



## STATE OF CONNECTICUT

### CONNECTICUT SITING COUNCIL

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### VIA ELECTRONIC MAIL

November 17, 2020

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RE: **PETITION NO. 1427** – SunJet Energy, LLC notice of election to waive exclusion from Connecticut Siting Council jurisdiction, pursuant to Connecticut General Statutes §16-50k(e), and petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 1.0-megawatt or less AC solar photovoltaic electric generating facility and associated electrical interconnection located at 0 Matthews Street and 125 Hill Street, Bristol, Connecticut.

Dear Attorney Michaud:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than December 1, 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](mailto: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/FC

**Petition No. 1427**  
**SunJet Energy, LLC**

**Interrogatories - Set One**  
**November 16, 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. Does the lease agreement contain any provisions related to site restoration at the end of the project's useful life? If so, please provide any such provisions.
3. Petition p. 2 states the Petitioner has a 20-year contract with the City of Bristol and Eversource. Petition p. 2 further states the Virtual Net Metering Agreement (VNM) with the City is over a 15-year term. Does the VNM agreement include a five year option for an extension?
4. Once the 20-year contract with Eversource and the City 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?
5. If the project is approved, identify all permits necessary for construction and operation and which entity will hold the permit(s)?
6. Would the petitioner participate in the ISO-NE Forward Capacity Auction? If yes, which auction(s) and capacity commitment period(s)?

**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)? How would the project affect the use classification?
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?
10. Provide the distance, direction and address of the nearest property line and nearest off-site residence from the solar field perimeter fence.

**Energy Output**

11. Have electrical loss assumptions been factored into the output of the facility? What is the output (MW AC) at the point of interconnection with these loss assumptions?
12. What is the projected capacity factor (expressed as a percentage) for the proposed project? For clarity, is this capacity factor based on a ratio of AC MWh to AC MWh, or a ratio of AC MWh to DC MWh?
13. Would the power output of the solar panels decline as the panels age? If so, estimate the percent of per year.
14. 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 Virtual Net Metering agreement.
15. Would the impact of soft or hard shading reduce the energy production of the proposed project? If so, was this included in the proposed projects capacity factor?
16. Does the design of the Project, including the method of interconnection, allow it to serve as a microgrid?
17. 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?
18. 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**

19. Provide the following information regarding the Project solar panels:
  - a) What is the length of the driven posts and to what depth would the posts be driven into the ground to provide the required structural stability?
  - b) How many panels will each rack hold?
  - c) Will the panels be mounted in a portrait or landscape fashion?
  - d) What is the minimum overall height of the panels above grade at maximum tilt position?
20. Revise the site plan to include the following:
  - a. locations and height of the four proposed utility poles required for the Project interconnection;
  - b. dimensions of the proposed utility pads;
  - c. limits of clearing and grubbing;
  - d. areas of subsurface trenching required for the tracking system and electrical conduits;
  - e. site construction phasing/sequencing details; and
  - f. signature and stamp of the Professional engineer licensed in the State of Connecticut that prepared the plan.

21. 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?
22. What is the length of the proposed access drive?
23. The proposed access gate is across from a residential property. Is it possible to relocate the access gate/road to a location opposite Peppermint Lane or Wintergreen Lane to prevent direct views into the facility from this residence? If not, can a gate with a screening treatment be installed?
24. What is the aisle width between the solar panel rows from panel edge to panel edge?

### **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?

### **Public Safety**

27. 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?
28. Where is the nearest federally-obligated airport? Is a glare analysis required to comply with FAA policy?
29. Petition page 22 states “The Project Site information has been submitted to the Federal Aviation Administration for review and approval.” Has the Petitioner received a response from the FAA? If so, provide such response.
30. With regard to emergency response:
  - a. 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?
  - 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**

31. The Stormwater Management Report page 1 states approximately 5.98 acres of the site require clearing and grubbing. Petition page 14 states the project occupies approximately 5.3 acres of hayfield. Clarify the amount of clearing and grubbing. Would grubbed areas be stabilized with vegetative growth prior to installing the solar panel racking system?
32. Provide the initial wetland technical report referenced on page 15 in the Petition.

33. 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.

34. Could the Petitioner include a minimum 6-inch gap between the fence fabric and ground level to allow for small wildlife movement through the site?

35. Are there any wells on the site or in the vicinity of the site? If so, how would the petitioner protect the wells and/or water quality from construction impacts?

36. 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? Are energy dissipators, as depicted in DEEP's draft Appendix I, Stormwater Management at Solar Array Construction Projects-Figure 2, proposed for this Project? If not, why not?

37. Are any impacts to groundwater quality anticipated from installing support posts for the solar racking? If so, how would the petitioner manage and/or mitigate these impacts?

38. Where is the nearest public recreational area from the proposed site? Describe the visibility of the proposed project from this recreational area.

39. Referring to Petition p. 22, what methodology was used to determine that operational noise from the Project inverters/transformers would not exceed Department of Energy and Environmental Protection (DEEP) noise standards at the property boundaries?

40. 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 shown (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**

41. Has the petitioner submitted an application for a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities from DEEP?
42. Has the petitioner 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. Has the petitioner consulted with the DEEP Dam Safety program regarding permitting requirements, if any, for the proposed stormwater basins?
44. 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 areas?
  - c) Could the solar field areas be installed with minimal alteration to existing slopes?
  - d) If minimal alteration of slopes are proposed, can existing vegetation be maintained to provide ground cover during construction?
  - e) Estimate the amounts of cut and fill in cubic yards for the project.
  - f) If there is excess cut, will this material be removed from the site property or deposited on the site property?
45. 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?
46. 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?
47. 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?
48. What is the anticipated sequence of construction? During what time of year would each sequence ideally occur? Does this account for possible seasonal construction restrictions due to the presence of protected species?

### **Maintenance Questions**

49. 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.
50. 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.
51. Petition page 9 states “Project Site vegetation is typically mowed three (3) times annually.” Describe how this will be consistent with the site management protection measures noted in the DEEP NDDB determination letter, dated June 29, 2020.
52. The site plan does not show an access gate to the stormwater basins. How would site personnel access the stormwater basins for post construction maintenance?
53. 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?
54. 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?