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April 23, 2024

VIA ELECTRONIC MAIL AND U.S. MAIL

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

Re: PETITION NO. 1608 – Greenskies Clean Energy, 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 3.035-megawatt AC solar photovoltaic electric generating facility located at 141 Middlefield Road, Durham, Connecticut, and associated electrical interconnection.

Dear Ms. Bachman:

I am writing on behalf of my client, Greenskies Clean Energy LLC (“GCE”), in connection with the above-referenced Petition. With this letter, I am enclosing the original and fifteen copies of the Responses to the Interrogatories issued to GCE by the Council April 2, 2024, along with the exhibits for these responses.

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

Sincerely,

Lee D. Hoffman
Enclosures

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

PETITION NO. 1608 – Greenskies Clean Energy, 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 3.035-megawatt AC solar photovoltaic electric generating facility located at 141 Middlefield Road, Durham, Connecticut, and associated electrical interconnection.	Petition No. 1608
	April 23, 2024

Petitioner Greenskies Clean Energy LLC (“GCE” or “Petitioner”) hereby submits the following responses to the Interrogatories that were directed to GCE by the Connecticut Siting Council (“Council”) on April 2, 2024.

Notice

1. Referencing Petition pp. 17-18, has Greenskies Clean Energy LLC (GCE) received any comments since the petition was submitted to the Council? If yes, summarize the comments and how these comments were addressed.

On February 20 the Town of Durham (“Town”) called Dennis Hicks to better understand the Project and the options available to the Town as a result of the Council submission. The options to the Town were presented, and the same question posed here was asked by the Town. GCE has been in contact with the neighbor owning the parcel to the south of the Project. Discussions with this neighbor focused mainly on visibility and sightlines. Representatives from GCE performed a site visit with the neighbor and have had follow up discussions. GCE and the neighbor agreed that screening will be added directly south of the southern project fence line in the vicinity of the neighbor’s house. The landscaping and screening details will be added to the final construction set of the Project designs and submitted to the Council prior to construction starting. GCE has not received any additional comments since the Petition was submitted.

Project Development

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

GCE will be the holder of all permits unless a sale occurs, at which point all permits will be transferred to the new owners following notice to the Council. The following permits are anticipated to be necessary for the construction and/or operation of the Project:

- *Town of Durham, Building Permit;*
- *Town of Durham, Electric Permit;*
- *Federal Aviation Administration (“FAA”) Notice of Proposed Construction and Determinations of No Hazard;*
- *Council approval; and*
- *Connecticut Department of Energy and Environmental Protection (“DEEP”) General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (“Stormwater Permit”).*

It is anticipated that GCE will be the entity that holds these permits.

3. What is the estimated cost of the project?

The total cost of the Project is just under \$6.5 million.

4. Is the project, or any portion of the project, proposed to be undertaken by state departments, institutions or agencies, or to be funded in whole or in part by the state through any contract or grant?

No.

5. If the facility operates beyond the terms of the Shared Clean Energy Facilities (SCEF) Agreement, will GCE decommission the facility or seek other revenue mechanisms for the power produced by the facility?

GCE would expect the facility to seek other revenue mechanisms at the end of the SCEF Agreement period and would not anticipate decommissioning at that time.

6. If GCE transfers the facility to another entity, would GCE provide the Council with a written agreement as to the entity responsible for any outstanding conditions of the Declaratory Ruling and quarterly assessment charges under CGS §16-50v(b)(2) that may be associated with this facility, including contact information for the individual acting on behalf of the transferee?

Yes. If GCE transfers the facility to another entity, GCE will provide notice of the entity responsible for management and operations of the Project and any outstanding conditions of the Declaratory Ruling and said entity’s contact information.

7. Referencing Petition p. 13, GCE notes that, “A draft construction schedule timeline is provided as Figure 8 – Construction Schedule.” Figure 8 appears to be the Wetland Delineation Map. Provide a projected construction schedule.

A Draft Construction Schedule is available as Exhibit 1 – Draft Construction Schedule.

Proposed Site

8. Submit a map clearly depicting the boundaries of the solar project site, the boundaries of the host parcel(s) and the locations of the proposed agricultural co-uses referenced in GCE's November 14, 2023 letter to the Department of Agriculture (DoAg), Under Regulations of Connecticut State Agencies §16-50j-2a(29), "Site" means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located.

The boundaries of the solar project site, host parcel, and proposed agricultural co-uses have been delineated in Exhibit 6.

9. What is the length of the lease agreement with the property owner? Describe options for lease extension(s), if any.

The lease agreement has a twenty-one (21) year term beginning after construction. GCE has the option of extending the lease through four (4) five (5) year extensions.

10. Does the lease agreement(s) with the property owner contain provisions for agricultural co-uses at the site? If yes, describe these co-uses.

The lease does not explicitly contain provisions for agricultural co-use at the site, but it does give GCE the ability to perform the ongoing maintenance at the site, which includes agricultural activities as defined by the project plans.

11. In the lease agreement with the property owner, 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.

At the conclusion of the lease, Petitioner is required to remove the solar project, including any and all site improvements and infrastructure related to the Project. GCE has six months to complete this work and is subject to all existing conditions of the lease during that time.

12. If agricultural co-uses are implemented at the site, who would be responsible for responding to concerns and/or complaints related to these agricultural co-uses? How would contact information be provided for complaints?

Ultimately, GCE would be the managing authority for the agricultural uses on the site and responsible for responding to concerns/complaints. GCE intends to work with a To-Be-Determined Tenant Farmer to conduct agricultural operations on site. While the Farmer would manage the day-to-day operations, GCE would ultimately be the manager of the uses and entities on site.

13. 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(s)? How would the project affect the use classification?

