STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
A PETITION OF WOODSTOCK SOLAR ONE, LLC AND VCP, LLC d/b/a VEROGY, LLC FOR A DECLARATORY RULING FOR THE PROPOSED CONSTRUCTION, MAINTENANCE AND OPERATION OF A 3.0 MW AC SOLAR PHOTOVOLTAIC ELECTRIC GENERATING FACILITY AT 11 CASTLE ROCK ROAD, WOODSTOCK, CONNECTICUT	:	PETITION NO. 1617
	:	JULY 15, 2024

RESPONSES OF WOODSTOCK SOLAR ONE, LLC AND VCP, LLC D/B/A VEROGY TO CONNECTICUT SITING COUNCIL INTERROGATORIES

On June 24, 2024, the Connecticut Siting Council ("Council") issued Interrogatories to Woodstock Solar One, LLC and VCP, LLC d/b/a Verogy, LLC ("WSO" or "Petitioner"), relating to Petition No. 1617. Below are the Petitioner's responses.

Notice

Question No. 1

Has Woodstock Solar One, LLC and VCP, LLC d/b/a Verogy received any comments since the petition was submitted to the Council? If yes, summarize the comments and how these comments were addressed.

Response

No further comments have been received.

Project Development

Question No. 2

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

Response

The following permits will be required for construction and operation of the WSO Facility. The Petitioner will obtain and hold the permits in its name.

a. Connecticut Department of Energy and Environmental Protection, General Permit for the Discharge of Stormwater and Dewatering Wastewater from Construction Activity.

b. Town of Woodstock, Building Permit.

c. Town of Woodstock, Electrical Permit.

Question No. 3

What is the estimated cost of the project?

Response

The estimated cost of the Project is between $6M to $7M.

Question No. 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?

Response

No.

Question No. 5

If WSO transfers the facility to another entity, would WSO 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?

Response

Yes. If the Petitioner chooses to transfer the WSO Facility, it will agree to do so subject to a requirement that the transferee comply with all regulatory permits and approvals. Contact information for the new ownership entity would also be provided.

Proposed Site

Question No. 6

Submit a map clearly depicting the boundaries of the solar facility site and the boundaries of the host parcel. Under Regulations of Connecticut State Agencies (RCSA) §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.

Response

Please see Appendix A Plan Sheet C-2.0 of the Petition for a depiction of the "Site" which includes the area within the Limits of Disturbance ("LOD") line shown. This area includes a specified boundary, access to the solar facility and electrical interconnection locations. The leased area will not be determined until the project is through the permitting process, but it will generally follow the Limits of Disturbance.

Question No. 7

Referencing Petition pp. 14-15, WSO notes that, "The Project…will occupy approximately 14 of the 38.3 acres with approximately 19 acres of total limits of disturbance." Is 14 acres the approximate combined area of the two fenced solar array areas? Explain.

Response

Yes, 14 acres is the approximate combined area of the two fenced solar arrays.

Question No. 8

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

Response

The lease is for twenty (20) years with the option for up to three (3) additional five-year extensions.

Question No. 9

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

Response

No. The current lease agreement does not address agricultural co-uses associated with the Project. The lease agreement with the property owner permits the Petitioner to use the leased premises for the placement of a solar array and any lawful purpose during the lease term. As part of Petitioner's development of the project, it intends to advance agricultural co-uses at the Site, and Petitioner has made the property owner aware of the proposed sheep grazing on the leased premises. The property owner is not opposed to this activity.

Question No. 10

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.

Response

The lease agreement contains provisions that require the Petitioner, upon expiration or termination of lease, to remove, at its expense, all fixtures and equipment and restore the

property to substantially the same condition that existed on the commencement date of the lease.

Question No. 11

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?

Response

Signage indicating the contact information for the company contracted to oversee the sheep grazing will be posted at the entrance gate when active grazing is occurring. Contact information for WSO could also be provided on signage at the entrance gate if required.

Question No. 12

Referencing Petition p. 6, is the host parcel currently farmed by the property owner or by a third party? If by a third party, is this use subject to a lease agreement and if so, when does the lease expire?

Response

The host parcel is currently farmed by the property owner.

Question No. 13

Is the site, or any portion of the host parcel(s), 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*?

Response

Yes, the Property is currently a part of the Public Act 490 Program. It is possible that once Project construction is completed, the portion of the parcel that contains the solar facility may no longer be eligible to participate in the Public Act 490 Program. If the Petition is

approved by the Council, WSO will meet with the Town of Woodstock Assessor, to determine how the Town will treat the project area for tax purposes.

Question No. 14

Has the State of Connecticut Department of Agriculture (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?

Response

No.

