STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

CANDLEWOOD SOLAR LLC PETITION FOR A DECLARATORY RULING THAT NO CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS REQUIRED FOR THE PROPOSED CONSTRUCTION, MAINTENANCE AND OPERATION OF A 20 MEGAWATT AC (26.5 MEGAWATT DC) SOLAR PHOTOVOLTAIC ELECTRIC GENERATING FACILITY LOCATED ON A 163 ACRE PARCEL AT 197 CANDLEWOOD MOUNTAIN ROAD AND ASSOCIATED ELECTRICAL INTERCONNECTION TO EVERSOURCE ENERGY'S ROCKY RIVER SUBSTATION ON KENT ROAD IN NEW MILFORD, CONNECTICUT	:	PETITION NO. 1312
	:	August 28, 2017

INTERROGATORY RESPONSES
TO CONNECTICUT SITING COUNCIL
SET ONE

PROJECT DEVELOPMENT

1. *When was Candlewood Solar LLC's (CS or Petitioner) proposed project submitted as a proposal for the Tri-State Clean Energy RFP? When was the proposed project selected?*

Response: The Candlewood Solar project was submitted as a proposal to the Tri-State Clean Energy RFP in October of 2015. The project was selected on October 24, 2016.

2. *Was CS' Power Purchase Agreement (PPA) approved by PURA? When? Are there provisions for any extension of time in the PPA?*

Response: The form PPA was included in Appendix C of the Tri-State Clean Energy RFP that was issued by the CT DEEP and utilities in Massachusetts and RI. The RFP specifically stated that 1) "Bidders are discouraged from proposing changes to the Form PPA", and 2) for bidders selected by DEEP, the RFP stated "Under Section 6 of Connecticut Public Act 13-303, any PPA shall be subject to review and approval by the Public Utilities Regulatory Authority, ("PURA"), which review shall be completed no later than thirty days after the date on which such agreement is filed with PURA. Under Section 7 of Connecticut Public Act 13-303, any PPA shall be subject to review and approval by PURA, which review shall include a public hearing and be completed no later than sixty days after the date on which such agreement is filed with PURA." Since PURA must review and approve the PPAs for Connecticut and since bidders were discouraged

from changing the RFP, we presume that PURA reviewed and approved the Form PPA.

Regardless of the above statement, since our project was not selected by Connecticut, PURA did not review our final PPA.

The PPA has been finalized between Candlewood Solar LLC and the following Massachusetts utilities: National Grid, Eversource (WMECO, NStar), and Unitil. The PPA is being submitted by these utilities for review and approval by the State Department of Public Utilities in Massachusetts. Subsequent to this approval, the PPA will be fully executed by all parties.

There are a number of provisions and requirements in the PPA for achievement of Critical Project Milestones. The PPA imposes Delay Damages if the Commercial Operation Date is not met by the Guaranteed Commercial Operation Date. The PPA allows for up to four six month extensions of Critical Milestone dates upon payment in each instance of additional Development Period Security.

3. *What is the length of the PPA? Is there an option to renew?*

Response: The length of the PPA is 20 years. There are no options to renew.

PROPOSED SITE

4. *What are the existing land uses in each direction from the proposed site, e.g. north, south, east, and west?*

Response: ***Solar Array***

Please refer to the maps included in Attachment 1 of the Petition and Figure 2 of the Environmental Assessment (Exhibit A of the Petition).

Existing land use directly to the north of the Solar Array is undeveloped forest.

To the east of the Solar Array, land use primarily consists of undeveloped, forested areas. Further east/southeast, is Candlewood Lake.

Land uses immediately south of the Solar Array primarily consist of wooded/forested areas.

It is noted that the large majority of the forested areas around the site were cleared and open fields as of the 1930s/40s, and have since had regrowth of forest. The same is true of the wooded areas on the site itself. There are also remnant stone walls in these wooded areas.

Non-wooded/forested areas on the adjacent parcel to the south are developed with outbuildings (barn, silo and several sheds) and existing, active horse pasture/hay fields. Further south, is a residential area (Lookout Ridge Road and Acorn Lane). Southwest of the Solar Array, west of Candlewood Mountain Road is Candlelight Farms Inn (a wedding and meeting venue).

Candlewood Mountain Road and several parcels containing single family residences are located west of the Solar Array parcel. West of Candlewood Mountain Road is a forested area, beyond which is Candlelight Farms Airport.

As discussed in Section 2.6 of the EA, land uses within one mile of the Solar Array are diverse and include undeveloped forest, agricultural, residential, industrial, and business uses and an airport. The Town of Sherman is located approximately 2,785 feet (0.5 mile) west of the Project Area (from the edge of the access road).

Transmission Line Corridor

The Project will connect with Eversource Energy at the ISO-NE Pool Transmission Facilities ("PTF") at Rocky River Substation in New Milford, Connecticut. located on Kent Road/Route 7. The interconnection route will follow existing cleared access road and utility corridors to the extent practicable across the adjacent Project Area parcels to the east. The interconnection route for the Project crosses two of the Project Area parcels that are located on the eastern flank of Candlewood Mountain. The electric interconnection route passes through forested areas down a steep slope to the east of the solar array, leading to forested areas adjacent to existing access roadways and an existing cleared fiber line right-of-way (ROW) to its terminus at Kent Road/Route 7. Land uses surrounding the proposed transmission line corridor include forested areas to the north and south and an area of cleared fiber line ROW to the south. Further south of the proposed transmission line corridor is Candlewood Lake. Please refer to the map in Attachment 3 to the Petition.

5. *Has the State of Connecticut Department of Agriculture purchased any development rights for the proposed site as part of the State Program for the Preservation of Agricultural Land?*

Response: The State of Connecticut Department of Agriculture has not purchased any development rights for the proposed site.

6. *Is any portion of the site currently in productive agricultural use? If so, how many acres and is it used by the property owner or is it leased to a third party? Could the project qualify under the Agricultural Virtual Net Metering Program or other agriculturally-friendly renewable energy program?*

Response: As noted in the EA, the Facility parcel includes approximately 16 acres of hay fields and horse pasture which will be incorporated into the solar array site. In addition, an approximately 5 acre horse pasture is located along Candlewood Mountain Road which will not be impacted by the construction of the solar array.

As a project specifically bid into and accepted by the Tri-State Clean Energy RFP, this project does not qualify under the Agricultural Virtual Net Metering Program or any other agriculturally friendly renewable energy program.

7. *Does the proposed site contain any Connecticut Prime Farmland and/or Important Agricultural Soils? If so, what acreage of prime and important soils would the facility and associated equipment be located on?*

Response: Based on a review of soil mapping that is maintained by the Natural Resource Conservation Service (NRCS), the solar array parcel does not include any Connecticut Prime Farmland Soils or Connecticut Important Agricultural Soils. Connecticut Prime Farmland Soils and Connecticut Important Agricultural Soils are mapped on portions of the interconnection parcels, however, these locations will not be impacted by construction of the electric interconnect.

8. *Is there any environmental contamination on the proposed site from any previous agricultural use or other land use disturbance (ex. Soil and/or water contamination)? If so, how would the Petitioner remediate the pre-existing soil and/or water contamination?*

Response: To the best of the knowledge of Candlewood Solar LLC, there is no environmental contamination on the proposed site from previous agricultural use or other land use.

9. *Is the site parcel, or any portion thereof, part of the Public Act 490 Program? If so, how does the town land use code classify the parcel(s)? For example, is/are the parcel(s) classified as "Tillable D – good to fair"?*

Response: The site parcel is not part of the Public Act 490 Program. The site is zoned Major Planned Residential Development District (MPRDD).

10. *Have any residential subdivisions or other land use plans been approved by the town for the site in the past? If so, please submit the approved plans. If not, could a residential subdivision or other land use plan be constructed at the site? If so, please provide an overlay map depicting the details of a potential residential subdivision or other land use plan for the site using maximum development potential allowed by the town's zoning regulations.*

Response: As stated above, the parcel is zoned as a Major Planned Residential Development District (MPRDD). This zoning district was established for this parcel approximately 12 years ago to allow for the potential development of a large scale, high-density, multi-story residential complex. Plans for a 508-unit active adult residential development (called "Dunham Farms") were submitted to the Town of New Milford in 2007, but approval was never granted by the Town and the project did not go forward. Preliminary design plans for Dunham Farms are on file with the New Milford Planning Department. The MPRDD zoning designation remains in place, and therefore a large scale residential development could still be constructed at the site.

11. *Where is the nearest recreational area from the proposed site? Describe the visibility of the proposed project from nearby recreational areas.*

Response: As described in Sections 2.6 of the EA, "Candlewood Mountain is part of the Housatonic Range Trail, a 6.2-mile footpath that starts in Gaylordsville, Connecticut and ends at the top of Candlewood Mountain in New Milford, north of the Facility location. The Trail is part of Connecticut's Blue Trail system and is maintained by volunteers. The trail approaches the top of Candlewood Mountain from the north and does not cross the portion of the property to be developed (see **Section 2.9**)." As noted in Section 2.9, the Housatonic Range Trail / Blue Trail System is approximately 755 feet north of the array. The solar facility will have no impact on the trail once operational as ample forested area will screen views of the Facility from the trail and the Facility will not generate noise at levels to disturb trail users.

The nearest recreational area from the outer edge of the Solar Array is Candlewood Lake, approximately 730 feet to the east. Lynn Deming Park is located on the east side of Candlewood Lake, along the Lake's northeastern corner, and is approximately 1,350 feet from the approximate edge of the Solar Array. [Please see also response #13 for discussion on visibility]

The nearest recreational area along the length of the interconnect route is Candlewood Lake, at an approximate distance of 360 feet. From the Project interconnect with the existing Eversource Energy conductors located on Kent Road/Route 7, the nearest recreational area is also Candlewood Lake, approximately 1,700 feet south/southwest of the interconnect point. [Please see response #13 for discussion on visibility]

12. *Is Candlewood Lake considered a recreational resource? If yes, is it public or private? What, if any, recreational uses is Candlewood Lake used for?*

Response: Candlewood Lake is considered a recreational resource and is available for public use. Candlewood Lake is located in five (5) municipalities; Brookfield, Danbury, New Fairfield, New Milford, and Sherman and each

of the municipalities have beaches on Candlewood Lake that provide Lake access to the public, along with on-site parking and some facilities.

In New Milford, Lynn Deming Park is located on the northeastern side of Candlewood Lake and includes usage of the lakefront and lake. Lynn Deming Park is managed by the New Milford Parks and Recreation Department (http://www.newmilfordrec.com/info/facilities/details.aspx?ActivityID=143993).

Recreational uses associated with Lynn Deming Park and the Lake include: swimming; picnicking; fishing; boating; manual vessels such as kayaking, canoeing, row boating, etc.; SCUBA diving, and water skiing. Park hours are sunrise to sunset. Lifeguards are on duty at Lynn Deming Park during certain months of the year and at specified times. Candlewood Lake is patrolled by the CT Department of Environmental and Energy Protection (DEEP) and the Candlewood Lake Authority Marine Patrol.

Additionally, to celebrate Independence Day, each summer the City of Danbury, in conjunction with the Danbury Volunteer Firemen, sponsors the 4th of July fireworks display on Candlewood Lake.

As detailed in Section 3.10 of the Environmental Assessment, the Facility will not be visible from Lynn Deming Park.

13. *On pages 24 through 31 of the Environmental Assessment, CS provided photo-simulations, including two in the vicinity of Candlewood Lake. Would the proposed solar facility and/or the 13.8-kV distribution poles be visible from any portion of Candlewood Lake?*

Response: Based on the visual assessment conducted for the Project, as well as a review of the topography of the lake and surrounding and intervening areas, CS does not expect that the solar array or associated electric interconnect poles will be visible from any portion of the main body of Candlewood Lake. As detailed in Section 3.10 of the EA, the facility will be significantly buffered from surrounding areas by existing forested lands. Furthermore, with respect to the portion of Candlewood Lake closest to the Project Site (the northern end of the northeastern arm of the Lake), the solar array will be located on the western face of Candlewood Mountain and the intervening ridgeline will preclude views from the Lake areas to the south and east, as depicted in the visual assessment conducted for two locations on Candlewood Lake (Locations #2 and 4). The proposed electric interconnect will also be screened from views from the Lake by existing trees which will remain between the electric corridor and the Lake shore, with the exception of a short section (approximately 100 feet) of the electric corridor which will run along the NU Access Road along the discharge canal. This area will only be visible from the discharge canal and not from the main portion of the lake

As detailed in Section 2.5 of the EA, Candlewood Lake was constructed in 1929 as a reservoir for hydroelectric power and is Connecticut's largest lake, extending into five municipalities in two counties. According to the CT DEEP, the Lake is eleven miles long and two miles wide at its widest point, resulting in 60 miles of shoreline and approximately 5,420 acres of surface area (http://www.ct.gov/Deep/cwp/view.asp?A=2712&Q=324722). The lake consists of several arms running generally in a north / south orientation, including the northeastern arm which is located partially within New Milford and whose northern terminus ends at the dam located to the east of the southern portion of the solar array location and south of the electric interconnect corridor alignment (see EA Figure 1). The northern portion of the northwestern arm is located in Sherman, more than one mile to the west of the site. Remaining portions of the Lake are located well to the south of the Project Site. The Lake is at an elevation of approximately 429 feet AMSL while land areas surrounding the lake generally rise steeply from the lake shore to elevations of up to 1100 feet and higher. These surrounding hills will effectively prohibit views of any portion of the Facility from the vast majority of the lake areas to the south and west of the Project Site. As can be seen on the Attachment 1, Hubbell Hill, Green Pond Mountain, Great Mountain and Vaughns Neck will preclude any views of the solar array from areas to the west and south of the northeastern arm of the Lake. As noted above, views of the solar array and electric interconnect poles from the northeastern arm of the Lake will be precluded due to the location of the array on the western side of Candlewood Mountain and existing mature forested areas to remain.

