

NEC Energy Solutions, Inc.

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April 12, 2019

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

Re: Comments on Clean Peak Standard (CPS) Straw Proposal

Dear Commissioner Judson:

NEC Energy Solutions Inc. ("NEC Energy Solutions" or the "Company"), a Massachusetts company that develops and manufactures advanced energy storage systems and services operating worldwide is pleased to provide the Massachusetts Department of Energy Resources ("DOER") with its comments on the April 2, 2019 Clean Peak Standard (CPS) straw proposal.

Since 2008, NEC Energy Solutions has designed, manufactured, and deployed energy storage systems globally and is a leader in the space with over 750 MW installed, under construction, or awarded – many of them located here in the Commonwealth. The Company has significant experience understanding how regulatory and economic policies have been used successfully to ensure that the benefits of storage are available to ratepayers and utility operators in multiple regions worldwide. We look forward to sharing our experiences and making recommendations on the groundbreaking Clean Peak Standard, a first in the energy storage industry which will serve as an example of an efficient and effective policy to encourage a cleaner, more efficient power grid.

Supporting Comments

NEC is excited about and strongly supports the CPS program in general. Of the CPS policy straw proposal elements presented on April 2 2019, NEC is most supportive of the following:

- Creation of CPC Multipliers that can be applied to peak periods, single actual monthly peak hours, minimum load hours, and distribution circuit value, namely:
 - Peak periods defined during slightly longer summer and winter periods matching actual weather and peak demand impact that are more effective than a simple 3 month seasonal period,
 - A look-back single monthly peak hour multiplier which focuses the entire clean peak fleet on meeting the worst peaks, incentivizing better and more effective use of resources,
 - A minimum load period which is complementary to a clean peak and supports net load leveling, further improving efficiency of the electricity network. Energy storage would likely charge during these hours and this incentive would help increase predictability for tactical day-to-day storage operations.
 - Distribution multiplier for local congestion relief, voltage support, or other services provides a locational value incentive which will be more needed as PV, EV charge points, or other resources continue to be built out throughout the electricity distribution network of the Commonwealth.
- NEC generally agrees with a resilience multiplier concept, the value of which is to be determined, but if the complexity of valuation, eligibility, and M&V becomes too complex, NEC believes this could be done separate from a core program element of CPS. Resilience and Clean Peak are two fairly different goals.
- A CPC Procurement process focusing on long-term revenue certainty especially for those facilities that are not sufficiently financeable with existing revenue streams – is greatly welcomed.

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- Finally, supporting new resources installed after Jan 1 2019 but with allowances for existing renewables or storage incremental new capacity eligibility will help keep analysis and factors for CPC valuation accurate to new build and not tied to sunk or retroactive cost recovery considerations, especially as the cost of storage continues to decrease.

Recommendations for Consideration

With respect to Slide 8, we agree that for Eligible Resources, pre-existing Class I/II renewables paired with storage should become eligible after addition of at least 25% of nameplate facility power and 4 hour duration, but NEC recommends offering latitude to allow **equivalent** storage – meaning that a 2 hour duration could also be eligible, but require 50% of nameplate facility power. Even shorter durations of storage will be able to shift clean energy to peak times; they will likely focus on hitting the actual peaks to maximize value for their shorter duration. Higher power could also allow greater avoidance of negative multipliers during minimum load hours. The program can thus encourage even more eligible resources to hit the worst peak hours.

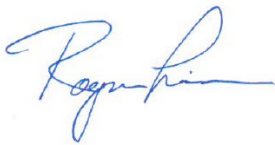
Regarding slide 9, NEC recommends a fundamental change from “operates primarily to store and discharge renewable energy” to “that can store and discharge renewable energy”. Storage is an incredibly versatile resource and when able to for economic reasons shift clean energy to the peak, it should not be disqualified based on arbitrary judgement or interpretation on what its “primary” job may be.

Finally regarding slide 18, the Fall peak analysis seems to show that historically, HE9 is not truly a daily peak. It may be more effective to extend afternoon/evening peaks which appear to have higher net loads. This of course is subject to modification as peak load hours and shapes will continue to change over time.

Conclusion

NEC thanks the Department for its tremendous progress on the CPS program design. NEC has over a decade of experience with energy storage for electricity grid applications, from analyzing business cases, developing and deploying technology, to operating and maintaining energy storage systems around the world. Please feel free contact us with any questions or requests for historical reference or assistance of any kind.

Sincerely,



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