Question No. 15

Is the site and/or host parcel within a Town of Woodstock-designated conservation easement?

Response

No.

Question No. 16

Referencing Petition Appendix A, Existing Conditions Map, the host parcel is noted as "subject to water line rights and possible reservoir rights" in favor of two other parcels and the parcel to the southeast and southwest of the solar arrays is noted as "the Spring Lot." Explain how these notations relate to the development of the parcel for the proposed solar facility.

Response

WSO is working with our title search company to determine what, if any, impacts these rights will have on the development of the proposed facility. These rights date back to 1888 and in some cases appear to have been released. WSO believes that that the project will be able to work around any existing rights, if they still exist.

Question No. 17

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?

Response

Yes.

Question No. 18

Referencing Petition p. 17, provide the distance, direction and address of the nearest property line and nearest off-site residence from the solar field perimeter fence and the proposed access drive.

Response

The perimeter fence is 18 feet from the property line at the southwest corner of the western array where it abuts Castle Rock Road. The perimeter fence is approximately 370 feet from the northwest corner of the residential dwelling at 11 Castle Rock Road, which is situated in the south-central area of the overall solar site. The proposed access road to the western array is also 370 feet from residence a 11 Castle Rock Road.

Proposed Facility Extension and Associated Equipment

Question No. 19

Referencing Petition, Appendix A, Sheet C-2.0, provide the widths and lengths of the proposed gravel Y-shaped southwestern and southeastern access drives.

Response

The widths of all roads proposed on the site are 15 feet wide. The road into the western array is 190 feet long and the road into the eastern array is 100 feet long. Each hammerhead leg proposed is approximately 60 feet in length for turnaround.

Question No. 20

Referencing Petition, pp. 7 and 17 and Appendix A, Sheet C-2.0, would each inverter bank of 12 inverters each be located on the equipment concrete pads, attached to the post-supported racking, or free standing on posts next to the equipment concrete pads? Explain.

Response

The inverters will be attached to free standing posts adjacent to the concrete equipment pads. The ground surface beneath will consist of compacted gravel.

Question No. 21

Referencing Petition, Appendix A, Sheet C-5.1, Cross Section of Fixed-Tilt Panel Array, what is the approximate angle with the horizontal that the solar panels would be oriented at?

Response

The panels will be oriented at 25-degree angle.

Question No. 22

Referencing Petition, Appendix A, Sheet C-5.1, Cross Section of Fixed-Tilt Panel Array, the minimum clearance is 2 feet between the bottom edge of the panels and grade. What is the maximum clearance between the bottom edge of the panels and grade? What is the maximum height from grade to the top edge of the panels?

Response

The clearance from the bottom edge of the panels will vary with the topography but should be no more than approximately three (3) feet. The height of the top edge of the panels above grade will also vary with the topography and may be up to twelve (12) feet above grade The property generally slopes down from south to north.

Question No. 23

Would the wiring from the panels to the inverters be installed on the racking system? If wiring is external, how would it be protected from potential damage from weather exposure, vegetation maintenance, or animals?

Response

Most of the wiring will be run on the racking system itself. Where wiring is not run on the racking, it would run in conduit. All Facility wires are weatherproof and rated up to 194° F.

Question No. 24

Provide the approximate dimensions of the proposed equipment pads.

Response

The eastern array will contain a concrete pad measuring approximately 13.5' x 15.5'. The western array will contain a concrete pad measuring approximately 8.5' x 7.5', with final dimensions for both subject to final equipment model selection.

Question No. 25

List the equipment that would be installed on the proposed equipment pads.

Response

Only the project transformers will be installed on the concrete equipment pads referenced in response to question#24.

Energy Output

Question No. 26

Referencing Petition p. 8, has WSO executed a Tariff Terms Agreement (TTA) with Eversource? Would WSO also sell the renewable energy certificates (RECs) to Eversource? Would the TTA include the transfer of capacity to Eversource?

Response

WSO was awarded a contract in the Year 4 Shared Clean Energy Facility Program (SCEF) auction in 2023. WSO executed a SCEF Tariff Terms Agreement with Eversource for a term of 20 years and for the purchase and sale of electricity and renewable energy certificates (RECs). On June 7, 2023, PURA approved the selected Year 4 SCEF projects. As it relates to capacity rights, WSO or the "Subscriber Organization" does not own capacity rights under the SCEF Tariff Terms Agreement.

Question No. 27

Approximately how many MW AC each are the eastern solar array and the western solar array?

Response

The western solar array is approximately 1.25 MW AC and the eastern solar array is approximately 1.75 MW AC.

