# Petition of North Haven Solar One, LLC for a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is Required for the Proposed Construction, Operation and Maintenance of a 1.625 MW AC Ground-mounted Solar Photovoltaic Electric Facility Located at 122 Mill Road in North Haven, Connecticut

**Prepared for**
**The Connecticut Siting Council**

**September 30, 2022**

VEROGY

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# Table of Contents

**LIST OF FIGURES:**



**LIST OF APPENDICES:**

# 1.0 Introduction

This is a Petition for a declaratory ruling, pursuant to Connecticut General Statutes §§4-176 and 16-50k, that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required for the development, construction, operation and maintenance of a proposed solar photovoltaic project proposed by North Haven Solar One, LLC ("North Haven Solar One" or "Petitioner") in the Town of North Haven, Connecticut (the "Project"). The Project consists of the development of a 1.625-megawatt ("MW") alternating current ("AC") ground-mounted solar photovoltaic ("PV") system located at 122 Mill Road, North Haven, Connecticut ("Property"). See Figure 1 – Site Location Map and Figure 2 – Proposed Project Areas Aerial.

The Project was selected and awarded a fifteen (15)-year contract to participate in Connecticut's Zero Emissions Renewable Energy Credit ("ZREC") program. The Project's output will be used to help Connecticut meet its emissions reduction targets via the State of Connecticut's Renewable Portfolio standards and Governor Lamont's aggressive Greenhouse gas ("GHG") reduction goals. Energy produced by the Project will be sold to The United Illuminating Company ("United Illuminating" or "UI") at market rates specified in the applicable utility tariff with United Illuminating for any self-generation facility.

Authorization by the Connecticut Siting Council ("Council") via approval of this Petition would allow the Petitioner to construct the Project and assist the State of Connecticut in achieving its goal of energy conservation and sustainability. Pending approvals, the Project will commence financing, detailed engineering, procurement, and construction efforts in 2023, with commercial operation planned for the entire Project by the end of 2023.

The Project is located on one parcel within the Town of North Haven's Residential R-40 zoning district and is comprised of approximately 9 acres on an 123.86-acre parcel. See Figure 3 – Zoning Map. The Town of North Haven's Assessor's Office has the parcel listed as MBL – 039 009 and the parcel is privately owned. See Figure 4 – Tax Parcel Map and Figure 5 – Site Survey.

## 2.0 Petitioner

The legal name of the Petitioner is North Haven Solar One, LLC. North Haven Solar One is a limited liability company with its principal place of business in Hartford, Connecticut. North Haven Solar One is an affiliate of Verogy, LLC ("Verogy"). Verogy is a professional renewable energy business with decades of experience in the solar industry; the core of its business is developing, financing, constructing, managing, and operating solar projects. The management team at Verogy has constructed over 250 megawatts of solar projects across the United States.

| | |
|---|---|
| Mailing Address: | North Haven Solar One, LLC<br>150 Trumbull Street, 4th Floor<br>Hartford, CT 06103 |
| Internet Address(es): | https://www.verogy.com/<br>https://www.verogy.com/north-haven-solar-one/ |

Correspondence and other communications concerning the Project are to be addressed to, and notices, orders and other papers may be served upon, the following:

William Herchel
North Haven Solar One, LLC
150 Trumbull St., 4th Floor
Hartford, CT 06103
wherchel@verogy.com
(860) 288-7215 x704

Bryan Fitzgerald
North Haven Solar One, LLC
150 Trumbull St., 4th Floor
Hartford, CT 06103
bfitzgerald@verogy.com
(203) 257-3375

Bradley Parsons
North Haven Solar One, LLC
150 Trumbull St., 4th Floor
Hartford, CT 06103
bparsons@verogy.com
(203) 814-6866

Lee D. Hoffman
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702
lhoffman@pullcom.com
(860) 424-4315

All four individuals consent to electronic mailings of all Council and Petition-related correspondence.

# 3.0 Proposed Project

## 3.1 Project Site Overview

The Property is a 123.86-acre parcel located at 122 Mill Road, North Haven, Connecticut in the eastern portion of North Haven. The Town of North Haven's Assessor's Office has the parcel listed as MBL – 039 009. See Figure 4 – Tax Parcel Map. There are current agricultural activities taking place on the northern portion of the Property and an existing cemetery is on the southern portion.