14. *Where is the nearest area of archaeological sensitivity from the proposed site? Describe the visibility of the proposed project from nearby archaeological areas.*

Response: Candlewood Solar LLC has retained Heritage Consultants, LLC out of Newington, Connecticut to complete a Phase IA cultural resources assessment survey (Phase IA). The Phase IA report is in the process of being prepared and will identify areas of archaeological sensitivity within and proximate to the Project Site, if any. A copy of the Phase IA report will be provided to the CSC, and is expected in early September.

15. *To date, has CS received a response from the State Historic Preservation Office (SHPO), based on its submission of a Project Review Cover Form? If yes, provide a copy of such correspondence.*

Response: In a response dated June 21, 2017, the SHPO states:

Although no properties listed on the National Register of Historic Places have been documented within the project parcels, the project area is situated on well-drained soils adjacent to unnamed wetlands. Additionally, the project site is within close proximity to both Candlewood Lake and the Housatonic River. This type of environmental setting tends to be associated with pre-contact Native American settlement. Several

archaeological sites have been recorded in the region surrounding the affected parcels.

We are therefore requesting that a professional cultural resources assessment and reconnaissance survey be completed prior to construction. A reconnaissance survey was already proposed by this office for portions of the site in 2004, during review of a prior project. SHPO acknowledges that portions of the property have been subjected to prior ground disturbances related to the pasture fields. Not all areas of the proposed solar field are archeologically sensitive, but it is SHPO's opinion that intact and relatively well-drained soils within portions of the Area of Potential Effect have an elevated potential to contain significant archeological resources. Subsurface testing should assess all areas of anticipated ground disturbance that are considered to have a moderate/high sensitivity for containing significant archeological deposits, unless sufficient research or fieldwork documents that this level of effort is unwarranted. All work should be in compliance with our Environmental Review Primer for Connecticut's Archaeological Resources and no construction or other project-related ground disturbance should be initiated until SHPO has had an opportunity to review and comment upon the requested survey. A list of qualified consultants is attached for your convenience.

See Attachment 2 for a copy of the June 21, 2017 SHPO letter.

As noted in response to question 14, above, Candlewood Solar LLC has retained Heritage Consultants, LLC out of Newington, Connecticut to complete a Phase IA cultural resources assessment survey (Phase IA). The Phase IA report is in the process of being prepared and a copy of the Phase IA report will be provided to the CSC.

16. *Page 22 of the Environmental Assessment notes that, "The closest residence is located approximately 400 feet to the west of the Project Area on Candlewood Mountain Road." What is the address of such off-site residence?*

Response: The residence identified as being located approximately 400 feet to the west of the Project is the rear dwelling structure on the parcel at 183 Candlewood Mountain Road. The distance was measured from the solar array fence to the structure.

ENERGY PRODUCTION

17. *On page 19 of ISO-New England, Inc.'s (ISO-NE) Final 2017 Solar PV Forecast, ISO-NE utilizes an AC MW to DC MW (AC/DC Ratio) of 0.83. Is it correct to say that the actual AC/DC Ratio can vary from one solar PV project to the next? Is it correct to say that the AC/DC Ratio of the proposed project is approximately 0.75? Generally, which design considerations were used to determine the AC/DC Ratio of the proposed project?*

Response: The AC/DC ratio can vary for different PV projects depending on several factors, including the inverters output power, PV modules power and array string sizing. The AC /DC ratio for the proposed project will use the current industry standard between 0.74 and 0.77 depending on the final DC array size. This project has a fixed AC size or inverter capacity of 20 MW and the DC array will be designed between 24MW and 27MW to compensate for wiring, temperature, soiling and other losses.

18. *Explain why a solar panel orientation to the south with an angle at 15 degrees above the horizontal was selected for this facility. Is the project designed to maximize annual energy production or peak load shaving?*

Response: Solar panels are oriented to the south with and angle at 15 degrees to maximize yearly energy production. Even at this configuration, the system will be able to shave loads from 9am to 3pm.

19. *What is the efficiency of the photovoltaic module technology of the proposed project?*

Response: The project will use crystalline technology PV modules with an efficiency between 17% and 22%.

20. *Is a battery or other type of energy storage system proposed? If yes, describe the function of lithium-ion battery or other type of storage system. What prediction methods and reports has CS used to assess total capacity and annual energy production in kilowatt-hours for this project, and how are the proposed batteries or other type of energy storage incorporated into those predictions? Are the batteries or other type of energy storage used to "even out" the energy production, charging during the day and discharging at night, or are they charged during off-peak hours to grant more output during peak hours? Are they simply used to function as a power supply backup?*

Response: The proposed system will not have a battery or any other type of energy storage. All energy produced will be injected into the grid.

21. *Would the impact of bird droppings, bird feeding habits (ex. Dropping food items such as clams or other prey on the solar panels) or weather events (ex. Snow or ice accumulation, hail, dust, pollen, etc.) reduce the energy production of the proposed project? If so, approximately how much and for how long? Would any of these expose the solar panels to ballistic or other damage? If applicable, what type of methods would be employed to clear the panels of the bird droppings, prey shells, snow and ice accumulation, hail, dust or pollen?*

Response: Bird droppings will potentially reduce the energy production, but only marginally. Based on our experience with other projects, rain and snow will keep the modules clean year-round. During the winter months, it is expected that the energy production will be affected by the percentages

shown in the table below due to the accumulation of snow on the panels while melting.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
16.5%	15.9%	9.3%	3.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	11.4%

22. *Would voltage and current be impacted by soft shading of the solar panels, such as air pollution, or hard shading of the solar panels, such as an accumulated solid? If so, would energy production be reduced?*

Response: Any sunlight obstruction will reduce energy production, but all potential shading sources are accurately simulated by the industry-accepted software, PV SYST, to determine final yearly energy production.

23. *Under Tab C of the Environmental Assessment, the Petitioner has included the Payment in Lieu of Tax Agreement (PILOT Agreement) dated February 17, 2017 between the Petitioner, the Town of New Milford (Town) and New Milford Clean Power, LLC. Under Schedule B of the PILOT Agreement and also on page 20 of the Petition, the Petitioner would submit a Decommission Plan to the Council to provide for the removal of the solar facility within 180 days when solar energy use of the facility ends or the PILOT Agreement ends, whichever is later. Under Tab 6 of the Petition, by letter dated June 9, 2017, Mayor Gronbach of the Town notes that the Petitioner would submit a Decommission Plan to the Council to provide for the removal of the solar facility within 90 days when solar energy use of the facility ends or the PILOT Agreement ends, whichever is later. Please clarify whenever the Decommission Plan would go into effect 90 or 180 days of when solar energy use of the facility ends and/or the PILOT Agreement ends.*

Response: In accordance with the provisions of the PILOT Agreement, decommissioning and removal of the solar facility occurs within 180 days of when the solar energy use of the facility ends or the PILOT Agreement ends.

SITE COMPONENTS AND SOLAR EQUIPMENT

24. *Provide the approximate dimensions for the transformers and inverters, including the heights.*

Response: Proposed transformers have external dimensions of 82" high, 72" wide and 99" deep and inverters have external dimensions of 92.3" high, 130.8" wide and 61" deep.

25. *What is the design wind speed of the solar panels with the fixed screw post foundations? What prevents the solar panels from separating from either the racking or the foundation during high winds?*

Response: Solar panels are certified to the IEC 61215 standard and are designed to withstand wind load pressures of 112 PSF on the front and 50 PSF on the

back. At the proposed 15 degree tilt angle these pressures are equivalent to 155 MPH wind speed on the front and 234 MPH on the back. The solar panels are securely bolted to the racking structure through the frame mounting holes and the structure is attached to four 6.83 Ft long ground screws.

26. *Reference Sheet E-101 under Tab 2 of the Petition. What is the total length of all of the proposed access roads combined in miles?*

Response: There is one access road to the site, which is off Candlewood Mountain Road. The total length of this access road is 1,316 ft.

27. *What is the color of the solar panels? Are other colors available? Is the glass casing reflective? Are there solar panels available with non-reflective glass? If so, what are the costs and benefits of each type?*

Response: The panels' solar cell color will depend on the final manufacturer selected. If the selected technology is polycrystalline, the panels will be either light or dark blue, and if it is monocrystalline or thin-film, panels will be black. All panels use glass with anti-reflective coating to reduce reflection as much as possible.

INTERCONNECTION

28. *What, if any, upgrades would be necessary at Rocky River Substation (RRSS) in order to accommodate the interconnection of the proposed project? If substation upgrades are required, would that be a separate petition filing to the Council from Eversource?*

Response: Ameresco submitted an Interconnection Application (IA) to Eversource and already payed the fee for the distribution and transmission impact study. Eversource is completing the impact studies and final reports are projected to be issued by end of September 2017. These reports will provide an engineering assessment of the distribution and transmissions system upgrades. We do not anticipate that substation upgrades will be a separate petition filing.

29. *Is the project listed on the most recent ISO New England, Inc. (ISO-NE) Regional System Plan Project List? If so, what is the project identification number? Or is this not applicable because it is a distribution-level connection to RRSS, rather than a transmission connection?*

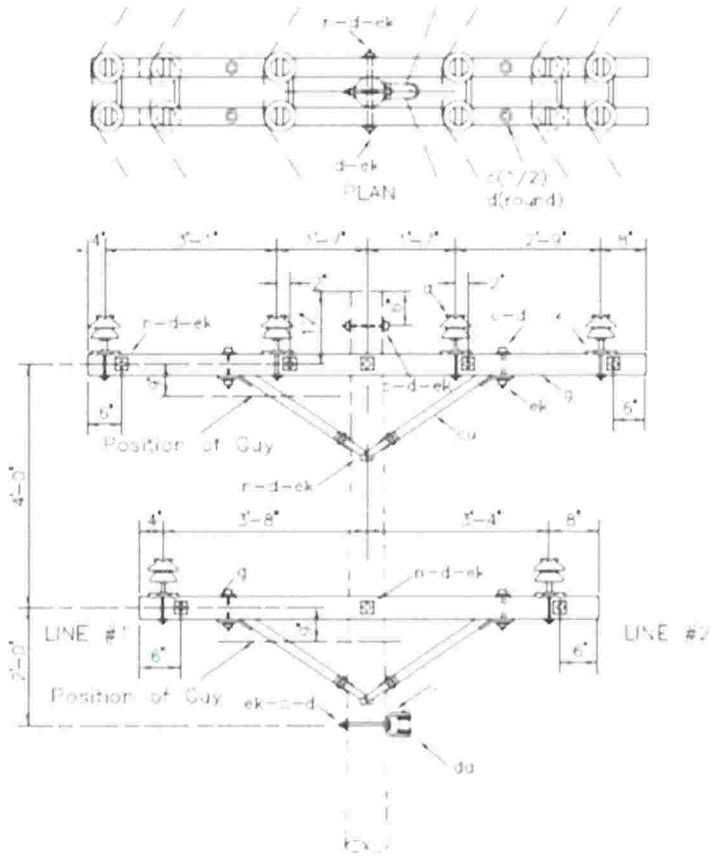
Response: Based on our correspondence with Eversource, this project does not have a project identification number as it is a distribution level connection.

30. *Would all of the power produced go to the grid or would any be for internal use? Would the power produced by the project be used regionally, locally or both?*

Response: 100% of the energy will go to the grid, aside from minimal auxiliary loads to operate inverters and data acquisition equipment. Depending on the local loads at a given time, the power generated by the system will serve those loads and any excess power flow will serve the Connecticut regional load.

31. *Approximately how tall would the 13.8-kV distribution poles to be installed between the proposed project and RRSS be? Approximately how many poles would be installed? Would the 13.8-kV electrical connection run overhead to cross Route 7 (Kent Road) to reach RRSS, or would it be an underground connection "trenched" under Route 7 to reach RRSS? Provide a drawing or sample picture of one of the proposed distribution poles.*

Response: The overhead 13.8kV poles will range from 45-55 ft. tall depending on local topography variation. There are 37 overhead poles in the current design that runs from the solar array site to Rte. 7 adjacent to the RRSS. The proposed plan is to run the 13.8kV line above ground to Route 7, and then the line will run underground across Route 7 into the RRSS. However, this routing configuration will be confirmed with Eversource engineering studies. Below is an example of the RUS Double Circuit design overhead poles.



