

KEEGAN WERLIN LLP

ATTORNEYS AT LAW
99 HIGH STREET, SUITE 2900
BOSTON, MASSACHUSETTS 02110

(617) 951-1400

TELECOPIER:
(617) 951-1354

April 18, 2019

Michael Judge
Department of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114
c/o doer.cps@mass.gov

Re: Clean Peak Standard Straw Proposal Comments

Dear Mr. Judge:

NSTAR Electric Company d/b/a Eversource Energy (“Eversource” or the “Company”) appreciates the opportunity to provide comments on the Clean Peak Standard (“CPS”) Straw Proposal developed by the Department of Energy Resources (“DOER”). The CPS has the potential to provide great benefit to our customers, the Commonwealth, and the region. Eversource offers the following comments on the CPS Straw Proposal.

Overall Comments

In 1990, there were roughly 2,000 grid-connected generators in New England. Today there are more than 125,000. Eversource is evolving from a centralized, fossil fuel-fired grid to one that is decentralized and decarbonized. Policy mandates like the CPS have the potential to shape this transformation positively: to ensure that peak energy periods, which are generally 10 times more costly and carbon-intensive, are lower cost and cleaner.

To deliver on the CPS’s potential to reduce greenhouse gas emissions and not materially raise costs for customers, it is critical that all CPS implementing regulations reflect the following core principles:

- (1) Cost to customers from the CPS should be minimized. This can be effectuated by stacking verifiable benefits (e.g., ISO-NE and RNS peak shaving) and by taking proper time to ensure that any multipliers reflect tangible and verifiable direct cost savings for all customers.
- (2) Utilities are the distribution grid platform operators, responsible to all customers to ensure safe, reliable, and cost-effective service. This requires that they have the ultimate authority to operate and dispatch all distribution grid level resources and take all actions necessary to enable, visualize, and optimize distributed resources on the grid. This includes identifying where and when specific distributed resources may have value, if any and sending signals to dispatch them.

Eligible Resources

Electric Distribution Company Ownership

The CPS Straw Proposal allows four types of resources to be eligible to generate Clean Peak Certificates, consistent with Chapter 227 of the Acts of 2018: (1) Class I Renewable Energy Resources; (2) Existing Class I/Class II resources that are paired with an Energy Storage System; (3) Energy Storage Systems and (4) Demand Response Systems. Further, it defines a Qualified Energy Storage System, consistent with Section 1 of Chapter 164 of the Massachusetts General Laws. As the DOER is aware, Section 1 of Chapter 164 defines “Energy Storage System” in pertinent part as “a commercially available technology that is capable of absorbing energy, storing it for a period of time and thereafter dispatching the energy and which may be owned by an electric distribution company...”.

The Company appreciates the DOER’s inclusion of electric distribution company (“EDC”)-owned energy storage systems in its CPS Straw Proposal. In doing so, the DOER will facilitate further development of this important technology in this relatively nascent market. In order to avoid disputes in the future regarding the eligibility of EDC-owned storage facilities for Clean Peak Certificates, the Company encourages the DOER to include explicit language in its CPS regulations authorizing the inclusion of these facilities in the CPS program, along with language defining Energy Storage System as proposed in the CPS Straw Proposal.

Qualified Energy Storage

Eversource recommends co-location with a renewable energy facility be a requirement for “Qualified Energy Storage,” in response to DOER’s request for input on how to interpret the phrase “operates primarily to store and discharge renewable energy.”

It is important to ensure that the CPS actually reduces peak costs and emissions for customers. The most effective way to do this is to require that storage and renewables be co-located geographically. Co-location ensures that energy being put back onto the grid by CPS resources is actually renewable given its location in relation to a renewable energy facility. It also avoids an extra layer of unnecessary administrative complexity connected to pairing storage dispatch and environmental attributes under a “virtual” construct. Further, requiring co-location maximizes battery storage grid benefits, ensuring that the storage can hold excess renewable generation at times where there is insufficient load to absorb it. This will become increasingly important from an overall grid reliability perspective due to the continued growth of solar PV and other renewable generation on the electric power system, which can otherwise over-saturate circuits (for example in areas where land and interconnection costs are low, facilitating solar PV development, but there is insufficient load to absorb the generation). Therefore, requiring CPS storage to be geographically co-located with renewable generation advances sustainable grid planning objectives.

