



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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VIA ELECTRONIC MAIL

September 1, 2020

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

RE: **PETITION NO. 1424** - Southington Solar One, 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 4.725-megawatt AC solar photovoltaic electric generating facility located at 1012 East Street, Southington, Connecticut, and associated electrical interconnection.

Dear Attorney Hoffman:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than September 22, 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

c: William Herchel, Southington Solar One, LLC
Bryan Fitzgerald, Southington Solar One, LLC

Petition No. 1424
Southington Solar One, LLC

Interrogatories - Set One
September 1, 2020

Project Development

1. If the project is approved, identify all permits necessary for construction and operation, and indicate which entity will hold the permit(s).
2. Referencing page 5 of the Petition, Southington Solar One, LLC states that, “Alternatively, in the event virtual net metering capacity becomes available, energy produced by the Project may be delivered to Eversource...” As an update, what is the status of the availability of virtual net metering capacity for this project? Would the project be viable based on the market-based tariff if virtual net metering is not available?
3. Referencing page 5 of the Petition, the Petitioner notes that, “Energy produced by the Project will be sold to Eversource at market rates specified in the applicable utility tariff...” Would the Petitioner also sell its renewable energy certificates (RECs) it expects to generate with the proposed project? If so, to which public utility? If the RECs are to be sold to more than one public utility, provide the percentage to be sold to each public utility.
4. Would the Petitioner participate in the ISO-NE Forward Capacity Auction? If yes, which auction(s) and capacity commitment period(s)?

Energy Output

5. Have electrical loss assumptions been factored into the output of the facility? What is the output (MW AC) at the point of interconnection?
6. 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?
7. Is the project being designed to accommodate a potential future battery storage system? If so, please indicate the anticipated size of the system and where it may be located on the site.
8. 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? What are the expected losses year to year and at what point would panel cleaning be necessary?
9. Does the design of the Project, including the method of interconnection, allow it to serve as a microgrid?
10. Referring to petition p. 15:
 - a. what “infrastructure upgrades” are proposed that will improve reliability of the electrical grid?
 - b. how will reduction in energy demand during peak usage decrease energy costs for ratepayers statewide?

11. 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?
12. 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 such challenges?

Proposed Site

13. In the lease agreement with the landowner, are there any provisions related to site restoration at the end of the project's useful life? If so, please provide such provisions.
14. The "Project Area" delineation lines in Petition Tabs A and E do not match. Please provide an aerial image of project infrastructure that also includes the Petitioner's leased limits of control.
15. Clarify the size of the "Project Area" (31, 33.7 and 37.45 acre values were provided). Does the "Project Area" include the Wildflower Pollinator Area and Vernal Pool Mitigation Area?
16. Are any portions of the "Project Area" under lease by another party? If yes, please explain.
17. Please indicate the location of the Wildflower Pollinator Area on diagram. What is the size of the pollinator area?
18. Petition pp. 21-22 states sheep may be allowed to graze at the site- please provide the following:
 - a. Where on the site will the sheep be allowed to graze? If outside the solar field fence, will additional livestock fencing be necessary on the site property?
 - b. Have there been other solar projects in CT where sheep have been allowed to graze within the array area? Is there a potential of damage to the panels/wiring from grazing?
 - c. Would the specified seed mix for the solar array areas be altered to provide adequate forage?
 - d. Is a shed/shelter necessary/proposed for the site property? If so, where would it be located?
 - e. Will the sheep be leased/owned by a local farmer?
19. Is fencing allowed across the two easements within the solar field area?
20. Can the solar field fencing across the western easement be modified to include fencing that extends parallel to the easement line so that the easement area can be used for either meadow- pollinator habitat/corridor for large animal species or for the continued of the production of hay?
21. Referring to Petition p. 24, does the 1.2 acres of tree clearing include the two stormwater basins on the north side of the project site?
22. Referring to Petition p. 25, will excess material be generated from the excavation of the northern stormwater basin(s)? If so, where will excess material be disposed of?

Site Components and Solar Equipment

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. Clarify the number of panels proposed for the project – p. 11 and Site plan EC-1 have different values.
25. Would the panels be mounted in a portrait or landscape fashion? How many panels can each rack hold?
26. The petition site plans show a solar array aisle width of 17.8 feet. Why is this width necessary? Can the aisle width be reduced to minimize the Project footprint?
27. Can 400 watt or larger panels be used at the site to reduce the overall project footprint?

Interconnection

28. Referencing page 7 of the Petition, would Eversource be responsible for any interconnection work or necessary permits/approvals? If so, would the demarcation point of the Petitioner's/Eversource's control (or responsibility for permitting) be at the proposed equipment pads or at another location?
29. At what voltage will the project interconnect to on Eversource's distribution system?
30. Clarify the number of new utility poles that would be installed for Project interconnection. (14 and 7 were identified in project documents)
31. Is the project interconnection required to be reviewed by ISO-NE?

