March 14, 2025

Mr. Ferguson,

Longroad Energy ("Longroad") appreciates the opportunity to provide the following comments regarding the forthcoming Request for Proposals ("RFP") for a first-round solicitation for mid-duration energy storage projects under Section 83E ("83E Round 1").

These comments will begin with Longroad's key recommendations for the structure of the procurement, followed by responses to some of the topics identified in the Request for Public Comment ("RFC").

Longroad is a Boston-headquartered developer, owner, and operator of utility scale wind, solar, and energy storage projects across the United States. The Longroad team has been developing projects in New England for two decades, and during that time, invested over a billion dollars in the process of developing approximately 900 megawatts (MW) of clean energy in the region. We have experience with the Commonwealth's procurement policies as a bidder and contracted developer in multiple Sec. 83 processes since passage of the Green Communities Act in 2008. Longroad also has over 3.2 GWh of energy storage operating and under construction. Longroad is developing utility scale energy storage projects in markets across the United States, including Massachusetts.

Summary of Key Recommendations

1) DOER should target contract execution prior to construction start so that the program's contracts can be used to support the financing of the projects. We recommend seeking 20-year contracts, with durations no less than 15.
2) DOER should set a minimum capacity for this program [e.g., 5 MW] to ensure it targets resources that do not have other options for long-term fixed price contracts.
3) DOER should prioritize near-term projects while recognizing the delay in the transition cluster by setting a COD target before 2030. In addition to sharing a schedule that achieves COD in 2030 or earlier, Longroad recommends considering qualitative rankings for projects based on their development status. In order to ensure that projects are on track to achieve COD in 2030 or earlier, DOER could require (a) that all eligible projects have a queue position eligible for the ISO-NE Transition Cluster and (b) projects post a development security upon contract signature.

Other Topics – Responses to Specific RFC Questions

The RFC requested information and comments from parties on a list of topics. Those topics and Longroad's comments are provided below.

1. *Procurement Schedule:*

When designing the schedule for the 83E Round 1 Solicitation, the RFP Drafting Parties should prioritize the following:

- Ensuring a predictable cadence of annual procurements for the next three years to support continued development of eligible projects; and
- Limit the amount of time between the solicitation and shortlist and contract signing to enable bidders to maintain their proposed pricing. Longer durations will require bidders to price in more inflation, tariff, and interest rate risks.

2. *Environmental Attributes:*

Clean Peak Energy Certificates ("CPECs") are likely the only environmental attribute that can be procured from a stand-alone storage project; however other factors, including the storage resource's ability to displace generation from existing fossil resources would likely improve the overall emissions profile of the grid. Such marginal emissions reductions can be estimated through dispatch simulation (e.g., production cost modeling).

3. *Clean Peak Qualification:*

The Statement of Qualification ("SoQ") application requirements for qualified energy storage resources includes Permission to Operate ("PTO") and/or approved Authorization to Interconnect ("ATI"). In order to ensure that the 83E procurement can support the financing of the qualified energy storage system, projects will need to be able to bid and sign contracts prior to construction start, well in advance of receiving PTO or ATI. Receipt of a SoQ should not be a requirement for bidding a project; doing so would prevent projects from contracting prior to construction start and therefore prevent the program from achieving the goal of facilitating financing of energy storage systems. Instead, receipt of the SoQ should be a condition precedent to declaring Commercial Operation and starting the contract term.

DOER could also consider implementing a SoQ reservation system, similar to the MA SMART program that allows projects to reserve the SoQ once the qualified energy storage project is in the interconnection queue.

4. *Eligible Bids:*

The 83E procurement of CPECs is currently the only long-term fixed-price contract that utility scale standalone storage projects are eligible for. Given the importance of providing a "cost-effective mechanism for facilitating the financing of beneficial, reliable energy storage systems", DOER should

consider setting a minimum capacity [e.g. 5 MW] for this program to ensure that it targets resources that do not have other options for long-term fixed price contracts. In addition, in order to align with the procurement goal to support financing of energy storage systems, the 83E procurement should be open to new resources, as those will be the resources that require long-term contracts to secure financing and start construction.

Projects should have operational flexibility as long as they can demonstrate compliance with the charging and discharging hour requirements under the Clean Peak Standards. Flexibility will allow projects the opportunity to capture ancillary revenue streams (e.g., ancillary services, capacity, arbitrage) and will result in a lower cost CPEC contract.

Baseline minimum clean peak energy credit delivery requirements should be measured on an annual basis. Bidders should specify a target credit delivery in the bid based on the size of the project, the operational parameters, and the multipliers it expects to qualify for. Contractual performance should be measured based on an availability metric during the Clean Peak program Seasonal Peak hours. Typical industry availability metrics are measured annually and are 96 – 97%. The structure of the clean peak credit program, with multipliers that differ across projects and time of year, means there is a significant range in the number of credits that can be generated from a single hour of 1 MW of generation. As a result, it would be difficult to set uniform performance specifications for projects around the number of credits produced per MW.

Regarding appropriate project maturity requirements, DOER should require site control. DOER should also require projects to be in the ISO-NE queue; however, given the delay in the start of the transition cluster, DOER should not preclude projects from bidding based on the status of the project in the queue. Depending on the timing of future procurements with future ISO-NE cluster studies, this recommendation may evolve for later procurements. DOER should require Bidders to include project development schedules that describe timelines and pathways to achieving key milestones.