Demand Response

Eversource recommends that DOER develop appropriate measurement and verification (“M&V”) methodologies for each type of eligible resource, acknowledging that a single methodology may not be appropriate for all resource types. For instance, hourly interval performance may be appropriate for those resources that are generating or discharging electricity but may not be appropriate for “traditional” demand response assets.

Demand response assets that are eligible to generate Clean Peak Certificates should have their baselines calculated in a similar fashion to how the electric distribution companies (“EDCs”) are calculating baselines and performance for their retail demand response programs. Further, the DOER may want to consider removing any days from the baseline calculation that contained an ISO- or EDC-called event. This will allow for increased participation in multiple programs.

Minimum Power/Energy Rating for Storage Added to Existing Renewables

Eversource recommends the DOER allow storage to de-rate its power output so that storage qualifies as having a four-hour duration, even if the duration at maximum power may be lower. For storage paired with an existing renewable, such as solar, DOER’s proposal for a minimum power rating for energy storage of 25 percent of the solar nameplate rating with a 4-hour duration may be deleterious to development of energy storage if the 25 percent/4-hour rule is enforced strictly. For some combinations of use cases, a project will have better economics at a different power/energy ratio, and participants should be free to vary those to deploy optimally-sized projects.

The DOER can mitigate possible unintended consequences by allowing systems with a higher installed power/energy ratio (e.g. with installed capacity of less than four hours based on nameplate ratings) to be deployed as long as they can discharge for four hours at ≥ 25 percent of the solar power rating.

For example, if a solar site has a nameplate power rating of 1 MW, the minimum energy requirement of storage should be $1 \text{ MW} * 25\% * 4 \text{ hours} = 1 \text{ MWh}$. An energy storage system rated at 1 MW and 2 hours (with an energy capacity of 2 MWh) would satisfy this requirement having doubled the minimum energy requirement, as it could be effectively de-rated to be 0.5 MW / 2 MWh.

Setting the Proper Incentives

Eversource recommends the DOER be mindful to set proper incentives to encourage dispatchable resources that are able to actually reduce peak upon signal. Under the CPS Straw Proposal, Class I resources that come on-line after January 1, 2019 are eligible to produce Clean Peak Certificates. Most of these Class I resources are expected to come from wind and solar. Both technologies are intermittent and non-dispatchable in-and-of themselves and have less ability to instantaneously adjust their generation based upon price signals.

Moreover, if DOER elects to include transmission-interconnected resources, the amount of offshore wind generation coming online in the next decade has the potential to flood the Clean

Peak Certificate market, depressing prices and discouraging development of new, incremental assets, especially storage. Currently, under Section 83C of An Act Relative to Green Communities, St. 2008, c. 169, as amended by St. 2016, c. 188, §12, there is a requirement to solicit and contract for 1600 MW of offshore wind with the potential for an additional 1600 MW¹. The number of Clean Peak Certificates that may be generated from these resources could potentially overwhelm the program without the ability to dispatch.

DOER could mitigate this issue by excluding large resources, or having different categories of resources, for the CPS. Whatever method is pursued should also be balanced with the goal of keeping the CPS as simple as possible.

Seasonal Peak Periods

Eversource supports DOER's seasonal peak periods definitions. DOER's proposal to define seasonal peak periods based on load shapes will support overall peak management and thus maximize benefits for customers. DOER's approach mitigates the risk of creating a new morning peak if only afternoon peak management were to be pursued.

Multipliers

Actual System Peak Multiplier

Eversource supports DOER's actual system multiplier. DOER's Actual System Peak Multiplier is essentially a "pay for performance" mechanism. This will help keep the cost of CPS compliance lower by incentivizing resources to optimize operation to hit actual system peaks, which in-turn avoids costs that would be otherwise passed-on to customers (e.g. from Forward Capacity Auction procurement).

Distribution Circuit and Resiliency Multiplier

Eversource supports the concept underlying the distribution circuit and resiliency multipliers but points out that the EDCs will first need to develop a relative locational value methodology before these multipliers may be assigned any material value. Moreover, until that methodology is developed, use of CPS resources for distribution or resiliency purposes could inadvertently negatively impact system reliability. Distribution utilities have the ultimate obligation to all customers to ensure safe, reliable, and cost-effective service. This requires that they have the ultimate authority to operate and dispatch all distribution grid level resources and take all actions necessary to enable, visualize, and optimize distributed resources on the grid.

