March 14, 2025

Thomas Ferguson
Department of Energy Resources,
100 Cambridge Street, 9th Floor, Boston, MA 02114

By electronic delivery to Thomas.Ferguson@mass.gov

Subject: Cypress Creek Renewables Comments on 83E Stakeholder Questions

Dear Mr. Ferguson,

Cypress Creek Renewables (CCR) submits these comments in response to the 83E Stakeholder Questions published by the RFP Drafting Parties on February 21, 2025. CCR supports the positions provided in PowerPoint to DOER on March 5, 2025 on behalf of the Energy Storage Coalition of companies. The PowerPoint is attached to these comments as Attachment 1. The comments below further elaborate on topics and questions posed by the RFP Drafting Parties.

CCR is a leading clean energy developer and independent power producer. It develops, finances, owns, and operates utility-scale solar and energy storage projects across the United States with a mission to power a sustainable future, one project at a time.

CCR appreciates the RFP Drafting Parties' efforts to implement energy storage RFPs and we look forward to seeing the benefits that energy storage systems will bring to the Commonwealth in the years ahead.

Sincerely,

Justin Biltz
Senior Director, Government Affairs
Cypress Creek Renewables

1. **Procurement Schedule:**
   a. The factors the RFP Drafting Parties should consider when designing the schedule for the 83E Round 1 solicitation, including deadlines for bid submission and selection of projects for negotiation. Please include as much specificity in key schedule milestones and timing as well as justification for preferred dates.
      - CCR supports the timeline and schedule included in the Energy Storage Coalition PowerPoint. For projects in the cluster study, CCR recommends the RFP Drafting Parties consider an optional Network Upgrade Adder to address the uncertain costs of network upgrades. This topic is more fully discussed in the response to question 17.

   b. How the 83E schedule could be designed to best align with other energy storage procurements being conducted or planned in neighboring New England states.
      - Consistent with the Clean Peak regulations, eligible storage resources should be interconnected with or offset load otherwise served by the distribution system or interconnected with the transmission system in the Commonwealth of Massachusetts.

2. **Environmental Attributes:**
   c. The environmental attributes in addition to Clean Peak Energy Certificates ("CPECs") that could be procured from your project.
      - CCR proposes that environmental attributes be limited to CPECs as the state is already procuring CPECs and there will be administrative efficiency in administering the program. At this time CCR is not aware of any other environmental attributes that can be procured from MA storage projects.

3. **Clean Peak Qualification:**
   d. Any barriers to energy storage facilities qualifying for the Clean Peak Standard ("CPS") or other attribute-generating program.
   e. Whether you have been awarded a Clean Peak Program Statement of Qualification ("SoQ") for the project you intend to bid into this solicitation.
      i. If not, whether you anticipate having a SoQ prior to bidding your project.

4. **Eligible Bids**:
   f. Project's technology type (e.g., lithium ion, flow batteries, thermal, etc.), and how it meets the defined Section 83E criteria.
      - CCR is technology-agnostic and would prefer to have storage technologies compete on cost and performance characteristics.

   g. Appropriate minimum and/or maximum bid size, both in terms of MW and Attributes.
      - CCR recommends that there not be a maximum bid size in order to not exclude larger projects that could be price competitive and valuable for utility customers. CCR defers to DOER on minimum bid size based on what is administratively feasible for the agency.

   h. Minimum delivery requirements (e.g., a certain number of CPECs delivered that is a function of Qualified Energy Storage Systems ("QESS") capacity); the frequency with which that requirement must be met (e.g., over entire contract, yearly, quarterly); and inclusion of an operational schedule in the bid to support delivery feasibility.
      - CCR recommends that CPECs be delivered as-generated with no minimum delivery requirement. If the contract compensates projects on a per CPEC basis, there is sufficient economic incentive for projects to maximize CPEC

production. The greatest source of potential variance in actual CPEC production from forecast will likely be unanticipated changes to CPS program rules that affect the quantity of CPECs created per MWh of delivered energy. Not having an explicit minimum delivery requirement from the contract would help mitigate investor concerns around the risk of significant revenue underperformance due to policy/regulatory changes outside of the project's control.

i. Appropriate project maturity requirements.
   - CCR recommends that projects in the ISO-NE cluster study process should be allowed to bid in Rounds 1 and 2 to ensure robust competition.

