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February 26, 2024

VIA ELECTRONIC MAIL AND HAND DELIVERY

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

Re: PETITION NO. 1599 – TRITEC Americas, LLC notice of election to waive exclusion from Connecticut Siting Council jurisdiction, pursuant to Connecticut General Statutes §16-50k(e), and petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 0.999-megawatt AC solar photovoltaic electric generating facility located at Parcel No. 30-25-59 Spencer Street, Suffield, Connecticut, and associated electrical interconnection. Petitioner Responses to Interrogatories from Council.

Dear Attorney Bachman:

On behalf of TRITEC Americas, LLC ("Petitioner"), please accept the enclosed responses to the interrogatories provided by the Connecticut Siting Council ("Council") on February 7, 2024.

Consistent with Council requirements, Petitioner submits an original and fifteen hard copies of all necessary documents.

Please feel free to contact me if you have any questions.

Very truly yours,

Paul R. michaul

Paul R. Michaud

c: Service List dated February 26, 2024

Petition No. 1599 TRITEC Americas, LLC Parcel No. 30-25-59 Spencer Street, Suffield, Connecticut

Interrogatories February 7, 2024

Notice

1. Has TRITEC received any comments since the Petition was submitted to the Council? If yes, summarize the comments and state how these comments were addressed.

RESPONSE: No, TRITEC has not received any comments since submitting the Petition to the Council.

2. Referencing Petition p. 3, what comments did the First Selectman have concerning the proposed project?

RESPONSE: The First Selectman had no comments and thanked Petitioner for informing him of the proposed Project.

3. Referencing Petition p. 4, how would the Project benefit abutting property owners, the Town of Suffield and the state?

RESPONSE: The proposed Project would greatly benefit the abutters, the Town of Suffield,

and the State. First, the Project would produce clean, carbon-free energy for the electric grid, thus reducing the Town's reliance on fossil fuels and helping to decrease greenhouse gas emissions and combat climate change, contributing to a more sustainable future. Second, it would produce long-term (at least 20 years) stable electricity for the electric grid, which can help lower electricity costs for the town and its residents over the long term. Third, the Project would generate additional revenue for the Town through property taxes and other fees - on the land and equipment. Fourth, the Project would reduce air and water pollution associated with fossil fuel power plants, improving local air quality and protecting natural resources. It would also conserve water, as solar panels do not require water for cooling like traditional power plants. Fifth, the Project could serve as an educational tool for local schools to teach the students about renewable energy, sustainability, and environmental conservation. Sixth, the Project would result in substantial grid improvements in the vicinity of the Project Site,

thus resulting in electric grid resiliency for local residents. Lastly, the project would allow the

Town to help meet Connecticut's law to achieve 100% carbon-free generation by 2040.

Project Development

4. Referencing Petition p. 7, which entity will hold the permit(s)?

RESPONSE: Petitioner will hold the permits.

5. Referring to Petition p. 12, when will the Project be bid into the NRES Program? Would the total capacity of the facility be supplied to the NRES Program?

RESPONSE: The entire Project capacity will be bid into the NRES Program in February 2024.

6. If the facility operates beyond the terms of the NRES Agreement, will TRITEC decommission the facility or seek other revenue mechanisms for the power produced by the facility?

RESPONSE: This will depend on the market conditions

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

RESPONSE: Yes, TRITEC would provide the Council with a written agreement.

Proposed Site

8. Submit a map clearly depicting the boundaries of the solar facility site and the boundaries of the host parcel(s). Under Regulations of Connecticut State Agencies (RCSA) §16-50j-2a(29), "Site" means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located.

RESPONSE: Petitioner directs Council staff to the "Site Layout Plan", Sheet 2.11 in Appendix B of the Petition for a clear depiction of the "Site" which includes the area within the Limits of Disturbance ("LOD") line shown. This area includes a specified boundary, access to the solar facility and electrical interconnection locations.

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

RESPONSE: The length of the lease agreement is 21 years with options to extend for two oneyear periods and two five-year periods. 10. In the lease agreement with the property owner, are there any provisions related to decommissioning or Site restoration at the end of the project's useful life? If so, please describe and/or provide any such provisions.

RESPONSE: Yes, the lease includes the following provision:

Decommissioning. At the termination or expiration of the Lease, whether as to the entire Property or only as to part, Lessee shall cease commercial operation of the Solar Energy Project on the Property or the part as to which the Lease has terminated or expired. Lessee shall, as soon as practicable thereafter and at its sole cost and expense, remove all above-ground and below-ground Solar Energy Project, excluding the portion of foundations that are below a depth of two feet below grade from the natural surface of the Property or of the portion as to which this Lease was terminated, infrastructure and underground conduit that cannot be removed without damage to the Property, and dispose of such removed components per applicable law (the "Decommissioning Obligations"). Lessee shall leave the Property in substantially the same condition as before the Effective Date (except for removal of trees and foliage permitted hereunder) and shall restore the soil surface to a condition reasonably similar to its original condition, reasonable wear, and tear, and casualty excepted. Lessee shall post a decommissioning performance bond to secure its performance of its obligations under this Section 13.13. The provisions of this section shall not affect any continuing rights or obligations that by the terms of this Lease survive the Term or any termination or expiration of this Lease. The provisions of this section shall survive any termination or expiration of this Lease.

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

RESPONSE: Yes, the lease agreement contains provisions for agricultural co-uses at the Site. The lease agreement does not specify the co-uses as the lease agreement was executed before the Petitioner could analyze the environmental aspects and status of the Site to determine the best agricultural uses.

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

RESPONSE: All concerns and/or complaints related to these agricultural co-uses can be directed to Petitioner's legal counsel, Michaud Law Group, LLC. Petitioner intends to maintain a project website containing pertinent information regarding the Project, including contact information.

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

RESPONSE: The landowner has a verbal agreement with a third party to grow corn and hay the Host Parcel.

14. Referencing Petition page 6, how many acres of the host parcel are zoned residential and industrial?

RESPONSE: Approximately 3.9 acres of the host parcel are zoned residential and approximately 7.8 acres of the host parcel area zoned industrial.

15. Referencing Petition Site Plan 2.11, how many acres of the Project lease area are zoned residential and industrial?

RESPONSE: The Project lease area and the host parcel are congruent, therefore the areas noted in Interrogatory 14 apply.

16. Referencing Petition Exhibit D, a different site layout is shown in Figure 1. What were the reasons for the re-design of the Project to the proposed layout?

RESPONSE: Figure 1 in Petition Exhibit D was a concept plan prepared by another engineering firm in 2021. The layout was modified over time to reduce the size of the gravel drive, which reduces impervious coverage and minimizes the mount of disturbance to the site.

Energy Output

17. Referencing Petition p. 9, what electrical loss assumptions have been factored into the output of the facility?

RESPONSE: The annual losses of 0.5% per year is the median solar panel degradation rate. This degradation rate is industry-standard.

18. Was a shade study conducted? Would shading from adjacent forested areas interfere with energy production at the site?

RESPONSE: No, a shade study was not conducted; however, the adjacent forested areas will not interfere with energy production at the site due to the Project's location and heights of the adjacent trees.

19. If one section of the solar array experiences electrical problems causing the section to shut down, could other sections of the system still operate and transmit power to the grid? By what mechanism are sections electrically isolated from each other?

RESPONSE: The electrical system is isolated by strings of DC circuits that are wired to a Combiner; each DC circuit is protected by Fuses. These fuses will protect other strings within the system and allow the balance of the system to produce. Furthermore, the DC strings connect to separate invertors, these invertors are connected to AC breakers. If the invertor fails it will only affect the DC strings attached to that specific invertor.

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

RESPONSE: TRITEC does not intend to participate in an ISO-NE Forward Capacity Auction at this time.

Proposed Facility and Associated Equipment

21. Referencing Petition p. 8, how many tracker unit motors would be installed? What is the lifespan of the tracker motors?

