

SR Litchfield, LLC

**PETITION OF SR LITCHFIELD, LLC FOR A DECLARATORY RULING THAT A
CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS
NOT REQUIRED FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF
A 19.8 MEGA WATT (AC) SOLAR PHOTOVOLTAIC POWER GENERATION
FACILITY IN LITCHFIELD AND TORRINGTON CONNECTICUT**

FEBRUARY 5, 2021



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1. INTRODUCTION

Pursuant to Section 16-50k(a) and Section 4-176(a) of the Connecticut General Statutes (“CGS”) and Section 16-50j-38 *et seq.* of the Regulations of Connecticut State Agencies (“RCSA”), SR Litchfield, LLC (“Petitioner”) hereby petitions the Connecticut Siting Council (the “Siting Council”) for a declaratory ruling that a Certificate of Environmental Compatibility and Public Need (“CECPN”) is not required for the construction, operation, and maintenance of a ground-mounted solar photovoltaic (“PV”) facility of approximately 19.8 MW(ac)¹ to be constructed in the Town of Litchfield and City of Torrington, Connecticut (the “Project”).

CGS § 16-50k(a) provides, in relevant 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 . . . the construction or location of any . . . 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 Environmental Protection [and] , (ii) the council does not find a substantial adverse environmental effect

As described more fully below, the construction, operation, and maintenance of the proposed Project satisfies the criteria of CGS § 16-50k(a) and will not have a substantial adverse environmental effect.

As a participant and awardee of the Connecticut Department of Energy and Environmental Protection (“DEEP”) Small-Scale Clean Energy Request for Proposals (“RFP”)

¹ Direct current (dc) is used for the bulk transmission of electrical power and is the type of electric power produced by the solar panels (i.e., the panel nameplate rating). Alternating current (ac) is the form in which electric power is delivered to businesses and residences from the utility (i.e., the project’s actual output). Accordingly, a solar facility must convert the “dc” power to “ac” before it can be delivered to the utility, which is achieved by the project inverters. Because the sun does not shine all the time and allow the panels to produce at 100% of their nameplate “dc” rating, a higher “dc” rating always exists once the power is converted into “ac” and delivered to the utility (e.g., Petitioner will need approximately 25.1 MWdc to produce 19.8 MW(ac)).

under Public Act 15-107 § 1(b) and 1(c)² and CGS § 16-50j, this Project is exempt from the requirements of CGS § 16-50k(a)(iii) as established by and through Public Act No. 17-218.

2. PETITIONER

SR Litchfield, LLC is a Delaware limited liability company with an office at 222 Second Avenue S., Suite 1900, in Nashville, Tennessee. SR Litchfield, LLC was organized in 2018 for the purposes of developing, constructing, and operating the proposed 19.8 MW(ac) solar photovoltaic facility described herein. Leading the development on behalf of the Petitioner is Silicon Ranch Corporation, a company based in Nashville, Tennessee. SR Litchfield, LLC is a wholly owned subsidiary of Silicon Ranch Corporation. Silicon Ranch is a leading developer and operator of solar energy facilities. Silicon Ranch is one of the largest independent solar power producers in the country. Its portfolio includes more than 135 solar facilities in fifteen (15) states.

Correspondence and/or communications regarding this petition should be addressed to:

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SR Litchfield, LLC
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A copy of all such correspondence or communications should also be sent to the
Petitioner's attorneys:

² In the table of DEEP's November 28, 2016 Press Release entitled *CT DEEP Announces Small-Scale Clean Energy Projects to Move Forward in Response to RFP* the Project is listed as "Litchfield Solar Plant + Park Project, Litchfield Solar Plant I Facility".

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3. PROPOSED PROJECT

3.1 PROJECT HISTORY

Sections 1(b) and 1(c) of Public Act 15-107, An Act Concerning Affordable and Reliable Energy, gave the DEEP the authority to solicit proposals for Class I renewable energy sources, Class III sources, passive demand response, and energy storage systems to secure cost-effective resources to provide more affordable and reliable electric service, consistent with the state's energy and environmental goals and policies established in the 2014 Integrated Resources Plan and 2013 Comprehensive Energy Strategy. Pursuant to this authority, in March 2016, the DEEP conducted an RFP. The Project was one of twenty-five selected by DEEP pursuant to the RFP.

3.2 SITE SELECTION

The site selection for the Project was based on a detailed evaluation of the following key criteria:

- Site suitability (solar resource size, grade and surrounding topography);
- Site availability (ability to lease or purchase land);
- Proximity to critical infrastructure (suitable electrical grid access);
- Compatibility with local land use.

Once the initial evaluation was completed, a preferred site was selected by Renewable Ventures, LLC, the prior owner of the Project, for development and preliminary due diligence work was initiated. Ultimately, six (6) contiguous parcels, totaling approximately two-hundred

twelve (212) acres, were selected for the Project. Three (3) of the six (6) parcels are located to the east of Rossi Road and Wilson Road. The remaining three (3) parcels are located north and south of Litchfield Town Farm Road, and west of Rossi and Wilson Roads (“Site”).³

The Site includes, in the:

- Town of Litchfield:
 - an approximately 50-acre parcel located west of Wilson Road and south of Town Farm Road (Litchfield Tax Parcel 162-020-015). *See Exhibit A*, p. 4 (PV-104).
 - an approximately 59-acre parcel located east of Wilson Road (Litchfield Tax Parcel 162-019-009). *See Exhibit A*, p. 5 (PV-104).
- City of Torrington:
 - an approximately 38-acre parcel located south of Highland Avenue, between Westside Road (to the west) and Wimbledon Gate North (to the east) (Tax Parcel 217-004-074). *See Exhibit A*, p. 2 (PV-101).
 - an approximately 18-acre parcel located west of Rossi Road (Tax Parcel 217-001-024). *See Exhibit A*, p. 3 (PV-102).
 - an approximately 47-acre parcel located west of Rossi Road and north of Litchfield Town Farm Road (Tax Parcel 217-004-016). *See Exhibit A*, p. 5 (PV-104)

³ The Project has negotiated and will enter into a Collector Line Easement Agreement with The Connecticut Light and Power Company d/b/a Eversource Energy to facilitate the intra-connection of the Project across public right-of-way.

- an approximately 0.33-acre parcel located south of Litchfield Town Farm Road, and north of the Litchfield/Torrington town line (Tax Parcel 217-014-075). *See Exhibit A*, p. 3 and 4 (PV-102 and PV-101).

These parcels are adjacent to a suitable interconnection substation, are currently owned by Silicon Ranch Corporation, and have enough suitable land to build the Project. The use of the Site for a solar array represents a comparable increase of tax revenue for the both the Town of Litchfield (“Town”) and the City of Torrington (“City”) and favorable low-impact development of the land as opposed to other potential uses.

The Petitioner retained the following consultants to assist in the evaluation of the Site and design of the Project: (1) HDR Engineering, Inc. of the Carolinas (“HDR”); (2) Public Archaeology Labs (“PAL”); (3) Provost & Rovero, Inc.; and (4) REMA Ecological Services, LLC (“REMA”); (5) All Points Technologies Corporation; and (6) Urban Solution Group.

