



# Town of Sturbridge

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Jean M. Bubon, AICP Town Planner

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## MEMORANDUM

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**TO:** PLANNING BOARD

**FROM:** JEAN M. BUBON, AICP, TOWN PLANNER *JMB*

**CC:** JESSICA BARDI, ESQ. ROBINSON + COLE; 30 SWIFT LLC; CHRIS VORLICEK, STURBRIDGE PV LLC; BRIAN YERGATIAN, BSC GROUP; DAVE FAIST, CMG; REBECCA GENDREAU, CONSERVATION AGENT

**SUBJECT:** REQUEST FOR SITE PLAN APPROVAL – 200 HAYNES STREET

**DATE:** 10/2/2023

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We have begun to review the application and plans submitted by Jessica Bardi, Esq. on behalf of Sturbridge PV, LLC for Site Plan Approval for the installation of a large scale ground mounted solar energy facility to be located at 200 Haynes Street (formerly 200 Route 15) and submit the following report to the Board for consideration.

### Review Methodology:

I have reviewed the application for administrative and technical compliance with the following municipal regulations:

- The Town of Sturbridge Zoning Bylaws as amended 2022

### Submittal and Distribution of Application:

The following information was submitted as part of the Site Plan Approval application on August 9, 2023:

- ✓ Cover Letter to the Town Clerk dated August 9, 2023 – Re: Application for Site Plan Approval;
- ✓ Completed application;
- ✓ Abutters list;
- ✓ Filing Fee;
- ✓ Document to Planning Board, Sturbridge Massachusetts – Statement in Support of

Site Plan Approval Application dated August 9, 2023, submitted by Jessica D. Bardi, Esquire, for the applicant Sturbridge PV, LLC;

- ✓ Exhibit A - Site Plan entitled “Ground Mounted Photovoltaic System, 200 Route 15 - Sturbridge, Massachusetts”. Plan prepared by BSC Group – 349 Main Street – Route 28, W. Yarmouth, Massachusetts 02673. Plan date April 26, 2023, Revised 6/14/23;
- ✓ Exhibit B - Interconnection Plans entitled “Proposed Photovoltaic Array, 200 Route 15, Sturbridge, Massachusetts 01566,” prepared for Bear Peak Power – 1099 18<sup>th</sup> ST, Suite 2150, Denver, CO 80202. Plan prepared by ARC Design – 409 North Main Street, Elmer, NJ 08318, dated May 23, 2022 revised through June 16, 2022;
- ✓ Exhibit C – Packet of technical specifications – 10 sheets;
- ✓ Exhibit D – Purchase and Sale Agreement dated September 29, 2022 and an Amendment of Purchase and Sale Agreement, dated April 12, 2023;
- ✓ Exhibit E – Operation and Maintenance Plan for Ground Mounted Photovoltaic System, dated April 10, 2023;
- ✓ Exhibit F – Certificate of Liability Insurance for Bear Peak Power, LLC;
- ✓ Exhibit G – A document entitled “Decommissioning Plan – Ground Mounted Solar Photovoltaic System – 200 Route 15 – Sturbridge, Massachusetts. Applicant & Responsible Part – Sturbridge PV, LLC – 2420 17<sup>th</sup> Street, Denver, CO 80202. Prepared by – BSC Group, Inc. – 349 Route 28, Unit D, West Yarmouth, MA 02673 (undated – received on August 9, 2023);
- ✓ Exhibit H – Email provided as proof of receipt of Interconnection Application from National Grid dated August 7, 2023;
- ✓ Exhibit I – Photo-simulations prepared by BSC Group;
- ✓ Exhibit J – Stormwater Report – Ground-Mounted Photovoltaic System – 200 Route 15, Sturbridge, MA 01566, April 2023. Owner/Applicant: Bear Peak Power, LLC – 2420 17<sup>th</sup> Street, Denver, CO 80202. BSC Group – 349 Main Street, West Yarmouth, MA 02673

- Peer Review

Quotes were obtained for a Peer Review of the project and the Peer Review Fee request was made on August 31<sup>st</sup>. The check was not received until September 25, 2023 at which time CMG was engaged to conduct the peer review. Since there was a significant delay in receiving payment, we are just beginning review of this project. I anticipate the Hearing will need to be continued to allow the completion of staff and peer reviews to take place.

