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October 30, 2019

By E-mail

Kara Sergeant
Massachusetts Department of Energy Resources
100 Cambridge St., Suite 1020
Boston, MA 02114

Subject: Draft Clean Peak Energy Portfolio Standard Regulation

Ms. Sergeant:

In response to the Department of Energy Resources' ("DOER") Notice of Public Comment and Hearing on 225 CMR 21.00 the Draft Clean Peak Energy Portfolio Standard Regulations ("Draft CPS Regulation"), RENEW Northeast, Inc. ("RENEW") submits these comments.

RENEW supports DOER's stated goals of lowering emissions and consumer costs by shifting clean energy to peak periods. These comments make the following key points about Clean Peak Standard ("CPS") design issues that could prevent the CPS from being a successful first in the nation program.

- The proposed Alternative Compliance Payment rate of \$30 is too low to lead to development of new Clean Peak Resources that would not otherwise be built;
- DOER has not provided the public with the data and information upon which the consultants and DOER relied upon to reach their conclusions so that the public could meaningfully review and comment on the Draft CPS Regulation;
- Restricting project eligibility to Massachusetts interconnection points leaves the regulations vulnerable to legal challenge; and
- The Clean Peak Certificate Procurements should be reserved exclusively for large-scale QESS and more details on the procurement process should be set in the Draft CPS Regulation.

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. Its members are developing stand-alone transmission interconnected Qualified Energy Storage Systems ("QESS") and QESS virtually or physically paired with renewable energy resources. 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. DOER's Failure to Provide RENEW with Requested Information Places the Validity of Any Final CPS Regulation into Doubt.

On September 27, 2019, DOER posted to its website a document entitled "Massachusetts Clean Peak Standard: Market Model" ("Report") that was produced by its consultants and contains information on the consultants' modeling of the program. Following the release of the Report, RENEW on October 11, 2019, requested DOER provide it with all analyses developed by its consultants in connection with the Report for RENEW and its members to be able to prepare informed written comments. The Report did not provide meaningful information for RENEW to be able to assess the assumptions for QESS revenue sources and program costs and benefits. It only provided an overview of the tool DOER used to make its policy decisions.

Not having received a response from DOER after several weeks, RENEW on October 24, 2019, pursuant to G.L. c. 66, § 10 and G.L. c. 4, § 7(26), submitted to the DOER Records Access officer a public records request with respect to the Draft CPS Regulation. As of the filing of these comments, DOER has not provided RENEW with the requested information.

Massachusetts law presumes that agency records are public, placing the burden on the agency to prove "with specificity" that an exemption applies. *See, e.g., Georgiou v. Comm'r of the Dep't of Indus. Accidents*, 67 Mass. App. Ct. 428, 431 (2006). Further, the withholding of documents that are subsequently found to be subject to disclosure may adversely impact RENEW and its members from providing informed comments as part of DOER's notice and comment process, bringing the validity of any final rule issued by DOER into question. That is

particularly true because RENEW previously requested these documents from DOER on October 11, 2019, and DOER failed to provide these documents in response to that request.

When DOER promulgates regulations, it must satisfy both procedural and substantive requirements. *See Leopoldstadt, Inc. v. Comm'r of the Div. of Health Care Fin. & Policy*, 436 Mass. 80, 85 (2002) (noting that regulations are subject to legal challenges on both procedural and substantive grounds). Procedurally, DOER is required to hold a public hearing and request public comment on any draft regulations. *See* G.L. c. 30A, § 2. This statutory obligation presupposes that the public will have sufficient knowledge of the bases for DOER's proposed regulations so that interested persons can meaningfully review and comment on the regulations. Here, DOER's draft regulations are based almost entirely on a consultants' report that draws key conclusions based on unexplained assumptions, particularly with respect to the Alternative Compliance Payment ("ACP") rate. Without access to either the data or information upon which the consultants reached their conclusion – and without knowing whether any such data or information even exists – the public cannot meaningfully comment on the Draft CPS Regulations. This undermines DOER's statutorily-mandated process for promulgating regulations and renders any resulting regulation procedurally deficient.

