

**SR North Stonington, LLC**

**PETITION OF SR NORTH STONINGTON, 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 9.9 MEGA WATT (AC) SOLAR PHOTOVOLTAIC POWER  
GENERATION FACILITY IN NORTH STONINGTON CONNECTICUT**

**FEBRUARY 25, 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 North Stonington, 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 9.9 MW(ac)<sup>1</sup> to be constructed in the Town of North Stonington, 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”)

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<sup>1</sup> 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 13.86 MWdc to produce 9.9 MW(ac)).

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

## **2. PETITIONER**

SR North Stonington, LLC is a Delaware limited liability company with an office at 222 Second Avenue S., Suite 1900, in Nashville, Tennessee. SR North Stonington, LLC was organized in 2018 for the purposes of developing, constructing, and operating a 9.9 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 North Stonington, LLC is a wholly 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 North Stonington, LLC  
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A copy of all such correspondence or communications should also be sent to the Petitioner's attorneys:

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<sup>2</sup> 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 "North Stonington Solar Plant + Park Project, NS 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);
- Congruence 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. Ultimately, five (5) parcels, totaling approximately one hundred fifty-seven (157) acres,

were selected for the Project. One (1) of these parcels is located to the north of Providence New London Turnpike (“State Route 184”). The remaining four (4) parcels is located to the south of State Route 184 , west of Boombridge Road and north of Interstate 95 (“I-95”) (collectively, the “Site”).<sup>3</sup>

The Site includes, in the Town of North Stonington:

- an approximately 63.54-acre parcel located north of I-95 and between Cranberry Bog Road (to the west) and Boombridge Road (to the east) (Tax Parcel 102-118-3006). *See Exhibit A*, p. 1 (PV-100).
- an approximately 32.94-acre parcel located north of I-95 and between Cranberry Bog Road (to the west) and Boombridge Road (to the east) (Tax Parcel 102-119-9950). *See Exhibit A*, p. 5 (PV-104).
- an approximately 31.13-acre parcel located north of State Route 184 between Stillman Road/Miner Meeting House Road (to the west) and Boombridge Road (to the east) (Tax Parcel 102-111-8238). *See Exhibit A*, p. 2 and 4 (PV-101 and PV-103).
- an approximately 28.22-acre parcel located south of State Route 184 between Stillman Road/Miner Meeting House Road (to the west) and Boombridge Road (to the east) (Tax Parcel 102-111-5299). *See Exhibit A*, p. 3 (PV-102).
- an approximately 1.33-acre parcel located north of I-95 between Spencer Drive (to the west) and Boombridge Road (to the east) (Tax Parcel 102-118-8880). *See Exhibit A*, p. 1 (PV-100).

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<sup>3</sup> 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.

These parcels are currently owned by Silicon Ranch Corporation, and have enough suitable land to build the Project. The use of this Site for a solar array represents a comparable increase of tax revenue for the Town of North Stonington (“Town”) and favorable low-impact industrial development of the land as opposed to other proposed uses.

The Petitioner retained the following consultants to assist in the evaluation and design of the Project: (1) HDR Engineering, Inc. of the Carolinas (“HDR”); (2) Public Archaeology Labs; (3) Provost & Rovero, Inc.; (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 North Stonington, 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 R-60 (Medium-Density Residential District). A majority of the Site was formerly utilized as a sand and gravel mining operation and currently maintains forested uplands and wetland areas. A small family cemetery identified in the westerly portion of the Site will not be impacted by the Project. *See Exhibit A and Exhibit U*, Attachment A, Figure 3. The Site is traversed by two headwater stream corridors and one less well defined drainageway. All of these resources will be avoided the Project. *See Exhibit A*.

Based on the favorable nature and condition 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 and the favorable diligence completed over the last four years, the Petitioner has found no reason to consider alternative locations for the Project.

