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November 13, 2023

VIA ELECTRONIC MAIL AND HAND DELIVERY

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

Re: Petition of TRITEC Americas, LLC for a Declaratory Ruling that No Certificate of Environmental Compatibility and Public Need is Required for the Construction Operation, Maintenance, and Decommissioning of a 0.999 MW AC Solar Photovoltaic Project in Suffield, Connecticut

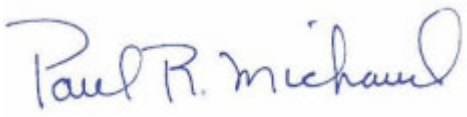
Dear Attorney Bachman:

Through its undersigned counsel, TRITEC Americas, LLC respectfully submits the enclosed Petition regarding the above-referenced solar photovoltaic project, including the original, fifteen copies, and the $625 filing fee.

Additionally, Michaud Law Group, LLC will submit an electronic copy of the Petition via electronic mail.

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

Very truly yours,



Paul R. Michaud

STATE OF CONNECTICUT

SITING COUNCIL

PETITION OF TRITEC AMERICAS, LLC FOR A DECLARATORY RULING THAT NO CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS REQUIRED FOR THE CONSTRUCTION OPERATION, MAINTENANCE, AND DECOMMISSIONING OF A 0.999 MW AC SOLAR PHOTOVOLTAIC PROJECT IN SUFFIELD, CONNECTICUT	**PETITION NO. _____** **November 13, 2023**

Under Connecticut General Statutes (C.G.S.) §§ 4-176, 16-50k(a), and 16-50k(e) and Regulations of Connecticut State Agencies § 16-50j-38 *et seq.,* TRITEC Americas, LLC ("Petitioner"), requests that the Connecticut Siting Council ("Council") approve by a declaratory ruling the location, construction, operation, maintenance, and decommissioning of a solar photovoltaic facility with a capacity of 0.999 MW AC and associated equipment inclusive of all solar panels, transformers, electrical switchgear, monitoring equipment, and access roadways ("Project"). The Project will be constructed on approximately 7.9 acres of land ("Project Site") located at 0 Spencer Street, Suffield, Connecticut ("Host Parcel"). C.G.S. § 16-50k(a) provides in part:

> …Notwithstanding the provisions of this chapter or title 16a, the council shall, in the exercise of its jurisdiction over the siting of generating facilities, approve by declaratory ruling (A) the construction of a facility solely for the purpose of generating electricity, other than an electric generating facility that uses nuclear materials or coal as fuel, at a Project Site where an electric generating facility operated prior to July 1, 2004, and (B) the construction or location of any fuel cell, unless the council finds a substantial adverse environmental effect, or of any customer-side distributed resources project or facility or grid-side distributed resources project or facility with a capacity of not more than sixty-five megawatts, as long as: (i) Such project meets air and water quality standards of the Department of Energy and Environmental

> Protection, (ii) the council does not find a substantial adverse environmental effect, and (iii) for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland or forestland, excluding any such facility that was selected by the Department of Energy and Environmental Protection in any solicitation issued prior to July 1, 2017, pursuant to section 16a-3f, 16a-3g or 16a-3j, 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 core forest. In conducting an evaluation of a project for purposes of subparagraph (B)(iii) of this subsection, the Departments of Agriculture and Energy and Environmental Protection may consult with the United States Department of Agriculture and soil and water conservation districts. (Emphasis added).

The proposed Project would produce 100% carbon-free energy thereby promoting Connecticut's legal requirement for 100% zero-carbon emissions from electricity generation by January 1, 2040. Public Act ("P.A.") No. 22-5, §1 (3). The technical evidence, evaluations, and analysis presented herein by Petitioner demonstrate that the Project will be a renewable distributed generation resource with a nameplate capacity of not more than sixty-five megawatts, will meet air and water quality standards of the Connecticut Department of Energy and Environmental Protection ("DEEP"), and will have no adverse environmental effects. The construction, operation, maintenance, and decommissioning of the proposed Project fully comply with the requirements set out in C.G.S. § l6-50k(a). Therefore, Petitioner respectfully requests that the Siting Council approve the Project by a declaratory ruling.

I. PETITIONER INFORMATION

TRITEC Americas, LLC is based in La Jolla, California. It is the Americas affiliate of TRITEC Group AG, a multi-national solar services company founded in 1987. TRITEC Americas

is a leading provider of solar PV project development, financing, and asset management services for the commercial and industrial solar market throughout the Americas.