Massachusetts courts also review regulations for substantive defects, including whether a regulation comports with its authorizing statute. *See Pepin v. Div. of Fisheries & Wildlife*, 467 Mass. 210, 221 (2014). The statute authorizing the CPS Regulation, G.L. c. 25A, § 17, requires "every retail electricity supplier in the commonwealth [to] provide a minimum percentage of not less than an additional 0.25 per cent of sales," from the prior year, "that shall be met with clean peak certificates." The Draft CPS Regulation establishes a \$30 ACP rate based on the consultants' report. However, DOER has failed to make any information available to the public about what data or information (if any) supports the conclusory assertion that such a low ACP rate will incentivize electricity suppliers to achieve the statutorily-required annual increase in Clean Peak Energy Certificates ("CPEC"). The unsubstantiated assumption that a \$30 ACP rate would generate a sufficient increase in CPECs leaves any final CPS Regulation vulnerable to legal attack on substantive grounds of being inconsistent with Section 17.

Given the absence of substantive evidentiary justification for the proposal, RENEW intends to oppose the Draft CPS Regulation when it comes before the Joint Committee on Telecommunications, Utilities and Energy. *See* G.L. c. 25A, § 12. During any public hearing and opportunity to comment on the draft CPS Regulation, RENEW will explain to the Joint Committee that DOER failed to provide the public with adequate information to comment on the proposal, and will request that the Joint Committee delay its issuance of a report until DOER discloses such information to the Joint Committee and to the public.

III. Comments on Draft Clean Peak Standard Regulations

A. Restricting Project Eligibility to Massachusetts Interconnection Points Leaves the Regulations Vulnerable to Legal Challenge

The Draft CPS Regulation requires that for a Clean Peak Resource to be eligible to participate in the program, it must be “interconnected with the Distribution System or Transmission System in the Commonwealth of Massachusetts. Clean Peak Resources must demonstrate that they generate, dispatch or discharge electricity to the electric distribution system in Massachusetts.” (225 CMR 21.05(1)(a)) Essentially, this requirement in the Draft CPS Regulation that eligible resources must have an interconnection point in Massachusetts will preclude out-of-state resources from participating in the CPS even if those resources are located within the ISO New England Control Area or can deliver energy to it during the Seasonal Peak Periods. By limiting only in-state resources to receive CPECs, Massachusetts might be impermissibly discriminating against out-of-state businesses and burdening interstate markets in violation of the dormant Commerce Clause. The regulations could be ruled unconstitutional.

The Commerce Clause provides that “Congress shall have Power . . . [t]o regulate Commerce with foreign Nations, and among the several States.” U.S. Const. art. I, § 8, cl. 3. In implementing the Commerce Clause, the Supreme Court “has adhered strictly to the principle that the right to engage in interstate commerce is not the gift of a state, and that a state cannot regulate or restrain it.” *Hughes v. Alexandria Scrap Corp.*, 426 U.S. 794, 808 (1976) (internal quotation marks omitted). The First Circuit Court of Appeals explained that “a discriminatory law is virtually per se invalid ... and will survive only if it advances a legitimate local purpose that cannot be adequately served by reasonable non-discriminatory alternatives. The state bears the burden of showing legitimate local purposes and the lack of non-discriminatory alternatives, and discriminatory state laws rarely satisfy this exacting standard. *Family Winemakers of Cal. v. Jenkins*, 592 F.3d 1, 9 (1st Cir. 2010) (internal quotation marks and citations omitted). Applying strict scrutiny, the Supreme Court has struck down an Oklahoma law that required ten percent of electric utilities’ coal purchases to be from in-state suppliers. *Wyoming v. Oklahoma*, 502 U.S. 437 (1992).

