



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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VIA ELECTRONIC MAIL

August 10, 2020

Steve Broyer
Ecos Energy LLC
222 South 9th Street
Suite 1600
Minneapolis, MN 55402

RE: **PETITION NO. 1395A** – Windham Solar LLC amended petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of one 1.0-megawatt (MW) and one 0.99 MW solar photovoltaic electric generating facilities located at 31 Benz Street, Ansonia, Connecticut.

Dear Mr. Broyer:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than August 28, 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 A. Bachman

Melanie A. Bachman
Executive Director

c: Michael Melone, Windham Solar LLC c/o Allco Renewable Energy Limited

MB/RM

**Petition No. 1395A
Interrogatories
Set One
August 10, 2020**

Project Development

1. Identify all permits necessary for construction and operation and what entity will hold the permit(s)?
2. Referring to Petition p. 3, what is the length of the two ZREC agreements with United Illuminating? Is there an option within the agreement to allow for changes in the total output of the facility based on unforeseen circumstances or resulting from a reduced site footprint?
3. If the ZREC agreement is not renewed at the end of the contracts 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 electricity produced by the facility?
4. Is the project interconnection required to be reviewed by ISO-NE?

Proposed Site

5. Petition p. 13 and Site Plan Sheet 3 list distances from the solar array to the residences on the east and west sides of the project. No similar information is given for the distances to the residences on the south side of the array, across Benz Street. Please revise the site plan to show this information. Additionally, referring to p. 13, how many panels and rows would have to be removed to achieve a minimum distance of 100 feet from the solar array to the residences on Benz Street?
6. Petition p. 5 states *the array along with the stormwater facility associated with this work will be located a minimum of 50-feet from the property line*; however, the stormwater basin appears closer to the property line than 50 feet. How many modules would need to be removed to have the stormwater basin a minimum of 50 feet from the property line?
7. Referring to Petition p. 6, can the existing paved driveway be used for the project?
8. Referring to p. 14, would the proposed plantings present a shading issue as they mature? If so, would the plantings be trimmed or replaced?
9. Referring to Site Plan Sheet 9 (Project Profile), how will the arborvitae along Benz Street be able to screen the solar arrays from the road if they are at a higher elevation?

Energy Output

10. Does the design of the Project, including the method of interconnection, allow it to serve as a microgrid?

11. Is the Project designed to accommodate a potential battery storage system?
12. Are the string inverters installed so that if one section of the solar array experiences an electrical problem that causes the section to shut down, the other sections of the solar array would still operate and transmit power to the local distribution system?

Site Components and Solar Equipment

13. 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?
14. The solar panels are identified as 430 watts. Is it feasible to use a higher power output rated panel to reduce the project footprint?

Public Safety

15. Referring to petition p. 12 and Site Plan Sheet 3, what methodology was used to determine that operational noise from the Project inverters/transformers would not exceed Department of Energy and Environmental Protection noise standards at the property boundaries?
16. What is the anticipated noise level resulting from ground screw installation?
17. Where is the nearest federally-obligated airport? Is a glare analysis required to comply with FAA policy?
18. Referring to petition p. 7 it states *UI has performed a system impact study for the Facilities and found that the Facilities cannot be connected safely and reliably with no significant upgrades.* What significant interconnection upgrades are required?
19. Referring to Site plan Sheet 3, has there been any discussion with the local fire marshal regarding compliance with the CT State Fire Prevention Code, Ground Mounted Photovoltaic System Installations section 11.12.3 in regards to site design clearance requirements around the solar array? If not, when will the petitioner contact the Fire Marshall?
20. Are there any drinking water wells in the vicinity of the site? If so, given that removal of bedrock may be required during site construction, how will adjacent wells be impacted?

Facility Construction

21. For the proposed electrical equipment concrete pad, would the concrete be pre-cast or poured on site? What other concrete components are proposed at the site? Where and by what method would cement trucks be cleaned at the site?
22. List the types of construction equipment that would be used at the site.
23. Would fuels be stored on site during construction? If so, in what location(s)? Please submit a spill prevention and control plan for the site.