Question No. 28

Referencing November 17, 2023, WSO letter to DOAg, Section 2b, the percentages of energy production to be delivered to various customer groups under the Shared Clean Energy Facility (SCEF) are provided. Would the percentages remain approximately the same on a capacity (rather than energy) basis?

Response

The production of the system is delivered to the utility (Eversource) as total energy (kilowatt hours) and then Eversource allocates the energy based on their management of subscribers to the SCEF program. Therefore, there is no discernible way for WSO to determine if the same allocation occurs on a capacity (kilowatt) basis.

Question No. 29

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.

Response

No battery storage system is currently contemplated for this project. Depending on state or federal programs encouraging battery storage systems in the future, the site plan could be amended to accommodate such systems.

Question No. 30

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?

Response

Yes, only the DC panels or DC to AC inverters for the affected area would shut down. The remaining portion of the system would continue to operate and generate power. Sections of the solar facility are electrically isolated by the grouping of DC panels to the DC to AC inverters, and the AC inverters are electrically isolated via breakers and disconnect switches.

Question No. 31

Would WSO participate in an ISO-NE Forward Capacity Auction? If yes, which auction(s) and capacity commitment period(s)?

Response

No, WSO would not participate in the ISO-NE Forward Capacity Auction, as Eversource owns the capacity rights of any SCEF program facility. However, at the conclusion of the SCEF

tariff, WSO may choose to participate in the ISO-NE Forward Capacity Auction or a similar capacity program that is available at that time.

Question No. 32

Referencing Petition p. 8, what electrical loss assumptions have been factored into the output of the facility? What is the output (MW AC) at the point of interconnection?

Response

Yes, electrical loss assumptions have been factored into the output calculation provided in the Petition. The output at the point of interconnection is estimated to be approximately 2.9 MW AC.

Question No. 33

If the facility operates beyond the terms of the SCEF Agreement, will WSO decommission the facility or seek other revenue mechanisms for the power produced by the facility?

Response

The Petitioner may continue to operate the Facility beyond the term of the SCEF agreement if another revenue mechanism for power supply is available at that time.

Question No. 34

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

Response

WSO was awarded a SCEF contract that calls for a 3MW AC facility to be installed at the Site. WSO believes the design, as currently presented, meets this obligation in the most efficient way possible with minimal environmental effect. Reducing the solar array footprint

would impact WSO's ability to meet its contract requirements. In addition, the row spacing for the proposed project is already constrained and narrowing the spacing further would result in shading of the panels and thus, reduced output.

Electrical Interconnection

Question No. 35

Provide the line voltage of the proposed electrical interconnection.

Response

23 kV

Question No. 36

Does the interconnection require a review from ISO-NE?

Response

Yes, the Project was required to be reviewed by ISO-NE as part of the interconnection application and system impact study process with Eversource and was approved by both ISO-NE and Eversource accordingly.

Question No. 37

Referencing Petition pp. 8-9, what is the status of the transmission impact study and interconnection agreement with Eversource?

Response

The transmission impact study was completed and Eversource issued an Interconnection Agreement on July 9, 2024.

Question No. 38

Will the interconnection provide energy to a substation? If yes, which one?

Response

Energy will be delivered to the Eversource distribution grid circuit that is designated as 14M9, which feeds to the 14M Tracy bulk substation. WSO cannot determine if energy delivered to a utility's distribution circuit will provide energy to this or any given substation or if the energy will be consumed within the distribution circuit.

Question No. 39

Provide a preliminary or final (as available) electrical interconnection design drawing depicting the point of interconnection, location of demarcation between WSO and Eversource, pole quantity and locations on the subject property, equipment on WSO and Eversource poles, and approximate pole heights.

Response

The electrical line diagram included in Attachment 1 depicts the point of interconnection to an existing Eversource utility pole, identifies all new poles (two by Eversource, three by WSO, for a total of five new poles), and identifies what equipment will be installed on each pole. All proposed poles will be 40-45 feet in height above grade and are identified on Appendix A, Sheet C-2.0 of the Petition.

Question No. 40

Has WSO discussed with Eversource the possibility of reducing/minimizing the number of poles required for the interconnection? Explain.

Response

WSO has not had such a discussion with Eversource about this Project but has had similar discussions regarding prior projects approved by the Council. As previously discussed, Eversource dictates the number of poles that are required to make the interconnection and to

install the necessary metering and protective equipment. The WSO proposed interconnection plan represents the minimum number of poles required by Eversource.

Question No. 41

Has there been any discussions with Eversource to use pad-mounted equipment rather than pole-mounted equipment? Provide cost estimates for both an overhead and underground interconnection.