In today’s ISO New England Generator Interconnection Queue, 25 percent of the 3000 megawatts of proposed battery energy storage queue positions are located outside of Massachusetts. By limiting project eligibility to in-state resources, Massachusetts consumers may face higher costs for CPS compliance. DOER has provided no public information to justify the protectionism. It has not demonstrated that out-of-state projects cannot provide the desired benefits for the Commonwealth. Without a showing of a legitimate interest, the restriction on non-Massachusetts projects should be modified to adopt the requirements in New England RPS laws that have withstood legal challenge. An RPS-like geographic would restrict eligibility to resources that interconnected to the ISO New England Control Area or can deliver to it.

B. The Draft CPS Regulation Alternative Compliance Payment Rate Will Not Result in New QESS Development nor Induce Existing RPS Resources to Add QESS

A gap analysis conducted by consultants at Daymark Energy Advisors (“Daymark”) for RENEW considered the required CPEC price for a range of eligible CPS projects. Daymark’s analysis found that the required CPEC price is significantly higher than the Draft CP Regulations proposed ACP of \$30/CPEC.

DOER did not provide any information about what it assumed for the forecasted capacity clearing price for all the years studied nor what it assumed for the New Resource Offer Price for QESS in the ISO New England (“ISO”) Forward Capacity Auction (“FCA”). DOER did not provide any information on whether CPEC revenue is assumed to be in-market for QESS under ISO New England’s Minimum Offer Price Rule (MOPR). Without this information, RENEW and its consultants are unable to understand how DOER supports an ACP of \$30/CPEC.

In one of Daymark’s cases, it assumed a \$4/kW-month capacity price and that a QESS would clear the FCA and secure a Capacity Supply Obligation (CSO) at that price. For reference, the most recent clearing price, FCA 13, was \$3.80 kW-month. Daymark determined that large stand-alone QESS would require a CPEC price between \$82 and \$93 per CPEC to be built. QESS under the SMART program would require a CPEC price of almost \$49 per CPEC. Even if QESS resources can secure capacity revenue, the Daymark analysis shows the required ACP is two to three times the proposed ACP rate in the Draft CPS Regulation.

Figure 1. Required Levelized CPEC Price (Assuming \$4/kW-month Capacity price)

	50 MW Storage	15 MW Storage	SMART Storage Only
LCOE (\$/CPEC)	\$152	\$164	\$194
Currently Available Revenues (\$/CPEC)	\$70	\$70	\$145
Gap (Required Levelized CPEC price)	\$82	\$93	\$49

The challenge for developers is that all energy projects seeking to obtain a CSO are subject to the MOPR which ISO New England established to mitigate the potential exercise of buyer-side market power. It requires new capacity resources to offer their capacity at prices at or above a price floor set for each type of resource known as the Offer Review Trigger Price (“ORTP”).

The ORTP today for QESS is the starting price of the FCA. (ISO New England Tariff Section III.A.21.1.1) The starting price in the next annual capacity auction (FCA 14) will be \$13.099/month. While large-scale storage resources might be able to receive a lower floor price from the ISO’s Internal Market Monitor (“IMM”) based on a project specific review of costs and

revenue, any offer floor is likely to be well above the FCA 13 \$3.80 kW-month clearing price based on the substantial “missing money” calculation by Daymark shown in Figure 1 at a comparable \$4 kW-month clearing price. The Report seems to indicate that DOER may have based its revenue assumptions used to calculate the ACP on the premise that QESS would obtain a CSO. As QESS resources are unlikely to clear in the FCA due to the high offer price, if DOER assumed that they would then that could explain in part why the Draft CPS Regulation sets the ACP so low.¹ Without the information RENEW has requested from DOER, RENEW can only speculate.

