

February 5, 2019

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

Re: Clean Peak Standard (CPS) Stakeholder Questions

Dear Commissioner Judson:

Thank you for the opportunity to provide input on the important Clean Peak Standard (CPS) program design elements identified in your January 15 stakeholder questionnaire. The Northeast Clean Energy Council (“NECEC”) and our member companies are glad to offer feedback at this early juncture of program development. We look forward to working with DOER to help design and implement a robust and effective CPS, including the opportunity to provide more detailed and refined comments and input as DOER develops its proposed framework and regulations. The Commonwealth’s CPS effort will be the nation’s first, and we believe that Massachusetts can set a high-water mark for future initiatives around the country.

NECEC is the lead voice for hundreds of clean energy companies across the Northeast, helping to grow the clean energy economy. NECEC’s mission is to create a world-class clean energy hub in the region delivering global impact with economic, energy and environmental solutions. NECEC is the only organization in the Northeast that covers all of the clean energy market segments, representing the business perspectives of investors and clean energy companies across every stage of development. NECEC members span the broad spectrum of the clean energy industry including solar, wind, energy storage, energy efficiency, CHP, fuel cells and other advanced and “smart” technologies. Our members are already – or are very interested in – doing business in the Commonwealth and helping to grow the clean energy economy.

Overview & Top Recommendations

NECEC recommends that DOER focus on several top-tier policy goals in its development of a CPS program framework and regulations. Under the CPS, DOER should prioritize program design elements that: i) create robust market opportunity for competitive solutions providers; ii) preserve simple, understandable program mechanics, taking into account existing program frameworks; and iii) support technology-neutrality where possible within the governing statute. As we describe in more detail below, we believe that a wide variety of resources are able to contribute to the CPS goals of reducing greenhouse gas emissions and ratepayer costs during peak hours, and the program design should allow all technologies to participate as long as they demonstrate they are supporting these two key objectives. In addition, we join other stakeholders in extending support for as simple and straightforward a program design as can be achieved under the complex and dynamic set of relevant inputs. Finally, as we note further below, the program should be designed to accommodate several means of demonstrating clean peak eligibility for resources beyond being co-located with a renewable resource. Doing so will best enable a range of flexible resources and project configurations to achieve the peak emissions- and cost-reduction goals of the program, especially amid ongoing uncertainty at ISO-NE about rules for co-located resources.

NECEC is pleased to provide the below input, organized in order of the questions released by DOER.

Clean Peak Resource

Clean peak resource is defined as “a qualified RPS resource, a qualified energy storage system or a demand response resource that generates, dispatches or discharges electricity to the electric distribution system during seasonal peak periods, or alternatively, reduces load on said system.”

1. Should only resources interconnected to the electric distribution system be eligible to qualify, or should resources connected to the transmission system also be eligible to qualify?

NECEC recommends that eligible clean peak resources should include transmission system resources as well as distribution system resources. We concur with the Energy Storage Association (ESA) that the CPS in its design aims to facilitate deployment of resources that are able to increase clean energy deliveries (and reduce load) during peak hours, and both transmission-connected and distribution-connected resources can serve this purpose and deliver cost- and emission-reducing benefits.

2. Should DOER interpret the use of the term “electric distribution system” to mean that only facilities on the electric distribution system in the Commonwealth should be eligible to qualify as clean peak resources under the CPS? Should the CPS also include all distribution and/or transmission level resources connected in the ISO-NE control area? Should it include adjacent Control Areas such as NYISO, Quebec, or New Brunswick?

The CPS should include all distribution- and transmission-level resources connected in the ISO-NE control area. Because the CPS should target system peak, it follows that resources qualification should be limited to resources within the footprint of that system. As such, DOER should limit geographic eligibility to resources in the ISO-NE control area, and not adjacent areas such as NYISO, Quebec, or New Brunswick.

Demand Response Resource

Demand response resource is defined as “changes in electric usage by end-use customers in the commonwealth from their normal consumption patterns in response to: (i) changes in the price of electricity over time, including, but not limited to, time-of-use rates for residential and small commercial and industrial customers; or (ii) incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized.”

