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October 23, 2020

VIA ELECTRONIC MAIL

Melanie Bachman
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

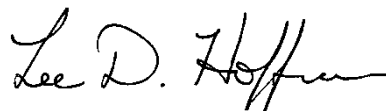
Re: Petition No. 1426 - East Windsor Solar One, LLC Petition for a Declaratory Ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 4.9-megawatt AC solar photovoltaic electric generating facility located west of the Ellington town boundary at 341 East Road, East Windsor, and associated electrical interconnection.

Dear Ms. Bachman:

I am writing on behalf of my client, East Windsor Solar One, LLC, in connection with the above-referenced Petition. With this letter, I am enclosing East Windsor Solar One's Responses to the October 2, 2020 (Set One) Interrogatories from the Connecticut Siting Council.

Should you have any questions concerning this submittal, please contact me at your convenience. I certify that copies of this submittal have been made to all parties on the Petition's Service List as of this date.

Sincerely,



Lee D. Hoffman

Enclosures

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

East Windsor 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 4.9-megawatt AC solar photovoltaic electric generating facility located west of the Ellington town boundary at 341 East Road, East Windsor, and associated electrical interconnection.

Petition No. 1426

October 23, 2020

EAST WINDSOR SOLAR ONE, LLC'S RESPONSES TO THE CONNECTICUT SITING COUNCIL'S (SET ONE) OCTOBER 2, 2020 INTERROGATORIES

The petitioner, East Windsor Solar One, LLC (“East Windsor Solar One” or “the Petitioner”), respectfully submits this response to the Council’s (Set One) Interrogatories, dated October 2, 2020, in the above-referenced Petition. In response to the Council’s Interrogatories, East Windsor Solar One states as follows:

Project Development

- 1. If the project is approved, identify all permits necessary for construction and operation and which entity will hold the permit(s).**

The following permits are anticipated to be required for construction and operation of the East Windsor Solar One facility:

- a. Connecticut Department of Energy and Environmental Protection (“CTDEEP”), General Permit for the Discharge of Stormwater and Dewatering Wastewater from Construction Activity.
- b. Town of East Windsor, Building Permit.
- c. Town of East Windsor, Electrical Permit.

The Petitioner will obtain and hold the above-referenced permits.

- 2. Referencing page 5 of the Petition, East Windsor Solar One, LLC (Petitioner) states that, “Alternatively, in the event virtual net metering capacity becomes available, the Project may deliver energy to certain eligible recipients through the Eversource’s Virtual Net Metering Rider... or any successor rider thereto.” 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?

East Windsor Solar One, LLC objects to this Interrogatory to the extent that it is beyond the scope of a Petition for Declaratory Ruling pursuant to Connecticut General Statutes §4-176 and §16-50k. Subject to the foregoing objection, East Windsor Solar One states that the Eversource Virtual Net Metering program is currently accepting applications for the State, Municipal, and Agricultural host funding program. Funding for the program is currently capped and projects are being placed on a waitlist in the event that funding is either increased or projects with funding allocated cease development or construction and forfeit their allocated funding. However, it should be noted that the Project is still viable based on the market-based tariff if virtual net metering is not available.

3. Would the petitioner participate in the ISO-NE Forward Capacity Auction? If yes, which auction(s) and capacity commitment period(s)?

East Windsor Solar One intends to participate in the ISO-NE Forward Capacity Market. Specifically, at this time, the intention is to participate in the ISO-NE Forward Capacity Auction #15 in 2021 for commitment period in 2024/2025.

Proposed Site

4. In the lease agreement with the landowner, are there any provisions related to decommissioning or site restoration at the end of the project's useful life? If so, please describe and/or provide any such provisions.

Yes, Section 12.1 ("Condition of Premises") of the subject Lease Agreement addresses site restoration at the end of the Project's useful life. Section 12.1 of the Lease is reproduced in its entirety below:

ARTICLE XII.