5. <u>Facilitating the Financing of Projects</u>:

j. How the requirement from Section 83E—that this solicitation provide a "cost-effective mechanism for facilitating the financing of beneficial, reliable energy storage systems"—could be applied under this RFP.
   i. Standards the RFP should set to confirm that projects are using this solicitation to facilitate financing.
   ii. How those standards could be applied to existing projects to allow their participation in this RFP.

k. The application of tax credits, for example the Investment Tax Credit and associated guidance, towards the financing of new projects, including whether your project would still be fully financeable if these credits are <u>not</u> available.
   - If federal tax credits were not available, projects would require significantly more debt to finance. Greater reliance on debt financing means contracted revenue becomes even more critical – requiring either a higher CPEC price or a structure that supports a higher level of revenue certainty.

l. The approximate percentage of your capital costs met by:
   i. CPECs revenue
   ii. Energy/Energy Arbitrage
   iii. Ancillary Services (Regulation, etc.)
   iv. Forward Capacity Market

m. The risks associated with each revenue over the life of the project.
   - <u>CPEC revenue:</u> Revenue risk mostly stems from uncertainty in how changes to CPS program windows, multipliers, and other rules could affect the quantity of CPECs created and available to sell under the contract.
   - <u>Wholesale market revenue including energy, ancillary services, and capacity:</u> Actual market outcomes falling materially short of forecast at the time of pricing the RFP bid. Despite similar starting assumptions, third party forecasts for storage revenue in ISO-NE span a wide range. Developers who use an aggressive forecast can bid a lower price, but increase the risk of project defaults during operation, making further investment in the MA storage market challenging.

n. Please comment on the following examples of lifetime values pictured below from the Massachusetts *Charging Forward* report and how they may correspond to your project

o. How a project's participation in the ISO-NE market affects its bid. Please specifically comment on how any ISO-NE operational obligations will impact the creation of CPECs.
   - Assuming an environmental attributes only contract in which the developer retains revenue from ISO-NE market, project bids generally reflect the

revenue gap between wholesale market revenue forecasts and investor risk-adjusted return hurdles. That is, assuming more wholesale market revenue due to higher market prices and/or better dispatch optimization results in lower bid prices. From the storage asset's perspective, ISO-NE market prices, wholesale offer obligations (e.g. must offer rules), CPS program rules, and any CPEC contractual obligations are all inputs/constraints that must be co-optimized. CCR expects the co-optimization between wholesale market revenue and CPEC revenue to reduce the quantity of CPECs created compared to a scenario where the storage resource was only seeking to maximize CPEC creation. However, if the contract were structured to require projects to maximize CPEC creation, projects should reasonably expect less wholesale market revenue and would thus require more revenue to be earned from the CPEC contract.

p. How a project and potential awarded contract will contribute to short- and long-term affordability for ratepayers in the Commonwealth.

- Storage lowers wholesale capacity and energy prices, which results in lower electricity costs for MA ratepayers. Specifically,
  - Li-ion battery storage is already a cost-competitive dispatchable capacity resource that puts downward pressure on ISO-NE capacity prices.
  - Unlike thermal resources, energy storage can absorb excess intermittent generation, thereby enabling the market entry of low marginal cost energy resources like wind and solar, which have been shown to drive down average energy prices.
  - Depending on location, storage can help reduce local congestion costs.

6. <u>Commercial Operation Date</u>:

q. Any appropriate commercial operation date for Section 83E Round 1.

- CCR does not recommend a required COD date for Round 1. For some projects, the long lead item is the ISO-NE interconnection study process & utility construction timelines, both of which are outside of a developer's control.

7. <u>Resource Types</u>:

r. Whether this procurement should allow for both transmission and distribution connected resources.