3. What types of resources should be included in this definition?

We emphasize the technology neutrality of this definition, and support an interpretation that allows customers to modify their normal consumption patterns via a wide variety of resources, technology types, and verifiable behavioral adjustments. There are several technologies that can serve as the means for enabling demand response. Such technologies include but are not limited to behind-the-meter energy storage that can reduce a customer’s consumption from the electric grid, smart EV charging schemes that can reduce or shift EV charging from periods of

high demand to low demand, or technologies that enable load curtailments from HVAC, lighting, production lines, etc. (see below for further comments on base-lining for load reduction). As long as a technology can facilitate a reduction in a customer's electric usage during the clean peak window, and contributes to a cleaner peak, it should qualify. We concur with other commenters that while traditional diesel combustion generators can be a form of demand response, we do not believe that those resources should qualify in the context of a clean peak program. We note however that the criterion for demand response resources should not simply be "no fossil fuels," which would preclude several high-efficiency technologies and solutions that are supported by Massachusetts policies and stand to fulfill the emissions- and cost-reduction objectives of the CPS, along with other benefits such as reduced criteria pollutants.

4. Should electric vehicles (EVs) qualify?

Yes, EVs should be able to qualify as demand response resources to the extent that they can operate to reduce load via the same general eligibility and metering and verification requirements faced by other demand response resources under this definition. Like other demand response resources, electric vehicle participation may need to be evaluated against a baseline of charging behavior to determine incremental/improved performance prompted by the CPS.

5. How should DOER interpret the inclusion of different types of rate designs in this definition?

DOER should accommodate CPS participation by residential and small C&I customers who may enroll on future time-of-use (TOU) tariffs. Changes in electric consumption in response to such rates and corresponding price signals meet the plain language of the statutory definition. It may make sense to require some reporting or other benchmarking of consumption patterns prior to the rate design change to establish a baseline of behavior, if sufficiently granular metering and data are available to do so. We note that such metering and data will be beneficial and may even be necessary in order to implement reasonable and effective rate design changes.

6. Should this definition only be limited to active demand response?

Resources under this definition should include both passive (e.g., intermittent solar generation) or active (e.g., dispatchable battery storage, load shedding controls, etc.), provided that they meet the definition and satisfy all applicable metering and verification requirements (discussed further below). We note however that passive energy efficiency and conservation measures may deserve differential treatment as they are funded through other policies/programs and typically provide "base-load" conservation benefits rather than peak-oriented impacts. We note that certain resources seeking to participate as demand response resources may need to be accompanied by base-lining to understand peak impacts relative to the customer load consumption patterns prior to the resource participating in the CPS.

7. Should standalone energy storage resources (i.e. not directly connected to another resource type) be eligible to qualify as demand response resources? What requirements, if any should standalone energy storage resources face in order to qualify as demand response resources?

Yes. Provided that a standalone energy storage resource can demonstrate that it can fulfill the general requirements of a demand response resource under the Clean Peak Standard (e.g.,

dispatch/reduce load during administratively determined timeframes), it should be permitted to qualify. BTM storage behaves like a demand response resource in many parts of the country and is explicitly included as such in the next 3-year energy efficiency plans. This model is also consistent with ISO-NE market design, where customers can use standalone energy storage to facilitate their participation in the ISO-NE demand response program.

8. Should the DOER view thermal storage facilities as a Demand Response Resource? What requirements, if any, should the thermal storage facilities face in order to qualify as demand response resources?

To the extent that thermal storage manifests itself on the grid as a change in electricity demand, yes. Here again, technology eligibility should be open and neutral if it has the same effect in meeting CPS objectives and statutory requirements.

Qualified Energy Storage System

Qualified energy storage system is defined as “an energy storage system, as defined in section 1 of chapter 164, that commenced commercial operation or provided incremental new capacity at an existing energy storage system on or after January 1, 2019; provided, however, that such system operates primarily to store and discharge renewable energy as defined in said section 1 of said chapter 164.”

9. How should DOER define what constitutes “incremental new capacity at an existing energy storage system”?

Incremental new capacity should be defined as physical equipment installed on or after January 1, 2019, with the capability of storing and later dispatching a controllable volume of energy. Physical equipment installed before that date should not qualify. Under these rules, any existing energy storage system would be able to increase its nameplate capacity to participate in the CPS, provided that only the incremental capacity would be eligible to receive clean peak certificates.

10. How should DOER interpret the requirement that a Qualified Energy Storage System operate “primarily to store and discharge renewable energy”?

