

STATE OF CONNECTICUT

SITING COUNCIL

PETITION OF SUNJET ENERGY, LLC FOR : PETITION NO. _____
A DECLARATORY RULING THAT NO : :
CERTIFICATE OF ENVIRONMENTAL : :
COMPATIBILITY AND PUBLIC NEED IS : :
REQUIRED FOR THE CONSTRUCTION, : :
OPERATION, MAINTENANCE, AND : :
DECOMMISSIONING OF A COMBINED : :
1.99 MW AC SOLAR PHOTOVOLTAIC : :
PROJECT IN BETHLEHEM, CONNECTICUT : :
_____ : **September 15, 2020**

Pursuant to Conn. Gen. Stat. §§ 4-176 and 16-50k(a) and Conn. Agencies Regs. § 16- 50j-38 *et seq.*, and Conn. Gen. Stat § 16-50(k)(e), SunJet Energy, LLC, a Connecticut limited liability company (“Petitioner”) requests that the Connecticut Siting Council (“Council”) approve by a declaratory ruling the location, construction, operation, maintenance, and decommissioning of two solar photovoltaic facilities with a combined capacity of 1.99 MWac (approximately 999 KWac to be interconnected at 0 Thomson Road and approximately 998 KWac to be interconnected at 78 Thomson Road respectively) and associated equipment inclusive of all of solar panels, transformers, electrical switchgear, monitoring equipment, and access roadways (“Project”). The Project will be constructed on approximately 11.84 acres on two contiguous parcels located at 0 and 84 Thomson Road, approximately 74.04 acres and 3.33 acres respectively, and interconnected at 0 and 78 Thomson Road in Bethlehem, Connecticut (“Project Site”). Connecticut General Statute (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 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]

As discussed below, Petitioner’s purpose is to construct a clean and environmentally friendly Project that produces the maximum amount of carbon-free and clean energy while avoiding and minimizing any substantial adverse environmental effects. Based on the evaluations and analysis presented in this Petition by various technical and environmental experts and consultants, the Project will be a renewable distributed resource with a nameplate capacity of not more than sixty-five megawatts, will meet air and water quality standards of the Department of Energy and Environmental Protection (“DEEP”), and will not have any substantial adverse environmental effect.

Accordingly, the construction, operation, maintenance, and decommissioning of the Project fully comports with the legal requirements set forth in Conn. Gen. Stat. § 16-50k(a) and should be approved by the Siting Council by a Declaratory Ruling.

I. INTRODUCTION:

Petitioner is a Connecticut-based limited liability company that develops renewable energy Projects in Connecticut. Petitioner's principal place of business is 175 Capital Boulevard, Suite 402, Rocky Hill, Connecticut 06067. Members of Petitioner have worked diligently with private landowners, towns, cities, housing authorities, and private businesses to develop solar photovoltaic projects in Connecticut. Please address all legal correspondence and communications regarding this Petition to:

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II. LOCAL INPUT, NOTICES TO PROJECT ABUTTERS AND GOVERNMENTAL OFFICIALS AND AGENCIES:

Petitioner has actively sought input and approval from the Town of Bethlehem regarding the Project and remains committed to providing the Town of Bethlehem with as much information regarding the Project as possible. In support of this goal, Petitioner attended several in-person meetings with the First Selectman for the Town of Bethlehem. In addition, as required by the Regulations of Connecticut State Agencies § 16-50j-40, Petitioner provided written notice of this Petition to all abutters and appropriate municipal officials and other governmental officials and

agencies. Certifications of service and the model notice letters are shown in **Exhibit A** attached hereto.

III. PROJECT:

In developing the Project, Petitioner strongly considered Connecticut's energy policy goals to develop and utilize renewable energy resources as much as possible. See Conn. Gen. Stat. § 16a-35k. The proposed Project is a Class I renewable energy source under Conn. Gen. Stat. § 16-1(a)(26). Pursuant to Public Act 11-80, The Connecticut Light and Power Company d/b/a Eversource Energy ("Eversource") is required to procure Class I Zero Emissions Renewables Energy Credits (ZRECs) to help achieve Connecticut's renewable energy policy and goals. Petitioner submitted a bid for the Project into Eversource's competitive ZREC Request for Proposals ("ZREC RFP") and was granted a long-term (15 year) contract for the ZRECs that will be produced by the Project. Selection of the Project by Eversource will help Connecticut meet its clean energy policy goals.