- Staff Comments were received from:

- Rebecca Gendreau, Conservation Agent dated September 12, 2023
- Lt. Jennifer Ashe, Fire Inspector dated September 14, 2023

The comments are attached to this report. Additional staff comments will be provided when received.

### Project Summary:

The applicant is requesting Site Plan Approval to allow the construction of a 1.3 MW-DC solar array with a 1,280 kWh battery energy storage system. The project will consist of solar panels mounted on a fixed metal frame with a battery energy storage system and other ancillary equipment as shown on the plans and supporting documentation provided.

### Zoning

The property is located in the Special Use District. Large Scale Solar Facilities are permitted as of right subject to the requirements of Article X Solar Energy Facilities and Article XIX Site Plan Approval.

### Review

A site visit is scheduled for this Wednesday, October 4<sup>th</sup> and the Hearing will be opened on Tuesday, October 10<sup>th</sup>. Initial estimates from Rebecca Gendreau, Conservation Agent are that the Conservation Hearing may be continued to the November 16<sup>th</sup> meeting to allow time for the wetlands peer review. Based on that, I would suggest the Planning Board continue its Hearing to November 21<sup>st</sup> or December 12<sup>th</sup> to allow a complete review to occur.

I have conducted an initial review and it appears some components of the plan may not comply with the bylaw and should be reviewed and/or adjusted by the applicant.

My initial comments are below:

1. It appears that the pad and battery storage system are being placed within the front setback requirement. This is not permitted and the plan should be modified to comply with zoning. Please note setback distance on revised sheet. See Sheet 3 of 9 – Transformer Pad is noted as 54.2' from property line, there is no notation on the EES and that appears much closer than the transformer pad. In accordance with Section 300-10.5 Dimension and Density Requirements, A. Setbacks – Ground-mounted solar energy facilities, including appurtenant structures (**including but not limited to equipment shelters, storage facilities, transformers and substations**) shall have a setback from front, side and rear property lines and public ways of at least 100 feet in Special Use District and Industrial Districts. Twenty percent of a parcel's square footage may be used for a solar facility". The plan should be revised to comply with the setback requirements as stated in the bylaw.
2. Exhibit B – Interconnect Plan – the site plan shown on this plan varies from the site plan submitted to the Board. This plan does not show the EES, shows the transformer pads in a different location, and does not appear to show the entire extent of the array. Shouldn't these plans be consistent?

3. Section 300-10.3 General Requirements B. (4) requires a glare analysis and proposed mitigation, if any, to minimize the impact of glare on affected properties. The applicant has stated in the “Statement in Support of Site Plan Approval Application” that *“the proposed solar facility will not produce glint or glare from the sun because it will have anti-reflective coating on the front glass to mitigate glint and glare. The proposed solar panels are designed to absorb photons, instead of reflecting them onto surrounding areas. Additionally, the Proposed Solar Facility will have no impact of glare on surrounding properties due to site topography and the natural vegetated buffer that will be maintained around the proposed solar facility.”* The applicant should provide manufacturer’s specifications indicating the panels will have the anti-reflective coating.
4. Section 300-10.5 B – Buffering states “The visual impact of large-scale photovoltaic facilities, including all appurtenant structures shall be mitigated. Structures shall be buffered/shielded from view and/or joined and clustered to avoid adverse visual impacts as deemed necessary by the Planning Board using landscaping and natural features as appropriate to accomplish the mitigation. When a proposed project abuts a property in residential use, *the minimum width of the buffer area shall be 200 feet (measured from the proposed solar project to the property line of the property in residential use)* and this distance shall supersede the 100 foot setback as stated in Subsection A above. In all other cases that buffering/shielding shall occur within the stated setback amount”.

We had discussed this in the past, but it does not appear that the buffering requirement is being met with the neighboring property at 2-76 Bentwood Drive (the Condominiums). It appears the 200’ buffer has been calculated from the nearest structure, not the property line as noted above. The plan must be adjusted and/or clarification of how you think this meets the bylaw shall be provided. Additionally, there is a substantial amount of clearing in the 200’ buffer from the Sturbridge Retirement Cooperative side. As discussed, this will be reviewed and additional plantings may be required by the Board; however, the Board has been very reasonable with this. There should be minimal clearing within the buffer to avoid the necessity of additional plantings being required within the 200’. Please review.