DOER should be extremely clear that this requirement is distinct and un-related to how “clean” the storage discharge is and thus how CPCs are earned. Overall, DOER should interpret this requirement to mean that a clean peak resource, *when it is acting as one*, should be primarily charging with renewable energy. Storage is inherently a multi-use resource, so when it’s being used for other purposes, the CPS requirements – and the “primarily to storage discharge” provision in particular – should not apply.

NECEC recommends that a Qualified Energy Storage System may, but should not be required to, be co-located with a renewable energy resource. DOER should clarify the requirement for Qualified energy storage systems as follows: first, a Qualified energy storage system co-located with a renewable energy resource should be able to qualify for the CPS through direct physical charging from that resource. Next, a Qualified energy storage system not co-located with a renewable energy resource should be allowed to purchase and retire Class I Renewable Energy Certifications (RECs) of an amount equal to the kWh/MWh discharged for Clean Peak Credits on an annual basis, plus additional RECs to account for round-trip efficiency losses (based on

the applicable manufacturer specifications). Alternatively, a Qualified energy storage not co-located with a renewable energy resource should be allowed to demonstrate charging during hours of low marginal emissions or during periods of high renewable energy production, where there is the chance now or in the future that renewables could be curtailed. By allowing charging during these windows, DOER could help avoid the curtailment of renewables.

This multi-option interpretation for standalone Qualified energy storage systems is of high importance, as it is not always practical or possible to install meaningful renewable energy capacity in locations where load is greatest and/or energy storage is most needed. Standalone energy storage systems need to be eligible for the program, and we also need to make sure they are not adding to emissions. We believe the frameworks described above should accomplish this.

a. Would alignment with the federal ITC requirement that storage is eligible for a credit as long as the battery is charged by a renewable energy system more than 75 percent of the time be appropriate?

We recommend against tying Qualified Energy Storage System requirements to the federal ITC requirement of 75%. Although the federal ITC requirement could be used as a reference for qualification, it should not be dispositive or limit the capacity/performance eligible to qualify for the CPS. For scenarios where an energy storage system is seeking to qualify via direct physical charging from a renewable resource, we reiterate that the “primarily” provision of the CPS should only apply to the energy discharged for CPS credit during peak windows, not to all charging activity/behavior on an annual basis. With seasonal peak periods likely limited to four hours per non-holiday business day (of which there are roughly 250 each year), clean peak hours will in the aggregate likely represent less than one eighth of all hours during the year that the storage system could be operating (1,000 out of 8,760). As such, any charging requirement for resources seeking to qualify in this manner must be limited in scope to the energy discharged for CPS credit during peak windows.

b. If not directly physically or electrically connected to a renewable energy resource, how can the qualified energy storage system demonstrate that it operates primarily to store and discharge renewable energy? Purchase and retirement of RECs? Some other means?

Please refer to our response to #10 above.

11. How should DOER view thermal storage facilities with respect to eligibility as a qualified energy storage system?

Thermal storage that is not acting as a demand response resource should only qualify as a Qualified energy storage system if it is discharging electricity. For example, a controllable hot water heater would only qualify as a demand response resource, not a qualified energy storage resource.

Qualified RPS Resource

Qualified RPS Resource is defined as “a renewable energy generating source, as defined in subsection (c) or in subsection (d) of section 11F that has: (i) installed a qualified energy storage system at its facility; or (ii) commenced commercial operation on or after

January 1, 2019.”

12. Given the requirement that RPS resources that commenced commercial operation prior to 2019 must be paired with a qualified energy storage system in order to qualify for the CPS, what, if any, requirements should DOER adopt regarding how much energy storage needs to be installed?

a. Should there be a minimum percentage threshold on the ratio of the size of the energy storage to the size of the renewable resource (e.g. minimum installed storage capacity equal to 25% or more than installed renewable capacity)?