Due to these ISO New England market rules, the appropriate assumption is that QESS resources will not secure revenue from the capacity market. Calculations for setting the ACP should reflect that assumption. With this assumption, Daymark’s gap analysis in Figure 2 reveals the required CPEC price is significantly higher than the proposed ACP of \$30/CPEC in the Draft CPS Regulation. Assuming no capacity revenue, stand-alone QESS would require a CPEC price between \$114-\$125 whereas a SMART QESS project needs \$92.

Figure 2. Required Levelized CPEC Price (Assuming no Capacity Revenue)

	50 MW Storage	15 MW Storage	SMART Storage Only
LCOE (\$/CPEC)	\$152	\$164	\$194
Currently Available Revenues (\$/CPEC)	\$65	\$65	\$102
Gap (Required Levelized CPEC price)	\$114	\$125	\$92

Unfortunately, any revenue QESS resources would receive from selling CPECs is unlikely to lower the offer floor price and increase the likelihood of QESS obtaining a CSO. The ISO’s IMM does not allow resources receiving *out-of-market revenue* to reflect that support in their offer prices, unless the support is widely available to other market participants. Out-of-market revenues are any revenues that are “(a) not tradable throughout the New England Control Area or that are restricted to resources within a particular state or other geographic sub-region; or (b) not available to all resources of the same physical type within the New England Control Area, regardless of the resource owner. Expected revenues associated with economic development incentives that are offered broadly by state or local government and that are not expressly intended to reduce prices in the FCM are not considered out-of-market revenues for this purpose.” (ISO New England testimony, 2012).

The geographic eligibility restriction in the Draft CPS Regulation should be eliminated or changed to help QESS obtain a CSO at the more recent lower FCA prices. It can accomplish this

¹ While state-sponsored policy resources like RPS resources that do not clear the FCA due to MOPR can offer into Competitive Auctions with Sponsored Policy Resources (“CASPR” or “Substitution Auction”) or qualify under Renewable Technology Resource (“RTR”) exemption, these options are not available to QESS.

objective if CPEC revenue is deemed in-market by IMM which will lower the offer floor for QESS. The geographic restriction on project eligibility in 225 CMR 21.05(1)(a), in addition to making the Draft CPS Regulation subject to legal challenge, will prevent the CPEC revenue from contributing to lower a QESS' offer price. If DOER lifted the geographic restriction, CPEC revenue would likely be considered in-market by the ISO's IMM. This would lower the floor price for QESS bidding into the FCA and increase the likelihood of a QESS clearing in the FCA and obtaining a CSO with a 7-year price lock-in that helps enable financing in the same way a long-term contract between a developer and the distribution utilities does. The ability of a QESS to obtain a significant portion of its revenue under a long-term commitment from the market would reduce the amount of "missing money" it would require under the CPS program. The lower CPS program cost would benefit consumers.

C. The Monthly Peak Multiplier and Resilience Multiplier Should Be Removed

The CPS 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 multipliers at least for non-distribution level resources which cannot reduce monthly Regional Network Load costs. 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. CPS signals should be stable, consistent, and uncluttered by the noise that sporadic weather-based peak load excursions introduce.

The CPS 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 distribution 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 CPS 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.

DOER did not provide any cost analysis to support the 15 times multiplier proposed for the monthly system peak. It did not provide any documentation associated with the Report on whether sufficient information is available to QESS resources for them to determine with any certainty when a monthly peak will occur. It did not provide any analysis on the risks to QESS discharging outside a daily window to capture a monthly peak and having less energy to supply during the daily peak window.

The legislative intent for a clean peak program was to have renewable energy or storage energy delivered to the grid at peak times. The same act, Chapter 227 of the Acts of 2018, addressed grid resiliency through a separate program enabling the distribution utilities to hold competitive solicitations for distribution side resiliency non-wires alternatives. Even if resiliency were a legislative objective, all QESS make the grid more resilient based on their ability to respond quickly to system scarcity events and should therefore be treated equally.