These Project consultants conducted preliminary due diligence investigations, wetland and natural habitat assessments, cultural resources and archaeological studies, geotechnical exploration, noise impact assessment, and visual and civil engineering analyses. Project representatives have been in contact with officials in Litchfield and Torrington, and staff at the DEEP and the State Historic Preservation Office (“SHPO”) regarding the Site and the Project.

3.3 PROPERTY DESCRIPTION

The Site is owned by Silicon Ranch Corporation, the development lead on behalf of the Petitioner. The Site is zoned Rural Residences (RR) District in Litchfield and R-60 and R-40 (Residential) in Torrington.

Currently, the Site consists mostly of open grass fields previously used for farming and wooded areas. A Connecticut Light and Power Company d/b/a Eversource Energy (“Eversource”) electric power transmission lines cross through the northeastern section of the

Site. The Site contains one major riparian corridor and two unnamed perennial tributaries that cross through the Site from north to south. *See* Exhibit A and Exhibit U, § 2.0.

Based on the favorable nature of the Site, the Project was awarded to Renewable Ventures, LLC from the DEEP RFP process in 2016. Silicon Ranch Corporation acquired the Project from Renewable Ventures, LLC in 2017. Given the DEEP RFP award at this Site location and the favorable diligence completed over the last four years, the Petitioner has found no reason to consider an alternative locations for the Project.

The Site is not located in a local historic district or zone in either the City or the Town and is abutted by low density residential development, grass farm fields and wooded areas. Higher density residential areas are also located to the east of the Site in Torrington.

In totality, the “Project Area,” representing the limits of disturbance, would encompass approximately eighty (80) acres to accommodate the Project, temporary construction staging areas, access and peripheral tree-free zones (to mitigate shading effects). This will require clearing of approximately forty (40) acres of deciduous and mixed deciduous-evergreen second-growth trees, and ruderal woods and scrub shrub thickets and tangles. Only approximately 4.8-acres will be cleared due to tree shading. This 4.8-acre area will be restricted from grubbing activities to maintain the woody understory and any tree stumps will be left in place. Upon completion, the fence-enclosed Project Area will comprise approximately eighty (80) acres. Of the acres within the proposed Limit of Disturbance approximately twenty-three and half (23.5) acres are mapped as Connecticut Prime Farmland Soils and approximately twenty-seven (27) acres are mapped as Statewide Important Farmland Soils. *See* Exhibit C.

3.4 PROJECT DESCRIPTION

The Project will consist of the installation of approximately fifty-five thousand two-hundred fifteen (55,215) Photo Voltaic (“PV”) modules and associated ground equipment, upgrading and installation of an access roads, installation of perimeter maintenance/access roads and installation of electrical intra-connection and interconnection facilities. *See Exhibit A.* The anticipated wattage of each PV module is four-hundred fifty-five (455) Watts. The anticipated size of each PV module is approximately 6 feet 10.5 inches x 3 feet 5 inches x 1.4 inches. The efficiency of each PV module is up to twenty-five percent (25%), which includes the additional energy harvesting from the rear side of the modules.

The PV modules will be mounted in a portrait orientation. The anticipated minimum and maximum overall height of the PV modules above grade is two feet (2’) and eleven feet (11’), respectively. A specification sheet for the anticipated PV module is included herein. *See Exhibit A, p. 7.* However, the PV module is subject to change as additional optimization and market conditions may dictate. Based on the current equipment specification, each rack holds a maximum of fifty-four (54) PV modules, but this may be adjusted as necessary.

The Project will use PV module technology, which has been extensively tested, is in wide use across the solar industry and meets the traditional level of reliability reflected in the solar power generation industry. A ground mount, fixed tilt system will allow for sufficient energy production per solar module. The Project will utilize approximately two-thousand forty-five (2,045) strings, with twenty-seven (27) modules per string, and ninety (90) string inverters. Information on the currently selected inverters and transformers can be found in *Exhibit A, p. 7.* The anticipated route of underground electrical conduit connecting the arrays to the pads and the pads to the interconnection point is shown in *Exhibit A.* Electrical and structural plans for the

Project have been initiated and will be finalized in preparation for the stormwater and building permits in the second or third quarter of 2021.

The solar array layout utilizes existing grades to the fullest extent possible in order to minimize the required amount of earth work, but some earth work is proposed throughout a majority of the Project Area in order to control stormwater runoff and meet equipment tolerances. Soil disturbance is also required to install the PV panels support structure, associated equipment, and access roads. Panel foundations will be secured using either a driven pile technology or ground screws. All racking will be designed to meet applicable Connecticut State building codes for wind and snow loads. The aisle width between PV module rows will be approximately ten feet (10’).

The Project will be accessed off of Rossi Road, Wilson Road, Litchfield Town-Farm Road, and Highland Avenue as illustrated in Exhibit A. Inside the Project fence line, the Petitioner will install perimeter maintenance/access roads throughout the Project Area, which will be approximately sixteen feet (16’) wide with two feet (2’) shoulders and approximately eight thousand six-hundred sixty-seven (8,667) feet long in total.⁴ The construction trailer and temporary parking area will be located just west of Rossi and Wilson Roads on the south side of Litchfield Town-Farm Road. Equipment deliveries and staging will be located on the north side of Litchfield Town-Farm Road and east of Rossi and Wilson Road. *See* Exhibit A.

The entire Project Area will be surrounded by a seven-foot (7’) chain linked fence topped with one-foot (1’) of barbed wire in accordance with National Electric Safety Code (“NESC”) and with mesh size to be determined but no greater than one and a quarter inch (1.25”) in accordance with Siting Council requirements. The fence will be raised two-inches (2”) above

⁴ The access road from Highland Avenue will be narrower in order to reduce impacts to wetlands.

ground level in all locations to ensure safety and compliance with Adaptive Multi-Paddock (“AMP”) grazing techniques, as further detailed in Section 6.2. A copy of the Site development plans illustrating the above-described Project attributes is included in Exhibit A.

At the point of interconnection with Eversource, Petitioner will provide a utility class circuit interruption device equipped with a multifunctional relay to serve as the Interconnection Interruption Device. Revenue metering and a gang operated disconnect switch will be provided on the utility side of the meter. Additional equipment to monitor circuit voltage and to disconnect the facility from the grid will also be installed as needed on existing grid circuits to protect the system during system outage.

The Project is expected to produce in excess of 33,032,000 Kilowatt-Hours (kWh) of energy in the first year of operation. The Project will have a design life of forty (40) years and efficiency loss of approximately half percent (0.5%) per year. The Project will provide 19.8 MW(ac) at the point of interconnection under normal operating conditions. The actual Project output will fluctuate based on temperature, irradiance, and various loss factors such as soiling and degradation. The projected AC capacity factor for the Project is approximately nineteen percent (19%). Factors such as soft shading (*e.g.*, air pollution) or hard shading (*e.g.*, weather events, dust, pollen) may reduce the energy production of the Project. These potential impacts are included in the capacity factor and loss assumptions for the Project.

