



#SmartSolarCT
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Waterford, CT 06385
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December 5, 2019

Melanie A. Bachman
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: PETITION NO. 1385 – Interrogatories in
Connection with Petition of Cobb Road, LLC

Dear Executive Director Bachman:

I enclose an original and fifteen (15) copies of #SmartSolarCT's Interrogatories for Cobb Road, LLC in connection with the above Petition for submission to the Connecticut Siting Council ("Council"). Should the Council have any questions regarding these Interrogatories, please do not hesitate to contact me.

I hereby certify that a copy of the enclosed document was electronically mailed to the following service list today:

James P. Schwartz, Managing Member
Cobb Road, LLC
9 Novelty Lane, Unit 9B
Essex, CT 06426
jschwartz@independencesolar.com

Lee D. Hoffman
Pullman & Comley, LLC
90 State House Square
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Thank you for your time.

Sincerely,

Deb Moshier-Dunn
Coordinator, #SmartSolarCT

Enclosures



#SmartSolarCT
7 Plant Drive
Waterford, CT 06385

December 5, 2019

Melanie A. Bachman
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Interrogatories for Proposed Photovoltaic Installation
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 Executive Director Bachman,

The #SmartSolarCT team respectfully submits the following Interrogatories in regard to the above-captioned Petition (the “Petition”) and the associated Project (defined next sentence) proposed by Cobb Road, LLC (the “Petitioner”). The term “Project”, as used herein means, the Petitioner’s proposed construction, operation and maintenance of a 1.95-megawatt AC ground mounted solar photovoltaic system on the property located at 20-1 Short Hills Road, Old Lyme, CT (the “Site”), as described in the Petition.

Stormwater Report section of the Petition:

Appendix D and Appendix E:

1. What depths were the infiltration tests performed relative to the existing ground surface?
2. What equipment was used to conduct the infiltration tests?
3. Were the infiltration tests conducted in accordance with ASTM Standard D3385? Provide evidence of compliance with the ASTM standard D3385.
4. For Basin B1, an infiltration rate of 3.33"/hr. was used in the hydrologic model. The 2004 CT DEP Storm Water Quality Manual “DEP Manual” requires that the observed infiltration rate be reduced by 50% (page 11-P3-3 of the manual), why did the Petitioner not provide the required factor of safety as required by the DEP Manual for infiltration basins B-1, B-2, and B-3?
5. The DEP Manual allows for up to 5 acres to be directed to an infiltration basin, but the Manual also recommends that not more 2 acres are directed to an infiltration basin. How can the Petitioner justify doubling the recommended 2-acre area?



6. The DEP Manual states “one field test and one test pit or soil boring should be performed per 5,000 square feet of basin area. A minimum of three field tests and test pits or soil borings should be performed at each basin. The design of the basin should be based on the slowest rate obtained from the field tests performed at the site.” Why have no test pits been performed as required by the DEP Manual?
7. How can it be verified that the bottom of the infiltration basin is located at least three feet (3') above the seasonally high groundwater table or bedrock as demonstrated by on-site soil testing?
8. The DEP Manual on page 11-P3-6 states that pretreatment should be required to accommodate 25% of the calculated water quality volume. What is the required pretreatment system for the four proposed infiltration basins?
9. It is further stated that pretreatment is required for soils with infiltration rates over 3.0” per hours. As this condition exists for basins B-1, B-3, and B-4, what is the Petitioner’s justification for not providing the required pretreatment per the DEP Manual?
10. Where are the calculations to define the Basin Dimensions as required by the DEP Manual on page 11-P3-8?
11. Do the Petitioner’s four infiltration basins meet the basin dimensional requirements found in the DEP Manual?
12. The DEP Manual states on page 11-P3-9 “Infiltration practices should not be used as temporary sediment basins during construction”, yet this is exactly what the Petitioner is proposing. How can the Petitioner justify using the infiltration basins as temporary sediment basins without adversely affecting the short and long term functionality of the infiltration basins?
13. Why are the actual solar panels not considered impervious as required by Appendix I document from the CT DEEP in the post-development hydrologic models?
14. Why was 4.81 acres of impervious area used in the Water Quality Volume calculations when only 0.009 acres of impervious area was used in the Hydrologic Model?

Site Plans:

Sheet GP-1:

15. How will the Petitioner prevent the movement of fine particles from the 20' gravel driveway from washing into the infiltration basins B-1 and B-2 and clogging the bottom of the infiltration basin?
16. Where are the sizing calculations for the proposed swale shown on this plan at the northeast corner of Basin B-1?

