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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 Berlin, Connecticut

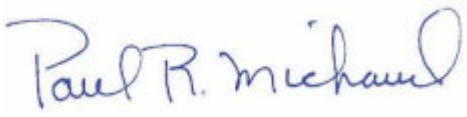
Dear Attorney Bachman:

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 BERLIN, 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 5.6 acres of land located at 0 Chamberlain Highway (Parcel ID: 30-2-74-40), in Berlin, Connecticut ("Project Site"). 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 San Diego, 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 Berlin and other government officials and agencies on June 16, 2023 and October 13, 2023. Certification of Service, Model Notice Letters, and Abutters Map are provided in **Exhibit A.**

In addition, Petitioner held video conferences with the Town of Berlin and Project Site abutters to overview the proposed Project and Project Site, seek public comments, and answer questions. Petitioner met with the Town Planner and Assistant Planner on June 27, 2023, and the abutters on July 31, 2023. The Town asked for a copy of the proposed Project site plan and for Petitioner to inform the Town when they submit the Petition to Council. A member of Petitioner's legal team emailed a copy of the proposed Project site plan to the Town Planner and Assistant Planner two days later, and Petitioner's legal team will inform them of Petition submittal once it's available on the Council's website.

Petitioner invited the four abutting property owners to the July 31, 2023 video conference, and one abutter attended. They asked questions regarding the noise levels and visibility of the proposed project. Petitioner confirmed that both noise levels and visibility will be minimal. Petitioner picked specific equipment and locations for both equipment and the Project Site to significantly reduce noise levels and visibility for abutters and from the road. The property owner then stated their support of the proposed Project. Additionally, the property owner expressed their interest in purchasing some of the host parcel owned by the Petitioner. Petitioner confirmed their interest in doing so, and these talks are ongoing.

The proposed Project would greatly benefit the abutters, the Town of Berlin, 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 twenty 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 area of the solar array, 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, and the proximity of the site to existing electrical infrastructure. The Connecticut Light and Power Company d/b/a Eversource Energy ("Eversource") is currently reviewing the Project's interconnection to the 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
William Kenny Associates LLC & Solli Engineering, LLC	Wetlands Delineation and Impact Analysis
Solli Engineering, LLC	Habitat Review and Assessment
Solli Engineering, LLC	Geotechnical Design Services
Archaeological Consulting Services LLC	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 on approximately 5.6 acres at 0 Chamberlain Highway (Parcel ID: 30-2-74-40), Berlin, Connecticut. The Project Site is on an unoccupied, operational hay farm located within the Town's Planned Office/Development zoning district. The immediate vicinity of the Project Site is Mountain Reserve 1 zoning district to the south and east, Planned Office/Development zoning district to the north, and Chamberlain Highway to the west. The proposed Project has a minimum setback of fifty feet (50') from the property line, to meet with the Town's land use regulations to the greatest extent possible. See **Appendix A** – Figures and **Appendix B** – Site Plans, which depict the access roads, boundaries, environmental attributes, and Project Site visibility.

Petitioner owns the host parcel outright, and neither the Project Site nor the host parcel are leased by a third party. The Project Site and host parcel are not 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, existing tree lines, 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 by the Council, the remaining state and local government permits and approvals are a General Stormwater Permit from DEEP, the building and electrical permits from the Town of Berlin, 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. 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 and DEEP do not anticipate the need to construct a stormwater quality basin because the grades and infiltration rates existing at the proposed Project Site create a catchment area that functions as a natural infiltration area. Additionally, Petitioner designed the stormwater management so that post-development peak discharges are in fact 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 25.29%, 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 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, however any rock crushing and topsoil screening will only occur between 9:00 a.m. and 4:00 p.m. to adhere to the Town of Berlin Zoning Regulations. 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. Additionally, Petitioner can provide a construction fuel materials storage, refueling, and spill response plan prior to construction.

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. Rainwater will not penetrate the solar panels. 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 0.99 MW, or about $3.22 million.

Geotechnical field investigations will be conducted in November 2023 with the report and findings expected in December 2023. The geotechnical report will establish the conditions to determine the racking columns and beams' sizing (length and depth of posts). Petitioner will submit the geotechnical report to the Council upon completion.

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 D**.

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 to the 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 36 decibels. According to the Centers for Disease Control and Prevention ("CDC"), 36 decibels is equivalent to about 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 fourteen miles northeast of the Project Site. Upon review of the Project Site, the Federal Aviation Administration ("FAA") determined that there is no hazard to air navigation and that no glare analysis would be necessary. See FAA Determinations provided in **Appendix G**.

G. Non-Residential Renewable Energy Solutions Program:

Eversource selected the proposed Project during the February 2023 competitive solicitation of 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 the NRES Program, 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 the City of Torrington, matching their electric accounts with the project. Because Torrington is also defined as "distressed municipalities" by the Connecticut Department of Economic and Community Development ("DECD"), 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 Torrington receiving about $50,000 per year throughout the 20-year term of the NRES tariff agreement for a total of $1,000,000. Moreover, the City will replace over 18% of its electrical dependency with renewable energy through the proposed Project. (The City will replace its remaining 82% in electrical dependency through other

renewable energy projects in Petitioner's pipeline.) Petitioner will seek other revenue mechanisms if the proposed Project operates beyond the twenty-year term of the NRES contract.

The proposed Project will not be undertaken by state departments, institutions, or agencies, and it will not be funded by the State of Connecticut through any contract or grant. Petitioner is not participating in an ISO-NE Forward Capacity Auction but intends to explore possibly participating in such an auction.

H. Agrivoltaics:

The host parcel is currently an operating hay farm. The hay is bailed and sold to a local farmer. 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. Petitioner is working closely with the American Farmland Trust to find other agricultural opportunities for the proposed Project, including using CTFarmlink and New Connecticut Farmer Alliance to find local farmers and expand the agricultural capabilities of the Project Site.

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 about 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 almost 42.5 MWh of electricity while emitting approximately 1,815 metric tons of CO_2e. This includes the construction and decommissioning emissions. To achieve the equivalent MWh production over 20 years as the

Project, a natural gas generator would emit an estimated 15,828 metric tons of CO_2e over its lifespan. See Carbon Debt Analysis provided in **Exhibit E**.

J. Environmental Assessment:

Solli Engineering, LLC prepared a comprehensive Environmental Assessment ("EA") of the proposed Project. The EA is attached in **Exhibit F**. Per the EA, the maximum ground slope within the solar array area will be 8%. A Phase IA Cultural Resources Assessment Survey ("Phase IA") was conducted in June 2023 and is provided in **Appendix E**. 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. Although the proposed Project Site is not located within a hatched area, DEEP identified two species of special concern that the Project could potentially impact – the eastern box turtle and the Jefferson salamander "complex." Petitioner would adhere to DEEP requirements and recommendations throughout the pre-, mid-, and post-construction processes to protect both species. See **Appendix D** – CT DEEP Correspondence. Additionally, the US Fish and Wildlife Service determined that developing the proposed Project would not result in the taking of the northern long eared bat or monarch butterflies. See **Appendix C** – Ecological Resources. The EA also provides a Noise Level Calculations (see Section 3.12 of EA) and Project equipment distances to abutting property lines (see Section 2.2.2 of EA). And, as outlined in Section 3.3 of the EA, the proposed Project Site does not fall within an aquifer protection area or a drinking water watershed. Photographic site documentation is also provided in **Exhibit G**.

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 0.99 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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