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**By E-mail**

Commissioner Judith Judson  
Massachusetts Department of Energy Resources  
100 Cambridge St., Suite 1020  
Boston, MA 02114

**Subject: Clean Peak Standard (CPS) Draft Stakeholder Questions**

Commissioner Judson:

In response to the Department of Energy Resources' ("DOER") request for input on the Clean Peak Energy Standard ("CPS") Straw Proposal in conjunction with its April 2, 2019, presentation on the subject, RENEW Northeast, Inc. ("RENEW") submits these comments.

**I. About RENEW**

RENEW is a non-profit association uniting environmental advocates and the renewable energy industry whose mission involves coordinating the ideas and resources of its members with the goal of increasing environmentally sustainable energy generation in the Northeast from the region's abundant, indigenous renewable resources. RENEW members own and/or are developing large-scale renewable energy projects, energy storage resources and high-voltage transmission facilities across the Northeast. They are supported by members providing engineering, procurement and construction services in the development of these projects and members that supply them with multi-megawatt class wind turbines. RENEW seeks to promote policies that will increase energy diversity, promote economic development, and achieve the Commonwealth's policy goals including those found in the Renewable Portfolio Standard ("RPS"), G.L. c.25A, §11F, and the Global Warming Solutions Act ("GWSA"), G.L. c. 21N.

**II. Comments on Clean Peak Standard Straw Proposal**

**A. Eligible Resources**

**1. Energy Storage Systems Should Be Required to Charge from Renewable Energy Resources**

During the presentation, DOER stated that it would prefer not to require stand-alone energy storage systems retire a Renewable Energy Certificate ("REC") against each Clean Peak

Certificate (“CPC”) it generates due to the complexity arising from a trading and tracking program that would be needed to be created to match the retired RECs against CPCs. RENEW disagrees that an energy storage system should not need to provide evidence that it is charging from renewable energy resources for CPC generated and that to do so requires a complicated trading and tracking program. First, the General Laws require “qualified energy storage systems” to “operate primarily to store and discharge renewable energy.” Second, energy storage systems not paired with a renewable energy facility could purchase an amount of renewable energy attributes equivalent to the amount of megawatt-hours of energy consumed to charge and subsequently discharge during clean peak windows. To measure compliance with having to create a new trading and tracking system, DOER could impose procedural requirements on stand-alone energy storage systems like those under the RPS that require retail electricity suppliers to demonstrate compliance at the end of each year. A flexible system for retiring RECs to show compliance may even be necessary for energy storage systems co-located with a renewable resource as ISO New England currently has no operational and market rules in place for these “hybrid” resources.

## **2. No Type of Energy Storage System Should Be Required to Perform for the Entirety of the Daily 4-hour Window**

The Straw Proposal on slide 8 states that energy storage facilities paired with existing Class I and Class I RPS resources must have a minimum 4-hour duration of storage. By contrast, on slide 20 it states, “A qualified Clean Peak Resource will generate Clean Peak Certificates (CPCs) according to the average output of the clean peak resource over the duration of the Seasonal Peak Period on a particular day.” During the question and answer session, DOER stated that energy storage need not perform for the entirety of the daily 4-hour window and confirmed only that its performance in each hour would be averaged over 4 hours. It appears storage resources paired with existing renewables might be held to a higher standard of having to perform for 4 hours to be eligible but that is not clear. RENEW supports allowing all storage resources to have the flexibility to discharge fully in less than 4 hours each day.

## **B. Further Analysis Should Be Performed to Determine If a One-Hour Peak Period in the Morning during the Winter, Spring and Fall Seasons Is Appropriate**

The peak period performance windows should be selected to include the most probable hours in which the peak will fall during the season. Peaks can and do fall across this period and the portfolio of resources procured under the standard will have the aggregate effect of reducing the peak. This is irrespective of a given resource impacting only a part of the period or sporadically hitting the actual peak.

In response to DOER’s Draft Stakeholder Questions, RENEW requested Daymark Energy Advisors prepare an analysis on peak occurrences. Due to the short period to develop responses to the Straw Proposal, RENEW has been unable to conduct a full assessment of DOER’s seasonal and daily peak period findings and compare it to Daymark’s analysis.