The proposed location of the Project falls on the northern portion of the Property, located to the north and west of Muddy River, to the east of Mill Road, and south of Drazen Drive South. ("Project Site" or "Site")

### 3.1.1 Existing Site Land Use

The overall land use of the parcel/property consists of a cemetery and associated structures, Muddy River, forested areas, wetlands, and farm fields. The existing cemetery is known as the All Saints Cemetery and is accessed from Middletown Avenue and Velvet Street. According to North Haven's Zoning Map, the principal use of the parcel is designated residential and located in a residential zoning district. Figure 5 – Site Survey.

### 3.1.2 Surrounding Land Use

The area surrounding the Project consists primarily of single-family residences and the cemetery. ACES Mill Elementary School exists approximately 0.5 miles to the north of the Site.

### 3.1.3 Project Site Alternatives

The Project Site was selected by North Haven Solar One because it was suitable for a solar PV project and would have minimal natural resource and environmental impacts. The Project as designed will not have adverse effects on wetlands or agricultural land, and the

Project will not diminish the quality of life of those who live in the vicinity. It was also important to North Haven Solar One to select a site that allows interconnection of the generation facility to a feeder and substation of the utility company that is compatible with the utility's grid and goal of better serving its customers.

## 3.2 Project Description

### 3.2.1 Site Access

The primary access point to the Project will be via an existing access road entrance to access the Property and UI distribution line where the solar array is proposed. The Petitioner would construct an approximately 500 linear foot internal gravel roadway within the Project area along the southern portion of the Project to provide access to the proposed solar array, electrical equipment, and stormwater detention basins. Petitioner proposes the construction of the roadway on prepared subgrades with a gravel topping which would match existing grades to the greatest extent feasible. See Figure 7 – Proposed Project Layout and Appendix A – Sheet 2.0 Layout and Materials Plan.

### 3.2.2 Solar Facility Design and Layout

It is currently anticipated that the Project will consist of photovoltaic (PV) arrays to be comprised of 540-watt panels (depending on the state of module technology at the time of construction) arranged two-high in portrait set at a 25-degree angle to maximize annual energy production within the available buildable area on Site. The panels will be mounted on steel racking with driven posts or ground screws, to a depth to attain sufficient structural capacity to resist the loads from the weight of the panels, as well as environmental loads including snow, wind, and seismic forces.

The current PV array on electrical site plan has a nameplate capacity of 1.625 MW AC and is designed with 150 strings of 26 modules, for a total of 3,900 modules. There would be 13-125 KW inverters that are to be distributed throughout the array and mounted to or placed adjacent to the racking structure. The DC capacity is 2.106 MW and the AC capacity is 1.625 MW. The DC to AC ratio is designed as 1.296. The Power from the inverters would

be directed to a transformer, switchgear, meter, and disconnects prior to interconnecting with utility distribution feeder. See Appendix B for project specifications and the Analytical Report summarizing the Toxicity Characteristic Leaching Procedures ("TCLP") for the solar panel that the Petitioner intends to install as part of the Project.

### 3.2.3 Electrical Interconnection

The interconnection application for the solar array was submitted to United Illuminating on June 4, 2021. United Illuminating is currently in the process of completing a Distribution System Impact and Facility Study for the Project, these are expected to be completed by the middle of October.

### 3.2.4 Fencing and Site Security

Petitioner proposes a 7-foot high chain link fence to be installed around the perimeter of the solar array field to provide site security, as well as to address National Electric Code requirements. In addition, the entrance to the Facility will be gated—limiting access to authorized personnel only—and all Town emergency response personnel will be provided access to the Facility via a Knox Pad lock. Importantly, the Petitioner notes that the Facility will be monitored from off-site and will have the ability to remotely de-energize in the event of an emergency. See Appendix A – Sheet 2.0 - Layout and Materials Plan.

## 3.3 Stormwater Management

Petitioner prepared a Stormwater Management Report in accordance with the 2004 State of Connecticut Stormwater Quality Manual and with the Connecticut General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("Stormwater General Permit") effective December 31, 2020. A copy of this Report is attached as Appendix E.

Petitioner also reviewed online soil mapping and intends to perform a field geotechnical study to investigate the native soil conditions and infiltration rates at the proposed locations of the stormwater basins. A copy of the findings of this study will be provided to the Council for reference. As indicated in the attached Stormwater Management

Report, predevelopment drainage patterns have been maintained to the greatest extent feasible in an effort to maintain pre-development flows to off-site areas.

