

**RESPONSE OF BROOKFIELD RENEWABLE PARTNERS**  
**TO NOTICE OF PUBLIC COMMENT AND HEARING ON**  
**THE CLEAN PEAK STANDARD DRAFT REGULATION**

Brookfield Renewable appreciates the work of the Department of Energy Resources (DOER) in developing the Clean Peak Standard Program (CPS or Program), including the deliberate effort to incorporate stakeholder feedback throughout. Brookfield Renewable has engaged in this process since the Clean Peak Standard concept was first introduced in the Legislature, and we are pleased to continue our involvement by responding to the September 27, 2019 *Notice of Public Comment and Hearing* regarding the Clean Peak Standard Draft Regulation (Draft Regulation).

Brookfield Renewable's investment in the region includes over 1,300MW of carbon-free resources in ISO-NE, as well as 1,000MW that can be imported into New England from New York and Quebec. Our renewable hydro, wind and pumped storage resources are available to help meet the energy needs and environmental objectives of Massachusetts and the region. In Massachusetts, our facilities include a 600MW pumped storage facility (Bear Swamp) and a 10MW hydroelectric facility (Fife Brook), as well as our North American System Control Center in Marlborough. Brookfield Renewable is also affiliated with TerraForm Power, Inc., which owns and operates approximately 217MW of wind and 135MW of distributed solar resources in New England.

**1. Resource Eligibility**

The Draft Regulation includes language for resource eligibility that allows new capacity at existing energy storage facilities, including pumped hydropower upgrades, to participate as a Clean Peak Resource. Brookfield Renewable believes this inclusion is consistent with statutorily directive and we support it as such.

The Draft Regulation also establishes locational limitations for Clean Peak Resources which requires interconnection to the “Distribution System or Transmission System in the Commonwealth of Massachusetts”<sup>1</sup>. Under this requirement the eligibility of in-state resources (with the exception of those located in the service territory of a municipal lighting plant) to participate is apparent. For out-of-state resource participation, however – which Brookfield Renewable understands based upon review of the statute, Draft Regulation language and the August 2019 Straw Proposal, requires interconnection at 69kV or above and the demonstration of deliverability to the electric distribution system in Massachusetts – CPS eligibility is unclear. Specifically, Brookfield Renewable seeks clarification on how the DOER intends for an out-of-state Clean Peak Resource to “demonstrate that they generate, dispatch or discharge electricity to the electric distribution system in Massachusetts,”<sup>2</sup> – including if such demonstration is satisfied through interconnection to the regional transmission grid. Brookfield Renewable recommends tying the deliverability threshold to ISO-NE capacity qualification. For instance, deliverability to Massachusetts could be established by an otherwise Qualified RPS Resource or Qualified Energy Storage System located outside Massachusetts qualifying as a capacity resource in the ISO-NE Capacity Market in the same year as CPS compliance eligibility. In the case of paired resources, Brookfield Renewable recommends that Capacity Market eligibility apply to at least one of the paired sources.

Lastly, the Draft Regulation establishes several ways to demonstrate that a Qualified Energy Storage Resource stores and discharges renewable energy.<sup>3</sup> Brookfield Renewable appreciates the DOER’s attempt at incorporating stakeholder feedback to ensure that demonstration requirements are varied and not overly restrictive for energy storage systems that are not co-located with an RPS-eligible resource. Brookfield Renewable supports both the proposal to deem eligible a standalone energy storage resource charging coincident with periods of typically high renewable energy production as a percent of the grid generation mix and the proposed hours for doing so.

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<sup>1</sup> Draft Regulation at 21.05(1)(a).

<sup>2</sup> Draft Regulation at 21.05(1)(a).

<sup>3</sup> Draft Regulation at 21.05(1)(a)2.b.