32. *Page 15 of the Environmental Assessment refers to the "...completion of the distribution and transmission level impact studies in progress." Is a system*

impact study being performed by Eversource or ISO-NE or both? Explain. What is the status of such system impact studies?

Response: As mentioned in #28, Eversource is performing distribution and transmission impact studies to determine the required level of protections and substation upgrades. The studies are under way and the final reports expected by end of September 2017

33. *If applicable, since the proposed project would connect to the 13.8-kV side of the electric system, but within a substation with existing transmission, would CS have to obtain a determination of no significant adverse impact to the transmission system from the ISO-NE Reliability Committee? If yes, please submit a copy of such determination letter. If no, approximately when is a determination anticipated?*

Response: Based on our correspondence with Eversource, a determination will be required from the ISO-NE Reliability Committee. Eversource will present the project to the Reliability Committee once the final impact study reports are completed.

PUBLIC SAFETY

34. *Would the solar plant have a protection system to shut the plant down in the event of a fault within the facility or isolate the facility during abnormal grid disturbances or during other power outage events?*

Response: The inverters will comply with the UL 1741 standard that requires the inverters to disconnect from the grid in the event of a grid power outage or any other abnormal grid disturbance. In the event of a fault within the facility, the system will have all protection systems including fuses, breakers, and reclosers that will isolate a section of the array or the entire plant if necessary.

35. *Would the project comply with the National Electrical Code, the National Electrical Safety Code and any applicable National Fire Protection Association codes and standards?*

Response: The project will comply with the National Electric Code (NEC 2017) and all applicable Safety and Fire Protection codes and standards.

36. *Would the proposed project fence utilize an anti-climb design? Has CS considered having an approximately 6-inch gap between the bottom of the facility fence and grade to prevent wildlife, e.g. turtles from being trapped within the gap?*

Response: No, CS is not proposing to utilize an anti-climb design for the chain-link fence to be installed around the solar array. Anti-climb designs have not

been typically incorporated into similar projects constructed by the petitioner.

CS is not currently proposing to install fencing with a gap for wildlife access. As noted in the DEEP NDDB response, "Eastern box turtles inhabit old fields and deciduous forests, which can include power lines and logged woodlands. They are often found near small streams and ponds. The adults are completely terrestrial but the young may be semiaquatic, and hibernate on land by digging down in the soil from October to April. They have an extremely small home range and can usually be found in the same area year after year."

The NDDB response further stated "Wood Turtles are found within forested areas, they prefer areas that do not have a fully closed canopy cover. The greatest concern during projects occurring in wood turtle habitat are turtles being run over and crushed by mechanized equipment."

Based on the NDDB description of turtle habitat, the fenced-in solar array area will not provide the type of habitat desired by the Eastern box turtle or the wood turtle and the fenced area.

The interconnect corridor will not be fenced. CS will comply with the NDDB recommendations to protect turtles during the construction phase.

37. *Would the inverters be "staged" such that only the minimum required number would be on at a given time depending on solar power production, or, generally, would all 8 inverters be operating at the same time?*

Response: The inverters will not be staged, but the PV solar array will be subdivided in 8 subarrays and one of the 8 inverters will be connected to one of these subarrays. All inverters will be operating at the same time, but the inverters have an internal multi-stage design that allows the inverters to follow the PV panel's output, thus keeping the efficiency high at all output power levels.

38. *In the context of the Connecticut Department of Energy and Environmental Protection (DEEP) Noise Control Standards, which class of emitter does CS consider the proposed project, e.g. Class A, B, or C? Which classes of receptors, e.g. Class A, B, or C abut subject property?*

Response: CS considers the project to fall within the Class B noise zone and to be a Class B emitter. The receptors that abut the project are considered to be Class A and Class B receptors. Further explanation is provided below.

The solar array parcel is located in a Major Planned Residential Development District ("MPRDD") #1 and the interconnection parcels are zoned Industrial ("I") and Residential ("R-80"). Regulations of Connecticut State Agencies (RSA), Sec. 22a-69-2.1., however, state, "Noisy Zone classifications shall be based on the actual use of any parcel or tract

under single ownership as detailed by the Standard Land Use Classification Manual of Connecticut (SLUCONN)." Per the regulations, the Class A noise zone is for lands which are generally in residential use areas "where human beings sleep or areas where serenity and tranquility are essential to the intended use of the land." (RSA Sec. 22a-69-2.3.) The solar array and interconnect do not fall within this type of land use. CS considers the solar array and interconnect to rightly fall within the Class B noise zone. Specifically, within SLUCONN Category 4. Transportation, Communication and Utilities as provided by RSA Sec. 22a-69-2.4. This category is intended to include land uses which are generally commercial in nature and where people converse normally. Class C, in contrast, is intended to include land uses which are generally industrial in nature and where "protection against damage to hearing is essential". (RSA Sec. 22a-69-2.5.)

With respect to land uses on parcels abutting the solar array parcel, existing land use directly to the north is undeveloped forest; to the east of the solar array parcel, land use primarily consists of undeveloped, forested areas, and immediately south of the solar array land use primarily consists of wooded/forested areas. Non-wooded/forested areas on the adjacent parcel to the south are developed with outbuildings (barn, silo and several sheds) and existing, active horse pasture. Candlewood Mountain Road and several parcels containing single family residences are located west of the solar array parcel.

Parcels that abut the solar array parcel fall under the Class A noise zone, specifically including SLUCONN categories 1. Residential and 9. Undeveloped, Unused and Reserved Lands and Water Areas. In addition, land use abutting the solar array parcel to the west and south also includes areas within the Class B noise zone, specifically including: 4. Transportation, Communication and Utilities; 8. Agriculture, and 9. Undeveloped, Unused, and Reserved Lands and Water Area.

Land uses abutting the proposed transmission line corridor parcels include forested areas to the north and south and an area of cleared fiber line ROW to the south. The Project will connect with Eversource Energy conductors located on Kent Road/Route 7.

The classes of receptors that abut the transmission line corridor parcels (the transmission line crosses two of the Project Area parcels that are located on the eastern flank of Candlewood Mountain) are similar to those that abut the solar array and include Class A Land Use Category SLUCONN category 9. Undeveloped, Unused and Reserved Lands and Water Areas and Class B Land Use Category SLUCONN categories: 4. Transportation, Communication and Utilities and 9. Undeveloped, Unused, and Reserved Lands and Water Area.

See response to question 4 for additional information regarding existing land uses in each direction from the proposed site.

39. *What would be the projected worst-case noise level in dBA at the nearest receptor? Would the proposed project meet the applicable DEEP Noise Control Standards at the property boundaries?*

Response: The transformers audible level is 62 dBa at 3 Ft and the inverters are rated at <79 dBA at 3 Ft. Distance to the closest abutter as measured conservatively from the nearest transformer/inverter to the nearest habitable structure at 183 Candlewood Mountain Road is approximately 700 feet. Noise levels at this distance will be below acceptable levels for a Class A noise zone (55 dBA) (as included in the DEEP Noise Control Standards) during the day, when generating electricity. The array is not operational at night and so generates no noise.

40. *Would glare from the panels present a problem for any nearby properties? Can plantings be used to buffer the visibility of and/or glare from the solar arrays?*

Response: Ameresco used the Solar Glare Hazard Analysis Tool ("SGHAT") developed by Sandia National Laboratory and to analyze potential glare impacts to planes taking off or landing via the two principal directions for Candlelight Farms Airport. The results of the glare analysis are included in Attachment 3. Analysis results show "green" or Low Potential for Temporary After Image. This analysis has been submitted to FAA for their review. The array will be shielded in all directions by significant tree buffers.

41. *Would glare from the solar panels attract birds (ex. appear as water) and create a collision hazard?*

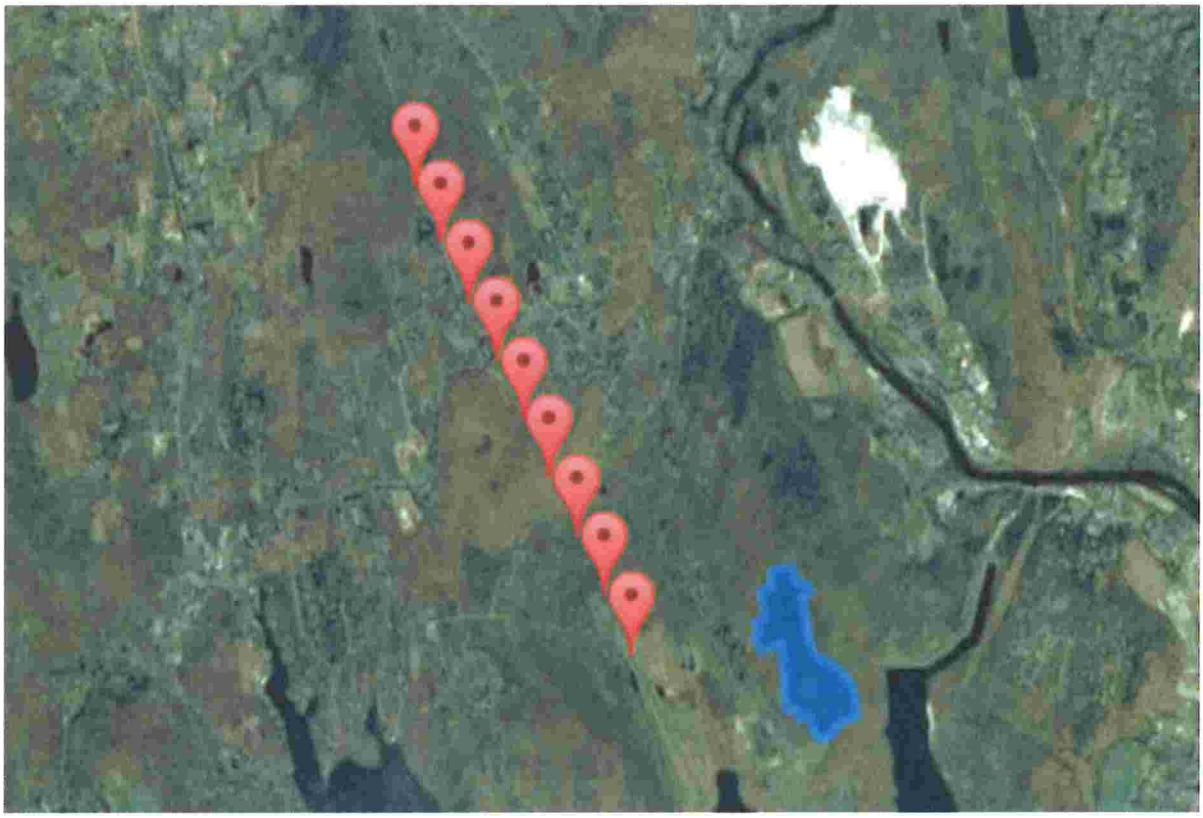
Response: Based on our experience installing and operating solar PV arrays across New England in the past 10 years, we have not encountered any issues with birds being attracted to or colliding with the panels.

42. *Did the Petitioner conduct a Shade Study Analysis? Would shading present any challenges for the proposed project? Is most of the tree clearing to accommodate the project itself, or is some percentage of the tree clearing (e.g. to the south) associated with minimizing shading of the panels? Explain.*

Response: A detailed shading analysis using PV SYST and Helios 3D was done to consider all potential sources of shading. To minimize shading from trees, there are minimum setbacks from the tree lines that need to be used to the south, east and west. There is a relatively small percentage (less than 20%) of tree clearing that will be done to accomplish these setbacks and reducing shading so that we meet our contractual obligations under the PPAs.

43. *Is Candlelight Farms Airport the nearest airport and/or airfield? Page 32 of the Environmental Assessment notes that the proposed facility would be approximately 0.5 miles from Candlewood Farms Airport. Provide the direction of Candlewood Farms Airport from its closest point on the proposed project footprint.*

Response: Candlelight farms Airport is the nearest airport to the project and is west of the project. Below shows the approximate flight path from the North and South of Candlewood Farms Airport in relation to the PV site (in blue).



44. *Would a crane be required for any portion of construction? If yes, would that necessitate construction notice to Federal Aviation Administration for the height(s) of such temporary crane equipment?*

Response: It is anticipated that a crane will be utilized for certain tasks such as off-loading of equipment pallets and for installation/mounting of the inverters and transformers. It is anticipated that the crane height will not be significantly different than the trees at the site, but CS and its subcontractors will provide notice to FAA as appropriate for the use of the crane.