Termination and Surrender

Section 12.1 - Condition of Premises. Upon expiration or other termination of this Lease the Solar Array and any improvements constructed on, over, or under the Leased Premises by Tenant shall be removed by Tenant and the Leased Premises shall be restored to substantially the same condition as prior to the commencement of this Lease, excluding normal wear and tear. All trade fixtures and signs, whether by law deemed to be a part of the realty or not, installed by the Tenant at any time or anyone claiming under the Tenant, shall remain the property of the Tenant or persons claiming under the Tenant and may be removed by the Tenant or anyone claiming under the Tenant at any time or times during the Lease Term. In the event this Lease terminates due to the expiration of the then applicable Lease Term, Tenant shall be afforded the term of thirty (30) days after such termination, as such time may be extended if Tenant is diligently pursuing the removal of the Solar Array, but not to exceed ninety (90) days, to remove all of its personal property, trade fixtures and signs for the Leased Premises including the Solar Array (which is deemed to be personal property) and Tenant shall pay the then existing Base Rent, calculated on a per diem basis, for any time period Tenant is removing personal property, trade fixtures, the Solar Array and/or signs..

5. **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? How would the project affect the use classification?**

East Windsor Solar One, LLC objects to this Interrogatory to the extent that it is beyond the scope of a Petition for Declaratory Ruling pursuant to Connecticut General Statutes §4-176 and §16-50k. Subject to the foregoing objection, East Windsor Solar One states that the Site Parcel is a part of the Public Act 490 Program. The municipal land use code classifies the Site Parcel as “Single Family Residential & Agricultural” Property Use within an R-3 & A-1 Zone. To the Petitioner’s knowledge, it is unknown as to whether the Project would impact the Public Act 490 designation. The proposed Project is unique in that it will be combining full agriculture with solar generation. As such, the acreage used for the proposed Project will maintain agricultural production throughout the Project life. Thus, Petitioner would submit that the 490 designation throughout the life of the Project would be appropriate.

6. **Has the State of Connecticut Department of Agriculture (DOAg) 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?**

No.

7. **Referencing the September 16, 2020 letter from DOAg, page 2, second paragraph, DOAg references multiple considerations for the proposed agricultural co-use of rotational sheep grazing on the site. Please respond to such considerations as noted by DOAg.**

The Petitioner, in conjunction with Agrovoltaic Solutions and Hillview Farm of Ellington, has worked to develop a Sheep Grazing plan that will allow for sheep to safely and successfully coexist with the proposed solar project. Specifically, the Petitioner will address the considerations listed by the DOAg in its September 16, 2020 letter as follows:

(1) “How sheep will coexist with the solar panels, the site fencing, cable trays, etc.”

- a. The proposed Project provides site fencing, specified to the NEC, that will provide safety and security for the flock of sheep within the limits of the fence. In order to accommodate grazing, fencing will extend all the way to the ground to a height of seven (7) feet. This will prohibit predation of the flock within the area to be grazed. The proposed project design incorporates a wire management system that is optimized for the bi-facial solar modules that will be installed. This wire management system provides three (3) main functions: (1) safety for maintenance technicians; (2) safety for grazing livestock; and (3), specified

wire mounting locations to optimize production on the backside on the solar modules. East Windsor Solar One is working closely with its partner, Agrovoltaic Solutions, to ensure both the livestock and array are protected (and operational).

(2) “The developers will also be expected to provide the necessary infrastructure to accommodate housing, feeding, watering to support general herd management practices.”

a. East Windsor Solar One has engaged Agrovoltaic Solutions and Hillview Farm to ensure that the livestock has all necessary housing, feeding, and watering to support the grazing livestock. In addition, the Petitioner continues to work closely with Agrovoltaic Solutions and Hillview Farm to develop a seeding plan that will provide suitable forage for the grazing sheep. Water will be provided and managed by Hillview Farm throughout the grazing periods.

(3) “Developers need to ensure there is an adequate plan for care and management of the sheep and training for anyone working at the site to ensure that both worker and animal welfare is effectively managed.”

a. The grazing livestock will be under the care and supervision of Agrovoltaiacs Solutions and Hillview Farm—both being experienced shepherds.

(4) “It will also be necessary to ensure there is adequate signage/security in and around the site noting that live animals are grazing on the property.”

a. The Petitioner will provide adequate signage at the entrance of the proposed solar facility (and other necessary areas), identifying that live animals will be present within the array area during the grazing season.

8. Is any portion of the site currently in productive agricultural use? If so, how many acres and is it used by the property owner or is it leased to a third party?