There is a section of the parcel designated as part of PA490 Program. The Town makes no distinction in land use solely on PA490. The land is classified as Farm Residential but is abutting parcels that are both Light Industrial and Farm Residential. GCE has not yet had discussions with the Town regarding if or how land use classification would change due to the proposed solar

project. However, should the Project reduce the acreage within the PA490 Program, because “state law sets no minimum for farmland” the Project would likely not remove the parcel from the program but would simply change the amount of acreage subject to it. For more information please refer to: <https://portal.ct.gov/DOAG/Commissioner/Commissioner/Public-Act-490---The-Basics>.

14. Has DOAg purchased any development rights for the facility site or any portion of the facility site as part of the State Program for the Preservation of Agricultural Land?

No.

15. Referring to Petition pp. 24-26 and November 14, 2024 letter from GCE to DOAg, are the proposed beekeeping area, herb and botanical planting areas, perennial cold season grass areas, pollinator-friendly flower planting areas and sheep grazing areas all located within the facility “site?” If yes, provide the following information for these agricultural co-use areas.

Yes, the listed activities would all be located within the site.

- a. What entity would manage these areas?

GCE is ultimately responsible but a tenant farmer would be responsible for any of the planting and/or grazing work in those areas.

- b. If the project is sold and/or transferred to another entity, would the sale and/or transfer include management and maintenance of these agricultural co-use areas?

Yes, if the Project is sold, all responsibilities held by GCE would transfer to the new owners.

- c. Would parking and access for emergency vehicles be available?

Emergency vehicles and services would be given the ability to access the site. Parking would be allowed along the access and maintenance roads internal and external to the site.

- d. Would the hours of accessibility be limited or unlimited? Explain.

Hours of accessibility for the farmer would be coordinated with the landowner and fall within daytime hours. GCE has the ability to access for maintenance and would self-impose limits of access to working hours except in the case of an emergency.

- e. Will signs be posted related to the hours of accessibility, permitted and prohibited uses, etc.?

There are currently no plans to post signage outside of what is required by electrical code and safety regulations. However, GCE is willing to work with the Council, Town, and tenant farmer to post whatever signs would be needed.

- f. Who would be liable for any personal injury?

GCE objects to this interrogatory to the extent that it calls for a legal conclusion for which no response is required. Subject to the foregoing objection, GCE states that it cannot know who would be liable for injury, since liability for personal injury is predicated on a number of factors, including actions taken by the defendant, the amount of control over a site and the situation that gave rise to the injury. For information on the allocation of liability for incidents related to an electric transmission facility, please see Gonzalez v. O&G Industries, Inc., 341 Conn. 644 (2021). Put another way, GCE anticipates that the State's common law would allocate liability for injuries between GCE, the landowner, and the alleged injured party.

- g. Who would be responsible for maintenance of the agricultural co-uses described above? What type of maintenance is necessary and how frequently would maintenance activities occur?

The farmer selected by GCE would be responsible for the maintenance of the agricultural co-use. Before final selection of exact crop types, it would not be possible to fully explain the exact requirements of the maintenance. In general, the farmer would be responsible for the production of agricultural products, and ensuring ground cover is maintained to prevent erosion of soils.

- h. Identify the water source for these agricultural co-use areas.

Water for the initial establishment of crops would be trucked onto the site, as no source of water is available on site. It is believed that rainfall would be sufficient to grow the crops. Should rainfall prove inadequate, water would be trucked on site.

- i. Could the lease agreement with the host property owner be amended to remove these agricultural co-use areas from the solar facility "site," as defined under RCSA §16-50j-2a(29)?

Theoretically, the lease agreement could be amended, however, doing so will defeat purpose of GCE's attempt to implement agrovoltatics on this site. Additionally, as the agricultural area is within the array area, there is no practical way to separate the two.

Energy Output

16. Referencing Petition p. 4, GCE notes that energy produced by the facility would be sold to Eversource. Has GCE executed a Tariff Terms Agreement (TTA) with Eversource? Would GCE also sell the renewable energy certificates (RECs) to Eversource? Would the TTA include the transfer of capacity to Eversource?

The Project has signed a Shared Clean Energy Facility ("SCEF") Agreement with Eversource. GCE will retain ownership of all generation equipment but will sell power to Eversource according to the SCEF contract.

17. 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 SCEF Agreement.

No battery storage system is currently contemplated for this Project.

18. 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? By what mechanism are sections electrically isolated from each other?

Yes. Sections of modules throughout the array are connected to multiple inverters. An inoperable inverter does not impede the functionality of other inverters.

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

At this time, GCE does not anticipate that the Project will be participating in the ISO-NE Forward Capacity Auction, however, GCE reserves the right to participate in the Forward Capacity Auction in the future.

20. Referencing Petition p. 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 at the point of interconnection is 3.035MW AC.

21. What is the projected capacity factor (expressed as a percentage) for the proposed project?

*The projected capacity factor for the proposed Project is 15.42% percent. This is based on: Capacity factor (%) = (production in kWh) / (system size kWdc * 8760) * (100).*

22. When the SCEF Agreement contract expires and the solar facility has not reached the end of its lifespan, will GCE decommission the facility or seek other revenue mechanisms for the power produced by the facility?

As indicated in the Response to Interrogatory Number 5, GCE does not anticipate decommissioning the facility at the end of the time period of the SCEF Agreement. Rather, GCE would expect the facility to seek other revenue mechanisms at the end of the SCEF Agreement. However, GCE will decommission the system at the end of the life of the Project regardless of whether the SCEF contract ends or another additional revenue source is sought.

23. Would GCE construct the facility if the solar array footprint was reduced and/or if the facility design features (ex. row spacing, panel height, etc.) were modified? Explain.