The Project is not participating in the Agricultural Virtual Net Metering Program or other renewable energy program; all of the power produced is being sold to Eversource and The United Illuminating Company (“UI”) through the Project’s Power Purchase Agreements (“PPAs”). The PPAs were approved by the Public Utilities Regulatory Authority (“PURA”) in Docket No. 17-01-11 – *PURA Review of Public Act 15-107(b) Small-Scale Energy Resource*

Agreements.⁵ The total capacity of the PPAs is 19.8 MW(ac).⁶ While there are mechanisms in the PPAs to allow the Petitioner to reduce the system size of the Project, any reduction in the system size would result in a negative impact to the financial viability of the Project. To remain viable, the system size will need to remain 19.8 MW(ac). The PPAs have a term of twenty (20) years and have no provisions for extension or renewal options.⁷

Construction of the Project is expected to begin in the third quarter of 2021 with mobilization of equipment, land clearing efforts, and grading activities. Further site work and land preparation is expected to be completed by the end of 2021 with construction and installation efforts for the array equipment completed in Summer 2022. Final site, testing, and commissioning will be completed by the end of 2022. Note, however, that Project construction timing is subject to change.

At the end of its useful life, the Project will be decommissioned in accordance with the requirements of the decommissioning plan attached hereto as Exhibit D.

3.5 INTERCONNECTION

The Project will be interconnected to the Eversource distribution network via the existing 27.6 kV distribution feeder on the Site that connects into the Campville 14R substation located at 420 Wildcat Hill Road, Harwinton, CT.⁸ Equipment pads required at the point of

⁵ See PURA Docket 17-01-11, *PURA Review of Public Act 15-107(B) Small-Scale Energy Resource Agreements*, Decision (Sept. 7, 2017) (“17-01-11 Decision”), available at <http://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/55e1a6ff05cfe85f85258194004b16bb?OpenDocument>.

⁶ See 17-01-11 Decision, at 5.

⁷ See 17-01-11 Decision, Attachment 1, at 5.

⁸ Eversource will seek the necessary permits/approvals (if any) for this work.

interconnection, such as the Project's switchgear, will require reinforced concrete, as will inverter pads.

The electrical connection transitions to overhead service just outside of the Project's fence line. *See Exhibit A.* After the connection passes under the fence line, it enters the switchgear, and then transitions overhead via a single riser pole. Pole-mounted metering will be located at the transition point as well. While an underground route to Eversource's distribution system may be more reliable, the relative magnitude of reliability improvement in comparison to an overhead solution is expected to be minimal and would not warrant the anticipated additional cost and disturbance required for such an alternative.

The interconnection facilities at the Site will consist of the installation of approximately three (3) fifty foot (50') tall poles⁹ with connecting spans of distribution line from the location where the feeder crosses Wilson and Rossi Roads to its termination at a riser pole near the Project fence line. From there, the feeder will connect to the main revenue meter and Project switch gear, which will be either pole- or pad-mounted. All inter-array wiring will be installed underground between the groups of panels, equipment pads, and the Project switch gear. In addition, inverters, transformers, and communications and control equipment will be installed at the Site. The inverters and transformers will be mounted on approximately twenty-foot (20') by forty-foot (40') concrete equipment pads at or just above grade. *See Exhibit A.*

The interconnection facility design and construction will be performed in accordance with the Eversource and UI Guidelines for Generator Interconnection and State of Connecticut,

⁹ This is a preliminary estimate based on Silicon Ranch's experience installing similar projects and is subject to change based on the final results of Eversource's facilities study. The final interconnection design, including the number and height of the poles will be included in the Project's Development and Management ("D&M") Plan.

ISO-New England (“ISO-NE”), and Federal Energy Regulatory Commission (“FERC”) requirements, as applicable. As part of the interconnection process, the Petitioner has successfully completed a utility-sponsored Scoping Meeting, Interconnection Application Request and an Application Review, Feasibility Study, and Distribution and Transmission System Impact Studies and is now completing the Facilities Study. The scope of these studies includes:

- Circuit Modeling;
- Power Flow Analysis;
- Voltage Impact Study;
- Thermal Impact Study;
- Short Circuit Study;
- Review of Distribution Equipment Interrupting Ratings;
- Protection Coordination Review;
- Assessment of Transfer Trip Requirements; and
- Review of Protection Schemes.

The Facilities Study, once completed, will provide the detailed design for the interconnection arrangement into the 27.6kV distribution circuit and any circuit or substation upgrades and final cost estimate. The Facilities Study is the final step prior to receiving an Interconnection Agreement, Interconnection Authorization, Installation, Commissioning Test(s) and final approval to energize the system.

4. PROJECT BENEFITS

A public benefit exists if a project “is necessary for the reliability of the electric power supply of the state or for a competitive market for electricity.” CGS § 16-50p(c)(1). The Project will generate much of its power at peak times, when the demand for electricity is greatest, and will thereby provide the electrical system with flexible peaking capacity that is necessary to keep the electrical grid stable. The Project’s production will overlap, in large part, with the anticipated

peak demand times of the local electric grid. Further, the Project will participate in the ISO New England capacity market, which ensures adequate future capacity to meet load growth projections, as well as sufficient capacity to serve peak load under grid contingency situations. These factors, coupled with additional diversification of the generation mix in New England, yield a net benefit for grid stability.

Further, the Project supports the State's energy policies as set forth in CGS § 16a-35k, including the goal to "develop and utilize renewable energy resources, such as solar and wind energy, to the maximum practicable extent." The Project will provide clean, renewable, solar-powered electricity and assist the State in meeting its legislatively mandated obligations under the Renewable Portfolio Standard.

The Project will also assist the State of Connecticut in reducing greenhouse gas emissions and reducing criteria air emissions pollutants associated with the displacement of older, less efficient, fossil fuel generation. Petitioner utilized the United States Environmental Protection Agency's ("USEPA") Greenhouse Gas Equivalencies Calculator¹⁰ to conduct a carbon debt analysis. While the Project anticipates requiring the clearing of approximately forty (40) acres of forested land, the Project will displace approximately twenty-three thousand three-hundred fifty-five (23,355) metric tons of CO_{2e} in the first year of operation and approximately eight-hundred forty-eight thousand six-hundred twenty-five (848,625) net metric tons of CO_{2e} will be avoided over the Project's forty (40) year expected life. It will take approximately one-hundred and seventy-five (175) days for the Project to offset its carbon debt.

As part of larger state, national and global strategies, reductions in greenhouse gas emissions from this Project will have long-term secondary biological, social, and economic

¹⁰ Available at <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

benefits. Similarly, the advancement of renewable resources at a distributed level contributes to our nation's desire for energy independence and reduces our dependency upon foreign countries where geo-political issues may not align with national policy.

The Project will also hire local labor, as practical, and be a source of increased revenue for local businesses during construction.

5. LOCAL INPUT & NOTICE

Throughout the Project planning process, the Petitioner has kept officials from the Town and the City apprised of the Project's progress and the Petitioner is committed to continuing to solicit input from Town and City officials, other relevant agencies, and from the general public in an effort to develop an ultimate design that results in the most public benefit with the least environmental impact. The Petitioner has developed a working relationship with Town and City officials and the community by pursuing a multi-faceted and inclusive public outreach effort.

In 2019, representatives of Silicon Ranch met with Town and City officials, including Litchfield's First Selectman and Torrington's Mayor, to introduce Silicon Ranch and the Project. Litchfield First Selectman Leo Paul presented the proposed Project to the Litchfield Board of Selectman on August 22, 2019. Shortly thereafter, the Project obtained an official letter of support from the Town.¹¹ *See Exhibit F.* The Petitioner has similarly reached out to officials with the City with offers to discuss the Project and make presentations, but those offers were declined.