Response

Eversource dictates the design for the service connection via the results of the system impact study that they conduct and the resulting costs via the Interconnection Agreement that Eversource issues. In our experience, Eversource remains unwilling to consider alternative interconnection design options. Eversource cost for the new service connection is approximately $250,000 based on our experience. A specific breakdown of just the new service was provided as part of the Interconnection Agreement as it included other required system upgrades. WSO does not have any cost information related to using pad-mounted equipment from Eversource. It is, however, our experience that pad-mounted equipment is significantly more expensive than overhead equipment. In response to condition of approval no. 8 for the Glastonbury Solar One project (Petition No. 1602), WSO contacted Eversource, who indicated that they "do not install pole-mounted reclosers" and that "pad mounted meters require additional cost and a 12–16-month lead time".

Public Health and Safety

Question No. 42

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?

Response

Yes

Question No. 43

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

Response

The Petitioner is not aware of any industry Best Management Practices for Electric and Magnetic Fields at solar facilities that connect to the existing distribution grid such as the WSO project. We would also like to direct the Council to the report provided by Exponent that addressed this concern for the similar Burlington Solar One project, and the report indicates that there were no EMF concerns for that project. That project was approved by the Council and is currently in service (see Docket No. 497, Petition No. 1437, https://portal.ct.gov/CSC/1_Applications-and-Other-Pending-Matters/Applications/3_DocketNos400s/Docket-No-497---Burlington-Solar-One)

Question No. 44

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?

Response

The Petitioner is prepared to provide assistance and/or training to local emergency responders.

Question No. 45

How would site access be ensured for emergency responders.

Response

WSO will provide emergency responders with a key to the access gate or use of a "knox box". Please refer to Section 6.1 of Appendix C.

Question No. 46

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

Response

In the event of a fire or emergency, the Facility will be able to be shut down by emergency responders via a physical disconnect switch that will be appropriately labeled pursuant to the requirements of the National Electric Code. In addition, the Facility can be disconnected remotely by either the Petitioner or Eversource via their respective reclosers.

Question No. 47

In the event of a brush or electrical fire, how are potential electric hazards that could be encountered by emergency response personnel mitigated? What type of media and/or specialized equipment would be necessary to extinguish a solar panel/electrical component fire?

Response

In the event of a fire or emergency, the Facility will be able to be shut down by emergency responders via a physical disconnect switch that will be appropriately labeled pursuant to the requirements of the National Electric Code. The Petitioner is not aware of any specific media and/or specialized equipment that may needed to extinguish a fire within the Facility. Generally speaking, electrical fires are allowed to burn themselves out, with water being used only on the surrounding areas to prevent the spread of any fire beyond the affected area.

Question No. 48

What is the distance of the nearest municipal fire hydrant to the proposed facility? What alternative water sources are available to the fire department? How would water be brought to the site in the event of a fire?

Response

WSO confirmed with the Woodstock Volunteer Fire Association that no municipal hydrants exist in the area around the Project site. The Petitioner cannot comment on the alternative water sources that might be available to the Woodstock Volunteer Fire Association.

Question No. 49

Would firewater or other runoff from a solar panel/electrical fire be considered hazardous and require cleanup by a hazardous materials response contractor?

Response

Per the TCLP report contained in Appendix B of the Petition, the Petitioner does not anticipate that any such runoff would be considered hazardous material.

Question No. 50

What type of insulating oil is used within the transformer(s)? Is it biodegradable? Do the transformer(s) have a containment system in the event of an insulating oil leak? Would the transformer(s) have a low oil alarm?

Response

The transformers will utilize FR3 fluid which is derived from over 95% renewable vegetable oil and is non-toxic. The transformers do not have an oil containment system. They do maintain liquid level gauges that can be ordered with contacts. WSO can monitor these contacts through the facility monitoring platform. WSO will add remote monitoring of leak detection to

the Project.

Question No. 51

What measures would be employed to ensure there would be no soil erosion and flooding resulting from construction activities and post-construction development of the site?

Response

Temporary swales and sediment traps have been proposed to be strategically located with the site topography to capture any runoff from the site prior to its exiting the site. The construction area is also proposed to be ringed with silt fence. Following the completion of construction, the traps are proposed to be filled in and regraded to allow vegetation to form and return the site to a natural condition where stormwater will sheet flow, and either be absorbed into the ground or be filtered by the grasses on site before it runs into the wood line. The Petitioner's Stormwater Report studied the pre- and post-development peak rates of runoff from the development area and generally concluded that the conversion of fallow farmland to mature bushy vegetative growth under the panels would reduce stormwater runoff from the site for flood events.

Question No. 52

Would notice to the Federal Aviation Administration (FAA) be necessary for the temporary use of a crane during construction?