45. *Would the proximity of any existing or proposed outbuildings, structures, etc. present a fire safety or other hazard (ex. lightning strike)? Would the proximity of any existing or proposed outbuildings, structures, etc. present a hazard in relation to the electric generating equipment?*

Response: There are no proposed or existing outbuildings within the array or within a close enough proximity to present any hazards

46. *Is outreach and/or training necessary to local emergency responders in the event of a fire or other emergency at the site? How would site access be ensured for emergency responders? In the event of a brush or electrical fire, how would the Petitioner mitigate potential electric hazards that could be encountered by emergency response personnel?*

Response: Ameresco will provide training to the local Fire Department and will provide 100% access to the facility either by a copy of the key lock or a code. The system will comply with the NEC labeling and all Safety and Fire codes and standards.

ENVIRONMENTAL

47. *Under Tab F, according to the U.S. Environmental Protection Agency (EPA) Greenhouse Gas Equivalencies calculator, the energy produced will be sufficient to offset approximately 23,894 metric tons of carbon dioxide (equivalent) each year. Was that calculation based on the 34,000,000 kWh AC? Does CS agree that it is appropriate to utilize kWh AC for this analysis because only AC power can flow into the grid, displace traditional grid generation and result in carbon emissions reductions? If necessary, recalculate the Tab F Greenhouse Gas Equivalencies using kWh AC.*

Response: The estimated annual output of 34,000,000 kWh AC is based on detailed system modeling using PVSyst software and accounts for system losses for conversion from DC to AC. This is the amount of AC power that will fed to the grid. CS agrees that it is appropriate to use kWh AC because only AC power can flow into the grid.

48. *Provide the carbon debt payback period. Specifically, EPA estimates that 1.06 metric tons of carbon dioxide are sequestered by one acre of average U.S. forest in one year. That number can be multiplied by the number of acres of trees to be cleared to estimate the annual loss of carbon dioxide sequestration in metric tons per year for the project. Then the total projected annual electrical production in kWh AC for the solar facility can be multiplied by the EPA estimate of 7.03 x 10^{-4} metric tons of carbon dioxide displaced per kilowatt-hour in order to provide the annual carbon dioxide emissions avoided by the operation of solar plant. Based on this or a different analysis, compute the number of months or years it would take to "break even" with carbon dioxide or when the carbon dioxide emissions reductions would equal the sequestration loss. (Data source: http://www.epa.gov/energy/ghg-equivalencies-calculator-calculations-and-references).*

Response: As stated in the EA, approximately 72.8 acres of forest will be cleared for the Project, including for the solar array, interconnect and to eliminate shading. This would result in an estimated loss of carbon dioxide sequestration of approximately 77.17 metric tons per year due to the Project (77.17 x (7.03 x 10^{-4})). In contrast, as noted in the response to question 47 above, based on the 34,000,000 kWh AC annual electrical production for the Facility, and using the EPA Greenhouse Gas Equivalencies calculator, 23,894 metric tons of carbon dioxide (equivalent) emissions would be avoided by the operation of the Facility per year. This means that the "break even" point, where the avoided carbon dioxide emissions equal the sequestration loss is less than two days in each year of operation.

49. *To date, has CS received a response from DEEP regarding its review of the Natural Diversity Database? If yes, provide a copy of such correspondence?*

Response: Yes, CS's environmental consultant, Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), received a letter from Ms. Dawn McKay of DEEP on July 10, 2017. A copy of the July 10, 2017 letter is attached as Attachment 4. In DEEP's July 10th letter, DEEP recommends surveys of the site be performed by a qualified ornithologist for the golden-winged warbler when the bird may be present as well as surveys of the site be performed by a qualified herpetologist for the slimy salamander. Surveys for the slimy salamander and its habitat, are being conducted by Oxbow Associates. Oxbow Associates is also conducting a habitat assessment for the golden-winged warbler, however a species survey for the golden-winged warbler is not currently being conducted as its breeding season is from May through July and we are outside of the breeding season.

50. *Provide the total tree clearing area in upland areas and the total tree clearing area in wetland areas, if applicable.*

Response: As stated in Section 3.2 of the EA, "(a)s currently proposed, approximately 72.8 acres of forest will be cleared, of which 57.1 acres will be for the Facility itself, 11.4 acres would be cleared to eliminate shading around the Facility, and 4.3 acres would be cleared for the interconnection to the Facility." As further stated in Section 3.5 of the EA, "(n)o wetlands or watercourses will be directly impacted by installation of the Facility and associated appurtenances and tree clearing, or the access road." Additionally, "(n)o direct impacts to wetlands or watercourses would be required to install the utility poles and guy wires associated with the overhead electric interconnection, but approximately 2,322 sq. ft. (0.05 acres) of Wetlands VI, VII, VIII, and IX would be converted from forested wetlands to emergent and/or shrub wetlands to provide vertical clearance for the overhead utility lines." Therefore, of the total 72.8 acres of tree clearing area, all but the approximately 0.05 acres of wetland area tree clearing for the overhead utility line clearance will be in upland areas (72.75 ac).

51. *If applicable, how would clearing in wetland areas, e.g. in the proposed 13.8-kV interconnection corridor be performed? For example, would wetland vegetation be trimmed short as shrubs and tree stumps would be left in place? Or would wetland vegetation be completely cleared? Would CS re-seed such wetland areas with a native New England wetland seed mix for restoration purposes?*

Response: Clearing in wetland areas would be limited to the minimum required for clearance of the overhead utility lines. As stated in Section 3.5 of the EA, only approximately 2,322 sq. ft. (0.05 acres) of Wetlands VI, VII, VIII, and IX would be converted from forested wetlands to emergent and/or shrub

wetlands to provide vertical clearance for the overhead utility lines. Clearing in these areas will be limited to cutting of trees which could interfere with the overhead lines. No ground disturbance in wetlands is planned to accomplish the tree cutting and, where trees are to be cleared in wetlands, stumps would remain in place to avoid soil disturbance. Remaining wetland vegetation will not be disturbed or cleared. As stated in Section 3.5 of the EA, "[a]pplication of herbicides and pesticides, if required, will not take place in or within 100 feet of wetlands and watercourses." As there will be no ground disturbance and existing vegetation will remain in place throughout the wetlands, no reseeding of wetland areas will be required.

52. *Does CS have an invasive species control plan to reduce the risk of invasive species becoming established in disturbed wetland areas? If yes, provide a copy of such plan.*

Response: CS does not have an invasive species control plan for the Project as there is minimal potential for invasive species becoming established in disturbed wetland areas. As stated in the response to question #51, above, no disturbance of wetland soils or vegetation is proposed with the exception of cutting trees which could interfere with overhead utility lines. Stumps will remain in place and other wetland vegetation and soils will not be disturbed. As the wetland soils and vegetation will remain in place, the wetlands will not be altered to the extent that invasive species will be more likely to become established than currently. Therefore, an invasive species control plan is not considered to be necessary.

53. *Based on the February 1, 2016 DEEP Map entitled "Northern long-eared bat (NLEB) areas of concern in Connecticut to assist with Federal Endangered Species Act Compliance," there may be known NLEB hibernacula in New Milford. Would any of the proposed tree clearing occur with 0.25 miles of a known NLEB hibernaculum? (It is not necessary to identify the location of the hibernaculum, only the approximate distance.)*

Response: In the response to the NDDB request submitted for the Project (see response to question 49 above), the DEEP did not identify NLEB as a state-listed species with an extant population known to occur within or close to the boundaries of the Project property. Therefore, CS concludes that the potential NLEB hibernacula in New Milford is not within 0.25 miles of the Project Site.

54. *What is the closest distance from the proposed solar facility fence line to a wetland, and where is it located? What is the closest distance from the proposed fence line to a watercourse, and where is it located?*

Response: The closest wetland to the solar array is Wetland III, which is approximately 51 feet to the west of the solar array fence. The closest watercourse to the proposed fence line is the beginning of the stream

which is formed by the discharge of Wetland I, located approximately 262 feet to the northeast of the closest fence.

55. *Is it correct to say that the proposed project would not be located within a DEEP-designated aquifer protection area (APA)? How far away (distance and direction) is the nearest APA from the proposed project? Are there any wells on the site or in the vicinity of the site? If so, how would the Petitioner protect the wells and/or water quality from construction impacts?*

Response: Based on publicly available information from the CTDEEP GIS website, Aquifer Protection Areas data layer updated 02/14/17, it is correct to say that the proposed Project would not be located within a DEEP-designated aquifer protection area (APA). There is an existing public water supply aquifer protection area (Indian Field) located northeast and southeast of the Project Area and Candlewood Lake (see Figure 8 included in the EA). The APA to the southeast of the Project Area is approximately 4,250 feet from the edge of the proposed solar array. The APA to the northeast of the Project Area is approximately 1,350 feet from the interconnect on Kent Road/Route 7.

No private wells are known to be on the site. There are likely private wells on some of the properties on Candlewood Mountain Road, however the Project will be constructed and operated in a manner to avoid impacts to any such wells. Specifically, construction of the solar array and related elements would be conducted in a manner to protect water quality. The solar array and associated appurtenances are all sealed units that do not contain hazardous materials. The stormwater design at the site has been developed in accordance with the Connecticut Stormwater Quality Manual and will promote infiltration of stormwater into the ground to recharge the groundwater table.

56. *Would the proposed project adversely impact groundwater that is classified by DEEP as GA?*

Response: The proposed project will have no adverse impacts on groundwater. The solar array and associated appurtenances are all sealed units that do not contain hazardous materials. The stormwater design at the site is being developed in accordance with the Connecticut Stormwater Quality Manual and will promote infiltration of stormwater into the ground to recharge the groundwater table.

57. *Does Candlewood Lake supply water to operate the Rocky River Hydroelectric facility?*

Response: Yes. Based on publicly available information on the Rocky River Hydroelectric Power Plant, Candlewood Lake does supply water to operate the Rocky River Hydroelectric Power Plant. Specifically, a penstock transports water from Candlewood Lake to the Housatonic River

by means for the Rocky River Hydroelectric Plant, and vice-versa. When demand reaches a peak, water is released through the penstock, and the motors driving the pumps reverse to become generators to produce electricity. The original penstock was built in 1927 and replaced in 1965. The 48-year-old wood stave penstock, installed in 1965, was replaced in 2013 with 950 feet of 120-inch pipe to rehabilitate the penstock. The 15-foot diameter wood stave penstock was replaced with 10-foot diameter fiberglass pipe.

https://www.wwdmag.com/pipe/hydroelectric-power-plant-upgrades-penstock.

https://www.asme.org/about-asme/who-we-are/engineering-history/landmarks/56-rocky-river-pumped-storage-hydroelectric-plant

58. *Page 4 of the Environmental Assessment notes that, "The remainder of the parcel where the Facility will be located is also identified as Zone X, defined as areas determined to be outside the 500-year floodplain." Is this area (outside of the 500-year flood zone) considered the "unshaded" Zone X as defined by the Federal Emergency Management Agency? And are the flood zone areas in the Rocky River corridor considered "shaded" Zone X?*

Response: Yes. The remainder of the parcel where the Facility will be located is "unshaded" Zone X, outside the 500-year floodplain. The flood zone areas in the Rocky River corridor area considered "shaded" Zone X. (see EA Figure 5).

As defined by FEMA, "Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded)." https://www.fema.gov/flood-zones

59. *Would the solar panels "heat" rainwater and potentially thermally pollute wetlands?*

Response: No, the rainwater will not be heated by the panels. Solar panels will be close to ambient temperature in cloudy and rainy conditions. Also, since panels will be at a tilted angle, it is expected that heat transfer from glass to water will be minimal.

60. *What percentage, if any, of the 100-foot to 750-foot Critical Terrestrial Habitat (CTH) around the vernal pool is currently cleared/developed? Or if there no existing clearing, and therefore, post-construction, the cleared percent area would be about 23.3 percent of the CTH?*

Response: As described in Section 2.5 of the EA, the vernal pool is located in a forested portion of the Project Site (see also Figure 13). No portion of the 100-foot to 750-foot Critical Terrestrial Habitat around the vernal is currently cleared or developed. Therefore, as detailed in Section 3.5 of the EA, Project related impacts (clearing, grading and construction activities) to the entire vernal pool habitat (vernal pool depression, envelope and CTH) will be approximately 23.3 percent.

61. *What is the length of the posts and to what depth would the screw posts be driven into the ground to provide structural stability? Are any impacts to groundwater anticipated? If so, how would the Petitioner manage and/or mitigate these impacts?*

Response: Ground screws are typically 6-7 ft long and will be driven almost completely into the ground leaving only 4-6 in exposed. Each racking table will have four (4) screws, one on each corner, for maximum stability. Exact depth to groundwater is not known, but regardless of groundwater depth, no impact to ground water is anticipated. Ameresco has installed numerous ground mount solar arrays around New England with no impacts to groundwater from the installation of screw posts.