Some level of redesign and change could be acceptable and maintain Project viability. However, there will be a tipping point at which GCE could not construct the Project. The exact details of the redesign would dictate at what point the Project would no longer be economically viable.

Proposed Facility and Associated Equipment

24. Referencing Petition p. 26, GCE notes that, "The leading edge of the modules will be a minimum of 3.5 feet..." What is the **maximum** height from grade to the bottom edge of the panels? What is the **maximum** height from grade to the top edge of the solar panels?

As currently designed, with two Heliene 540 W panels in portrait configuration at 20 degree tilt, the proposed clearance height from finished grade to the bottom edge of a panel is between three and a half (3.5) feet and four and a half (4.5) feet and the top edge of the solar panels is anticipated

to be approximately seven (7) to eight (8) feet off the ground not accounting for ground slope. Final clearances are subject to change, however, pending final equipment selection and electrical design, it is not anticipated that the top edge will be more than ten (10) feet above grade even considering undulating ground. A detail of the tracking system can be found on page E-100 of the electrical engineering plans.

25. Referencing Petition p. 26, what type of machinery would be used by farmers in harvesting the crops beneath and between solar racking? Where would the increased signage and fencing be located?

Due to size constraints of the array and the nature of the agricultural use, it is not anticipated that specialized equipment will be required. The harvesting work would be done without machinery and would instead use hand tools. The signage would be placed directly at the equipment or area of potential risk. For example, transformers and switchgear would have signs to not touch.

26. Provide the distance, direction and address of the nearest property line and nearest off-site residence from the solar field perimeter fence, transformer pads, and the proposed access drive.

The perimeter fence of the northern array is 22 feet at the nearest point from the Property Line to the north. The western equipment pad is 97 feet from the Property Line to the north. The access drive is 19 feet at the closest point south of the property line abutting 159R Middlefield Road.

The nearest residence at 159R Middlefield Road is 153 feet north of the access road at the closest point. It is 313 feet to the northwest from the western equipment pad and 266 feet to the northwest from the nearest fence line.

27. 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, farming activities or animals?

Photovoltaic wire is typically run on, and supported by, the racking. The specified wiring is typically UV rated to protect from degradation from sun exposure. If a jumper is required (e.g., when DC wiring must go from one row to the next) or when a run must go from the racking to the inverter, or row to row, the wire is typically run through conduit. Such conduit is buried and comprised of PVC.

28. Provide the approximate dimensions of the proposed equipment pads.

The proposed equipment pads are approximately 72ft x 13ft.

29. List the equipment that would be installed on the proposed equipment pads. Would the project have one or more transformers? Explain.

Each of the two equipment pads will have 1 solar transformer, 1 solar AC switchboard, and 1 grounding transformer. Next to each equipment pad, the inverters will be mounted on driven beams or screw foundations and Unistrut.

30. What is the expected useful life of the proposed solar facility?

The expected useful life of the Project is approximately 35 years. However, a PV generating facility on site can last for longer than 35 years but may require replacement of key equipment.

31. How could GCE minimize the solar facility footprint and its visibility to the maximum possible extent without provisions for agricultural co-uses (ex. slimmer row spacing, lower panel height)?

If agricultural co-use activities were not conducted, visibility would be reduced by several key aspects. First, the height of the modules would be lower, and thus, the panels would be less visible. Second, the spacing in between the rows could be reduced and could either allow for a smaller footprint or a higher capacity in the same location. A third aspect is that there would be less ongoing work on site without the agricultural use, and thus, the Project would have a lower impact to the community by way of fewer trips in and out of the access location. However, agrivoltaics are strongly encouraged by state policy, and as such GCE has implemented agricultural co-use as a means of sustainable energy development. See, <https://portal.ct.gov/deep/planning/steps-for-solar-development>.

Electrical Interconnection

32. Petition p. 11 refers to Electrical Plans behind Appendix B. The Equipment Specifications are behind Appendix B. Provide the subject Electrical Plans.

GCE is aware of the Council's concern regarding the visibility of the interconnection poles and understands the need to minimize the impact. As such, GCE has preemptively reduced the impact from the previous design at the time of submission by eliminating one meter from the design which reduces the pole count by one. Two of the other poles, owned by GCE, were also relocated interior to the site to reduce visual impact. The poles owned by Eversource, however, need to stay at the exterior of the site to allow them to be in Eversource's existing right of way.

An updated version of the electrical plans is attached as Exhibit 3.

33. What is the status of the electrical layout and the Interconnection Agreement with Eversource?

An Interconnection Agreement was received from Eversource on January 12, 2024. The electrical layout has been revised to show the interconnection location agreed upon with Eversource and the revised locations of the four utility poles (previously five). One pole was removed, and two were moved further on site away from the road to reduce visual impact.

34. Provide the line voltage of the proposed electrical interconnection.

The 3 Phase line that the Project would be interconnecting to is 13.2kV.

35. Referencing Petition p. 11, does the Project interconnection require a review from ISO-NE?

This Project was reviewed by ISO-NE and approved.

36. Would any off-site upgrades to the existing electric distribution system be required (e.g. distribution line upgrades and/or upgrades from single to three phase)? If yes, describe.

The Interconnection Agreement with Eversource states: "The regulators and regulator controls on Cherry Hill Road will be upgraded to accommodate the back feed caused by the DER project."

37. Petition p. 17 states "... at least 60% of the total capacity of the facility will be supplied to low-and moderate-income customers..." Where will the remaining approximately 40% be supplied?

The SCEF program dictates that the majority of the power generated from awarded projects be used to power low and moderate income customers. Once that is satisfied, distribution of the remaining energy is at the discretion of Eversource. Petitioner will not be informed or in control of where the power is allocated.