Yes, approximately 66.7 acres of the site is in agricultural production. It is the Petitioner’s present understanding that the landowner had previously leased the acreage to a third-party tenant farmer.

9. Would all components of the solar photovoltaic panels be recyclable? Could components of panels be reused to make photovoltaic cells or whole panels be used to make new solar panels at the end of the life of this project? Could the solar panels and/or associated components be repurposed for a different use or product?

The Petitioner estimates that up to 99% of all solar photovoltaic panel components can be captured in the recycling process. These components are captured, broken down, and refined—and the commodity itself can be repurposed for similar or different products.

10. Provide the distance, direction and address of the nearest property line and nearest off-site residence from the solar field perimeter fence.

The distance to the nearest property line is approximately 60 feet to the west across East Rd. (MBL: 050 64 006; Address: Middle Road; Owner: Gardner's Nurseries, Inc.). The distance to the nearest off-site residence is approximately 110 feet to the north (MBL: 050 82 002A; Address: 73 Middle Road; Owner: AJAX 2018 B REO LLC).

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?

Yes, electrical loss assumptions have been factored into the output of the facility. The output of the facility is 4.975 MW AC at the point of interconnection.

12. 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 ZREC contract.

Currently, the Petitioner has no plans to incorporate a battery energy storage system ("BESS") into the Project's design. However, in the event that a BESS is incorporated in the future, it is anticipated that it would be located on the customer side of the existing DC/AC inverters and would not disrupt the existing interconnection approval with Eversource. Because there is no PPA for a BESS for the Project at this time, it is not possible to estimate the anticipated size of any such system. The Petitioner currently does not anticipate any impacts to the ZREC contract if a BESS were to be installed at some later date.

13. 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?

Yes, soft or hard shading would impact energy production at the facility. However, shading and other appropriate/relevant factors have been included in the production modeling assumptions for the Project. The expressed degradation year-to-year was modeled at 0.5 percent (%) annually.

14. Could the project be designed to serve as a microgrid?

The Project was not initially contemplated to serve as a microgrid, nor is the current interconnection design suitable to accommodate microgrid functionality. Having the Project serve as a microgrid would require extensive design changes. By way of example, microgrid functionality would require that the Project have an energy storage component or local connected load and dispatch capabilities, which are not currently included in the Project's design.

15. 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?

Yes; for example, if one of the DC/AC inverters was not producing energy, other DC/AC inverters that comprise the system would continue to produce energy and deliver that energy to the grid.

16. 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?

East Windsor Solar One, LLC objects to this Interrogatory to the extent that it is beyond the scope of a Petition for Declaratory Ruling pursuant to Connecticut General Statutes §4-176 and §16-50k. Subject to the foregoing objection, East Windsor Solar One states that in general, the Petitioner believes that intermittent resources create a minor challenge for the independent service operator (“ISO”) as the ISO works to match the supply and demand of the energy markets. This challenge is driven by the relative uncertainty of production due to the availability of the intermittent resource’s fuel source. For solar photovoltaic generators in particular, weather forecasts are made to anticipate the solar insolation and relative irradiance at a given time. These forecasts help the ISO anticipate supply, however, they are not perfect. In circumstances of unanticipated production from intermittent resources (or lack thereof), the ISO (and the market incentives it has devised) encourage production from other generators in times of scarcity and discourage production in times of abundance. The ISO can curtail or dispatch resources in circumstances where the economic incentives are insufficient to balance energy supply and demand.

Additionally, in the energy markets, size and scale matter. Projects under 5 MW AC that are interconnecting to the distribution network (as opposed to the transmission network) may register with the ISO as a “settlement-only generator” or choose not to register with ISO as a “load reducer.” Due to the minimal impact these generators have on the overall grid, they are not subject to the same ISO oversight (not centrally dispatched nor monitored in real time). The Project at issue here is beneath that 5 MW AC threshold and will most likely exist as a “settlement-only generator” (such a designation is necessary to participate in the capacity markets).

The technology that can most help the ISO as it navigates the increasing presence of intermittent resources on the grid is storage. At this time, the most prevalent form of storage is lithium-ion BESS. By increasing the penetration of BESSs and increasing the ISO’s connectivity to those systems, the grid supply demand could be better balanced and the necessity for curtailment (and potential waste) is mitigated.