A. Project Site Selection:

Petitioner utilized its internal experience, and the experience and expertise of third-party electrical engineering, civil engineering, and environmental consultants to analyze and select the Project Site. Project Site selection was based on the site's suitability regarding size, topography, and the absence of biological and hydrological conflicts, site availability, proximity of the Project Site to existing electrical infrastructure, and approval to interconnect to the Project to the Eversource electric distribution grid. The Project has been designed to minimize the disturbance of the land required for the Project and preserve as much of the site as possible. Petitioner performed significant public outreach with the Town of Bethlehem including attending several in-person meetings with the First Selectman during 2019 and 2020.

The extensive Project Site assessment and analysis process in preparation of this Petition involved several industry leading expert consultants:

Consultant	Area of Site Assessment and Analysis
Smith & Company Surveyors & Engineers, Inc.	Land Surveying
All-Points Technology Corporation, P.C.	Civil Engineering
All-Points Technology Corporation, P.C.	Wetlands Delineation and Impact Analysis
All-Points Technology Corporation, P.C.	Habitat Review and Assessment
Down to Earth Consulting, LLC	Geotechnical Design Services
Heritage Consultants, LLC	Phase IA Environmental Site Assessment
Blymyer Engineers	Mechanical Engineering and Design
Blymyer Engineers	Electrical Engineering and Testing
Blymyer Engineers	Interconnection Design and Medium Voltage Analysis

B. Property Description:

The properties comprising the Project Site consist of a total of 77.37 acres at 0 and 84 Thomson Road and the Project being interconnected at 0 and 78 Thomson Road in Bethlehem, Connecticut. The Project Site is an open hayfield with no trees. The immediate vicinity of the Project Site consists of sparsely developed residential, farmland, and undeveloped properties as shown on the Site Location, Existing Conditions, and Proposed Conditions Maps shown in **Exhibit B** attached hereto.

C. Project Description:

The Project will involve the construction and installation of ground-mounted solar photovoltaic panels, a single-axis sun tracking system, and related improvements on approximately 11.84 acres. Of the 11.84 acres, 11.26 acres is located on the 0 Thomson Road parcel and 0.58 acres is located on the 84 Thomson Road parcel. The Project will consist of approximately 6,804 non-reflective solar panels measuring approximately 8'-1" above final grade, in its maximum tilt position, surrounded by a chain link security fence. The solar modules are designed to absorb incoming solar radiation and minimize reflectivity, such that only a small percentage of incidental

light will be reflected off the panels. This incidental light is significantly less reflective than common building materials, such as steel, or the surface of smooth water. The panels will rotate east to west tracking the sun, thereby further reducing overall reflectivity (in any one given direction).

Petitioner will install the Project in the area shown on the Project Lease and Easement Plan **Exhibit C** attached hereto. The Project construction period is estimated to take approximately three and one-half months after the issuance of all required governmental permits and approvals. Please see the Table directly below. Petitioner anticipates constructing the Project immediately upon receiving the Declaratory Ruling from the Council, a General (stormwater) Permit from DEEP, and the Building Permit from the Town of Bethlehem.

Project Construction Schedule:

Task	Duration
Mobilization and site preparation	2 weeks
Civil work: road construction, grading	2 weeks
Racking, panel & electrical installation	4 weeks
Interconnection and medium voltage	2 weeks
System testing	1 week

Approvals & commissioning	3 weeks
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D. Electric Distribution Grid Interconnection:

Petitioner will interconnect the Project to the Eversource electric distribution grid as shown on the Project Interconnection and Site Plans in **Exhibit D** attached hereto. 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 additional output from the Project. The existing electrical infrastructure was one of the key reasons the Project Site was selected by Petitioner based on the assessment and analysis conducted by its electrical engineering consultant - Blymyer Engineers. Eversource has granted interconnection approval to the Project, and Petitioner and Eversource have entered into an interconnection agreement for the Project. Eversource has indicated that it is ready to commence the necessary interconnection upgrades for the Project upon receiving a notice to proceed from Petitioner and will work to complete the interconnection upgrade by the end of this year.

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

The Project design is focused on maximizing the efficiency of the solar photovoltaic system by utilizing premium modules and a single-axis sun tracker system instead of the traditional fixed ground-mounted system. A detailed description of the Project Equipment is shown in **Exhibit E** attached hereto. The Project will produce carbon-free clean energy and improve grid resiliency by providing distributed energy where it is needed. The operational life of the Project is based on the designed life expectancy of the equipment. The equipment for the Project comprising of premium modules a single-axis sun tracker system has a designed life and warranty extending for twenty years. The inverters for the Project have a designed life and warranty of approximately ten

(10) years. Petitioner expects an inverter replacement during the life of the Project. Therefore, the anticipated operational life of the Project is twenty plus years.

