PETITION OF LSE DELPHINUS 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 1.992 MW AC SOLAR PHOTOVOLTAIC FACILITY IN ENFIELD, CONNECTICUT

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STATE OF CONNECTICUT SITING COUNCIL

PETITION OF LSE DELPHINUS LLC FOR A DECLARATORY RULING THAT NO CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS REQUIRED FOR THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF A 1.992 MW AC SOLAR PHOTOVOLTAIC FACILITY IN ENFIELD, CONNECTICUT	**PETITION NO. _____** **SEPTEMBER 12, 2019**

I. INTRODUCTION

Pursuant to Conn. Gen. Stat.§§ 4-176 and 16-50k(a) and Conn. Agencies Regs.§ 16- 50j-38 *et seq.*, LSE Delphinus 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 1.992 MW AC, and associated equipment ("Project") consisting of approximately 9.86 acres (inclusive of all of solar panels, transformers, electrical switchgear, monitoring equipment and access roadways) to be constructed on a 24.42 acre parcel located at Long Hollow Road, Enfield, Connecticut, also known as assessor's parcel number #6775753 (the "Project Site"). Approximately 75% of the Project Site currently consists of an existing sand and gravel pit, with the remaining portion consisting of open and wooded areas.

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. § l6-50k(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 145. Lodestar will lead the Project development, construction and finance 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, commercial businesses, 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 four (4) operating projects in Connecticut.[1]

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

Carrie Larson Ortolano, Esq.
Associate General Counsel
Lodestar Energy LLC
40 Tower Lane, Suite 145
Avon, CT 06001
cortolano@lodestarenergy.com

[1] Note that the 500MW of solar Projects includes Projects that have been developed by Lodestar principals prior to joining the Company.

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

Jeffrey J. Macel
Principal
Lodestar Energy LLC
40 Tower Lane, Suite 145
Avon, CT 06001
jmacel@lodestarenergy.com

III. PROPOSED PROJECT

A. PROJECT BACKGROUND

In developing this Project, the Petitioner has taken into account the State's energy policy 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 December 28, 2017. In addition, the Project will be subject to a virtual net metering agreement(s) with the Towns of Enfield and East Windsor ("VNM"). The VNM agreements related to the Project are awaiting finalization.

B. SITE SELECTION

The Company 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 and mutual benefits (the ability to develop the Project without disturbing any greenfield land); and,

- Proximity of existing electrical infrastructure and the proposed cost of interconnecting to this infrastructure.

After performing an initial Site evaluation, the Company began a preliminary design of a Site layout that would best avoid or minimize any potential negative environmental impacts. The Company has designed the Project to maximize the usage of the pre-disturbed portion of the Site and minimize the impacts on any surrounding vegetated portions of the Site. The Company conducted further diligence on the Project Site and entered into a option to lease the Project Site. The Company performed significant public outreach with Town leadership and administration including: meeting with the Town Manager and Assistant Town Manager, the Director of Development, the Director of Public Works, the Director of Finance, appearing before the Town Council, and anticipates receiving appropriate letters of support from the Enfield Town Manager on behalf of the Town. At the request of Town officials, Lodestar held a public informational session at the Enfield town hall on September 9, 2019 and invited (by providing legal notice via publication and direct mailing) all abutting property owners to such meeting. It should be noted Lodestar is working directly with the Town of Enfield so that the Town can directly receive the benefits of hosting the solar array in the Town of Enfield. The proposal will enable the Town to purchase power from the Project at a significant discount, and pass those savings on to its taxpayers. It is estimated that the power purchase agreement will save the Town of Enfield over $1 million in electricity costs. During the site selection and evaluation process, Lodestar has retained the following consultants to assist in the evaluation and design of the Project:

- J.R. Russo & Associates – civil engineering/land surveying/planning
- RBI Solar – geotechnical and solar design services

- All Points Technology – phase I environmental site assessment and habitat and wildlife review and evaluation
- D&E – mechanical engineering and design
- CES – electrical engineering and testing
- ArcDesign – interconnection design and medium voltage analysis

C. PROPERTY DESCRIPTION

The Project will occupy approximately 9.86 acres of the entire 24.24 acre parcel located on the East side of Powder Hill Road, north of the intersection with Monroe Road and Abbe Road in Enfield, Connecticut[2]. A vicinity map is included in Exhibit 1. The property is owned by Powder Hill Sand & Gravel LLC (the "Landowner") and has historically been used as a gravel and sand pit as well a storage and staging site for the owner's landscaping and road construction business. The Site is bounded to the north by undeveloped, privately owned land, to the west by undeveloped land owned by the State of Connecticut, to the south land owned by the Connecticut Water Company, and to the east by residential properties. Exhibit 1 includes the vicinity and land use maps which depicts the surrounding land uses within one-half mile of the Project Site based on the Town of Enfield's zoning map and regulations.