Site Components and Solar Equipment

17. Would the panels be mounted in a portrait or landscape fashion? How many panels would each rack hold?

The panels would be mounted in landscape fashion, and each racking table will hold either twelve (12), sixteen (16), or twenty (20) modules. Each complete row of modules will be comprised of these racking tables.

18. Provide the dimensions of the transformer and inverter pads.

The dimensions of the pads are as follows: the western-most pad is approximately 84 feet by 17 feet; the centrally-located pad is approximately 84 feet by 17 feet; and the eastern-most pad is approximately 46 feet by 17 feet.

19. 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?

The Petitioner anticipates that the posts will be approximately fourteen (14) feet in length and will be driven roughly eight (8) feet into the ground to provide structural stability.

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 including sheep?

The majority of the wiring will be run on the racking itself. Where wiring is not run on the racking, it would run in conduit. All PV wire is weatherproof and rated up to 194° F.

21. Referencing Sheets SP-1 and SP-2, could the proposed 17.2-foot aisle width be reduced to decrease the project footprint? What is the minimum aisle width at which the solar panel rows could be installed?

The inter-row spacing of 17.1 feet was determined by considering the site-specific inter-row shading—meaning, the shade cast on a posterior row of modules by the row anterior. The Petitioner will be installing bi-facial solar modules. Because the modules will be bi-facial, the racking design, including the inter-row spacing, was optimized to increase the capacity factor of the proposed solar facility. The spacing was determined to minimize any shading effect and help increase overall generation of the facility. If the inter-row spacing is reduced, anterior rows will cast shade on posterior rows and decrease facility production. In order to maintain the production in such event, additional panels would need to be added. If the Petitioner were not concerned with shading or optimal production, the minimum aisle width of the rows could be approximately twelve (12) feet, or larger than the proposed module plane width. Additionally, any inter-row spacing less than the module plane width runs the risk of rendering the array as an impervious surface for CTDEEP Stormwater purposes.

- 22. Can the petitioner install higher wattage solar panels at the site to allow a reduction in the overall footprint of the project? Explain.**

The Petitioner originally designed the proposed facility with only 380-Watt and 390-Watt panels. However, the Petitioner redesigned the Project to incorporate 385-Watt and 395-Watt panels—in turn, reducing the footprint of the array. Currently, East Windsor Solar One is working to incorporate 400-Watt panels into the Project’s design in order to maximize production per square foot. Solar panel procurement is accomplished for a given project based on product availability, logistics, and price. Although it may be desirable to use the highest density solar panels in every circumstance, it is not always feasible to procure such product(s). In every project, however, the Petitioner strives to obtain the solar panels that will produce the highest amount of clean energy per square foot of project area.

Interconnection

- 23. Is a System Impact Study from the electric distribution utility required for the interconnection process? Does the Petitioner have an Interconnection Agreement and with whom? Provide the status of such studies and agreements.**

Upon submission of interconnection applications, the Petitioner has completed a Feasibility Study and a Distribution System Impact Study and is in the process of completing a Facility Study for the Project. East Windsor Solar One currently holds signed interconnection agreements with Eversource.

- 24. Is the project interconnection required to be reviewed by ISO-NE?**

The Petitioner initially filed interconnection applications with Eversource, conducted a Feasibility Study, a Distribution System Impact Study, and is in the process of completing a Facility Study through Eversource. In February of 2020, the Petitioner signed interconnection agreements with Eversource. Based on the size and scale of the Project—as well as the size/scale of other generators on the applicable distribution circuit—the Petitioner and Eversource do not anticipate that any additional interconnection agreement(s) or study(ies) will need to be signed or performed with ISO-NE.

- 25. What is the line voltage of the electrical interconnection?**

The line voltage of the electrical interconnection is 23kV. The voltage of the existing distribution infrastructure is 23kV.