CONSTRUCTION QUESTIONS

62. *If applicable, could tree clearing, grubbing, grading, excavation, filling and dewatering, be performed in stages (e.g. five acres at a time)? Why or why not? (Note: Connecticut Department of Energy and Environmental Protection "DEEP" General Permit for the Discharge of Stormwater and Dewatering Wastewasters Associated with Construction Activities states that, "Whenever possible, the site shall be phased to avoid the disturbance of over five acres at a time...")*

Response: Yes, as detailed in Attachment D (Stormwater Management Report), Appendix D (Erosion and Sediment Control Plan), Section 3.0, the project has been developed in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. As such, the project development will be separated into five phases:

- Access Road Construction
- Site Clearing, Stump Removal, and Limited Grading
- Solar Array Installation
- Interconnection Route
- Perimeter Fence Installation

The second phase (Site Clearing, Stump Removal, and Limited Grading) will be broken into several smaller sub-phases, with the intent that the total area of disturbed, exposed ground surface contributing stormwater runoff to a common point, at any one time, is restricted to 4.9 acres or less. The contractor will be responsible for survey layout and flagging of all sub-phase areas prior to ground disturbance associated with this phase.

63. *Will grading be required? If so, is it possible to install the facility with minimal alteration to existing slopes? If not, could existing vegetation be maintained/managed?*

Response: Minimal grading within the proposed footprint of the array is proposed where slopes exceed the maximum allowable slope of the racking equipment. Grading will also be required to implement construction-phase best management practices (BMPs) for erosion and sedimentation control, as described in the Erosion and Sediment Control Plan (Attachment D, Appendix D), which will be converted to permanent stormwater quality BMPs to maintain water quality following construction. Overall, the site topography will remain largely unchanged.

64. *Estimate the amounts of cut and fill in cubic yards for a) access roads and b) general site grading, if applicable.*

Response: For the access roads, the project involves an estimated amount of net cut of approximately 280 cubic yards. For general grading within the array areas, the project involves an estimated amount of net cut of approximately 175 cubic yards to address slopes that exceed the maximum allowable slope of the racking equipment. Temporary berms and diversions will be graded in and used to manage construction-period stormwater flows, as described in the Erosion and Sediment Control Plan (Attachment D, Appendix D). Earthwork volumes associated with construction-phase and permanent stormwater BMPs will be refined to address construction-phase flow patterns, but the project aims to balance the surficial net cut and fill volumes upon completion of construction.

65. *How would the vertical screw posts (that would support the solar arrays) be driven into the ground to a sufficiently shallow depth to avoid ledge? In the event that ledge is encountered, what methods would be utilized (ex. mechanical chipping or blasting) or would relocation of the posts be utilized instead of chipping or blasting?*

Response: Screws will be driven using a self-propelled screw drilling machine. In the event that ledge is encountered, no chipping or blasting will be performed; the rock will be pre-drilled with diamond drill bits before the screw is drilled into the rock. Relocation of the posts for ledge is not necessary.

66. *What is the anticipated sequence of construction? During what time of year would each sequence ideally occur? Does this account for possible seasonal construction restrictions due to the presence of protected species?*

Response: The general construction sequence will be as follows, see also above in the answer to No. 62:

- Site Preparation – the access road to the site from Candlewood Mountain Road will be improved with installation of erosion control measures. Wooded areas will be cleared and necessary grading will be conducted, along with installation of temporary storm water and erosion control measures
- Major Equipment Delivery – during site preparation, racking and panel deliveries to the site will be made.
- Racking Installation - racks will be installed starting at the northern portion of the array and working south.
- Panel installation – panel installation will follow racking, also working north to south
- Balance of System (BOS) – trenching, wiring and installation of inverters and transformers, fencing
- Interconnection – the interconnection work will proceed as soon as site preparation is completed and will be completed in parallel to array construction

All construction activities will be timed and sequenced to allow for mitigative and protective measures required for protected species, which are found or presumed to be present. This mitigation could include seasonal restrictions on tree clearing and other site work, and also other actions during the work to avoid or mitigate impacts to certain species. The most recent correspondence from DEEP has already outlined certain requirements for the protection of bats and wood and box turtles. Additional requirements will be determined based on pending findings of wildlife and cultural resource surveys in progress.

67. *Provide a project schedule with estimated commencement and completion dates. Also include the proposed construction hours and days of the week, e.g. Monday through Saturday 7:00 a.m. to 5:00 p.m. Is it possible that some Sunday construction hours might be necessary due to unforeseen conditions such as inclement weather, transmission outage constraints and/or critical path activities? If the project is approved, could the final construction hours be included in the Development and Management Plan?*

Response: Below is an estimated project schedule with major milestone dates. This schedule is subject to change based on several factors including the date of permitting completion, PPA approval by MA DPU, ability to continue work under winter conditions, and the overall schedule of completion of system upgrades by Eversource. CS currently plans for construction hours of Monday to Friday 7 am to 5 pm. Some weekend construction hours may be necessary to advance critical path activities or to accommodate utility requirements.

Estimated Construction Schedule

Site Mobilization	November 2017
Site Preparation	November 2017 – February 2018

Racking Installation	January 2018 – April 2018
Panel Installation	March 2018 – July 2018
BOS Installation	May 2018 – August 2018
Interconnection to Rocky River Substation	March 2018 – July 2018
Eversource Interconnection Upgrades	April 2018 – October 2018
Commercial Operation	November 2018

68. *Would a Construction General Permit from DEEP, or other type of permit, be required?*

Response: Yes, coverage under the DEEP CGP will be required as ground disturbance of more than one acre is proposed.

69. *Would the stormwater design be installed in phases to control stormwater flows onto adjacent properties during construction?*

Response: Yes, as outlined in both the Stormwater Management Report (Attachment D) and the Erosion and Sediment Control Plan (Attachment D, Appendix D), during construction, runoff from cleared, exposed areas will drain to constructed berms and sediment traps to remove sediment. In addition, the downgradient boundary of the site will be protected with a perimeter sediment barrier (i.e., silt fence and/or compost socks and/or straw wattles) to prevent sediment-laden runoff from leaving the site. All conveyances and BMPs have been sized to accommodate the anticipated flow rates in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. Following construction and stabilization of upgradient areas, in general, the berms and sediment traps will be converted to water quality swales, which will discharge through level spreaders. Flow discharged from level spreaders will be non-concentrated sheet flow. Water quality swales and level spreaders have been designed in accordance with the 2004 Connecticut Stormwater Quality Manual, and have been designed to maintain post-construction discharge flows at rates equal to or below pre-construction rates.

70. *Has the Petitioner considered provisions to handle stormwater during/following a rain event during construction? Are temporary swales and/or basins proposed?*

Response: Yes, as detailed in the Erosion and Sediment Control Plan (Attachment D, Appendix D), Section 3.0, during construction, runoff from cleared, exposed areas will drain to constructed berms and sediment traps to remove sediment. In addition, the downgradient boundary of the site will be protected with a perimeter sediment barrier (i.e., silt fence and/or compost socks and/or straw wattles) to prevent sediment-laden runoff from leaving the site. All conveyances and BMPs have been sized to accommodate the anticipated flow rates in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

71. *Would the proposed site access from Candlewood Mountain Road also serve as construction access?*

Response: Yes and a stabilized construction exit will be installed to minimize sediment tracking onto the public roads.

MAINTENANCE QUESTIONS

72. *How would the Petitioner handle potential snow accumulation on the panels and any effects of blocking the sunlight?*

Response: Snow that falls on the panels and will melt or fall off by gravity. No active clearing of snow is required. All the reduction in production has been considered and simulated in the PV SYST production estimation model.

73. *Has any analysis been conducted to determine structural limits of snow accumulation on the solar panels and steel support structures, assuming heavy, wet snow and or ice? What accumulation of snow could the structures handle? Would the Petitioner clear snow from the panels when it approached the limit?*

Response: Yes. Solar panels will be certified to the IEC 61215 standard that includes mechanical load testing. The panels are tested flat to withstand a snow load of 5,400 Pa (112 PSF). The steel support structures can withstand up to 160 MPH winds speed and 80 PSF snow load, and are engineered to exceed applicable ASCE, IBC and UL standards. The maximum snow load in the area is 35psf, then snow removal will not be necessary.

74. *Would the Petitioner adhere to any seasonal restrictions on mowing due to the presence of protected species?*

Response: Surveys for habitat for the golden-winged warbler are being conducted by Oxbow Associates on behalf of CS. Pending the outcome of that effort, CS will consider seasonal restrictions on mowing, if appropriate, to minimize potential impacts on this protected species.

75. *Would the installed solar panels require regular cleaning or other, similar, maintenance? How would this be accomplished? Would this maintenance activity have any impacts to water quality?*

Response: The solar panels will not require regular cleaning or other similar maintenance.

76. *What are the impacts of the grass on erosion? Would the site be hydro-seeded?*

Response: Once established, grass will stabilize slopes and prevent future erosion. Temporary erosion and sedimentation controls would remain in place and be maintained until the grass is established. Grass seed would

be applied through hydroseeding, as this would be considered a more efficient means of application at this site.

77. *How would the 13.8-kV interconnection route be vegetated? Would grass be planted and require mowing, or would it be left to naturally re-vegetate?*

Response: Clearing of the interconnection route will generally not involve removing root structures. Ground vegetation will remain. Revegetation will be natural through succession. Periodic pruning may take place in the future to maintain proper clearances.

78. *Could the Petitioner establish post-construction site restoration/revegetation that includes the incorporation of model pollinator habitat?*

Response: Pollinator habitat has not been proposed in the design plans. CS is willing to consider incorporating pollinator habitat, but cannot commit to implementing such actions at this time without further review.

79. *How would the proposed project impact traffic? Specifically, about how many construction vehicles per day would be expected to visit the site during construction? Once the facility is operational, estimate the number and frequency of vehicles visiting the site for operation and maintenance.*

Response: Over the course of an approximately 8-10-month total construction duration at the site (including the solar array and interconnection construction), it is anticipated that the main part of the construction traffic coming off Candlewood Mountain Road will be over the first three to four months. During this period there will be delivery to the site of major equipment, as well as some fill materials for stormwater BMPs, and transport of removed trees and vegetation. It is estimated that during this period the maximum amount of construction vehicles to visit during a given day will be 50 total, but on average will be closer to 5 total. Access for vehicles for the interconnection work will also be off of Route 7 via the FirstLight property. Construction vehicle access for this work will be less than 5 trucks per day.

Once operational, the site will be visited by a 1-2 pick-up trucks on average 3-4 times per year at most.

Respectfully Submitted,

CANDLEWOOD SOLAR LLC

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Its Attorney

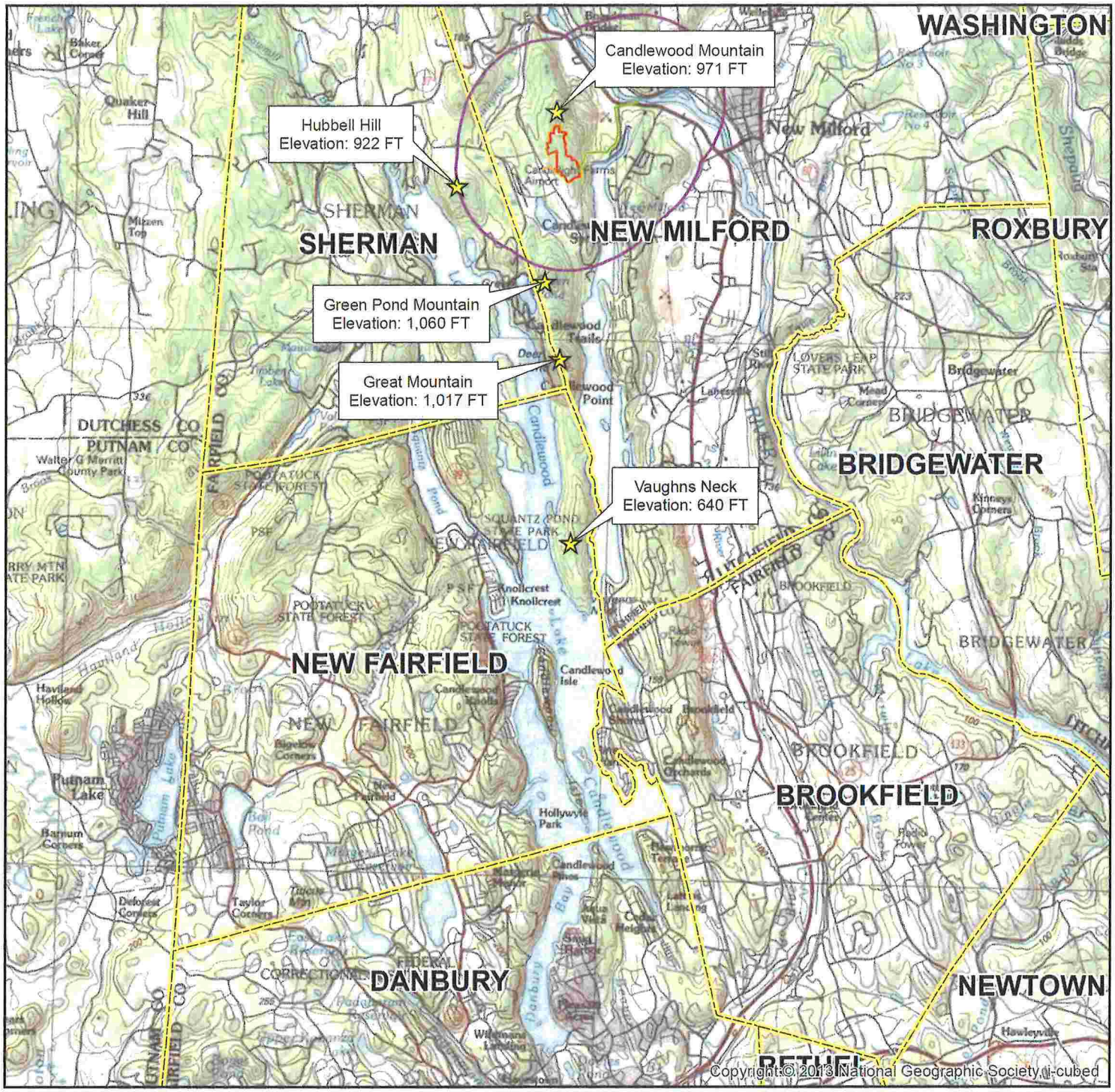
CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing interrogatory responses has been either hand-delivered, electronically filed or sent via U.S. Mail this 28th day of August, 2017 to all parties of record.

