



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Web Site: www.ct.gov/csc

VIA ELECTRONIC MAIL

April 21, 2020

Carrie Larson Ortolano, Esq.
Lodestar Energy LLC
40 Tower Lane, Suite 201
Avon, CT 06001

RE: **PETITION NO. 1398** – LSE Pictor, 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 on an approximately 104 acre parcel located off of Platt Hill Road, Winchester, Connecticut and associated electrical interconnection.

Dear Attorney Ortolano:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than May 12, 2020. To help expedite the Council's review, please file individual responses as soon as they are available. Please provide an electronic copy to this office only.

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: Jeffrey Macel, LSE Pictor, LLC

MB/RM

Petition No. 1398
Interrogatories
Set One
April 21, 2020

Project Development

1. Referring to the Petition p. 7, 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 LREC/ZREC agreement with Eversource? Is there an option within the LREC/ZREC agreement to allow for changes in the total output of the facility based on unforeseen circumstances or resulting from a reduced site footprint?
3. Referencing Petition p. 3, how is the Virtual Net Metering (VNM) split between the Towns of Winchester and Windsor? Please explain how the sale of LREC/ZREC credits is related to VNM.
4. What percent of the energy produced is under VNM contract? In other words, what percentage of the annual electrical energy generated by the project would be attributed to each municipality? If there is any electrical energy produced that is not subject to the VNM program, where will it be sold?
5. If the LREC/ZREC agreement and VNM agreement are 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?

Proposed Site

6. The petition states Trade Wind Farms, LLC is the Property Owner. Petition Attachment 9 states the property will be sold to Reservoir Holding, LLC. When will the sale occur? Who will be the property owner at the time Lodestar's lease will be executed?
7. Are there any provisions in the lease agreement with the property owner related to site restoration at the end of the project's useful life? If so, please provide any such provisions.
8. Provide the distance, direction and address of the nearest off-site residence and nearest property line from the solar field perimeter fence. (different values are listed in the petition narrative and noise report).
9. What is the distance from the Gillette and the Kolek properties to the 1) proposed limit of tree clearing, and 2) the proposed fence line? What visual impacts are anticipated from these two properties?
10. Petition p. 4 states the proposed installation will utilize existing access and infrastructure. Provide information as to what existing access/infrastructure will be incorporated into the proposed project.

11. Referencing Petition Attachment 9, please provide the following:
 - a) Indicate the ground slopes within the solar array area;
 - b) Figures 1, 4 & 5 are not legible - provide legible copies;
 - c) Provide a solar facility overlay using the Figure 1 color topographic map;
 - d) Figure 2 depicts a subdivision plot map. Revise Figure 2 to show the proposed solar facility;
 - e) Figure 3 is dated 1978 –is this the most recent FEMA mapping for this area? If not, submit the most recent version; and
 - f) Estimate the acreage of prime farmland soils affected by the project development area and laydown area;

Energy Output

12. Have electrical loss assumptions been factored into the output of the facility? If so, identify what losses would potentially occur. What is the output (MW AC) at the point of interconnection at year one?
13. Would the power output of the solar panels decline over time? If so, estimate the percent loss per year.
14. Referring to petition p. 9, what is the projected annual capacity factor for the proposed Project?
15. Does the design of the Project, including the method of interconnection, allow it to serve as a microgrid?
16. Is Lodestar designing the Project to accommodate a potential battery storage system?
17. Do the string inverters service one section of the solar array so that if one section experiences an electrical problem that causes the section to shut down, could the other sections of the solar array still operate and transmit power to the grid?

Site Components and Solar Equipment

18. Petition p. 6 mentions a ballasted fence. Please define the term “ballasted”.
19. Petition pp. 6 & 7 both refer to images but no images were provided. Please submit.
20. 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?
21. The solar panels are identified as 340 to 380 watts. Is it feasible to use a higher power output rated panel to reduce the project footprint?

Public Safety

22. Referring to the FAA Analysis at Petition Tab 12, what is the distance/direction to the nearest airport from the site? Is a glare analysis required under FAA rules?