- 26. Confirm the number of utility poles required for the interconnection. What would be the height of these poles? Did the petitioner consider installing an underground run with risers to the existing pole? What would be the increased cost to run the interconnection underground?**

As presently designed, the Project contemplates a total of five (5) utility poles, measuring 40 feet in height. The anticipated pole lineup includes a utility recloser (1); a Utility Gang-Operated Air-break Switch (2); and one pole per service (3,4, & 5). The Petitioner understands that this is the minimum amount of equipment required by Eversource in order to interconnect the facility. East Windsor Solar One has preemptively moved the customer-owned equipment from a pole-top design to pad-mounted in order to limit the over-head site disturbance (this equipment is included in the concrete pad sizes from Interrogatory question No. 18). While Eversource would allow each of the primary meter poles (3,4, & 5) to be pad-mounted rather than pole-top, there is a (significant) added cost to the metering enclosures. The increased cost PER service goes from roughly \$30,000 for the pole-top primary meter to \$58,000 for the pad-mounted enclosure—representing a total increase in Project cost of approximately \$84,000. Unfortunately, even if the Petitioner were to move the primary meter to a pad-mounted enclosure, Eversource would not permit any reduction in the pole count at the site (given that it is minimum amount of equipment required by Eversource for interconnection to the facility).

To avoid the complex configuration for interconnection that is contemplated for this Project, the Petitioner proposed a secondary metered configuration which would drastically reduce the impact to the site both geographically and aesthetically. Eversource, however, rejected the secondary metered configuration in favor of the proposed (more elaborate) setup.

27. Is the existing distribution three-phase or would it have to be upgraded from single-phase to three-phase?

As a part of the Petitioner's scope of work with Eversource, the Petitioner will be upgrading the existing single-phase circuit on Middle Road to a three-phase distribution circuit.

Public Safety

28. Would the project comply with the National Electrical Code, the National Electrical Safety Code and any applicable National Fire Protection Association (NFPA) codes and standards, including, but not limited to, NFPA Code Section 11.12.3?

Yes, the Petitioner has designed the facility to comply with the current National Electrical Code, as well as all applicable National Fire Protection Association ("NFPA") codes and standards, including, but not limited to, NFPA Code Section 11.12.3.

29. Where and what is the nearest federally-obligated airport? Petition page 45, states that based on the determination of No Hazard to Air Navigation, a glare analysis is not required. Which of the FAA determinations provided in Appendix G of Exhibit B provides for this?

Skylark Airpark, located at 54 Wells Road in East Windsor, and Ellington Airport, located at 360 Somers Road in Ellington, are both approximately 3.8 miles from the proposed

facility. It is the Petitioner's understanding that if a glare analysis is required, the FAA would notify the applicant of the need for such study and would not issue a "No Hazard" response. Thus, by issuing the "Determination of No Hazard To Air Navigation," as provided in Appendix G of Exhibit B, it is understood that the FAA is determining that no glare analysis is required.

30. With regard to emergency response:

- a. Is outreach and/or training necessary 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?**

- a. The Petitioner is prepared to provide assistance and/or training in the event that such assistance or training is requested by local emergency responders.
- b. The Petitioner anticipates that it will provide emergency responders access to the site through a Knox Lock Box at the entrance to the facility, off of East Road.
- c. In the event of a fire, the Petitioner would notify local emergency response personnel and de-energize the system remotely, so as to mitigate any potential electric hazards to emergency response personnel.
- d. Yes, the facility can be de-energized remotely in the event of a fire. The Petitioner will be able to access the SCADA system that, in turn, will alert the recloser to close the remotely- operable-breaker so that the system can be de-energized.

Environmental

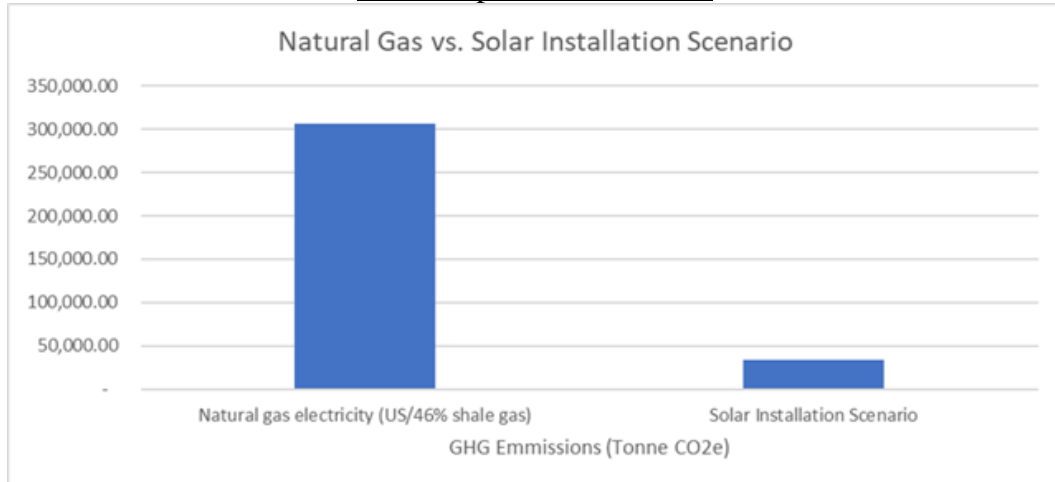
31. The Greenhouse Gas (GHG) Assessment in Appendix M of Council Petition No. 1352 compared the life cycle GHG emissions from a solar project to a scenario where the solar project is avoided and an equivalent amount of natural gas-fired electric generation operated for the estimated life of the solar 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.