RESPONSE: There are 43 tracker motors with an expected life span of 30 years.

22. Referencing Petition Exhibit G, p. 2, to what approximate depth would the tracker support posts be driven into the ground?

RESPONSE: Approximate depth will be 9' to 12' of embedment.

23. How are the tracker motors powered?

RESPONSE: Tracker motors are powered by a low voltage auxiliary panel located at the equipment pad.

24. What are the approximate dimensions of the transformer and switchgear that would be installed on the concrete pad adjacent to the proposed access drive? What equipment and its approximate dimensions would be installed on the adjacent small concrete pad?

RESPONSE: Transformer dimensions are approximately 6' wide by 4' deep and the electrical distribution are 10' wide by 3' deep.

25. Referencing Petition Site Plan 2.11, are the eight inverters mounted on concrete pads or on posts?

RESPONSE: Invertors will be mounted on a post.

Electrical Interconnection

26. Referring to Petition p. 8, what offsite upgrades are required for the electrical distribution system? Does the interconnection require a review from ISO-NE?

RESPONSE: The Project requires 1,000 feet of 3-phase line extension on circuit 36M1 from 4.8kV to 23kV.

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

RESPONSE: Yes, the interconnection will provide energy to the 36M Suffield distribution substation.

28. Referencing Petition Site Plans 2.11, four proposed utility poles are shown; however, three poles are listed in Petition Appendix G, p. 4. Clarify.

RESPONSE: The Site Plan has been modified to show five (5) utility poles: three (3) Eversource-owned poles and two (2) customer-owned poles. Ultimately Eversource will dictate the exact details of the interconnection as it pertains to quantity and spacing of the poles, however the proposed alignment is based on recent projects of similar size. Please see, "Site Layout Plan 2.11." 29. What equipment would be installed on each utility pole? Can the number of poles be reduced by consolidating equipment?

RESPONSE: The equipment on the utility poles is owned and operated by the utility company, this equipment will consist of a manual disconnect switch (GOAB), a recloser and a primary meter. Based on the system design and Utility requirements this is the minimum amount.

30. Referencing Petition Site Plan 2.11, why do the utility poles need to be within 10 feet of each other? Can some or all the utility poles be located farther to the south and west of the access road parking area?

RESPONSE: The Site Plan has been modified to provide 40-foot spacing between the (3) Eversource-owned utility poles and 30-foot spacing between the (2) customer-owned poles. The poles are placed along the proposed access drive. Ultimately Eversource will dictate the exact details of the interconnection as it pertains to quantity and spacing of poles, however the proposed alignment is based on recent projects of similar size. Enclosed, please see, "Site Layout Plan 2.11."

31. Referencing Petition Exhibit G, p. 4, it states Eversource does not pad-mount their equipment. Explain.

RESPONSE: Eversource dictates the exact details of the interconnection and equipment. Typically, Eversource does not pad-mount their equipment for solar projects, therefore pole-mount equipment is shown on the Site Plans. It should be noted that underground interconnections are substantially more expensive than above ground and would put the Project's viability at risk.

Public Safety

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

RESPONSE: Petitioner is not aware of any Best Management Practices for Electric and Magnetic Fields at solar facilities like the proposed Project. The Council's "Best Management Practices for Electric and Magnetic Fields" addresses, "engineering practices for proposed electric transmission lines with a design capacity of 69kV or more" and the proposed Project will interconnect to a distribution line with a design capacity of 23kV. See Connecticut Siting Council, "Best Management Practices for Electric and Magnetic Fields" (Feb. 20, 2014) 2.

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

RESPONSE: Training can be provided to local emergency responders of the facilities operation.

34. Are there manual facility shut-off switches that can be operated by emergency personnel? If yes, in what location(s)?

RESPONSE: Yes, there are multiple means of isolating and shutting of the power to the facility. First is the manual disconnect switch located on the Utility pole, second will be the

automatic means located second utility pole and third will be the main breaker located at the equipment pad.

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

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

36. Provide an Emergency Response Plan for the proposed facility.

RESPONSE: Petitioner respectfully requests that the Council make the submission of an Emergency Response Plan a condition in Council's Final Decision because the final design of the Project depends on several factors, including any potential changes made by the Council or DEEP through their respective permitting processes.

37. Referencing Petition p. 9, does the transformer have a containment system in the event of an insulating mineral oil leak? Can the SCADA system detect an insulating mineral oil leak?

RESPONSE: No, transformer manufactured today use mineral oil. Mineral oil presents no danger to the environment. SCADA cannot sense a leak of fluid.

38. Would the installation of racking posts affect well water quality from construction impacts, such as from vibrations and sedimentation?

RESPONSE: It is not anticipated that vibration from any equipment installation will affect the nearby aquifers or groundwater quality. The project has also been designed such that any overland runoff will be protected from depositing sediment off the site by incorporation of a detailed erosion control plan, included with the site plans.

39. Referencing Petition p. 12, submit the noise study that determined the noise level complies with Department of Energy and Environmental Protection (DEEP) Noise Standards at the nearest property line. Was operation of the tracker motors considered in the noise analysis?

RESPONSE: A noise study was not prepared for the Project. The noise calculations were prepared using the Inverse Square Law. The tracker motors were not considered in the noise analysis because their noise levels are minimal and would have negligible impacts on the calculations.

40. Referencing Petition p. 12 and the November 16, 2023 comments from the Connecticut Airport Authority, would TRITEC conduct a glare analysis due to the proximity to Bradley International Airport, which is the nearest federally obligated airport?

RESPONSE: Petitioner submitted the necessary Project information to the Federal Aviation Administration (FAA). The FAA reviewed multiple points, determined that a glare analysis

is not required, and issued a Determination of No Hazard to Air Navigation for all points. A glare analysis is not required.

Environmental Effects and Mitigation Measures

41. Referencing Petition Site Plan 3.01- Fence Detail, and Petition Exhibit G, p. 8, can the bottom of the perimeter fence fabric be raised to a height of six-inches above grade to allow for small wildlife movement?

RESPONSE: The proposed fence detail has been modified accordingly. Please see "Details Sheet 3.01."

42. Referencing Petition Figure 8, what is the acreage of prime farmland soil within the site boundaries?

RESPONSE: The approximate acreage of prime farmland soil within the site boundaries is 3.3 acres.

43. Referencing Petition p. 13, it states hay and corn production will continue through the project lifespan. Where on the host parcel and/or facility site will crop production occur? What other agricultural activities are contemplated for the site, if any.

RESPONSE: The Petition states, "Petitioner intends to continue both agricultural practices (hay and corn) throughout the Project's lifespan to the greatest extent possible." These practices would occur on the Host Parcel, outside the Project Site and its limit of disturbance. Petitioner is also contemplating honeybee apiaries and pollinator habitats.

- 44. Referencing Petition Exhibit G, pp. 5-6, provide the distance of the limit of disturbance at its closest point to the two wetlands identified on the host parcel.
 RESPONSE: The approximate distance from the limit of disturbance at its closest point to the wetland area to the east is 50 feet. The approximate distance from the limit of disturbance at its closest point to the wetland area to the wetland area to the west is 50 feet. Enclosed, please see, "Exhibit G: Environmental Assessment."
- 45. Referencing Petition p. 14, has the Phase IA Cultural Resources Assessment Survey been submitted to the State Historic Preservation Office? If yes, provide a copy of their response, if available. RESPONSE: The SHPO response letter is included herein. They have requested the completion of a professional archaeological reconnaissance survey of archaeologically sensitive portions of the area of potential effects associated with the Project prior to construction.
- 46. Has TRITEC submitted an application for a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities to DEEP? If yes, what is the status of such permit?

RESPONSE: As the CTDEEP Stormwater General Permit application is intended to include "construction ready" site plans, the Petitioner has not yet submitted this application. The Petitioner intends to apply for this permit in the near future and will submit proof of approval to the Council as a pre-condition to beginning construction of the Project.