We strongly support the eligibility of storage retrofits under this definition, and DOER should adopt a minimum level of storage capacity relative to renewable energy nameplate capacity in order to qualify. The SMART Energy Storage Adder qualification guidelines relative to renewable resource capacity ratios should serve as an acceptable starting point, with adjustments to account for what can be substantially different storage cost profiles for resources larger than would otherwise be participating in SMART (and which may have different capacity factors than distributed solar). We further note that SMART battery sizing was fundamentally different from the CPS, in that it was tied to being eligible for the kWh SMART incentive and storage adder. As such, CPS program rules should be flexible enough to accommodate a wider range of battery sizes, at least on the residential scale, where forward looking solar+storage installations may see both larger and smaller PV:storage ratios. DOER should design the retrofit rules to incentivize meaningfully improved/optimized behavior, which should prevent an existing RPS resource that happened to already be generating during the defined Clean Peak Windows from getting credit in the future just by installing a small amount of energy storage. In other words, retrofitted projects should be credited for CPS performance based on energy injected or load reduced during peak windows above what is being or would otherwise be injected/reduced by existing resource operations (i.e., above an established baseline). We note that special consideration may need to be given for small-scale retrofits given seasonal and day-to-day variation in output.

13. With respect the quantity of its capacity that a Qualified RPS Resource can qualify under the CPS, should the DOER discount a Qualified RPS Resource’s eligible capacity based on the capacity it can supply through the duration of each seasonal peak period (e.g. a 2 MW solar resource that can only provide 50% of its capacity value over the peak period would qualify as a 1 MW facility)?

No. Qualified RPS Resource performance under the CPS should be tied solely to MWh delivered during the peak windows, at least in terms of the “spot” CPS market. Any discounting according to capacity value would add immense complexity to the calculation of expected revenue streams, and should only be reserved for the terms of specific procurements/solicitations made pursuant to the CPS, if appropriate.

14. Should DOER adopt any additional requirements regarding the CPS eligibility of renewable energy generating sources as defined in subsection (c) or in subsection (d) of section 11F (e.g. emissions thresholds, fuel sourcing, etc.)?

NECEC has no comment at this time.

Seasonal Peak Periods

Establishing Seasonal Peak Periods

DOER is required to establish seasonal peak periods, which are defined by that statute as “the daily time windows during any of the 4 annual seasons when the net demand of electricity is the highest; provided however, that a seasonal peak period shall be not less than 1 hour and not longer than 4 hours in any season, as determined by the department.”

15. Given these limitations, how should DOER establish different seasonal peak periods to both optimize cost reductions for ratepayers and emissions reductions for the Commonwealth?

Generally, the establishment of the seasonal peak periods should be a combination of recent trends plus forward-looking forecasts of substantial changes expected ahead (e.g., new EV load, arrival of offshore wind, etc.). For the Summer, DOER should pay special attention to the historical 1 Coincident Peak hours, the ISO-NE system peak that is the basis on which all ratepayers are assigned a proportional share of the cost of the Forward Capacity Market. (For instance, from 2002 through 2018, the ISO-NE 1 CP hour has fallen within the 2 – 5 p.m. range in the months of June – August.) Attention should also be paid to ISO-NE historical OP-4 events to see if there is a seasonal or time of day pattern of occurrence that could help define a peak period, as periods of capacity scarcity trigger the dirtiest resources to dispatch. For the shoulder months (Spring/Fall), DOER should look to the historical record of Regional Network Service coincident peak hours, potentially in conjunction with historic distribution peak demand levels across utility territories.

For Winter, DOER may need to consider a more nuanced analysis of the most optimal winter peak hours from a cost and emissions perspective. One idea that may be worthy of exploration is setting the winter peak period based on hours of historical and forecasted peak natural gas demand (i.e., at Algonquin Citygate) rather than peak electrical demand as manifested at ISO-NE. The rationale for this approach being that the costliest and dirtiest periods occur during peak gas scarcity events, during the coincidence/convergence of high gas demand for both power and space heating. Especially viewing Winter as a three-month period, it is important that the CPS peak period encompass the most likely hours for this convergence.

16. DOER is considering announcing seasonal peak periods on an annual basis based on 1 to 3 years of historical data.

a. What formula should DOER use to set the seasonal peak periods to reflect real time operating conditions?

Regardless of the formula used to calculate seasonal peak periods, DOER should keep in mind the importance of long-term consistency in operational requirements when making resource investment decisions. Significant year-to-year changes in peak period durations and timeframes will likely discourage investment and drive up \$/MWh CPS costs as a result. For that reason, we recommend that the duration of seasonal peak periods be fixed on a year-to-year basis, subject to change via a robust stakeholder feedback process only if and when DOER identifies an acute need to change a peak period's duration. As a baseline, we suggest initial CPS resources be grandfathered under their initial peak period windows for approximately five years.

b. What data sources should DOER use to determine seasonal peak periods?