Nevertheless, RENEW observes that Daymark's information does not support the Straw Proposal's approach of a one-hour peak period in the morning during the winter, spring and fall seasons.

Within each season, RENEW proposed a single peak period that best matches the timing of expected peak occurrences. In winter, Daymark found two peaks occurring in the morning and evening. However, the morning peak is less consistently placed in time, with most occurrences between HE 700-900 and HE 1100-1200. The afternoon peak, however, is quite stable and almost always the daily peak. For this reason, and the interest of adopting a less complicated standard, RENEW recommended a contiguous 4-hour afternoon clean peak period for winter. The shoulder seasons (fall and spring) were relatively flat with a minor single afternoon peak. RENEW agrees with DOER that historical daily load shapes for the New England system show summer typically has a single broad peak.

RENEW had recommended DOER adopt three seasons: summer, winter, and shoulder. Daymark found that if the shoulder periods were split into their respective seasons, the number of peak occurrences within a 4-hour period would not change. With this data in mind, RENEW recommended DOER adopt a single shoulder period rather than making a distinction between the spring and fall, or shoulder, seasons.

### **C. The Actual System Peak Multiplier and the Negative Multiplier for Discharging During Periods of Low Demand Should Be Removed**

The Clean Peak Standard should be straightforward and maximize participation and competition among resources that can deliver clean power at peak. For this reason, RENEW recommends DOER remove the provisions for the monthly system peak multiplier. One of the primary objectives of the CPS is to provide investment signals to resources that can deliver clean energy on peak. Monthly peaks are erratic due to the nature of the weather. Clean Peak Standard signals should be stable, consistent, and uncluttered by the noise that sporadic weather-based peak load excursions introduce.

The Clean Peak Standard should not be structured to target the monthly or seasonal peak (neither the utility non-coincident nor the system coincident peak). The program should focus on measuring megawatt-hour deliveries during the peak period performance windows and treat each window equivalently for the purpose of assessing resource performance. If a utility puts incremental value on deliveries during its or the system's seasonal or monthly peak, it should be free to include compensation for such an incremental service in its contract or tariff with a distribution level resource, but this should not be a component of the program design.

After the Clean Peak Standard has been fully established and understood by participants, only then might it be appropriate to consider expanding the program's definition of peak to include a multiplier for seasonal or extraordinary events.

RENEW opposes a negative multiplier for discharging during periods of low demand or charging during the clean peak window. A negative multiplier exceeds DOER's authority in the statute which requires it implement a program for the dispatch or discharge of electricity during peak periods. The law makes no provision for addressing off-peak periods.

Benefits exist from aligning charging time with minimum load windows. The objective of the Clean Peak Standard, though, should not be to encourage charging during low load periods, per se, but rather charging when clean resources are on the margin. This approach would allow storage to explicitly shift clean power from times it would be curtailed and wasted to the on-peak performance measurement periods. RENEW would be interested in exploring development of a market for a marginal price of carbon that could set when charging should and should not occur and that could be an alternative to REC purchases to demonstrate compliance. At the outset of the program, though, DOER should keep the Clean Peak Standard program simple and workable for participants and rely as much as possible on wholesale market prices to encourage to developers to charge at periods of low prices which will likely correspond to periods of low demand.

#### **D. DOER Should Establish a Program for Periodic Procurement of Attributes from Energy Storage Systems and RPS Resources Using Long-Term Contracting**

DOER in its Straw Proposal suggests that procurements of clean peak resources should "focus on facility types that may not have other sources of long-term financing available to them." RENEW agrees.

Large-scale wind (land-sited) and large-scale solar (over 5 megawatts) are the least cost form of new renewable energy resources yet lack any opportunities under Massachusetts law for long-term commitments to enable financing. As the SMART program has been set up for smaller energy storage projects, the Clean Peak Standard should focus on the contracting opportunities for stand-alone energy storage interconnecting at the ISO New England level and energy storage paired with large-scale land-based wind projects and solar projects larger than 5 megawatts with no upper boundary.

