



October 25, 2021

**VIA ELECTRONIC DELIVERY**

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

**RE:** LSE Indus LLC (“Lodestar”) for a Declaratory Ruling that No Certificate of Environmental Compatibility and Public Need is Required for the Construction, Operation and Maintenance of Solar Photovoltaic Facility in North Canaan, Connecticut

Dear Attorney Bachman:

In connection with the above-captioned petition, please find the original and fifteen (15) copies of a petition for declaratory ruling filed by LSE Indus LLC for property located at 81 East Main Street, North Canaan, CT (the “Site”) along with the filing fee check for \$625. Please let me know if you have any questions.

Sincerely,

*Carrie Larson Ortolano*

Carrie L. Ortolano  
General Counsel

Enclosures



LODESTAR ENERGY

**PETITION OF LSE INDUS LLC (“LODESTAR ENERGY”) FOR A DECLARATORY RULING THAT NO CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS REQUIRED FOR THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF A 1.99 MW AC SOLAR PHOTOVOLTAIC FACILITY IN NORTH CANAAN, CONNECTICUT**

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**STATE OF CONNECTICUT SITING COUNCIL**

**PETITION OF LSE INDUS LLC  
FOR A DECLARATORY RULING  
THAT NO CERTIFICATE OF ENVIRONMENTAL  
COMPATIBILITY AND PUBLIC NEED IS  
REQUIRED FOR THE CONSTRUCTION,  
OPERATION, AND MAINTENANCE OF  
A 1.99 MW AC SOLAR PHOTOVOLTAIC  
FACILITY IN NORTH CANAAN, CONNECTICUT**

**PETITION NO. \_\_\_\_\_**

**October 21, 2021**

**I. INTRODUCTION**

Pursuant to Conn. Gen. Stat. §§ 4-176 and 16-50k(a) and Conn. Agencies Regs. § 16-50j-38 *et seq.*, LSE Indus LLC, a Connecticut limited liability company (“Lodestar” or “Petitioner”) requests that the Connecticut Siting Council (“Council”) approve by declaratory ruling the location, construction, operation, and maintenance of a solar photovoltaic facility capable of up to 1.99 MW AC, and associated equipment (“Project”) consisting of approximately 11.6 acres (inclusive of all of solar panels, transformers, electrical switchgear, monitoring equipment and access roadways) to be constructed on an approximately 67-acre parcel located at 81 East Main Street, North Canaan, Connecticut, also known as assessor’s parcels #16/046-0 and #16/050-0 (the “Project Site”). The Project Site is currently largely vacant but does host the Project Site Owner’s personal residence.

Conn. Gen. Stat. § 16-50k(a) provides:

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... the construction or location 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 such Project meets air and water quality standards of the Department of Energy and Environmental Protection.

As discussed in this petition, the Petitioner's goal is to design an environmentally compatible Project that produces the maximum amount of energy while avoiding and minimizing adverse environmental impacts. Based on the evaluation presented in this report, the Project will not have a substantial adverse environmental impact to the immediate and surrounding area. Accordingly, the construction, operation, and maintenance of the Project satisfies the criteria of Conn. Gen. Stat. § 16-50k(a).

## **II. PETITIONER**

Lodestar is a Connecticut-based limited liability company that develops renewable energy projects in Connecticut and New England. Lodestar's principal place of business is located in Avon, Connecticut at 40 Tower Lane, Suite 201. Lodestar will lead the Project's development, construction and financing and will be the long-term owner and operator of the Project. Lodestar's team has worked with utilities, school districts, cities, housing authorities, counties, Fortune 500 companies, private businesses, commercial and industrial clients and many others to develop more than five hundred (500) MW of solar projects with a value of more than \$1 billion across North America including five (5) operating projects in Connecticut and two (2) additional projects under construction, both approved by the Council (petition #1398A and #1412).