Project construction will have an anticipated duration of approximately three and one-half months requiring the services of local electrical, civil and structural contractors. There will be a single access road on the Property Site and steel foundations will be driven into the ground. 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 then to a single transformer on a single pad on the edge of the array. A single switchgear will also be mounted to this pad. The electrical contractor will install a medium voltage circuit from the Project Site to the Eversource point of common coupling. The Project construction schedule will be based on a six (6) day work week Monday through Saturday between the hours of 7:00 AM and 5:00 PM but will be modified if required to comply with Town of Bethlehem requirements. As noted above, Petitioner will utilize for erosion and sedimentation control consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control* throughout construction of the Project. Once construction is completed and the Project is operational, the Project will be monitored remotely twenty-four (24) hours a day, seven (7) days a week through a data acquisition system (“DAS”). The DAS system can detect weather, 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/or the Eversource distribution circuit, the Project is required to be isolated from the distribution circuit within two (2) seconds of fault detection. The Project’s Operations and Maintenance (“O&M”) company will perform detailed scheduled annual inspections of all equipment at the Project Site. In addition, the O&M company will always be on-call in the event of unscheduled equipment maintenance or safety related

concerns. Project Site vegetation is typically mowed three (3) times annually. The O&M Plan for the Project is shown in **Exhibit F** attached hereto. At the end of the operational life of the Project, Petitioner will remove all equipment (*e.g.* racking system, panels, inverters, electrical collection system, etc.) from the Project Site. The Decommissioning Plan for the Project is shown in **Exhibit G** attached hereto.

IV. NO SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT:

C.G.S. Stat. § 16-50k (a) provides that a Certificate is not required if an electric generating facility meets the air and water quality standards of DEEP and does not have a substantial adverse environmental effect. As explained in Section III(A), Petitioner retained several environmental expert consultants to conduct a comprehensive environmental assessment and analysis of the Project Site. Petitioner also consulted with DEEP and other relevant agencies in its evaluation of potential environmental impacts of the Project. For these reasons and for those addressed in detail below, this Project avoids, reduces, and mitigates any substantial potential environmental effects and should be approved.

A. Air Quality:

The Project will not generate any emissions and will contribute to carbon reduction goals in Connecticut. In addition, the Project will have only very minor air emissions of regulated air pollutants and greenhouse gases during construction. To ensure this, Petitioner will control any temporary emissions at the Project Site by enacting appropriate mitigation measures (*e.g.*, water for dust control; avoid mass early morning vehicle startups, etc.). Accordingly, any potential air effects produced by the Project's temporary construction activities will be *de minimus*. During the Project's operation, the Project will produce no regulated air pollutants or greenhouse gases (*e.g.*,

PM, VOCs, GHG or Ozone). No air permit will be required for either construction or operation of the Project.

B. Water Quality:

The groundwater underlying the Project Site is classified by DEEP as “GA”.¹ This classification indicates groundwater within the area is presumed to be suitable for human consumption without treatment. Based upon the reviewed DEEP mapping and a field survey conducted by APT, the nearest surface water body is a farm pond located ±50 feet north-northeast of the Project Site. This pond is classified by DEEP as Class A² surface water bodies. The Project Site is not located within a mapped preliminary or final Aquifer Protection Area.

Petitioner is committed to implementing protective measures in the form of a Stormwater Pollution Control Plan (“SWPCP”) to safeguard water resources from potential impacts during construction. These protective measures will be finalized and submitted to the Council pending approval by DEEP Stormwater Management. The SWPCP will include monitoring of sedimentation and erosion controls that will be installed and maintained in accordance with the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control*. Petitioner will also apply for a *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities* from DEEP.

Upon its completion, the Project will be unstaffed, and no potable water uses, or sanitary discharges are planned. No liquid fuels are associated with the operation of the Project. Once operative, the stormwater generated by the proposed development will be properly handled and treated in accordance with the 2004 *Connecticut Stormwater Quality Manual*.

¹ Designated uses in GA-classified areas include existing private and potential public or private supplies of drinking water and base flow for hydraulically connected surface water bodies.

² Designated uses for Class A surface water bodies include habitat for fish and other aquatic life and wildlife; potential drinking water supplies; recreation; and water supply for industry and agriculture.