Sheet GP-2:

17. Where are the sizing calculations for the proposed swale shown on this plan at the southeast corner of Basin B-4?
18. Where is the evidence that the bottom of Basin B-3 which is excavated at least two feet (2') below existing grade will provide a three foot (3') vertical separation to seasonal high groundwater or bedrock?
19. Where is the evidence that the bottom of Basin B-4 which is excavated at least four feet (4') below existing grade will provide a three foot (3') vertical separation to seasonal high groundwater or bedrock?



20. How will the Petitioner prevent the movement of fine particles from the 20' gravel driveway from washing into the infiltration basins B-3 and B-4 and clogging the bottom of the infiltration basin?

Sheet EC-1:

21. Why are temporary stockpile locations shown just above the temporary sediment traps where a failure of the erosion control measure around the stockpile would result in a large discharge of suspended material into the temporary sediment trap?
22. Is the topsoil or other material being stripped from within the area of the solar array which necessitates the number of stockpiles shown on this plan?
23. Where will the chipped material be stockpiled on the site? Where and when will the chipped material be used on the site?
24. The Petitioner shows compost socks to be installed perpendicular to contours which will result in concentrated flow along them. Why does the Petitioner have compost socks located perpendicular to contours?
25. How will the Petitioner prevent concentrated flow and the resultant erosion on the gravel driveways which are perpendicular to contours?

Sheet EC-2:

26. Why are temporary stockpile locations shown just above the temporary sediment traps where a failure of the erosion control measure around the stockpile would result in a large discharge of suspended material into the temporary sediment trap?
27. Is the topsoil or other material being stripped from within the area of the solar array which necessitates the number of stockpiles shown on this plan?
28. Where will the chipped material be stockpiled on the site? Where and when will the chipped material be used on the site?
29. The Petitioner shows compost socks to be installed perpendicular to contours which will result in concentrated flow along them. Why does the Petitioner have compost socks located perpendicular to contours?
30. How will the Petitioner prevent concentrated flow and the resultant erosion on the gravel driveways which are perpendicular to contours?

Sheet EC-3:

31. According to this plan, the entire area of the solar array will be disturbed at one time which is in contradiction to the notations shown on Sheets EC-1 and EC-2? Which approach is correct? If the information of Sheet EC-3 is correct then an Individual Permit, not the General Permit from CT DEEP will be required. Has the Petitioner applied for an individual permit?
32. This plan also notes that the only impervious areas are the concrete pads for electrical equipment. How can the Petitioner justify this position when the plans have to comply with Appendix I from the DEEP?

Sheet EC-4:

33. The detail for the outlet from the temporary sediment trap shows that the bottom of the spillway is only 12" below the top of the berm. How is the Petitioner providing a freeboard of 1' which is standard engineering practice for any water impoundment structure?



34. How will the proposed plywood baffle system prevent runoff from going under the plywood barrier as proposed?

Petitioner Responses to Council Interrogatories :

35. **Council Question 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?

Petitioner Answer: The rows of solar panels are not considered “closed systems,” because there are “gaps” between each module (both north/south and east/west). As such, the drip edge of each solar panel will not have an impact on the Site’s drainage patterns, as stormwater will flow off of the panels in various locations as the panels follow the contours of the existing land. In the case of this Project since the solar panels will be in four up landscape orientation increasing the lower drip edge from two in portrait to four in landscape, reducing in half the amount of runoff encountered at each drip edge. Furthermore, once the Site is fully stabilized post-construction, channelization along the drip edge is not expected. The Petitioner expects that the only time that channelization along the drip edge may be of concern is during construction in those areas that are not fully stabilized; however, such would be rectified upon final stabilization of the Site.

Our response: The answer is wrong; runoff from the panels will follow parallel to the panel rows like East Lyme and cause concentrated flow. This flow will concentrate more and more as it moves down the hill. It has to cross the gravel driveway above the basins and will likely erode the gravel surface and deposit this material in the basins. Fine layers of this type of sediment will clog the infiltrative surface of the basins. How can this be corrected based on actual data gathered from the East Lyme resulting runoff?

36. **Council Question 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?

Petitioner Answer: The racking manufacture TerraSmart does not require a comprehensive geotechnical study to be completed to support their structural design as their pre-drilled foundation screw holes can accommodate any subsurface conditions. The Project has completed test pit and soil analysis for the stormwater basins to support the stormwater management design. Those results can be found in the Stormwater Management Report.