- CCR recommends that Round 1 and Round 2 should be limited to transmission-connected resources. The ISO-NE queue has a substantial backlog of transmission-connected resources that are seeking to come online over the next several years. For example, over 2 GW of battery storage projects have completed System Impact Studies in MA alone, with many of those projects having signed interconnection agreements. In addition, there are many GWs of additional projects under study. CCR recommends that the first two Rounds should maximize the potential to bring viable, transmission-connected resources online to have the largest impact on energy prices and grid reliability.

- To the extent that the RFP Drafting Parties include distribution-connected resources in Round 1 and 2, CCR recommends no more than 200 MW across the two Rounds (i.e. 100 MW in Round 1 and 100 MW in Round 2). This would equate to eight percent of the capacity available in the two rounds (200 / 2500). CCR believes this would provide a reasonable balance between the asset classes.

s. The appropriate resource mix in Section 83E Round 1 procurement between distribution-connected QESS and transmission connected QESS.
   i. If both distribution- and transmission-connected QESS are to be procured in Section 83E Round 1, please comment on:
      1. The need, if any, for a carveout for either distribution- or transmission-connected QESS; and
         - Please see above.
      2. The need, if any, for separate bidding criteria between distribution- and transmission- connected QESS to be considered by the RFP drafting parties.
         - To the extent that the RFP Drafting Parties accept distribution-connected resources, they should be evaluated separately from the transmission-connected projects.

8. <u>Contract Length and Form</u>:

t. The contract length, for a period of up to 30 years, that should be considered under Section 83E Round 1 and associated reasoning, including how the contract term will facilitate the financing of the project, how the term aligns with useful life, augmentation schedules, etc.
   - CCR recommends a minimum term of 15-years in order to provide the minimum revenue certainty to finance projects on reasonable terms. CCR also believes a contract term of 20 years is appropriate and may better align with equipment life expectancy. In addition to upfront costs and operating expenses, the revenue requirement to advance a BESS project is influenced by the risk-adjusted return threshold necessary to obtain approval from the investment committees of the project sponsor and other financing parties. Longer contracts result in a higher percentage of contracted revenue and thus a lower risk profile and return threshold. Generally, contract prices and net cost to ratepayers decrease with longer contract lengths.

u. Given the degradation of battery performance over time, how contractual provisions for operational security should be constructed to assure optimal/maximum performance for the duration of the contract.
   - There is a tradeoff between the incremental value derived from offsetting the natural degradation of battery performance (e.g. energy capacity) and the cost of such augmentations. In tolling or "energy services" type agreements, CCR recommends incentivizing optimal battery performance through adjustments to the fixed contract price based on industry standard capacity performance tests. In CPEC only contracts, projects are already motivated to maximize battery performance so as to optimize CPEC creation. To minimize ratepayer risks and costs, CCR recommends an operational security that declines over time reflecting the residual value of the contract.

v. For distribution-connected QESS, how the EDCs would develop manageable contract agreements, including but not limited to defined aggregations with one negotiated contract.

9. **Safety:**

w. Which safety standards should be required as a minimum baseline.

- NFPA855 compliance, UL9540, UL9540A testing.

x. The safety systems, insurance requirements, relationships with emergency responders and host communities, emergency response plans, and any other necessary protections to keep adjacent communities safe.

- Most of these are covered by NFPA855.

10. **Project Viability and Other Qualitative Factors:**

y. Any risks associated with uncertainty related to tariffs on imports that may impact the supply chain for energy storage systems. Similarly, any risks associated with uncertainty related to the domestic supply chain.

i. What strategies can be implemented to minimize these risks and increase project viability.

- CCR recommends the use of already-existing price protection adjustment mechanisms from prior RFPs with minor modifications to capture tariff or ITC issues, protecting against re-bid or cancellation scenarios. The RFP should request sufficient information about interconnection cost assumptions to obtain comparable bids across projects.

z. The key elements that should be considered in evaluating project viability, including any minimum requirements for participating in the RFP. Please specifically comment on:

i. Site control
ii. Interconnection studies
iii. Technical and logistical viability
iv. Ability to finance the project
v. Bidder experience

- CCR recommends that all of the above items should be considered when evaluating projects. While interconnection studies should be considered, projects in the cluster study should be eligible to bid to ensure robust competition. Higher qualitative points can be awarded for known interconnection costs.

aa. Any other considerations that should be considered when drafting the RFP that would impact project viability.

bb. How the above factors are considered in CPS Qualification.