One permanent basin with supporting swales has been designed and is strategically located on the Project site to maintain existing drainage patterns and to treat water quality from the area that will be cleared of trees. This basin will discharge stormwater towards Muddy River on-site, where the existing runoff flows. The proposed basin does not exceed the 3 acre-ft volume limit; thus a CT DEEP Dam Safety permit is not required.

Petitioner developed a HydroCAD model, using TR-55 methodology, to evaluate the existing and proposed drainage conditions of the Property. The results of the analysis demonstrate that there would not be an increase in peak stormwater runoff rates for the 2-, 25-, 50-, and 100-year storm events to any subwatershed. Water quality treatment of the Project area is proposed to be handled in this permanent stormwater management basin as well as within the vegetated buffer areas between the Project and adjacent wetlands.

## 3.4 Construction Schedule and Phasing of Construction

The Petitioner anticipates that construction of the Project will begin in the Spring of 2023 and will take approximately four (4) months. Construction activities within the Project Area will include: tree clearing, grading to incorporate the Project's proposed stormwater management features, erosion and sedimentation ("E&S") control measures, and racking and module(s) electrical trenching; the installation of interconnection infrastructure; and, new access road(s) development. Existing grades throughout the Project Area will remain, except in areas where the Project's stormwater management features are proposed. For those areas, some manipulation (i.e., cuts/fills) and regrading will be required.

Initial work would involve the installation of erosion and sediment control measures, including installation of sediment traps. A temporary staging area would be located in the field southeast of the Project.

Upon completion of the installation of the erosion control measures, the project will commence the required clearing and begin the racking installation. Upon completion of the racking installation the modules and other electrical equipment will be installed. Final site stabilization, testing, and commissioning would be expected to be completed in the Summer of 2023. Construction activities would be expected to occur 7:00AM to 6:00PM Monday through Friday and Saturday between the hours of 8:00 a.m. and 5:00 p.m.

A Storm Water Pollution Control Plan (SWPCP) would also be developed and implemented by the project civil engineer that will include regular inspection of erosion control measures to prevent sedimentation or water quality impact. The Petitioner will also apply for a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities from CT DEEP. The Stormwater Management Report (Appendix E) provides Erosion and Sedimentation Control Best Management Practices – Maintenance/Evaluation Checklists for Construction Practices and Long-Term Practices. Construction sequencing is described in detail on sheet C-4.0 in Appendix A.

## 3.5 Operation and Maintenance

Required maintenance of the Project will be minimal; the Petitioner anticipates that the Site will require mowing and routine maintenance of the electrical equipment one (1) time per year, which will typically involve two (2) technicians. The Facility would be monitored remotely 24 hours a day, 7 days a week. The Petitioner does not expect that any snow removal operations will be necessary for the Project, given that the selective positioning of the Facility's panels allows for any accumulating snow to "sheet" off. Repairs to the Facility will be made on an as-needed basis. See Appendix C – Operation & Maintenance Documentation.

## 3.6 Decommissioning

At the end of its useful life, the Project will be decommissioned in accordance with the requirements of the Petitioner's land lease agreement and the Project's Decommissioning and Restoration Plan. See Appendix D – Decommissioning and Restoration Plan.

## 4.0 Project Benefits and Needs

The State of Connecticut has committed to develop its renewable energy market and mitigate the negative environmental impacts associated with traditional electric power generation. In so doing, it has set aggressive targets to reduce greenhouse gas ("GHG") emissions and to increase the deployment of Class I renewable energy.

The Governor's Council on Climate Change ("GC3") recommendation is that the Connecticut's Renewable Portfolio Standard ("RPS") reach a target of 40 percent Class I renewable energy sources by 2030, with an aim to reduce the carbon intensity of the RPS to achieve the State's decarbonization goals. Additionally, Governor Lamont has set a 100 percent zero carbon target for the energy sector by 2040. Owners of renewable-electricity generation projects receive one renewable energy certificate (REC) for every megawatt-hour of renewable electricity they produce. Those RECs are traded in a regional market for state RPS compliance. Connecticut establishes required annual REC percentages from three classes of renewable energy resources.

