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Sent By E-mail

The Honorable Judith F. Judson
Commonwealth of Massachusetts
Department of Energy Resources
100 Cambridge Street, Suite 1020^[L]_[SEP]
Boston, MA 02114

RE: Lincoln Clean Energy, LLC's Comments On DOER's CPS Straw Proposal

Commissioner Judson:

On behalf of Lincoln Clean Energy, LLC ("LCE" or, the "Company") please accept the below comments on the Department of Energy Resources' ("DOER") Clean Peak Energy Standard ("CPS") straw proposal, issued on April 2, 2019. LCE recognizes and appreciates that DOER's straw proposal is an important first step in establishing a CPS that fulfills the Legislature's goals under the *Act To Advance Clean Energy*, enacted in 2018. As a developer looking to construct, own, and operate wind, solar, and energy storage facilities in Massachusetts, LCE offers these comments regarding Clean Peak Certificate ("CPC") (1) pricing and procurement, (2) multipliers, and (3) a proposed methodology for establishing Clean Peak Windows. LCE is eager to continue to support this important effort and happy to provide additional clarifications or industry perspectives as is useful to DOER.

I. CPC Pricing and Procurement

Establishing an appropriate CPC pricing and procurement structure is the single-most important step that DOER must take to ensure that the CPS achieves program objectives. LCE agrees with DOER's proposal requiring Massachusetts electric distribution companies (the "EDCs") to obtain CPCs through competitive procurements that ensure "long-term revenue certainty, enabling reduced cost financing and increased technology deployment at lower program cost" for Clean Peak Resources.¹ LCE respectfully requests that DOER establish CPC values sufficient to incentivize stakeholders, including developers of Energy Storage Systems ("ESS"), to compete in the CPS market. Without substantial participation of ESS, it is much less likely that the CPS will achieve its objectives to flatten the net electric load curve during the full peak window or during actual peak hours.

¹ 4/2/19 Straw Proposal at Slide 29.

Moreover, if developers of ESS lack appropriate incentive to enter the market, new solar generation will be less likely to be co-located with ESS. Far from flattening the load curve, such a development could instead lead to duck-curve load patterns and high ramping levels during evening peak hours, a potential outcome that is contrary to the objectives of the CPS.

To avoid this outcome, LCE respectfully requests that DOER implement CPC pricing and procurement rules that best encourage resource availability during all hours of the peak window, particularly ESS. One market-based approach to achieving that objective is to calculate CPCs based on production during the minimum production hour of the Clean Peak Window for a given day, rather than the eligible resource's average output during the peak window of each day within the Seasonal Peak Period. The minimum production hour for a resource would be the hour during a day's Clean Peak Window in which a resource provides the least amount of clean energy to the grid. For example, if the four hours of the Clean Peak Window were in the early evening and a solar generator produced 20 megawatts ("MW") in hour one, 10 MW in hour two, and 0 MW in hours three and four, hours three and four would constitute the minimum production hours, during which time production was 0 MW. If the solar resource was co-located with a 4-hour ESS, it would be able to sustain output to the grid and production of CPCs throughout the Clean Peak Window. A hybrid solution in which CPCs are calculated to reflect a blend of average production during the Clean Peak Window and production during a minimum production hour is also worth considering.

II. CPC Multipliers

LCE supports DOER's proposal to calculate CPCs based on multipliers that will best align periods of CPC production with periods of the highest value, and provides the following additional comments regarding multiplier methodology:

- **Seasonal Multiplier.** LCE supports DOER's proposal to apply the Seasonal Multiplier to the calculation of CPCs generated, as such a measure will help to achieve CPS objectives. In addition, LCE suggests that DOER establish a Seasonal Multiplier for the Winter Seasonal Peak Period that is greater than the multiplier for the Summer Seasonal Peak Period. Because peak solar generation and the proposed peak window for the Summer Seasonal Peak Period (2:00 – 6:00 PM) overlap, solar generators will be well-positioned to capture the added value of the Seasonal Multiplier without deploying co-located ESS. During the Winter Seasonal Peak Period, however, with less solar generation available (compared to the Summer period) and most of the proposed Clean Peak Window occurring later in the day (4:00 – 7:00 PM), solar facilities will more likely need to deploy ESS to maximize CPC production. If Seasonal Multipliers for the Summer and Winter periods hold the same value, solar developers may be content to generate most CPCs during the Summer Seasonal Peak Period, limiting clean energy production during the Winter Seasonal Peak Period and resulting in the CPS having a reduced impact during the high emission Winter months.
- **Actual System Peak.** LCE also supports the proposed Actual System Peak Multiplier. As DOER further develops this program component, LCE requests that DOER consider increasing the multiplier above 15, to provide maximum incentive to potential market participants. LCE also requests that DOER consider making the Actual System Peak

Multiplier applicable to multiple system peaks, rather than solely the Actual Monthly Regional Peak, as proposed. These recommendations are intended to further incentivize both the deployment of ESS as well as the operational strategy of pursuing actual peaks rather than just Clean Peak Windows. When a battery system decides to “chase the peak” it potentially risks the guaranteed revenue of the peak window. Without a sufficient multiplier, this might not be considered worth the risk. Moreover, if only the single, monthly peak is considered, the operator may only choose to do so on particular days when it seems more likely that a monthly peak would occur. Both of these effects reduce the likelihood of renewable energy being used to address actual monthly or daily peaks.

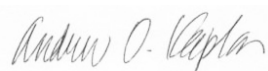
III. Establishing Clean Peak Windows

LCE generally supports DOER’s initial articulation of its methodology for establishing Clean Peak Windows, and the assumptions of that methodology, including DOER’s reliance on usage data from more recent years that reflect changed load profiles throughout Massachusetts. LCE respectfully requests that DOER provide additional detail on peak usage, including “raw peak” as compared to “net peak” – “net peak” being the peak after accounting for solar generation. Such information would assist stakeholders in better understanding the extent to which the proposed Clean Peak Windows align with system peak, after considering the impact of solar generation.

LCE also respectfully submits that establishing Clean Peak Windows of sufficient and consistent length to ensure that Eligible Resources provide sufficient revenue streams to project owners is critical to the success of the CPS. Particularly, leaving open the possibility of the Clean Peak Window reducing from four hours to one hour adds substantial cost risk to an ESS business case. For example, if an ESS system is designed to be four hours to capture the full Clean Peak Window and then the window is reduced to one hour, the ESS will have paid substantially more for a larger battery of which three hours of energy generation is no longer earning CPCs (and thus revenue). This risk would reduce ESS deployment. At a minimum, detailing a clear process by which the DOER would reduce the length of the Clean Peak Window (and not just which hours are selected), would be essential for asset planning.

Thank you for your consideration of these initial comments. LCE looks forward to providing additional feedback regarding the CPS in the future and working with DOER and stakeholders to ensure that the CPS as adopted achieves its important and worthy goals, as intended by the Legislature. In the event that DOER wishes to confer with LCE on any of these comments, please feel free to contact Dr. Francis O’Sullivan, LCE’s Senior Vice President, Strategy, at fosullivan@lincolnclean.com.

Very truly yours,



Andrew O. Kaplan