11. **Grid Resiliency and Transmission Needs**:

cc. How Section 83E Round 1 may be designed to best encourage investments and commitments that maximize grid resiliency and fulfill transmission needs in specific geographic locations. Please be as specific as possible in describing resiliency and transmission needs.

- CCR recommends that projects that are able to demonstrate substantial impacts to grid resiliency and/or reduce congestion costs should be awarded additional qualitative points, thus increasing chances of selection.

12. **Interconnection Capability Requirement**

a. Please comment on your current interconnection status or plan. What interconnection status, level and maturity should be required by the RFP?

- Any project that has entered the cluster study should be eligible to bid into the RFP. Projects can be awarded more qualitative points for having completed studies or signed GIAs.

13. <u>Economic Development, Workforce, and Diversity, Equity & Inclusion (DEI)</u>:

dd. How Section 83E Round 1 could be designed to best encourage investments and commitments that maximize economic benefits to the Commonwealth, particularly for transitioning fossil fuel communities, support workforce harmony, and advance DEI goals.

- CCR recommends that projects that are able to demonstrate benefits to transitioning fossil fuel communities should be awarded additional qualitative points, thus increasing chances of selection.

14. <u>Environmental Justice</u>:

ee. How Section 83E Round 1 could be designed to best encourage project design and investments that avoid negative impacts on, and direct positive benefits of the project to, Environmental Justice ("EJ") communities.

- CCR recommends that projects that are able to demonstrate benefits to EJ communities should be awarded additional qualitative points, thus increasing chances of selection.

15. <u>Energy Storage Industry</u>:

ff. Any trends in or around the energy storage industry that may impact the Section 83E Round 1 procurement and how the RFP Drafting Team should account for them.

- Per above, CCR recommends the use of already-existing price protection adjustment mechanisms from prior RFPs with minor modifications to capture tariff or ITC issues, protecting against re-bid or cancellation scenarios. The RFP should request sufficient interconnection cost assumptions to obtain comparable bids across projects. In number 17 below CCR provides a proposal to address unknown interconnection costs for projects in the cluster study.

16. <u>Future RFPs</u>:

gg. Whether and how the RFP drafting team should consider inclusion of energy services in future 83E RFP Rounds, both in terms of how future RFPs would be similar or different from 83E Round 1's RFP, which is only for environmental attributes.

- CCR encourages DOER to include energy services, in addition to environmental attributes, in future RFPs. Including energy services in the procurements will increase the revenue under contract with a creditworthy counterparty, thus attracting a wider and lower cost pool of financing parties. Bringing mainstream capital providers to the Massachusetts storage market ultimately reduces net cost to utility customers. A minimum level of contracted revenue is a binary requirement for many investors.
- The definition of "energy services" in law is sufficiently broad for DOER to define in a way that is similar to a tolling agreement. An energy storage tolling agreement, like a standard tolling contract for a traditional plant, gives the buyer (i.e. utility) dispatch rights to a battery energy storage system to operate in the market. The seller (i.e. BESS owner) owns, operates and maintains the storage project while the buyer directs when to charge and discharge the resource, pays for charging energy from the grid to the resource, and acts as

scheduling coordinator or market participant for the resource in the wholesale markets. The seller receives a fixed monthly payment from the buyer, and the buyer receives all wholesale market revenues earned by the resource. Tolling agreements have been used in the power plant industry with gas plants for decades and have been implemented for energy storage systems in several states, including in California, Texas, and New York. CCR encourages the RFP Drafting Parties to explore how such a mechanism could be deployed under "energy services".

hh. The use of indexing or other adjustment mechanism.