The Project Site is located in the center of the parcel. The Project Site will be accessible from Powder Hill Road via a newly installed gravel driveway, approximately ninety (90) feet to the south of the existing driveway. The purpose of relocating the access driveway will be to improve site lines for ingress and egress to and from the Site. The Project Site has been historically for

[2] The Enfield assessor's office uses the address of Long Hollow Road for the Site. Ingress and egress to and from the Site is from Powder Hill Road

staging gravel, sand and fill materials for the gravel business is currently operated on the Site. *See* Exhibit 1. The Petitioner currently holds an option to lease the Site and is also in active discussions to purchase the entire Site from the Landowner. It is the intent of the Landowner, regardless of whether the Petitioner leases or purchases the Site, to cease its operations on the Site within one (1) year of completion of construction of the Project.

D. PROJECT DESCRIPTION

If this Project is approved by the Siting Council, Lodestar will exercise its option and enter into a long-term lease (20 years) that will give it the right to construct, operate, and maintain the solar facility at the Project Site. The Project will involve the construction of approximately 9.86 acres of ground-mounted solar photovoltaic panels and related improvements. The work will include minimal clearing and grubbing (<1.2 acres, most of which is low scrub brush), construction of access roads; layout and placement of foundation systems, racking, approximately 8,570 340 Watt solar PV panels and 12 Solectria XGI 1500-166 166 kW string 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 access road will be relocated approximately ninety (90) feet south of the current access driveway to improve site lines along Powder Hill Road. The new access drive will be designed in accordance with local requirements to accommodate emergency vehicles and fire trucks. The security fence will completely enclose the PV facilities and will consist of a seven (7) foot chain-link ballasted fence with gated access.

The PV panels will be mounted on a driven post racking system at a 25 degree fixed tilt facing due south. Inverters will be mounted on a concrete pad to the southwest of the array. The maximum height of the panels will be approximately eight (8) feet. The image below is an example of the type of panels and racking system that will be utilized. In addition, as noted on Exhibit 2, the Petitioner intends to install a concrete pad for future battery storage at the Site. In the event that Petitioner seeks to install battery storage at a later date, Petitioner will seek to amend any approval with the Council to reflect that and obtain all regulatory approvals required for that proposed installation.

Given the fact that the majority of the Project Site has previously been disturbed, very limited removal of trees (<1.2 acres with only forty eight (48) trees of six (6) inches in diamater or greater proposed to be removed) will be necessary to prepare the array location for equipment installation, as well as to maximize the electrical production of the system as virtually the entire Site is currently disturbed and cleared. At the end of the operational life of the Project, the Company will remove all equipment (*e.g.* racking system, panels, inverters, electrical collection system, etc.) from the Project Site.

The Company will install the Project in the area shown on the Site Plans in Exhibit 2. The image below is an example of a similar solar array field installed by the Company.

The Project construction period is estimated to take approximately four to six (4 - 6) months from issuance of all required permits. Subject to regulatory approval, Petitioners anticipate commencing construction in the first quarter of 2020.

Project Schedule:

Task	Duration
mobilization and site preparation	2 weeks
civil work: road construction, tree clearing, grading	2 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 23 kV overhead circuit that runs along Powder Hill Road, which is part of Eversource's distribution system. Petitioner has already completed (1) an interconnection application; and (2) an impact study with Eversource. 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. The interconnection services agreement executed on April 30, 2018 by the Petitioner and Eversource will enable the Project to interconnect to the distribution system to deliver the electricity produced at the Site. The Project is, therefore, fully approved to interconnect by Eversource.