Please address all correspondence and communications regarding this Petition to Petitioner's attorney:

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II. NOTICE, ABUTTER INPUT, SITE PLANS

Under the Regulations of Connecticut State Agencies § 16-50j-40, Petitioner provided written notice of this Petition to all Project abutters, appropriate officials in the Town of Suffield, and other government officials and agencies on April 27, 2023 and October 26, 2023. See **Exhibit A** – Certification of Service and the Model Notice Letters**.** In addition, Petitioner provided an overview of the proposed Project and Project Site and sought public comment from abutters and Suffield officials. Petitioner conducted two video conferences – the first with First Selectman Colin Moll on April 19, 2023, and the second with abutters on May 11, 2023.

Neither First Selectman Moll nor the three abutters who attended the video conference expressed their disapproval of the project. The abutters asked three questions. First, the abutters asked about project visibility. Petitioner has incorporated a vegetative buffer to reduce project visibility for nearby residents. See Proposed Conditions Viewshed Map in **Appendix A**. Second, abutters asked about potential impacts to property value. As shown in a recent study, the University

of Connecticut and Lawrence Berkeley National Lab determined that large-scale photovoltaic projects have no effect on sales prices in Connecticut. See *Shedding light on large-scale solar impacts: An analysis of property values and proximity to photovoltaics across six U.S. states*, Lawrence Berkeley National Lab and University of Connecticut, §5, Energy Policy Vol. 175 (April 2023). And finally, abutters asked about potential water runoff impacts on the nearby water well. Petitioner assured abutters that the Petitioner will seek and obtain a Stormwater General Permit from the CT Department of Energy & Environmental Protection ("DEEP") and install stormwater basins to prevent runoff impacts.

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.

III. PROJECT

The proposed Project is a Class I renewable energy source as defined under C.G.S. § 16-1(a)(20) and, as such, will help the State achieve its stated energy policy goals and meet legal requirements for 100% carbon-free electric generation by January 1, 2040. See C.G.S. § 16a-35k; P.A. No. 22-5 §1 (3).

A. Project Site:

Petitioner utilized its internal experience and the knowledge and expertise of third-party electrical engineering, civil engineering, consultants, and legal counsel to carefully review, analyze, and select the proposed Project Site. The proposed Project Site selection was based on the site's suitability regarding size, topography, the absence of biological and hydrological conflicts, site availability, the proximity of the site to existing electrical infrastructure, and approval by The Connecticut Light and Power Company d/b/a Eversource Energy ("Eversource") to interconnect the Project to the utility's electric distribution grid. The proposed Project was designed to minimize land disturbance and preserve the site. Petitioner conducted an extensive site assessment and analysis to prepare this Petition. The Project and Site Assessment involved the expert consultants and legal counsel shown in **Table 1** below:

TABLE 1:

Consultant	Site of Project Site Assessment and Analysis
BL Companies, Inc.	Land Surveying
Solli Engineering, LLC	Civil Engineering
BL Companies, Inc.	Wetlands Delineation and Impact Analysis
Solli Engineering, LLC	Habitat Review and Assessment
GEI Consultants, Inc.	Geotechnical Design Services
Archaeological Consulting Services	Phase IA Environmental Project Site Assessment
Pure Power Engineering, Inc.	Electrical and Mechanical Engineering
Horton Electrical Services, LLC	Project Construction and Installation
Pure Power Engineering, Inc.	Interconnection Design and Medium Voltage Analysis
Michaud Law Group LLC	Legal Counsel

B. Project Site Description:

The Project Site is located at 0 Spencer Street (MBL: 30-25-59) in Suffield. The property is divided into two zoning districts, Residential Zone (R-25) and Planned Development Industrial Park Zone. The Project Site is an undeveloped agricultural field with wooded areas along the perimeter. Petitioner has existing and proposed agricultural activities on the Project Site allowing the Project to be eligible as an "agrivoltaic" project. See Section III (H) below. The immediate vicinity of the Project Site is also Residential Zone and Planned Development Industrial Park Zone. The solar array setback is forty feet from the property line. See **Appendix A** – Figures and **Appendix B** – Site Plans depicting the Project Site, Host Parcel, and their environmental attributes.

Neither the Project Site nor Host Parcel are part of the Public Act 490 Program, and the State of Connecticut Department of Agriculture has not purchased any development rights for the Project Site as part of the State Program for the Preservation of Agricultural Land.