38. Referencing Petition Drawing C-2.0, five new utility poles are proposed. Approximately how tall would these poles be above grade? Identify the equipment that would be installed on the proposed utility poles. There are existing utility poles 18, 19, 20, 21, 22, 23 and 25 identified along Middlefield Road. Where is utility pole 24 located?

Exact pole heights are not known at this time. Typically, they are 30-40 feet tall. The electrical plan has been revised and now proposes four new utility poles instead of five. See, Exhibit 3. The four poles would house the Utility Recloser, Utility Primary Meter, Customer GOAB, and Customer Recloser respectively. The revised electrical plan also shows the location of the existing utility pole that the Project will be interconnecting to.

39. Have there been any discussions with Eversource about using pad-mounted equipment rather than pole-mounted equipment? Provide cost estimates for both an overhead and underground interconnection.

General conversations regarding pole mount vs pad mounted equipment have taken place with Eversource. While we cannot provide cost figures for each option independently, we can state that pad mounted costs are higher. However, more importantly, Eversource prefers to have pole mounted interconnection. The lead time and complexity of equipment for pad mounted gear cause it to not be a viable interconnection option for the proposed Project. The pad mounted gear is also large and takes up more space and requires both utility and customer pads. Arguably, the visual impact from pad mounted interconnections is also worse than the modified and proposed pole design.

Public Safety

40. Would the project comply with the current Connecticut State Building Code, National Electrical Code, National Electrical Safety Code, Connecticut State Fire Prevention Code, and National Fire Protection Agency codes and standards, as applicable?

Yes, the Project will comply with all relevant codes and standards, including, but not limited to, the Connecticut State Building Code, National Electrical Code, National Electrical Safety Code, Connecticut State Fire Prevention Code, and National Fire Protection Agency requirements.

41. What are industry Best Management Practices for Electric and Magnetic Fields at solar facilities? Would the site design conform to these practices?

According to the Council's revised EMF Best Management Practices dated February 7, 2014, the Council recognized that a 2010 guideline established 2,000 mG as an acceptable exposure level to EMF. The Council also recognized that there is scientific consensus that there is no cause-and-effect link with EMF and any health effect, and that "scientific evidence to date does not warrant the establishment of MF exposure limits" surrounding transmission lines. In 2015, the Massachusetts Department of Energy Resources, Department of Environmental Protection, and Clean Energy Center released a solar guide that states that PV arrays generate EMF in the same extremely low frequency range as electrical appliances and wiring found in most homes and

buildings and that the measurements at three commercial PV arrays in MA gave off less than 0.5 mG at the sites' boundaries and typically PV arrays give off less than 1.0 mG within three inches of the panels, whereas a vacuum cleaner three feet away from a motor is approximately 2.0 mG. As such, GCE is not aware of any BMPs for EMF at solar facilities.

42. Would training be provided for local emergency responders regarding site operation and safety in the event of a fire or other emergency at the site?

Yes. GCE would work with emergency response personnel to provide training on understanding Project details, access, disconnect locations, and electrical functioning of the system. Hazard mitigation training would include how the Project was designed to code as well as managing brush on site. Training on signage and access to the site would also be included. Please also refer to the response to Interrogatory Number 44 below.

43. Referencing Petition p. 26, GCE notes that, "The site is being designed with farmer's safety in mind." What is the proposed aisle width for the farming activities, and how is it sufficient for farmer's safety?

The current row spacing of 12.5 feet is sufficiently wide for vehicles such as pick up trucks or small ambulances to pass through. Additionally, the site is being designed so there will be significantly lower risk of any electrical accidents. Such design includes wiring connected to the racking and wires buried where possible. It would be the intent of the agricultural co-use plan to use no till farming so there is also no risk of a plow cutting a buried wire.

44. In the event of a brush or electrical fire, how are potential electric hazards that could be encountered by emergency response personnel mitigated?

In the event of an electrical fire or brush fire that threatens electrical equipment, the proper response to mitigate further risk is to spray water around the fire area to reduce or prevent the spreading of fire. Additionally, all electrical equipment would be shutdown via the main switch. If the project main switch is not accessible, the electricity can also be turned off on the utility side at the point of interconnection. This information will be included during the training of emergency responders.

45. Could the entire facility be shut down and de-energized in the event of a fire? If so, how?

The site can be disconnected from the grid via either utility or customer disconnects. The inverters will automatically shut down for a variety of reasons. Fire would cause inverters to shut down or enter a default state. Either or both systems would stop the flow of power from affected systems to the grid.

46. What type of media and/or specialized equipment would be necessary to extinguish a solar panel/electrical component fire?

Fire extinguishers rated for electrical fires or chemical suppressants should be used to extinguish an electrical fire. Water should not be added to an electrical fire. It is also important to cut off the flow of power from whatever device is on fire. Otherwise, no specialized equipment is required to manage fire at a ground mounted solar project.

47. How would site access be ensured for emergency responders?

All access points would have proper signage as required by electrical code. Additionally, the access code or spare physical key would be provided to the local fire department.

48. What type of oil is within the transformers? Do the transformers have a containment system in the event of a leak? Can the remote-monitoring system detect an insulating oil leak?

GCE has not yet made a final selection as to the exact make and model of the transformer, however, all transformers being considered for the Project contain mineral oil in relatively small volumes. There are no containment systems, as they use such small amounts of mineral oil and mineral oil is naturally occurring and nonpolluting. The monitoring detection system would detect any leak, however, and would notify GCE.

49. Are there any water supply wells in the vicinity of the site? If yes, would the installation of racking posts affect well water quality from construction impacts, such as vibrations and sedimentation?