For these large-scale resources DOER should leverage its existing procurement programs and approaches to enable financing of clean peak resources at the least cost. Using existing mechanisms will ease the administrative burdens on both DOER and developers. As these approaches are proven to developers and financiers, they will lower project risk which lowers finance costs.

Another reason that clean peak resource procurements should be designed solely for large-scale resources is ensure the program goals are attained at the least cost to consumers. The use of competitive long-term contracting for meeting Massachusetts RPS goals has enabled developers to provide consumers with low-cost renewable energy. And according to the State of Charge report's information on Use Case Benefit-to-Cost Ratio, utility-scale projects have benefit/cost ratios of 3.00-4.40 for merchant facilities, and from 2.04-4.06 for LSEs, IOUS, and

MLPs. By contrast, Behind-the-Meter (BTM) project ratios of 0.49-2.43 ratios make the case for robust deployment of larger projects.

RENEW recommends procurements for large-scale resources be held annually and under a schedule several years into the future to induce developers to build a pipeline of projects to ensure robust competition and ensure an adequate supply to meet CPS objectives. The date of the first procurement being announced in the implementation schedule could help bring projects into commercial operation closer to the start date of the program.

To minimize risk premiums in bids, the clean peak window should remain static for the duration of a developer's long-term commitment. Fixing the window would have lifespan against which parties could structure contracts and seek financing. The net load shape may change as load patterns shift and as new renewable resources enter the market but then DOER can modify the peak window as necessary over time and the new windows would be applicable to future contracted clean peak resources.

As applicable to non-contracted resources, RENEW recommends seasonal peak periods should be re-evaluated no more frequently than biannually with any changes made as infrequently as possible while still ensuring that the parameters are reasonable to maximize certainty for participants.

**E. A Cost Cap Must Be High Enough to Allow for Program Goals to Be Met and It Must Account for the Value of Benefits That Will Lower the Direct Cost for CPCs**

The initial ACP levels should be set at a level that will lead to project development based solely on CPS revenue. With CPS projects having to procure renewable energy to charge their systems, the ACP amount must include both the project development costs and the costs to charge with renewable energy. The charging energy costs could potentially be proxied as the ACP for the RPS procurements. Alternatively, DOER could establish the component of the ACP related to the cost of new asset development like the cost of new entry (CONE) calculation used for traditional generation. Without further analysis it cannot be known how much peak electricity reduction will occur with a 5 mill limit on ratepayer cost. If any cost cap is imposed, RENEW recommends that calculation of the cap reflect not just direct costs to consumers (e.g., retirement of CPC, cost of contracting) but be offset by benefits (e.g., emissions reductions, transmission and distribution upgrade deferrals).

**F. The Program Targets Should Be Set at a Level to Achieve Meaningful Peak Reductions**

The Minimum Standard should be set a level to foster development of new energy storage systems and renewable energy facilities that can lower peak emissions according to goals set by the GWSA and reduce costs arising from fossil fueled generation units running during

peak hours. Increases of the annual requirement at the statutory minimum level of one-quarter percent per year (about a 100 megawatt-hour of energy storage) is unlikely to lead to meaningful storage and renewable energy development particularly for the larger, least-expensive projects.

**G. The Proposed Implementation Schedule Should Be Modified So That Regulations Are Approved and the Program Is Operation Prior to the Raising the CPS Obligation Above Zero Percent**

At the DOER presentation on the Straw Proposal, DOER stated that the program must be set-up, structured and operating before the summer of 2020. This summer 2020 launch may be problematic if the first increase in the compliance obligation occurs at the next annual interval of January 1, 2020. RENEW recommends that the compliance obligation year not take effect until the regulations have the force of law and all program features including long-term contracting are operational. Buyers and sellers may not be willing to take the risk to enter into transactions for CPCs until regulations are approved and they know the final operational requirements and procedures.

**III. Conclusion**

Thank you for the opportunity to provide this feedback. RENEW recommends DOER issue a second draft of the Straw Proposal that considers today's stakeholder feedback and is more comprehensive than the first version. This second Straw Proposal should be subject to stakeholder review and comment before DOER issues draft regulations.

Sincerely,



Francis Pullaro  
Executive Director