Please refer to our response to #15 above. Other sources to inform the determination should include the AESC and CELT reports, among others.

c. What time period(s) should each of the 4 annual peak periods cover?

NECEC is open to a number of options for the establishment of the four seasonal periods. One option that should be explored is longer summers and winters (4 months each), which shorter shoulder seasons (2 months each). In other words, winter would span December through March, and summer would cover June through September, with spring and fall in between. There are other policy-based and technical considerations to bear in mind (including accounting for the two daylight savings time shifts per year), so DOER should explore several options and combinations thereof. We look forward to discussing this question further with DOER and other stakeholders.

d. Should seasonal peak periods be different lengths depending on the season?

Seasonal peak periods could be different lengths depending on the season. The timing and duration of peak periods should be based on a historical look-back of peak load events, modified as necessary for projected future peak load change. With an eye to project cost, DOER should note that for some resources, energy storage especially, the shorter the performance window, the more cost-effectively the peak can be served.

e. How often should the seasonal peak periods be examined and/or adjusted to reflect changes in seasonal peak demand over time? What should be the trigger and/or the process for making such adjustments?

Please refer to our response to #16a above. We emphasize that it is important avoid “snap-back” of peaks via grandfathering/vintaging of initially qualified resources (i.e., any changes to peak windows should be prospective only). To calibrate performance of existing resources within previous windows (e.g., to ensure even spread across all four hours), DOER may consider future evaluation on a regular basis to consider additional program designs to improve peak performance.

17. Are there alternative methods of establishing seasonal peak periods the DOER should consider?

DOER should also seek to align seasonal peak periods with the hours that (a) carry the highest proportional cost to Massachusetts ratepayers and (b) have the highest GHG-emissions embedded in the fuel mix. Any deviation from the historical record of these system peaks and their corresponding fuel mixes should be based on detailed projections of future load and generation resources, and open to stakeholder feedback.

Atypical Peak Events

Not all system peaks occur within the same 1-4 window throughout the course of a season (e.g. a 95-degree day on a weekday in May will almost certainly not have a peak that occurs at a similar time of day as the bulk of peak periods in the same month).

18. Should DOER establish peak periods other than the seasonal peak periods during which clean peak resources are eligible to generate clean peak certificates?

DOER should create a mechanism to incentivize peak-responsive performance that may fall outside the predetermined CPS windows. This may not necessarily result in the generation of clean peak certificates nor be under the umbrella of the CPS at all, but there should be a means of compensating resources for performing during actual peak events rather than the expected/pre-determined peak windows. As such, atypical peak events should be addressed/compensated with a distinct mechanism. As long as DOER allows a clean peak resource to also participate in the Atypical peak event mechanism, the developer/operator can figure out any complexities and the CPS can be kept relatively simple.

a. If so, what criteria should DOER use to establish these periods and what mechanism(s) and should be used to trigger and announce these events in advance of them occurring?

DOER may consider additional compensation for in-state CPS resources that perform during Capacity Scarcity Conditions established by ISO-NE under its Pay-for-Performance construct in the Forward Capacity Market. DOER could separately leverage the utilities' peak event "calls" made for the active demand management (ADM) programs within the energy efficiency plans, at least whenever those call events are expected to fall substantially outside the predetermined CPS window.

b. Should DOER specifically target ISO system peaks?

Generally, yes, the CPS should target ISO system peaks (please refer to our response to #15 above). The same should apply for Atypical Peak Events, at least for Spring, Summer, and Fall (see above for possible unique treatment of Winter).

Generation of Certificates

Some clean peak resources may only be capable of generating clean peak certificates during a portion of a seasonal peak period. For example, a solar resource trying to deliver energy for the duration of a summer seasonal peak period that lasts from 6-9 PM may generate a significant number of certificates in the early part of that window compared to the later.

19. Should only resources that can provide value for the entire duration of a peak period be able to generate certificates?

No. Please refer to our response to #13 above.

20. Should there be different values provided to resources that can provide value for a portion of a peak period versus the entire peak period? If so, how should DOER differentiate these value streams?

No. Determining those values becomes very complex and would result in a strong likelihood of significant administrative complications. Please refer to our response to #13 above.