The Connecticut Department of Health Public Water Supply Map viewer suggests that the host parcel itself and surrounding parcels are likely served by private wells; however, the existence and/or location of any of these wells are not known at this time. It is not anticipated that any construction activities would affect well water quality and the Project incorporates a detailed erosion control plan and stormwater management plan to ensure that runoff leaving the site during and after construction will be protected from sedimentation.

50. Identify the distance/direction of the nearest federally-obligated airport from the proposed site.

A review of the FAA search page around the host parcel coordinates suggests that Meriden Markham Municipal Airport is the nearest federally-obligated airport. It is located approximately 7.5 miles to the west of the host parcel as the crow flies.

51. Would notice to the Federal Aviation Administration be necessary for the temporary use of a crane during construction? Explain.

The FAA requires notification on alterations, permanent or temporary, taller than 200ft above ground level. If a crane of this height was needed a permit would be required. GCE does not intend to use a crane in the construction of this Project at this time.

52. Referencing Petition p. 22, would the results of the noise calculations be impacted by cumulative noise from the transformer and inverters, or would the inverters be the dominant source of noise? Would such equipment operate at night? Explain.

The inverters will be the dominant source of noise and will not be operating at night.

53. Referencing Petition p. 22, the projected noise level at a distance of 75.5 feet from the inverters would be less than 55 dBA. Does this noise value represent one inverter unit or a bank of 10 inverters operating simultaneously?

This represents a bank of 10 inverters operating simultaneously. The noise calculations have been revisited and for 10 inverters operating simultaneously the projected noise level at a distance of 83ft, not 75.5ft, will be less than 55 dBA. The nearest property line from an equipment pad is 97ft away and the Project will still meet noise requirement levels at the nearest property line.

54. Referencing Petition p. 22, paragraph 3, what is the projected noise in dBA at the nearest abutting property line? Provide a noise analysis that includes this projected noise level in dBA. Is this projected noise level based on one inverter or a bank of 10 inverters?

Sound is logarithmic function, not linear. 10 inverters (each creating 73dBA at 1 meter) located on an equipment pad will produce 83 dBA all together at a distance of 1 meter.

Therefore, at a distance of 97 feet away from the property line, using the inverse square law to calculate the sound levels, the noise generated by 10 inverters operating simultaneously will be 53.6 dBA.

55. Referencing Petition p. 23, a Phase I Environmental Site Assessment (ESA) identified one Area of Concern where there may be possible herbicide or pesticide contamination in the soils. It indicates a copy of the Phase I ESA is behind Appendix E. Appendix E is the Stormwater Report. Provide a copy of the Phase I ESA.

A copy of the Phase I ESA is attached as Exhibit 2.

Environmental Effects and Mitigation Measures

56. Is the proposed project located within 150 feet of a known northern long-eared bat (NLEB) maternity roost tree or within 0.25-mile of a known NLEB hibernaculum? How would the proposed project affect the NLEB?

Based upon a review of the Connecticut Northern Long-eared bat Observations by Town map prepared by CTDEEP NDDB dated July 24, 2023, and included herewith as Exhibit 4, the project site is not within 0.25 miles of a known NLEB hibernaculum. US Fish and Wildlife Service documentation on the Northern Long-eared bat suggests that location information for hibernacula and maternity roost trees is generally kept in state natural heritage inventory databases. The Project was provided a Final Determination, dated December 1, 2023, by CTDEEP Wildlife Division which did not include the possible presence of the NLEB or mature roost trees in the vicinity. Given this information along with the fact that only a small number of select trees within open fields are proposed to be removed, it is the Petitioner's anticipation that the proposed Project will not affect any habitat associated with the NLEB .

57. Referencing Petition, Drawing C-5.1, please respond to the following regarding the fence design.
- a) The proposed 7-foot chain link fence would have a 6-inch wildlife gap. Would this gap also be compatible with potential sheep grazing? If no, what size gap would be compatible?
 - b) Could GCE install an agricultural style fence? If so, provide a photograph or drawing of such fence design and the incremental cost versus the proposed fence configuration.
 - c) Would an agricultural style fence design be compatible with potential sheep grazing at the site?
 - d) What size gap under an agricultural style fence would be compatible with wildlife migration and potential sheep grazing at the site?
- a) *Petitioner believes that a 6-inch wildlife gap may not be desirable for sheep grazing due to risk of sheep escape and allowance for potential predators to enter. Accordingly, Petitioner wishes to reserve the right to revise the fence design to extend to the ground in the event that sheep grazing is undertaken at the site.*

- b) *Yes, Petitioner would be amenable to installing an agricultural-style fence in lieu of chain link of equal height. A photo of a sample agricultural fence at a different solar facility in Connecticut is included as Exhibit 5 for reference.*
- c) *Yes, it is Petitioner's understanding that an agricultural fence would be compatible with potential sheep grazing.*
- d) *Petitioner believes that a 6-inch wildlife gap may not be desirable for sheep grazing due to risk of sheep escape and allowance for potential predators to enter. Accordingly, Petitioner wishes to reserve the right to revise the fence design to extend to the ground in the event that sheep grazing is undertaken at the site. It is also Petitioner's understanding that the mesh size of an agricultural-style fence would allow small wildlife to pass through the fence rather than under the fence while still being effective at protecting potential sheep.*

58. Referencing Petition p. 28, approximately 6 acres of tree clearing is proposed. Please provide the following:

- a. Acreage of tree clearing only; and
- b. Acreage of tree clearing and grubbing.

Of the approximate six (6) total acres of tree clearing, approximately 1.5 acres are proposed outside of any development limits for shading purposes and would not need to have their stumps grubbed. The remaining 4.5 acres of tree clearing are within the development footprint and would need to have their stumps grubbed.

59. 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?

