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Re: 83E Round 1 Comments

Brookfield Renewable[1] thanks the Department of Energy Resources (DOER) for the opportunity to submit these comments on 83E Round 1 procurement. Brookfield Renewable has limited its feedback to a subset of questions issued by the RFP Drafting Parties that are most relevant to Brookfield Renewable as an owner of an existing CPS resource.

Notably, the portion of our existing Bear Swamp pumped storage hydro facility currently eligible for the Clean Peak Energy Standard is uniquely positioned to support lowest cost outcomes under the RFP and to do so without crowding out significant deployment of new build battery projects. Accordingly, we encourage the Drafting Parties to structure the RFP and related submittals in a manner that balances energy affordability, system benefits and clean energy deliveries during peak periods through potential contracts for both existing and to-be-built energy storage technology.

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*

[1] Brookfield Renewable is a leading owner, operator and developer of renewable power, delivering innovative renewable power solutions that accelerate the world towards a sustainable, low-carbon future. In Massachusetts, our facilities include a 660MW pumped hydropower storage facility (Bear Swamp), a 10MW hydroelectric facility (Fife Brook) and a large fleet of affiliate-owned existing and proposed distributed solar generation.

projects for negotiation. Please include as much specificity in key schedule milestones and timing as well as justification for preferred dates.

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.*

Brookfield Renewable recommends against seeking alignment with other states for Round 1, specifically, given the potential for unnecessary delay and, importantly, the focus on CPEC procurement through Round 1, which is distinct to Massachusetts.

Clean Peak Qualification

a. *Any barriers to energy storage facilities qualifying for the Clean Peak Standard ("CPS") or other attribute-generating program.*

In Brookfield Renewable's experience the ability to qualify for the CPS did not present substantial barriers, even despite the complicating and somewhat unique consideration that only a portion of Unit 1 and Unit 2 at the Bear Swamp pumped hydro facility qualifies for the CPS as a result of capacity upgrades at an existing facility.

b. *Whether you have been awarded a Clean Peak Program Statement of Qualification ("SoQ") for the project you intend to bid into this solicitation.*

Bear Swamp Unit 1 and Unit 2 have been issued a Statement of Qualification.

Eligible Bids

a. *Project's technology type (e.g., lithium ion, flow batteries, thermal, etc.), and how it meets the defined Section 83E criteria.*

In addition to the listed technology types, pumped hydro also meets the 83E requirement of dispatching at its full capacity for a period equal to or greater than 4 hours in duration. The technology further aligns with the definition of an eligible energy storage technology under section 1 of chapter 164 of the General Laws, as evidenced by existing participation in the CPS program.

b. *Appropriate minimum and/or maximum bid size, both in terms of MW and Attributes.*

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The DOER should consider a maximum bid size that allows potential awards to a diverse mix of resources – including technology, vintage and location – by limiting maximum bid size to no more than 1/3 of the applicable procurement. Assuming the DOER advances a procurement design that considers transmission and distribution-connected resources together, a maximum bid size should not exceed 500MW of *offered* nameplate capacity (i.e., if a resource larger than 500MW participates it should be limited to less than 500MW of eligible capacity and related attributes). Should the DOER ultimately decide to allocate the statutorily-directed 1,500MW procurement target into defined transmission-connected and distribution-connected segments, the maximum bid size should be adjusted downward to reflect these sub-target amounts. Maximum bid size for attributes should similarly be limited to no more than 1/3 of overall annual CPECs that may be contracted through this procurement, perhaps defined by the DOER establishing a proxy resource(s) to determine the likely amount of CPECs that would be created annually, inclusive of assumed multipliers, from 1,500MW of awarded capacity.

c. *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.*

Suppliers should have the option to sell up to 100% of anticipated CPECs generated during a contract year, subject to maximum bid limitations. Any minimum delivery requirements should be considered across a multi-year period and account for impacts outside of the supplier's control (force majeure, T&D outages, etc.). For example, this mechanism could include a minimum delivery requirement of 80% of the annual CPECs contracted from the awarded project, and assessed over a rolling 3-year basis. Any deficiencies below the 80% threshold during the rolling term, net of deficiencies tied to impacts outside of a supplier's control, would be subject to penalty equal to the cost of attribute replacement, with the maximum penalty not to exceed the applicable ACP(s) for the rolling period.

d. *Appropriate project maturity requirements.*

Operating CPS resources and resources with executed interconnection agreements should be given preference in order to limit the attrition experienced in recent clean energy procurements in

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Massachusetts and throughout New England. Awarded projects should minimally have proof of site control, permits and have advanced through relevant interconnection process milestones such that commercial operations can reasonably achieved within 24 months of awards.

