

October 28, 2019

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Via electronic Mail: DOER.CPS@mass.gov

RE: Comments Massachusetts Clean Peak Standard

LS Power Development, LLC (“LSP Development”) is pleased to provide these comments on the Draft Regulations for the Clean Peak Energy Standard (“CPES”) in anticipation of active participation in the program.

LSP Development is a Delaware limited liability company that develops, owns, and operates a diverse mix of independent power projects, transmission infrastructure, storage projects as well as energy services such as demand response in the United States. LSP Development is a top development, investment, and operating company that has been at the leading edge of the industry’s evolution of greening the electric grid with utility-scale wind and solar generation projects, competitive transmission to deliver renewable energy to the load centers, as well as utility scale batteries in California and proposals in New York.

Creating incentives to shift clean renewable energy and energy from low emitting resources to peak periods, thereby decreasing the need to operate higher emission and higher cost resources, are most efficiently implemented if unnecessary limits are not placed on eligibility. Siting, permitting constructing and interconnecting storage resources to the electric system is difficult enough without restricting where they should be located or what size they need to be.

Accordingly, in conjunction with the CPES the location of renewable and storage resources should not be limited to the Commonwealth of Massachusetts (“Massachusetts”). The goal of shifting renewables to peak periods would be most cost effectively achieved if the generation of Clean Peak Energy Certificates (“CPECs”) was also guided by competitive energy market signals provided by ISO-NE. The difference between peak and off-peak energy pricing is a significant driver in the development and location of storage facilities. The requirement that transmission connected resources must be located in Massachusetts and deliver their energy to Massachusetts creates an unnecessary inefficiency in that the largest peak/off-peak energy price signals and the corresponding opportunities to shift clean renewable energy to peak periods may occur across the border. In addition, land and transmission system interconnection constraints may be more readily available and/or less costly if not required to be

in Massachusetts. Nevertheless, such a resource could be effectively designed to provide the benefit of shifting renewable power to peak periods.

With respect to the in-state delivery requirement, while there may be administrative mechanisms that can be used to attribute MWhs as being delivered to Massachusetts, the practical reality is that the electric systems of the northeast are interconnected and all of the energy flows freely in interstate commerce. The same is the case with respect to CO2 emissions. Reduced CO2 emissions in one location in the northeast count towards the global reduction just as much as another. As such, exceptions to the in-state preference should be facilitated so as not to frustrate the goal of the Clean Peak Standard, which is reducing CO2 emissions.

If competitive markets are allowed to guide transmission interconnected renewable resources and resources that store energy, installations will naturally be located in the higher emitting and higher energy cost locations that ISO-NE's competitive market signal will produce the greatest shift. This combined with opportunities to generate CPECs will provide the greatest benefit in the shortest timeframe at the lowest cost.

Similarly, the size of the resource should be able to respond to competitive market signals as opposed to a requirement to be 25% of nameplate capacity. The 25% of nameplate capacity may impose a size requirement that is not achievable due to any number of constraints such as, transmission system capability or peak/off-peak market price signals. Nevertheless, a smaller facility may be better able to respond. Unfortunately, such a smaller facility would not qualify for CPECs and could very well not be developed because it would be ineligible for the CPECs.

A key attribute of a battery that is shifting MWhs from one time period to another is its round trip efficiency as well as its duration capability compared to the need. The very same battery project would have a MW capability of 200 MW/hr for 2 hours but only 100MW/hr for 4 hours. Considering different locations may have different peak shapes and durations, batteries should be sized based on what the needs are as opposed to a set assumption with respect to size and duration capability. Moreover, if there are multiple periods in a day where it is advantageous to shift MWhs and one of those periods is only 2 hours significantly more benefit could be realized from a 4 hour battery if it was operated as a 2 hour battery. Flexibility in the regulation is important and competitive markets can provide the signals related to how frequently and for what duration energy should be shifted to provide the greatest benefit at the least cost.

In addition, although arguably the larger the battery, the more MWhs it can shift, just because larger might be better doesn't mean smaller should be excluded. Requiring batteries be 25% of the nameplate capacity of a renewable resource will likely create a situation where the perfect is the enemy of the good. For example, if there is a 132 MW wind farm and there is a very viable battery that can be sited but it is only 30 MW because of transmission constraints, it will not qualify for the CPECs. Accordingly, it might not be developed and an opportunity will be missed simply because it isn't 33 MWs (i.e., $0.25 * 132\text{MW}$). While a 33 MW battery might be better, a 30 MW battery is certainly better than 0 MWs.



Finally, the 0.1 multiplier for existing resources that is not applicable to new resources unnecessarily mutes the signal for existing resources to change behavior and operations in a manner that would shift production as sought by Massachusetts. It also isn't clear how new resources will shift their production in a manner 10 times as valuable as existing resources. If changes to the behavior of renewable resources is what is desired, all resources should receive the same signal in order to achieve the greatest benefit for the least cost.

Thank you for considering our comments as you finalize the regulations. LSP Development looks forward to participating in a robust program. If you have any questions or want to discuss these comments further, please contact me as noted below or call Mark Hillinger at (212)547-4386, mhillinger@lspower.com.

Sincerely,

/s/

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