While the exact design and length of the foundation system is to be determined in the future pending structural pull testing at the site by the selected EPC, it is currently anticipated that approximately six (6) foot long ground screws will be used based on the fact that the stormwater geotechnical testing performed located pockets of shallow ledge. A rock drill would be used as part of the ground screw installation in areas of refusal. No impacts to groundwater quality are anticipated from any construction activities and the Project is designed to meet State water quality guidelines.

60. Referencing the November 14, 2023 letter from GCE to DOAg, commercial herb and botanical farming, a pollinator habitat and honeybee apiary are proposed as on-site agricultural co-uses.

- a. How much space is required under and adjacent to the panels for herb and botanical farming, taking into account sunlight or shading effects?

It is anticipated that the suggested agricultural use would only require a few feet of spacing between plants and thus, the current aisle width of 12.5 feet would support the agriculture without additional changes to the design.

- b. Where would the pollinator habitat and honeybee apiary be located on-site?

As the entire parcel will have a ground cover, it is expected that the entire area will be used as pollinator habitat. The two different types of plants will not adversely affect each other and would rather provide both total ground coverage and an agricultural use for the parcel. The beehives final location would be coordinated between GCE, the landowner, and the farmer, but the hives would be placed outside the fence of the array in a location where the bees could access the whole array but which still allows for unobstructed access to other parts of the property and Project.

61. Would on-site herb and botanical farming be conducted by a third-party farmer?

Yes, GCE would partner with a tenant farmer.

62. Would on-site pollinator habitat and honeybee apiary be managed by a third party?

Yes, GCE will either also partner with a beekeeper or it would be managed by the tenant farmer, depending on their capabilities.

63. Referencing Petition p. 26 and Drawing C-2.0, the aisles between the solar arrays have been widened to accommodate 26.5 feet solar panel row to row spacing (or equivalently, 12.5 feet aisle width) to allow for crop production and farmer safety. What is the minimum aisle row spacing for efficient operation of this facility? If the narrower aisle width was used, by how many acres would the facility footprint be reduced?

The system has been designed to maximize both system capacity and available farm space. The minimum row spacing is not fully defined but would have to allow for human access between rows. There is no intent to reduce the overall footprint acreage of the facility.

64. How was it determined that 12.5-foot wide aisles is the minimum space to support crop production? Is it anticipated crops would be grown across the 12.5-foot wide aisle or would there be offsets from the solar panel edges? Would any crop growth extend under the panels? If so, by how many feet?

It is planned that the crops would be evenly distributed throughout the array location and only portions of the plants removed during harvest. The row spacing was determined based on review of existing agricultural solar projects, workability, discussion with farmers and experts and balancing of solar generating and production needs of the Project. There would be grasses and shade tolerant plants grown directly underneath the modules but plants for harvest would dominantly be between rows.

65. Would the larger facility site footprint to accommodate 12.5-foot wide aisles for crop production require additional stormwater detention when compared to a project with narrower aisles?

The crop production proposed for the site consists solely of low-growing leafy vegetation and the ground cover will remain bushy year-round and not be tilled or cleared. Accordingly, the underlying ground cover for the facility will be bushy vegetation irrespective of the final clear spacing between solar panel racking, and no additional stormwater detention measures would be needed.

66. Referencing Petition Appendix F – Stormwater Report, was the crop production within the facility site footprint accounted for within the post-construction calculations? Explain.

Yes, the crop production proposed for the site consists solely of low-growing leafy vegetation and the ground cover will remain bushy year-round and not be tilled or cleared. Accordingly, the underlying ground cover for the facility will be bushy vegetation and has been conservatively modeled as low-growing grass.

67. Have the details of the Agricultural Co-use Plan for areas within the fenced solar facility site been finalized? If so, please submit the plan. If not, when is the anticipated completion date?

The Agricultural Co-Use Plan has not been finalized. Since the CT DEEP Stormwater Permit requires growth of ground cover for two growing seasons before any other actions can be taken, any agricultural activities would not begin for a number of years. GCE has not finalized their search for tenant farmers nor negotiated terms or plans. Prior to the parcel becoming available for farming activities, GCE would work to secure a tenant farmer and finalize crop decisions, planting times, and a finalized Agricultural Co-Use Plan which could be submitted to the Council at that time.

68. Referencing Petition p. 29, all water used for construction would be trucked in. What is the source of water for the proposed crop production? If sheep grazing were to occur on the site as a secondary agricultural co-use, what would be the source of water for the sheep?

Water for the proposed agricultural planting would be trucked in during the establishment and initial ground cover growth. It is expected that once established, natural precipitation would be sufficient. The water for sheep would also have to be trucked in. Logistical concerns for sheep grazing were one of the main factors driving the decision towards the proposed use.

69. Does GCE intend to offer free use of the solar facility site to the third-party farmers or would there be a sub-lease with monetary terms? Does the lease agreement with the property owner permit sub-leasing?

The details of any deal with a tenant farmer have not been finalized at this time. Since the farmers services would replace the traditional mowing and vegetation management, GCE may decide to compensate the farmer rather than seek payment for a sub-lease.

70. Referencing the November 14, 2023 letter from GCE to DOAg, p. 5, GCE letter notes that, if herb farming is not a viable option for the Project, GCE would utilize sheep grazing instead. Under what circumstances could the herb farming be deemed not viable? At what point in the planning process would this be determined?

Farming and agricultural use on site would be in lieu of traditional mowing and landscaping. To be determined to be not viable, the agricultural use would have to be operating at a significant loss, or if GCE is unable to find a farmer to partner with but is able to find a shepherd. This decision would be made during construction or during the 2 growing seasons required to satisfy the Stormwater General Permit or potentially after attempting the primary option.

71. If the Project is approved, and if the herb farming is later deemed no longer viable, would GCE submit a sheep grazing plan at that time?