47. Referencing Petition Exhibit H, identify the properties with visible structures in Photos 13 North, 16 North, 21 West, and 22 West.

RESPONSE: The addresses of the properties with visible structures shown in the photos are the following:

- Photo 13 North: 191 Spencer Street & 377 Spencer Street
- Photo 16 North: 191 Spencer Street & 377 Spencer Street
- Photo 21 West: 191 Spencer Street, 415 Hale Street & 421 Hale Street
- Photo 22 West: 191 Spencer Street & 377 Spencer Street

Facility Construction

48. Will blasting be required to construct the site? If not, how will bedrock be removed if encountered?

RESPONSE: No, Blasting is not required. If bedrock is encountered the racking posts will be installed with a rock drill to get to the burial depths required. No other major earth work.

49. Referencing Petition Exhibit G, p. 11, where will the 750 cubic yards of material be disposed of? What would this material be composed of? What is the total estimate of cut and fill?

RESPONSE: It is anticipated that the estimated 750 cubic yards of cut material would be placed, as needed, around the site to facilitate positive drainage patterns. Note that 750 cubic yards could be spread evenly across the entire Project area at a depth of approximately 0.7-inches. Any excess material will be removed from the Site. The material will be composed of topsoil and native silty/gravelly glacial till. The estimate of cut and fill is approximately 1,950 CY of cut and 1,200 CY of fill.

Facility Maintenance/Decommissioning

50. Revise the Petition Operations and Maintenance Plan (Exhibit C) to include procedures for pesticide/herbicide use, panel washing, and inspection and replacement of landscaping if die off occurs.

RESPONSE: The Operations and Maintenance Plan has been updated accordingly. Please see enclosed, "Exhibit C: Revised Operations and Maintenance Plan."



KEY QTY		BOTANICAL NAME	COMMON NAME	ROOT	SIZE	COMMENTS		
TREES								
IO	17	ILEX OPACA	AMERICAN HOLLY	B&B	7'-8' HT	FULL, EXTRA HEAVY, 15' O.C.		
JV	22	JUNIPERUS VIRGINIA	EASTERN RED CEDAR	B&B	7'-8' HT	FULL, EXTRA HEAVY, 15' O.C.		
PG	15	PICEA GLAUCA	WHITE SPRUCE	B&B	7'-8' HT	FULL, EXTRA HEAVY, 15' O.C.		
TC	12	TSUGA CANADENSIS	CANADIAN HEMLOCK	B&B	7'-8' HT	FULL, EXTRA HEAVY, 15' O.C.		
SEED M	SEED MIXES							
NEW ENGLAND EROSION CONTROL/RESTORATION NO MOW MIX (NEW ENGLAND WETLAND PLANTS, INC.)								
APPLIC/	ATION RAT	E: 1 LBS/2,500 S.F.						
ERNMX-147								
APPLIC/	APPLICATION RATE: 42 LBS/ACRE WITH A COVER CROP OF ANNUAL RYEGRASS AT 12 LBS/ACRE							
ERNMX	ERNMX-610							
A DDI ICA "	FION DATE: 20	L DS/A CDE OF A COVED CDOD FOD A COVED CDOD	LISE EITHED CDAIN OATS (IAN 1T)			E (A LIG 1 TO DEC 21)		

	TOTAL
SIZE DC	1.399 MW
SIZE AC	0.999 MW
INVERTER LOAD RATIO	1.40
MODULE TYPE	TRACKING TRINASOLAR TSM-540-DEG19C.20 (540W)
MODULE QUANTITY	2,590
INVERTER	SUNGROW SG125HV 125KW
INVERTER QUANTITY	8
UTILITY	EVERSOURCE





EXHIBIT G

Environmental Assessment



Environmental Assessment

Proposed Solar Photovoltaic Array 0 Spencer Street Suffield, Connecticut

Prepared For Tritec Americas, LLC 888 Prospect Street, Suite 200 La Jolla, California 92037

September 22, 2023 Revised On: February 28, 2024





501 Main Street, Suite 2A Monroe, CT 06468 Office: (203) 880-5455 11 Vanderbilt Avenue, Suite 240 Norwood, MA 02062 Office: (781) 352-8491

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1.0 INTRODUCTION

Solli Engineering (Solli) has prepared this Environmental Assessment (EA) on behalf of Tritec Americas, LLC, (Petitioner) as an exhibit to the Connecticut Siting Council for a Petition for a Declaratory Ruling that a Certificate of Environmental Compatibility and Public Need is not required for the construction, maintenance, and operation of a 0.99 megawatt (MW) alternating current (AC) ground-mounted solar photovoltaic array (Project/Facility) to be located at 0 Spencer Street in Suffield, Connecticut (Site).

2.0 PROJECT DESCRIPTION

2.1 EXISTING SITE CONDITIONS

The Project area is comprised of a $7.2\pm$ acre portion of the $11.71\pm$ acre Site. The Site is bound by Spencer Street to the north, undeveloped woods to the east, farmland to the south and residential uses to the west. The Site is divided into two zoning districts, with the northern portion located within a Residential Zone (R-25) and the southern portion located within the Planned Development Industrial Park Zone. The Site is currently undeveloped and is currently utilized as an agricultural field. The centrally located field is bound by wooded areas located along its perimeter. Based on information gathered from the Town of Suffield GIS, it is assumed that the neighboring residential properties are serviced by private water wells.

Elevations within the Project area range from approximately 146 feet at the southeast corner to approximately 179 feet at the northwest corner, along Spencer Street. Slopes range from $1\%\pm$ in the middle of the Project area to $20\%\pm$ in the northwest corner of the Project area near Spencer Street.

The Site contains two wetland corridors that run north to south along the eastern and western property lines. The Facility is proposed to be located outside of these existing wetland areas. Please refer to Section 3.2 for more details regarding existing water resources.

2.2 PROPOSED DEVELOPMENT

As currently designed, the proposed Project will consist of 2,590 TrinaSolar TSM-DEG19C20 540W modules, eight (8) Sungrow SG125HV 125kW inverters, AC panel boards and/or switchgear and one (1) 2,000 kVA transformer. The panels will be secured to a ground-mounted steel racking structure utilizing a single-axis tracking system, which allows the panels to rotate from east to west for more efficient capture of sunlight. The steel racking structure will be anchored to the ground using pile driven posts. The array of panels and the equipment will be surrounded by a 7-ft tall chain link security fence. Access to the Project will be from Spencer Street via a 12-ft wide, 830± long gravel road. The road will extend to the south to provide access to the proposed equipment, and will generate minimal traffic, for the primary use of operation and maintenance of the photovoltaic array. The proposed utility interconnection service poles by Eversource will be located in the northeast corner of the Site.

2.2.1 PUBLIC HEALTH AND SAFETY

The Project has been designed to meet all applicable local, state, national and industrial health and safety standards related to electric power generation. The Facility will not consume any raw materials, will not produce any by-products, and will be unstaffed under normal operating conditions. No chemicals will be used during the operation of the facility.

A 7-ft tall chain link fence surrounding the development is required per the Best Management Practices for Electric and Magnetic Fields and National Electric Code. This fence would mitigate potential electric hazards. The proposed project equipment has internal fail-safes to further mitigate the risk of electrical fires. A 26-ft wide gate is proposed at the entrance to the Project and will limit access to authorized



personnel only. Town emergency response personnel will have access to the Project via a Knox padlock. The photovoltaic array will have the ability to be de-energized remotely in case of an emergency.

2.2.2 LAND USE PLAN

The solar photovoltaic array has been designed in accordance with state and federal policies and will support the State of Connecticut's energy goals by constructing a renewable energy resource with no substantial adverse environmental impact. The solar photovoltaic array will comply with the current Connecticut State Building Code and National Electric Code.