The interconnection will require the installation of three (3) new poles extending from the existing utility pole, located on the west side of Powder Hill Road at the entrance to the access road, to the array location on the west side of the Project Site. Eversource will own and install a load break on the first new pole, a pole mount 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. The Company will install a riser pole with a load break and fuse cutouts and will direct the interconnection circuit underground. The Company will install an underground 3-phase 23 kV line running approximately one hundred eighty (180) feet from the point of common coupling/riser pole to the pad mounted switchgear at the array location.

F. LOCAL INPUT & NOTICE

As discussed above, the Company has actively sought input and approval from the Town of Enfield 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, the Company:

- Has been regularly updating Town officials since 2018 on the status of the Project;
- Appeared before the Town Council on July 1, 2019;
- Is working with Town to enter into a power purchase agreement whereby the Town will benefit from the energy produced by the Project via cost savings pursuant to VNM;
- Met with the Town Director of Development Services and Town Manager on August 23, 2019;
- Organized and attended a public informational session on September 9, 2019 at the Enfield town hall, which was noticed in the local newspaper and to which the Company sent notice to all abutting property owners, which meeting was attended by seven (7) neighbors;
- Will be providing notice to the Town of the filing of this Petition to the Siting Council.

Additionally, as required by the Regulations of Connecticut State Agencies § 16-50j-40(a), the Company provided notice of this petition to all required persons and appropriate municipal officials and governmental agencies. Attached as Exhibits 7 and 8 are copies of the certifications of service to abutters and required officials respectively.

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. The array layout is a rectangular format with setbacks from east, west and southern forests that cause shading. In effect, minimal tree clearing is required. As noted previously, only forty-eight (48) trees of six (6) inches or greater in diameter are proposed to be removed during the construction process. Within this rectangular layout 8,570 photovoltaic modules will be installed at a 25 degree fixed tilt with an azimuth of 180 degrees due south. The racking configuration will mount two modules on top of one another in a longitudinal format achieving a maximum height of approximately eight (8) feet. The photovoltaic array will feed twelve (12) Solectria XGI 1500-166 166 kW inverters for a total power output of 1.992 MW.

Eversource reviewed the Project's designed output during their system impact study process. Eversource determined that the distribution circuit 27H8 located to the southwest of the parcel on Powder Hill Road is suitable for the additional output from the Project.

The operational life of the Project is based on the designed life expectancy of the equipment. The equipment for the Project is comprised of modules, racking and inverters. Photovoltaic modules and racking equipment, which has a designed life and warranty extending for twenty (20) years. The inverters have a designed life and warranty of approximately ten (10) years. The company expects an inverter replacement during the life of the Project. Therefore, the anticipated

operational life of the Project is twenty (20) plus years. At the end of the operational life of the Project, the Company will remove all equipment (*e.g.* racking system, panels, inverters, electrical collection system, etc.) from the Project Site.

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 751 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 is attached hereto as Exhibit 3.

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. The Company engaged J.R. Russo and All Points Technology Corporation, P.C. ("APT") to conduct a comprehensive environmental impact assessment. *See* Exhibits 9 (Phase I ESA), 10 (Natural Diversity Data Base), 13 (Aquifer Map), 14 (State Historic Preservation Office "SHPO") and 15 (Town of Enfield wetlands maps). The Company consulted with CT DEEP and other relevant agencies, evaluated potential environmental impacts, and consulted with the Federal Aviation Administration ("FAA"). For these reasons and those addressed further below, this Project avoids, reduces, and mitigates potential environmental impacts.

A. ENVIRONMENTAL SITE ASSESSMENT

APT performed a Phase I Environmental Site Assessment ("ESA") of the Project Site, in conformance with ASTM E 1527-13. The ESA concluded that the Project Site contained no recognized environmental conditions. Accordingly, APT concluded that no additional investigation or action was required at the Project Site. *See* Exhibit 9.

B. AIR QUALITY

The Project will not generate any emissions but rather, as demonstrated in Exhibit 6, the Project will contribute to carbon reduction. *See* Carbon Debt Analysis attached hereto as Exhibit 6. The Project will have no air emissions during operation and only very minor air emissions of regulated air pollutants and greenhouse gases during construction. The Company 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.