C. Project Description:

The proposed Project will be a ground-mounted solar photovoltaic system using a single-axis sun-tracking system and related improvements. The proposed Project has approximately 2,590 non-reflective solar panels measuring from about 4' to 7'5" above final grade, depending on location and grades. It will be surrounded by a chain-link security fence and a vegetation buffer of evergreen trees to reduce the visibility of the Project significantly. The solar modules are designed to absorb incoming solar radiation and minimize reflectivity, so only a tiny percentage of incidental light will be reflected off the panels. This incidental light is significantly less reflective than standard building materials such as steel or a smooth water surface such as a pond or lake. The panels will rotate east to west tracking the sun and reducing overall reflectivity in any given direction. If one section of the array experiences electrical problems, then the remaining sections

of the proposed Project can still operate and transmit power to the grid because the system is isolated by circuit strings that are further protected by fuses.

Petitioner will construct the proposed Project. The proposed Project construction period is estimated to take three to four months after receiving all required state and local government permits and approvals. If approved, the proposed Project will require a General Stormwater Permit from DEEP, building and electrical permits from the Town of Suffield, and a utility interconnection easement with Eversource Energy. The Table below shows the Estimated Project Construction Schedule.

Estimated Project Construction Schedule	
Task	**Duration**
Mobilization and Project Site Preparation	Two weeks
Civil Work: Road Construction, Grading	Two weeks
Racking, Panel & Electrical Installation	Three weeks
Interconnection and Medium Voltage	Two weeks
System Testing	One week
Approvals & Commissioning	Two weeks

The proposed Project has not been designed to accommodate a potential future battery storage system, however, such a system would not impact the Project or its Non-Residential Renewable Energy Solutions contract.

D. Electric Distribution Grid Interconnection:

Petitioner will interconnect the Project to the Eversource electric distribution grid as depicted in **Appendix B**. Eversource reviewed the Project's electrical design and output during their system impact review process and determined that the distribution circuit for the Project is suitable for the energy delivery to the electric grid from the Project. The line voltage of the electrical interconnection is 4.8 kV which will require offsite upgrades to the electrical distribution system. Eversource has granted interconnection approval to the Project, and Petitioner and Eversource have entered into an interconnection agreement. Eversource has indicated that it is ready to commence the necessary interconnection upgrades for the Project upon receiving a notice to proceed from Petitioner. It will complete the interconnection upgrade upon approval by the Council.

E. Stormwater Management:

Petitioner's civil engineers and legal team met with DEEP's Water Permitting & Enforcement Division on October 23, 2023, to discuss the proposed Project and Petitioner's stormwater management plan. Petitioner will maintain the existing stormwater flow patterns and grading, and the proposed Project won't result in any adverse conditions to the surrounding areas and properties. Additionally, Petitioner designed the stormwater management so that post-development peak discharges are *less* than pre-development peak discharges. See Stormwater Report in **Exhibit B**.

E. Equipment, Construction, Operation, Maintenance, and Decommissioning:

1. Equipment. The Project equipment is comprised of premium modules, such as a single-axis sun tracker system that has a designed life and warranty extending for twenty years, but the proposed Project may remain operational for up to 30 years. The Project's capacity factor

is 24.3%, which is relatively high for a solar system and is due to the use of single-axis trackers. The solar capacity factor is the system's actual output ratio to its maximum potential output. Annual losses due to system degradation are estimated at 0.5% per year. A solar inverter is a critical component in a solar system. It converts direct current (DC) electricity into alternating current (AC), the standard form of electricity used in homes and businesses. The inverters for the proposed Project have an operational life and warranty of approximately ten years. Therefore, Petitioner expects at least one inverter replacement during the entire operating life of the Project.

Steel foundations will be driven into the ground for the solar array. Steel racking components will be mounted on these foundations, followed by the installation of photovoltaic modules. The electrical contractor will then install conductors from the photovoltaic modules to the inverters and a transformer on a pad at the end of the array. A switchgear will also be mounted to this pad. The electrical contractor will install a medium voltage (MV) circuit from the Project Site to the Eversource point of standard coupling. AC wiring from the inverters to the panels and MV Transformer occurs on the equipment pads next to the array. Underground conduits will protect feeders. The DC string wiring from the panels to the inverters is routed securely along the racking structure, preventing animal access. These wires enter a conduit weather head under the array, then route to the inverters. Any wiring along the system exposed to the sun is protected by split loom tubing to prevent UV damage. No wiring will be subject to damage during vegetation maintenance, as all wiring below the panels will be in a conduit. No spare parts or replacement modules will be kept on site. No chemicals will be used on-site. The transformers contain mineral oil, but this oil is industry standard and not a danger to the environment. See Product Information in **Appendix F**, including Toxicity Characteristic Leaching Procedure test results indicating that the proposed solar panels are not hazardous waste.