More recent community outreach efforts include the following:

¹¹ In November of 2019, Litchfield elected Denise Raap as its new First Selectman of the Town of Litchfield. Silicon Ranch has engaged with Litchfield's current First Selectman, Denise Raap.

- Silicon Ranch scheduled a meeting with the Litchfield Board of Selectman for March 2020 and a “town hall” meeting with neighbors in April 2020, however, these were both cancelled due to the COVID-19 pandemic.
- On May 5, 2020, Petitioner presented information about the Project to the Litchfield Board of Selectman and the general public via Zoom. The Board of Selectmen and general public had the opportunity to ask questions and interact with Petitioner during the meeting. A video recording of the meeting was made available on the Town’s YouTube page for those unable to attend. Elinor Carbone, Mayor of Torrington, accepted the invitation for the live presentation, but was not able to attend.
- On May 19, 2020, Petitioner submitted a press release to the *Republican-American* newspaper about the Project. The Press release was not printed or published online by the *Republican-American*.
- On September 22, 2020, Petitioner sent postcard mailers to property owners abutting the property that included Project details and welcomed neighbors to contact Petitioner directly with any questions or comments *See Exhibit E*.

As required by RCSA § 16-50j-40(a), the Petitioner also provided notice of its intent to file this Petition to those adjacent property owners listed on Exhibit G; and the municipal officials and government agencies listed on Exhibit H. A map showing abutting properties can be found in Exhibit I.

The Petitioner conducted outreach to DEEP and met on May 4, 2020 and September 21, 2020 with Beatriz Milne, Chris Stone, Neal Williams, and others to discuss the Project’s location, key environmental characteristics, and findings such as wetlands and stormwater, and

receive their feedback. Each of these consultations were done in order to incorporate DEEP's comments into the Site Layout and Design. Particularly, early engineering efforts for the Project focused heavily on stormwater and erosion and sedimentation control measures, and site stabilization. Petitioner filed its General Permit Registration Form for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities and Stormwater Pollution Control Plan with DEEP on October 20, 2020 and is working to secure its General Permit by Spring 2021.

6. POTENTIAL ENVIRONMENTAL EFFECTS

The Petitioner and its consultants, REMA, HDR, and PAL, conducted comprehensive environmental and cultural resources assessments of the Site and the Project between 2017 and 2020. As part of this process, relevant agencies were consulted, Project facilities were overlaid onto the Site, environmental impacts were evaluated, and mitigation was applied as appropriate.

6.1 NATURAL ENVIRONMENT AND ECOLOGICAL BALANCE

Historical aerial photographs indicate that most of the Site has been open land since at least 1934, and only few areas were wooded at that time. Portions of the Site were used for agricultural activities, including pasturing, hay production, silviculture (*i.e.*, logging), and arboriculture (*i.e.*, fruit trees) from at least 1934 and until at least 2006. Hay production on portions of the Site continued through 2020. Between the 1940s and 1960s a portion of the far southwest area of the Site, measuring approximately three (3) acres, was quarried for sand and gravel, but was not a commercial operation. The remainder of the Site has been wooded area since at least 1955.

Some hazardous substances are required to be used or stored on the Site during construction of the Project, including gasoline or diesel-powered equipment during construction activities, requiring fuel storage. Industry best practices for the use, management and

containment of such substances will be strictly enforced during construction and incorporated into operations and management plan for the Project. Further, the inverter step-up transformers located at each equipment pad will use biodegradable oil for cooling. Transformers such as these typically use biodegradable oils (Envirotemp FR3 Fluid) and use approximately 650 gallons. The safety data sheet (“SDS”) for Envirotemp FR3 Fluid is in Exhibit K. Accordingly, the appropriate Spill Prevention, Control, and Countermeasure (“SPCC”) plans will be implemented at the Site. An April 2020 updated Phase I Environmental Site Assessment (“ESA”) prepared for the Site concluded that no recognized environmental conditions (“REC”) or other related concerns exist. *See* Exhibit J.

In order to design and install the most efficient Project, while also avoiding unnecessary forest impacts, the Petitioner conducted a “shading” study and analysis in order to determine the extent of tree clearing required to avoid a shading effect on the PV panels. Due to the constrained usable area for siting PV panels at the Site, as noted above, some tree removal will be required in order to accommodate the array footprint itself, as well as to ensure that shading to the panels is kept to minimal levels during the most productive times of the day. Based on the study and analysis, the trees are assumed to be approximately forty-five feet (45’) tall, the wall thickness for the tree cluster is assumed to be fifteen feet (15’), and fifty percent (50%) tree wall transparency. In order to minimize tree clearing and maximize energy output of the Project design and configuration, an average of forty-foot (40’) setback from the array across the Site was utilized.

The proposed Project layout results in an average annual shading loss of approximately three and nine-tenth percent (3.9%), which the Petitioner has determined will allow for the achievement of target energy output numbers under the PPA. In order to achieve this percentage,

the Petition will need to clear approximately forty (40) acres of trees, resulting in the clearing of approximately one-thousand nine-hundred eighty (1,980) trees with a six inch (6”) or greater diameter at breast height. *See Exhibit L.*

At the end of design life of the Project, all equipment (*e.g.*, racking system, panels, inverters, electrical collection system, etc.) will be removed in accordance with the Decommissioning Plan. *See Exhibit D.*

6.2 LAND MANAGEMENT APPROACH

Silicon Ranch takes an integrated management approach for all land and vegetation management needs on its solar power plants throughout the country. Site-specific management plans are developed for each project reflecting the unique management needs of that project based on various regulations, conservation goals, environmental attribute goals, and the local/regional community and cultural contexts. Typical integrated vegetation management strategies consist of mechanical, chemical, and biological control measures as needed to address any specific issues that arise during the useful life of the facility.

Silicon Ranch has developed an internal holistic land management program called “Regenerative Energy” in order to shift land management strategies throughout our operating fleet towards a more ecologically sensitive land management strategy. This is achieved through the integration of very specific regenerative agricultural practices into the long-term land management strategy and an annual ecological monitoring program that informs managers of the outcomes of management decisions. The Integrated Vegetation Management Plan for the Project is included as Exhibit M.

As part of the program, local and/or regional ranchers are contracted to provide Adaptive Multi-Paddock sheep grazing (“AMP Grazing”) as the lead vegetation control measure, with mechanical and chemical control measures used as needed to meet performance

specifications of the vegetation management program and to comply with local, state, and federal regulations regarding noxious weeds and other issues. AMP Grazing facilitates the sequestration of carbon and other GHGs in the soil, can reduce erosion through higher organic matter in soils, thereby increasing water infiltration and water holding capacity of the soils, and generally increases the health and value of the land and associated ecosystems. Silicon Ranch's use of AMP Grazing and other holistic land management practices are intended to distribute additional positive economic impacts locally and regionally while increasing biodiversity and keeping lands in agricultural production.