23. Referring to Petition p.15, a health and safety plan is mentioned. Does it include an emergency response plan? Is training planned 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?
24. Are there any drinking water wells in the vicinity of the site? If so, how will Lodestar ensure there are no impacts to these wells resulting from construction activities?

Facility Construction

25. What is the anticipated construction time from start to finish (different time periods on Petition p. 7 & p. 17)? What are the approvals necessary as listed in the chart on p. 7?
26. 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?
27. What is the length of the racking posts and to what ground depth do the posts need to be installed? How will the posts be installed if shallow bedrock is encountered?
28. List the types of construction equipment that would be used at the site.
29. Do the two wetland crossings for the site access road require permits from the U.S. Army Corps of Engineers and/or DEEP?
30. For clarity, revise the Phasing Site Plans 9, 10, & 11 sheets to match the descriptions of each phase. Clearly show erosion controls per phase, site clearing limits, acreage of tree clearing, acreage of grubbing, stockpiles, and various seeding areas.
31. Site Plan Sheet 9, Phase I, provide plan detail of the temporary wetland crossings.
32. Site Plan Sheet 10, Phase II clarify the following:
 - a) Will dewatering procedures be necessary to construct the wetland detention basin? Provide detail.
 - b) What material will be used to fill holes/depressions resulting from stump removal?
 - c) How will seeding occur in areas where stumps are to remain (outside solar array)? Will brush, small branches from tree removal, deadfall, and forest duff be removed or left in place? If left in place, how would seed growth be promoted?
 - d) What is the time interval between Phase II and IIIA? What time interval is necessary to establish stable ground cover and functional swale cover?
33. Site Plan Sheets 9 & 10 show limited clearing in the area of the large swale and associated wetland detention basin. How will tree cutting equipment and construction vehicles access this area using the limited cleared area shown? Provide revised plans that clearly show how access will be facilitated.
34. Site Plan Sheet 11, Phase III, provide the following:
 - a) The proposed filter sox in the solar array area do not follow the contours of the hillside. Please revise to comply with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control (2002 Guidelines)*.
 - b) Wood chip berms are described but not shown on the site plan. Identify locations.

- c) What is the acreage of Phase IIIA and IIIB?
 - d) For final seeding of the solar array, who will determine if the soil in the area is suitable for the selected seed mix? What methodology will be used? What uniform depth of nutrient rich topsoil is necessary to promote seedling growth?
- 35. The site phasing plan does not include any specification for temporary sediment traps or other temporary sediment control measures beyond filter sox arranged across the contours of the hill. Please describe/provide detail of temporary features/measures that will be used to control sediment during construction.
- 36. The proposed construction schedule has a majority of work occurring during winter months. Provide detailed winter work procedures for each phase that address construction erosion and sediment control as well as stabilization of stormwater control swales and the wetland detention basin. If applied in winter, how will seeding be maintained until the spring growing season?
- 37. 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?
- 38. Site plan 13- Notes, Please address the following:
 - a) Section *TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES - MAINTENANCE REQUIREMENTS* - #2 – Why is Filtrexx Soxh being inspected on a monthly basis rather than on a more frequent basis, as outlined in other Sections?
 - b) Section *GENERAL EROSION AND SEDIMENTATION CONTROL PLAN NOTES* –
 - #7 where will accumulated sediment be disposed of?
 - #8, #9, & #10 - please clarify the information provided.
- 39. Petition p. 11 states Lodestar consulted with CT DEEP. What divisions of DEEP were consulted? Please describe any recommendations, comments or concerns about the project provided by the DEEP Stormwater Division. Would the on-site wetland detention basin require consultation with the Dam Safety Division?
- 40. Based on the soil and subsurface testing, do site conditions support the overall project design, including the location of proposed stormwater control features? Would rock chipping and/or blasting be required to install site components and/or stormwater features?
- 41. What is the specific function of the wetland detention basin? How will it function in summer if the designed one-foot pool level dries out and wetland plants die off? How will it function in the winter if the pool is frozen or the plants are dormant or dead?
- 42. Provide a cross section detail of the proposed wetland detention basin.
- 43. Provide a slope profile of the three proposed drainage swales. The design of the swale system shows the east and west swales meeting at the top of the larger swale- could high flow storms cause erosive forces that could result in swale failure or damage at the point where all three swales meet?
- 44. Does the large swale leading to the plunge pool have any velocity dissipaters beyond the 9-inch rip rap bottom? Would high storm events cause runoff to flow at a high velocity into the detention basin plunge pool, thus suspending and dispersing accumulated sediment from the plunge pool into the wetland portion of the detention basis, and ultimately into the adjacent watercourse?