Yes, if GCE decides to switch the agricultural use to sheep, GCE would submit an amended plan to the Council.

72. Referencing Petition p. 13, indicate the type and location of proposed landscaping/screening measures. Which abutting properties would be incorporated into the landscaping/screening plan? Provide a proposed landscaping/screening plan.

There is existing vegetation surrounding the majority of the facility that would prevent sightlines from most abutting properties. GCE does not intend to remove any screening, and a fair amount of the existing vegetation exists outside of the parcel, so it cannot be removed without coordinating with the neighbors. GCE is in initial talks with the neighbor to the south to create an agreeable

screening solution. The only direction that would have any view of the Project would be along and across Middlefield Road. Currently, GCE is not planning any screening along this side of the Project as there have not been any comments or concerns by abutters or locals expressing interest in GCE providing that screening.

GCE would provide a final landscaping plan to the Council prior to construction.

73. Where is the nearest publicly accessible recreational area from the proposed site? Describe the visibility of the proposed facility from this recreational area.

Either the Durham Fairgrounds or Allyn Brook Park are the closest public recreational areas to the proposed sites. Both are about 1.1 miles from the proposed Project and would have no view of the site. Numerous forested areas, private residences and businesses block sightlines between these two recreational areas and the Project area.

74. Referencing Petition, p. 26, what is the status of the Phase 1B study? Provide a copy of the Phase 1B Report if it is available.

A copy of the Phase 1B plan is included as Exhibit 7 and a copy of a letter of concurrence from SHPO dated February 2, 2024, confirming their opinion of no adverse impacts to cultural or historic resources by the Project, is included as well.

75. Referencing Petition Appendix F – Phase 1A Report, p. 24, paragraph 4, could the existing stone walls be retained, in whole or in part? Explain why or why not. If the walls could be retained, please indicate walls to remain on Figure 6 – Proposed Project Layout.

The stone walls at the site are generally coincident with the parcel boundary lines. GCE does not intend to remove or otherwise modify any of the existing stone walls. A revised version of Figure 6 – Proposed Project Layout is included depicting the location of the known existing stone walls to remain at the site.

76. Where is the nearest national, state and/or locally-designated scenic road from the proposed site? Describe the visibility of the proposed project from the nearby scenic road(s).

The nearest designated Scenic Road is Rt-17 in Durham. From the closest point of the array to the nearest center point of the road, the distance is about 1,250 ft. Between these two points are dense forested areas, private residences, and light industrial businesses. There will be no visibility of the Project from Rt-17. Topography in the area also indicates hills between the Project location and Rt-17. Lastly, no portions of Route 17 were visible from the site during multiple site visits during leaf-off conditions.

77. Referencing Petition p. 7, it states the parcel is “progressively cleared by the landowner.” Does the landowner harvest wood and if so, is the wood harvesting considered an agricultural activity?

The landowner has cut down and removed trees from the property informally through either handshake deals or called in favors. There is not an organized logging operation or any formal wood harvesting on site. The landowner was simply removing trees from the property. Formal wood harvesting would be considered an agricultural use, pursuant to Conn. Gen. Stat. § 1-1(q).

78. Referring to Petition pp. 13 and 29, is the preliminary design of the Project at least 50 percent complete? If not, would construction comply with the *Connecticut Soil Erosion and Sediment Control Guidelines* and *Connecticut Stormwater Quality Manual*, effective March 30, 2024?

It is Petitioner's belief that the site plans and stormwater management design of the Project were at least 50%, or greater complete at time of Petition submission. Accordingly, it is anticipated that the Project will not need to comply with the 2024-effective versions of the Connecticut Soil Erosion and Sediment Control Guidelines ("ESCG") and Connecticut Stormwater Quality Manual ("SWQM") guidance documents. The Project has, however, been designed to conform with the 2002 ESCG and 2004 SWQM guidance documents, and Petitioner intends to apply for and secure a CT DEEP Stormwater General Permit.

79. 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).

A photolog and accompanying photo location map have been prepared and are included as Exhibit 8.

Facility Construction

80. Referencing Petition p. 18, during the November 14, 2023 meeting with DEEP, please describe any recommendations, comments or concerns about the project that were discussed.

During the November 14, 2023 meeting, GCE and its consultants introduced the project to CT DEEP and the Department's Concierge Office. GCE showed the proposed layout at the time as well as how much prime farmland would be used, showed no impacts to forestland habitat, as well as a lack of FEMA floodplains and delineated wetlands. GCE also demonstrated the limited visual

impact of the Project. Proposed stormwater basins were shown with an explanation of how many swales were designed at the time.

The CT DEEP team had various questions about potential agricultural impacts, and GCE responded with the proposed agricultural use plan that was later approved by the Department of Agriculture. CT DEEP asked pointed questions regarding the slopes of the site, stormwater design, and the soils on site. GCE and team confirmed that the Project will meet all requirements for stormwater and explained that the stormwater controls will need to be permanent due to the Ground Cover Ratio.

CT DEEP also asked for the Project to submit Project plans and proposals to the Forestry Division. GCE did so, and DEEP's Forestry Division subsequently confirmed that the Project would have no impact on Forestland Habitat. Lastly, CT DEEP asked about the amount of tree clearing and grubbing. At the time, GCE and its consultants were in the process of completing a cultural study but explained the intent to only fully remove the trees inside of the array and to limit tree clearing. In response to DEEP's questions on this topic, GCE opted instead to adjust the placement of the array into more open land to reduce number of trees cleared.

81. Has the Petitioner consulted with the DEEP Dam Safety program regarding permitting requirements, if any, for the proposed stormwater basins? Explain.