6.3 PUBLIC HEALTH AND SAFETY

Overall, the Project will meet or exceed all health and safety requirements applicable to electric power generation. Each employee working on the Site will:

- Receive required general and Site-specific health and safety training;
- Comply with all health and safety controls as directed by local and state requirements;
- Understand and employ the Site health and safety plan while on the Site;
- Know the location of local emergency care facilities, travel times, ingress and egress routes; and
- Report all unsafe conditions to the construction manager.

During construction, heavy equipment will be required to access the Site during normal working hours (7 a.m. to 7 p.m. Monday through Saturday; Sundays only as required), and it is anticipated that sixty (60) to seventy (70) construction vehicles (average size light-duty) will make daily trips to the Site. After construction is complete and during operation, minimal traffic is anticipated. For standard operations and maintenance activities, one to two light-duty vehicles will visit the Site on a monthly recurring basis, on average. There will not be permanent staff present at the Site and the facility will be remotely monitored 24 hours per day, 7 days per week,

365 days per year by Silicon Ranch staff and contracted third-party operations and maintenance providers.

The Project will not produce significant noise during operation. While, during the construction of the Project, higher levels of noise are anticipated, all work will be conducted during daylight hours and it is not anticipated that the levels of noise will exceed State or local noise standards or limits. *See Exhibit N.*

Because the solar modules are designed to absorb incoming solar radiation and minimize reflectivity, only a small percentage of incidental light will be reflected off of the panels. This incidental light is significantly less reflective than common building materials, such as steel, and the surface of smooth water. Most importantly, a majority of the Project will be shielded from view due to existing landscaping and topographical conditions.

The nearest airport is the Waterbury-Oxford in Oxford, CT. Silicon Ranch submitted the Project location to the Federal Aviation Administration's ("FAA") Notice Criteria Tool and received a result indicating "You do not exceed Notice Criteria." Thus, the Project does not require further notification or coordination with the FAA and poses no direct hazard to air navigation for any adjacent airport approach ways by default. *See Exhibit O.*

Prior to beginning Project operation, the Petitioner will meet with Town and City first responders to provide them information regarding response to emergencies at PV facilities, discuss industry best practices, and provide a tour of the Site and the Project. Silicon Ranch employees and/or its third-party operations and maintenance vendors will remotely monitor the Project 24 hours a day, 7 days a week, 365 days of the year. In the event of a fire or emergency requiring site access, first responders will be ensured entry through the use of a "knox box" or equivalent that allows 24/7 rapid access through all gates. In the event of a fire, Silicon Ranch

will remotely disconnect the Project from the Eversource grid, cease inverter operation, and de-energize the Project while emergency personnel are dispatched to the Site, assuming remote access is available. Once Silicon Ranch or its designated vendor arrive on-site, the field personnel will follow appropriate shutdown procedures to the extent shutdowns have not already been performed remotely. This would involve up to and including manually disconnecting the main AC connection to the grid and applying appropriate safety locks.

The Project will have a protection system that will disconnect the Project from the grid under certain contingency scenarios, as well as fault monitoring that would shut the Project down, as is required per Eversource's interconnection guidelines and applicable IEEE and UL standards. It will also be possible to isolate sections of the Project down to the PV module string level to allow for partial power production under the necessary conditions. The Project will comply with all listed codes and standards, such as the National Electrical Code, the National Electrical Safety Code and any applicable National Fire Protection Association codes and standards, as well as others required by Eversource, which include the IEEE and UL standards. There are no known existing or proposed outbuildings or structures that could present a hazard to the Project or its interconnection route.

6.4 AIR QUALITY

Overall, the Project will have minor emissions of regulated air pollutants and greenhouse gases during construction. No air permit is required for these activities. During construction of the Project, any air emission effects will be temporary and will be controlled by enacting appropriate mitigation measures (*e.g.*, water for dust control, avoid mass early morning vehicle startups). Accordingly, any potential effects on air quality as a result of the Project construction activities will be *de-minimis*.

During operation, the Project will not produce air emissions of regulated air pollutants or greenhouse gases (*e.g.*, PM₁₀, PM_{2.5}, VOCs, GHG, or Ozone). Thus, no air permit will be required. Moreover, over forty (40) years, the Project is projected to result in the avoidance of approximately eight-hundred forty-eight thousand six-hundred twenty-five (848,625) metric tons of CO₂ equivalent, which is equal to taking approximately one-hundred eighty-three thousand three-hundred forty (183,340) passenger vehicles off the road for one (1) year or the amount of carbon sequestered by approximately one million one-hundred eight thousand two-hundred sixty-five (1,108,265) acres of U.S. forests in one (1) year.¹²

6.5 SCENIC VALUES

No scenic areas would be physically or visually impacted by development of the Project. No recognized scenic areas, outlooks, or designated scenic roads are located proximate to the Site. Furthermore, no public hiking trails or other potential public non-vehicular trails were found to be present in the area that would serve as potential observation points.

Most of the Project will be set back from adjoining roadways and behind substantial vegetative buffers. Some portions of the Project may be visible from a public roadways and adjoining parcels.

6.5.1 Quantitative Visual Impacts

The Site and surrounding areas are characterized by rolling, hilly terrain. A viewshed analysis was completed to determine which portions of the Site would be visible after construction from several locations. Viewshed analysis points were chosen based on two primary factors including:

- Visibility by the public (public highways, etc.).

¹² U.S. EPA Greenhouse Gas Equivalencies Calculator.

- Visibility from private properties with existing scenic view qualities.

The viewshed analysis was completed utilizing aerial LIDAR elevation data and aerial photography captured in 2016 through a joint effort of the Capitol Region Council of Governments and the Connecticut Department of Transportation. The proposed tree clearing limits for the Project were used in conjunction with aerial photography and on-site inspections to determine where trees would remain and obstruct potential views of the Project.

The viewshed analysis assumes that an observer's eye is five (5) feet above the ground elevation at the observation point and the top of the solar array is ten (10) feet above the ground elevation. Field measurement of the mature hardwood trees on the Site resulted in typical height measurements between eighty (80) and ninety (90) feet above ground level to the top of the trees. A tree height of seventy-five (75) feet above ground level was assumed in wooded areas which would obscure views of the Project. Exhibit Y, Figures 1 to 5 show the results of the viewshed analysis at the selected analysis points.

6.5.2 Qualitative Visual Impacts

Four observation points were chosen at the perimeter of the Site to assess the potential for visual impacts after Project. Observation points were chosen based on a number of factors including:

- Visibility potential for the greatest number of people.
- Locations that would be representative of other similar locations/surrounding land uses which would also experience similar potential impacts.
- Existing scenic observation points which may be important to the local neighborhood.

This analysis began with capturing digital photographs at each of the four locations on September 30, 2020. Three dimensional models of the proposed perimeter fencing, solar array

and vegetative screening (where applicable) were created and rendered onto the existing photographs to present a realistic view from each observation point after project construction.

The four observation points are shown on Exhibit Y.

The following is a summary of each observation point:

- **Observation Point 1**

Observation Point (“OP”) 1 is the intersection of Wilson Road and Town Farm Road near the Litchfield/Torrington town line. OP 1 presents an unobstructed view of an existing hay field which will become the northwesterly portion of the Project. Exhibit Y, Figure 7 shows the existing conditions from OP 1. Exhibit Y, Figure 8 shows the proposed conditions from OP 1.