If approved, the Project will provide a wide range of environmental and economic benefits to the State of Connecticut and the Town of North Haven, respectively, including:

- Once operational, the Project will generate approximately 2,752 MWh per year. This is enough renewable energy to power 1,609 homes for an entire year and would effectively offset 12,772 metric tons of carbon dioxide annually—the same amount as 211,188 tree seedlings grown for ten (10) years, or 31,703,040 miles driven by an average passenger vehicle;
- Reduction in energy demand during peak usage will decrease energy costs for ratepayers Statewide;
- The creation of construction jobs in the region;
- The Project will effectively increase new annual municipal tax revenues for North Haven with no additional burden on town services;
- The Project will provide Infrastructure upgrades that will improve the reliability of North Haven's electrical grid; and

- The Project will only occupy an estimated 9 acres out of a total 123.86 acres—thereby leaving approximately 93% of the Property undeveloped and available for other uses, including agriculture and open space.

## 5.0 State and Local Outreach/Input

North Haven Solar One has been in communication with and has engaged state and local regulators regarding the design and development of the project.

On January 20, 2022, the Petitioner met with North Haven's First Selectman Michael Freda, to discuss the Project. The Petitioner introduced key members of its development team to local officials and provided a comprehensive introduction to the Project and the benefits to the North Haven community.

On August 29, 2022, North Haven Solar One project team, including VHB, met with the CT DEEP's Concierge team. The DEEP staff present at that meeting represented Wildlife, Dam Safety, Fisheries, Land and Water Resources, and Stormwater Divisions. CT DEEP staff provided feedback that the Project seemed straight forward and did not have any specific comments after VHB's presentation. CT DEEP staff noted another requirement that because the Project site is located on wetlands, with vernal pools, the review of the design and its impact on the wetlands and vernal pools will be included in the Council review.

On September 1, 2022, North Haven Solar One sent a Project Fact Sheet and other related information about the Project to the abutting property owners and established a Project-specific website (www.verogy.com/north-haven-solar-one) to keep the public informed about the Project. See Appendix I – Public Outreach Documentation for copies of North Haven Solar One's Project Fact Sheet and a sample letter sent to abutting landowners as well as a list of the abutting landowners notified.

In addition, pursuant to the requirements of R.C.S.A. § 16-50j-40(a), North Haven Solar One has sent out formal notifications concerning this Petition to all abutters and applicable governmental officials. The 61 "green cards" indicated successful delivery of these letters have all been returned to North Haven Solar One. A table summarizing this outreach is included in Appendix I.

# 6.0 Potential Environmental Effects/Impacts

## 6.1 Site/Community Setting and Scenic Character and Values

The Project is located in the northern portion of the Property and will occupy approximately 9 acres of the 123 acres. The overall land use of the parcel/property consists of a cemetery and associated structures, Muddy River, forested areas, wetlands, farm fields. The surrounding land use is primarily residential with some agricultural use.

## 6.2 Public Health and Safety

The proposed Project is not expected to create any adverse impact with regard to public health or safety issues. The proposed Project will meet or exceed all local, state, national and industry health and safety standards and requirements. During construction and post-construction operations and maintenance, workers and personnel would follow all health and safety standards applicable to solar energy generating facilities.

A site-specific construction health and safety plan is typically developed prior to initiation of any on-site Project-related tasks. During the construction phase of development, all contractors, sub-contractors and personnel will be appropriately trained and briefed on any potential site health and safety issues. There will be a designated construction manager and/or site safety officer or representative present at all times during construction, and such individual will be responsible for overseeing/implementing the site construction health and safety plan.

Construction traffic relative to the site includes standard construction trucks, small earth moving equipment, and all-terrain forklift equipment. Vehicle trips would be relative to scheduled deliveries of the major materials such as solar racking, solar panels, electrical equipment to serve the solar site, and fencing materials to be installed around the perimeter of the solar field. Construction activity and associated traffic would generally take place from 7:00 AM to 6:00 PM daily Monday through Friday and 8:00 AM to 5:00PM Saturday.

Some hazardous substances are required to be used or stored on the Property during construction or operation of the Project. Namely, gasoline or diesel-powered equipment will be in regular use during construction activities, requiring some on-Property fuel storage. Further, the inverter step-up transformers located at each equipment pad will use biodegradable oil for cooling. Accordingly, a Spill Prevention, Control, and Countermeasure ("SPCC") Plan and an Operations and Maintenance ("O&M") Plan have been developed for the Project. See Appendix L – Spill Prevention Control, and Countermeasure Plan.

## 6.3 Noise

### 6.3.1 Noise Level Guidelines and Regulatory Requirements

Potential Project-related noise is regulated by General Statutes section 22a-69 and the Town of North Haven's Noise Ordinance.