Paul R Michaud

ATTACHMENT 1

Candlewood Lake Area Map



CANDLEWOOD LAKE AND SURROUNDING AREA RELATIVE TO PROJECT LOCATION

Candlewood Solar LLC

Candlewood Solar Project
New Milford, Connecticut

Location of Site

Legend

- Proposed Interconnect
- Approximate Outline of Proposed Solar Array
- Proposed Work Area
- Proposed Work Area 1 Mile Radius
- Town Boundary

Notes & Sources

Datalayer Sources:
1. Town Boundary Polygon updated 10/20/08 obtained from CT DEEP GIS website.
2. Geographic Names Information System (GNIS) for Connecticut updated 12/09/11 obtained from CT DEEP GIS website.

Note: Elevation values are height above mean sea level (AMSL).

0 8,800 Feet

N

amec foster wheeler
Amec Foster Wheeler
Environment & Infrastructure, Inc.
271 Mill Road
Chelmsford, MA 01824
(978) 692-9090

H:\Ameresco\NewMildford_CT\Task2\MXD\CandlewoodLakeArea.mxd August 23, 2017 DWN: emily.gardiner CHKD: AKN

ATTACHMENT 2

SHPO Letter

June 21, 2017

Mr. Ryan Hale, PWS
Amec Foster Wheeler
271 Mill Road, 3rd Floor
Chelmsford, MA 01824

Subject: Solar Farm Development
Candlewood Mountain Road, Map 26, Lot 67, Unit 1
New Milford, Connecticut

Dear Mr. Hale:

The State Historic Preservation Office (SHPO) has reviewed your request for information concerning the potential effects to historic properties associated with the referenced project. SHPO understands that the proposed solar voltaic facility will entail the construction of ground mounted solar arrays, ancillary improvements (e.g. access road), and construction of an approximately 6,998-foot long linear electric interconnect route within an area encompassing approximately 86.6 acres. The proposed activities are under the jurisdiction of the Connecticut Siting Council and are subject to review by this office pursuant to Section 106 of the National Historic Preservation Act (NHPA) and the Connecticut Environmental Policy Act (CEPA).

Although no properties listed on the National Register of Historic Places have been documented within the project parcels, the project area is situated on well-drained soils adjacent to unnamed wetlands. Additionally, the project site is within close proximity to both Candlewood Lake and the Housatonic River. This type of environmental setting tends to be associated with pre-contact Native American settlement. Several archaeological sites have been recorded in the region surrounding the affected parcels.

We are therefore requesting that a professional cultural resources assessment and reconnaissance survey be completed prior to construction. A reconnaissance survey was already proposed by this office for portions of the site in 2004, during review of a prior project. SHPO acknowledges that portions of the property have been subjected to prior ground disturbances related to the pasture fields. Not all areas of the proposed solar field are archeologically sensitive, but it is SHPO's opinion that intact and relatively well-drained soils within portions of the Area of Potential Effect have an elevated potential to contain significant archeological resources. Subsurface testing should assess all areas of anticipated ground disturbance that are considered to have a moderate/high sensitivity for containing significant archeological deposits, unless sufficient research or fieldwork documents that this level of effort is unwarranted. All work should be in

compliance with our *Environmental Review Primer for Connecticut's Archaeological Resources* and no construction or other project-related ground disturbance should be initiated until SHPO has had an opportunity to review and comment upon the requested survey. A list of qualified consultants is attached for your convenience.

This office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act and Section 106 of the National Historic Preservation Act. For additional information, please contact Marena Wisniewski, Environmental Reviewer, at (860) 256-2754 or marena.wisniewski@ct.gov.

Sincerely,

Catherine Labadia
Deputy State Historic Preservation Officer

TO WHOM IT MAY CONCERN

The following archaeologists, as known to us, meet the professional qualification guidelines of the National Park Service (36 CFR 61):

ACS [Archaeological Consulting Services]
Attn: Dr. Gregory Walwer
10 Stonewall Lane
Guilford, CT 06437-2949
Phone: 203-458-0550
Fax: 203-672-2442
acsinfo@yahoo.com

American Cultural Specialists LLC
Attn: Lucianne Lavin, Ph.D.
755 Riverside Avenue
Torrington, CT 06790
Phone: 860-626-8210
Fax: 877-903-0269
Luci.ACS@pobox.com

Archaeological & Historical Services
Attn: Ms. Mary Harper
PO Box 543
Storrs, CT 06268
Phone: 860-429-2142
Fax: 860-429-1724
mharper@ahs-inc.biz

Aspetuck Landways
Attn: Dr. Stuart A. Reeve
PO Box 11024
Greenwich, CT 06831
Phone: 203- 470-7874
Sareeve2000@yahoo.com

Marc L. Banks, Ph.D., LLC
11 Lincoln Lane
Weatogue, CT 06089
Phone: 860-658-7482
Fax: 860-658-7482
banksmarc@sbcglobal.net

BL Companies
Attn: Mr. Jonathan Libbon
355 Research Parkway
Meriden, CT 06450
Phone: 717-943-1672
jlibbon@blcompanies.com

Gray & Pape Inc.
Attn: Mr. Patrick O'Bannon
60 Valley Street, Suite 103
Providence, RI 02909
Phone: 401-273-9900
Fax: 401-273-9944
pobannon@graypape.com

Hartgen Archaeological Associates Inc.
Attn: Mr. Matthew Kirk
1744 Washington Avenue Ext.
Rensselaer, New York 12144
Phone: 518-283-0534
Fax: 518-283-6276
mkirk@hartgen.com

Heritage Consultants LLC
Attn: Nicholas Griffis, M.A.
P.O. Box 310249
Newington, CT 06131
Phone: 860-667-3001
Fax: 860-667-3008
info@heritage-consultants.com

Historical Perspectives Inc.
Attn: Ms. Cece Saunders
Historical Perspectives, Inc.
P. O. Box 529
Westport, CT 06881
Phone: 203-226-7654
cece@historicalperspectives.org

Sarah L Holmes, PhD
31 Mistuxet Ave
Mystic, CT 06355
Phone: 860-501-1446
slh@att.net

Louis Berger Group Inc.
Attn: Dr. Hope Luhman, Cultural Resources
20 Corporate Woods Boulevard
Albany, NY 12211
Phone: 518-514-9303
Fax: 518-514-0731
hluhman@louisberger.com

Commonwealth Heritage Group, Inc.
Attn: Mr. Martin Dudek
410 Great Pond Road, Suite B-14
Littleton, MA 01460
Phone: 978-793-2579
mdudek@johnmilnerassociates.com

Public Archaeology Laboratory Inc.
Attn: Ms. Deborah Cox
26 Main Street
Pawtucket, RI 02860
Phone: 401-728-8780
Fax: 401-728-8784
dcox@palinc.com

Public Archaeology Survey Team Inc.
Attn: Ms. Mary Harper
PO Box 209
Storrs, CT 06268
Phone: 860-429-1723
Fax: 860-429-9454
mharper@past-inc.org

R. Christopher Goodwin & Associates, Inc.
Attn: Jeffrey H. Maymon
3 Inspiration Lane, Suite 4
Chester, CT 06412
Phone: 860-322-4493
Fax: 860-322-4684
jmaymon@rcgoodwin.com

Raber Associates
Attn: Dr. Michael S. Raber
81 Dayton Road, PO Box 46
South Glastonbury, CT 06073
Phone: 860-633-9026
Fax: 860-633-9026
msraber@aol.com

Cosimo Sgarlata, Ph.D.
1 Roscoe Street
Norwalk, CT 06851
Phone: 203-847-5882
Sgarlata@wcsu.edu

This information updates and supersedes all previous material provided by the State Historic Preservation Office with respect to the identification of archaeological consultants. Further, this list has been arranged alphabetically; no preferential rating or evaluation should be inferred. The State Historic Preservation Office does not recommend, endorse, or assume responsibility for the quality of work for any individual or firm on this list, nor is there any guarantee, implicit or implied, that any work product produced by those on this list will necessarily meet federal and state requirements.

At its discretion, the State Historic Preservation Office may remove consultants from its informational list if no work has been undertaken in Connecticut over a three year period.

For further information please contact Catherine Labadia, Staff Archaeologist, at catherine.labadia@ct.gov

Revised 4/15

ATTACHMENT 3

Glare Analysis

Solar Glare Hazard Analysis Flight Path Report

Generated June 8, 2017, 8:36 a.m.

Flight path: South Flight Path

South Flight Path

Glare found

Print

Analysis & PV array parameters

Analysis name	New Milford
PV array axis tracking	none
Orientation of array (deg)	180.0
Tilt of solar panels (deg)	12.0
Rated power (kW)	27000.0
Vary reflectivity	True
PV surface material	Smooth glass without ARC

Timezone offset	-5.0
Subtended angle of sun (mrad)	9.3
Peak DNI (W/m^2)	1000.0
Ocular transmission coefficient	0.5
Pupil diameter (m)	0.002
Eye focal length (m)	0.017
Time interval (min)	1
Correlate slope error with material	True
Slope error (mrad)	6.55

Flight path parameters

Direction (deg)	332.66
Glide slope (deg)	3.0
Consider pilot visibility from cockpit	False

PV array vertices

id	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Height of panels above ground (ft)	Total elevation (ft)
1	41.5686977782	-73.4509119989	807.26	10.0	817.26
2	41.5698536405	-73.4517273904	800.8	10.0	810.8
3	41.5698536405	-73.4524140359	779.55	10.0	789.55
4	41.5703512971	-73.4524998666	784.35	10.0	794.35
5	41.5703673504	-73.4533581735	755.72	10.0	765.72
6	41.5740755727	-73.4536585809	792.16	10.0	802.16
7	41.5735779448	-73.455160618	749.03	10.0	759.03
8	41.5740434678	-73.4555039407	731.06	10.0	741.06
9	41.5743966209	-73.4557185174	729.34	10.0	739.34
10	41.5745571444	-73.455224991	747.9	10.0	757.9
11	41.5751510787	-73.4556756021	735.49	10.0	745.49
12	41.5753437046	-73.4549245836	758.63	10.0	768.63
13	41.5770131049	-73.4552464486	787.87	10.0	797.87
14	41.5771254668	-73.4544525148	818.8	10.0	828.8
15	41.5775508353	-73.4544739725	830.72	10.0	840.72
16	41.5780725097	-73.4544310571	852.56	10.0	862.56
17	41.5782490755	-73.4528861047	926.49	10.0	936.49
18	41.5776952994	-73.4527680875	890.55	10.0	900.55
19	41.5773341385	-73.4526500703	864.02	10.0	874.02
20	41.5773341385	-73.4522852899	844.83	10.0	854.83
21	41.5772538802	-73.4517273904	832.89	10.0	842.89

id	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Height of panels above ground (ft)	Total elevation (ft)
22	41.577005079	-73.4516737462	821.02	10.0	831.02
23	41.5767562768	-73.4516844751	817.48	10.0	827.48
24	41.5766278624	-73.4522852899	830.81	10.0	840.81
25	41.5758573706	-73.4520277978	811.83	10.0	821.83
26	41.5752473915	-73.4519419671	813.85	10.0	823.85
27	41.5742216509	-73.4517338278	809.84	10.0	819.84
28	41.5734206311	-73.451225281	808.89	10.0	818.89
29	41.5729551036	-73.4504528048	798.69	10.0	808.69
30	41.5726019426	-73.4494657519	747.79	10.0	757.79
31	41.571542448	-73.4484357836	731.8	10.0	741.8
32	41.569969227	-73.4481782916	721.81	10.0	731.81
33	41.5694555139	-73.449723244	790.03	10.0	800.03
34	41.5689417967	-73.449980736	794.77	10.0	804.77