Please address all correspondence and/or communications regarding this Petition to:

Carrie Larson Ortolano, Esq.  
General Counsel  
LSE Indus LLC  
c/o Lodestar Energy LLC  
40 Tower Lane, Suite 201  
Avon, CT 06001  
[cortolano@lodestarenergy.com](mailto:cortolano@lodestarenergy.com)

Please also provide a copy of all such correspondence and/or communications to:

Jeffrey J. Macel  
LSE Indus LLC  
c/o Lodestar Energy LLC  
40 Tower Lane, Suite 201  
Avon, CT 06001  
[jmacel@lodestarenergy.com](mailto:jmacel@lodestarenergy.com)

### **III. PROPOSED PROJECT**

#### ***A. PROJECT BACKGROUND***

In developing this Project, the Petitioner has taken into account the State’s energy policy and goals to “develop and utilize renewable energy resources, such as solar and wind energy, to the maximum practicable extent.” Conn. Gen. Stat. § 16a-35k. As a solar development, the proposed Project is considered a Class I renewable energy source under Conn. Gen. Stat. § 16-1(a)(26).

Through Public Act 11-80, the Connecticut Light and Power Company (“Eversource”), *inter alia*, was required to procure class I renewable energy credits (RECs) to reach Connecticut’s renewal energy goals and established the Low and Zero Emissions Renewable Energy Credit Program (“LREC”). The proposed Project was submitted into the state-wide competitive LREC/ZREC solicitation and granted an award from Eversource on August 27, 2021. In addition, the Project will be subject to a virtual net metering agreement with the City of Hartford in the State of Connecticut (“VNM”) providing discounted net metering credits and savings of over \$1.25 million across the life of the Project.

#### ***B. SITE SELECTION***

Lodestar utilized its internal expertise and that of outside consultants and industry leaders to base its site selection for the Project on a detailed evaluation of the following key criteria:

- Site suitability (size, topography, and apparent lack of biological and hydrological conflicts in initial fatal flaw screening);
- Site availability;
- Proximity of existing electrical infrastructure and the approval to interconnect to this infrastructure from EDC;
- Utilization of the existing access driveway and infrastructure to limit new gravel road construction;
- Maximizing the site benefits, including many previously disturbed areas that are not utilized by the Owner, the natural southern contours of the site that limit necessary tree clearing for shade mitigation, and a series of pre-existing man-made drainage ditches created to control surface runoff from the access road.

After performing an initial site evaluation, Lodestar began a preliminary design of a site layout that would best avoid or minimize any potential negative environmental impacts. The Project Site is a largely undeveloped parcel with the Project Site Owner's personal residence located thereon along with a small airstrip that the Owner utilizes for his personal purposes. Upon approval of the Project, the Petitioner will lease a portion of the Project Site from the current owner.

Lodestar performed significant public outreach with Town leadership and administration including attending in-person meetings. Lodestar met with the Board of Selectmen on May 3, 2021 and the planning and zoning commission on May 10, 2021. As a result of those meetings, the Town of North Canaan provided Lodestar with a letter voicing its support of this Project.

In May 2021, Petitioner requested a pre-application meeting with the Department of Energy and Environmental Protection ("DEEP"). This meeting took place on June 23, 2021.



During this meeting, DEEP staff made several suggestions to improve the project's design at that iteration. In response, Petitioner has made the following substantive changes to the Project's design:

- Petitioner has removed most of the proposed disturbance on areas with slopes greater than 15%, with such areas now representing less than 5% of the total development. This was done directly as a result of feedback from staff at the Stormwater Safety Program at DEEP.
- Petitioner has removed all development that was originally proposed directly uphill from residential abutters, at the request of staff from both the Stormwater and Dam Safety Programs at DEEP.
- Based on the new stormwater guidelines being promulgated by DEEP, Petitioner has included a phased construction process, whereby a full growing season will be allowed after the initial clearing and stormwater features are complete. This will allow for full stabilization of these areas prior to further construction. In addition, Petitioner designed all stormwater control basins to maintain a maximum grade of 3:1 and provided for additional rip-rap on the slopes to ensure stability.

As noted above, the Petitioner has finalized a virtual net metering credit agreement with the City of Hartford expected to produce savings of over \$1.25 million from the Project. During the site selection and evaluation process, Lodestar has retained the following consultants to assist in the evaluation and design of the Project:

- All Points Technology ("APT") -- environmental assessment and civil engineering services

- Davison Environmental, LLC (“Davison Environmental) – wetlands and vernal pool assessment
- Heritage Consultants – SHPO review and cultural resources investigation
- RBI Solar – geotechnical and mechanical design services
- EST – electrical engineering and testing
- ArcDesign – interconnection design and medium voltage analysis

**C. *PROPERTY DESCRIPTION***

The Project will occupy approximately 7.6 acres of the Project Site located on the north side of East Main Street (aka State Route 44). A vicinity map is included in **Exhibit 1**. The property is currently owned by John Bunce (the “Landowner”) and is developed with the Landowner’s personal residence and outbuilding. A private air field is centrally located on the property. The surrounding land use is primarily residential, with commercial/industrial development and undeveloped wooded land immediately to the west and north, respectively. Residences and agricultural fields are located to the south and east.