The Property is surrounded by low density residential uses, a dog kennel, State Route 184, and I-95. In totality, the “Project Area,” representing the limits of disturbance, would encompass approximately forty-seven (47) of the one-hundred fifty-seven (157) acre Site to accommodate the Project, temporary construction staging areas, Project access, and peripheral tree-free zones (to mitigate shading effects). The Project will require clearing of approximately forty-six (46) acres of existing forest with five and a half (5.5) of those acres restricted from grubbing activities to maintain the woody understory. Upon completion, the fence-enclosed Project will comprise approximately forty-four (44) acres. Of the acres within the Limit of Disturbance approximately one half (0.5) acre is mapped as Connecticut Prime Farmland Soils and approximately two-tenth (0.2) acre is mapped as Statewide Important Farmland Soils. *See Exhibit C.*

### **3.4. PROJECT DESCRIPTION**

The Project will consist of the installation of approximately twenty-eight thousand nine-hundred seventy-one (28,971) 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 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.

The PV modules will be mounted in a portrait fashion. 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.

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 one-thousand seventy-three (1,073) strings, with twenty-seven (27) modules per string, and forty-five (45) string inverters. Information on the currently selected inverters and transformers is in Exhibit A, p. 7. The anticipated route of underground electrical conduit connecting the invertors to the transformers and the transformers to the pad mount switchgear (interconnection point) is shown on 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 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 twelve and a half feet (12.5').

The “Northern Array” is located north of State Route 184 and the “Southern Array” is located south of State Route 184. The Southern Array of the Site will be accessed off of Boombridge Road and State Route 184. The Northern Array will be accessed off State Route 184. *See Exhibit A.* Inside the Project fence line, the Petitioner will install perimeter maintenance/access roads throughout the Project Area, which will be approximately sixteen (16) feet wide with two (2) feet of shoulders on each side and approximately 2,228 linear feet long in total.

The entire Project 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”) regulations and with mesh size to be determined but no greater than one and a quarter inch (1.25”) in compliance with Siting Council requirements. The fence will be raised two-inches (2”) above ground level in all locations to ensure safety and compliance with Adaptive Multi-Paddock (“AMP”) grazing techniques, as further detailed in Paragraph 6.2. A copy of the Site development plans illustrating the above-described Project attributes is included as Exhibit V, p. 140.

At the point of interconnection with The Connecticut Light and Power Company d/b/a Eversource Energy (“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 18,215,000 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 a percent (0.5%) per year. The Project will provide 9.9 MW(ac) at the point of interconnection under nominal 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 twenty-one percent (21%). 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.<sup>4</sup> The total capacity of the PPA is 9.9 MW(ac).<sup>5</sup> 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 9.9 MW(ac). The PPAs have a term of twenty (20) years and have no provisions for extension or renewal options.<sup>6</sup>

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<sup>4</sup> 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>.

<sup>5</sup> See 17-01-11 Decision, at 5.

<sup>6</sup> See 17-01-11 Decision, Attachment 1, at 5.

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 end of 2022. Note, however, that Project construction timing is subject to change due to various factors.

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 one (1) new dedicated 13.8 kV distribution feeder that Eversource will construct from the Shunock 32P substation, located at 25 Pendleton Hill Road, North Stonington, CT 06359, southwest of the Project location.<sup>7</sup> Equipment pads required at the point of 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

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<sup>7</sup> Eversource will seek the necessary permits/approvals (if any) for this work.

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 poles<sup>8</sup> with connecting spans of distribution line from the location where the feeder crosses State Route 184 to its termination at a riser pole near the Project fence line. From there, the feeder will then 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. 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, 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, Distribution and Transmission System Impact Studies, and is now completing the Facilities Study. The scope of these studies includes:

- Circuit Modeling;

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<sup>8</sup> 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.

- 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 detail design for the interconnection arrangement into the 13.8kV distribution circuit and 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 Calculator<sup>9</sup> to conduct a carbon debt analysis. While the Project anticipates requiring the clearing of approximately forty-six (46) acres of forested land, the Project will displace twelve thousand eight-hundred seventy-nine (12,879) metric tons of CO<sub>2e</sub> in the first year of operation and approximately four-hundred sixty-seven nine-hundred sixty-one (467,961) net metric tons of CO<sub>2e</sub> will be avoided over the Project's forty (40) year expected life. It will take approximately three-hundred sixty-six (366) 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 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.

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<sup>9</sup> Available at <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.



