



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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VIA ELECTRONIC MAIL

December 3, 2020

Paul R. Michaud, Esq.
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RE: **PETITION NO. 1431** – SunJet Energy, 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 1.99-megawatt AC solar photovoltaic electric generating facility and associated electrical interconnection located at 0, 78 and 84 Thomson Road in Bethlehem, Connecticut.

Dear Attorney Michaud:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than December 29, 2020. To help expedite the Council's review, please file individual responses as soon as they are available. At this time, consistent with the Council's policy to prevent the spread of Coronavirus, please submit an electronic copy only to siting.council@ct.gov. However, please be advised that the Council may later request one or more hard copies for records retention purposes.

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,

s/Melanie Bachman

Melanie Bachman
Executive Director

MB/RM

Petition No. 1431
SunJet Energy, LLC- Bethlehem

Interrogatories
December 3, 2020

Project Development

1. What is the length of the lease with the landowner? Does the lease contain provisions to extend the lease for continued use as a solar facility? If so, over what time interval(s)?
2. Referring to Petition p. 4, does the ZREC contract contain provisions for a five year extension?
3. Once the ZREC contract expires and the solar facility has not reached the end of its lifespan, would the Petitioner decommission the facility or seek other revenue mechanisms for the power produced by the facility?
4. If the project is approved, identify all permits necessary for construction and operation and which entity will hold the permit(s)?
5. Would the Petitioner participate in the ISO-NE Forward Capacity Auction? If yes, which auction(s) and capacity commitment period(s)?
6. Referring to Petition p. 4, did the Town present project recommendations during the in-person meetings? If so, describe the recommendations and were these recommendations included within the project design?

Proposed Site

7. What is the municipal zoning designation of the proposed site?
8. 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)? Is the Project area located within lands enrolled in the Public Act 490 Program? If so, how would the project affect the status of such land?
9. 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? If so, can the facility be developed on such land? Please explain.
10. Provide the distance, direction and address of the nearest property line and nearest off-site residence from the solar field perimeter fence.
11. Referring to Petition Exhibit I, why was a portion of the project footprint shifted from more moderate grades along the crest of the hill to the steeper slopes on the west side of the hill?
12. What is the length of the new section of the site access drive? Describe any upgrades to the existing driveway that are necessary for site access.

13. Does the lease agreement contain any provisions related to site restoration at the end of the project's useful life? If so, describe such provisions.
14. The Petition Decommissioning Plan (Exhibit G) appears to be for another site. Please submit a project specific decommissioning plan that includes provisions within the lease agreement, if any, related to site restoration at the end of the project's useful life.

Energy Output

15. Have electrical loss assumptions been factored into the output of the facility (i.e. soft shading, average weather conditions, equipment)? What is the output (MW AC) at the point of interconnection with these loss assumptions?
16. What is the projected capacity factor (expressed as a percentage) for the proposed project? Would the capacity factor decline over time? If so, what are the contributing losses?
17. Would the power output of the solar panels decline as the panels age? If so, estimate the percent of loss per year.
18. 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 ZREC agreement.
19. Does the design of the Project, including the method of interconnection, allow it to serve as a microgrid?
20. 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?
21. 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?

Site Components and Solar Equipment

22. Revise the site plans to include the following;
 - a. locations and height of the four proposed utility poles required for project interconnection;
 - b. solar field, fence, access road, landscaping and utility pad detail;
 - c. legible pre-construction and post-construction contour lines;
 - d. temporary sediment trap and permanent stormwater basin detail;
 - e. limits of clearing and grubbing;
 - f. areas of subsurface trenching required for the tracking system and electrical conduits;
 - g. site construction phasing/sequencing details;
 - h. environmental mitigation notes and fuel spill prevention plan;
 - i. type and locations of erosion and sediment controls; and
 - j. laydown area.
23. 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?

24. Provide the following information regarding the solar array system:
- to what depth would the racking posts be driven into the ground to meet racking system structural specifications?
 - how many panels will each rack hold?
 - will the panels be mounted in a portrait or landscape fashion?

Interconnection

25. Is the project interconnection required to be reviewed by ISO-NE?
26. Is the existing distribution three-phase or would it have to be upgraded from single-phase to three-phase?
27. Referring to Petition p. 7, what component of the interconnection upgrade would be completed by the end of this year?