The proposed post-development drainage characteristics of the Project Site will change minimally. Two (2) grass-lined stormwater swales and two (2) grass-lined stormwater management basins are proposed along the western and southern edges of the Project. Any stormwater runoff that enters the basins and discharges will be controlled for velocity with the use of a plunge pool and level spreader which will discharge onto locations where stormwater currently drains. The basins have been designed to treat 100 percent of the Water Quality Volume. Supporting stormwater management calculations, including the design of the basins, are provided in the Stormwater Management Report in **Exhibit H** attached hereto. Soils disturbed during construction of the Project Site will be stabilized with a naturalized low growth seed mix, containing a mix of native grass and forbs species. The Project has been designed to generally meet the requirements of DEEP's January 2020 draft *Appendix I, Stormwater Management at Solar Array Construction Projects*.

Accordingly, with the incorporation of the proposed protective measures, stormwater runoff from Project development will not result in an adverse impact to water quality associated with wetlands, watercourses or other water resources.

C. Floodplain Areas:

APT reviewed the United States Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Map ("FIRM") for the Project Site. The FIRM is shown in **Exhibit L** attached hereto. Based upon the reviewed mapping, the Project Site is classified as unshaded Zone X, which is defined as areas of minimal flooding determined to be outside the 100- and 500-year flood zones. As such, no special considerations or precautions relative to flooding are required for the Project.

D. Farmland Soils:

Farmland soils include land that is defined as prime, unique, or farmlands of statewide or local importance based on soil type, in accordance with the Code of Federal Regulations, CFR title 7, part 657. They represent the most suitable land for producing food, feed, fiber, forage, and oilseed crops. According to the Connecticut Environmental Conditions Online Resource Guide,¹ approximately 33.8 acres of Prime Farmland Soils are mapped across the Project Site. Approximately 4.1 acres of Prime Farmland Soils, representing 12.13% of this resource, are within the western portion of the Project Site area as shown in **Exhibit B** attached hereto. The remainder of the mapped Prime Farmland Soils are located within an open hayfield to the east of the Project Site, which will not be disturbed by the installation of the Proposed Project, thereby minimizing the overall effects on Prime Farmland Soils.

Recognizing that development of the Project Site has a useful life and could be considered temporary in nature, Petitioner has proposed using a minimally intrusive method for construction of the Project. The use of pile-driven mounts for installation of the solar panels mitigates the need for substantial grading of the Project Site and minimizes impacts to soils.

E. Historic and Archaeological Resources:

Heritage Consultants LLC (“Heritage Consultants”) of Newington, Connecticut, reviewed relevant historic and archaeological information and conducted a pedestrian survey to determine whether the Project Site holds potential cultural resource significance. Their review of historic maps and aerial images of the Site and examination of files maintained by the Connecticut State Historic Preservation Office (“SHPO”) revealed that no historic or known archaeological resources

¹ Connecticut Environmental Conditions Online (CTECO) Resource Guide
www.cteco.uconn.edu.

exist within the Project Site. Three (3) historic standing structures listed on the National Register of Historic Places are located within approximately one (1) mile of the Project Site. Four (4) previously documented archaeological sites are identified within approximately one (1) mile of the Project Site. No effect on historic or archaeological resources is anticipated. On behalf of APT, Heritage Consultants submitted Project information and historic/archaeological data to the State Historic Preservation Office (“SHPO”) for review and concurrence on August 14, 2020 and is currently awaiting SHPO’s response. A copy of the SHPO submission including the cover letter and *Phase IA Cultural Resource Reconnaissance Survey of the Proposed SunJet Solar Center in Bethlehem, Connecticut* are provided in **Exhibit I** attached hereto.

F. Visibility:

The Project will consist of 6,804 non-reflective solar panels measuring approximately 8’-1” above final grade surrounded by a chain link security fence. The proposed electrical interconnection will consist of one overhead utility line with approximately four (4) wooden poles. The solar modules are designed to absorb incoming solar radiation and minimize reflectivity, such that only a small percentage of incidental light will be reflected off the panels. This incidental light is significantly less reflective than common building materials, such as steel, or the surface of smooth water. The panels will be tilted up toward the southern sky at a fixed angle of 55 degrees and will rotate east to west tracking the sun, thereby further reducing overall reflectivity.

G. Habitat And Wildlife:

The Project Site lies within the Weekepeemee River Watershed atop a glacial till drumlin. The Project Site occupies the west-facing easterly slope of the hilltop. From a regional perspective, the Project Site falls within the Northwest Hills Ecoregion (Dowhan and Craig, 1976). This is an interior upland ecoregion on the transition north towards the Berkshire range. It

is characterized by a moderately hilly landscape of intermediate elevation (750 feet to 1,000 feet) with narrow valleys and local areas of steep rugged terrain.