Although the Town of Suffield currently does not have any land use requirements related to solar photovoltaic arrays, the Project was designed to meet the Town's land use regulations to the maximum extent practicable.

The Facility has been designed to have a minimum setback of 40 feet from all abutting residential properties. Tree lines will be maintained to the best extent practicable, and additional evergreen trees will be planted to provide a visual buffer to adjoining properties.

The distance, direction, and address of the nearest property line and nearest off-site residence from the proposed 7' chain link fence, transformer pad, and access drive is shown in Table 1.

Table 1: Proposed Development Limits Table						
	Distance (ft)	Direction	Address			
Perimeter Fence to	5 '	Month	Sman and Streat			
Property Line	3	INORIII	Spencer Street			
Perimeter Fence to	1063	NV /	101 Guaran Street			
Residence	100	west	191 Spencer Street			
Transformer Pad to	57?	East	MDL 20 25 (2			
Property Line	57	East	WIBL 30-23-62			
Transformer Pad to	602'	Northcost	141 Sugar Street			
Residence	002	Northeast	141 Spencer Street			
Access Drive to	25'	Fast	MDI 20 25 62			
Property Line	55	East	WIBL 30-23-02			
Access Drive to	150'	East	141 Sugar Street			
Residence	150	East	141 Spencer Street			
Project Area to Nearest	5 600'					
Town Line	5,000	South	w masor Locks			

Equipment

TrinaSolar TSM-DEG19C20 540W modules are solar panels consisting of a glass-cover, aluminum pane, and sealed back sheet, preventing rainwater from penetrating the panels and leaching out chemicals or substances. These solar panels have a width of 7.8 feet, a minimum height of 4 feet above grade, and a maximum height of 7.5 feet above grade when panels are at full tilt. The manufacturer of the solar panels, Trina Solar Co., Ltd., has conducted Toxicity Characteristic Leaching Procedure (TCLP) testing of the proposed solar panels. The solar panels are not classified as hazardous waste. For more information refer to the TCLP test results attached in Appendix F, Product Data Sheets.

Medium voltage switchgear and the 2,000 kVa transformer is proposed to be installed on the concrete pad that abuts the proposed access driveway. The proposed transformer will contain mineral oil which is not a danger to the environment. The transformer is standard and used industry-wide, including by electrical



distribution companies such as Eversource. Final dimensions of the switchgear and transformer will be available when equipment is ordered.

Three (3) utility-owned utility poles and two (2) customer-owned utility poles are proposed to be located directly adjacent to the access drive to provide interconnection to an existing utility pole on Spencer Street. The standard height for utility poles is between 35 and 40 feet. The poles will be mounted with Eversource owned and operated equipment. All necessary offsite improvements to facilitate the interconnection will be completed by Eversource. Eversource Energy does not pad-mount their equipment; therefore, polemounted equipment is necessary to complete the project.

The Petitioner believes that this Project will benefit the local community by improving electrical service for existing and future development with the availability of a local, renewable energy source.

2.2.3 STORMWATER MANAGEMENT PLAN

The Project has been designed in accordance with the 2024 Connecticut Stormwater Quality Manual; the Connecticut General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (General Permit), effective December 31, 2020; and the Connecticut Department of Energy & Environmental Protection (CT DEEP) Appendix I, Stormwater Management at Solar Array Construction Projects (Appendix I). The design addresses three primary concerns: the management of peak stormwater flows, water quality volume treatment and soil and sedimentation controls (SESC) throughout the construction period.

To safeguard water resources from potential impacts during construction, the Petitioner is committed to implementing protective measures in the form of a Stormwater Pollution Control Plan (SWPCP), subject to review and approval by the CT DEEP Stormwater Management team. The SWPCP will include monitoring of established SESC measures that are to be installed and maintained in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control and Appendix I. Please refer to Section 3.3.3 for more information regarding stormwater management.

The phased soil and erosion control plans and details are provided in Appendix B. To meet the requirements of the General Permit, silt fencing with compost filter socks and geotextile silt fences with wings for areas less than 1 acre will be installed during construction activities. Perimeter SESC measures will encircle the Project area to trap sediment mobilized during construction activities. These measures will be cleaned of deposited sediment as needed during construction to maintain sufficient sediment storage capacity.

As indicated in the Stormwater Management Report, pre-development drainage patterns are proposed to be maintained, to the greatest extent possible, to maintain and/or reduce peak post-development flows to offsite areas. The proposed design results in the management/reduction of post-development peak runoff rates from existing conditions for the 2-, 25-, 50- and 100-year storm events. Water quality treatment will be handled within the proposed stormwater basin, sediment forebay, and via the seed mix proposed across the Project area which will promote a meadow-type ground cover that encourages infiltration.

With the incorporation of the protective measures outlined above, the Project is not anticipated to result in an adverse impact to water quality associated with nearby surface water bodies or downstream properties.

2.2.4 LANDSCAPE PLAN

Vegetation buffers are proposed to shield the Facility from neighboring properties. Planting materials, consisting of a mix of evergreen species, will provide year-round screening on the northern, northwestern, and northeastern sides of the Project area. Existing wetlands provide buffers on the eastern and western sides of the Project. The south side of the Site is adjacent to agricultural uses.



Seed mixes for the proposed solar photovoltaic array include ERNMX-147 for final stabilization within the solar array, ERNMX-610 for areas outside of the fence line and in non-array areas, and New England Erosion Control/Restoration No Mow Mix for the stormwater basin. For more information refer to the seed mix notes in Sheet 2.11 of Appendix B.

3.0 ENVIRONMENTAL CONDITIONS

This section provides a summary of the existing environmental conditions in and around the Site, as well as the potential impacts on the environment from the proposed photovoltaic array development. The results discussed in this section demonstrate that the development complies with CT DEEP air and water quality standards and will have no adverse effect on the existing environment and ecology.

3.1 AIR QUALITY

The nature of solar energy generating facilities results in a condition where no air emissions are generated during the operations of the facility. Therefore, this development will have no adverse effect on air quality and will not require a permit.

During construction, temporary mobile source emissions may occur due to the presence of construction vehicles and equipment. Any of these potential air emissions that occur during the construction of the solar photovoltaic array can be considered de minimis. These emissions will be mitigated using measures such as limited idling times of equipment, regular maintenance of all vehicles and equipment, and watering/spraying of vehicles and equipment to minimize dust and particulate releases. Additionally, all on-site and off-road equipment will meet the latest standards for diesel emissions as prescribed by the United Sates Environmental Protection Agency.

3.2 WATER RESOURCES

Wetlands and watercourses onsite were field delineated by BL Companies on January 22, 2022. William Kenny Associates (WKA) conducted additional field investigations, including inventory and assessment of onsite wetland and watercourse conditions, on April 21, 2023. WKA concurs with BL Companies' initial assessment and location of the two wetland and watercourse systems.

3.2.1 WETLANDS AND WATERCOURSES

Small Onsite Portion of a Primarily Offsite Woodland Wetland

The first wetland system, located as a small pocket in the eastern portion of the Project area, is a portion of a primarily offsite woodland wetland. The principal source of hydrology for this wetland system is groundwater discharge from the project site. The project area is located at a high point in the surrounding landscape, with a narrow ridge that extends north to south, and the nature of the onsite soils shallow subsurface hardpan which is located at approximately 25 inches below the surface, forces groundwater to seep to the east offsite, and to the west to the other area of wetlands identified. Soils within this system consist of poorly to very poorly drained silt loams and silty clay loams formed in low lying areas of glaciolacustrine deposits. At the time of WKA's investigation, the offsite portion of this wetland appeared slightly inundated. The portion of the woodland wetland around the project area consists of a canopy of the red maple and birch with an understory of interspersed pussy willow. The shrub stratum is dominated by a thick shrub layer of red osier dogwood and invasive multiflora rose and honeysuckle shrubs are present along the border with the upland cropland. Other shrubs identified include northern arrowwood. Groundcovers within the onsite portion of the wetland include sensitive fern, goldenrod, horsetail, and a



pocket of cattails. The hydrogeomorphic classification of this wetland and watercourse system is gently sloping and the USFWS classification for this system is Palustrine, Forested, Broad-Leaved Deciduous (PFO1).

