



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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VIA ELECTRONIC MAIL

November 6, 2019

Lee D. Hoffman, Esq.
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702

RE: **PETITION NO. 1385** – Cobb Road, LLC petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 1.95-megawatt AC solar photovoltaic electric generating facility on approximately 11.16 acres located at 20-1 Short Hills Road, Old Lyme, Connecticut and associated electrical interconnection.

Dear Attorney Hoffman:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than November 20, 2019. To help expedite the Council's review, please file individual responses as soon as they are available.

Please forward an original and 15 copies to this office, as well as a copy via electronic mail. In accordance with the State Solid Waste Management Plan, the Council is requesting that 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 November 20, 2019 deadline.

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,

Melanie A. Bachman
Executive Director

MB/MP/emr

c: James P. Schwartz, Managing Member, Cobb Road, LLC

**Petition No. 1385
Interrogatories
Set One
November 6, 2019**

Project Development

1. If the project is approved, identify all permits necessary for construction and operation and which entity will hold the permit(s).
2. Would the Petitioner sell all of the electricity and renewable energy certificates (RECs) it expects to generate with the proposed project to Eversource?
3. What authority approves the power purchase agreement (PPA) for the facility? Has a PPA with Eversource been executed? If so, at what alternating current megawatt output? If not, when would the PPA be finalized?
4. What is the length of the PPA? Are there provisions for any extension of time in the PPA? Is there an option to renew?
5. Is the alternating current megawatt capacity of the facility fixed at a certain amount per the PPA? Is there an option within the PPA to allow for changes in the total output of the facility based on unforeseen circumstances?
6. If the PPA expires and is not renewed and the solar facility has not reached the end of its lifespan, will the Petitioner decommission the facility or seek other revenue mechanisms for the power produced by the facility?
7. Would the petitioner participate in the ISO-NE Forward Capacity Auction? If yes, which auction(s) and capacity commitment period(s)?

Proposed Site

8. Would the Petitioner lease or purchase the subject property to develop the project? If the property is to be leased for the purposes of the project, in the lease agreement, are there any provisions related to site restoration at the end of the project's useful life? If so, please provide any such provisions.
9. Page 6 of the Petition, Section 3.2.2 states, "Currently, the immediate surrounding parcel is in the process of being developed for residential subdivisions by a private developer." Please identify this parcel by property owner and lot number.
10. The Viewshed Analysis Map notes that, "Proposed solar panels to be mounted on approximately 10' AGL support structures." Does this mean that the distance from grade to the bottom edges of the solar panels would be not more than 10 feet? Or is 10 feet AGL a conservative maximum height that would not be exceeded by the proposed solar panel installation? Please explain.

11. Referencing the Phase 1B Cultural Resources Reconnaissance Survey, page 25, it notes, “As mentioned above, none of the archaeological deposits identified within the Locus 1 do not retain research potential...” Was “...none of the archaeological deposits identified within Locus 1 retain research potential...” intended (emphasis added)?
12. What is the operational life of the facility?
13. Page 11 of the Petition, Section 3.7 notes that, “Key assumptions in estimating the Project’s decommissioning costs include the fact that fencing, electrical cabinetry, solar racks, solar panels, wiring and all other equipment are one hundred percent (100%) recyclable...” However, Under Appendix B of the Petition – Decommissioning Plan, Step 2, states that, “The panels will either be recycled, reused at another project or transported to an appropriate disposal if they can neither be reused nor recycled.” Please explain why page 11 of the Petition notes that the panels are assumed to be 100 percent recyclable while Appendix B has a disposal option.
14. Page 11 of the Petition, Section 3.7 notes that, “When the operation of the Project has been discontinued, or the Facility has been decommissioned, abandoned or has reached the end of its useful life, Cobb Road plans to remove the Facility within 90 days of discontinued operations.” Explain what is meant by “abandoned” in this context.
15. Page 6 of the Petition notes, “The nearest residence is located approximately 750 feet south of the Project Area.” Please provide the address of this residence.

Energy Production

16. Have electrical loss assumptions been factored in to the output of the facility? What is the output (MW AC) at the point of interconnection?
17. Explain why a solar panel orientation to the south with an angle at 25 degrees above the horizontal was selected for this facility. Is the project designed to maximize annual energy production or peak load shaving?
18. What is the projected capacity factor (expressed as a percentage) for the proposed project?
19. What is the efficiency of the photovoltaic module technology of the proposed project?
20. Would the power output of the solar panels decline as the panels age? If so, estimate the percent per year.
21. Is the project being designed to accommodate a potential future battery storage system? If so, please indicate the anticipated size of the system, where it may be located on the site, and the impact it may have on the PPA.
22. Would the impact of soft or hard shading reduce the energy production of the proposed project? If so, was this included in the proposed project’s capacity factor?
23. Could the project be designed to serve as a microgrid?
24. 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?

Site Components and Solar Equipment

25. Provide the specifications sheet for the proposed solar photovoltaic panels.
26. Provide the following information regarding the Project solar panels:
 - a) What is the anticipated size of the panels? How many panels would each rack hold?
 - b) Will the panels be mounted in a portrait or landscape fashion?
 - c) What is the minimum and maximum overall height of the panels above grade?
27. Were string inverters considered for this project? If so, what factors led the current design of several large inverters rather than the use of string inverters? Would the use of string inverters rather than large inverters allow the Petitioner to reduce the footprint of the project?
28. Referencing page 2 and Appendix H of the Petition, there would be 12 inverters at 150 kW AC each for a total of 1.8 MW AC. Would 13 inverters be required to achieve 1.95 MW AC? Explain.
29. What is the length of the screw anchors (that support the racking systems) and to what depth would the anchors be spun into the ground to provide the required structural stability? How would the screw anchors be spun into the ground? In the event that ledge is encountered, what methods would be utilized for installation? Are any impacts to groundwater quality anticipated? If so, how would the Petitioner manage and/or mitigate these impacts?
30. 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 animals?
31. The proposed aisle width between the solar panel rows from panel edge to panel edge is about 13.4 feet per Sheet SP-2. What is the minimum aisle width at which the solar panel rows could be installed?