Response

Per Appendix K, WSO utilized the FAA Notice Criteria Tool to evaluate the possible use of a crane and it was determined that no other action is required.

Question No. 53

What is the distance of the proposed facility to Woodstock Airport?

Response

The closest portion of the proposed facility is approximately 1,400 feet from the northern portion of the existing runway within the airport property, and approximately 620 feet from the nearest airport property boundary line.

Question No. 54

Referencing Petition p. 19 and Appendix K, where is the nearest federally obligated airport?

Response

Based upon a review of the FAA Circle Search for Airport online feature, the nearest federally obligated airport is Toutant Airport, located approximately 5.5 miles to the west/northwest of the proposed WSO facility.

Question No. 55

What noise-generating equipment would be installed at the site? Would operation of the proposed facility meet the applicable state noise standards at the nearest property boundary?

Response

The noise-generating equipment on site is limited to the inverters and transformers. This equipment would not operate at night. As indicated in Section 6.3 of the Petition, the project would have a combined inverter bank calculated sound power level of under 85dBA at 1 meter. The Inverse Square Law shows that the 85dBA would reduce to approximately 57dBA at a distance of 86 feet, which is the nearest residential property line to the south, on the opposite side of Castle Rock Road. This value is less than the DEEP allowable limit of 61dBA. As noted

above, the transformers would not have an impact on the cumulative noise and is below the DEEP limits of 61dBA.

Question No. 56

Referencing Petition p. 17, it states noise sound levels were based on a previously completed sound analysis that determined a combined inverter bank has a calculated sound power level of under 85 dBA at one meter. What inverter manufacture/model was used in the previously completed combined inverter bank analysis?

Response

The same inverter manufacturer/model as this project (Chint CPS SCH125KTL-DO/US-600) was used in the previously completed combined inverter bank analysis.

Question No. 57

Referencing the Sheep Grazing Plan Attached to the January 19, 2024, DOAg correspondence, if temporary electric fence is used at the site to create defined pasture areas within the solar field, what types of safety measures are in place to prevent electric fence shock hazards?

Response

To help prevent electric fence shock hazards, warning signs are attached to the fence with additional instructional signage placed on the exterior security gate fencing, independent of any -16- signage associated with operation of the solar array. The electric fence is powered by a 12-volt battery attached to a solar charger that is independent of the solar array and in no way touches nor energizes any permanent structure. According to the electric fence manufacturer: "Most modern fence energizers send very brief (less than 3/10,000 of a second in duration), high-voltage pulses (usually 2,000–6,000 volts) of electrons down the conductor every 1–2

seconds. Though powerful enough to deter animals and poultry, pulses this brief and this infrequent almost never pose a fire risk when the conductor is near combustible material. There simply isn't enough "on" time for heat to build and allow ignition to occur."

Question No. 58

Regarding sheep grazing at the site, would flock protection animals such as dogs, llamas or donkeys be used?

Response

Llamas may be utilized for flock protection, if needed, as determined by the grazer's consultation with USDA Wildlife Services and their resulting recommendations.

Question No. 59

How many days per week would the sheep manager visit the site to check on the sheep?

Response

The number of days per week varies depending on weather and the need to restock the water supply but is typically 5-6 times per week. Almost daily on-site checks will occur in hot weather or after extreme weather events and remote cameras are placed on site during grazing that are utilized for daily checks.

Question No. 60

How would sheep be managed if electrical contractors/personnel were dispatched to the site for nonscheduled maintenance or emergency repair work?

Response

The sign on the entrance gate warns contractors/personnel of the presence of the livestock, to ensure the gate remains closed to contain the animals and contains emergency contact information for the grazer. If there is a need to exclude animals from an area where

maintenance or repair work is being performed, the grazer can be contacted and dispatched to the site to temporarily modify the layout of the electric fence that defines the paddocks where the sheep can safely graze.

Question No. 61

Referencing page 8 of the Sheep Grazing Plan attached to the January 19, 2024 DOAg correspondence, provide a sample copy of the sheep manager contact sign.

Response

See below photos from a similar project as examples of the signage and contact information that can & will be provided.

Environmental Effects and Mitigation Measures

Question No. 62

Will livestock manure affect the water quality of adjacent wetlands? How can such effects be mitigated?