5. *Facilitating the Financing of Projects:*

   Both ITCs and CPECs are a vital portion of the incentives that enable financing of the project. Without either, it would be difficult to move forward with project financing.

6. *Commercial Operation Date:*

   The initial procurement should target resources that can demonstrate a development schedule with a pathway to achieving COD prior to 2030.

7. *Resource Types:*

   Longroad recommends limiting this procurement process to utility-scale standalone storage projects (Please see response to #4).

8. *Contract Length and Form:*

   Longroad encourages DOER to obligate EDCs to fully utilize long-term contracting with at least 20-year contract terms to meet 100% of their market obligations.

9. *Safety:*

   A commitment to meeting and/or exceeding current BESS safety requirements is integral to successful development and operation of a storage system. In light of the Moss Landing fire in CA, there is increased scrutiny on battery safety. RFP Drafting Parties should take the necessary steps to ensure community safety and dissuade rising concerns.

   NFPA 855, Standard for the Installation of Stationary Energy Storage, is the leading industry standard for BESS safety. NFPA 855 requires failure mode testing, site specific hazard mitigation analysis, emergency response plans, and first responder training, as well as establishes setbacks and spacing requirements. In relation to NFPA 855, the latest versions of the following testing and standards should be met:

   - UL9540A testing on cell, module, and unit levels
   - UL9540 system certification
   - Large scale fire test, a test that represents an installation where an entire unit is forced into failure to prove fire will not propagate to external equipment.
   - Designed to NFPA 68 (explosion management) and/or NFPA 69 (explosion prevention)
   - NFPA 72 compliance of the fire detection and alarm system
   - NFPA 70 compliance

   Local emergency responders should be engaged throughout the design, construction, and operation of the project to establish site-specific emergency response plan, hazard mitigation analysis, and ensure the system design aligns with their requirements and expectations. First responder training should be provided on an annual basis at a minimum. RFP Drafting Parties should also engage the local community and provide resources to dissuade concerns related to battery safety in the development process.

Outdoor container designs, however, offer natural safety advantages through better ventilation, physical isolation from densely populated areas, and easier emergency access. Their modular design helps prevent failure propagation between battery clusters.

Indoor installations require extensive safeguards including advanced thermal management, gas detection, and specialized fire suppression, along with third-party validated failure analyses. Community engagement is essential, as even with precautions, indoor battery storage carries inherent risks that communities should fully understand before installations near populated areas.

10. *Project Viability and Other Qualitative Factors:*

Below are Longroad's specific comments, as requested in the RFC, on the key elements that should be considered in evaluating project viability:

- Site Control: Regarding appropriate project maturity requirements, DOER should require site control
- Interconnection Studies: DOER should require projects to be in the ISO-NE queue; however, given the delay in the start of the transition cluster, DOER should not preclude projects from bidding based on the status of the project in the queue. Depending on the timing of future procurements with future ISO-NE cluster studies, this recommendation may evolve for later procurements
- Technical and Logical Viability: DOER should require Bidders to include project development schedules that describe timelines and pathways to achieving key milestones
- Ability to Finance the Project: DOER should project offers from Bidders with experience financing similar projects
- Bidder Experience: DOER should prioritize project offers from Bidders with experience developing similar projects

11. *Grid Resiliency and Transmission Needs*

The storage resource's ability to displace generation from existing fossil resources would likely improve the overall emissions profile of the grid. Such marginal emissions reductions can be estimated through dispatch simulation (e.g., production cost modeling).

12. *Economic Development, Workforce, and Diversity, Equity & Inclusion (DEI):*

No comment.

13. *Environmental Justice:*

No comment.

14. *Energy Storage Industry:*

Energy storage technology has been rapidly evolving in recent years. Over the past 3-5 years, installations have consisted of smaller enclosures, ranging from 500 kWh to 750 kWh. Designs have evolved to higher density 3 MWh to 5 MWh enclosures. With these larger storage enclosures, it substantially reduces the site's footprint, installation time, and maintenance.

The storage industry has also made a general shift from Nickle Manganese Colbalt (NMC) to Lithium Iron Phosphate (LFP). LFP is generally considered a safer option compared to NMC due to its increased chemical stability. Additionally, some storage providers are exploring sodium batteries. While sodium batteries are not yet commercially viable, advancements in technological and manufacturing could make this technology a feasible option within the next 5-10 years.

15. *Future RFPs:*

Other markets with significant build out of utility scale storage have been driven by toll contracts, where the offtaker pays a monthly $/kW price for the environmental attributes, capacity, energy arbitrage, and ancillary services. By offering a bundled product and allowing the Buyer, in this case Massachusetts utilities, to dispatch the BESS it can optimize the BESS to meet their needs. This gives the Buyer more flexibility in operating the energy storage system to meet dynamic needs for the grid. The cost of financing the project decreases as the proportion of contracted revenue streams increases, allowing projects to offer more competitive prices by bundling different revenue streams into a single toll.

16. *Other:*

Additional feedback has been provided above in the Summary of Key Recommendations.

Sincerely,

Matthew T. Kearns

Chief Development Officer,
Longroad Energy