## 5. LOCAL INPUT & NOTICE

Throughout the Project planning process, the Petitioner has kept officials from the Town apprised of the Project's progress and the Petitioner is committed to continuing to solicit input from Town 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.

In 2020, the Petitioner corresponded with the Town's Planning, Development, and Zoning Official Juliet Hodge and First Selectman Michael Uργο on several occasions. The Petitioner offered to meet with Town officials to discuss the proposed Project but was unable to do so. In Fall 2020, the Petitioner sent postcard mailers to property owners abutting the Site. These postcard mailers included Project details and welcomed neighbors to contact the Petitioner directly with any questions or comments. *See* Exhibit E.

In addition, because of the Project's proximity to the State's boundary, in November 2020 the Petitioner contacted the Town Planner for the Town of Westerly Rhode Island (Nancy Letendre) to discuss the proposed Project. Ms. Letendre offered no comments on the Project.

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 on 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 permit and Stormwater Pollution Control Plan with CT DEEP on October 20, 2020 and is working to secure its permit by Spring 2021.

## **6. POTENTIAL ENVIRONMENTAL EFFECTS**

The Petitioner and its consultants, REMA, HDR, and PAL, have comprehensive environmental and cultural resources assessment of the Site 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 the majority of the Project Area was cleared agricultural land prior to 1934. Between 1934 and the 1970's a majority of the Project Area continued to be used as agricultural land. Between the 1960's and approximately 2004 significant portion of the Site, approximately fifty-eight (58) acres, was excavated to varying degrees to facilitate a sand and gravel mining operation. The remainder of the Site has been wooded for many decades.

Some hazardous substances are required to be used or stored on Site during construction or operation 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 six-hundred fifty (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. A March 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, 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 layout results in an average annual shading loss of approximately two percent (2%), 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 Petitioner will need to clear approximately forty-six (46) acres of trees, resulting in the clearing of approximately three-thousand three-hundred ninety-seven (3,397) 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 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 onto 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 normal working 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 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 Westerly State Airport in Washington County, Rhode Island. 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 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 personnel are dispatched to the facility, 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.*, PM<sub>10</sub>, PM<sub>2.5</sub>, VOCs, GHG, or Ozone). Thus, no air permit will be required. Moreover, over forty (40) years, the Project will result in the avoidance of approximately four-hundred sixty-seven thousand nine-hundred sixty-one (467,961) metric tons of CO<sub>2</sub> equivalent, which is equal to taking approximately one-hundred one-thousand one-hundred (101,100) vehicles off the road in one year and the amount of carbon sequestered by

approximately six-hundred eleven-thousand one-hundred twenty-six (611,126) acres of U.S. forests in one year.<sup>10</sup>

## **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 majority of the Project is located within the interior of the parcels that make up the Site. The interior location combined with existing topography and wooded buffers, which will remain after development of the Project, will result in relatively limited visibility of the Project from publicly accessible vantage points.

### **6.5.2. Qualitative Visual Impacts**

Two (2) observation points were chosen at the perimeter of the Site along State Route 184 to assess the potential for visual impacts after development of the Project is complete.

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 which would also experience similar potential impacts.

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<sup>10</sup> U.S. EPA Greenhouse Gas Equivalencies Calculator.



- Accessibility to photograph existing conditions from a meaningful observation point (e.g., not on abutting private property, etc.).

This analysis began with capturing digital photographs at two (2) locations on September 30, 2020. Three dimensional models of the proposed Project, including perimeter fencing, were created and rendered onto the existing photographs to present a realistic view from each observation point after project construction. The two observation points are shown on Exhibit Y, Figure 1.

The following is a summary of each observation point:

- **Observation Point 1**

Observation Point (“OP”) 1 is the westbound lane of State Route 184 directly opposite 454 Providence New London Turnpike (State Route 184). The view from OP 1 is looking along the westbound lane of State Route 184 and represents the location with the greatest visibility potential to motorists. Exhibit Y, Figure 2 shows the existing conditions from OP 1. Exhibit Y, Figure 3 shows the proposed conditions from OP 1.