Our Response: If shallow bedrock is encountered, like less than 4’ below grade, then any support system will NOT be adequate to hold up the panels, if they are drilling holes into the ground to whatever depth they need, then the study may not be needed, but should be done anyway so that the Petitioner knows what type of material he is dealing with. I did not see deep test pit data in stormwater report, only infiltration data, which led to my questions.

General questions:

37. Why was this undeveloped forested property chosen for the facility when an area at the brown field Old Lyme transfer station on Four Mile River Road would have offered a similar ease of connection to the Eversource electric power system?



38. Is this proposed facility consistent with the Town of Old Lyme's Plan of Conservation and Development?
39. Is this proposed facility consistent with the Town of Old Lyme's zoning regulations?
40. Can the Petitioner show how the Project "1.95 +/- MW AC" output was calculated, including references for all data used in the calculation?
41. What level of uncertainty does the "+ / -" indicate in the calculation of electrical output for this Project? What is the acceptable range for this uncertainty?
42. What is the design DC output for this facility?
43. What is the expected operational lifetime for this Project?
44. Is Independence Solar, LLC an affiliate, subsidiary, or otherwise owned by another corporation or series of corporations? If so, provide the corporate ownership(s) and location(s) of their main headquarters. If not, is this Project being financed by another entity?
45. Is the statement about the solar panels being recycled after the end of the life of this facility an expectation or is it grounded in fact? (I.e., are there any solar panels presently being recycled anywhere in the United States?) What will be done with a panel or panels that are broken during construction or during the life of the Project?
46. What materials used in the manufactured solar panels for this project can presently be recycled?
47. Why hasn't the petitioner provided a detailed decommissioning plan for this facility, including engineering and environmental aspects with appropriate cost estimates? The property is within a strategically protected area with core forest. If it is not decommissioned properly, invasive species will grow affecting the surrounding flora and fauna. What experts will be consulted to ensure "the restoration of the property to pre-Project conditions"?
48. What entity will bear the cost of eventual decommissioning and solar panel recycling? Will there be a bond posted to bear the costs of these efforts? If so, at what amount?
49. Are any of the materials used in the solar panels for this project considered to be hazardous to human health or toxic to humans, wildlife, and the environment?
50. Are the solar panels combustible or flammable? If so, what gaseous or particulate by-products might be expected if they are subject to burning in a fire? Can a fire on the array be put out by water or is foam required?
51. Will there be an emergency response plan for use by local or state personnel prepared for this facility by Cobb Road, LLC or will that be left up to the Town of Old Lyme? Will Cobb Road, LLC be responsible for updating the Town's Hazard Plan? (e.g, Who is responsible for clean-up and removal of damaged panels and infrastructure that lands off the Site in the event of a catastrophic storm?)
52. Has an engineering analysis been completed for this project that provides information regarding possible outcomes or damages to the solar panels and infrastructure in the event of a hurricane, tornado, or similar large wind event?
53. How will possible lightning strikes to the solar panels or other electrical equipment be attenuated? What is the possibility that a lightning strike could initiate a fire onsite?
54. As much of this parcel will remain forested, what provisions will be made to deal with downed trees or other obstructions for fire or other emergency vehicles to access the site?



55. Will Cobb Road, LLC post a bond with the appropriate authorities in the event that there may be environmental damages resulting from this project or liabilities associated with its operation or decommissioning (not just during construction)?
56. What is the petitioner's plan and schedule for monitoring the site's infiltration basins and their outflows?
57. As this Site is surrounded by protected lands with a robust wildlife population, is it possible to create wildlife corridors in the fencing to allow all wildlife (not just small mammals) to traverse the array in a number of areas?
58. The Council on Environmental Quality (CEQ) has noted in its October 28, 2019 letter (corrected) to the Council that the Petitioner has not done an on-site survey of State Listed Species. Will the Petitioner conduct such a survey prior to any disturbance to the Site to answer the question of whether the "absence of listed species indicates that they were not present or that they were not looked for"?
59. Has the Petitioner and the Petitioner's engineering team and construction company reviewed the engineering and construction failures that occurred resulting in adverse environmental impacts at the solar installations in East Lyme (Petition 1056 which resulted in ongoing litigation from downstream landowners and Pomfret (Petition 1328 which resulted in a DEEP Consent Order due to failures in storm water mitigation). Can lessons learned from these failures be used to ensure that the poor stormwater planning, engineering and design are not repeated in this development both during and post construction? Link here for Pomfret Consent Order: <https://www.ct.gov/deep/lib/deep/enforcement/consentorder/COWRSW18003.pdf>

Respectfully submitted,

Deb Moshier-Dunn

Coordinator, #SmartSolarCT

cc:

Steven Trinkaus, PE

Don Danila, Biologist