C. WILDLIFE RESOURCES

A review of the CT DEEP Natural Diversity Database (NDDB) Area map dated July, 2019 was conducted by J.R. Russo and revealed that the Project Site is not located within an area identified to potentially have State and Federal Listed Species & Significant Natural Communities.

Notwithstanding the foregoing, Petitioner submitted the Project Site information to CT DEEP and received the initial response on September 5, 2019, attached hereto as Exhibit 10.

Based on the results of this preliminary screening, Lodestar has retained APT to further review the Site for any potential impacts to the species listed in the DEEP NDDB response. The purpose of the review is to confirm initial findings that the Site will have no impact on any threatened, endangered or species of special concern or their habitat due to the historical use of the Site as a gravel pit and the fact that the Site has been previously disturbed.

Lodestar has proposed to seed the Site with a pollinator mix in order to promote a favorable habitat for honey bees and other pollinators. Lodestar has planted pollinator mixes at several of its sites throughout New England (including its project located at 1005 North Street in Suffield (approved by the Council in Petition #1159)), and will seed the inter-row areas and other disturbed areas with a pollinator mix. Lodestar has reached out the Connecticut Beekeeping Association to explore the possibility of permitting beekeeping at the Project Site, subject to Lodestar satisfying any safety requirements associated therewith. Therefore, the proposed Project will have a positive impact on wildlife and habitat at the Project Site.

D. WETLANDS

The Project Site was investigated for the presence of state and federal wetlands by Certified Soil Scientist Richard Zulick in September, 2019. These investigations revealed a small isolated wetland associated with a groundwater seep within the wooded area at the southern end of the Site. All work associated with the proposed Project is located outside of this wetland area and outside of the one hundred (100) foot regulated area associated with this wetland. Furthermore, none of the proposed activity is located within the watershed of the wetland. No other wetlands,

watercourses or vernal pools were identified on the subject property. A summary wetlands report will be provided to the Council in the coming days.

In addition, the Petitioner investigated to confirm that the proposed Project will not have any impact on any off-Site wetlands. Since the Petitioner does not have access to third party, private property, Petitioner reviewed of the wetland mapping available on the Town of Enfield's GIS website. Based upon that review, there are potential wetlands located across Powder Hill Road to the west. Exhibit 15 provides the portion of the Town Wetland Map in the vicinity of the project site. As discussed in Exhibit 11 and herein *supra,* runoff from the majority of the Site is contained on-Site and has no impact on this downgradient, off-Site wetland. Where runoff from the Site entrance does leave the Site, as discussed in Exhibit 11 and herein *supra*, erosion and sedimentation controls will be implemented during construction to ensure no significant impacts to the water quality which runs off of the Site. As a result, the proposed Project is not anticipated to have any negative impacts on wetland resources.

E. 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 11. As can be seen from Exhibit 11 and herein, construction and operation of the Project at the Site will actually improve drainage conditions at the Site.

The prior gravel removal activities at the Site have created a relatively flat area suitable for the installation of the solar field without the need for re-grading. Thus, earthwork will be limited to the demolition of the existing paved drive, the construction of the new gravel entrance drive, the removal of stumps and backfill of stump holes within the fenced area, and the spreading of topsoil

in disturbed areas and areas that currently exist as bare soil. The removal of stumps will be limited to the trees removed from within the fenced area of the Project. Stumps outside of the fence will remain in an effort to minimize the earth disturbance at the Site.

The proposed fixed panel solar arrays will be installed on elevated racks that provide adequate height above the ground to promote vegetative growth and allow for infiltration. As a result, the areas containing the solar arrays can be considered pervious vegetated groundcover. All disturbed and existing bare soil areas will receive a minimum of four inches (4") of topsoil and be seeded with an eastern pollinator seed mix. By establishing a vegetated cover, the development of the Site will promote quicker infiltration and reduce runoff.

The majority of the Project Site currently consists of exposed, unvegetated soil remaining from the gravel removal operation. Runoff from the northern and central portions of the proposed solar array currently sheet flows westerly to a low spot along the western edge of the site where it ponds and eventually infiltrates back into the sandy soils. Similarly, runoff from the southern portion of the solar array currently flows southerly to another low spot along the southern edge of the property where it also ponds and eventually infiltrates back into the sandy soils. The only runoff from the Project area that leaves the Site is from around the site driveway. Runoff from this area is collected via a pipe inlet and catchbasin and piped to Town's drainage system at the edge of Powder Hill Road. The drainage patterns for the proposed Project will not change the existing drainage patterns. Thus, discharge from the Site will be limited to the area around the site entrance where the disturbance will be limited to relocation of the site driveway. *See also* Exhibit 11.