Separately, however, we are concerned with how the statutory language requiring that energy storage “operates primarily to store and discharge renewable energy” will be implemented and what discretion will be utilized for determination. As DOER is keenly aware, energy storage resources have varying capabilities and several different applications, each important to the continued reliable operation of the Massachusetts electricity grid. Overly prescriptive requirements for a standalone Qualified Energy Storage System to operate *primarily* to store and discharge renewable energy has the potential to 1) limit Program participation by energy storage resources deployed to assist in maintaining grid reliability but still otherwise capable of renewable energy storage and discharge during Clean Peak Windows or 2) detract from the ability to provide other functions necessary for grid operations. In either scenario, the result is less efficient than simply requiring energy storage resources to demonstrate they charge (or pump) with renewable energy and discharge a consistent MWh value (netting for roundtrip losses) during specified windows. Therefore, the thresholds for demonstrating eligibility should be those established in the Draft Regulation, including through charging during specified hours or the presentation of contractual arrangements and supporting performance data that specify the sale and delivery of renewable energy during hours outside Clean Peak Windows (and, of course, discharging from the energy storage unit during Clean Peak Windows), without additional requirements related to primary operations. Under this scenario, the intent of the Program is maintained but flexibility remains available for an energy storage system to adequately participate in wholesale markets and respond in real-time to provide necessary grid services.

## **2. Clean Peak Seasons and Periods**

As the CPS expands in the future, the DOER should seek to develop a construct that adapts to actual demand during peak periods. Because peak seasons and time periods change dependent on weather conditions and resource mix, together with implementation of additional energy efficiency measures, demand side management and distributed generation technologies, the peaks will similarly evolve. Implementing a mechanism that more regularly reacts to changes in system resources and peaks would service the goals of the program more comprehensively. Therefore, similar to the ISO-NE’s Forward Capacity Market Pay-for-Performance construct, the CPS could include the creation of certificates based on real-time peak load instead of predefined

average demand during a period of the year or day. This would allow resources to respond in the desired ways as the shape of the peaks change over time.

### **3. Clean Peak Energy Certificate Multipliers**

Brookfield Renewable believes the preferred approach would be the establishment of adaptive multipliers that evolve over time to ensure program compensation and goals remain aligned. This is accomplished to some degree through the proposed Actual Monthly System Peak Multiplier, which incentivizes performance during the peak hour of the month. However, we are concerned that, in the context of the broader proposal – including CPS demand and additional multipliers – the value of the Actual Monthly System Peak Multiplier (15x) may lead to outcomes that devalue credit generation and incentives for performance.

The Draft Regulation also proposes eligibility of existing RPS Class I/Class II resources (COD prior to 1/1/2019), solar resources participating in the SMART Program and offshore wind contracted under 83C of the Green Communities Act, provided such resources deploy new energy storage (the Existing and Contracted Resource Multiplier). In such cases, the existing or contracted resource would receive a 0.1 multiplier for Clean Peak Energy Certificate generation, while the performance of the paired energy storage would be exempt from the same multiplier and treated as a new resource. Brookfield Renewable generally supports programs that seek to include a broad set of resources, regardless of vintage, in order to support innovative and cost-effective outcomes. As such, we believe it is sensible to allow certain existing resources to participate in the CPS, subject to the deployment of energy storage. However, in recognition of the Program's intent, we recommend the Existing and Contracted Resource Multiplier instead be set much lower for the existing or contracted resource. In fact, it would be justified to do away entirely with this multiplier and simply include regulatory language that provides eligibility for energy storage when paired with a SMART project (recognizing language is currently proposed that allows existing RPS and contracted 83C resources to participate in the program through the deployment of paired energy storage). While the DOER's proposed multiplier of 0.1 is modest, it appears arbitrary and unnecessary and, importantly, would serve to contribute to potential over-supply conditions, particularly in early years when, absent significant change, demand will

be relatively low. This has the potential impact of limiting incentives necessary for other resources to shift behavior toward performance during Clean Peak Windows and to promote new investment.

#### **4. Energy Reserves**

The Draft Regulation indicates the DOER will make a determination by December 31, 2020, on whether to implement a mechanism for the generation of Clean Peak Energy Certificates through the provision of energy reserves. Brookfield supports tying Clean Peak Energy Certificate generation to *either* energy dispatch or the provision of ISO-NE reserves during applicable Clean Peak Windows. As we have explained in prior submittals, whether a unit is discharging or being positioned for dispatch during specified windows, the result serves the intent of the CPS: the displacement of, and reduced reliance on, emitting resources during peak periods. Program eligibility and compensation should therefore be expanded accordingly. We urge the DOER to move forward with including this Program element as early as possible.

Respectfully submitted,



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