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04/27/2023

Holliston Planning Board
703 Washington Street
Holliston, MA 01746

Subject: 600 Central St Proposed BESS Project – Additional Information and Responses

Dear Members of the Planning Board:

BlueWave would like to submit the following responses to comments and concerns raised at and following the March 16th, 2023 Planning Board meeting regarding the Special Permit application for the proposed Battery Energy Storage System at 600 Central St. Comments have been summarized based on meeting notes from the public hearing, and BlueWave can address any additional concerns or questions the Board or public may have at the continued public hearing.

Question/Concern #1: Sound Impact of battery system

BW Response: BlueWave has engaged with Epsilon Associates to perform sound measurements and analysis for the 600 Central Street site. The analysis was performed for the previous site configuration, and is in the process of being updated for the new site plan. The updated analysis will be available and shared at the May 4th hearing with the Board. Regardless of site location and layout, BlueWave intends to meet the DEP Sound Regulation 310 CMR 7.10, which dictates a maximum increase of ambient sound levels of 10dB(A) at property lines. We expect mitigation required to encompass the following:

- A sound wall/barrier (anticipated 14-16ft.)
- Potential operational restrictions on the project (in hours of operation and/or number of units)

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Question/Concern #2: Visual Screening Details

BW Response: The previous plan incorporated additional vegetative screening at both the entrance of the proposed access road, as well as along the northwest boundary of the limit of work toward the northern property line. In the revised plan, the limit of work is significantly pulled back from the northern property boundary, which eliminates the need for additional vegetative screening toward the northern abutters. In the revised site plan, vegetative screening is still proposed along the entrance section of the access road; however, additional vegetative screening can be added pending additional feedback from the Board or members of the public.

The nature of the vegetative screening is typically a mix of evergreen trees and low-lying native shrub mix, typically in off-set layers to provide overlapping coverage. An example list of potential species that can be utilized is provided separately. Additionally, the sound barrier itself provides completely opaque visual screening to the system itself and can be constructed in a color better suited to blend into the existing vegetative landscape. A representative cutsheet of an example sound barrier material is also provided separately that provides a visual reference.

Question/Concern #3: Impact on wildlife passage through the site

BW Response: With both the previous and updated site plan and layout, wildlife passage and access through the site would be almost entirely uninhibited, apart from the limited footprint of the area within the sound barrier (approximately 8,000 sq. ft.). No other portions of the site design would restrict wildlife from moving through the site onto adjacent properties and habitat. The site design does not cause fragmentation of the larger habitat area, and the limit of work/clearing is restricted to 1.5 acres in the updated plan.

Question/Concern #4: Fire hazard and safety

BW Response: Modern large-scale energy storage systems, including the proposed Powin Centipede system, are designed and tested to address historical concerns regarding lithium-ion fires and safety concerns. The system is compliant with NFPA 855, UL9540, and UL1973, detailed standards that specify how systems should be designed and built to prevent a fire or thermal conditions from creating a public safety event.

Thermal runaway is inherent to all lithium-ion chemistries and is the primary cause of concern in regard to battery fires. UL9540A testing is critical to ensuring that thermal runaway and fire do not propagate from module-to-module within a unit, and by extension from unit to unit. We have provided the UL9540A test report separately which shows that propagation does not occur at the module level for the Powin Centipede system. Thus, in the unlikely event elevated thermal conditions or a fire occur in a unit, the fire should not spread between units, causing a larger-scale public safety concern.

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Units are also equipped with redundant smoke, gas, and heat detectors, and a multi-level alarm system that will transmit a signal to the fire department if any alarms are triggered. Alarms trigger an automatic emergency shutdown of the system, and BlueWave will immediately dispatch a response to the site. Furthermore, the system is monitored 24/7 for temperature, voltage, and any abnormal conditions that could be present all the way down to the cell level. This monitoring is likely to reveal any potential conditions that could lead to a thermal event, and the system could be shutdown preemptively to halt or slow down an event from occurring.

Because of these design measures, the recommended procedure for responding to a fire is to let the affected module/unit burn under supervision of first responders and technical personnel from the operator. Additionally, it has been discussed with the Holliston fire department to equip the units with an additional aerosol-based fire suppression system, that can work to prevent fires originating from other electrical components of the system. We have provided a draft Emergency Response Plan (ERP) prepared by the Energy Safety Response Group on procedures that should be followed in the event of a fire for first responders and anyone who may be on-site. This plan will go through multiple iterations as the project progresses to and through construction, and will also involve training with the fire department on the system and procedures that should be followed in any emergency event.

Question/Concern #5: Water availability for fire suppression

BW Response: As mentioned previously, the recommended procedure for responding to a fire from both manufacturers and experts is to allow for a controlled burn of the effected unit. In the event the fire department would require water access, there is a hydrant located across the street from the 600 Central St parking lot that could be accessed.

Question/Concern #6: Water pollutants

BW Response: To date, available testing and data does not indicate significant concerns for fire-fighting runoff from lithium-ion fires. Any compounds present in the runoff from lithium-ion fires are very similar to the same compounds you would see in a modern structural or plastics development fire. The electrolyte within the battery cells is not a federally listed hazardous substance, and is contained by the hermetically sealed individual cells, and remains primarily absorbed within the electrodes. In the event any amount of electrolyte were to escape from an individual cell, the enclosures acts as secondary containment and would prevent any electrolyte from reaching the external environment in the time it takes to respond to the site and provide immediate remediation. The aerosol-based suppression agent utilized would be non-toxic, as well as the dielectric fluid used in the transformers.

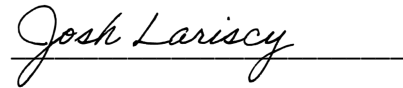
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Question/Concern #7: Stormwater runoff

BW Response: Updated stormwater calculations are being prepared based on the new site plan and design. Based on peer review responses to-date, it is expected that the updated calculations will be reviewed and approved by the peer reviewer with no concerns. Per Massachusetts Stormwater Standards, no increase to peak flow stormwater can occur, and the design addresses and treats all increases in stormwater due to the development.

We look forward to discussing these responses and additional materials provided in greater detail at the May 4th hearing.

Sincerely,

A handwritten signature in black ink that reads "Josh Lariscy". The signature is written in a cursive style and is positioned above a horizontal line.

Joshua Lariscy – Director of Energy Storage Development