- Indexed contract structures such as NY's indexed storage credit are designed to strike a middle ground between reducing uncertainty in storage procurement costs and derisking project revenue for infrastructure investors . Under proposed indexed structures, the CPEC price hedges merchant revenue by increasing in periods of lower wholesale market prices, thereby allowing more of the project's forecasted revenue to be classified as lower risk or "contracted". Conversely, the CPEC price would lower in periods of high wholesale market prices, thus protecting ratepayers from overpaying for the storage program.
- While indexed contracts are one way to balance the goals of designing an effective storage procurement program while minimizing ratepayer costs, they can be administratively complex. It may be possible to achieve similar outcomes via a sufficiently diverse portfolio of storage tolls or upside revenue sharing agreements.

17. <u>Other</u>:

ii. Any additional comments that you believe should be known by or would be helpful to the RFP drafting team.

- Consistent with the PowerPoint submitted by the Energy Storage Coalition, CCR recommends that the first RFP be inclusive of two Rounds for environmental attributes only. Holding two Rounds provides a nearer term schedule that is more likely to lead to sustained investments in battery energy storage projects that are currently under development. Both rounds or phases of the initial procurement would be developed under the *<u>same RFP and contract structure, but with different bid deadlines.</u>* CCR recommends that the 2nd RFP be held in 2026 to support developers advancing projects in ISO-NE's transitional cluster study and putting significant capital at risk to maintain project schedules necessary to meet the state's procurement goal
- CCR recommends that the program should acknowledge the value of adding new storage capacity in MA by either awarding negative points to projects already in operation or construction at the time of bid, or additional points to new projects coming online after project award.
- CCR recommends that the RFP Drafting Parties investigate and consider adopting an optional Network Upgrade Adder for projects that are in cluster study, as discussed below.

While CCR recommends that projects with surety of network upgrade costs (i.e. projects with signed interconnection agreements or projects with completed studies) be given some priority in the evaluation of bids, we recommend that projects still in the study process not be excluded from consideration. There may be highly competitive and well-

positioned projects in the study process that could contribute to system needs and state objectives. However, the uncertain costs of network upgrades may make bidding of these projects particularly challenging.

The lack of line of sight around the cost of network upgrades at the time of the bid will result in increased risks to projects and ratepayers or potentially an inability to deliver projects. Specifically, project developers will have to increase the bid cost in order to account for all potential uncertainty in network upgrades, or risk an under-estimate which could cause the developer to be unable to finance the project after award. To address the concern about lack of clarity on network upgrade costs at the time of bidding, CCR recommends that the RFP Drafting Parties evaluate a mechanism that would result in higher quality bids and lead to more comprehensive participation in the RFP.

The RFP Drafting Parties could adopt a Network Upgrade Adder in the RFP bidding process for only network upgrades. Project developers would continue to be responsible for managing all other interconnection costs in their base bids. In summary, all bidders would submit a base price assuming no network upgrade costs. The bidder will also submit a Network Upgrade Adder value that scales with a project's final network upgrades. The Network Upgrade Adder value would be added to the base price using a project's actual final allocation from the cluster study.

CCR recommends that the state should have the option, but not the obligation, to terminate awards if the final network upgrade costs results in a Network Upgrade Adder that increases the final base price by more than 25% of the initial base price. This mechanism would provide the state with the ability to protect ratepayers by terminating projects with exorbitantly high network upgrade costs, while still electing to pursue sites which may be quality projects.

CCR believes that the Network Upgrade Adder will provide a balanced approach to managing the risks and costs of network upgrades. Reasonable interconnection risks will remain on project developers while also ensuring that the state selects quality projects at the lowest possible cost for ratepayers.

CCR also recommends that the RFP Drafting Parties evaluate projects based on the initial base price. The Network Upgrade Adder only comes into effect for the final contract price. The "25% mechanism" will give the state assurance that the final contract strike price will not deviate without bound from the initial base prices that projects are evaluated on. Further, the "25% mechanism" ensures that the state isn't selecting projects with needlessly high network upgrade costs. Also, knowing that the state will have discretion to reject contracts that deviate the initial base price by more than 25% will incent bidders to submit as accurate of a bid as possible.