Shrubland/Woodland Wetland

The second wetland and watercourse system, located in the western portion of the Project area, is a shrubland/woodland wetland with small drainage channels interspersed. As with the other system, the principal source of hydrology for this wetland system is groundwater discharge from the subject property. Soils within this system consist of poorly to very poorly drained silt loams and silty clay loams formed in low lying areas of glaciolacustrine deposits. At the time of WKA's investigation, the wetland appeared inundated and the small drainage channels identified had a width of approximately two feet and one to two inches of water within them. The shrubland/woodland wetland consists of primarily the same as the eastern primarily offsite woodland. The shrubland portion of the system, which is present in the southern portion, is dominated by red osier dogwood, with red maple saplings interspersed and invasive multiflora rose and honeysuckle shrubs along the border with the upland cropland, and native southern arrowwood present further west close to where the wetland transitions into woodland. The groundcover present includes various grasses as well as sensitive fern. According to historic aerial imagery of the project site (Appendix/Exhibit X) the shrubland appears to have been cultivated like the surrounding upland cropland, up until the 1990s. The woodland portion of the wetland, which is in the northern portion, includes more mature pole to saw timber sized red maples as well as ash trees. As with the shrubland portion and the eastern wetland, the shrub strata is dominated by red osier dogwood. Invasive oriental bittersweet vines are entwined within the tree canopy along with native grapevines. Groundcovers common within the woodland include sensitive fern, goldenrod, skunk cabbage, jack in the pulpit and creeping jenny. The hydrogeomorphic classification of this wetland and watercourse system is gently sloping and the USFWS classification for this system is Palustrine, Forested, Broad-Leaved Deciduous / Palustrine, Scrub-Shrub, Broad-Leaved Deciduous (PFO1/PSS1).

3.2.2 WETLAND IMPACTS

Land development has the potential to cause direct and indirect impacts to inland wetlands and watercourses in the short- and long-term from activities such as vegetation clearing, soil filling, soil excavation and/or pollution of stormwater. The proposed site improvements are designed to avoid indirect impacts in the short and long-term through the incorporation of various best management practices (BMPs) such as soil erosion and sediment control measures and stormwater management measures (further discussed in Section 3.4.3).

No activities are proposed within wetlands and watercourses, and, as such, no direct impacts will occur.

Table 1. Wetlands Impacts Table					
Wetlands Impacts					
Direct Impacts to Wetland 1	0 Acres				
Direct Impacts to Wetland 2	0 Acres				
Direct Impacts to Upland Review Area of Wetland 1	0.35 Acres				
Direct Impacts to Upland Review Area of Wetland 2	0.64 Acres				

3.2.3 FLOODPLAIN AREAS

WKA reviewed the most recent available mapping from the Federal Emergency Management Agency (FEMA) in regard to the presence of floodplain or flood prone areas in and around the project area. According to the FEMA Flood Map Service Center (MSC), flood map number 09003C0208F, effective on 9/26/2008, the subject property and project area falls within "Zone X" as defined by FEMA. Zone X is



defined as "are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500year) flood". This indicates that the project site is not within a flood zone and requires no special considerations relative to flooding for its implementation. Please see Appendix A, Figure 3 for flood map number 09003C0208F.

3.3 WATER QUALITY

The proposed solar array facility will have no potable water uses or sanitary discharges due to the unmanned nature of the facility. The proposed development will result in an increase in the stormwater peak discharge rate of runoff, from that of existing conditions, due the increase in gravel cover and the installation of the solar arrays. As such, the development includes a stormwater management plan to mitigate changes to stormwater runoff resulting from the increase in impervious cover.

3.3.1 GROUNDWATER

WKA reviewed the CT DEEP Water Quality Classifications Suffield, CT map, dated October 2018, in order to assess the quality of ground and surface water at the project area. The map classifies that the project area falls within an area classified by 'GA' groundwater quality. 'GA' is defined as "existing private and potential public or private supplies of water suitable for drinking without treatment and baseflow for hydraulically connected surface water bodies".

According to the CT DEEP Public Water Supply Map, the project area does not fall within an aquifer protection area. The nearest aquifer protection area is approximately five miles to the east. However, the project site is labeled as a private well parcel, yet the nature of the project as a solar array dictate that no potable water uses are required.

Based on the project design, type, and use and proposed stormwater management measures, it is concluded that the project will have no direct adverse environmental impact on groundwater quality. Information regarding stormwater management BMPs is provided in Section 3.4.3.

3.3.2 SURFACE WATER

The project area is situated within the Spencer Brook Local Drainage Basin (4100-15) and the Stony Brook Subregional Drainage Basin (4100). These drainage basins are part of the larger Stony Brook Drainage Basin (41) and Connecticut River Major Drainage Basin (4). Spencer Brook, which is offsite approximately 900 feet to the west, is characterized by the CT DEEP as a first order stream with 'class 1 stream flow' which means that it is a free-flowing stream. The water quality of the offsite Spencer Brook is listed as 'class A' surface water quality. Class A surface water quality are defined as "Class A designated uses are habitat for fish and other aquatic life and wildlife; potential drinking water supplies; recreation; navigation; and water supply for industry and agriculture".

According to the CT DEEP Public Water Supply Map, the project area does not fall within a drinking water watershed. The nearest drinking water watershed is approximately 10 miles to the southwest. The offsite Spencer Brook serves as habitat for fish and other aquatic wildlife and flora, however, onsite watercourses that feed into Spencer Brook do not appear to serve as aquatic wildlife or flora habitat. Spencer Brook does not sustain a trout population according to the CT DEEP Connecticut Trout Stocking Map, however, the brook it drains into, Stony Brook, is stocked with trout. Spencer Brook is also not a cold-water habitat according to the CT DEEP Cold Water Habitat Map. For more information, please refer to Figure 5, Public Supply Watershed Map. Based on the project design, type, use, and proposed stormwater management measures, it is concluded that the project will have no direct adverse environmental impact on surface water quality. Information regarding stormwater management is provided in Section 3.3.3.



3.3.3 STORMWATER MANAGEMENT

In the short-term, wetlands can be indirectly impacted from sediment laden stormwater from the proposed construction activities. All proposed development activities are outside of inland wetlands and watercourses. The proposed access drive to the Project is proposed within the town's upland review area of the eastern wetland. No activity is proposed within the upland review area of the western wetland. The Project proposes the installation of soil erosion and sedimentation controls before construction and the maintenance of these controls throughout construction to prevent adverse indirect impacts to inland wetlands and watercourses from soil erosion and sedimentation. These controls are designed to comply with standards set by the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control published by the CT DEP (the predecessor to the CT DEEP) to manage the land disturbance from the development and protect surface water features. Such controls include but are not limited to temporary silt fencing surrounding the perimeter of the development area and an anti-tracking pad at the construction entrance. The silt fencing proposed around the perimeter of the development area will prevent sediment from migrating downslope to inland wetlands and watercourses. A double row of silt fencing is proposed around the eastern wetland and a portion of the western wetlands due to the close proximity of grading activity in this area. A chain-link fence is also proposed to follow the silt fence to deter access to the site by wildlife and civilians. The anti-tracking pad is proposed to prevent sediment from being tracked into the street. These control measures have been provided to maximize protection to wetlands and watercourses and the monitoring and maintenance of all control measures are required to ensure efficacy throughout all phases of construction.