24. Referring to Site Plan Sheet 3, please explain the feasibility of installing a decorative fence/gate along the perimeter of the Project facing Benz Street.
25. Referring to the fence detail, can the perimeter chain link fence be designed so that a six-inch gap would be present between the fence fabric and ground level to allow for small wildlife movement through the site?
26. Referring to Site Plan Sheet 4, a callout box notes *rock outcroppings to be investigated for solar racking constraints*. What issues are in these areas? Are screw foundations proposed for the entire site or just in these areas? What other methods will be used to overcome racking constraints? basin
27. Clarify the NOTES on Site Plan Sheets 4 and 5 where it mentions a Siting Council approved Project on January 18, 2018.
28. Site Plan Sheet 8 photos show boulders and exposed bedrock. Given that a geotechnical survey has not been conducted (Petition p. 4) how will the proposed stormwater swales and basins be installed if shallow or exposed bedrock is encountered?
29. What is the recommended soil depth for the selected seed mixes for the solar array, swales, and basins? Please provide the specification sheets or source of the soil depth information. How much topsoil will be imported into the site to ensure seedlings have sufficient soil for root establishment?
30. What are the estimated quantities of cut and fill? If there is excess cut, boulder or ledge material, where will this material be disposed of?
31. How much old fill material, identified on the property by Northstar Environmental Management, will need to be removed prior to the installation of the panel racks? How much soil is needed to fill in this excavated area?
32. Referring to Site plan Sheet 6, where is the rip rap level spreader discharging to? Is the discharge point on the street line? Are grades such that basin discharge would flow onto Benz Street?
33. Referring to Site Plan Sheet 10;
 - a) Invasive Species item #2 states only straw bales should be used, yet the all of site plans include references to hay bales, please clarify.
 - b) Sedimentation and Erosion Control Plan – what areas will require stabilization by erosion control blankets (ECB)? Is it possible to use ECB with natural fiber netting?
 - c) Sedimentation and Erosion Control Plan – a drainage narrative prepared by CLA Engineers mentioned. Please provide a copy of the narrative.
 - d) Sedimentation and Erosion Control Plan – the project is described as not being phased. Explain the rationale for not phasing the project into 2 or 3 smaller clearing and construction phases.
 - e) Sedimentation and Erosion Control Sequence – provide more detail as to what activities will occur during rough grading. Is the entire site being striped of soil and stockpiled? Where are stumps and other non-suitable materials being disposed of?
 - f) Sedimentation and Erosion Control Sequence – when will seeding of the swales and detention basins occur?

34. Referring to petition p. 19, project construction is estimated at 5 months. When is the anticipated start date? What are the typical construction hours and work days of the week? Are these hours/days consistent with City of Ansonia ordinances?
35. If the proposed construction schedule has a majority of work occurring during winter months, provide detailed winter work procedures that address construction erosion and sediment control as well as soil stabilization.
36. What effect would runoff from the drip edge of each row of solar panels have on site drainage patterns? Would channelization below the drip edge be expected? If not, why not?

Environmental

37. 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?
38. Referring to Petition p. 11, was an asbestos and lead-based paint survey conducted for the site buildings that will be demolished? If so, were these materials found? When would removal of hazardous materials occur?
39. Clarify the amount of tree clearing necessary to develop the site. (several different values are provided in the petition narrative and on the site plans).
40. The Petition Phase I Environmental Analysis and the Wetland Report describe a vernal pool in the northwest portion for the site. Was an analysis of the vernal pool conducted? If so, please submit. If not, why not?
41. What is the buffer from the edge of Project site clearing to the edge of the vernal pool? Is this distance consistent with the vernal pool envelope buffers that are recommended within the *2015 U.S. Army Corps of Engineers Vernal Pool Best Management Practices*?
42. Provide a diagram that depicts pre and post project development effects on the vernal pool envelope and critical terrestrial habitat. Include the area, in square feet and by percentages) of pre and post construction development effects.
43. Referring to the Petition Wetland Report, provide an overlay of the project onto the wetland “sketch map”. Include solar arrays, swales fencing, clearing limits and a scale.
44. How was the Petition Wetland Report “sketch map” flagging information accurately transferred to the Site Plan Sheet 1.1? Was the flagging on Site Plan Sheet 1.1 then used to create the wetland delineation on the other Site Plans?
45. Referring to the Petition Wetland Report, are the groundwater discharge/seep areas that were identified in the upland areas considered wetlands?
46. How would site grading and development of the solar field affect the groundwater discharge/seep areas and their function as providing water to the down gradient wetland/vernal pool?

47. How will the storm northern stormwater basin affect the adjacent wetland in terms of surface sheet flow that would no longer reach the wetland but instead be captured within the stormwater basin?
48. Has the Petitioner designed the site in accordance with DEEP's proposed revisions to the General Permit, including draft Appendix I, *Stormwater Management at Solar Array Construction Projects*? Please explain how the Project would comply.
49. Why was a 50-foot wetland buffer included on the site plans? What is the 50-foot buffer supposed to represent if the limit of construction is 12.1 feet from the wetland at its closet point, as indicated on Site Plan Sheet 5?
50. DEEP's proposed revisions to the General Permit, including draft Appendix I, *Stormwater Management at Solar Array Construction Projects* specifies a 100 foot buffer between the solar array and wetlands or waters. Given that the proposed solar array is within 100 feet of the wetland, how many panels/rows would have to be removed to create a 100 foot buffer? How would this affect the project output?
51. Please submit photographic site documentation with notations linked to the site plans or a detailed aerial image that identifies the 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 Maintenance

52. What is the anticipated frequency of clearing in areas outside of the solar array perimeter fence and how would clearing be accomplished if stumps are to remain?
53. Would pesticides or herbicides be used at the site? If so, specify anticipated products and use.
54. Would the Petitioner remove snow that accumulates on the panels? If so, at what storm snowfall depth? Describe snow removal methods.
55. 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.
56. 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?
57. What is the inspection frequency for the permanent detention basins and swales? How will sediment be removed and transported from these features? Where would accumulated sediment be disposed of?
58. Referring to the Decommissioning Plan, is the intent to remove the swale/ detention basins to restore pre-construction hydrological conditions?