The Project Site is located in the eastern portion of the property, both north and south of the air strip. The Project Site will be accessible from East Main Street via an existing access driveway.

**D. *PROJECT DESCRIPTION***

If this Project is approved by the Siting Council, Lodestar will exercise its option to purchase the Site and will proceed to construct, operate, and maintain the solar facility at the Project Site. The Project will involve the construction of approximately 7.6 acres of ground-mounted solar photovoltaic panels and related improvements. The work will include clearing and grubbing, improvement of the access road; layout and placement of foundation systems, racking,

approximately 5,902 solar PV panels and sixteen (16) 125kW inverters; installation of utility pads and associated electrical equipment; installation of electrical conduit, conduit supports, electrical poles, and overhead wire; installation of a transmission line and associated transmission line tap and installation of security fencing. The existing gravel access driveway located off of East Main Street will be upgraded to ensure that construction vehicles can travel to and from the Site, including the addition of a construction entrance. Emergency access will be available via East Main Street and will be designed in accordance with local requirements to accommodate emergency vehicles and fire trucks. The security fence will completely enclose the Project and will consist of a seven (7) foot chain-link fence with gated access.

The PV panels will be mounted on a driven post racking system at a 25-degree fixed tilt facing south to maximize energy production. The maximum height of the panels will be approximately eleven (11) feet. The image below is an example of the type of panels and racking system that will be utilized.



Inverters will be mounted at a balance of system area located in the middle of the array, where small concrete pads will also be installed for transformers and switchgears. Construction of the Project will require 7.33 acres of tree clearing with a total development area of 11.6 acres. At the end of the operational life of the Project, Lodestar will remove all equipment (*e.g.* racking system, panels, inverters, electrical collection system, equipment pads, etc.) from the Project Site.

Lodestar will install the Project in the area shown on the Site Plans in **Exhibit 1**. The images below are examples of a similar solar array field installed by the Petitioner.



The Project construction period is estimated to take approximately 8-12 months from issuance of all required permits, due to the required growing season between periods of disturbance. Subject to regulatory approval, Petitioner anticipates commencing construction in the spring of 2022 or upon approval from the Siting Council.

Project Schedule:

<b>Task</b>	<b>Approximate Duration</b>
Mobilization and site preparation	2 weeks

Civil work: road construction, tree clearing, grading and stormwater controls	4-8 weeks
Site Stabilization <sup>1</sup>	8-12 weeks
Racking, panel & electrical installation	8 weeks
Interconnection and medium voltage	3 weeks
System testing	1 week
Approvals & commissioning	2 weeks

***E. UTILITIES AND INTERCONNECTION***

Lodestar proposes interconnecting the Project to an existing 13.2 kV overhead circuit that runs along East Main Street on the south of the Site, which is part of Eversource’s distribution system. The existing electrical infrastructure was one of the key reasons the Project was sited here. Petitioner has already completed an interconnection application. Completion of the interconnection study and impact study has resulted in the execution of an interconnection services agreement, which will allow the Project to interconnect in the manner set forth above.

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<sup>1</sup> As required by DEEP pursuant to the June 23, 2021 meeting.

The interconnection will require the installation of three (3) new poles extending from the existing utility pole, located in the vicinity of the southern border of the Site at the entrance to the access road off of East Main Street as depicted in **Exhibit 1**. Eversource will own and install a load break on the first new pole, a pole-mounted recloser on the second new pole, and an overhead primary metering cluster on the third new pole. The point of common coupling will be on the load side of the primary metering cluster. The extension will follow the path of the access road with poles installed adjacent to the access road on its east side. Lodestar will install a riser pole with a load break and fuse cutouts and will direct the interconnection circuit underground. Lodestar will install an underground 3-phase 13.2 kV line running approximately twelve-hundred (1,200) feet from the point of common coupling/riser pole to the pad mounted switchgear at the Project area. This is the same process and configuration that has been used on Lodestar's previous projects in other locations across Connecticut.