As note, A detailed Drainage Report was prepared by J.R. Russo & Associates, LLC and is provided as Exhibit 11. The report includes an analysis of the existing and proposed hydrologic conditions to determine if the development will result in significant changes to the stormwater

discharge from the Site. As discussed above, the only discharge from the Project area is limited to the area surrounding the Site entrance where disturbance will be limited to approximately 0.25 acres associated with the relocation of the driveway. However, as detailed in Exhibit 11, the proposed driveway modifications will result in a reduction in impervious area and associated reduction in the peak rates of discharge from the Site. In addition, the establishment of a vegetated groundcover within the pit floor will also reduce the generation of runoff and promote infiltration. As a result, the report concludes that the proposed project will not have a negative stormwater impact on downgradient properties.

During construction and until vegetation is established, the Site runoff will be allowed to continue to sheet flow across the Site, mimicking the existing condition. Erosion control measures at the Site will include: the installation of perimeter silt fence in areas downgradient of construction, minimizing soil disturbance by maintaining existing grades; installation of inlet protection in the existing on-site catch basin; maintenance of existing riprap check dams in the existing drainage swale; and seeding and stabilization of disturbed areas as soon as practicable. Because the stormwater discharge from the Site is limited to the area of the driveway where the disturbed area totals 0.25 acres (less than the 0.5 acre threshold), registration under the DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities is not required. Notwithstanding the foregoing, the Petitioner has prepared a Stormwater Pollution Control Plan (SWPCP) in accordance with the requirements of the General Permit.

F. FLOODPLAINS

The attached Federal Emergency Management Agency (FEMA) Flood Map, attached hereto as Exhibit 12, indicates that no portion of the Project Site is located within the one hundred (100) year flood zone or special flood hazard areas.

G. DRINKING WATER RESOURCES

A review of the Connecticut Aquifer Protection Area Map prepared by the CT DEEP Bureau of Water Protection and Land Reuse, attached hereto as Exhibit 13, identifies a mapped Level A aquifer protection area running through the middle of the Project Site. Due to the nature of the current gravel operations and the non-toxic characteristics of solar Projects, this Project is not expected to have a negative impact on the Aquifer. In fact, any proposed activity to the Site should result in a net benefit due to cessation of the current gravel operations.

The proposed activities associated with the proposed Project do not involve the withdrawal of water, nor the storage or use of oil or hazardous materials (other than what is present in the construction equipment). Thus, the proposed Project is not anticipated to have an impact on any surrounding drinking water supplies. Furthermore, the Project Site is replacing a gravel operation, which is likely to have historically adversely impacted the water table in the immediate area. The presence of existing background contamination minimizes any potential impacts from the proposed Project.

H. HISTORIC RESOURCES

On July 22, 2019, a project notification form was submitted to the Connecticut State Historic Preservation Office ("SHPO") for review of the proposed Project in relation to historic and archeological resources. Lodestar received a response from the SHPO dated July 29, 2019 confirming that the Project will have no adverse effects to historic resources. *See* SHPO response letter attached hereto as Exhibit 14.

I. SCENIC VALUES

The Project is located approximately one hundred (100) feet east of Powder Hill Road and is separated from Powder Hill Road by a row of large-growth trees with canopy heights of

approximately fifty (50) to seventy (70) feet in height, none of which are proposed to be removed as part of the Project. The Project's site plan additionally calls for the installation of new evergreen vegetation at the southwesterly corner of the site near the planned access road. *See* Exhibit 2. As a result, the visibility of the Project from Powder Hill Road will be extremely limited, and the potential for visual impacts to Powder Hill Road are minor.

The nearest potentially sensitive visual receptor to the Project was determined to be the existing residential house to the south of the Project Site located on the property owned by Noah Larkin. The Project will be located more than five hundred (500) feet from the residence, which includes approximately two hundred (200) feet of dense forest vegetation. Therefore, it is anticipated that there will be no visual impact to this residence. Given the existing dense vegetation surrounding the Project Site and the topography of the Project Site and surrounding area, it is anticipated that there will be no visual impact of the Project to the surrounding area.