The Project Site consists of an active dairy farm. The eastern half of the Project Site is occupied by cow pasture and the western half is occupied by a managed hay field. The Project Site lies entirely within the managed hayfield.

The Project Site will be accessed from Thomson Road via an existing access drive that leads to a barn and farm equipment storage area. The Project Site is located within a hayfield (uplands) habitat bordered by a coniferous and mixed hardwood forest immediately west of the Project Site. Small transitional ecotones, consisting mainly of narrow scrub/shrub habitat between the open field and forested areas to the west, separate these habitat types. The habitat types and their vegetative communities depicted in **Exhibit B** attached hereto are described below.

i. Habitat Types

a. Hayfield

The Project Site lies within a managed hayfield consisting of cool-season Eurasian feed grasses. The field consists of two predominant feed species orchard grass (*Dactylis glomerata*) and timothy grass (*Phleum pratense*) – mixed with areas of clover (*Trifolium sp.*). The field is intensively managed, with two harvest cuttings per year (June and October). The Project Site will occupy approximately 11.7 acres, or ±27.79%, of this habitat.

b. Wetlands

No wetlands occur within the Project Site. Four (4) wetlands are present on the Project Site, and an additional wetland is located off-Site to the west of the Project Site. The two (2) wetlands proximate to the Project Site, referred to herein as Wetlands 1 and 2 (see **Exhibit B** attached hereto) were investigated. Wetland 1 is located approximately 50 feet north-northeast of

the Project Site. This wetland consists of a man-made farm pond with bordering palustrine emergent wetlands including marsh and wet meadow cover types.

Vegetation consists of dense common reed (*Phragmites australis*) and cattail (*Typha latifolia*) within the shallow flooded pond fringe, with willow (*Salix sp.*) and reed canarygrass (*Phalaris arundinacea*) dominant along the pond shoreline. Dense submergent aquatic vegetation is present throughout the pond, with duckweed (*Lemna minor*) covering the pond's surface.

Wetland 2 is located off-Site approximately 50 feet west of the Project Site. Due to its location off-Site, it was not observed from the western Project Site boundary. It is a hillside groundwater slope wetland with a saturated hydrology. The wetland is forested, with red maple (*Acer rubrum*) dominating the tree canopy, spicebush (*Lindera benzoin*) dominating the shrub layer, and skunk cabbage (*Symplocarpus foetidus*) in the herbaceous layer. The invasive non-native Japanese barberry (*Berberis thunbergii*) and Asiatic bittersweet (*Celastrus orbiculatus*) are common along the wetland-upland interface.

The two (2) additional wetland systems remote from the Project Site consist of: a large unnamed stream system associated with three agricultural ponds that lies along the eastern Project Site boundary, beyond the cow pasture, which flows south into the Weekepeemee River; and, a second unnamed stream system with bordering forested wetland along the extreme northwest Project Site boundary near Guilds Hollow Road (State Highway 132). This stream is also a tributary to the Weekepeemee River. Neither wetland system is proximate to the Project Site and both are in a separate local watershed. As such, the Project will have no effect on these resources.

No wetlands or watercourses will be directly impacted by the Project. The Project Site has been designed so that the fenced limits of the Project are ± 50 feet from any wetland resources. The

area of encroachment drains away from the Wetland 1. A phased sedimentation and erosion control plan will be implemented to properly protect Wetland 2, the nearby downgradient and off-Site wetland resource.

Potential short-term temporary impacts associated with the Project's construction activities will be minimized by the proposed sedimentation and erosion controls, which will be installed and maintained during construction activities in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*.

Potential long-term secondary impacts to wetland resources associated with the operation of this Facility are minimized by several factors. The development will be unstaffed (generating negligible traffic), utilize a gravel/dirt access road (to avoid creation of impervious surfaces), and treat the majority of the ground beneath the solar arrays with native grass/vegetation (providing ample opportunity for surface water to infiltrate or slow prior to discharge to surrounding resources). As such, the Project will not have a likely adverse impact to wetland resources.

c. Vernal Pools

Vernal pool inspections were conducted on April 25, 2019 and June 1, 2020. No vernal pools were observed within either Wetland 1 or Wetland 2. Neither wetland meets the hydrologic criteria of a vernal pool.