***F. LOCAL INPUT & NOTICE***

Lodestar has actively sought input and approval from the Town of North Canaan throughout the planning and development of this Project, and remains committed to providing the Town with as much information regarding the Project as possible. In support of this goal, Lodestar attended meetings:

- May 3, 2021 meeting with the Board of Selectmen;
- May 10, 2021 meeting with the Planning and Zoning Commission.

Additionally, as required by the Regulations of Connecticut State Agencies § 16-50j-40(a), Lodestar provided notice of this petition to all required persons and appropriate municipal officials and governmental agencies. Attached as **Exhibits 5 and 6** are copies of the certifications of service to abutters and required officials respectively. As a result of Petitioner's

significant outreach to the Town, the Town has issued a letter of support for the Project, which is attached hereto as **Exhibit 12**.

#### **IV. EQUIPMENT AND ENERGY PRODUCTION**

The design of the Project focuses on maximizing the efficiency of the system based on existing conditions of the Project Site and local weather patterns while, at the same time, minimizing environmental impacts. The array layout was chosen to maximize the use of the open field portions of the Site. Within this layout, approximately 5,902 photovoltaic modules will be installed at a 25-degree fixed tilt with an azimuth range of 180-200 degrees south. The racking configuration will mount two modules on top of one another in a longitudinal format achieving a maximum height of approximately eleven (11) feet. The photovoltaic array will feed sixteen (16) Sungrow Model SG125HV inverters for a total output of 1.99MW AC.

Eversource reviewed the Project's designed output during their system impact study process which is identical to the electrical design of previous approved projects Lodestar has developed including Suffield (Petition #1159), Norcap North and NorCap South in East Windsor (Petition #1294 & #1295), Enfield (Petition #1380), Winchester (Petition #1398A), and North Canaan (Petition #1412). Eversource determined that the distribution circuit located along East Main Street south of the Project Site is suitable for the additional output from the Project. This new incremental clean energy generation will improve grid resiliency in Connecticut 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 consists of modules, racking and inverters. Photovoltaic modules and racking equipment have a designed life and warranty extending for twenty (20) years or greater. The inverters have a designed life and warranty of approximately



ten (10) years or greater. Therefore, the anticipated operational life of the Project is twenty (20) plus years. At the end of the operational life of the Project, Lodestar will remove all equipment (e.g. racking system, panels, inverters, electrical collection system, etc.) from the Project Site.

See **Exhibit 4**.

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 performs this isolation via a SEL 351 Vista Switchgear which continually monitors for deviations in frequency, current and voltage outside of Eversource parameters. If a fault is detected, the switchgear automatically opens the circuit and restricts the Project from production. The equipment specifications for the proposed equipment are attached hereto as **Exhibit 2**.

## **V. NO SUBSTANTIAL ENVIRONMENTAL IMPACTS**

Conn. Gen. Stat. § 16-50k (a) provides that a Certificate is not required if an electric generating facility meets the air and water quality standards of the Department of Energy and Environmental Protection (“DEEP”) and does not have a substantial adverse environmental effect. Lodestar engaged various environmental professionals to conduct a comprehensive environmental analysis. See **Exhibit 8** (Environmental Assessment), which, includes information regarding the location of the Site, wetlands and vernal pools along with associated impacts, State Historic Preservation Office (“SHPO”), Natural Diversity Database (NDDDB”) and **Exhibit 9** Federal Aviation Administration (“FAA”) determinations and **Exhibit 11** noise analysis. Lodestar consulted with CT DEEP and other relevant agencies to evaluate potential environmental impacts. For these reasons and those addressed further below, this Project avoids, reduces, and mitigates potential environmental impacts.

**A. AIR QUALITY**

The Project will not generate any emissions but rather, as demonstrated in Exhibit 10, the Project will contribute to carbon reduction. The Project will have no air emissions during operation and only very minor air emissions of regulated air pollutants and greenhouse gases during construction. Lodestar 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 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. The Project will reduce particulate disruption by replacing the existing gravel operations on the Site (which is causing significant disturbance) thereby improving air quality for the immediate surrounding area.