Using the methods and general assumptions provided in Appendix M of Council Petition No. 1352 as a foundation, and applying those principles proportionally to the subject project (Petition No. 1426), East Windsor Solar One estimates that there would be an 89 percent (%) reduction in GHG emissions by pursuing solar instead of natural gas.

More specifically, over 20 years, the Petitioner estimates that the Project will generate approximately 178,607 MWh of electricity, while emitting approximately 33,386 tons of

CO₂e. By contrast, for a natural gas generator to achieve the equivalent MWh production over 20 years, it would emit an estimated 305,791 tons of CO₂e. Please see Figure 1 below.

Figure 1: Greenhouse Gas Emissions over 20-years for Natural Gas Scenario vs. Solar Scenario per 178,607 MWh



For additional detail(s) regarding the equivalencies used to arrive at the above conclusions, please refer to Exhibit A attached hereto.

32. What is the nearest distance between the proposed limits of disturbance and the property boundary?

Zero (0) feet, as the proposed limits of disturbance (“LOD”) follows the Property Line along the western and northern side of the property. The LOD extends beyond the Property line, into the public ROW, at the access road entrance and the interconnection path.

33. Could the facility be moved further south and/or east to increase the distance to the nearby roads?

Throughout the development of the Project, the Petitioner worked closely with the site’s tenant farmer to ensure that the farmer retained access to at least 30 acres on the parcel—an acreage amount deemed appropriate in terms of providing a logistical benefit to cultivation. The current, proposed configuration of the Project achieves that goal; moving the Project further south into the parcel, however, would bisect the approximate 36 acres, making it less ideal for cultivation at scale.

34. Could landscaping and/or privacy slats be installed on any portion the western boundary of the facility?

The Petitioner is amenable to adding privacy slats to the entire length of the western fence line, if the Council desires.

35. **Regarding Prime Farmland Soils on the parcel:**
- a. **Provide (in acres) the amount of Prime Farmland soil currently in agricultural production; and**
 - b. **Provide (in acres) the amount of Prime Farmland soil currently in agricultural production that would be occupied by the project.**

- a. The Project is located entirely on the East Windsor portion of the site, with approximately 56.6 acres of Prime Farmland Soils currently used for agricultural production within these boundaries.
- b. Once constructed, approximately 21.3 acres of Prime Farmland Soil would be occupied by the Project.

36. **Please describe the similarities and differences between the solar grazing practices planned for the proposed project from the practices described in the article "Solar grazing: How sheep mow the lawn at community solar projects in upstate NY" (<https://www.newyorkupstate.com/news/2019/09/solar-grazing-how-sheep-mow-the-lawn-at-community-solar-farms-in-upstate-ny-video.html>)**

The Petitioner has worked with Agrovoltaic Solutions throughout the development of the grazing program and will work with Agrovoltaic Solutions for the management and operation of the grazing program for East Windsor Solar One. The solar grazing best practices employed at other, like solar sites in upstate New York will be incorporated into the Project.

37. **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?**

There is an onsite well that services the single-family home to the south of the proposed facility. However, there are no anticipated groundwater impacts from the construction activity(ies) planned for the Project. Vibrations from the installation of the racking system are not expected to cause sediment releases, and no disruption(s) to well water flow or quality is anticipated. As a result, no special precautions related to wells and/or water quality are warranted.