Flight Path Observation Points

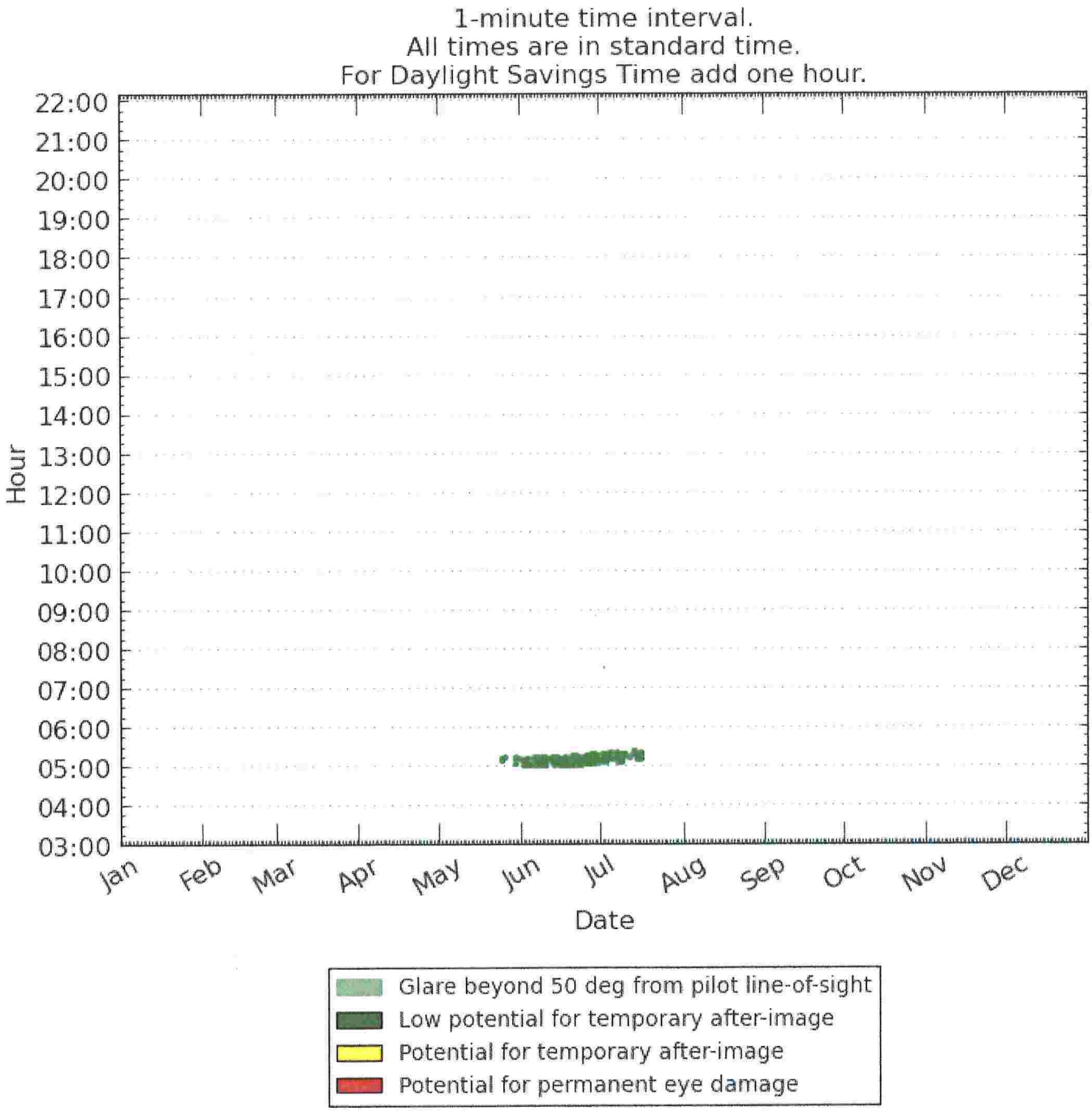
	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Eye-level height above ground (ft)	Glare?
Threshold	41.5655961121	-73.459546566	652.11	50.0	Yes
1/4 mi	41.5623860352	-73.4573257263	653.4	117.88	No
1/2 mi	41.5591759583	-73.4551048865	775.36	65.11	No
3/4 mi	41.5559658814	-73.4528840468	867.72	41.92	No
1 mi	41.5527558045	-73.450663207	693.59	285.22	No
1 1/4 mi	41.5495457277	-73.4484423673	533.04	514.96	No

	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Eye-level height above ground (ft)	Glare?
1 1/2 mi	41.5463356508	-73.4462215275	423.23	693.94	No
1 3/4 mi	41.5431255739	-73.4440006878	423.23	763.13	No
2 mi	41.539915497	-73.441779848	531.77	723.77	No

Glare occurrence plots

All times are in standard time. For Daylight Savings Time add one hour.

Threshold


1-minute time interval.
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For Daylight Savings Time add one hour.
Hour
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Jan
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Sep
Oct
Nov
Dec
Date
Glare beyond 50 deg from pilot line-of-sight
Low potential for temporary after-image
Potential for temporary after-image
Potential for permanent eye damage

1/4 mi

No glare

1/2 mi

No glare

3/4 mi

No glare

1 mi

No glare

1 1/4 mi

No glare

1 1/2 mi

No glare

1 3/4 mi

No glare

2 mi

No glare

Solar Glare Hazard Analysis Flight Path Report

Generated June 8, 2017, 8:11 a.m.

Flight path: North Flight Path

North Flight Path

Glare found

Print

Analysis & PV array parameters

Analysis name	New Milford
PV array axis tracking	none
Orientation of array (deg)	180.0
Tilt of solar panels (deg)	12.0
Rated power (kW)	27000.0
Vary reflectivity	True
PV surface material	Smooth glass without ARC

Timezone offset	-5.0
Subtended angle of sun (mrad)	9.3
Peak DNI (W/m^2)	1000.0
Ocular transmission coefficient	0.5
Pupil diameter (m)	0.002
Eye focal length (m)	0.017
Time interval (min)	1
Correlate slope error with material	True
Slope error (mrad)	6.55

Flight path parameters

Direction (deg)	155.25
Glide slope (deg)	3.0
Consider pilot visibility from cockpit	False

PV array vertices

id	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Height of panels above ground (ft)	Total elevation (ft)
1	41.5686977782	-73.4509119989	807.26	10.0	817.26
2	41.5698536405	-73.4517273904	800.8	10.0	810.8
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33	41.5694555139	-73.449723244	790.03	10.0	800.03
34	41.5689417967	-73.449980736	794.77	10.0	804.77

Flight Path Observation Points

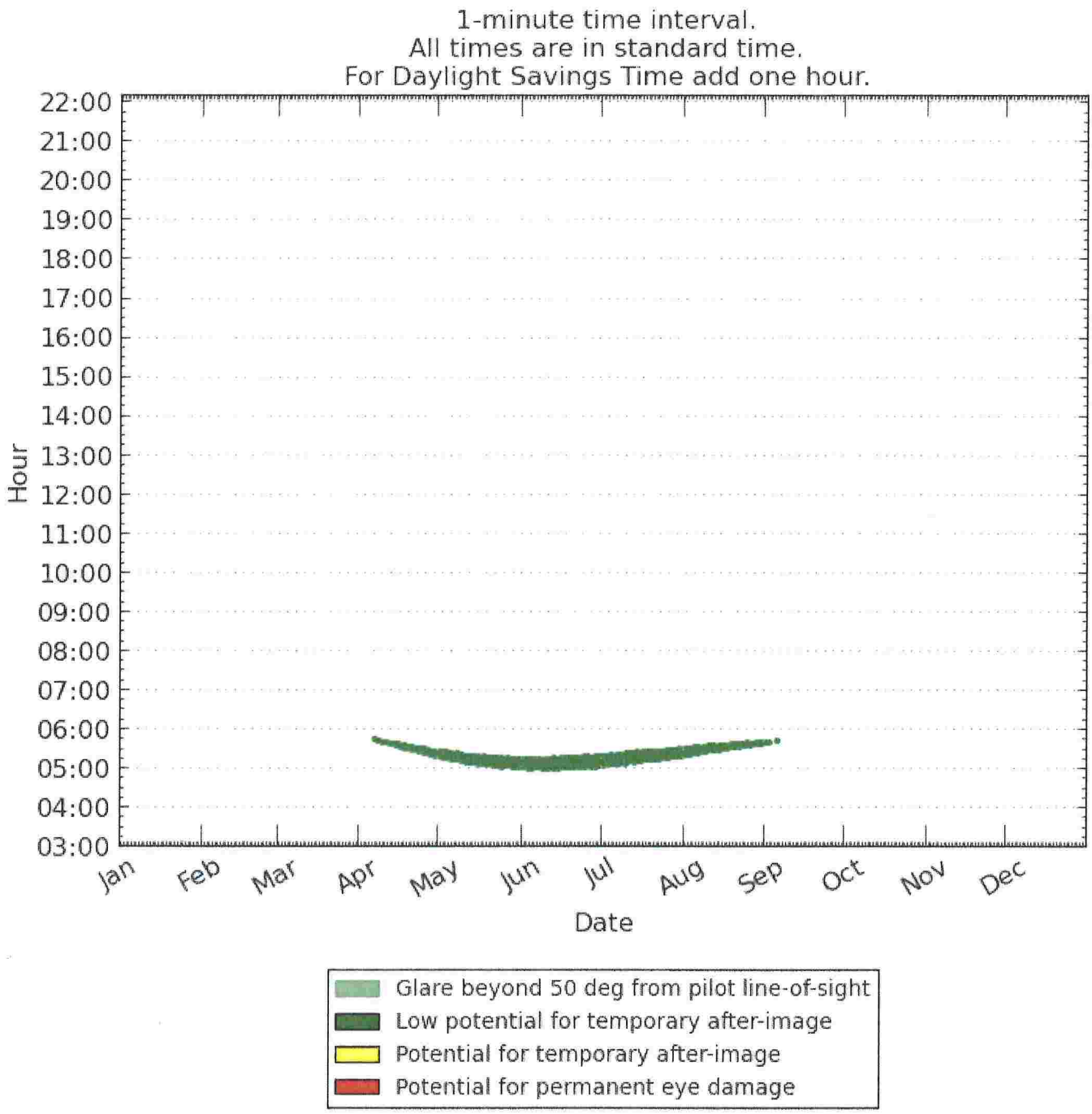
	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Eye-level height above ground (ft)	Glare?
Threshold	41.5733339455	-73.464910984	685.3	50.0	Yes
1/4 mi	41.5766157421	-73.4669356927	668.93	135.54	Yes
1/2 mi	41.5798975386	-73.4689604013	425.9	447.77	No
3/4 mi	41.5831793351	-73.4709851099	630.04	312.8	No
1 mi	41.5864611317	-73.4730098186	633.12	378.89	No
1 1/4 mi	41.5897429282	-73.4750345272	782.37	298.82	No

	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Eye-level height above ground (ft)	Glare?
1 1/2 mi	41.5930247247	-73.4770592358	839.41	310.96	No
1 3/4 mi	41.5963065212	-73.4790839444	888.24	331.31	No
2 mi	41.5995883178	-73.4811086531	840.76	447.96	No

Glare occurrence plots

All times are in standard time. For Daylight Savings Time add one hour.