**B. WILDLIFE RESOURCES**

Petitioner submitted the Project Site information to CT DEEP NDDDB and received a determination that there are no reported populations of state or federal listed species on this property (NDDDB Determination No.: 202009902, dated August 28, 2020). The NDDDB indicated that there are populations of two (2) state-listed fish species associated with the Blackberry River, which is located south of the Site across East Main Street, approximately 1,600 feet from the Site. The agency recommended the Petitioner consult with a CT DEEP Fisheries biologist if stormwater generated at the Site will be discharged to the Blackberry River. Petitioner completed that consultation and was informed, via electronic mail dated June 23, 2021, which is

included in **Exhibit 8**, that “ impact would be minimal if any and that there would be no further consultation required at this time.” Therefore, the Project will have no impact on any wildlife resources.

### **C. WETLANDS AND WATERCOURSES**

The Project Site was investigated for the presence of state and federal wetlands by Eric Davison of Davison Environmental, a Connecticut certified soil scientist. A small portion of forested wetlands (a.k.a. wooded swamps) are present along the northeastern property boundary and drain in a southerly direction to a perennial stream. These wetlands continue offsite where the majority of the wetland occurs. Wetland hydrology ranges from saturated to seasonally flooded. The tree canopy is dominated by red maple (*Acer rubrum*), eastern hemlock (*Tsuga canadensis*), green ash (*Fraxinus pennsylvanica*) and American elm (*Ulmus americana*). The shrub and ground cover layers are dominated by spicebush, Japanese barberry, Morrow’s honeysuckle, skunk cabbage (*Symplocarpus foetidus*) and tussock sedge (*Carex stricta*).

An unnamed perennial stream is located along the southeastern property boundary. It carries flows from the property’s forested wetlands, as well as offsite wetlands farther to the northeast, and drains south across East Main Street to the Blackberry River. The stream is steeply sloping, has a near linear north-south channel alignment, and a substrate dominated by large stones (from cobble size to boulders). The channel is well-defined with no bordering wetlands due to the steep topography. The streamside vegetation consists of hardwood trees.

Bordering the access road into the Site are a series of man-made drainage ditches, one of which was demarcated as an intermittent watercourse. These ditches were created by the landowner to control surface runoff from the access road and carry flows to the stream. They are largely unvegetated, with eroded sand and gravel that discharges from the unpaved access road.

These features are strictly flow conveyance features, with no habitat function. They do not contain base flow and do not provide habitat for aquatic species.

A single vernal pool was identified offsite beyond the northern property boundary. It was investigated on April 9, 2021. Due to its location on an adjoining parcel, observations were made from the property limits, primarily using binoculars. The pool was confirmed to contain two common vernal pool indicator species, the wood frog (*Lithobates sylvaticus*) and spotted salamander (*Ambystoma maculatum*), as egg masses of both species were visible floating atop woody vegetation on the pool's surface. As a result, the resource is considered a high-quality or Tier 1 vernal pool.

In order to assess the vernal pool qualitatively, the methodology described in *Best Development Practices, Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States* (Calhoun and Klemens, 2002, a.k.a. the BDP) was used. The BDP assessment considers two management zones, referred to as the Vernal Pool Envelope (VPE, 0-100 feet) and the Critical Terrestrial Habitat (100-750 feet). The pool's VPE zone presently has 11% development and the CTH zone has 15.7% development.

No Project activity is proposed within one hundred (100) feet of the vernal pool. Approximately 4.1 acres of Project development is proposed within the CTH zone, which will increase total development within this zone from 15.7% to 24.8% (9.1% increase). This post-development habitat alteration complies with the BDP guidelines, as it proposes no development within the VPE Zone and less than 25% development within the CTH Zone.

#### ***D. STORMWATER MANAGEMENT***

Petitioner completed a drainage analysis to review pre-and post-development runoff at the Site. Petitioner's report is attached hereto as **Exhibit 7**. As can be seen from **Exhibit 7** and

herein, construction and operation of the Project at the Site will fully comply with requirements of the Department and Energy and Environmental Protection (“DEEP”) stormwater requirements, including the now proposed but not implemented Appendix I. The Project will have no adverse environmental effect on surface water quality.