Public Safety

32. Referring to Petition p. 18, has there been any discussion with the local fire marshal regarding compliance with the CT State Fire Prevention Code, Ground Mounted Photovoltaic System Installations in regards to site design clearance requirements for access to and around the perimeter of the solar array?
33. Referring to Petition p. 18:
 - a. Would outreach and/or training be conducted for local emergency responders in the event of a fire or other emergency at the site?
 - b. 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?
 - c. Could the entire facility be shut down and de-energized in the event of a fire? If so, how?
34. Are there any drinking water wells on the site or in the vicinity of the site? If so, how would the Petitioner ensure wells and/or water quality are not impacted from construction activities?
35. What is the length of the posts and to what depth would the posts be driven into the ground to provide structural stability? Are any impacts to groundwater quality anticipated? If so, how would the Petitioner manage and/or mitigate these impacts?
36. Referring to Petition p. 49, please clarify the name and distance to the nearest federally-obligated airport.

Environmental

37. Referring to Petition p. 22, is the Vernal Pool Mitigation Area (VPMA) proposed for VP-01 or VP-02? What is the size of the VPMA?
38. Referring to Petition p. 39, why would the portion of the Critical Terrestrial Habitat (CTH) within the array area be considered developed if post-construction vegetation is similar to pre-existing conditions? Can any type of CTH habitat enhancement be used in a portion of the array area such as logs or thick layers of leaf litter?
39. What is the status of the Purple Milkweed survey? If the survey identified it on site, how will Project impacts be mitigated?
40. 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?
41. Referring to Petition Tab A p. 2 – in addition to landscaping, what other visual mitigation techniques will be employed?
42. Referring to the fence detail on Sheet DN-1, revise the specification to include a minimum 6-inch gap between the fence fabric and ground level to allow for small wildlife movement through the site, as specified on Petition p. 30.
43. Referring to Petition p. 27, does Table 3 only refer to Prime Farmland Soils? Are Farmland Soils of Statewide Importance present in areas on the site that are currently used for agriculture? If so, indicate acreage currently in use and acreage that would be available for post-construction use if not encumbered by stormwater basins or habitat enhancement areas.
44. Has the Petitioner had any meetings with the Department of Energy and Environmental Protection (DEEP) Stormwater Division regarding the Stormwater design? If so, when and with whom? Were any recommendations incorporated into the Petition site plans prior to filing with the Council?
45. The Site Plans show 5 stormwater basins. The Stormwater report specifies 4 basins. Please clarify.
46. Referring to Petition pp. 48-49, what nearby noise receptors are referred to and what would be the calculated noise levels at these receptors?

Facility Construction

47. Would the concrete be pre-cast or poured on site for the proposed electrical equipment concrete pads? What other concrete components are proposed at the site? Where and by what method would cement trucks be cleaned at the site?
48. Referring to Petition p. 14, Phasing.

- a) Phase 2 #3 states *Install remaining electrical conduit*. Where was conduit installed prior to this step? Please clarify.
 - b) Does Phase 2 #6 also include the establishment of the Wildflower Pollinator Area and Vernal Pool Mitigation Area? If not, at what point would these be established?
 - c) The heading states the project will be constructed in 6 months. The Site Plans indicate 3-4 months. Please clarify.
 - d) If work begins in October, how will the Phase 1 basins and swales be stabilized?
 - e) If work begins in October, how will the seeding in Phase 2 be accomplished? What other methods/materials will be used for winter stabilization?
 - f) How does Project timing comply with the DEEP recommended spotted turtle construction restrictions?
49. The Site Plans show the outlet and emergency overflow of Stormwater Basin 4 discharging towards an abutting property. What is the distance from the outlet structure end points to the property lines? What are the grades after the point of discharge? Will basin discharge flow onto abutting properties? Is it possible to elongate this basin to the east, thereby creating a wider buffer to the southern property line?
50. Are any of the five stormwater basins designed to be pond type detention basins? Indicate which basins and the anticipated hydro period.
51. What are the typical construction hours and work days of the week? Are these hours/days consistent with Town ordinances?
52. Has a comprehensive geotechnical study been completed for the site to determine if site conditions support the overall Project design (e.g. solar array, roads, stormwater basins)? 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

53. Provide a post-construction Operations and Maintenance Plan that includes provisions for vegetation management within and outside the fenced areas including mowing/vegetation management restrictions related to listed-species, wildlife enhancement areas, and agricultural activities, inspection/corrective action protocols for site equipment, stormwater features, and landscaping, and invasive species management within the VPMA.
54. 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?
55. How will sediment be removed and transported from stormwater features? Where would removed sediment be disposed of?
56. Would the petitioner store any replacement modules on-site in the event solar panels are damaged or are not functioning properly? If so, where?