In the long-term, and if not properly mitigated, wetlands and watercourses can be indirectly adversely impacted by stormwater runoff that flows from buildings, pavement, and vegetated surfaces. The proposed project will not cause post-construction long-term adverse impacts from stormwater runoff due to the proposed stormwater management plan, which will mitigate changes to stormwater runoff resulting in a proposed increase in impervious cover. A stormwater basin is proposed in the far southern portion of the project area at the edge of the cropland habitat. The stormwater basin has been designed to provide adequate storage of the water quality volume generated from the solar array and other impervious surfaces. The basin will allow captured stormwater to settle and gradually infiltrate into the surrounding soils. The basin will also allow for pollutants to be removed when the stormwater flows through the basin vegetation, stems, leaves, and roots. The implementation and maintenance of this BMP will protect stormwater quality and will ensure that post-construction peak discharge rates of stormwater runoff from the project site will be less than predevelopment rates for the 2-year, 25-year, 50-year, and 100-year storm events.

3.4 HABITAT & WILDLIFE

The project area is located at Spencer Street (MBL: 30-25-59) in Suffield Connecticut. Spencer Street borders the project site to the north. The surrounding land use to the north is suburban residential, to the southwest, agricultural, and to the east, undeveloped. No buildings or other structures or paved surfaces are present within the project area. Three habitat communities are present. They include cropland, woodland and wetlands and watercourses. These habitat types are further discussed in Sections 3.2.1 and 3.4.1. Wildlife species at or that can utilize the project site are species common to agricultural areas. These species are further discussed in Section 3.4.3.

3.4.1 HABITAT TYPES

Cropland

The majority of the Project area is an upland cropland. This habitat is present throughout almost the entirety of the project area except for the western portion and a small fringe bordering the northern, eastern, and southern boundaries. Corn is the only crop being grown. At the time of our investigation, the cornfield had been threshed. As this is the case, a majority of the cropland is bare soil save for the bases of the cut corn



stems and some interspersed grasses. Soils within this portion of the project area are primarily well drained silt loams formed in lodgement glacial till mantled by silt. The majority of this habitat will be replaced with the proposed solar array, the gravel access drive and other improvements and the proposed meadow. Please see Table 2 for the total acreage of habitat alteration.

Woodland

The remaining upland habitat type within the project area consists of a fringe of woodland habitat along the northern, eastern, and southern site boundaries. The woodland is relatively young with a few interspersed larger, older trees. Trees consist mainly of maples, birches, crabapples, black cherry, and quaking aspen. Native staghorn sumac, multiflora rose, and honeysuckle shrubs are also present within the fringes of woodland. Invasive oriental bittersweet vines are also present, especially entangled within trees along the northern portion of the project area along Spencer Street. Groundcovers within the fringes of the woodland consist of ground ivy, invasive garlic mustard and a small pocket of invasive common reed at the entrance to the project area on Spencer Street. Soils are primarily well drained silt loams formed in lodgement glacial till mantled by silt. Due to this habitat being along the perimeter of the project area, a small portion of this habitat is proposed to be eliminated, mainly to make way for the gravel access drive to the site and to allow for grading. Areas bordering the drive will be meadow. Conifers are proposed to be planted along the western and northern portions of the property to provide screening for nearby residences. Please see Table 2 for the total acreage of habitat alteration.

Wetlands & Watercourses

Two wetland and watercourse areas were identified and evaluated. Further detail regarding these wetlands and watercourses is provided in Section 3.2.1. The wetlands and watercourses are not proposed to be disturbed or impacted by the proposed development. Please see Table 2 for the total acreage of habitat alteration.

Habitat Type	Total Area on Property (±Acres)	Project Area (±Acres)
Cropland	8.6	6.9
Woodland	1.5	0.3
Wetlands	1.6	0

Table 2: Habitat Area Table

3.4.2 CORE FOREST DETERMINATION

The Connecticut Department of Energy and the Environment (CT DEEP) defines 'core forests' as "forests surrounded by other forests, and in Connecticut, it has been defined as forest features that are relatively far (more than 300 feet) from the forest-nonforest boundary. Core forests provide habitat for many species of wildlife that cannot tolerate significant disturbance. The loss of core forest cover diminishes water purification and habitat values, and could result in heavier runoff, which might lead to poorer water quality and impaired habitat".

According to the CT DEEP 2020 Connecticut Forest Plan Priority Areas Map (Appendix A, Figure 11), no Core Forests are present in and around the project area, and none will be impacted by this project. The closest Core Forest to the project site is approximately 1,000 feet to the north and northwest and consists of several fragmented Small Core Forest areas.

3.4.3 WILDLIFE

The proposed project will eliminate the cropland habitat and a small portion of the woodland habitat to construct the solar array. Meadow habitat will be established within and adjacent to the solar array. These habitats support various wildlife including mammalian, amphibian, reptilian and avian species. The cropland habitat serves mammalian species, such as white-tailed deer, skunk, opossum, raccoon and voles,



moles, and mice, who scavenge remaining corn husks and/or burrow into the exposed soil. The large open field is beneficial for birds of prey as hunting ground for small game, perching in the canopy trees within the bordering woodland. Other avian species such as crows, robins and sparrows will also utilize the cropland, scavenging corn husks and predating on insects within the exposed soil.

The fringe of woodland borders the cropland and provides edge habitat. The woodland extends offsite to the south and east. The edge habitat serves the aforementioned birds of prey as perches for hunting small mammalian species that may utilize the cropland. Many of the aforementioned mammalian species will transit through the woodland and cropland. The woodland also provides foraging opportunities for species in the form of nuts and seeds and plants. Portions of the woodland, being adjacent to wetland and watercourse systems, may serve as the terrestrial habitat for wood frogs and spring peepers. It is also likely common reptile species such as eastern garter snakes utilize both the woodland fringe, wetland, and cropland. Avian species such as turkeys are likely to forage in the ground layer of the woodland while songbirds likely perch in the canopy above. It is unlikely species common to core forests reside within the project area, or immediately adjacent to the project area because the onsite and adjacent woodlands are not Core Forest.

The adjacent wetlands and watercourses serve as habitat for all aforementioned species and provide them a source of drinking water. The adjacent wetlands and watercourses do not function as vernal pools and no vernal pool areas were identified adjacent to the project site (within 100 feet) via observations made from the project site, public rights-of-way and information gathered from publicly available sources (i.e., town maps, topographic maps, aerial imagery, etc.). The western wetland does have a small stream channel extending through the central portion of this system. It likely does not function as habitat for finfish due to its shallow, intermittent nature. Please see Section 3.2.1 for additional information regarding Wetland and Watercourse conditions, and 3.3.2 for more information regarding Surface Water conditions.

It is expected that the proposed project will cause a slight decrease in the abundance of wildlife at the project area due to the loss of some vegetated areas and will cause an increase in the diversity of wildlife species due to the meadow habitat. The species that inhabit the project area are common and habitat exists for them to use in other areas of Suffield and beyond. As such, the project will not have significant adverse impacts to wildlife.

3.5 RARE SPECIES

A review of publicly available state and federal information was utilized to determine whether listed species and/or critical habitats were present onsite or adjacent to the project site or could potentially be present onsite. No state records indicate that listed species and/or critical habitats are present onsite or adjacent to the project area. Federal records indicate that the site may potentially serve as habitat for endangered species and/or as a stop for protected migratory birds. A limited onsite review of the project property was completed on April 21, 2023. Based on this field review and on the review of state and federal files, it is concluded that the proposed project will not affect listed species or critical habitats.