D. The Existing or Contracted Resource Multiplier May Be Inadequate

The purpose of the Existing or Contracted Resource Multiplier is designed to prevent these resources from dominating the CPS market. The more revenue that is diverted to existing and contracted resources, the less revenue available for new QESS. DOER has not provided any information cost and benefit analysis to support setting the multiplier for existing or contracted resources at 0.1. DOER has not explained how much this multiplier will limit existing resources from earning CPEC and what an appropriate amount of existing or contracted resources should be.

E. The Clean Peak Certificate Procurements Should Be Reserved Exclusively for Large-Scale QESS and More Details on the Procurement Process Should Be Set in the Draft CPS Regulation

1. The Clean Peak Certificate Procurements Should Be Reserved Exclusively for Large-Scale QESS

DOER in its Straw Proposal suggested 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 agreed. Under the Draft CPS Regulation, however, the Clean Peak Certificate Procurement does not exclude Existing or Contracted Resource like solar paired with QESS receiving SMART program revenue.

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. 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. As the SMART program has been set up for smaller energy storage projects paired with solar, the CPS should focus on the contracting opportunities for QESS 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.

2. The Draft CP Regulations Should Contain More Detail on the Design of Clean Peak Certification Procurement Program

For these large-scale 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.

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. If the proposed \$30 ACP is applied to Clean Peak Certification Procurements, then no solicitation is likely to result in any bids being received at or below \$30 based on the Daymark analysis presented above. One solution is not to apply the ACP to Clean Peak Certification Procurements

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.

While the distribution utilities may develop and issue RFPs for CPECs, they should not be involved in the selection process to help ensure any bid selection process is conducted in a non-discriminatory way due to the possibility of the distribution utilities having a financial interest in one or more of the bids. If the distribution utilities are to be involved in the procurement process including writing of the RFP, then they should not be able to submit bids themselves.

The length of the contracts should be set by regulation. Terms ranging from 7 to 10 years is preferred by developers of QESS.

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. DOER has provided no information about much new energy storage will be build based on its proposed cumulative minimum percentages in 21.07.

G. The Requirement for QESS to Charge during Periods of High Renewable Energy Production Should Allow for Some Flexibility

The Draft CPS Regulation provides for several ways that a storage facility can be eligible as a QESS. One qualification method is for the QESS to charge during enunciated times of “high renewable energy production.” (225 CMR 21.05(2)(c)) The intent of this provision appears to be that QESS should primarily meet the conditions in paragraphs (a) through (d) to qualify, but RENEW does not believe the intent is that a system should be wholly disqualified on the basis of limited charging outside of the time periods identified in section (2)(c). However, it is currently unclear what happens if, for example, a facility charges 95 percent of its total monthly energy usage within the established periods, and 5 percent outside of those periods (e.g., due to emergency system conditions).

As a result, RENEW recommends a clarification that accounts for facilities for which the bulk of charging occurs during the qualified time periods, but for which a small portion of total charged energy, e.g., 20 percent or less, was stored during times outside of the identified window. DOER should clarify that if a storage system charges outside of the time periods identified as “high renewable energy production,” such as a maximum of 20 percent total charged energy, then that facility remains a QESS. In the alternative, if DOER’s intent is to limit QESS to those that strictly charge at certain times (and is willing to address the administrative challenges that come with that strict interpretation), then DOER should indicate that the quantity of CPECs should be reduced on a pro-rata basis based on when a facility charges. For example, Facility A is a QESS that charges 80 percent of the time during the DOER-identified periods. Facility A would remain a qualified energy storage system but would receive a pro-rata share of CPECs in accordance with its charging patterns. This change would incentivize storage to meet DOER’s clean energy goals without unnecessarily burdening facilities that “operate primarily to store and discharge renewable energy” or limiting their usefulness to the grid.

IV. Conclusion

Thank you for the opportunity to provide these comments.

Sincerely,

A handwritten signature in blue ink that reads "Francis E. Pullaro". The signature is written in a cursive, flowing style.

Francis Pullaro
Executive Director