2. Construction, Operation, and Maintenance. The proposed Project construction will have an anticipated duration of three to four months and will take place Monday through Friday between 7:00 a.m. ET and 3:30 p.m. ET. Construction will involve the services of electrical, civil, and structural contractors. The construction staging area will be located entirely within the proposed limit of disturbance associated with the project. One access road will be on the Project Site. Petitioner will carry out construction consistent with the 2002 *Connecticut Guidelines for Soil Erosion and Sedimentation Control* put out by DEEP.

Once built and operational, the Project will be monitored remotely twenty-four (24) hours a day, seven days a week, through a data acquisition system ("DAS"). The DAS system can detect local weather conditions, production from all equipment for the Project, and safety concerns related to grid outages or faults. In the event of a fault or power outage within the solar facility and the Eversource distribution circuit, the proposed Project must be isolated from the distribution circuit within two seconds of fault detection. The proposed Project's Operations and Maintenance ("O&M") company will perform detailed scheduled annual inspections of all equipment at the Site. In addition, the O&M company will always be on-call in case unscheduled equipment maintenance or safety-related concerns are needed. Cleaning of the solar panels would be conducted as needed with non-toxic substances. However, it should be noted that regular cleaning is unnecessary due to average rainfall and environmental conditions. The tracker system has a snow sensor, and snow accumulation is shed automatically. The snow sensor can be programmed to have the trackers shed snow once it reaches a certain depth. The vegetation within the Project Site will be mowed four times a year. The Project's Operations and Maintenance (O&M) Plan is shown in **Exhibit C**. The proposed Project's estimated costs, including equipment and construction costs, are approximately $3.22/Watt AC x 0.999 MW, or about $3.22 million.

As shown in **Exhibit D**, geotechnical field investigations were completed in December 2021, with the report and findings completed in February 20222. The geotechnical investigation results established the conditions to determine the racking columns and beams' sizing (length and depth of posts). Deep glacial till throughout the proposed Project area will allow the use of a standard post-driven rack system.

3. Decommissioning Plan. At the end of the proposed Project's operational life, Petitioner will remove all equipment, including the tracking system, panels, inverters, and electrical collection system, and restore the site to its condition before construction. The Decommissioning Plan for the Project is shown in **Exhibit E**.

F. Public Health and Safety:

Petitioner's focus on safety will meet or exceed all health and safety requirements applicable to electric power generation. The proposed Project is designed to meet all industry, state, and local codes and standards and will not pose a safety concern or create an undue hazard to the public. The proposed Project includes a seven-foot-high safety fence and gate as mandated by National Electric Code and will limit access to authorized or emergency personnel only. Each employee working at the Project Site will (1) receive required general and Project Site health and safety training, (2) comply with all health and safety controls as directed by local, state, and federal requirements, (3) understand and employ the Project Site health and safety plan, (4) know the location of local emergency care facilities, travel times, ingress and egress routes, and (5) immediately report all unsafe conditions to the construction manager. The local contractor, Horton Electrical Services, LLC, will conduct outreach to local emergency responders in case of a fire or other emergency at the Project Site. The Fire Marshal will sign off on the site when the building permit is issued. Petitioner will be prepared to provide access to emergency responders and the

utility to cut power to the site for safety-related concerns. The proposed Project will adhere and comply with Best Management Practices for Electric and Magnetic Fields, the National Electric Code, and the current Connecticut State Building Code.

The calculated noise level from Project operations to the nearest property line is relatively low at 35 decibels. According to the Centers for Disease Control and Prevention ("CDC"), 35 decibels is roughly equivalent to a soft whisper. See CDC, *What Noises Cause Hearing Loss?* https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html, (Last Reviewed Nov. 8, 2022). The vegetation buffers will further reduce this minimal noise.

The nearest federally-obligated airport is about 12 miles southeast of the Project Site. Based on the distance of the Project Site, the FAA determined that there is no hazard to air navigation and no glare analysis would be necessary. See **Appendix E** – FAA.