The Town of North Haven's Noise Ordinance provides: "It shall be unlawful for any person to emit or cause to be emitted any sound beyond the boundaries of his/her/its premises so as to violate any provisions of this chapter." For the Residential District which the Property, and surrounding receptors, are located in, local ordinance prescribes a maximum level of 55 dBA for daytime hours (defined as 7 AM to 9 PM) or 45 dBA for nighttime hours (defined as 9 PM to 7 AM). Noise generated by the operation of any tools or equipment used in construction, drilling, or demolition work between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays and Sundays is exempt.

General Statutes section 22a-69 is applicable to the proposed Project and requires the Project to meet the following sound levels: 61 dBA at the nearest residential property during the day (when the Project would be generating electricity); 51 dBA at the nearest residential property at night (when some accessory equipment might still be in operation); 66 dBA at the nearest commercial/educational property; and 70 dBA at the nearest agricultural/industrial property. The statute also accounts for impulse and other types of noise. Construction noise is exempt from the statute.

### 6.3.2 Proposed Project-generated Noise

Due to the nature of the use, facility design, required equipment and distance from potential noise receptors, the proposed Project is expected to have no adverse noise-related impact on the surrounding area. Existing uses around the perimeter of the Project site include farming activities and single-family residential development.

The selected inverter has acoustic noise rating 65 dBA at 1 meter distance, as noted on the inverter specification sheet provided in Appendix B. All other selected system equipment will typically generate the same or lower levels of noise.

The nearest residence is located at 135 Mill Road approximately 480 feet from the Project area and closest equipment pad. The Petitioner applied the Inverse Square Law to evaluate the relative sound level of the inverters to the nearest residential property line, and the calculations show that the 65 dBA would reduce to approximately 22 dBA which is below the maximum allowable of 55 dBA.

## 6.4 Air Quality

Because the Project is a solar energy generating facility, no air emissions will be generated during operations and, therefore, an air permit would not be required. Temporary, potential construction-related mobile source emissions would include those associated with construction vehicles and equipment. Any potential air quality impacts related to construction activities can be considered *de minimis*. Such emissions would be mitigated using available measures including limiting idling times of equipment; proper maintenance of all vehicles and equipment and watering/spraying to minimize dust and particulate releases. In addition, all on-site and off-road equipment would meet the latest standards for diesel emissions, as prescribed by the United States Environmental Protection Agency (USEPA) and, with the above mitigation measures, should reduce the exhaust emissions.

## 6.5 Visual Impact Assessment

Petitioner anticipates that the location of the proposed Project, coupled with the design of the proposed solar energy facility, would significantly limit, if not eliminate, any potential views from any public viewsheds or private properties. The Project has been sited on land which is generally low visibility from surrounding roads, residences, and any designated public recreation area (i.e. playing fields, walking trails, or parks). Visual impacts of the Project from multiple directions are naturally mitigated due to a variety of distance, topography, and existing vegetation. Cross sections displaying the proposed Project elements in relation to two (2) different abutting parcels have been prepared in support of this Petition and are included in Appendix J. Discussions between the Petitioner and all abutting parcels to the Project are ongoing and Petitioner intends to incorporate mitigation screening into the site development plan as needed to address screening deficiencies which may exist. The Petitioner intends to provide the Council any updates to visual impact studies or proposed mitigation screening plans.

## 6.6 Federal Aviation Administration Determination

Petitioner used the Federal Aviation Administration ("FAA") Notice Criteria Tool to screen the Project site to assess if the Project triggers the FAA Notice Criteria. The result of the initial screening on August 5, 2022 is that no additional notice is required for FAA. See Appendix K, FAA Consultation.

## 6.7 Site Soils and Geology

### 6.7.1 Existing Site Soils and Geology

A review of available NRCS online soils mapping indicated the presence of multiple soils throughout the project area, with Hydrologic Soil Groups ranging from "A" to "D" and slopes ranging from 3 to 20%. Petitioner intends to perform geotechnical subsurface testing at the Site and the results will be provided to the Council for reference. Soils information is included in Figure 11 – NRCS Soils Information.

### 6.7.2 Preservation of Prime Agricultural Soils

The site is currently undeveloped farmland and woodlands. A review of the USDA's soil mapping for the area indicates that only a small portion of the development area is prime farmland. It is currently anticipated that no soils will be exported from the site and that any excess material will be reused on site.