21. Should there be a penalty (i.e. negative credits) if a resource under-produces during the actual monthly peak?

No. CPS crediting should be based only on performance during the peak windows. Even under

a separate/parallel Atypical Peak Event structure, there should never be a penalty or negative credit for resources that choose to perform during the predetermined peak windows instead of during actual peaks (though they may forego potentially higher revenues from Atypical Peak Event performance).

22. How should resources participating in other state programs (e.g. section 83 procurements, SMART, EE programs, etc.) interact with the CPS?

Resources enrolled in other programs should be able to participate in and interact with the CPS, excluding any resources under fixed bilateral contracts with one or more distribution companies pursuant to a previous or future procurement (Section 83, and others). While the CPS should generally avoid providing windfall profits to existing projects or projects that would be built with or without the CPS, we believe that extending CPS participation to other programmatic resources will provide them with a value signal that is complementary to and distinct from the revenue streams available under the respective programs, which will allow them to modify and improve their performance and value delivered. The general rationale DOER should adopt for multi-program participation is to ensure that resources are not receiving compensation twice for the same performance or behavior. Resources enrolled on the SMART tariff or qualified under the active DR offerings in the energy efficiency programs will ultimately have to meet those program rules and requirements, including time-based performance under the EE programs. But, if resources can meet those requirements while also optimizing to earn Clean Peak Certificates, they should not be prevented from doing so and generating additional value for the system, provided that such behavior is incremental to/separate from the performance required of them (and being compensated) under another program. We also note that multi-program participation should accommodate situations existing incentive/compensations structures may be undervaluing a certain type of performance – i.e., dual program participation should be allowed, with appropriate rules and modifications, if a separate program provides some compensation for performance, but this compensation is found to undervalue the service performed.

We note that for resources seeking to participate as demand response resources, the statutory definition explicitly contemplates the eligibility of a resource/customer making use of “incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized,” such as the active demand management (ADM) offerings in the energy efficiency plans. Similarly, we view the CPS as one likely means of demonstrating operational compliance under the SMART storage adder, both for standalone and behind-the-meter resources.

23. Should qualified energy storage systems that can demonstrate they were charged during minimum load windows be provided additional incentives or benefits under the CPS? If so, how should these be structured and how should minimum load windows be established?

No. To keep the CPS simple and straightforward, we reiterate that it should be narrowly designed to compensate for performance during defined windows.

Metering

Verification of Metered Data

DOER proposes that all clean peak resources be registered with NEPOOL GIS as Non-NEPOOL participants. This would mean that, as required by the NEPOOL GIS operating rules, all resources would be required to report their eligible output to NEPOOL GIS by a DOER approved Independent Third Party Meter Reader. This entity would be responsible for verifying the accuracy of the reported data before uploading it to NEPOOL GIS for the creation of certificates.

To ensure that all data is collected, reviewed, and reported to NEPOOL GIS in a consistent manner, DOER would select a single entity to act as the Independent Third-Party Meter Reader, similar to the process used under the SREC programs, in which the Production Tracking System at the Massachusetts Clean Energy Center serves in this role.

24. Do you support this proposal? If not, please describe why.

We support this proposal, and we suggest that there be a stakeholder process for determining meter configuration requirements and cost caps. It will be important that the 3rd party meter reader accept data from a wide range of metering devices.

We note that since demand response is an eligible technology, the verification system needs to be able to handle the measurement and verification of demand response, including development and verification of a base-lining methodology. We are unaware of whether NEPOOL GIS is suited for this capability. In addition, because clean peak certificate creation is dependent not just on the quantity of energy output, but also its timing, more sophisticated metering may be required than that which is required for many RPS eligible systems under current practices.

25. If DOER procures the services of a single Independent Third-Party Meter Reader:

a. What criteria should DOER use to evaluate the capabilities of the entity that is selected to act as the Independent Third-Party Meter Reader?

The Third-Party Meter Reader needs to accept data from a wide range of metering devices, so participants aren't locked into specific expensive equipment. The Reader must allow metering devices to be installed and owned by developer (not the utility or the Meter Reader).

b. Do you support the establishment of a fee structure to support the ongoing services provided by the Independent Third-Party Meter Reader?

In order to reduce the number of individual transactions occurring in connection with the CPS program, any fee structure developed with the Third-Party Meter Reader should be paid directly by DOER or the CPS program administrator, rather than individual CPS resource participants.

c. How should this Third-Party verification take place?

NECEC has no comment at this time.