Interconnection

32. Is the project interconnection required to be reviewed by ISO-NE?
33. Is a System Impact Study from Eversource required for the interconnection process? If yes, has Eversource confirmed that the existing distribution can accommodate the 1.95 MW AC of the facility, or would the existing distribution need to be upgraded?
34. What is the status of the interconnection agreement with Eversource?
35. Would the proposed electrical interconnection be underground from the solar facility to Proposed Utility Pole #5 and then continue overhead to reach Eversource's existing distribution? Approximately how tall would the five proposed utility poles be?
36. Page 11 of the Petition, Section 3.7 notes that, "The proposed facility would interconnect to the electrical grid via an existing distribution pole located within the Eversource ROW to the south." Is the existing Eversource distribution three-phase or would it have to be upgraded from single-phase to three-phase? What is the line voltage of the existing Eversource distribution, e.g. 13.8-kV?

Public Safety

37. Would the project comply with the National Electrical Code, the National Electrical Safety Code and any applicable National Fire Protection Association codes and standards?
38. Page 8 of the Petition, Section 3.3.4 notes that, “[T]he main point of ingress/egress to the Facility is located in the southwest corner of the Project Area.” Was “southeast corner of the Project Area” intended?
39. Two access gates would be located on the western portion of the fenced solar facility. What would these access gates be used for?
40. Where is the nearest federally-obligated airport? Is a glare analysis required to comply with FAA policy?
41. With regard to emergency response:
 - a. Is outreach and/or training necessary for local emergency responders in the event of a fire or other emergency at the site?
 - b. How would site access be ensured for emergency responders?
 - c. In the event of a brush or electrical fire, how would the Petitioner mitigate potential electric hazards that could be encountered by emergency response personnel?
 - d. Could the entire facility be shut down and de-energized in the event of a fire? If so, how?

Environmental

42. Referencing Appendix F – Wetland & Vernal Pool Protection Plan, Reporting Section, it states, “Following completion of the project, a summary report will be prepared by the Environmental Monitor documenting compliance with the Wetland and Vernal Pool Protection Plan and submitted to the Permittee.” If approved, could the Environmental Monitor’s final summary report also be provided to the Council?
43. Could the project be redesigned to reduce impacts to core forest and the critical terrestrial habitat of the vernal pool? Explain.
44. Please provide the following:
 - a. Acreage of tree clearing only;
 - b. Acreage of tree clearing and grubbing;
45. How would invasive species be managed? If the project is approved, could a 5-year invasive species management plan be submitted?
46. With regard to herbicide and pesticide use, would such uses be avoided per the voluntary measures on page 36 of the Environmental Assessment, or would herbicides and pesticides be used “only when necessary” with spot treatments per page 27 of the Petition? Would they be required to control invasive species?
47. Did the Petitioner conduct a Shade Study Analysis? Would shading present any challenges for the proposed project? If so, provide acreage of trees that would be removed to mitigate for shading? How were the limits of tree shading determined? Will stumps be left in place in these areas?

48. What effect would runoff from the drip edge of each row of solar panels have on the or site drainage patterns? Would channelization below the drip edge be expected? If not, why not?

Facility Construction

49. Would noise from inverters and transformer comply with DEEP Noise Control Regulations?
50. Has the Petitioner submitted an application for a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities from the Department of Energy and Environmental Protection?
51. Please provide a copy of CTDEEP's *Appendix I, Stormwater Management at Solar Array Construction Projects* referred to on page 37 of the Environmental Assessment.
52. Has the Petitioner considered the feasibility of installing a level spreader at the end of the proposed detention basin spillways to promote more of a sheet flow stormwater release?
53. With regard to earthwork required to develop the site, provide the following:
- a) What is the desired slope within the solar array areas?
 - b) Could the solar field areas be installed with minimal alteration to existing slopes?
 - c) If minimal alteration of slopes are proposed, can existing vegetation be maintained to provide ground cover during construction?
 - d) Estimate the amounts of cut and fill in cubic yards for the access road(s)
 - e) Estimate the amounts of cut and fill in cubic yards for solar field grading.
 - f) If there is excess cut, will this material be removed from the site property or deposited on the site property?
54. Would topsoil be stripped from the site prior to grading? If so, would the topsoil be spread over the disturbed areas once grading is complete? If not, how would growth of new vegetation/grasses be promoted within the graded areas if nutrient rich soils are not present?
55. What is the minimum access road width required for post-construction use?
56. 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 Petitioner anticipated and designed the Project with assumed subsurface conditions? What are these assumed conditions?

Maintenance Questions

57. Describe the type and frequency of anticipated vegetation management for the site. Include areas inside and outside of the perimeter fence, as well as detention basins and swales, as applicable.
58. Would the installed solar panels require regular cleaning or other, similar, maintenance? If so, describe cleaning procedures including substances used. Would this maintenance activity have any impacts to water quality?
59. How does the developer intend to promote and maintain grasses or other ground cover beneath the panels and within the solar array rows? Would bare ground areas or patchy growth increase site runoff?

60. If applicable, what type of methods would be employed to clean the panels and how often?
61. Would the petitioner store any replacement modules on-site in the event solar panels are damaged or are not functioning properly? If so, where? How would damaged panels be detected?