## 6.8 Historic and Archaeological Resources

Heritage Consultants prepared a 1A Cultural Resources Assessment Survey in July 2022. Heritage found that portions of the development area contained a moderate sensitivity for archaeological resources and recommended that a Phase 1B study be performed within these areas. Petitioner retained Heritage Consultants to perform a Phase 1B shovel test in these areas and the investigation concluded that no impacts to cultural resources are expected by the proposed construction of the solar facility, and no additional archaeological examination is recommended. A copy of the Phase 1A & 1B reports are included in Appendix F.

## 6.9 Wetlands and Watercourses

### 6.9.1 Wetlands Delineation and Methodology

In February 2022, soil scientists from VHB investigated the site to determine if regulated Inland Wetlands or Watercourses were present. In Connecticut, Inland Wetlands are defined by areas of poorly drained or very poorly drained soils or alluvial soils of any drainage class. The investigation was facilitated by the use of a tile spade and soil augers that were used to examine soil profiles and evaluate drainage classes. A Wetlands Delineation Report dated February 8, 2022, was prepared outlining the survey process and findings. A copy of this report is included in Appendix G.

### 6.9.2 Existing Wetlands and Watercourses

Multiple wetland systems were delineated as a result of this effort and are depicted in the report. Generally speaking, wetland systems exist to the west, east, and south of the Project area. All delineated wetlands are tributary to the Muddy River. A more comprehensive analysis of the various wetland systems can be found in the Wetland Delineation Report included in Appendix G.

### 6.9.3 Vernal Pools

During Spring 2022, VHB identified one (1) vernal pool on the Site. No evidence of vernal pool breeding was observed within Wetlands 2 or 3; however, Wetland 1 was found to contain the cryptic vernal pool breeding area. Observed obligate vernal pool species included wood frog tadpoles. No fairy shrimp, marbled salamander larvae, or state-listed vernal pool breeding amphibians were observed. The vernal pool area exhibits a soft, leafy, silty bottom and average flood depths within the breeding areas ranged between 10 and 12 inches. The vernal pool does have a permanent culverted outlet across Mill Road; however, it is a restricted outlet in that the culvert is perched

above the ground by approximately 12 inches, which allows for the presence of standing water. The following table provides the details of the VP observations conducted on site:

**Obligate Vernal Pool Species Indicators and Observations**

| Cryptic VP ID | Wood Frog Egg Masses | Spotted Salamander Egg Masses | Total Egg Mass Count | Other amphibians |
|---|---|---|---|---|
| VP 1 | 100-200 | 0 | 100-200 | - |

The vernal pool is less than one-quarter acre and appeared to exhibit suitable hydrology for full larval development and metamorphosis of obligate vernal pool-breeding species. It is unclear if the pool completely dries out on an annual basis.

The land uses surrounding the breeding pocket in Wetland 1 indicate habitat suitable for more edge or generalist species. It is expected that actual habitat use is presumed to be limited to the drier areas of Wetland 1, and upland forested areas located across the agricultural field to the southwest and northeast of Wetland 1. Refer to Appendix G – Vernal Pool Study for further information.

### 6.9.4 Proposed Project and Mitigation

The Project has been designed to provide a vegetated buffer between the development itself and these wetland systems to maintain an ecological edge zone that separates the solar development and stormwater features from the wetland communities. The wetlands will be further protected by incorporation of the stormwater management features that have been designed to mitigate peak runoff rates and treat water quality that is generated from the development area.

In concurrence with CTDEEP Stormwater General Permit, the minimum buffer proposed for any grading activities or infrastructure development is generally 50-feet from any wetland resource, and the minimum buffer proposed for any solar panels is generally 100-feet from any wetland resource.

No work is proposed within 100 feet of the delineated vernal pool (the Vernal Pool Envelope). The Project recognizes that it will be constructed, in part, inside of the 750-foot Critical Terrestrial Habitat buffer of multiple vernal pools on the Site. It is not anticipated that this construction will have an adverse effect on the surrounding amphibians accessing these pools. None of the construction will occur within the vernal pools or inside of the 100-foot Vernal Pool Envelope. Moreover, all construction will be done in accordance with the 2015 Vernal Pool Best Management Practices of the US Army Corps of Engineers to minimize any potential harm. Finally, the construction of the project will not result in any diminution of habitat within the 750-foot Critical Terrestrial Habitat perimeter. Refer to Appendix M – Natural Resource Impact Assessment Memo for further information.