Metering Specifications and Requirements

Because clean peak certificate creation is dependent not just on the quantity of energy

output, but also its timing, more sophisticated metering will be required than that which is required for many RPS eligible systems, which only require monthly meter reads.

26. Describe in as much detail as possible the metering standards and requirements (type, accuracy, etc.) that DOER should employ to ensure the accurate collection of data.

NECEC's members have offered the following general recommendations:

- The program should avoid requiring in-line meters only. Developers should always have the option of using CT-based meters.
- Time interval granularity should align with GHG data granularity. E.g., if the CPS will be measuring GHGs based on 30-minute emissions windows, then meters need to provide 30-minute data.
- The program should allow for use of Inverter API, consistent with other M&V standards across industry.
- For Clean Peak services sourced from EV charging functionality, DOER should create a pathway for providers to use the embedded sub-meters on EVSE to record and transmit interval EV charging consumption data for settlement and verification purposes.

27. Should different standards apply to different sizes and types of facilities? If so, please describe your recommendations in as much detail as possible.

Generally, meter accuracy requirements should align with the rules for SREC and SMART, including lower accuracy/granularity requirements for smaller systems. As an example, CT-based "revenue grade" meters are relatively inexpensive, and generally should not be prohibitive unless at the residential level.

28. What other verification mechanisms could be deployed to simplify the process, particularly for small-scale systems for which some types of metering solutions may be cost-prohibitive?

Please refer to our response to #26 above. We have no further comment.

Value of Certificates

DOER must establish an alternative compliance payment rate and potentially other mechanisms that will help establish the value of clean peak certificates. Please describe in as much detail as possible:

29. How much value is likely needed on a per MWh basis to incentivize different types of existing resources to operate during peak windows and/or new resources developed or financed using CPS revenue streams?

CPS credits should be valued at a level to encourage development, especially early on in the program. Due to their on-peak nature, clean peak certificates will generally be much more valuable than Class I RECs. Accordingly, the general market range and the level of an ACP ceiling for the CPS should be significantly higher than the Class I ACP. It is also important to keep in mind that some CPS resources may need to purchase and retire RECs for compliance, which should be accounted for in the establishment of CPS credit values. Finally, we reiterate that there will be significantly fewer CPS on-peak hours each year (approximately 1,000) than

RPS-eligible hours (RECs can be generated at any time, 8,760 hours per year). This small quantity of hours of throughput is a fundamental difference between the CPS and RPS and should be accounted for as DOER establishes the parameters for CPS financing/revenue streams.

30. How should DOER establish these values?

DOER should manage the CPS market in a manner similar to the SREC II market. There should be a supply-reactive formula that ensures that the value of CPS credits will not skyrocket or crash over time. Massachusetts has already learned this lesson well with the SREC program, and we shouldn't forget it when designing the CPS. There may be an argument for having a separate supply-reactive formula for the Demand Response carve-out of the CPS, since costs and timelines for that sector may differ from the other sector. We finally note that the establishment of credit values should consider the relative values of CPS performance during shoulder seasons as compared to during "peak" summer/winter periods and reflect these values accordingly.

Long-term Contracts

In establishing certificate values, DOER "may include a process by which electric distribution companies competitively procure clean peak certificates from clean peak resources and enter into long-term contracts, subject to the approval of the department of public utilities."

31. If DOER does require competitive procurements:

a. What types of facilities should be able to participate in solicitations? Should it be limited to certain types of facilities (e.g. facilities that are either new and/or not already supported by another type of long-term contract or financing tool)?

Procurements can be helpful, but we note that for many customer-based and customer-sited solutions, an "always on" program similar to the SREC or SMART programs is the way to drive the most development at lowest cost. Procurements may result in over-investment in prospective development assets that then needs to be recovered through higher bids. Procurements are also not compatible with most customer-based and customer-sited solutions due to complications with the sales cycle. That said, there is a place for procurements and long-term contracts under the CPS, and we believe that both large-scale resources and aggregations of smaller resources should be allowed to fully participate in any procurements. Assuming the terms of any procurement would create an affirmative obligation to perform during peak periods (i.e., would require additional investment and improved performance), CPS competitive solicitation should be indifferent to other sources of revenue supporting the resource, contracted or otherwise, unless the practical requirements of another revenue stream conflict with performance under the CPS program. Please refer to our answer to #22 above for more commentary as well.

b. How frequently should solicitations take place?