Response

According to a University of Nebraska study on water Quality and the Grazing Animals (see reference and hyperlink below) areas of farmland that are grazed with animals compared to -18- cropland may have better surface and groundwater quality if the fertilizer and animal ware inputs are low to moderate. Properly managed grazed land will protect the soil surface from erosion compared to cropland. The study also states that one landscape management tool that has been found to be effective in reducing water pollution from both cropland and grazed areas in the

humid eastern part of the United States is use of riparian buffer systems. Many studies at different sites in the Gulf Atlantic Coastal Plain region have shown that concentrations and loads of Nitrogen in surface runoff and subsurface flow are markedly reduced after passage through a riparian buffer. In the case of Glastonbury Solar One, the sheep grazing program will be managed with the appropriate number of sheep per acre and rotated throughout the fenced Facility to ensure areas are not over grazed. Additionally, the fenced Facility is greater than 100' from any wetlands, leaving a significant riparian buffer to help filter stormwater runoff in addition to protecting water quality that is being managed within the stormwater basins. Based on the current design of the project and the Petitioner does not believe that the water quality will be affected by the grazing and as such no additional mitigation measures are required. Hubbard, R. K.; Newton, G. L.; and Hill, G. M., "Water Quality and the Grazing Animal" (2004). Publications from USDA-ARS/UNL Faculty. https://digitalcommons.unl.edu/usdaarsfacpub/274/

Question No. 63

How would water be provided at the site for the sheep?

Response

Water from the host farm is brought on-site by the sheep grazer.

Question No. 64

What is the length of the posts and to what depth would the posts be driven into the ground? How would the posts be driven into the ground? Are any impacts to groundwater quality anticipated? If so, how would WSO manage and/or mitigate these impacts?

Response

It is expected that the posts will be driven to a depth of 8-10 feet into the ground, but this value will ultimately be determined by the racking manufactures structural engineer. The posts

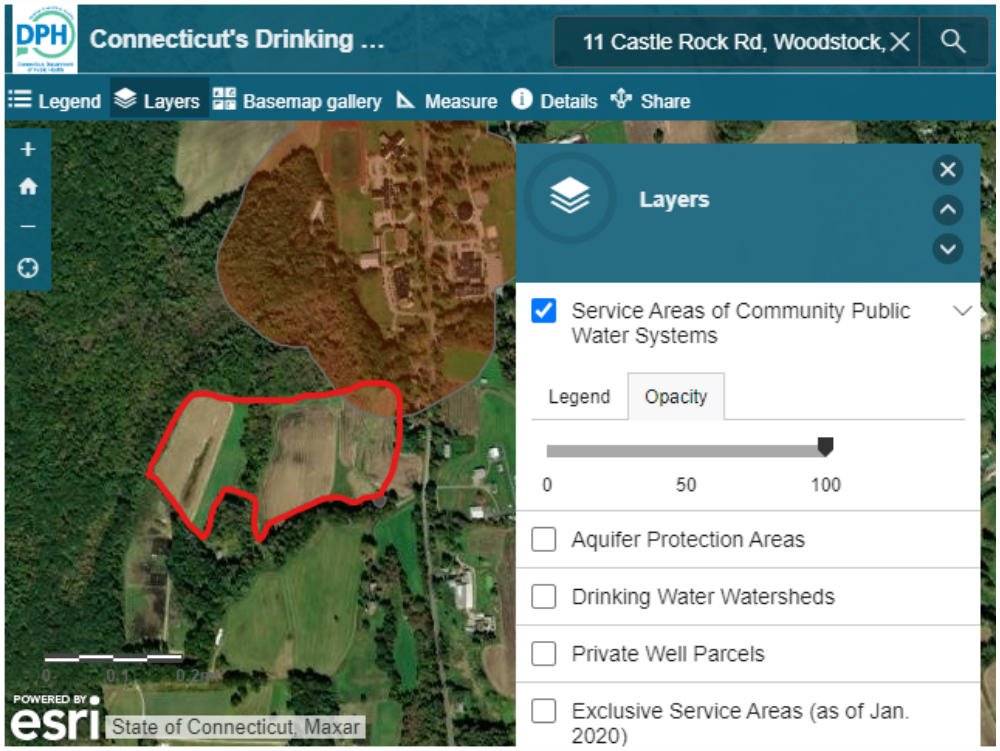
will be driven into the ground utilizing a pile driving machine. There are no anticipated ground water impacts from Facility construction. Installation of the racking system are not expected to cause sediment releases, and no disruption to well water flow or quality is anticipated. Question No. 65