Wetland 1 is permanently flooded as opposed to seasonally flooded (as required to meet the criteria for vernal pools). However, because it is permanently flooded, it supports amphibian breeding and development, including wood frog, a vernal pool indicator species. Amphibians and reptiles observed within Wetland 1 include wood frog (*Rana sylvatica*), green frog (*Rana clamitans*), bullfrog (*Rana catesbeianus*), gray treefrog (*Hyla versicolor*) and painted turtle

(*Chrysemys picta*). Large numbers of green frog and bullfrog tadpoles were present within the pond.

A single wood frog egg mass was observed north of the pond in a shallowly flooded pool within the mowed path surrounding the pond. While additional breeding activity is likely occurring in Wetland 1, the area is not a productive vernal pool habitat, primarily due to high densities of bullfrog and green frog, both of which are voracious predators of wood frog larvae. Fish, another amphibian larvae predator, are also likely to be present, but were not observed. Additionally, insects that can also predate amphibian larvae were abundant, including dragonfly and other odonates (aquatic or semi-aquatic as juveniles). Fingernail clams and backswimmers were also found to be common during dip-net searches for amphibian larvae.

Wetland 2 does not meet the hydrologic criteria of a vernal pool due to the steeply sloping topography. As a result, the wetland contains no prolonged standing water.

ii. Rare Species

The DEEP Natural Diversity Data Base (“NDDB”) program performs hundreds of environmental reviews each year to determine the impact of proposed development projects on state listed species and to help landowners conserve the state’s biodiversity. In furtherance of this endeavor, the DEEP also developed maps to serve as a pre-screening tool to help applicants determine if there is the potential project-related impact to state-listed species.

The NDDB maps represent approximate locations of (i) endangered, threatened and special concern species and, (ii) significant natural communities in Connecticut. The locations of species and natural communities depicted on the maps are based on data collected over the years by DEEP staff, scientists, conservation groups, and landowners. In some cases, an occurrence represents a location derived from literature, museum records and/or specimens. These data are compiled and

maintained in the NDDDB. The general locations of species and communities are symbolized as shaded (or cross-hatched) areas on the maps. Exact locations have been masked to protect sensitive species from collection and disturbance and to protect landowner's rights whenever species occur on private property.

APT reviewed NDDDB mapping (December 2019)¹ to determine if any such species or habitats occur within the vicinity of the Site. According to the available NDDDB maps, a NDDDB buffer area encompasses most of the Project Site and area. See **Exhibit B**, Existing Conditions Map. APT submitted a review request to DEEP for this Project on May 21, 2020 and DEEP responded on June 15, 2020 with a Determination letter (No. 202006358) identifying three state-listed Special Concern grassland bird species potentially occurring on the Site. Those species include Savannah sparrow (*Passerculus sandwichensis*), bobolink (*Dolichonyx oryzivorus*) and brown thrasher (*Toxostoma rufum*). During a preliminary investigation of the Site in the spring of 2019, all three bird species were observed, and those observations were noted in the NDDDB review request. Petitioner engaged APT to perform grassland bird surveys, which were performed on May 20, June 1 and 12, 2020.

The surveys confirmed the presence of the three (3) state-listed species identified by DEEP on the Project Site. A male brown thrasher was observed within the old field habitat, northeast of Wetland 1, and within the northern portion of the pasture farther to the east. Although a nesting site could not be confirmed, a breeding pair is presumed based on the seasonal timing of the observation and the presence of suitable breeding habitat. These areas are remote from the Project Site and therefore, no direct or indirect impact to brown thrasher habitat is anticipated.

¹ There is no change between the December 2019 and June 2020 NDDDB mapping.

A male Savannah sparrow was observed within the hayfield and is presumed to have a nesting location in the southern portion of the Project Site, approximately 300 feet northwest of the barn near Thomson Road. A large population of bobolink were observed within the hayfield. Approximately 11.7 acres of suitable hayfield breeding habitat for the bobolink are located within the Project Site.

Based on the results of the surveys, Savannah sparrow and bobolink (both grassland specialists) appear to be breeding within the hayfield. The hayfield is intensively managed, with two hay cuttings occurring per season. During the field survey conducted in early June, the first cutting had begun. Based on this cutting regime, some degree of nest failure, destruction and/or abandonment is anticipated. The severity of hay cutting impact to grassland birds is dependent upon the timing of nesting/egg laying relative to the first cutting which varies seasonally depending on weather and rainfall conditions.

To avoid impacts to these three State-listed species (and breeding birds in general), it is recommended that no construction occur during the breeding season, generally from April 1st through August 31st. These dates capture the starting and ending “safe dates” (per the Connecticut Bird Atlas) for all three species.