- **Observation Point 2**

OP 2 is also the westbound lane of State Route 184 directly opposite 454 Providence New London Turnpike (State Route 184). The view from OP 2 is looking directly at a location where it is anticipated that existing trees will be removed as part of the Project and represents the location with the greatest visibility potential to pedestrian or vehicle passenger traffic along the State Route 184. This would also be representative of the visibility potential from 454 Providence New London Turnpike (State Route 184). Exhibit Y, Figure 4 shows the existing conditions from OP 2. Exhibit Y, Figure 5 shows the proposed conditions from OP 2.

## **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 Property and coordinated with the Petitioner in the preliminary design phase to avoid direct impacts by excluding these areas from the Project’s footprint to the extent possible. PAL also identified approximately fifty-seven (57) 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 a letter 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-A Technical Report (“Phase I RAS”) in November 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.* On November 25, 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 investigation that no further investigations are warranted and the Project will have no impact on potentially significant archeological sites. *See Exhibit S,* p. 57. On December 28, 2020, SPHO 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 wooded areas of the Site. Stone walls and piles within the fence line are 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. In addition, a small cemetery is located in the westerly portion of the Site. All development will occur at least one-hundred feet (100') from this area so as to avoid encountering any unmarked graves.

## **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 twenty-four (24) site visits:

- Vernal Pool Habitat Investigation – April 2017, 2018, 2019, and 2020 (*see Exhibit U, § 6.2*);
- Amphibian Breeding Season Field Survey – 2017, 2018, 2019, and 2020 (*see Exhibit U, § 5.2*);
- Listed Plant Targeted Survey – November 2018 (*see Exhibit U, § 5.2*); and
- Wetland and Waterway Delineation – April 2017, November 2018, and May and June 2019 (*see Exhibit U, § 5.2*).

An eastern spadefoot toad survey is scheduled for May 2021. *See Exhibit U, § 7.1 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 but not overlapping the Site. *See Exhibit U, § 7.1.* DEEP’s NDDB mapping, revised in June 2020, still does not show any Natural Diversity Area overlaps with the Site. *See Exhibit U, § 7 and Exhibit V, Appendix A, Figure 3.*

In 2017, REMA requested an NDDDB State-Listed Special review by DEEP.<sup>11</sup> DEEP's response noted the presence of six (6) listed species in the vicinity of the Project: Sparkling Jewelwing (Threatened; *Calopteryx*); Eastern Pearlshell (Special Concern; *Margaritifera margaritifera*); Low Frostweed (Special Concern; *Crocathermum Propinquum*); Hoary Plantain (Special Concern; *Plantago Virginica*); Red Bat (Special Concern; *Lasiurus Borealis*); and Eastern Spadefoot (Endangered; *Scaphiopus Holbrookii*). In order to confirm no NDDDB habitat areas were present on the Site, REMA requested and was authorized to conduct several targeted surveys for Connecticut-listed species. See Exhibit V, Appendix E.

REMA did not specifically survey for the Sparkling Jewelwing. This species requires flowing waters that tend to be perennial. The intermittent streams present on the Site would not be preferred by this species, if it were present. If this species were to be present at the flowing streams on the Site, the Project development activities would not affect these habitats and the Sparkling Jewelwing would be secure. See Exhibit U, § 7.4. Similarly, REMA determined that the Eastern Pearlshell would not be found at the Site, since the Site does not contain any suitable habitat – perennial streams – for this species. See Exhibit U, § 7.1.

REMA's botanist conducted a moderate-intensity survey for the Low Frostweed. This survey was focused on any areas of the Site with the highest probability of occurrence – e.g., the open sand-barren type habitats. It is REMA's opinion after conducting this survey that the likelihood of this species being present on the Site is relatively low. Regardless, to the extent this species' preferred habitats are found at this Site, they will be left intact and will not be influenced in any way by the proposed Project.

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<sup>11</sup> On December 30, 2020, REMA submitted a new Request for Natural Diversity Data Base (NDDDB) 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.