38. **Would any fuels be stored on site during construction? If so, provide fuel storage/spill prevention control details.**

The Petitioner does not anticipate storing any fuels on site other than the fuel within standard construction equipment and vehicles. Section 3 of Exhibit B, Appendix D, is the Petitioner's proposed Petroleum Materials Storage and Spill Prevention plan for the Project. It instructs, in relevant part, that any refueling of construction vehicles would occur on an impervious pad and be at least 100 feet from wetlands or watercourses.

39. **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? If not, why not?**

The rows of solar panels are not considered “closed systems” since 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, because stormwater will flow off the panels at multiple locations, as the panels follow the contours of the existing land. For this same reason, after construction is complete and the Site is fully stabilized, channelization along the drip edge is not expected.

40. What is the municipal setback regulation from wetlands for East Windsor and Ellington?

The municipal setback regulation(s) from wetlands for East Windsor and Ellington are 150 feet and 100 feet, respectively. The Petitioner stresses, however, that no part of the Project is located within the Ellington portion of the Site.

41. Would the proposed project be consistent with the 2015 U.S. Army Corps of Engineers Vernal Pool Best Management Practices?

Yes, the Project would be consistent with the US Army Corps of Engineers New England District’s Vernal Pool Best Management Practices (January 2015).

42. Petition page 35 references three vernal pools; however, the Environmental Report references one vernal pool. Please clarify.

The reference to three (3) vernal pools on page 35 of the Petition was in error. There is only one (1) vernal pool located on the Site, as referenced in Exhibit B, *Environmental Assessment*, and in the preceding sections within the Petition. The location of the Vernal Pool is also shown on Figure 4 – Vernal Pool Analysis Map (Petition, p.36).

43. Where is the nearest parcel used for publicly accessible recreational purposes? Describe the visibility of the proposed project from this parcel.

Pierce Memorial Park is the nearest parcel used for publicly accessible recreational purposes and is located approximately 0.75 mile to the west of the Project. Due to the relative low height of the Project, coupled with the distance and existing vegetation, views of the Project from this location are not anticipated.

44. 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 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.

The requested submission(s) is attached hereto as Exhibit B.

Facility Construction

45. **Has the petitioner submitted an application for a Stormwater Permit from the Department of Energy and Environmental Protection (DEEP)?**

Yes; in July of 2020, the Petitioner submitted an application for a stormwater permit to the CTDEEP.

46. **Has the petitioner met with the DEEP Stormwater Division? Please describe any recommendations, comments or concerns about the project provided by the Stormwater Division.**

Yes, the Petitioner and its civil engineer met with Neal Williams and Chris Stone of the CTDEEP Stormwater Division for purposes of a pre-permit submission meeting in January of 2020. The only recommendations made by the CTDEEP staff during said meeting were to utilize the current version of the CTDEEP guidance document, "Appendix I," which Petitioner has done in its submittal. The recommendations taken from that meeting were incorporated into the Petition's Site Plans prior to filing with the Council.

47. **Are solar panels and access roads proposed to be located in the stormwater basin? If so, why are they placed there?**

Yes, both solar panels and a portion of one of the access roads are proposed to be located in the stormwater basin. Due to (1) the flat nature of the site, (2) the requirements/guidelines of CTDEEP's draft Appendix I, and (3) the potential existence of groundwater within five (5) feet of the existing grades onsite, the proposed basin required the utilization of the existing site topography and depression with an earthen berm on the southern side. Utilizing the existing topography allowed for the minimization of cut on-site—thus helping maintain the separation to the existing groundwater. Based on the larger surface area that the basin covers, even during the 100-year storm event, the basin is modeled to not stage above 1.5 feet, which puts the gravel road and modules within the basin under potentially 1-foot depth of stormwater. Additionally, the basin is designed to fully drain out within 72 hours. During the typical 2-year storm event, neither the road nor module racking should experience any staging stormwater.

48. **If solar panels and access roads are proposed to be located in the stormwater basin, what is the potential effects of accumulated basin water on the rack posts and access road? How would the basin be periodically cleaned out and maintained? Would use of the access road result in additional accumulation of sediments in that basin?**

Because the basin is designed to fully drain out within 72 hours, no adverse effects are expected for the racking posts and gravel access road that are within the proposed basin. As the facility, once operational, will require minimal maintenance, little to no additional sediment is expected to result by the periodic use of the access road for maintenance activities. Sediment will likely be removed and transported from the stormwater features via a skid-steer loader. The sediment, in turn, can be spread and stabilized within upland areas onsite or disposed of offsite in accordance with applicable laws and regulations.