The results of the surveys are being provided to NDDB and a copy of DEEP’s final determination letter will be provided to the Council upon receipt.

iii. Federally Listed Species

One federally listed¹ threatened species, the northern long-eared bat (“NLEB”; *Myotis septentrionalis*) was identified to potentially occur in the vicinity of the Project Site. As a result of this preliminary finding and in accordance with USFWS New England Field Office’s consultation

¹ Listing under the federal Endangered Species Act

policy, habitat supported by the Site and an evaluation of whether it is suitable for NLEB was assessed.

Northern Long-eared Bat

The NLEB's range encompasses the entire State of Connecticut. Suitable NLEB roost habitat includes trees (live, dying, dead, or snag) with a diameter at breast height ("DBH") of three (3) inches or greater.

Although no tree removal is associated with the Project, a determination of compliance with USFWS's NLEB final rule 4(d) was completed. The *Northern long-eared bat areas of concern in Connecticut to assist with Federal Endangered Species Act Compliance map* (March 6, 2019) was reviewed to determine the locations of any known maternity roost trees or hibernaculum. This map revealed that there are currently no known NLEB maternity roost trees in Connecticut. The nearest NLEB habitat resource to the Project Site is in Morris approximately four (4) miles northeast of the Site.

APT submitted the USFWS's NLEB final 4(d) rule Streamlined Consultation Form on April 29th, 2020 under the consultation framework that allows federal agencies to rely upon the USFWS January 5, 2016, intra-Service Programmatic Biological Opinion ("BO") on the Final 4(d) Rule for the NLEB for section 7(a)(2) compliance. If the USFWS does not respond within thirty (30) days from submittal of this form (by May 28th, 2020), one may presume that USFWS determination is informed by the best available information and that Petitioner's project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS' BO. No response was received from USFWS. Therefore, the proposed Project is not likely to result in an adverse effect to NLEB.

Regardless, Petitioner would consider the following additional USFWS voluntary conservation measures, where appropriate and as the Project schedule allows, to reduce the potential impacts of activities on NLEB.

- Conduct tree removal activities outside of the NLEB pup season (June 1-July 31) and active season (April 1-October 31) to minimize impacts to pups at roosts not yet identified.
- Avoid clearing suitable spring staging and fall swarming habitat within a five-mile radius of known or assumed NLEB hibernacula during the staging and swarming seasons (April 1-May 15 and August 15-November 14, respectively).
- Maintain dead trees (snags) and large trees when possible.
- Use herbicides and pesticides only if unavoidable. If necessary, spot treatment is preferred over aerial application.
- Minimize exterior lighting, opting for down-shielded, motion-sensor security lights instead of constant illumination.

J. Stormwater Management:

As indicated, through APT, Petitioner completed a drainage analysis to review pre-and post-development runoff at the Project Site shown in **Exhibit H** attached hereto. This Exhibit shows construction and operation of the Project at the Project Site will fully comply with requirements of the DEEP stormwater requirements, including the now proposed but not implemented Draft Appendix I. Petitioner will also prepare and implement a Stormwater Pollution Control Plan for the Project and apply for a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities from DEEP.

K. Public Health And Safety:

Petitioner is immensely concerned with safety. Overall, the Project will meet or exceed all health and safety requirements applicable for electric power generation. The Project would be designed to applicable industry, State and local codes and standards and will not pose a safety concern or create undue hazard to the public. The Project includes a proposed seven-foot-high safety fence and gate (which is mandated by National Electric Code), which will limit access to authorized or emergency personnel only. Each employee working on the Project Site will:

- Receive required general and site-specific health and safety training;
Comply with all health and safety controls as directed by local, state, and federal requirements;
- Understand and employ the Site health and safety plan;
Know the location of local emergency care facilities, travel times, ingress and egress routes; and
- Immediately report all unsafe conditions to the construction manager.
During construction, heavy equipment will be required to access the Project Site and higher levels of noise are anticipated; however, Petitioner will conduct all activities during normal working hours.

For the limited construction time required to construct the Project, construction equipment will be required to access the Project Site during normal working hours.

L. Noise:

While no formal noise study was completed for the Project, the Project is not anticipated to be a source of noise and will follow DEEP and Town of Bethlehem regulations. Once the Project is constructed and operational, the only equipment that will emit noise consists of the inverter

cooling which cannot be heard outside of the Project fence line. The inverters will not be active at night when the sun is not shining.