We recommend annual or twice-yearly solicitations.

c. How large should the procurements be (e.g. percentage of total load or annual requirement)?

The procurements should be sized so as not to exceed the distribution companies' share of annual retail sales (as we understand, roughly 30-40% of sales in recent years, excluding MLPs). This approach would mean that a majority of the annual CPS market would not be procured/contracted.

d. How should the contract price be established? Pay as bid? Reverse auction mechanism with a single clearing price for all resources? Other?

A clearing price mechanism may be appropriate for establishing contract prices, in line with most ISO-NE market programs and the initial price-setting procurement in the SMART program. In order to facilitate the development of new resources, DOER should offer the option for bidders to carry their clearing price forward into future compliance years, similar to ISO-NE's provision along these lines for resources that clear in the Forward Capacity Market. We recommend the bidders be given the option to carry their price forward in any whole-year increment up to 20 years.

Post-2019 Minimum Standard Requirements

DOER has established a baseline Minimum Standard requirement of 0% for 2019. Each year after 2019, DOER is required to establish a Minimum Standard requirement for retail suppliers that increases at a rate of at least 0.25% of total retail sales annually.

32. What methodology should DOER use to establish post-2019 Minimum Standard requirements (e.g. fixed annual requirements in a published schedule, supply reactive formula, other)?

Please refer to our response to #30 above. DOER should establish fixed requirements at five or ten-year milestones in order to encourage the resource development and energy supply communities to make multi-year development and multi-year procurement decisions, respectively. On a year-to-year basis, a supply reactive formula should be used to set individual year compliance obligations. We support additional analysis to determine the optimal percentage of clean peak resources that the state would like to achieve at these milestones (e.g., 30% clean peak by 2030) based on estimated costs and benefits and alignment with the state's greenhouse gas emissions reductions goals.

33. How large should the minimum standard be?

The statute provides DOER with the authority to require an annual increase greater than 0.25%. The annual targets should be determined following an initial establishment and further analysis that identifies the CPS levels needed to support the state's broader greenhouse gas reduction and policy goals, with cost-benefit analysis. Given the substantial grid, cost, and environmental benefits to be gained from targeted peak improvements, we believe DOER should be as aggressive as possible in setting initial targets and annual compliance trajectories.

Demand Response Resource Carve-out

Separate from the total Minimum Standard requirement, DOER is required to establish "a minimum percentage of clean peak certificates that must be derived from demand response resources."

34. How should DOER interpret this requirement?

We support a demand response carve out to ensure that the end-use customers that are ultimately paying for the Clean Peak program have an opportunity to directly participate. We support a 10%-20% set-aside for demand response, and recommend that DOER retain flexibility as necessary to adjust this year to year.

35. What methodology should DOER use to establish this carve-out of the larger Minimum Standard?

We have no further comment at this time.

36. Please discuss any other implementation issues not addressed above.

NECEC and our members have identified the following points for further clarification and resolution during the remainder of the CPS rulemaking process:

- It is critical that DOER establish a methodology for how much of a Clean Peak Certificate is earned for each MWh discharged/produced/avoided during a Clean Peak Window. Not all performance should be 1-for-1, because of the differences in how “clean” each action can be. From an emissions point of view, the CPS should not treat all performance as equally clean, whether via DR or battery discharges.
- It is unclear what is meant by “energy reserves” in the Clean peak certificate definition (“a credit received for each megawatt hour of energy or energy reserves provided during a seasonal peak period that represents a compliance mechanism.”). It would be helpful for DOER to clarify how this term will be interpreted.
- DOER should address the interaction of the CPS with other programmatic definitions of “environmental attribute.” Specifically, DOER should affirm that ownership of CPS credits/clean peak certificates does not flow through the definition of environmental attributes and ownership thereof.

Conclusion

NECEC is grateful to the Department for its consideration of these comments. We look forward to continuing to work with DOER and other stakeholders throughout the remainder of the CPS program design and rulemaking process in 2019. We would be glad to discuss any of our recommendations with DOER and reiterate that we are available as a resource throughout this process. Please do not hesitate to contact us if you have any questions or we can provide any assistance.

Sincerely,



Peter Rothstein
President



Janet Gail Besser
Executive Vice President

Cc: Mike Judge, DOER; Will Lauwers, DOER; Jamie Dickerson, NECEC