REMA searched the Site for Hoary Plantain during several visits. The searches were focused on open sunny sites with previously disturbed soil, as well as areas with sandy, dry soil. This included the dirt roads and residual sandy/gravelly quarry area on the Site. This species was not found, however, the open quarry areas will all be preserved. As such, the Project will not adversely affect this species, if it is located at the Site. *See Exhibit U, § 7.5.*

REMA found that it was possible the Eastern Red Bat and the Northern Long Eared Bat (“NLEB”) could utilize portions of the Site during roosting season. The presence of mature forest, forested edges, wetlands, and on-site or nearby open water sources, contributed to REMA’s assessment. REMA did not conduct surveys for these species, because, as a precautionary mitigative measure, tree clearing for the Project will be restricted according with 4(d) rule requirements of the Endangered Species Act (“ESA”), 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 performed cover searches for the Eastern Spadefoot each Spring during vernal pool surveys. The portions of the Site with potential habitat for this species had been disturbed relatively recently (mid-1990’s) and the proposed Project will not be utilizing those portions of the Site. REMA still collected tadpoles in April and May 2017 and 2018 from several of the vernal pool areas. After rearing the tadpoles, all metamorphosed as either wood frogs or gray tree frogs. Nevertheless, DEEP’s NDDDB requested that the Petitioner retain an Eastern Spadefoot

specialist to conduct more robust surveys at the Site. The Petitioner has retained Mr. Dennis McQuin to conduct these surveys in May 2021. See Exhibit U, § 7.1.

During REMA's investigations and natural resource inventories at the Site, REMA documented several additional Connecticut listed species of special concern. Those species were: the Ribbon Snake (*Thamnophis s. sauritus*), the Eastern Box Turtle (*Terrapene c. Carolina*), and the Spotted Turtle (*Clemmys guttata*).

From REMA's observations, it is believed the Ribbon Snake is present in several portions of the Site. However, the proposed Project will be hundreds of feet away from the Ribbon Snake's preferred habitats and all of the vernal pool habitats on the Site are considered "conserved". Thus, it is REMA's opinion that impacts to this species are highly unlikely.

REMA observed one female Eastern Box Turtle on the Site. However, REMA believes that based on the types of habitats at the Site, additional of this species may be present on the Site, especially in wooded areas along the wetland corridors. Therefore, the Petitioner will undertake the standard search and exclusion protocol recommended by DEEP prior to any land disturbance. See Exhibit U, § 7.2.

REMA observed habitats at the Site that are suitable for Spotted Turtles and observed a Spotted Turtle within a wetland area. REMA also observed abundant prey for this species. As all of the vernal pools in the vicinity of the Spotted Turtle's preferred habitat will be preserved, it is REMA's opinion that following the Project's development this species will be secure. See Exhibit U, § 8.2.

REMA's assessment concluded that it is unlikely that any of the species listed in DEEP NDDDB's May 2017 letter occur or breed at the Site, with the possible exception of Eastern

Spadefoot. Additional surveys for this species will be conducted in May 2021, consistent with DEEP NDDDB's request. The two listed plants, if they would be present, would only occur in the disturbed, sand barren-type habitats found in the southern portion of the Site. All of that habitat will be left intact, and beyond the influence of the Project. REMA also concluded that the three (3) additional special concern species that REMA observed (*i.e.*, the Ribbon Snake, the Eastern Box Turtle, and the Spotted Turtle) will all be secure following development of the Project. This conclusion considered that Petitioner will undertake the standard search and exclusion protocol recommended by DEEP prior to any land disturbance.

#### **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. The majority of the Site is within Flood Zone X, designated by FEMA as an area outside of the 500-year floodplain area with a minimal risk for flooding. *See Exhibit Z*, Appendix B. The extreme southwestern portion of the Site is classified as Zone A, which is identified as a high flood risk area. *See Exhibit Z*, Appendix B. No development activities will be conducted in that portion of the Site. *See Exhibit A*. The Site is located within an Aquifer Protection Zone, but the nearest Level A Aquifer Protection Area is more than twenty thousand feet (20,000') to the northwest of the Site. *See Exhibit B*. Thus, no impacts on water quality or supply are anticipated

to occur with the construction or operation of the proposed Project. Finally, groundwater quality at the Site is classified by the DEEP as GA. *See* Exhibit B.