M. FAA:

A small privately-owned airport with a grass runway (Thomson Field Airport - 5CT5) is located on the property. The property owner owns this airport and is also the airport manager. The airport has no control tower and is unattended. Pursuant to 14 C.F.R. § 77.9 regarding the FAA Notice of Proposed Construction or Alteration, the FAA must be notified of “any construction or alteration that exceeds an imaginary surface extending outward and upward at a slope of 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of the airport.” 14 C.F.R. § 77.9(b)(1) The FAA Study Point Locations for the proposed solar project has been submitted to the FAA for review and approval as shown in **Exhibit J** attached hereto.

N. EPA Carbon Dioxide Reduction Equivalency:

The estimated annual EPA Carbon Dioxide Reduction Equivalency calculations for the life of the Project will help Connecticut meet its important zero-carbon policy goals. For example, the clean electricity produced by the Project is equivalent to reducing Greenhouse Gas Emissions by an estimated 6,309,999 pounds. This is equivalent to 618 passenger vehicles, 322,062 gallons of gasoline consumed, 3,153,716 pounds of coal burned, and is enough to energize 330 homes for one year. Moreover, the carbon sequestered by the Project is equivalent to an estimated 47,327 tree seedlings grown for ten years or 3,738 acres of U.S. forests in one year. The estimated EPA Carbon Dioxide Equivalency Results are shown in **Exhibit K** attached hereto.

V. CONCLUSION:

As discussed above, Petitioner’s purpose is to construct a clean, carbon free, and environmentally friendly Project that produces the maximum amount of carbon-free clean energy while avoiding and minimizing any adverse environmental effects. Based on the evaluations and analysis presented in this Petition by Petitioner and Petitioner’s technical and environmental expert consultants, the substantial evidence shows that the 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 effect.

Accordingly, Petitioner respectfully requests that the Connecticut Siting Council grant this Petition for a Declaratory Ruling and approve the location, construction, operation, maintenance, and decommissioning of two solar photovoltaic facilities with a combined capacity of 1.99 MWac (approximately 999 KWac to be interconnected at 0 Thomson Road and approximately 999 KWac to be interconnected at 78 Thomson Road respectively) and associated equipment inclusive of all of solar panels, transformers, electrical switchgear, monitoring equipment, and access roadways (“Project”). The Project will be constructed on approximately 11.84 acres on two contiguous parcels located at 0 and 84 Thomson Road, approximately 74.04 acres and 3.33 acres respectively, and interconnected at 0 and 78 Thomson Road in Bethlehem, Connecticut.

RESPECTFULLY SUBMITTED,

SUNJET ENERGY, LLC



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Exhibit A

Certification of Service – Model Service Letters

Exhibit B

Site Location, Existing Conditions, and Proposed Conditions Maps

Exhibit C

Project Lease and Easement Plan

Exhibit D

Project Interconnection and Site Plans

Exhibit E

Project Equipment

Exhibit F

Operations and Maintenance Plan

Exhibit G

Decommissioning Plan

Exhibit H

Stormwater Management Report

(Including Drainage Analysis –

Review of Pre-And Post-Development Runoff At The Project Site)

- INTRODUCTION -

Exhibit H

Stormwater Management Report

(Including Drainage Analysis –

Review of Pre-And Post-Development Runoff At The Project Site)

- APPENDIX A –

NRCS Soil Survey

Exhibit H

Stormwater Management Report

(Including Drainage Analysis –

Review of Pre-And Post-Development Runoff At The Project Site)

- APPENDIX B –

Existing Drainage Area Map & Hydrologic Computation

Exhibit H

Stormwater Management Report

(Including Drainage Analysis –

Review of Pre-And Post-Development Runoff At The Project Site)

- APPENDIX C –

Proposed Drainage Area Map & Hydrologic Computation

Exhibit H

Stormwater Management Report

(Including Drainage Analysis –

Review of Pre-And Post-Development Runoff At The Project Site)

- APPENDIX D –

NOAA Atlas 14 Precipitation Frequency Table

Exhibit H

Stormwater Management Report

(Including Drainage Analysis –

Review of Pre-And Post-Development Runoff At The Project Site)

- APPENDIX E –

Water Quality Volume Calculations

Exhibit I

SHPO Submission

**(Cover Letter and Phase IA Cultural Resource Reconnaissance Survey of the
Proposed SunJet Solar Center in Bethlehem, Connecticut)**

Exhibit J

FAA Review Map

Exhibit K

EPA Carbon Dioxide Reduction Equivalency Report

Exhibit L

**United States Federal Emergency Management Agency (“FEMA”) Flood
Insurance Rate Map**