3.5.1 NATURAL DIVERSITY DATA BASE

The CT DEEP Natural Diversity Data Base (NDDB) is a collection of maps that show the approximate locations of state endangered, threatened, and special concern species and important natural communities in Connecticut. The locations shown on the maps are based on information collected over the years by DEEP personnel and others. The maps are intended to serve as a pre-screening tool for preventing potential impacts to listed species. Maps are generated for each town. The map for the Town of Suffield is dated December 2022. The map indicates areas where listed species have been identified in a hatched buffer area and areas of critical habitat in green polygons. The hatched buffer areas are intentionally left inaccurate to protect protected species, therefore, if the project area fell within or near a buffer, a request for



determination would have to be filed with the CT DEEP NDDB for more accurate information and field work would need to occur to determine the presence or absence of these species onsite. According to the Town of Suffield NDDB map, this project area does not fall within a hatched buffer area and is approximately 1,600 feet from the nearest area to the southeast of the project area surrounding Bradley International Airport. As such, no request for determination was filed for the property and the state has no records of listed species or critical habitats being present at the property. For more information, please refer to Figure 7, Natural Diversity Database Map.

3.5.2 USFWS CONSULTATION

The US Fish and Wildlife Service (USFWS) provides an online planning tool, Information for Planning and Consultation (IPaC) system, allowing for project planners the ability to perform a regulatory review for protected species under the Endangered Species Act (ESA) that inhabit or potentially may inhabit their project area. This resource is designed to provide a list of potential ESA-protected and/or candidate species, migratory bird species protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, critical habitats, as well as the ability to consult whether a proposed project has the potential to result in "take" of listed species. "Take" refers to any means to "harass, harm, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct to threatened and endangered species". In consulting this resource, projects are able to determine whether they follow the ESA and other federal acts. Solli Engineering filed on February 8, 2023, an IPaC review of the project site and received a letter report from the USFWS titled "List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project". This report is attached in Appendix/Exhibit X. The report specifies that one endangered species, one candidate species and 12 migratory bird species have the potential to be impacted by the proposed project. The endangered species is the Northern Long Eared Bat, the candidate species is the Monarch Butterfly, and the migratory birds are listed in the report in the attached Appendix C.

The Northern Long Eared Bat is listed as endangered under the ESA. This species range encompasses the entirety of Connecticut. The CT DEEP has compiled a map of Connecticut towns known as hibernacula for Northern Long Eared and other bats. Based on this map, no known hibernacula are located within the Town of Suffield. The nearest hibernacula according to the map is within the Town of East Granby, approximately 1.3 miles southwest of the site. For more information regarding the locations of NLEB areas of concern, refer to Figure 7, Natural Diversity Database Map. Regardless, to comply with the ESA, the IPaC Consultation Package Builder (CPB) was utilized to assess whether the project would result in the "take" of Northern Long Eared Bats. The results of the CPB can be found in the attached report "Consistency letter for the 'Spencer CT Solar Array' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR § 17.40(o)" found in the attached Appendix C. The results of this report indicate that the project is not likely to result in the unauthorized "take" of Northern Long Eared Bats and therefore does not require a permit from the USFWS.

The monarch butterfly is a candidate species for protection under the ESA. Candidate species are "species which the USFWS has sufficient information to propose as endangered or threatened under the ESA, but for which their development of a proposed listing regulation is precluded by other higher priority listing activities". As such, until they are proposed for listing, these species are not officially entitled to legal protection under the ESA, and they are not considered when making a determination as to "take".

3.6 SOILS & GEOLOGY

The project grading is expected to generate a net export of approximately 750 cubic yards of material. Before any fill material is removed or used, the topsoil will be stripped and stockpiled for later seeding of



disturbed areas. Any soil exposed due to construction will be treated according to the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

The following soils currently exist on-site and in surrounding areas:

- 1. Belgrade silt loam, 0 to 5 percent slopes.
- 2. Broadbrook silt loam, 3 to 8 percent slopes.
- 3. Broadbrook silt loam, 8 to 15 percent slopes.
- 4. Enfield silt loam, 3 to 8 percent slopes.
- 5. Scitco, Shaker and Maybid soils.
- 6. Wethersfield loam, 3 to 8 percent slopes.
- 7. Elmridge fine sandy loam, 0 to 3 percent slopes.

For more information, refer to the map Figure 8, Prime Farmland Map.

3.6.1 PRIME FARMLAND SOILS

Solli Engineering has reviewed the listed soils in accordance with the Code of Federal Regulations ("CFR") Title 7, part 657. Prime Farmland Soils are distinguishable based on soil type. These soils are to be identified under CFR Title 7, part 657 in order to know the extent and location of the best land for producing food, feed, fiber forage and oilseed crops. Upon review, the entire project is made up of prime farmland. For more information refer to the map Figure 8, Prime Farmland Map.

The agricultural field used to grow corn covers the majority of the project area. Because the expected use of the Site will have a finite lifespan, the Petitioner proposes to use minimally intrusive methods during construction when possible. Grading will be limited by the use of solar panel tracker systems and construction of solar panels in existing areas where grades are similar to proposed conditions. There will be some excavation and regrading that takes place on prime farmland to install stormwater management basins and to properly develop the project area as a whole. In areas where Prime Farmland Soils are disturbed, the developer will remove the topsoil, segregate it from underlying horizons, and stockpile and spread it throughout the project area as necessary to re-establish vegetation growth.

When the solar panel facility reaches the end of its finite lifespan, the facility will be decommissioned. Upon this development, all areas disturbed by the facility will be top dressed with native soils and reseeded with the same (or approved equivalent) pollinator blend that exists within the area of the solar panel facility. These proposed design strategies will not materially affect the prime farmland. According to Public Act No. 17-218, "for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland or forestland... the Department of Agriculture represents, in writing, to the council that such project will not materially affect the status of such land as prime farmland or the Department of Energy and Environmental Protection represents, in writing, to the council that such project will not materially affect the status of such land as prime farmland or the Department of Energy affect the status of such land as core forest." The project is a 0.99 MW AC solar photovoltaic facility; therefore, a letter to the Council of the Department of Agriculture is not required.

3.7 HISTORIC & ARCHAELOGICAL RESOURCES

Archaeological Consulting Services LLC performed a Phase 1A cultural resources assessment survey on behalf of Solli Engineering and the Petitioner. Their report discloses that a property National Register of Historic Places does not exist within the Site. This conclusion was reached by means of a literature search for previously recorded cultural resources in the area, a review of historical maps and aerial imagery depicting the project area, and a pedestrian survey complete with photo documentation of the project area to determine archaeological sensitivity.



A portion of the project area has been identified as having a moderate sensitivity for historical cultural resources due to its historical uses and location along a historic route.

Archaeological Consulting Services LLC recommends a Phase 1B survey be performed on the Site within 300 feet of Spencer Street in advance of construction impacts. This survey would likely consist of standard-size shovel tests. For more information refer to the Phase 1A report in Appendix D, Cultural Resources.

3.8 SCENIC AND RECREATIONAL AREAS

State Route 75 is a scenic route that runs north from the Town of Windsor. Existing tree cover will shield the scenic route from the project area and the project will not visually impact the route. No hiking trails exist in the vicinity of the project area and overall property. The closest open space is approximately 0.8 miles north of the Site at the Suffield Land Conservatory. For more information regarding resources located within one mile of the site refer to Figure 9, Scenic & Recreation Map.

3.9 LIGHTING

Permanent exterior lighting is not planned for the project. During routine maintenance of the Facility there may be times when on-site equipment that have small lights which will only be activated during maintenance.

3.10 FAA DETERMINATION

The closest federally obligated airport is Bradley International Airport located approximately 1 mile south of the Site.

Solli Engineering has submitted the required project information to the Federal Aviation Administration (FAA) for review. The FAA reviewed multiple sample points to determine whether a potential hazard exists for air navigation. Upon review, the FAA issued a Determination of No Hazard to Air Navigation for all points, therefore a glare analysis is not required. For more information see Appendix E, FAA Determinations.

3.11 VISIBILITY

There will be solar trackers a maximum of 6' off finished grade within the solar panel facility. All disturbed areas will be contained within a 7' chain link fence. Trees constituting the existing tree line will be preserved and maintained to the best of the developer's ability. Most neighbors in the vicinity of the subject property will only be able to view the solar panel facility on a seasonal basis due to existing tree coverage. Figure 10, Proposed Conditions Viewshed Map.