### **6.8.1. Wetlands**

REMA completed wetland inspections and delineations in April 2017, November 2018, and May and June 2019 (*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 thirty-four (34) acres of wetland area, of which the Project is expected to have a direct impact on less than four thousand (4,000) square feet. *See* Exhibit U, § 8.1 and Exhibit V, § 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 wooded areas and upland areas dominated by the former sand and gravel mining operation. Approximately seventeen (17) "zones" throughout the Site contain distinct wetland areas. These wetland areas are described in detail in Section 5 of Exhibit U. Eleven (11) semi-permanently to seasonally flooded wetland areas on the Site were identified as vernal pool habitats. REMA's report provides further details, including locations, for each of these vernal pool habitats. *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 nine (9) of the vernal pools will remain intact. The VPEs for Vernal Pool 1 and Vernal Pool E will be marginally within the proposed Project's Limit of Disturbance ("LOD"). In both instances, the disturbance is associated with the outer slopes of proposed stormwater management basins. These slopes will be appropriately vegetated with native vegetation, including shrubs. Thus,



these areas will function as effective VPEs post-development. As such, it is REMA's opinion that after development of the proposed Project, and during its operation, the VPE for all eleven (11) vernal pools on Site will remain and function the same as under existing conditions. *See Exhibit U, § 6.5.*

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 each of the eleven (11) vernal pools on the Site. In calculating the CTH, the acreage of preferred habitat that was cut-off by State Route 184 and I-95 were excluded. Existing disturbances within the CTH, other than noted transportation corridors, were calculated, including residential structures and manicured lawns. REMA also took into consideration that during the Project's operation amphibians are expected to traverse the Project area, which will be seeded to preserve connectivity and meta-population dynamics. The CTH for nine (9) of the vernal pools is considered "conserved," as the Project would result in a disturbance of twenty-five percent (25%) or less. While Vernal Pool 1 and Vernal Pool E would experience a disturbance greater than twenty-five percent (25%), it is REMA's opinion that site-specific factors would mitigate these disturbances. As such, REMA considers both of these vernal pools "conserved" under the proposed conditions. *See Exhibit U, § 6.5.*

In large part, the ability to "conserve" all eleven (11) vernal pools at the Site is due to the Petitioner's willingness to acquire two (2) additional parcels, which allowed the Project to be repositioned to the north and further away from the majority of the vernal pools. It is REMA's opinion that the design of the proposed Project succeeds in minimizing impacts to vernal pool habitats and associate species while maintaining connectivity between pools. REMA anticipates this will promote robust metapopulations. As such, REMA expects the diversity and productivity

of amphibians, and in particular of those species favoring vernal pools, to be maintained at the Site. See Exhibit U, § 6.5.

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. If necessary, 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 Z*), 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 North Stonington, 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 Z) 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 Z, 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 forest to the meadow condition as part of the Project.

The CT DEEP Forestland Habitat Impact Map (*see Exhibit C*) indicates that the portion of the Site north of State Route 184 may impact core forest habitat. Based on this a more detailed analysis of potential core forest impact was undertaken. This analysis utilized three-inch (3”) resolution aerial photography captured in Spring 2016 overlaid with the proposed limits of the Project and further supported with field inspections of the Site.

While various definitions exist for “core forest,” for purposes of this analysis, core forest was considered to a contiguous block of forested land at least three-hundred feet (300’) from any forest edge and having an area of two-hundred fifty (250) acres or greater. This definition excludes forest areas whose habitat value is degraded by edge effects and/or small size. This definition is consistent with the criteria DEEP utilizes in developing its GIS screening tool. As shown on Exhibit C, the Project will impact an area of forest free from edge effects (greater than three-hundred feet (300’) from a forest edge). However, the total contiguous area of this forest is only thirteen and a half (13.5) acres. As such, this forest does not qualify as “core forest.”

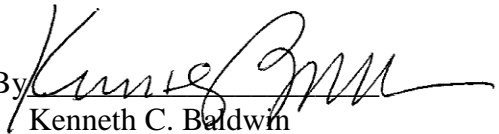
## **7. CONCLUSION**

The Project will provide numerous and significant benefits to the Town, the State of Connecticut and its citizens, and will place the Town 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 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, the 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 North Stonington, LLC

By 

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