- **Observation Point 2**

OP 2 is at the southerly side of Town Farm Road approximately two hundred (200) feet west of the intersection of Town Farm Road and Wilson Road. OP 2 is representative of views from the public roads including Town Farm Road, Wilson Road, and Rossi Road where existing mature trees will remain in place and provide natural visual buffering. Exhibit Y, Figure 9 shows the existing conditions from OP 2. Exhibit Y, Figure 10 shows the proposed conditions from OP 2.

- **Observation Point 3**

OP 3 is at the easterly side of Rossi Road approximately five hundred (500) feet north of the intersection of Wilson Road and Rossi Road. Similar to OP 2, OP 3 is representative of views from the public roads including Town Farm Road, Wilson Road, and Rossi Road where existing mature trees will remain in place and provide

natural visual buffering. Exhibit Y, Figure 11 shows the existing conditions from OP 3. Exhibit Y, Figure 12 shows the proposed conditions from OP 3.

- **Observation Point 4**

OP 4 is along the easterly boundary of the Site adjacent to the high-density residential subdivision located along Wimbledon Gate North. Several of the residential properties in this area have a minimally obstructed view of an existing hay field which will be developed as part of the Project. OP 4 is representative of the abutting residential properties which may experience the greatest potential visual impact following development of the Project. Exhibit Y, Figure 13 shows the existing conditions from OP 4. Exhibit Y, Figure 14 shows the proposed conditions from OP 4.

6.6 HISTORIC VALUES

On behalf of the Petitioner, The Public Archaeology Laboratory, Inc. (“PAL”) of Pawtucket, Rhode Island prepared an Archaeological Sensitivity Assessment for the Site in June 2019. *See* Exhibit P. PAL identified historic resources in portions of the Site and coordinated with Silicon Ranch in the preliminary design phase to avoid direct impacts by, to the extent possible, excluding these areas from the Project’s footprint. PAL also identified approximately thirty-five (35) acres considered to possess moderate to high sensitivity for containing archaeological resources and recommended that these areas be subjected to subsurface testing using shovel tests.

On June 11, 2019, PAL requested a review of the Project by the SHPO. *See* Exhibit Q. In an email response received July 25, 2019 from SHPO via Catherine Labadia, Deputy State Historic Preservation Officer and Staff Archaeologist, SHPO concurred with PAL’s findings and proposed scope of work for a future Phase I-A Archaeological Field Analysis to be performed at the Site to evaluate sensitive areas. *See* Exhibit R. PAL completed the scope of work and issued

the Phase I Reconnaissance Archaeological Survey (“Phase I RAS”) in October 2020, determining that no further archaeological investigations are warranted and the proposed Project will have no impact to potentially significant archaeological sites based on their findings. *See Exhibit S.*¹³ On November 12, 2020, PAL sent a copy of the Phase I RAS to SHPO. *See Exhibit T.* In the Phase I RAS, PAL concluded that after its extensive investigations that no further investigations are warranted and the Project will have no impact on potentially significant archeological sites. *See Exhibit T*, p. 47. On December 19, 2020, SHPO issued a letter to PAL concurring with PAL’s conclusion and stating that “no historic properties will be affected by the proposed activities.” *See Exhibit X.*

Remnant field stone walls can still be seen in several portions of the Site. Stone walls and piles within the fence line area will be removed as part of the clearing and site preparation process. Stone walls and piles outside of the Project’s fence line, including those demarcating property boundaries, will be maintained to the fullest extent possible.

6.7 WILDLIFE & HABITAT

Extensive field and habitat surveys were conducted to characterize potential special-status plants, wildlife, and their associated habitat that may occur on the Site. In particular, REMA performed the following over the course of thirty-five (35) site visits:

- Vernal Pool Habitat Investigation – April 2017, 2018, 2019 and 2020 (*see Exhibit U* § 6.0);
- Listed Species Surveys – Spring 2017, 2018, and 2019 (*see Exhibit U*, § 7.0); and
- Wetland and Waterway Delineation – Summer/Fall 2017 (*see Exhibit U*, § 5.0).

¹³ The Phase I RAS’s references a one-hundred eighty-five (185) acre area, which is a references to the approximate anticipated area where solar arrays and other development would occur.

HDR also completed an updated Phase I Environmental Site Assessment in April 2020. *See Exhibit J.*

In 2016, REMA conducted its initial review of the Natural Diversity Database (“NDDB”) mapping for threatened, endangered, or special concern species or critical habitats. This review showed several “estimated habitats” for listed species near the Site or overlapping a portion of the Site. *See Exhibit U*, § 7.1. DEEP’s NDDB mapping, revised in June 2020, now reveals that that no Natural Diversity Area overlaps with the Site. *See Exhibit U*, § 7 and *Exhibit W*, Appendix A, Figure 3.

In 2017, REMA requested a NDDB State-Listed Species review by DEEP.¹⁴ DEEP’s response noted the presence of five (5) listed species in the vicinity of the Project: (i) Pale Green Orchid (Special Concern; *Platanthera flava var. herbiola*); (ii) Wood turtle (Special Concern; *Glyptemys insculpta*); (iii) Red Bat (Special Concern; *Lasiurus borealis*); (iv) Hoary Bat (Special Concern; *Lasiurus cinereus*); and (v) Vesper Sparrow (Endangered; *Pooecetes gramineus*). In order to confirm no NDDB habitat areas were present on the Site, REMA requested and was authorized to conduct several targeted surveys for Connecticut-listed species. *See Exhibit W*, Appendix E.

In June 2017, May 2018, and May 2019 targeted searches for Wood Turtle were conducted along the Site’s perennial watercourses. These are the times of year when it would be most likely to observe Wood Turtles within and adjacent to perennial watercourses. Each targeted search occurred over a two (2) to three (3) hour period. No Wood Turtles were observed on the Site during the targeted searches. It is REMA’s opinion, based on extensive experience,

¹⁴ On December 30, 2020, REMA submitted a new Request for Natural Diversity Data Base (NDDB) State Listed Species Review to DEEP. *See Exhibit W*. Ms. Dawn McKay responded to this request via email and stated that the original 2017 list of “listed species” would still be considered valid.

that the possibility of Wood Turtles at the Site is very low based upon the nature and features of the perennial watercourses and riparian corridors on the Site. *See Exhibit U*, § 7.2.

Targeted searches for Pale Green Orchid were conducted by a REMA plant ecologist in June and July 2017, when this orchid is in bloom, at favorable habitats. Responsive to DEEP's requests, habitat assessment and species inventories continued into the early Fall 2017. No Pale Green Orchid were observed on Site during these searches, assessments, and inventories. It was determined that the historical agriculture use at the Site has likely made production limited. The presence of the Project, which will eliminate the historical agriculture uses at the Site, presents the potential for Pale Green Orchid production. *See Exhibit U*, § 7.4.

In June 2017 and July 2019, targeted avian surveys were conducted in early morning hours on mostly sunny days at the appropriate habitats for the Vesper Sparrow. REMA did not observe any Vesper Sparrow on the Site, whether during the targeted avian surveys or during any other fieldwork. It is REMA's opinion that the likelihood that Vesper Sparrows are breeding on the Site is very unlikely based on REMA's observations, available data, and that the preferred habitat for this species is very limited at the Site. A portion of the Site that contained the type of habitat the Vesper Sparrow prefers was checked during the 2017 through 2020 breeding seasons, and no Vesper Sparrows were observed. *See Exhibit U*, § 7.3.