In May 2021, Petitioner requested a pre-application meeting the Department of Energy and Environmental Protection (“DEEP”). This meeting took place on June 23, 2021. During this meeting, DEEP staff made several recommendations regarding the Project’s design as it relates to stormwater maintenance. In response, Petitioner has made the following substantive changes to the Project’s design:

- Petitioner has removed most of the proposed disturbance on areas with slopes greater than 15%, with such areas now representing less than 5% of the total development. This was done directly because of comments from staff at the Stormwater Safety Program at DEEP.
- Petitioner has removed all development that was originally proposed directly uphill from residential abutters, at the request of staff from both the Stormwater and Dam Safety Programs at DEEP.
- Petitioner has included a phased construction process, whereby a full growing season will be allowed after the stormwater basins are constructed. This will allow for full stabilization of these areas prior to the installation of racking. Petitioner also redesigned all stormwater control basins to maintain a maximum grade of 3:1 and provided for additional rip-rap on the slopes to ensure stability.

Petitioner provided an updated conceptual site plan reflecting these changes to DEEP Staff on July 14, 2021, July 28, 2021 and again on October 20, 2021. Petitioner has not received

any further comments from DEEP staff since July, 2021. Simultaneous with the filing of this Petition, Lodestar is filing its general permit application with DEEP stormwater.

***E. FLOODPLAINS***

No portion of the Project Site or property is located within the one hundred (100) year flood zone or special flood hazard areas.

***F. DRINKING WATER RESOURCES***

A review of the Connecticut Aquifer Protection Area Map prepared by the CT DEEP Bureau of Water Protection and Land Reuse depicts the western portion of the property within the North Canaan (Eddy) Aquifer Protection Area. The Project Site is located outside (east) of this aquifer protection area. Therefore, the Project will have no impact on any drinking water resources.

***G. HISTORIC RESOURCES***

Heritage Consultants o conducted a Phase IA Cultural Resources Assessment Survey of the Project Site and determined that no historic or archaeological resources will be affected by the Project. Lodestar has submitted Project plans and a copy of the Phase 1A Survey to the SHPO on September 29, 2021 and is waiting on the agency's confirmation of these findings that the proposed Project will have no impact on historic resources. A copy of the Phase 1A Survey is included in **Exhibit 8**. A copy of the SHPO determination letter will be provided to Council upon receipt.

***H. SCENIC VALUES***

The Project is located north and upgradient of East Main Street. The existing vegetation along the frontage on East Main Street will remain.

No state or local designated scenic roads, scenic areas, public recreational areas or public open space are located near the Site and therefore none will be physically or visually impacted by development of the Project. Additionally, there are no CT Blue Blaze Hiking Trails located proximate to the Site.

The nearest potentially sensitive visual receptor to the Project was determined to be a residential structure located nearly five hundred (500) feet to the southeast. Given the existing dense vegetation separating the Project Site and the topography of the Project Site and surrounding area, it is anticipated that there will be no visual impact to the neighboring residence or the surrounding area in general. In addition, Petitioner has met with the owner of this property to inform the owner of the proposed Project and, to date, the owner has not expressed any concerns about the Project.

#### ***I. PUBLIC HEALTH AND SAFETY***

Lodestar 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 (7) foot high safety fence and locked 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, Lodestar will conduct all activities during normal working hours.<sup>2</sup>

***J. NOISE***

While no formal noise study was completed for the Project, the Project is not anticipated to be a source of noise and will be in compliance with DEEP and Town of North Canaan regulations. Once the Project is constructed and operational, the only equipment that will emit noise consists of the three (3) inch cooling fans for the sixteen (16) inverters, which cannot be heard outside of the Project fence line. The noise output for those inverters is contained in **Exhibit 2** attached hereto and Lodestar’s analysis and compliance with applicable noise regulations is attached hereto as **Exhibit 11**. Those inverters are not active and produce no sound at night.

***K. FAA***

Pursuant to 14 CFR § 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 CFR § 77.9(b)(1) The Project

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<sup>2</sup> If we are still working under state of Connecticut COVID-19 guideline at the time of construction, Petitioner will abide by all health requirements outlined for outdoor construction including washing stations, worker distances and other applicable requirements.



Site information has been submitted to the FAA for review and approval and a copy of the FAA determination of no hazard is attached hereto as **Exhibit 9**.