## 6.10 Wildlife and Habitat

### 6.10.1 Rare, Threatened and Endangered Plants and Wildlife

A Request for Natural Diversity Data Base (NDDB) State Listed Species Review was completed and distributed to CTDEEP Wildlife Division for review. In return, a Final Determination dated March 1, 2022 was provided by CTDEEP Wildlife Division which found that extant populations of two State Species of Concern: Eastern Box Turtle (*Terrapene carolina Carolina*) and Wood Turtle (*Glyptemys insculpta*) were in vicinity of the project. Therefore, CTDEEP recommended protection strategies during construction activities.

The final determination letter approves construction as proposed. A copy of this letter is included in Appendix H.

### 6.10.2 Potential Impacts and Mitigation

The Final Determination provided by CTDEEP Wildlife Division lists Eastern Box turtle and Wood turtle as the identified protected species at the site and suggests proposed conservation measures for each. The Petitioner has incorporated these conservation

measures into the site development plan and will coordinate the construction work with CTDEEP Wildlife Division as needed.

### 6.10.3 Core Forest

Review of CTDEEP Forestland Habitat Impact Map indicates that no known core forest exists at or in proximity to the site. Accordingly, it is the Petitioner's opinion that the Project will not alter areas of core forest.

## 6.11 Water Supply

No water for the construction of the facility will be sourced on site from either a well or utility hook up. All water used for construction will be trucked in. Minimal long-term water use will be required for operations for the purpose of cleaning modules and this water will also be trucked in.

## 6.12 Stormwater Management

### 6.12.1 Existing Conditions

Under existing conditions, untreated stormwater runoff from most of the Site generally flows westerly and easterly overland towards one of the on-site wetland systems (Wetlands 1-3). Wetland 1 conveys stormwater runoff across Mill Road via culvert and ultimately back into Muddy River. Wetland 2 conveys stormwater in a southerly direction towards Muddy River, while Wetland 3 is a low-lying flood area of Muddy River itself.

Approximately 40% of the development area is comprised of forested wetland and the remaining 60% are generally comprised of grass and farm fields. Generally, the site is at its highest elevation within the central/western portions of the development area, and slopes to the west and to the east towards the adjacent forested wetland systems. The majority of terrain slopes in the Project area range from 0% to 5% with portions ranging up to 20% slope.

Information and computations regarding existing conditions hydrology is contained in the Stormwater Report. A copy is included in Appendix E.

### 6.12.2 Proposed Conditions

The proposed stormwater management system for the Project has been designed to meet State standards found within 2004 Connecticut Stormwater Quality Manual and CTDEEP Stormwater General Permit effective December 31, 2020. The system consists of one proposed permanent stormwater management basin and accompanying drainage swales which has been strategically located throughout the Project site to maintain existing drainage patterns to the onsite wetlands. A seed mix of permanent turf forming grasses will be used to establish vegetation directly under the modules to help stabilize the topsoil from erosion, sequester nutrients and pollutants, and lower runoff rates. The only impervious surfaces created by the Project will be a small amount of gravel access road and equipment pads.

Post-construction stormwater runoff will be collected and conveyed to the stormwater basin via overland sheet flow and permanent diversion swales. The pond will include an outlet control structure designed to mitigate peak stormwater flows to predevelopment levels. Water quality treatment is provided in the basin and infiltration of stormwater runoff into the ground has been promoted to the maximum extents practicable. Information and computations regarding proposed conditions hydrology is contained in the Stormwater Report. A copy is included in Appendix E.

## 7.0 Conclusions

The Project clearly meets the standards set forth in Conn. Gen. Stat. §16-50k(a). Specifically:

- The Project meets CT DEEP's air and water quality standards, with no material emissions associated with either construction or operation, and water quality standards associated with construction and operational stormwater management a primary focus of the Project's design;
- The Project has been configured to avoid any substantial environmental impacts by largely utilizing land which has been subject to former agricultural uses; and
- The Project will not alter areas of core forest; and

In addition, the Project would not be visible from any public viewsheds and would be largely screened from surrounding properties; nor will there be any impacts from noise.

Given the benefits this Project will provide to the State of Connecticut, North Haven Solar One respectfully requests that the Council approve this Project as currently designed and issue a declaratory ruling that a Certificate is not required.