During REMA's targeted avian surveys, it observed and identified as breeders two (2) additional Specials of Special Concern – Bobolink (*Dolichonyx oryzivorus*) and Savannah Sparrow (*Passerculus sandwichensis*). Bobolink was observed at the Site in 2017 through 2020, however, it was determined that while they frequent some fields on the Site in early Spring, successful nesting is rare due to the active hay harvesting in those fields. Savannah Sparrow was also observed at the Site in 2017 through 2020, however, in very limited numbers. Similar to the

Bobolink, it was determined that successful nesting is rare due to the ongoing haying operations. REMA observed both Bobolink and Savannah Sparrow at off-Site locations in the area and both have been reported by local avian enthusiasts in the area. It is REMA's opinion that the Project will not adversely affect the breeding reproduction of these species at the Site or in the immediate vicinity of the Site. See Exhibit U, § 7.3.

Searches for Red Bat and Hoary Bat were not conducted as development of the Project will include seasonal restrictions for the cutting of maternity roosting trees. REMA believes it is likely that Hoary Bat and Red Bat (and potentially the Northern Long-Eared Bat ("NLEB")) utilize portions of the Site during their roosting season. According to the U.S. Fish and Wildlife Service ("USFWS") New England Field Office, Northern long-eared bat's ("NLEB") range encompasses the entire State of Connecticut. Consultation with the DEEP NDDDB *Northern long-eared bat areas of concern in Connecticut to assist with Federal Endangered Species Act Compliance map* (March 6, 2019) revealed that the Site is not within one-hundred fifty feet (150') of a known occupied maternity roost tree and is not within a quarter (0.25) mile of a known NLEB hibernaculum. The nearest NLEB habitat resource to the proposed activity is located in Morris (± 7 miles to the south) and Winchester (± 10 miles to the north). This map reveals that there are currently no known NLEB maternity roost trees in Connecticut. Therefore, the proposed Project is not likely to adversely affect NLEB. See Exhibit W, § 1.2.7.

As a precautionary mitigative measure, tree clearing for the Project will be restricted in accordance with 4(d) rule requirements of the Endangered Species Act associated with the conservation of NLEB. Tree clearing will be limited pursuant to NDDDB's restrictions for the Site. Following construction, significant wooded areas will remain on the Site, or in the vicinity, and expansion of edge habitat will occur, providing additional foraging lanes for bats. It is

REMA's opinion that these measures will ensure the Site continues to provide suitable habitat for the Connecticut and federally listed bats during the Spring and Summer activity period. *See Exhibit U*, § 7.5.

REMA's assessment concluded that is unlikely that any of the species listed in DEEP NDDDB's May 2017 letter occur or breed at the Site. Therefore, none of the listed species would be negatively impacted by the Project with implementation of mitigation measures to protect and enhance habitats for Hoary Bats, Red Bats, and NLEB. *See Exhibit U*, § 7.6.

6.8 WATER QUALITY

The Project will use no water during operations in the production of electricity. Any water utilized during the construction of the Project for dust suppression will be minimal and have no impact on the water quality in the vicinity of the Site.

No Federal Emergency Management Agency ("FEMA") Floodplains are located on the Site. Those portions of the Site in Litchfield are located in flood zone C (areas of minimal flooding) as shown on Flood Insurance Rate Map – Town of Litchfield, Connecticut – Litchfield County – Community Panel Number 090047 0004 B – Effective Date: June 15, 1982. Those portions of the Site in Torrington are located in flood zone C (areas of minimal flooding) as show on Flood Insurance Rate Map – City of Torrington, Connecticut – Litchfield County – Community Panel Number 095081 0001 B – Map Revised: April 4, 1983 and Flood Insurance Rate Map – City of Torrington, Connecticut – Litchfield County – Community Panel Number 095081 0004 B – Map Revised: April 4, 1983. *See Exhibit B* and *Exhibit Z*, at Appendix B.

The Site does not include any areas designed by the DEEP as Aquifer Protection Areas. The nearest Aquifer Protection Area is the Level A Goshen Aquifer Protection Area in Goshen, Connecticut which is approximately two (2) miles northwest of the Site. The next closest Aquifer Protection Area is the Hamill Aquifer Protection Area which is located approximately three and

one-third (3.3) miles from the Site. Because there are no Aquifer Protection Areas in the vicinity of the Site, there are no impacts anticipated from the Project. Finally, groundwater quality at the Site is classified by the DEEP as GA.

6.8.1 Wetlands

REMA completed wetland inspections and delineations between June and October 2017 (*see* Exhibit U) and those delineations were used to design the Project's physical layout in an effort to avoid wetlands features. In fact, Silicon Ranch acquired additional acreage and modified the Project's layout in order to significantly minimize disturbance of wetlands and vernal pools. The Site has approximately twenty-six (26) acres of wetland area, of which the Project is expected to have a direct impact on less than ten thousand (10,000) square feet. *See* Exhibit U, § 8.0 and Exhibit W, § 1.2.6. The Project will maintain an appropriate setback from all wetlands and watercourses on the Site.

The vast majority of the Site is comprised of grassy fields and wooded areas. Approximately twenty (20) "zones" throughout the Site contain distinct wetland areas. These wetland areas are described in detail in Section 5 of Exhibit U. Two (2) semi-permanently to permanently flooded wetland areas on the Site were identified as vernal pool habitats. Vernal Pool 1 is located at the far northwestern corner of the Site, just north of an existing hayfield. Vernal Pool 2 is located in the southeastern portion of the Site, within Eversource's electric transmission right-of-way. *See* Exhibit U, Figure 2, Attachment A. Vernal Pool 1 and Vernal Pool 2 were surveyed for the presence or absence of obligate vernal pool indicators (*i.e.*, wood frog, spotted salamanders, fairy shrimp) during four (4) consecutive amphibian breeding seasons (*i.e.*, 2017 through 2020). *See* Exhibit U, § 6.3.

The 100-foot Vernal Pool Envelopes ("VPEs") are considered critical for vernal pool conservation as they are considered to be most protective against direct "physical" impacts of

vernal pools and are the preferred habitat area for emerging metamorphs. The VPEs for Vernal Pool 1 and Vernal Pool 2 would be preserved in the post-construction phase. *See Exhibit U, § 6.4.*

While the VPE for Vernal Pool 1 would be within the Project's proposed limit of disturbance ("LOD"), the great majority of it is an existing agricultural field . Only a few woodland edge shrubs, and perhaps one or two trees would be cleared, in an area roughly 0.11 acres in size. This disturbance is temporary and the area will be restored following construction. Therefore, it is REMA's opinion that the function of the VPE under these proposed conditions will be higher functioning with regard to vernal pool amphibians than under existing conditions. The proposed LOD will not encroach within the VPE for Vernal Pool 2, some of which is already part of an existing agricultural field. *See Exhibit U, § 6.4.*