Threshold


1-minute time interval.
All times are in standard time.
For Daylight Savings Time add one hour.
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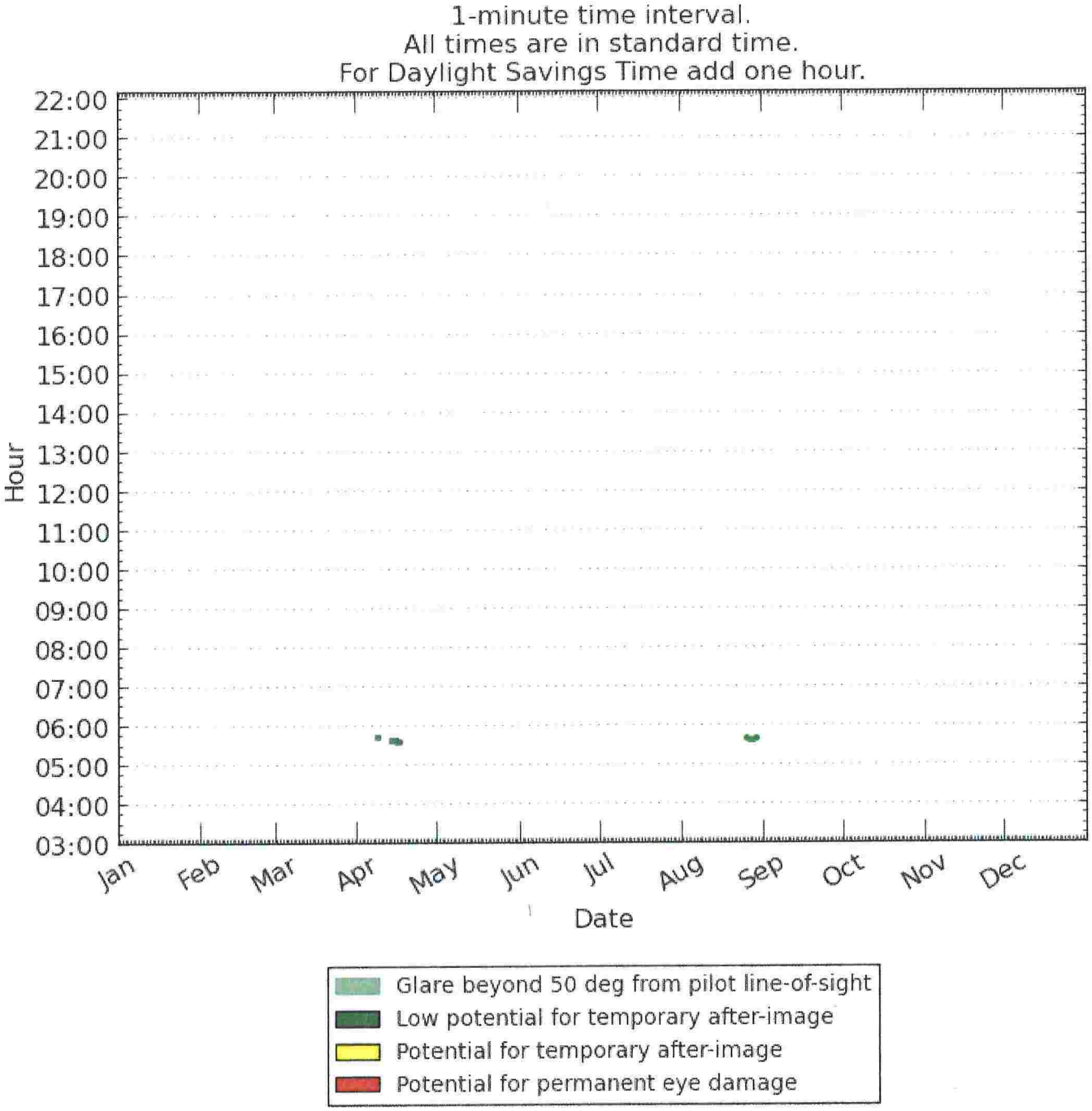
Dec
Date
Glare beyond 50 deg from pilot line-of-sight
Low potential for temporary after-image
Potential for temporary after-image
Potential for permanent eye damage

1/4 mi


1-minute time interval.
All times are in standard time.
For Daylight Savings Time add one hour.
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Dec
Date
Glare beyond 50 deg from pilot line-of-sight
Low potential for temporary after-image
Potential for temporary after-image
Potential for permanent eye damage

1/2 mi

No glare

3/4 mi

No glare

1 mi

No glare

1 1/4 mi

No glare

1 1/2 mi

No glare

1 3/4 mi

No glare

2 mi

No glare

ATTACHMENT 4

NDDB Letter

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

July 10, 2017

Ryan Hale
AMEC Foster Wheeler
271 Mill Road, 3rd Floor
Chelmsford, MA 01824
ryan.hale@amecfw.com

Project: Preliminary Comments and Recommendations for Proposed Candlewood Solar Project, between Candlewood Mountain Road and Kent Road in New Milford, Connecticut
NDDB Preliminary Assessment No.: 201703524

Dear Ryan Hale,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map provided for a proposed Candlewood Solar Project, between Candlewood Mountain Road and Kent Road in New Milford, Connecticut. This is not a final determination letter from our program as at least two of the species known from this area of New Milford will require further investigations before final comments can be prepared. This particular letter cannot be used with any state permit or registration since I will need to review either field survey reports generated from field investigations and/or protection strategies to ensure that state actions do not impact state-listed species.

According to our records there are known extant populations of State Listed Species known that occur within or close to the boundaries of this property. The species include:

State Endangered
Myotis lucifugus (Little brown bat)
Vermivora chrysoptera (Golden-winged warbler)

State Threatened
Plethodon glutinosus (slimy salamander)

State Special Concern
Ambystoma jeffersonianum (Jefferson salamander "complex")
Glyptemys insculpta (Wood turtle)
Terrapene carolina carolina (eastern box turtle)
Lasiurus borealis (Red bat)
Lasionycteris noctivagans (Silver-haired bat)
Lasiurus cinereus (Hoary bat)

Thank you for including the vernal pool protection strategies that you will implement. The state special concern Jefferson salamander "complex" will benefit from these conservation measures. I concur with the following conservation measures you submitted to protect the vernal pool. These conservation measures include:

- No impacts should occur to the vernal pool depression or 100-foot envelope.

- The total length of roads within the 750-foot critical terrestrial habitat (CTH) will be the minimum required to access the northern portion of the array for maintenance or emergency activities.
- Site clearing, grading, and construction activities will be limited to less than 25% of the entire vernal pool habitat (i.e., the vernal pool depression, envelope, and CTH), calculated as follows:
- Total area of vernal pool habitat: 48.5 acres (2,111,984.3 sq. ft.)
- Total area of proposed site clearing, grading, and construction: 11.3 acres (491,550.7 sq. ft.)
- Total percentage of impact to vernal pool habitat: 23.3%
- Any ruts or artificial depressions created as part of the project will be refilled to grade to avoid creation of decoy vernal pools.
- Erosion and sediment control BMPs will be implemented per the required Connecticut General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities.
- Impervious surfaces will be minimized within the vernal pool habitat.
- No lighting will be required for the project.

State Endangered *Vermivora chrysoptera* (golden-winged warbler):

In Connecticut, the golden-winged warbler breeds in old-field habitat generally 10 or more acres in size. Its breeding season is from May through July. During this time it is most susceptible to disturbances in its feeding and nesting habitat. Minimizing impacts to habitat during this time period will likewise minimize impacts to this species. To prevent impacts to this State-listed bird species, I recommend that surveys of the site be performed by a qualified ornathologist when this bird may be present. A report summarizing the results of such surveys should include:

- Survey date(s) and duration
- Site descriptions and photographs
- List of bird species within the survey area (including scientific binomials)
- Data regarding population numbers and/or area occupied by State-listed species
- Detailed maps of the area surveyed including the survey route and locations of state-listed species
- Statement/résumé indicating the biologist's qualifications

The site survey report should be sent to our NDDB email address (deep.nddbrequest@ct.gov) and it will be reviewed by our program biologists. Further evaluation and recommendations will be provided once we receive the results of this field investigation. If this bird is found to occupy this property please provided best management practices that will avoid or mitigate potential impacts to this bird speies from this project.

State Threatened *Plethodon glutinosus* (slimy salamander):
In Connecticut the state threatened slimy salamander is restricted to mature mesic forest habitat with rocky talus slopes, numerous fallen logs along with a thick layer of leaf litter and forest debris. The subject area (this property) was identified as providing suitable potential habitat for the slimy salamander in a field survey from 2010 which was a five year study to monitor the impacts of the U.S. Route 7 Bypass project on this state threatened salamander. I also reviewed the photographs you provided in your submitted NDDB request application and believe that this project site may provide suitable habitat for this salamander. To prevent impacts to this State-listed amphibian species, I recommend that surveys of the site be performed by a qualified herpetologist. A report summarizing the results of such surveys should include:

- Survey date(s) and duration
- Site descriptions and photographs
- List of species within the survey area (including scientific binomials)
- Data regarding population numbers and/or area occupied by State-listed species
- Detailed maps of the area surveyed including the survey route and locations of state-listed species
- Statement/résumé indicating the biologist's qualifications

The site survey report should be sent to our NDDB email address (deep.nddbrequest@ct.gov) and it will be reviewed by our program biologists. Further evaluation and recommendations will be provided once we receive the results of this field investigation. If this salamder is found to occupy this property please provided best management practices that will avoid or mitigate potential impacts to this amphibian speies from this project.

We also have several state listed bat species (listed above) and known from this area of New Milford.

Tree-Roosting Bats:

Hoary, Red and Silver-haired bats are found in Connecticut during the spring and summer seasons and migrate south to overwinter. They are all tree roosting bats. Their diet primarily consists of moths and beetles. These bats will roost high in large coniferous and deciduous trees. They typically do not roost on buildings. Female tree-roosting bats are solitary and give birth mid-May to late June. If work occurs outside this time frame, direct negative impacts to this species will be minimized. Long-term impacts can be minimized by retaining large diameter coniferous and deciduous trees whenever possible. Establishing this sort of wooded buffer adjacent to the wetland area, will help maintain potential roosting habitat.

Bat Protection Recommendations:

Given the known concentrated seasonal use of this area by bats, we recommend that tree cutting and other land-clearing activities be conducted during the hibernation period of these animals. Tree cutting should be conducted from November 1 through March 30 to ensure that bats are safely situated in their hibernacula. Retaining larger diameter trees (12-inch DBH and larger) wherever possible on-site, may additionally minimize the potential for negative impacts to bats. Trees with loose, rough bark such as maples, hickories, and oaks are more desirable than other tree species due to the increased cover that the loose bark provides. Large trees with cavities are also utilized by different bat species. Bat houses installed in the area where trees will be removed will help in the conservation of tree roasting bats. These best management practices for bats will also help conserve the state endangered little brown bat which is declining because of a disease (white nose syndrome which impacts this bat in its hibernaculum) and habitat loss.

We also have state special concern eastern box turtle and wood turtle in this area of New Milford.

Eastern Box Turtle: Eastern box turtles inhabit old fields and deciduous forests, which can include power lines and logged woodlands. They are often found near small streams and ponds. The adults are completely terrestrial but the young may be semiaquatic, and hibernate on land by digging down in the soil from October to April. They have an extremely small home range and can usually be found in the same area year after year. Eastern box turtles have been negatively impacted by the loss of suitable habitat. Some turtles may be killed directly by construction activities, but many more are lost when

important habitat areas for shelter, feeding, hibernation, or nesting are destroyed. As remaining habitat is fragmented into smaller pieces, turtle populations can become small and isolated.

Wood Turtle: Wood Turtles are found within forested areas, they prefer areas that do not have a fully closed canopy cover. The greatest concern during projects occurring in wood turtle habitat are turtles being run over and crushed by mechanized equipment. Reducing the frequency that motorized vehicles enter wood turtle habitat would be beneficial in minimizing direct mortality of adults. Habitat destruction, degradation or alteration and fragmentation all threaten Wood Turtle populations. Turtles are also particularly vulnerable to any activity that consistently reduces adult survivorship. Disturbances to stream and riparian habitats and activities that change the hydrology of the stream, the physical habitat itself and water quality are all potentially detrimental activities for the Wood Turtle.

Recommended Protection Strategies for Wood and Box Turtles:

The following recommendations will minimize potential impacts to the turtles. These recommendations should be implemented throughout the work area:

- Hiring a qualified herpetologist to be on site to ensure these protection guidelines remain in effect and prevent turtles from being run over when moving heavy equipment. This is especially important in the month of June when turtles are selecting nesting sites.
- Exclusionary practices will be required to prevent any turtle access into construction areas. These measures will need to be installed at the limits of disturbance.
- Exclusionary fencing must be at least 20 in tall and must be secured to and remain in contact with the ground and be regularly maintained (at least bi-weekly and after major weather events) to secure any gaps or openings at ground level that may let animal pass through. Do not use plastic web or netted silt-fence.
- All staging and storage areas, outside of previously paved locations, regardless of the duration of time they will be utilized, must be reviewed to remove individuals and exclude them from re-entry.
- All construction personnel working within the turtle habitat must be apprised of the species description and the possible presence of a listed species, and instructed to relocate turtles found inside work areas or notify the appropriate authorities to relocate individuals.
- Any turtles encountered within the immediate work area shall be carefully moved to an adjacent area outside of the excluded area and fencing should be inspected to identify and remove access point.
- In areas where silt fence is used for exclusion, it shall be removed as soon as the area is stable to allow for reptile and amphibian passage to resume.
- No heavy machinery or vehicles may be parked in any turtle habitat.
- Avoid degradation of wetland habitats including any wet meadows and seasonal pools.
- The Contractor and consulting herpetologist must search the work area each morning prior to any work being done.
- When felling trees adjacent to brooks and streams please cut them to fall away from the waterway and do not drag trees across the waterway or remove stumps from banks.
- Avoid and limit any equipment use within 50 feet of streams and brooks.
- Any confirmed sightings of box, wood or spotted turtles should be reported and documented with the NDDB (nddbrequestdep@ct.gov) on the appropriate special animal form found at (http://www.ct.gov/deep/cwp/view.asp?a=2702&q=323460&depNav_GID=1641)

Please be advised that this is a preliminary review and not a final determination. A more detailed review will be necessary to move forward with any environmental permit applications submitted to DEEP for the proposed project. **This preliminary assessment letter cannot be used or submitted with your permit applications at DEEP**. This letter is valid for one year.

If you do not intend to do site surveys to determine the presence or absence of state-listed species, please let us know how you will protect the state-listed species from being impacted by this project. You may submit these best management practices or protection plans with a new request for an NDDB review. Please confirm with your new NDDB request how you will actually protect the species described above.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

Dawn M. McKay
Environmental Analyst 3