



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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VIA ELECTRONIC MAIL

August 19, 2021

Kenneth C. Baldwin, Esq.
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280 Trumbull Street
Hartford, CT 06103-3597
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RE: **DOCKET NO. 505** - Haddam Quarter Solar, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a 2.8-megawatt-AC solar photovoltaic electric generating facility located south of Haddam Quarter Road and north of Johnson Lane, Durham, Connecticut and associated electrical interconnection.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than September 9, 2021.

Please submit an original and 15 copies to the Council's office and an electronic copy to siting.council@ct.gov. In accordance with the State Solid Waste Management Plan and in accordance with Section 16-50j-12 of the Regulations of Connecticut State Agencies, the Council requests all filings be submitted on recyclable paper, primarily regular weight white office paper. Please avoid using heavy stock paper, colored paper, and metal or plastic binders and separators. Fewer copies of bulk material may be provided as appropriate.

Please be advised that the original and 15 copies are required to be submitted to the Council's office on or before the September 9, 2021 deadline.

Copies of your responses are required to be provided to all parties and intervenors listed in the service list, which can be found on the Council's website under the "Pending Matters" link.

Any request for an extension of time to submit responses to interrogatories shall be submitted to the Council in writing pursuant to §16-50j-22a of the Regulations of Connecticut State Agencies.

Sincerely,

A handwritten signature in blue ink, appearing to read "Melanie Bachman".

Melanie Bachman
Executive Director

MB/RM

c: Service List dated July 13, 2021

Docket 505
Interrogatories to Applicant

August 19, 2021

General

1. Referencing Application Attachment 4, of the letters sent to abutting property owners, how many certified mail receipts were received? If any receipts were not returned, which owners did not receive their notice? Were any additional attempts made to contact those property owners.
2. Since the filing of notice to abutters (Attachment 4), did the Applicant receive any abutter or neighbor comments on the proposal? If so, provide a summary of the comments received.
3. What is the estimated cost of the Project?

Project Development

4. If the project is approved, identify all permits necessary for construction and operation and which entity will hold the permit(s). The Project Site Plans reference approvals from the Town of Durham. What Town approvals are required?
5. Was the project selected through a RFP process? If so, which RFP?
6. Was the project selected for the LREC/ZREC Program?
7. Is the project subject to a virtual net metering agreement? Would all of the Project output be dedicated to virtual net metering?
8. Does the Applicant have a contract to sell the electricity and renewable energy certificates (RECs) it expects to generate with the proposed project? If so, to which public utility? If the electricity is to be sold to more than one public utility, provide the percentage to be sold to each public utility.
9. What authority approves the power purchase agreement (PPA) for the facility? Has a PPA with an electric distribution company been executed? If so, at what alternating current megawatt output? If not, when would the PPA be finalized?
10. What is the length of the PPA? Are there provisions for any extension of time in the PPA? Is there an option to renew?
11. Is the alternating current megawatt capacity of the facility fixed at a certain amount per the PPA and/or the RFP? Is there an option within the PPA to allow for changes in the total output of the facility based on unforeseen circumstances?
12. If the PPA expires and is not renewed and the solar facility has not reached the end of its lifespan, will the Applicant decommission the facility or seek other revenue mechanisms for the power produced by the facility?

13. Would the Applicant participate in the ISO-NE Forward Capacity Auction? If yes, which auction(s) and capacity commitment period(s)?

Proposed Site

14. Is the site parcel, or any portion thereof, part of the Public Act 490 Program? If so, how does the municipal land use code classify the parcel(s)? How would the project affect the use classification?
15. Has the State of Connecticut Department of Agriculture purchased any development rights for the project site or any portion of the project site as part of the State Program for the Preservation of Agricultural Land?
16. Provide the distance, direction and address of the nearest property line and nearest off-site residence from the solar field perimeter fence.

Energy Output

17. What, if any, electrical loss assumptions have been factored into the output of the facility?
18. What is the efficiency of the photovoltaic module technology of the proposed project?
19. Would the power output of the solar panels decline as the panels age? If so, estimate the percent per year.
20. Could the project be designed to serve as a microgrid?
21. If one section of the solar array experiences electrical problems causing the section to shut down, could other sections of the system still operate and transmit power to the grid? By what mechanism are sections electrically isolated from each other?
22. What is the projected capacity factor (expressed as a percentage) for the proposed project?
23. Do solar facilities present a challenge for the independent system operator for balancing loads and generation (to maintain the system frequency) due to the changing (but not controlled) megawatt output of a solar facility? What technology or operational protocols could be employed to mitigate any challenges?
24. Pursuant to CGS §16-50p(c), a public benefit exists when a facility is necessary for the reliability of the electric power supply of the state or for the development of a competitive market for electricity. Public benefit exists if the Council finds and determines a proposed electric generating facility contributes to forecasted generating capacity requirements, reduces dependence on imported energy resources, diversifies state energy supply mix and enhances reliability. Please respond to the following:
 - a) Would the proposed facility be necessary for the reliability of the electric power supply of the state? Explain why or why not.
 - b) Would the proposed facility be necessary for the development of a competitive market for electricity? Explain why or why not.