***L. CARBON DEBT ANALYSIS***

Lodestar has conducted an independent analysis of the Carbon Debt and Carbon Offsets of this Project. The Project calls for the removal of no more than 7.3 acres of forested vegetation or trees. Lodestar’s analysis is based upon the United States Environmental Protection Agency conversion factor to identify the amount of carbon sequestered in one year by one acre of average U.S. forest: 0.85 metric tons (MT) CO<sub>2</sub> (EPA, 2017). Accordingly, the Project will begin with a Carbon Debt of 1.632 metric tons.

The expected annual output of the Project will be approximately 3,398 MWhs per year. Using the EPA Greenhouse Gas Equivalencies Calculator, the estimated annual carbon offset of the Project is 2,408.8 MT CO<sub>2</sub>. Greenhouse gas equivalencies for this estimated offset include:

- 524 passenger vehicles driven for one year;
- 2,661,637 pounds of coal burned; and
- 290 homes’ energy use for one year.

Anticipating an annual “carbon debt” of 5.43 MT CO<sub>2</sub> and an annual carbon offset of 2,408.8 MT CO<sub>2</sub>, Lodestar performed the following calculation to determine the duration of time to offset the carbon debt of the tree clearing:

$$\text{Offset Time in Days} = \text{Annual Carbon Debt} / (\text{Annual MT CO}_2 \text{ Offset/days Per year})$$

Using this formula, Petitioner has determined that it would take approximately 0.97 days to produce a net improvement in carbon reduction. It would take approximately 18.325 days to recover the loss of carbon sequestration by the 7.3 acres of cleared trees over 20 years.

## **VI. PROJECT CONSTRUCTION AND MAINTENANCE**

The construction of the Project will have an anticipated duration of approximately eight to twelve months, depending on the timing of applicable approvals, requiring the services of local electrical, civil and structural contractors. The initial phase of construction will be the improvement of the temporary construction access road, and construction of the internal road located on the western boundary of the photovoltaic array. Stormwater controls will be installed and, as required by DEEP, construction activities will not commence until a full growing season has occurred. Based on the existing schedule, construction activities would then commence in the fall of 2022. Next, 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 western edge of the array. A single SEL 351 Vista Switchgear will also be mounted to this pad. In parallel, Eversource will install three (3) utility poles at the site access and provide utility interconnection to the site. The electrical contractor will then install a medium voltage circuit from the SEL 351 Vista Switchgear to the Eversource point of common coupling. 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 North Canaan requirements. As noted above, the Petitioner will utilize erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Erosion and Sedimentation Control throughout construction of the Project.

Once construction is complete and the Project is operational, the Project Site will be monitored remotely twenty-four (24) hours a day, seven (7) days a week through a data

acquisition system (DAS). The DAS is capable of detecting weather, production from all equipment at the Project Site and safety concerns related to grid outages or faults. See **Exhibit 3.** An operations and maintenance team will perform detailed scheduled annual inspections of all equipment at the Project Site. In addition, the Petitioner's operations and maintenance team is on-call at all times in the event of unscheduled equipment maintenance or safety related concerns. Site vegetation is typically mowed three (3) times annually or as needed.

## VII. CONCLUSION

The Project, a grid-side distributed resources Project with a capacity of less than 65 MW, is among the types of Projects that the Council can approve by declaratory ruling. Accordingly, and for the reasons stated herein, because the proposed Project will meet state air and water quality standards and will not have a substantial adverse effect on the environment, Petitioner respectfully requests that the Council approve the location and construction of the proposed Project by declaratory ruling.

Respectfully submitted,

Petitioner  
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**Exhibit 1 – Site Plans**

## **Exhibit 2 – Equipment Specifications**

## **Exhibit 3 – Operations and Maintenance Plan**

**Exhibit 4 – Decommissioning Plan**



**Exhibit 5 – Service List - Abutters Notification**

**Exhibit 6 – Service List – Agencies and Officials**

**Exhibit 7 – Stormwater Management Report**

## **Exhibit 8 – Environmental Assessment**

**Exhibit 9 FAA - Determination of No Hazard**

## **Exhibit 10 – Carbon Debt Analysis**

## **Exhibit 11 – Noise Analysis**

**Exhibit 12 - Town of North Canaan Letter of Support**