45. Was the larger swale leading to the plunge pool modeled within the stormwater calculations? If so, where is it identified?
46. Was a swale depth of 2 feet used in the stormwater calculations? If so, was the depth to the soil or rip rap installed within the swales accounted for?
47. Why was the plunge pool designed as conical in shape rather than being designed with a uniform depth? Is a uniform depth recommended in the *2004 Connecticut Stormwater Quality Manual*? How will the depth of the conical plunge pool be cleaned of sediment without damaging the sides? What is the average depth of the plunge pool?

Environmental

48. Referring to Petition Attachment 12, what is the status of the archeological assessment requested by the State Historic Preservation Office?
49. Referring to Petition pp. 15-16, does the United States Environmental Protection Agency's Greenhouse Gas Equivalency Calculator allow for a Carbon Debt Analysis to include the exceptions listed on p. 16? If so, please provide.
50. Is the onsite wetland/stream along the west portion of the site a tributary of Taylor Brook? Is Taylor Brook a cold water fishery that supports wild brook trout?
51. Does the *2004 Connecticut Stormwater Quality Manual* recommend the use of wetland detention basins that discharge into cold water fisheries? If not, what stormwater design alternatives can be used at this site to reduce any thermal impacts to the western watercourse?
52. What is the distance from the solar array access drive along the west side of the array to the nearest wetland boundary?
53. Would the proposed project be consistent with the 2015 U.S. Army Corps of Engineers Vernal Pool Best Management Practices? Please explain.
54. By maintaining a permanent pool in the wetland detention basin, could the basin act as a decoy pool to vernal pool species that may utilize the on-site wetland corridors?
55. Petition Attachments 9 & 10 contain different values for the distance to the nearest vernal pool from the solar array, please clarify.
56. What is the rationale for diverting stormwater from the eastern on-site drainage area to the western on-site drainage area? Is this practice consistent with the *2002 Guidelines*? Would reduced overland flow affect the downgradient wetlands? What studies were undertaken to determine such diversion?
57. Can a detention basin, or other types of water control features, be constructed within the eastern drainage area to reduce the amount of water diversion from one drainage area to another, as well as reduce the swale length and associated maintenance?
58. Referring to Petition Attachment 10, where were approved subdivision sediment basins and constructed marsh located on the property?

59. Petition p. 4 states 75 acres of the site will be donated to the Winchester Land Trust upon approval of the Project and commencement of the lease. Would discharge of the wetland detention basin occur at the updated land trust property line and flow into a wetland/watercourse on the land trust property?
60. 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

61. 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?
62. Would pesticides or herbicides be used at the site? If so, specify anticipated products and use.
63. The Operations and Maintenance Plan does not contain specific post-construction inspection, maintenance, or corrective action protocols for the wetland detention pond and associated stormwater control swales. Please provide details consistent with the *2004 Connecticut Stormwater Quality Manual* and the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*.

64. There is no access road to the wetland detention basin or swales on the southeast and east sides of the site. How will access be provided to facilitate repairs and to maintain of these features? What equipment will be used for access, repairs, and maintenance?
65. How will sediment be removed and transported from the wetland detention basin and swales? Where would accumulated sediment be disposed of?
66. Referring to the Decommissioning Plan, is the intent to remove the swale/wetland detention basin system and the gravel road wetland crossings? Will tree seedlings be planted to restore the area to pre-existing conditions?