- c) Would the proposed facility contribute to the forecasted generating capacity requirements? Explain why or why not.
- d) Would the proposed facility reduce dependence on imported energy resources? Explain why or why not.
- e) Would the proposed facility diversify the state's energy supply mix? Explain why or why not.
- f) Would the proposed facility enhance reliability? Explain why or why not.

Site Components and Solar Equipment

25. Is the wiring from the panels to the inverters installed on the racking? If wiring is external, how would it be protected from potential damage from weather exposure, vegetation maintenance, or chewing animals?

Interconnection

26. Is the project interconnection required to be reviewed by ISO-NE?
27. Is a System Impact Study from the electric distribution utility and/or ISO-NE required for the interconnection process? Does the Applicant have an Interconnection Agreement and with whom? Provide the status of such studies and agreements.
28. Is the existing electrical distribution on Johnson Lane three-phase or would it have to be upgraded from single-phase to three-phase to accommodate the Project?
29. Why are four utility poles in close proximity to each other required for the interconnection?

Public Safety

30. Are there any wells on the site or in the vicinity of the site? If so, how would the Applicant protect the wells and/or water quality from construction impacts?
31. In the event of a brush or electrical fire, how would the Applicant mitigate potential electric hazards that could be encountered by emergency response personnel?
32. Is a Spill Prevention, Control and Countermeasure Plan required as part of the DEEP Stormwater Permit? If not, provide fuel storage/spill prevention and control details.
33. Has the manufacturer of the proposed solar panels conducted Toxicity Characteristic Leaching Procedure (TCLP) testing to determine if the panels would be characterized as hazardous waste at the time of disposal? Please submit the specifications that indicate the proposed solar modules would not be characterized as hazardous waste. If the project is approved, would the Applicant consider installing solar modules that are not classified as hazardous waste through TCLP testing?

Environmental

34. Referring to Application p. 14, has the State Historic Preservation Office provided comment on the project? If so, provide a copy of the response.

35. Referencing Application Attachment 8, the Public Information Meeting site diagram is not legible. Submit a legible copy. Did the initial design maintain a 100-foot buffer from the limit of disturbance to the on-site wetland?
36. Is Hersig Brook a DEEP recognized cold water stream?
37. Referring to Site Plan V-1, why are 100-foot and 150-foot wetland buffers shown?
38. Referring to Site Plan OP-1, what is the width of the wetland buffers shown on the plan?
39. The Greenhouse Gas (GHG) Assessment in Appendix M of Council Petition No. 1352 compared the life cycle GHG emissions from a solar project to a scenario where the solar project is avoided and an equivalent amount of natural gas-fired electric generation operated for the estimated life of the solar facility. For the proposed project, how would the net GHG emissions (or reduction) over the life of the solar facility and carbon debt payback be affected under this natural gas-fired generation versus proposed solar generation scenario?
40. What effect would runoff from the drip edge of each row of solar panels have on the site drainage patterns? Would channelization below the drip edge be expected? If not, why not?
41. Please submit photographic site documentation with notations linked to the site plans or a detailed aerial image that identify locations of site-specific and representative site features. The submission should include photographs of the site from public road(s) or publicly accessible area(s) as well as Site-specific locations depicting site features including, but not necessarily limited to, the following locations as applicable:

For each photo, please indicate the photo viewpoint direction and stake or flag the locations of site-specific and representative site features. Site-specific and representative site features include, but are not limited to, as applicable:

1. wetlands, watercourses and vernal pools;
2. forest/forest edge areas;
3. agricultural soil areas;
4. sloping terrain;
5. proposed stormwater control features;
6. nearest residences;
7. Site access and interior access road(s);
8. utility pads/electrical interconnection(s);
9. clearing limits/property lines;
10. mitigation areas; and
11. any other noteworthy features relative to the Project.

A photolog graphic must accompany the submission, using a site plan or a detailed aerial image, depicting each numbered photograph for reference. For each photo, indicate the photo location number and viewpoint direction, and clearly identify the locations of site-specific and representative site features show (e.g., physical staking/flagging or other means of marking the subject area).

The submission shall be delivered electronically in a legible portable document format (PDF) with a maximum file size of <20MB. If necessary, multiple files may be submitted and clearly marked in terms of sequence.

Facility Construction

42. Has the Applicant met with the DEEP Stormwater Division? If yes, when? Please describe any recommendations, comments or concerns about the project provided by the Stormwater Division.
43. How does construction of the stormwater basin at the site comply with DEEP Stormwater Permit Appendix I, I(2)(a)(ii) regarding 50-foot wetland buffers from the limit of disturbance?
44. Would the proposed stormwater basin retain water during the Spring due to an elevated water table?
45. Does the Applicant intend to consult with the DEEP Dam Safety program regarding permitting requirements, if any, for the proposed stormwater basin?
46. Referring to Site Plan GD-1, Note 1, what areas need to be re-graded?
47. Where would the excess cut from construction activities be disposed of?
48. Has a comprehensive geotechnical study been completed for the site to determine if site conditions support the overall Project design? If so, summarize the results. If not, has the Applicant anticipated and designed the Project with assumed subsurface conditions? What are these assumed conditions?

Facility Maintenance

49. Would the Applicant store any replacement modules on-site in the event solar panels are damaged or are not functioning properly? If so, where?
50. Is a livestock/agricultural co-use plan proposed for the site? If so, submit co-use plan details.