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

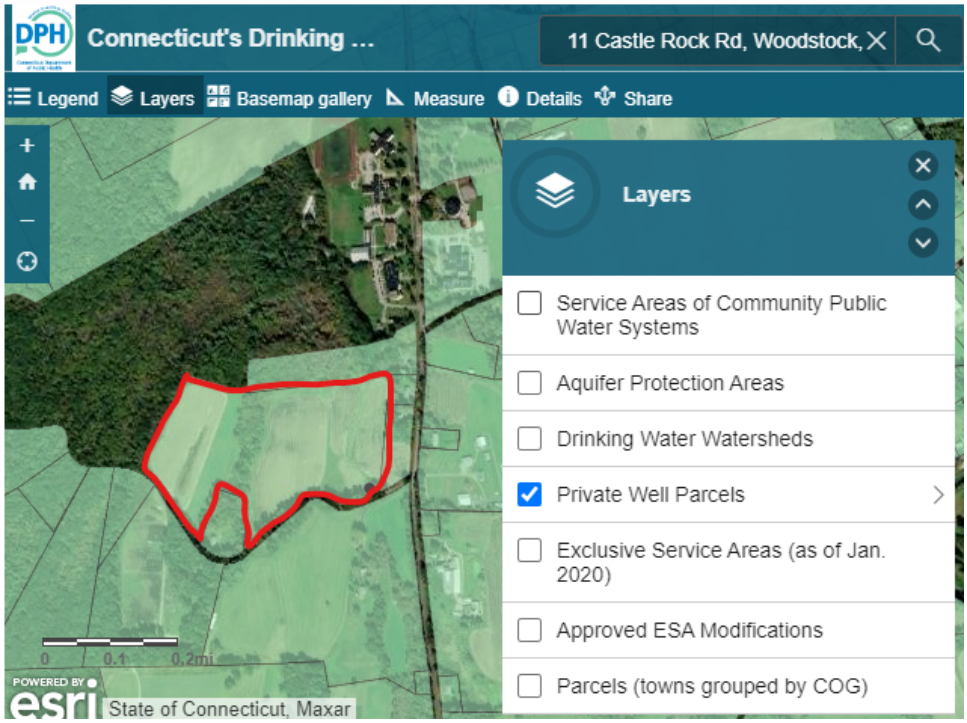
Response

A check of the Connecticut Department of Health's Public Water Supply Map (see below) indicates that the subject parcel and surrounding parcels to the south, east, & west are served by private wells. The parcel to the north (Woodstock Academy) is currently served by a Community Public Water System. Based on the depth of groundwater on site, depth to which the posts will be driven, and the relevant distance to these adjacent parcels, it is not anticipated that vibrations from post installation will affect well function and/or water quality.

Public Water Supply Map



Public Water Supply Map



Question No. 66

Referencing Petition, Figure 6, the proposed facility would be located within a public drinking water supply watershed. How would WSO protect water quality within this watershed?

Response

A spill prevention plan has been prepared and is included Appendix L of the Petition. This plan details measures to install and maintain erosion and sedimentation controls and manage refueling and fuel storage procedures (no hazardous materials will be used), spill prevention and response protocols, and requirements for supplying and maintaining a fuel spill remediation kit. WSO will also be required to receive a Stormwater General Permit for this project.

Question No. 67

Referencing Petition, p. 7 and Appendix F – Phase 1A Survey Report, p. 23, would existing stone walls remain in place post-construction to the extent feasible?

Response

As the stone walls are largely located along the property lines, we do not anticipate the need to remove any stone walls.

Question No. 68

Referencing Petition, p. 19 and letter from the State Historic Preservation Office dated April 9, 2024, provide a copy of the Phase 1B Survey Report dated March 2024.

Response

A copy of the Phase 1B Survey Report is included in Attachment 2.

Question No. 69

Describe the visibility of the proposed facility from the two abutting residences located

directly east of the host parcel and west of Route 169.

Response

It is anticipated that proposed solar panels and equipment for the eastern array may be visible from the two abutting residences to the east.

Question No. 70

Referencing Petition, p. 18, Route 97, a state-designed scenic road, is not visible from the project site. Would the proposed facility be visible from Route 97? Explain.

Response

The northern terminus of Route 97 is anticipated to be at Brayman Hollow Road, approximately 2 miles to the south of the proposed facility. There is dense vegetation within the parcels between Route 97 and the Project site and it is anticipated that there would be no visibility of the Project.

Question No. 71

Referencing Petition, p. 18, describe the visibility of the proposed facility from Norwich Worcester Turnpike (Route 169), a nationally designated scenic road.

Response

The eastern portion of the facility is located approximately 525 to 550 feet to the west of Route 129. In the area of the Facility, Route 169 has approximately 250 feet of unscreened view into the Project site and facility with a small amount of topographic undulation and accordingly, it is anticipated that portions of the Project would be visible from this portion of Route 169.

Question No. 72

Referencing Petition p. 18, are there any locally designated scenic roads proximate to the proposed facility? If yes, provide the distance and describe the visibility of the facility from such

scenic road.