DOER should also be mindful that distribution circuit values for CPS resources may be immaterial in many cases. For example, local circuit-level needs are often able to be resolved with a relatively small amount of new asset development. Once a project "solves" an issue, additional projects would not provide any incremental value.

¹ Section 21 of An Act to Advance Clean Energy directs the DOER to investigate the necessity of requiring an additional offshore wind solicitation and procurement for an additional 1,600 MW.

Simplicity with Respect to Multipliers

DOER should strive to include multipliers that explicitly incentivize cleaner peaks. Keeping the CPS as simple as possible will minimize financial and administrative burden. The program must be practicable to administer and easy for both the provider of Clean Peak Certificates and those who would be buying them to cover load. Retail Suppliers of power will need to buy Clean Peak Certificates in advance of their need to properly hedge their exposure and provide a firm price for customers. If there is uncertainty about supply or requirements, Retail Suppliers will have to build in a risk premium when selling power to customers. Layering-in excess multipliers may introduce volatility into the supply of Clean Peak Certificates, increasing costs.

Procurement

For EDC procurement of CPS resources, DOER appears to prefer a tariff-based mechanism (similar to the SMART program) but proposes a contract-based incentive mechanism as a possible alternative.

If the DOER elects to require the EDCs to solicit long term contracts, DOER should consider the relative burden on the EDCs and customers. The current long-term contracting burden for Eversource alone is estimated to be greater than \$21 billion after accounting for known legislative requirements. Most of the value of contracts is in offshore wind, which under the Straw Proposal would be eligible to generate Clean Peak Certificates. Further, burdens to the EDCs' contracting requirements might not be the best way to incent production of CPCs and, in fact, may not even be needed. Smaller, simpler steps, such as easing the burden on the developer by expediting approvals and eliminating red tape in the development process, should be undertaken and allowed to work before moving to utility contract as a solution. If the decision is made to require long term contracts—whether explicitly or via tariff with an underlying contractual obligation—it is essential and proper that the EDCs be compensated for taking on these burdens.

Multiple Programs and Clean Peak Certificate Ownership

To maximize the development of new resources, individual assets should be eligible to participate in multiple programs (i.e. ISO wholesale market, EDC demand response, SMART) in addition to the CPS.

If a Clean Peak Certificate is generated due to an asset's inclusion in a EDC sponsored program, such as EDC demand response or SMART, then that certificate should go to the EDC to apply toward compliance targets on behalf of customers to offset the cost associated with running the respective program and complying with the CPS.

For example, if a demand response asset is dispatched by the EDC during the hours of the actual monthly peak, the EDC should receive associated clean peak certificates. If that same asset is dispatched by the aggregator that developed the asset during the seasonal peak period, but not during the actual monthly peak, then the aggregator should be entitled to those associated certificates.

To incent CPS participation, whichever entity is responsible for the dispatch of an asset

should be entitled to the associated certificates. This could be the EDC, an aggregator, or a host customer.