The critical terrestrial habitat ("CTH"), the zone outward to 750 feet from the edge of each vernal pool, was also considered to determine the Project's potential impact on Vernal Pool 1 and Vernal Pool 2. In calculating the CTH, the acreage of existing hayfields was excluded as they are not the preferred wooded habitat for vernal pool amphibians. For the purposes of the CTH analysis, hayfields were considered "project neutral," since amphibians will be able to traverse the Project Area post-construction. The CTH for Vernal Pool 1 is considered "conserved", as the Project would only reduce it in area by approximately 0.2 acres and the recommended twenty-five percent (25%) or less disturbance of the CTH would be achieved. *See Exhibit U, § 6.4.*

The Project would reduce the CTH for Vernal Pool 2 by approximately 3.88 acres. This would take the existing CTH impact from approximately twenty-six percent (26%) to approximately thirty-eight percent (38%). REMA believes that site-specific factors mitigate this

impact. First, of the 3.88 acres reduction of the wooded CTH, only 1.49 acres are contiguous optimal habitat to Vernal Pool 1. The balance of this “wooded” acreage is either discontinuous or poor habitat, including field hedgerows and young woods and scrub shrub/vine tangles within Eversource’s electric transmission right-of-way. Second, Vernal Pool 2 is predominately a wood frog breeding pool. Only a few spotted salamander egg masses were counted, and only in the first of the four breeding season surveys. REMA reports that unless there is major additional fragmentation of optimal non-breeding habitat by busy roadways and a significant increase of impervious surfaces, “wood frog vernal pool” can be conserved with wooded CTH that is fifty percent (50%) or greater of the total acreage. Therefore, REMA finds that the CTH for Vernal Pool 2 should also be considered “conserved”. See Exhibit U, § 6.4.

Any selective tree removal in wetlands required to eliminate shading effect on nearby PV modules will be accomplished with the use of various equipment to minimize disturbance to wetland vegetation that will remain and compaction of wetland soils. This will likely be performed with a combination of hand cutting and the use of logging equipment such as forwarders, feller-bunchers with cutting heads, harvester-processor, etc. Equipment entering into wetlands would generally use truck mats and/or swamp mats to minimize disturbance in wetlands, resulting in only temporary wetland impacts. Where safe to do so, mats would be placed directly over shrubs to minimize impact to the wetland understory vegetative cover. Tree tops and logs would be removed from the wetland although some slash would be allowed to remain to provide temporary cover for wildlife. Typically, trees will be cut two feet (2’) to three feet (3’) off the ground surface with no tree stumps removed. In addition, a suitable amount of snags will be created to enhance wildlife habitat by selecting trees that are a minimum six inches

(6") in diameter at breast height ("DBH") and cutting the tree at a height of six feet (6') to eight feet (8') from the ground surface.

Potential short-term, temporary impacts associated with construction activities will be minimized through the proper design, installation, and maintenance of sedimentation and erosion controls in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*. Further, due to the proximity of the proposed development to nearby wetlands and vernal pools, the Petitioner will develop, following Siting Council approval, a wetland and vernal pool protection plan to be implemented during construction to provide additional measures to avoid temporary wetland impacts.

6.8.2 Stormwater Management

Petitioner has taken stormwater management very seriously from an early stage in the development process for the Project. Design and engineering of stormwater and erosion control measures are integral to the overall development plan for the Project. Accordingly, Petitioner has prepared the SWPCP (*see Exhibit V*), which includes a Preliminary Drainage Assessment (*see Exhibit V, Appendix D*), for the Project that details the method and plan for stormwater management at the Site.

Due to the existing topography, the Project will require some areas of grading to lessen the slope and allow for the installation of PV panels. Additionally, there will need to be earthwork to build stormwater and construction stormwater infrastructure consistent with best management practices. Since construction of the Project will disturb more than one (1) acre of land, Petitioner must register under the DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities at least thirty (30) days prior to commencing any construction activities.

On October 20, 2020, Petitioner registered under DEEP Stormwater and Dewatering Wastewaters from Construction Activities General Permit (DEEP-WPED-GP-015), by submitting a complete and accurate General Permit Registration Form and transmittal prior to construction activities and in accordance with applicable regulations at the time of filing. The General Permit Registration Form and transmittal were submitted in the name of SR Litchfield, LLC.

In connection with that registration, the Petitioner will implement a stormwater management plan to minimize any potential adverse environmental effects. These procedures are outlined in the SWPCP for the Project. Upon receipt, the Notice of Permit Authorization under the General Permit will become part of the SWPCP. Additionally, the Preliminary Drainage Assessment (*see Exhibit V, Appendix D*) will serve as an Erosion and Sediment Control Plan in accordance with CGS §§ 22a-325 through 22a-329.

DEEP stormwater regulations require site planning that strives to preserve pre-development hydrologic conditions. Pre-development runoff volume and rate, groundwater recharge, stream baseflow, and runoff water quality are primary areas the DEEP design methodology addresses. Concepts such as designing the development to fit the terrain, limiting land disturbance activities, providing setbacks and vegetated buffers, and maintaining pre-development vegetation shall be utilized to the maximum extent practicable to preserve pre-development hydrologic conditions. Utilizing sizing criterion, and design concepts identified in Exhibit V, Appendix D, the Project's watersheds were analyzed hydrologically in order to provide preliminary site stormwater management design, including permanent stormwater management facilities to meet DEEP requirements.

As per the SWPCP, some disturbance of the Site is required in order to facilitate installation of the arrays and associated equipment to satisfy equipment tolerances and ensure appropriate stormwater control. Analysis shows the need for various temporary and permanent stormwater and erosion control features, including silt fencing, fiber rolls, diversion ditches, and stormwater basins.

As can be concluded from the SWPCP, the Project's stormwater engineering design will mimic existing conditions of the historic drainage patterns to the maximum extent practicable, and limit environmental impacts to wetlands, streams, and habitat. Post-construction, a native seed mix will be implemented. Once the Site is stabilized, temporary erosion and sediment control structures will be removed. Sediment basins located on the Site will be converted into permanent structures to provide peak flow attenuation post-development per the Stormwater Concept Report analysis. No other permanent stormwater controls are necessary due to natural attenuation of runoff that is caused by changing the existing cover type from upland forest¹⁵ to the meadow condition as part of the Project.

7. CONCLUSION

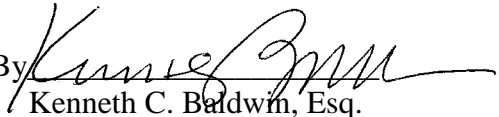
The Project will provide numerous and significant benefits to the Town, the City, the State of Connecticut and its citizens, and will place the Town and the City at the forefront of green energy development while producing substantial environmental benefits with minimal environmental impact. Pursuant to CGS §16-50k(a), the Siting Council shall approve by declaratory ruling the construction or location of a grid-side distributed resources project or facility with a capacity of not more than sixty-five (65) MW, as long as such project meets DEEP

¹⁵ The Site does not fall within a mapped core forest block so no impacts to core forest will result from the proposed Project.

air and water quality standards and will not have a substantial adverse environmental effect. As amply demonstrated within this Petition, the Project meets these criteria.

For all the foregoing reasons, Petitioner requests that the Siting Council issue a declaratory ruling that the proposed Project will comply with DEEP air and water quality standards, will not have a substantial adverse environmental effect and, therefore, that a CECPN is not required for the construction, operation, and maintenance of the Project.

Respectfully submitted,
SR Litchfield, LLC

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