Response

A check of the Town of Woodstock's records at (www.woodstockct.gov/planning-and-zoning-commission/pages/scenic-roads) indicates that there are no locally-designated scenic roads proximate to the proposed facility.

Question No. 73

Referencing Petition, p. 20, what is the status of the potential vernal pool survey? Provide a copy of the survey results if available and any recommended vernal pool protective measures. Would the project comply with the 2015 U.S. Army Corps of Engineers Vernal Pool Best Management Practices, if applicable?

Response

The vernal pool survey was performed on April 2, 2024. It was determined that no vernal pools are present and that the conditions do not exist to support a vernal pool. *See* Attachment 3.

Question No. 74

Referencing Petition, Appendix A, Sheet C-5.1, the proposed agricultural style fence would have a 4-to-6-inch wildlife gap at the bottom of the fence. Would such gap be compatible with hosting sheep at the site? Explain.

Response

The gap at the bottom of the fence is not adequate for hosting sheep. The agricultural fence detail will be revised to eliminate the 4-to-6-inch gap at the bottom. The fencing will be material will not be chain link but rather a Fixed Knot Woven Wire, consisting of 20 horizontal wires, with graduated spacing, and 6" spacing between vertical. This fencing will allow for the passage of small wildlife.

Question No. 75

Referencing Petition, Appendix A, Sheet C-4.0, 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?

Response

With the Petition filing submitted on March 4, 2024, it is the Petitioner's assertion that the site plans and stormwater design reached 50+% completion at that point and accordingly, that the Project would be reviewed under the light of the 2002 CT Soil Erosion and Sediment Control Guidelines and 2004 CT Stormwater Quality Manual.

Question No. 76

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).

Response

See Attachment 4.

Facility Construction

Question No. 77

Has the WSO met with the Department of Energy and Environmental Protection (DEEP) Stormwater Division? If yes, when? Please describe any recommendations, comments or concerns about the project provided by the Stormwater Division and how such feedback was addressed in the project design.

Response

Petitioner met with CTDEEP Concierge team, including the Stormwater Division, on March 26, 2024. No specific recommendations, comments, or concerns were outlined from the Stormwater Division at that meeting.

Question No. 78

DEEP's General Permit Appendix I states that the 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.

Response

The only disturbance proposed within 100 feet of a known wetland are the temporary sediment traps and small portions of the site security fence. It is anticipated that the site will be delivered to the Petitioner fully vegetated which will significantly reduce the overall risk of erosion from the site as well. This plan was provided to DEEP as part our March 28, 2024 meeting.

Question No. 79

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 is 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?

Response

a) The only grading proposed for the Project are the temporary sediment traps which will be filled in and brought to existing grades upon completion of construction.
b) Racking and construction tolerances are both on the order of 15% slope. No slopes within the project development area exceed this tolerance.
c) Yes, it is anticipated that the site will be delivered as grassed to the Petitioner and that no mass earthwork will need to be performed to construct the Project.
d) Yes, it is Petitioner's intent to maintain existing vegetation to the maximum extents feasible.
e) The project proposes approximately 150 cubic yards of soil cut and gravel import.
f) No grading is proposed for the solar field area.
g) It is anticipated that any cut generated by construction of the access road will be spread to other portions of the site.

Question No. 80

Referencing Petition p. 7, how would the posts or ground screws (that support the racking system) be driven/spun into the ground?

Response

The posts would be pile driven into the ground.

Question No. 81

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?

Response

A comprehensive geotechnical study has been completed and it was determined that the site conditions will support the overall project design. Geotechnical borings were conducted on January 30-31, 2024 and did not require any tree clearing. The report was received in March 2024. Per the report, soil and groundwater conditions were encountered that can support the proposed posts to support the solar array using driven piles and/or ground screws.

Question No. 82

Will blasting be required to construct the site or stormwater features? If not, how will racking posts be installed if bedrock or ledge is encountered?

Response

No.

Facility Maintenance/Decommissioning

Question No. 83

Would the inverters last the life of the project? If not, at what time intervals would the

inverters need to be replaced?

Response

The inverters would not likely last for the projected 20-35 year life of the Project. The inverters are typically warrantied for up to 15-20 years. Therefore, it is anticipated that the inverters will likely need to be replaced once during the life of this project.

Question No. 84

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

Response

No.

Question No. 85

Referencing Petition Appendix D, explain how the value of the components of the array at the end of the project's useful life in a salvage or resale value would be greater than the expected cost of decommissioning the facility.

Response

WSO has previously consulted with services such as WeRecycleSolar.com that provide tools for estimating the Value Recovery of the materials at the end of life and/or upon decommissioning of ground mounted solar arrays. The recovery value of the materials was found to exceed the cost of the labor and materials required to remove the equipment.