Public Safety

28. Would the project comply with the National Electrical Code, the National Electrical Safety Code and any applicable National Fire Protection Association codes and standards including CT State Fire Prevention Code, Ground Mounted Photovoltaic System Installations, Section 11.12.3?
29. Where is the nearest federally-obligated airport? Is an FAA glare analysis required for this project?
30. Referring to Petition page 23, has the Petitioner received a response from the FAA regarding the Study Point Location filing? If so, provide the response.
31. With regard to emergency response:
- does the project developer intend on conducting outreach and/or training for local emergency responders in the event of a fire or other emergency at the site?
 - how would site access be ensured for emergency responders?
 - 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?
 - could the entire facility be shut down and de-energized in the event of a fire? If so, how?

Environmental

32. Referring to Petition p. 5, provide the Wetland Delineation and Impact Analysis, and the Habitat Review and Assessment reports/documentation.
33. Referring to Petition p. 16, provide more detail regarding the phased sedimentation and erosion control plan that will be implemented to protect Wetland 2.
34. Referring to Petition p. 19, what is the status of the Department of Energy and Environmental Protection (DEEP) Natural Diversity Database review?
35. Referring to Petition pp. 18-19, can the solar field area be seeded with grasses that provide habitat for grassland bird species?

36. Has shading from nearby trees been factored into the project design? Is tree cutting anticipated now or in the future to reduce solar panel shading? If so, in what areas?
37. Can the facility perimeter fence be designed to include a minimum 6-inch gap between the fence fabric and ground level to allow for small wildlife movement through the site?
38. Are there any wells on the site or in the vicinity of the site? If so, would construction activities, such as driving posts, damage area wells or affect groundwater quality? How would the Petitioner manage and/or mitigate these impacts?
39. Are there any public recreational areas/scenic roads near the site that would have visibility of the proposed project? If so, describe project visibility from these areas.
40. Describe the visibility of the site from abutting residences and roads. Describe measures to reduce project visibility from these areas.
41. Referring to Petition p. 13, what is the status of the filing to the State Historic Preservation Office?
42. Referring to Petition p. 22, what methodology was used to determine that operational noise from the Project inverters/transformers would not exceed DEEP noise standards at the property boundaries? Was noise data provided by the manufacturer?
43. 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.
44. 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

45. Has the Petitioner submitted an application for a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities from DEEP? If yes, on what date?
46. Has the Petitioner met with the DEEP Stormwater Division? If yes, on what date? Please describe any recommendations, comments or concerns about the project provided by the Stormwater Division.
47. Provide the area of the solar field (in acres and as a percentage of the total) with slopes equal to or greater than 15 percent for both pre-construction and post-construction conditions.
48. Referring to Petition Exhibit H (Stormwater Analysis), were the site soil conditions downgraded by one soil group and the solar panels modeled as impervious, as recommended in DEEP's draft Appendix I, Stormwater Management at Solar Array Construction Projects document? Please explain.
49. Are energy dissipators, as depicted in DEEP's draft Appendix I, Stormwater Management at Solar Array Construction Projects document-Figure 2, proposed for this Project? If not, why not?
50. Are the proposed stormwater basins excavation-type basins or berm-type basins? If they are berm-type basins, has the Petitioner consulted with the DEEP Dam Safety program regarding potential permitting requirements?
51. Do the stormwater infiltration basins have an emergency spillway with a discharge point that flows onto abutting properties? If so, can the basins be moved or altered to allow for discharged stormwater to remain on the site parcel for a longer period of time?
52. Estimate the amounts of cut and fill in cubic yards for the project. If there is excess cut, will this material be removed from the site property or deposited on the site property?
53. With regard to earthwork required to develop the site, provide the following:
 - a. will the site be graded? If so, in what areas?
 - b. what is the desired slope within the solar array area?
 - c. can the solar field be installed with minimal alteration to existing slopes?
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. How would the posts that support the racking system be driven into the ground? In the event that ledge or boulders are encountered, what methods would be utilized for installation?

56. Has a comprehensive geotechnical study been completed for the site to determine if site soil 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. Would the Petitioner remove snow that accumulates on the panels? Would snow accumulation on the solar panels affect the output of the facility? Under what circumstances would snow be removed? Describe snow removal methods.
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. Revise the Operations and Maintenance Plan to include procedures for the stormwater basins and swales, landscaping, solar panel cleaning and solar array vegetation management that includes site specific DEEP NDDDB species protective measures, if applicable.
60. How would damaged panels be detected? Would the Petitioner store any replacement modules on-site in the event solar panels are damaged or are not functioning properly? If so, where?