If I can provide any additional information, please do not hesitate to contact me.

**Subject:** Re: FW: 200 Haynes Street

Hello Everyone,

In response to the inquiry regarding the hazardous materials threat associated with the ESS for this project, I can offer the following comments:

1. Lithium Ion Battery Energy Storage Systems (ESS) can cause a potential fire and hazardous materials danger. We have lithium ion batteries in our cell phones, mobility devices, wireless headphones, E-Vehicles, and a growing number of technological products. The batteries can handle multiple recharges and are not as prone to developing "memory" issues like the previous generation of cadmium batteries. We use them every single day, and they can be a safe energy source as long as safety precautions are followed, and safe use practices are observed.
2. As part of the plan review, a fire code review was conducted and all required safety features, distances, signage, and restrictions designated in 527 CMR: The Massachusetts Comprehensive Fire and Life Safety Code, specifically Chapter 52 (Energy Storage Systems) are required and shall be enforced.
3. Safe and appropriate emergency access points for firefighting and any emergency response to the solar array and ESS has been discussed and planned.
4. The technology is rapidly developing and we are continuing to stay informed as to the best strategies, methods, and equipment necessary for negating lithium ion battery fires. In fact, several members of the department, including myself and Deputy Chief Martell, will be attending a symposium at the Massachusetts Firefighting Academy, this month, for this very reason. We are constantly evaluating and reworking our pre-plan strategies and tactics as better practices emerge and develop.
5. Given the distance from the proposed site and the Sturbridge Crossings property, there is a significant buffer of safety in the form of distance and natural shielding.
6. Issues with overheating and thermal runaway are generally caused by damage or improper use or charging practices. The site will be secure and the ESS cabinet(s) will be protected and restricted.
7. With there being no slowing in the use of lithium ion batteries in contemporary technology, we thoroughly pre-plan for any possible incident involving the technology. ESS fires involving ground solar arrays have been rare, but whenever one occurs, we are reviewing the investigations and will rework and adapt our tactics to be in line with the identified best practices.
8. Deputy Chief Martell is a senior Hazardous Materials Technician and has been an active member of the State Haz-Mat team for many years. Every single one of our firefighters is trained to the Hazmat Operational Level. We have a solid team, prepared to respond should there be an incident.
9. We use propane every single day, but there are precautions that must be taken, safe practices which must be observed, and despite it being used every day for our domestic needs, the inherent hazard must be respected. Lithium Ion Batteries must be approached the same way. They are helpful and useful, but that does not take away all potential hazards.

I am happy to respond to any specific questions or concerns. I hope that my comments may answer some of the concerns on the resident's minds.

Respectfully,

On Wed, Oct 25, 2023 at 10:59 AM Jean Bubon <[jbubon@sturbridge.gov](mailto:jbubon@sturbridge.gov)> wrote:

## Departmental Comments

**Status**

Close

**Status Date**

09/12/2023

**Action by Department**

Conservation

**Action By**

Rebecca Gendreau

**Comments**

Project is within the Sturbridge Wetland Bylaw 200-foot buffer zone and within the Sturbridge Zoning Bylaw (Chapter 300-4.1E) jurisdictional buffer zone for projects on slopes of 8% or more. A Notice of Intent has been filed for review and a public hearing has been scheduled. The project includes land alteration that will affect most of the 14 acre parcel.

A detailed phased plan will be required. Property contains steep slopes and clearing and grubbing needs to be phased to avoid having large amounts of land open on steep slopes. The Commission may have concerns with the extent of work within the 200 foot buffer zone and may ask that alternatives are explored to minimize work here.

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**Status**

Close

**Status Date**

09/14/2023

**Action by Department**

Fire

**Action By**

Fire Inspector

**Comments**

There will be an ESS on site to collect from the panels. The fire department requests the following to be included in the final proposed plans:

1. A Knox box mounted at a fixed location at the exterior of the fencing for access.
2. All NFPA required signage be provided.
3. A gate providing direct access to the ESS and any shut offs for efficient

emergency management.

4. Manufacturer / cut sheets with the specs on the ESS and the solar panels.

There are no other concerns, questions, or requests at this point in the review from the Fire Department.