Facilitating the Financing of Projects

a. *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.*

The statutory language does not explicitly require that the procurement be limited only for the purpose of facilitating financing of energy storage systems as highlighted by the deliberate inclusion of language requiring eligibility of existing energy storage systems. Indeed, the statutory language highlights this exception for existing storage systems as emphasized below.

> (a) In order to provide a cost-effective mechanism for facilitating the financing of beneficial, reliable energy storage systems, as defined in section 1 of chapter 164 of the General Laws, on a long-term basis, taking into account the factors outlined in this section, every distribution company shall, in coordination with the department of energy resources, jointly and competitively solicit proposals for energy storage systems and, provided that reasonable proposals have been received, shall enter into cost-effective long-term contracts equal to, in the aggregate, approximately 5,000 megawatts of energy storage systems not later than July 31, 2030, of which 3,500 megawatts shall be mid-duration energy storage, 750 megawatts shall be long-duration energy storage and, if commercially available at a reasonable cost, 750 megawatts shall be multi-day energy storage; **provided, however, that existing energy storage systems shall be eligible to participate in any procurement issued under this section.**

Nonetheless, the ability of an existing energy storage resource to secure a long-term contract for CPECs will facilitate more favorable refinancing opportunities that can ensure continued site

viability and reinvestment for the benefit of system reliability and clean energy policy achievement.

Facilitating the Financing of Projects (continued)

a. *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.*

Currently, the generation of CPECs is assumed in how Bear Swamp is offered in the ISO market. This can at times drive offers and dispatch that, absent CPEC creation, may otherwise result in uneconomic dispatch. This is, however, support for the efficacy of the program because the potential for CPEC revenues alter resource behavior in favor of delivering clean energy during DOER-defined peak periods. Because Bear Swamp holds a Capacity Supply Obligation there may be periods when it is required to be available to respond to a system event or risk significant financial penalties (Pay for Performance). This could, in theory, reduce the generation of CPECs should a capacity event occur outside of CPEC hours. However, given the infrequency of these events, this is not anticipated to significantly impact the creation of CPECs under current market design. As the capacity market evolves toward a prompt and seasonal design there are unknowns in how this could impact capacity awards and obligations; these risks would be considered and reflected in pricing offered in response to this RFP.

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

The inclusion of existing resources in this RFP offers the potential for significant ratepayer savings as bid considerations may differ from those of new projects. This optionality can deliver a long-term hedge for ratepayers through the purchase of a meaningful volume of CPECs annually at pricing over a number of years that may present significant savings compared to certain new build requirements – and particularly compared to program ACPs. This is also a necessary consideration when acknowledging the constraints and delays to new build resources, which is further impacted by ongoing interconnection process changes as well as potential reversals in federal policy regarding tax credits, funding and tariffs. To ensure best outcomes for ratepayers, price should be heavily-weighted when determining awards for this initial procurement.

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Commercial Operation Date

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

Brookfield Renewable recommends that commercial operation date requirements be inclusive of projects in operation and those able to achieve commercial operation within 24 months of contract awards. This timeline allows adequate runway for projects to advance to commercial operation and ensures the statutorily-directed future procurements through 2027 may adequately consider attrition associated with Round 1 and adjust future procurement targets accordingly.

Resource Types

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

The statute does not restrict or limit participation for either new or existing transmission and distribution connected resources. As such, procurement should be open to new and existing resources that are transmission or distribution-connected. Given the ability of certain distribution-connected resources to realize multipliers not available to transmission-connected resources, Brookfield Renewable encourages the RFP process to avoid segmenting for transmission and distribution-connected procurement. However, should the Drafting Parties determine specified carve-outs are appropriate, we suggest that *at least* 1,200MW be reserved for transmission-connected resources given the likely potential for least-cost procurement and related ratepayer benefits that would follow as well as the benefits that transmission-connected resources offer as resources dispatchable by the system operator, which is not necessarily true of distribution-connected resources.

Contract Length and Form

a. *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.*

Contract length considerations may differ depending on technology and vintage as the useful life of certain energy storage technologies' may be longer or shorter than competing technologies, while differing resources may require shorter or longer contracts to support adequate financing

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for the project. However, in general, the most competitive outcomes will be tied to opportunities to contract for at least 15-20 years. Therefore, Brookfield Renewable recommends the contract length be established as no less than 15 years but with supplier optionality to offer a term longer than 15 years if it is feasible for the resource and ratepayers would benefit from the pricing that would result.

For existing resources, specifically, Brookfield Renewable proposes allowing suppliers to select a term of at least 15 but not more than 20 years. This allows the potential to realize the most competitive pricing while ensuring any awarded contracts for existing resources roll off before the end of the term of the Program (2050), thus maintaining room during the Program term for future contracting for new projects in support of the Commonwealth's goals.

Brookfield Renewable appreciates the RFP Drafting Parties' consideration of our comments. Please don't hesitate to contact me directly to discuss any of these issues further.

Sincerely,

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