



Lincoln Public Schools

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Lincoln School Committee

September 19, 2019

Judith Judson, Commissioner
Massachusetts Department of Energy Resources
100 Cambridge Street, 10th floor
Boston, MA 02116

Re: Public Comments on SMART Program 400 MW Review in 225 CMR 20.00 and 15.00

Dear Commissioner Judson:

Thank you for providing the opportunity to comment on the SMART 400 MW Review. The Town of Lincoln Public Schools ("Lincoln") seeks the Department of Energy Resources ("DOER") consideration in addressing two key issues impacting the success of Lincoln's objective to achieve a net-zero energy educational facility in connection with a comprehensive renovation of our school buildings and which includes a large-scale, roof- and parking-lot mounted solar photovoltaic array paired with energy storage.

Lincoln applauds DOER's effort to encourage Behind-the-Meter ("BTM") installations paired with Energy Storage Systems ("ESS") through new SMART Program Regulations. Lincoln concurs that such regulatory policy objectives provides benefits not only locally to Lincoln and its taxpayers, but also directly to the future of sustainable electric power grids.

Background:

The Town of Lincoln, through the Lincoln Public Schools, has committed to build a net-zero energy school facility at the Lincoln campus located at 6 Ballfield Rd., Lincoln, MA 01773. The complete revitalization of the property, involving both renovation and new construction, is scheduled to occur in two phases, June 2020 - July 2021 and July 2021 - September 2022.

Phasing is required since the facility is the only K-8 school serving the families of the Town of Lincoln. As such, it is critical that it remain in service to meet the Commonwealth of Massachusetts' legal requirement for educational services. The revitalized Lincoln School is being designed as an energy-efficient, all-electric facility to meet the Town's energy bylaw.

The project is currently under final design by Lincoln's design consultant, SMMA of 1000 Massachusetts Ave, Cambridge, MA. SunPower Corporation's Massachusetts office at 262 Washington St. Boston, MA has been engaged to design and build the solar photovoltaic and energy storage systems, and to facilitate all permitting, interconnection and SMART Program requirements. The solar photovoltaic array will be constructed in phases, consistent with the overall phased implementation plan for the school facilities and will be installed as a BTM system, paired with ESS. This configuration will allow Lincoln to demonstrate both energy savings and operational management benefits through demand management, demand response and capacity tag management.

SMART Program Challenges:

The two immediate issues Lincoln raises for DOER consideration relate to utility interconnection and SMART qualifications as it relates to a staged implementation project. While it is understood that utility-related matters are generally addressed by the Department of Public Utilities ("DPU"), Lincoln advises DOER that its proposed policy objectives encouraging BTM solar photovoltaic systems paired with ESS conflict with Eversource Energy's interconnection tariff, metering requirements and protection policies. We address the issues below:

1. Utility Interconnection Tariff, Metering Requirements and Protection Policies:

- The Eversource interconnection tariff generally addresses the interconnection of distributed energy systems in a BTM configuration for existing operational facilities. It does not specifically address comprehensive renovation projects like Lincoln's in which the existing service/meter will be replaced, and such replacement service/meter does not exist at the time of application filing. Eversource has agreed to review and consider the interconnection application, but the current tariff does not provide for such review.
- Eversource's metering strategy and policy as shown in their customer-facing SMART Metering Diagrams requires for a utility-owned recloser to be located in front of the meter. This configuration places significant risk to Lincoln. Specifically, Eversource has indicated that if for line maintenance or other operational necessity it is required to disconnect the solar array from their distribution system, it will open the recloser. The result is a complete shutdown of the electricity power supply to the school while the Eversource circuit remains energized. It is understood that emergency situations or power interruptions to the facility would result in the same impact, but such situations are unavoidable and managed through the use of short-term emergency generation.

Lincoln has proposed to Eversource an alternative strategy that allows remote BTM PV generation disconnection. Eversource has agreed to evaluate this option, but has noted that its company policy is to avoid ownership, control or access to equipment on customer property. To the extent DOER is encouraging through the SMART Program regulations and guidelines full consideration of BTM solutions paired with ESS, Eversource's SMART metering policy (not tariff requirement) creates conflicts, risks and challenges to well placed distributed PV generation. We also note that Eversource DOES require manual disconnects that are customer-owned, specified by, accessible to and operable by Eversource on customer property.

Lincoln notes that several nearby municipalities served by Eversource East are in various stages of design for planned school facility renovations; therefore, this issue will be repeated in the near term. Lincoln suggests that Eversource system protection policy may have contributed to the low penetration rate of BTM solar photovoltaic arrays in Eversource East where BTM systems should enjoy a higher adoption rate.

2. Staged project implementation.

- As discussed above, the SMART Program paradigm sufficiently accommodates solar photovoltaic systems on existing facilities. Lincoln supports the modification under the Straw Proposal for the duration of the reservation period for public entity projects to increase from 12 months to 18 months.

While Lincoln understands that extension opportunities exist in the current SMART Program regulations, we remain concerned that a staged implementation required for continuous on-going educational learning and activities will require a reservation period beyond the 18 months plus the 6-month allowed extension. Lincoln further understands that the current SMART Program regulation allow for "good cause" extensions, such extensions are not guaranteed and are subject to DOER judgement. This uncertainty will create project and financing risk thus increasing the cost to Lincoln taxpayers. This project and financing risk would be mitigated if SMART Program regulations allowed automatic approval of "good cause" extensions in major renovation projects of this type.

- Lincoln seeks consideration on SMART Program certification. Specifically, due to the staged construction activities, it is anticipated that rooftop systems and canopy systems will become operational at different times. Lincoln is seeking a single BTM system interconnection, paired with ESS, and the generation from the arrays will be combined and consumed BTM following the phased installations. Notwithstanding, it is Lincoln's

objective to fully utilize solar generation as soon as it is available for operation at the end of each school construction phase and not wait for the entire school project to be completed.

Lincoln requests that DOER address in its anticipated Emergency Regulations a detailed approach to supporting and encouraging BTM with ESS for solar photovoltaic projects that must be installed in phases.

Conclusion:

Thank you for the opportunity to provide feedback and for DOER's thoughtful consideration of these comments. Please let us know if we can be of any assistance to DOER during the remainder of the rulemaking process.

For the Lincoln School Committee:



Peter Borden
Vice Chairperson

For the Lincoln Board of Selectmen



Jennifer Glass
Chair

copy furnished:

Kaitlin Kelly, Manager of Solar Programs, DOER
Senator Michael Barrett
Representative Thomas Stanley
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