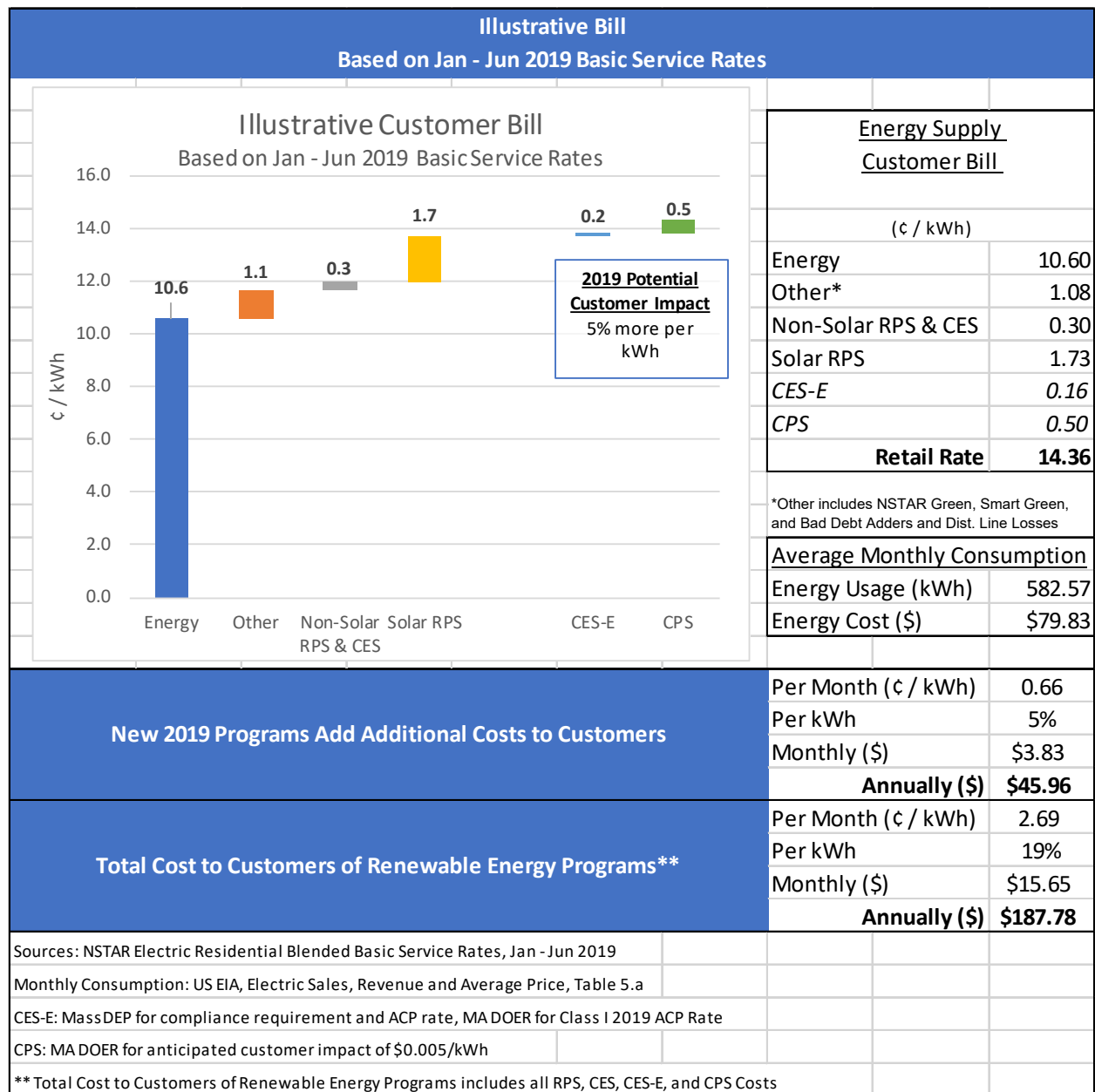
Metering

Eversource notes that many of the PV systems installed under the SMART program will likely be eligible under the Clean Peak Standard. At this time, the metering solutions provided as part of the SMART program for the majority of systems do not have the ability to record the hourly data necessary for the CPS verification. As the agency with regulatory oversight over both the Clean Peak Standard and the SMART program, DOER should ensure that customer generators and distribution companies are not unduly burdened with obligations to support multiple metering solutions for multiple incentive programs for the same solar installation.

Cost to Customers

DOER has a laudable goal to minimize cost for customers by noting its goal to keep customer costs at under \$0.005/kWh for the CPS program. Eversource is also concerned with the overall cost implications of the CPS program for customers. Indeed, even at the \$0.005 cents/kWh estimated cost goal quoted by DOER, the Clean Peak Standard could be a material burden to customers.

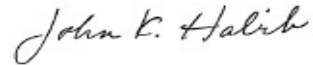
The table below is an illustrative residential blended basic service bill for Jan-Jun 2019 for NSTAR Electric. Currently, the retail rate is 13.7 cents/kWh. The CPS, along with the additional Clean Energy Standard (“CES”) proposed by the Department of Environmental Protection, would raise average customer costs by about 5% to 14.4 cents per kilowatt-hour. This brings the total cost to customers for RPS, CES, and CPS to nearly 20% of customers’ retail bill, or nearly \$200 per year for the average customer.



Massachusetts customers already pay some of the highest electric supply rates in the nation. Taken together with the proposed additional CES, the CPS poses the risk of substantially increasing electric supply rates. Accordingly, Eversource strongly encourages the DOER to further reduce its cost goal for the CPS program as it refines the CPS Straw Proposal and develops CPS regulations.

Thank you for the opportunity to comment on the CPS Straw Proposal. Please contact me at (617) 951-1400, Charlotte Ancel at (781) 441-8912, or Kerry Britland at (781) 441-8219.

Very truly yours,

A handwritten signature in cursive script that reads "John K. Habib". The ink is dark and the signature is fluid.

John K. Habib