G. Non-Residential Renewable Energy Solutions Program:

Petitioner is submitting the Project into the State's Non-Residential Renewable Energy Solutions ("NRES") Program. The NRES Program is an incentive program that promotes clean-energy facility development with the energy generated by non-residential solar or other Class I renewable technologies. Under NRES, State, Agricultural, and Municipal ("SAM") customers can share compensation from renewable energy generation. This is done by matching the SAM's beneficial accounts with a renewable energy project. For this Project, Petitioner has an agreement with numerous distressed municipalities matching their beneficial electric accounts with the Project. The NRES program rules prioritize such projects in the NRES program to ensure participation by and economic benefits to distressed municipalities in the form of electric bill savings. The proposed project would result in one or more distressed municipalities receiving up to $60,000 per year throughout the 20-year term of the NRES tariff agreement for a total of over

$1,000,000. The proposed Project is part of solar project portfolio that Petitioner has put together to help distressed municipalities obtain 100% of their electrical needs through renewable energy.

H. Agrivoltaics:

The proposed Project will be an "Agrivoltaic" project. The U.S. Department of Energy's Solar Energy Technologies Office defines agrivoltaics as "agricultural production, such as crop or livestock production or pollinator habitats, underneath solar panels or adjacent to solar panels." See U.S. D.O.E, *What is Solar and Agriculture Co-Location*, Solar Energy Technologies Office, https://www.energy.gov/eere/solar/solar-and-agriculture-co-location. The Host Parcel is an active corn and hay farm. Petitioner intends to continue both agricultural practices throughout the Project's lifespan to the greatest extent possible. Additionally, Petitioner is working closely with the American Farmland Trust to find other agricultural opportunities for the proposed Project Site, including using CTFarmlink and New Connecticut Farmer Alliance.

I. Reduction in Greenhouse Gas Emissions Compared to Natural Gas:

Using resources from the National Renewable Energy Laboratory (NREL) and the U.S. Environmental Protection Agency (EPA), Petitioner estimates that there would be over a 90% reduction in greenhouse gas ("GHG") emissions by pursuing solar instead of natural gas. Petitioner estimates that over 20 years, the proposed Project will generate about 40,581 MWh of electricity while emitting approximately 1,745 metric tons of CO_2e. To achieve the equivalent MWh production over 20 years as the Project, a natural gas generator would emit more than 19,723 metric tons of CO_2e – over eleven times the amount of emissions from the proposed Project. See Carbon Debt Analysis in **Exhibit F**.

J. Environmental Assessment:

Solli Engineering, LLC prepared a comprehensive Environmental Assessment ("EA") of the proposed Project. The EA is attached in **Exhibit G**. Per the EA, the maximum ground slope within the solar array area will be 20%. A Phase IA Cultural Resources Assessment Survey ("Phase IA") was conducted in June 2023 and is provided in **Appendix D**. The State Historic Preservation Office ("SHPO") will review the Phase IA study for the potential need to complete a Phase IB Survey for a portion of the property. The Natural Diversity Data Base ("NDDB") map in **Appendix A** shows that the proposed Project Site is not located within the approximate location of any endangered, threatened, or notable concern species and significant natural communities in Connecticut. The nearest NDDB area is about 1,600 ft southeast of the Project Site. The Project Site and the entire State of Connecticut are within the threatened Northern Long-Eared Bat range, but the bats have no known hibernacula in the Town of Suffield. The U.S. Department of the Interior's Fish and Wildlife Service confirmed compliance with protection for the bat in a letter provided in **Appendix C**. Photographic site documentation is also provided in **Exhibit H**.

IV. CONCLUSION

As discussed above and in the EA, Petitioner proposes to construct a state-of-the-art, clean, carbon-free, environmentally friendly solar electric generation system that will produce the maximum amount of carbon-free clean energy, implement agrivoltaic practices, provide economic benefits to two distressed municipalities and avoid and minimize any adverse environmental effects.

Based on the evaluations and analysis presented in this Petition by Petitioner, the substantial evidence shows that the proposed Project will be a distributed resources project with a

capacity of not more than sixty-five megawatts, will meet or exceed the air and water quality standards of DEEP, and will not have any substantial adverse environmental effects.

Accordingly, Petitioner respectfully requests that the Council grant this Petition for a Declaratory Ruling and approve the location, construction, operation, maintenance, and decommissioning of the proposed Project with a capacity of 0.999 MW AC, and associated equipment inclusive of solar panels, electrical transformers, electrical switchgear, monitoring equipment, and access roadways.

RESPECTFULLY SUBMITTED,

TRITEC Americas, LLC

By: _____

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