Petitioner has not consulted directly with the CT DEEP Dam Safety Division regarding permitting requirements; however, Petitioner did conduct a pre-application with CT DEEP through their Office of Planning and Program Development Division. Dam Safety opted not to join this presentation or to provide comments. Furthermore, none of the proposed stormwater basins exceed three (3) total acre-feet of impounded water and hence are under the State statutory limits of being classified as potentially-hazardous dams.

82. DEEP's General Permit Appendix I states that 50-foot wetland buffers shall be comprised of existing dense herbaceous vegetative ground cover. Provide information regarding the presence of this ground cover type within the proposed wetland buffer area.

The Project only proposes approximately 0.1 acres of tree clearing (without stump removal) that is closer than 100-feet to a downstream wetland resource. This area would only have about 3-4 trees cut down which could be performed by hand without the use of construction vehicles to further minimize disturbance. Accordingly, it is Petitioner's belief that the Project does not contemplate any ground disturbance within 100-feet of a wetland resource area.

83. With regard to earthwork required to develop the site, provide the following:

- a) Will the site be graded? If so, in what areas?
- b) What is the desired slope within the solar array areas?
- c) Could the solar field areas be installed with minimal alteration to existing slopes?
- d) If minimal alteration of slopes are proposed, can existing vegetation be maintained to provide ground cover during construction?
- e) Estimate the amounts of cut and fill in cubic yards for the access road(s)
- f) Estimate the amounts of cut and fill in cubic yards for solar field grading.
- g) If there is excess cut, will this material be removed from the site property or deposited on the site property?

- a) *No mass earthwork or regrading is proposed within the limits of the solar array. The only proposed site grading is to install the stormwater basins.*

- b) *A typical upper limit maximum slope for fixed-tilt solar panel arrays is approximately 15%; however, final racking specifications will dictate upper limit tolerances.*
- c) *Yes, as noted above, no grading is proposed within the limits of the solar array.*
- d) *Yes, it is Petitioner's intent to keep as much existing vegetation on the site as possible throughout construction.*
- e) *The Project currently proposes approximately 0.5 acres of compacted gravel access roads and, while final gravel depths may vary during installation due to localized soil conditions, it is anticipated that the average depth of road material will be approximately 8 inches. This would result in approximately 550 cubic yards of soil excavation and 550 cubic yards of gravel import, and existing grades will be maintained.*
- f) *No grading is proposed for the solar array.*
- g) *It is not currently anticipated that an excess cut will happen. Should there be an excess cut it would be deposited on the site; however, Petitioner wishes to reserve the option to haul material offsite if it is preferred by the contractor hired to perform civil work for the Project.*

84. 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?

While the exact design and length of the foundation system is to be determined in the future pending structural testing at the site, it is currently anticipated that approximately six (6) foot long ground screws will be used based on the fact that the stormwater geotechnical testing performed located pockets of shallow ledge. A rock drill would be used as part of the ground screw installation in areas of refusal.

85. 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. Was any tree clearing necessary to perform the geotechnical study? If so, where?

A Geotechnical study has been completed by Down To Earth Consulting. A number of borings were completed to determine the subsurface strata of the site. The borings generally found 3 to 6 inches of topsoil, followed by either a sand deposit, or weathered bedrock, or a combination of the two, these varied in depth from about 2 to 7 feet. The report found that groundwater would likely not be encountered during construction, but use of ground screws was recommended for areas where depth to bedrock would create challenges for other forms of construction. Separately, a stormwater geotechnical investigation was performed at the location of each of the proposed stormwater basins finding similar results. No tree clearing was required to complete either survey.

86. Would any blasting be required to develop the site or stormwater features?

It is not anticipated that blasting will be required to construct any aspects of the Project. Any bedrock encountered will be removed via use of a rock drill and/or pneumatic hammer.

87. Submit a construction fuel materials storage, refueling and spill response plan with applicable contact information.

A draft Spill Prevention, Control, and Countermeasure ("SPCC") Plan has been prepared for the Project and is included herewith as Exhibit 9. It is intended to have the selected EPC or general contractor constructing the Project prepare a final site-specific SPCC Plan prior to beginning construction.

Facility Maintenance/Decommissioning

88. Would the inverters last the life of the project? If not, at what time interval would the inverters need to be replaced?

Most inverters are expected to operate 10-15 years before needing replacement. Larger centralized string inverters like these are expected to need component replacements in lieu of full system replacement.

89. Referencing Petition p. 29, how often would the panels be cleaned? What equipment and substances would be used?

Module washing isn't anticipated to be required on a set schedule for a site located in CT. Enough natural rain falls to keep the modules relatively clear. In the unusual circumstance that washing would become necessary then medium pressure water and soft scrub brushing without detergents or chemicals would be used to clear the debris from the surface.

90. Would the Petitioner remove snow that accumulates on the panels? Would snow accumulation on the solar panels affect the output of the facility? Under what circumstances would snow be removed? Describe snow removal methods.

GCE would not remove accumulated snow. Given typical winters in southern New England, it is anticipated that snow would not accumulate in significant amounts on the panels. The panels are angled and as such, snow would be anticipated to sheet off of the panels. It is not anticipated that mechanical means of snow removal will be required.

91. Referencing Petition p. 10, would GCE agree to install solar panels that are not classified as hazardous waste through Toxicity Characteristic Leaching Procedure testing?

Yes, as long as panels that fit the Project requirements and have that classification are available at the time of procurement and construction. GCE does not control the supply chain of PV modules and due to national and global politics, that supply is sometimes limited.

92. Would replacement modules be stored on-site in the event solar panels are damaged or are not functioning properly? If yes, in what location?

No. Replacement panels would not be stored on site. Replacement panels would be delivered on an as needed basis, and damaged panels removed.