49. **The map provided in the Site and Exploration Location Plan in the Stormwater Report shows a solar array layout that is different from the site plan drawings provided in the petition. Does the Stormwater Report accurately reflect proper stormwater management from the layout depicted in the drawing sheets?**

Yes, the Stormwater Report accurately reflects the proper stormwater management for the layout depicted on the drawing sheets. *See* Proposed Drainage Area Map PDA-1 within the report. The referenced figure was included as part of the Geotechnical Report after which time the layout was adjusted slightly.

50. **Has the petitioner consulted with the DEEP Dam Safety program regarding permitting requirements, if any, for the proposed stormwater basin?**

The Petitioner has not consulted with the DEEP Dam Safety program, as the basin is designed to stage a maximum of 1.5 feet deep during the 100-year storm event and is designed to fully drain out within 72 hours, however, the Petitioner is amenable to making such a consultation if the Council so desires.

51. **How would the posts (that support the racking system) be driven into the ground? In the event that ledge is encountered, what methods would be utilized for installation?**

The posts that support the racking system would be driven into the ground using a pile driver. The pile driver pounds the beam to a designed embedment of 8 feet below the surface. If ledge is encountered, drilling pilot holes and backfilling same with grout will be utilized for installation. Driven pile was the method chosen for the racking due to the low refusal rate on the pull-out test and based upon the results of the geotechnical study that was completed on site.

52. What is the minimum road width required for post-construction use?

As referenced in Appendix A, *Project Plans of Exhibit B – Environmental Assessment of the Petition*, a minimum road width of fifteen feet (15.0') is required for post-construction use.

53. 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?

A comprehensive geotechnical study was completed at the facility. The results of this study revealed that the subsurface contained: Subsoil, deltaic deposits (sand, silty sand, & silt), and weathered rock. Weathered rock was found between five (5) to eleven (11) feet below the surface and bedrock was not observed until about ten to seventeen feet (10-17') below the surface. The study reflects that the proposed driven pile foundation racking solution will be supported. The geotechnical study, along with the pull-out tests, helped the racking manufacturer determine that a driven pile foundation that has an eight-foot (8') embedment would be sufficient for this project location.

54. Regarding the construction sequence, 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?

The Project anticipates starting construction during the winter months, with completion anticipated in early spring. As indicated in Exhibit B, *Environmental Assessment Section 3.2 – Rare Species*, and Petition Appendices B and C, the Project does not anticipate any seasonal construction restrictions due to the presence of protected species.

55. Provide the estimated typical construction hours and days of the week.

Typical construction hours and work days of the week are as follows:

Monday – Friday 7:00 AM to 4:00 PM.
Saturday (if needed) 7:00 AM to 4:00 PM.
Sunday (if needed) 9:00 AM to 4:00 PM.

These work days and hours are consistent with the Town of East Windsor Ordinances.

Maintenance Questions

56. **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.**

Vegetation management within the Project Area (inside the fence) will be handled through the livestock / sheep grazing program throughout the growing season (April / May through October / November). Vegetation Management immediately outside of the fenced-in Project Area, including the detention basin, will be managed by the Petitioner, on an as needed basis, through traditional landscaping procedures.

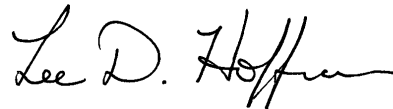
57. **Would the installed solar panels require regular cleaning or other, similar, maintenance? If so, describe cleaning procedures including substances used. Would this maintenance activity have any impacts to water quality?**

The installed solar panels are not anticipated to require regular cleaning. No cleaning materials are anticipated to be used, nor are impacts to water quality expected.

58. **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?**

No, the Petitioner does not anticipate the need to store any replacement modules on the site. Damaged panels would be detected and marked for replacement one of two ways: either remotely, through alarms in the monitoring system, or during routine site inspections by operations and maintenance technicians.

Respectfully Submitted,
East Windsor Solar One, LLC



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