J. PUBLIC HEALTH AND SAFETY

The Company 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 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, the Company 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.

K. 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 Enfield regulations. Once the Project is constructed and operational, the only equipment that will emit noise consists of the fans for the twelve (12) inverters. The noise output for those inverters is contained in Exhibit 3 attached hereto and Lodestar's analysis and compliance with Town of Enfield Noise Ordinance is attached hereto as Exhibit 16. Those inverters are not active at night. In fact, the Project will have a positive impact on noise in the vicinity of the Project Site since, within one (1) year of the completion of construction of the Project, it is the Site Owner's intent to terminate any gravel operations at the Site, which will result in a decrease in noise from the Site.

L. 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)(l) The northern property line of the Project Site is approximately 18,000 feet from the southeastern end of the runway at Skylark Airpark. The Project's nearest panel is approximately another 15 feet+/- from the Project Site's property line. Thus, the closest structure (a PV panel) will be approximately 18,015 feet from the end of the runway.

However, the elevation at the end of the runway is approximately one hundred twenty-one (121) feet. The elevation of the ground surface at the highest point where the Company is installing PV panels is approximately one hundred eighty-five (185) feet. Even if the panels were to extend fifteen (15) feet high (to elevation 200), the difference in elevation is only seventy-nine (79) feet over the 18,015 feet. Thus, the array's highest structure does not rise above the limiting 100:1 slope, which at a distance of 18,015 feet would be elevation 301 feet (121 feet+ 18,015 feet/100). Accordingly, when considering either the Project's distance to the end of the runway or the elevation of the Project's site in relation to the end of the runway, the Company is not required to file a notice with the FAA.

Notwithstanding the foregoing, the Project Site information has been submitted to the FAA for review and approval and after receipt of the FAA determination of no hazard, a copy of that determination will be forwarded to the Council.

M. CARBON DEBT ANALYSIS

Lodestar has conducted an independent analysis of the Carbon Debt and Carbon Offsets of this Project. The Project calls for the disturbance of no more than 1.5 acres including the removal of

any 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) CO2 (EPA, 2017). Accordingly, the Project will begin with a Carbon Debt of 1.275 metric tons.

The expected annual output of the Project will be 3,567,000 kWhs per year. Using the EPA Greenhouse Gas Equivalencies Calculator, the estimated annual carbon offset of the Project is 2,522 MT CO2. Greenhouse gas equivalencies for this estimated offset include:

- 536 passenger vehicles driven for one year;
- 2,757,561 pounds of coal burned; and
- 302 homes' energy use for one year.

Anticipating an annual "carbon debt" of 1.275 MT CO2 and an annual carbon offset of 2,522MT CO2, Lodestar performed the following calculation to determine the duration of time to offset the carbon debt of the tree clearing:

Offset Time in Days = Annual Carbon Debt / (Annual MT CO2 Offset/days Per year)

Using this formula, Petitioner has determined that it would take approximately 0.185 days to produce a net improvement in carbon reduction. It would take approximately 3.690 days to recover the loss of carbon sequestration by the 1.5 acres of cleared trees over 20 years.

This analysis does not account for energy used as part of material extraction; solar panel manufacturing and production; manufacturing of balance of system components or Project installation. It also does not include the carbon dioxide that is expected to be released from the tree removal. *See also* Exhibit 6 attached hereto.

VI. PROJECT CONSTRUCTION AND MAINTENANCE

The construction of the Project will have an anticipated duration of approximately four (4) to six (6) months requiring the services of local electrical, civil and structural contractors. The initial phase of construction will be the single access road to be constructed on the western boundary of the photovoltaic array. 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 in the southwest corner of the array. A single SEL 751 Vista Switchgear will also be mounted to this pad. In parallel, Eversource will install (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 751 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 Enfield requirements. As noted above, the 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 complete and the Project is operational, the Project Site will be monitored remotely twenty-four (24) hours a day, seen (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. An operations and maintenance team performs detailed scheduled annual inspections of all equipment at the Project Site. In addition,

the 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. Snow removal from Site access roads is performed for larger snow accumulation to ensure access is maintained for emergency vehicles.

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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