The solar panel products are designed in such a way that they are not highly reflective. Because solar panels have tracking features, the panels will not reflect in one direction for an extended period of time.

3.12 NOISE

The subject property is currently being used as an agricultural field. As such, the Site generates noise through the use of farming machinery.

Noise from the construction of the solar panel facility is exempted under Connecticut regulations for the control of noise. For more information refer to RCSA 22a-69-1.8(h). During construction, the increase in noise will likely lead to a subsequent elevation in ambient sound levels in the immediate vicinity of the project area. Standard construction equipment will be used for the project, and the highest level of noise generated from this equipment - such as backhoes, bulldozers, cranes and trucks – is expected to be approximately 88 dBA from the origin.



When construction ceases, noise from the solar panel facility will be minimal. The maximum amount of noise will be generated by inverters, during operation hours, which will emit 61 decibels measured at one meter from the inverter. The collective operational noise level of the inverters at the nearest property boundaries would be 35 decibels. This noise level meets applicable CT DEEP Noise Standards, and noise levels will effectively be reduced to zero during nighttime hours when the array is not generating electricity. For more information regarding the inverter product information refer to the specification sheets in Appendix F.

4.0 CONCLUSION

As demonstrated by the information outlined herein, the Project will have no air emissions, no significant adverse environmental impacts and will comply with the CT DEEP air and water quality standards. The Petitioner, therefore, respectfully requests that the Council issue a declaratory ruling that the proposed Project will comply with CT DEEP air and water quality standards, will not have a substantial adverse environmental impact, and does not require the issuance of a Certificate.





February 23, 2024

Dr. Gregory F. Walwer Archaeological Consulting Services 118 Whitfield Street Guilford, CT 06437 (sent only via email to acsinfo@yahoo.com)

> Subject: Cultural Resources Assessment Survey of a Proposed Solar Development O Spencer Street Suffield, Connecticut

Dear Dr. Walwer:

The State Historic Preservation Office (SHPO) received the technical report prepared by Archaeological Consulting Services (ACS) titled *Phase Ia Archaeological Assessment Survey: Proposed Solar Photovoltaic Array, Spencer Street, Town of Suffield, Connecticut* dated June 2023. Based on the information submitted to our office, the completed investigation meets the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources.* SHPO understands that the proposed project will consist of the construction of a new solar facility including associated infrastructure and an access road at the referenced address. Because the project will require approval from the Connecticut Siting Council, it is subject to review by this office pursuant to the Connecticut Environmental Policy Act.

The archaeological assessment survey consisted of comprehensive background research that examined historic maps and aerial imagery as well as previously identified cultural resources in proximity to the proposed project area. The review located four previously recorded archaeological sites and a National Register of Historic Places (NRHP) listed district within a mile of the project area. In addition, background research revealed the presence of a cluster of outbuildings once located near the northwest corner of the project parcel. The report concluded, and a subsequent pedestrian survey confirmed, that the project area retains a moderate archaeological sensitivity to contain intact postcontact archaeological deposits within 300 feet of Spencer Street. Based on the information provided to our office, it is the opinion of SHPO that the project area has an elevated potential to impact significant archaeological resources. We are therefore requesting the completion of a professional archaeological reconnaissance survey of archaeologically sensitive portions of the APE prior to construction. 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.



This office appreciates the opportunity to review and comment upon this project. For additional information, please contact Cory Atkinson, Staff Archaeologist and Environmental Reviewer, at (860) 500-2458 or cory.atkinson@ct.gov.

Sincerely,

Conathan heares

Jonathan Kinney State Historic Preservation Officer



EXHIBIT C

Revised Operations and Maintenance Plan

	O&M Scope	Frequency	Description
	-	per Year	
1.	General Site Inspection	Varies	 Verify safety and Identification labeling is present and legible. (1x per year) Inspect site access/egress locations are free of obstructions and hazards. (1x per year) Equipment access lanes are free of obstructions and hazards. (1x per year) Inspect site for changes of environmental conditions such as nearby construction activity, agricultural activities, bird migrations, water table changes, acts of vandalism, and shading. (1x per year) Wash panels using non-toxic substances. (As needed)
2.	Mechanical System Inspection	1x per year	 Racking structures visual and mechanical inspection. Mechanical inspection 2% of Module-to- racking attachments for torque specification. Module visual inspection. DC Optimizer operation verification via monitoring equipment (when applicable). Ballast block, foundations, driven piers, mechanical attachments, and earth screw visual inspection. Roof protection installation methods and materials. Equipment Grounding Conductor electrical continuity inspection. Equipment bonding to ground electrical continuity inspection.

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3	3. DC & AC Electrical 1	x per year	-	Verify safety and Identification labeling is
	System Inspection			present and legible.
			-	Enclosure mounting, gaskets, interior, and
				exterior visual inspection.
			-	Grounding and bonding inspection.
			-	Terminations (conductors) thermography
				scanning.
			-	Visual inspection of conductor termination
				torque markings.
			-	Fuse and breaker thermography scanning.
			-	Vacuum clean interiors.
			-	Visual inspection of conduits, fittings,
				junctions/splice boxes, and enclosures.
			-	Exercise operation of all protective devices.
			-	Switchgear inspection.
			-	Use infrared camera to inspect for hot
				spots, bypass.
4	1. Inverter Inspection 1	x per year	-	Verify safety and Identification labeling is
				present and legible.
			-	Enclosure mounting, gaskets, Interior, and
				exterior visual inspection.
			-	Grounding and bonding inspection.
			-	Inverter operation verification.
			-	Use an infrared camera to check
				connections.
			-	Vacuum clean interior.
			-	Clean air intake/exhaust screens, fans, and
				filters.
			-	Complete all other manufacturer specific
-	Dete Association 1			Maintenance procedures not listed above.
	5. Data Acquisition 1	x per year	-	verify safety and identification labeling is
	System Inspection			present and legible.
			-	Meteorological data sensor cleaning,
				positioning, and operation.
	E Departing 1	v non voor	-	Provide digital commissioning report
•	5. Reporting	ix per year	-	including results from all stops with
				responses noting Page Values or Failure
				with exploration
				Photo report of deficiencies
-	7 Invertor Donlagement	An Noodod	-	Additional site visite related to investor
'	A Inverter Replacement A	-15 Inceded	-	failure will be billed to Asset Manager on a
				time and materials basis
				Site visite will be followed with a report on
			-	site conditions and findings within three (2)
				business days
1				ousinoss uays.

8.	Testing	1x per year	-	Perform performance test: measure incident sunlight and simultaneously observe temperature and calculate the balance of system efficiency. Compare readings with diagnostic benchmark (original efficiency of system).
9.	Vegetation Maintenance	Varies	-	Inspect site for vegetation growth or accumulation which could shade arrays and impact PV production (4x per year) Mow, clear, and/or apply herbicides or pre- emergent (where allowed by applicable laws and regulations) to manage site vegetation. Mowing will be completed at a slow speed, the mower height will be 7- 12," and performed in a pattern that allows wildlife to escape the tractor and mower, and equipment will be washed before and after use at the site to prevent the spread of invasive plants. (4x per year during the first 5 years and establishing of the vegetation, but then decrease to 1x per year) Inspect arrays for soiling, evidence of pest infestation, water pooling, vegetation growth, shading or damage (2x per year). Photo-document general condition of each array, noting any corrective actions and location of any issues requiring remediation beyond project manager visit time allocation (2x per year). Inspect site for landscaping die off (4x per year) and replace dead landscaping (As needed).
10.	Stormwater Control Management	As Needed	-	Perform the steps to be outlined in the Stormwater Pollution Control Plan, approved by the Connecticut Department of Energy and Environmental Protection, and in compliance with the 2004 Connecticut Stormwater Quality Manual and 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.