like solar and wind replace natural gas generation in the grid, there will be energy market price signals (differentials between high and low prices) that provide revenue for storage facilities. Revenues may be even higher once ISO markets are adjusted to better support essential reliability services. Procurement funds may be needed to build new storage today, but not as much to provide income in the future.

Therefore:

d) Policies to support storage and distributed energy must consider and address ecology, community, and environmental justice. This means analyzing impacts and benefits, favoring higher-benefit and lower-impact technologies and placements, and requiring outreach and engagement with communities, especially environmental justice and historically marginalized communities.

e) If ratepayer or taxpayer funds are used to finance storage or distributed energy. policymakers should ensure that these funds **are used judiciously, are focused on construction of new storage, and are accountable to benefits, impacts, and the public.**

Recommendations for the Conference Committee:

Based on the previous findings and principles, we recommend the following:

Storage provisions (H.4524 SECTION 26 and S.2842 SECTION 55).

(a) Storage study definition.

We urge the use of Senate language, which provides for a broader analysis of storage opportunities and financing approaches (S.2842 55(a)). The House bill restricts its study of financing to competitive solicitations and procurement of stored energy. Competitive solicitations and procurement is likely to be a costly and contested approach to storage development, and may unnecessarily favor large-scale storage, which can have large environmental and environmental justice impacts. Alternative financing arrangements should be included in the study, as outlined in the Senate language.

(b) Considerations and goals of recommendations based on the study (H. 4524 26(b) or S. 2842 55(b)).

We suggest if possible the addition of the following (adapted from bills' language on wind and solar)**:**
(vi) minimize, mitigate and monitor impacts to wildlife and fish;
(vii) provide benefits to local communities' economic development, to certified minority-owned and women-owned small business enterprises, to individuals residing within environmental justice communities, and to federally and state recognized tribes.

(c) We strongly recommend the *omission* of the procurement requirement (H. 4524 26(c)).

We urge omission for four reasons:

- Solicitation and procurement is often a particularly costly and contentious approach to energy development.
- Solicitation and procurement relies on long-term ratepayer funding. It may be a strategic approach at times, as in off-shore wind, but it should not be the default for storage.
- Both bills in section (b) call for the secretary to incorporate targets and benchmarks. These provide for assurance that study results will be put into action, while allowing flexibility for consideration of the best approach to action.
- Before any recommendations are implemented there need to be community outreach and engagement.

If the Conference Committee finds that legislative authorization is needed to allow the *possibility* of solicitations and procurements for energy storage, the language here could be changed to: (c) If the study finds it beneficial to the commonwealth, the department of energy resources ~~shall~~ **may** require solicitations and procurements….

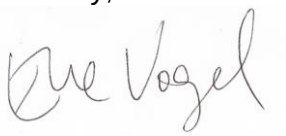
2. Both bills have provisions for **distributed energy** (H.4524 SECTION 17 and S.2842 SECTION 61). **We support the Senate language** that provides for broad DOER recommendations, not only utility-directed plans. This broader approach will better assess all the possible ways the Commonwealth can promote distributed resources, which are some of the most cost-effective, flexible, and low-environmental-impact approaches to grid transformation. Appropriately, the Senate language also includes avoided environmental compliance costs and equity and environmental justice benefits (SECTION 61 (i)(E)) and (H)); the sighting of clean energy projects in underserved communities and within the built environment on developed and degraded land…. and avoiding or minimizing impacts to natural and working lands and waters (SECTION 61 (iii) and (iv)).

   Additionally, we caution that the House language in this section on utility-directed grid modernization plans would automatically put the cost of investments onto ratepayers. Not only would these utility-directed plans lock in ratepayer funding for a variety of investments; they could also risk inefficiencies and overbuilding as happened in the days of utility-directed growth before electric restructuring.

3. Wherever environmental justice and underrepresented communities are addressed, we urge the **inclusion of federally <u>and state</u> recognized tribes**. This includes sections on a clean energy equity workforce and market development program (H4524 SECTION 11A and S2842 SECTION 8), the clean energy investment fund (S2842 SECTION 9), the Electric Vehicle Adoption Incentive Trust Fund (S2842 SECTION 34), amendments of 83C wind procurement language.

Thank you very much for your consideration of these recommendations.

Sincerely,



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