STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
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WATERTOWN SOLAR ONE, LLC AND VCP, LLC D/B/A VEROGY PETITION FOR A DECLARATORY RULING, PURSUANT TO CONNECTICUT GENERAL STATUTES §4-176 AND §16-50K, FOR THE PROPOSED CONSTRUCTION, MAINTENANCE AND OPERATION OF A 1.975-MEGAWATT-AC SOLAR PHOTOVOLTAIC ELECTRIC GENERATING FACILITY LOCATED AT 669 PLATT ROAD, WATERTOWN, CONNECTICUT, AND ASSOCIATED ELECTRICAL CONNECTION	:	PETITION NO. 1417
	:	AUGUST 28, 2020

RESPONSES OF WATERTOWN SOLAR ONE, LLC
AND VCP, LLC D/B/A VEROGY TO
CONNECTICUT SITING COUNCIL INTERROGATORIES - SET ONE

On August 20, 2020, the Connecticut Siting Council ("Council") issued Interrogatories, Set One to Watertown Solar One, LLC and VCP, LLC d/b/a Verogy ("Verogy" or "Petitioner"), relating to Petition No. 1417. Verogy offers the following responses.

Project Development

Question No. 1

If the project is approved, identify all permits necessary for construction and operation, and indicate which entity will hold the permit(s)?

Response

The following permits will be required for construction and operation of the Watertown Solar One facility. The Petitioner will obtain and hold the permits.

a. Connecticut Department of Energy and Environmental Protection, General Permit for the Discharge of Stormwater and Dewatering Wastewater from Construction Activity.
b. Town of Watertown, Building Permit.
c. Town of Watertown, Electrical Permit.

Question No. 2

Referencing page 4 of the Petition, Watertown Solar One, LLC and VCP, LLC d/b/a Verogy (Petitioner) states that, "Alternatively, in the event virtual net metering capacity becomes available, energy produced by the Project may be delivered to Eversource…" As an update, what is the status of the availability of virtual net metering capacity for this project? Would the project be viable based on the market-based tariff if virtual net metering is not available? Explain.

Response

The Eversource Virtual Net Metering program is currently accepting applications for the State, Municipal, and Agricultural host funding program. Funding for the program is currently capped and projects are being placed on a waitlist in the event funding is increased or projects with funding allocated cease development or construction and forfeit their allocated funding. Yes, the project is still viable based on the market-based tariff if virtual net metering is not available.

Question No. 3

Referencing page 4 of the Petition, the Petitioner notes that, "Energy produced by the Project will be sold to Eversource at market rates specified in the applicable utility tariff…" Would the Petitioner also sell its renewable energy certificates (RECs) it expects to generate with

the proposed project? If so, to which public utility? If the RECs are to be sold to more than one public utility, provide the percentage to be sold to each public utility.

Response

Watertown Solar One will sell renewable energy certificates (RECs) to Eversource Energy via a 15-year fixed price Low Emission Renewable Energy Certificate (LREC) Contract that was executed in August of 2019. Any RECs that are produced in excess of the maximum annual quantity defined in the LREC Contract may be sold on the spot market.

Question No. 4

Would the Petitioner participate in the ISO-NE Forward Capacity Auction? If yes, which auction(s) and capacity commitment period(s)?

Response

Yes. Watertown Solar One will participate in the ISO-NE Forward Capacity Auction #15 in 2021 for commitment period in 2024/2025.

Proposed Site

Question No. 5

In the lease agreement with Catholic Cemeteries Association of the Archdiocese of Hartford, are there any provisions related to site restoration at the end of the project's useful life? If so, please provide any such provisions.?

Response

Yes, there is a provision related to site restoration in the lease agreement. Please see the relevant section below.

> "Section 12.1 - Condition of Premises. Upon expiration or other termination of this Lease the Solar Array and any improvements constructed on, over, or under the Leased Premises by Tenant shall be removed by Tenant and the Leased Premises shall be

restored to substantially the same condition as prior to the commencement of this Lease, excluding normal wear and tear. All trade fixtures and signs, whether by law deemed to be a part of the realty or not, installed by the Tenant at any time or anyone claiming under the Tenant, shall remain the property of the Tenant or persons claiming under the Tenant and may be removed by the Tenant or anyone claiming under the Tenant at any time or times during the Lease Term. In the event this Lease terminates due to the expiration of the then applicable Lease Term, Tenant shall be afforded the term of thirty (30) days after such termination, as such time may be extended if Tenant is diligently pursuing the removal of the Solar Array, but not to exceed ninety (90) days, to remove all of its personal property, trade fixtures and signs for the Leased Premises including the Solar Array (which is deemed to be personal property) and Tenant shall pay the then existing Base Rent, calculated on a per diem basis, for any time period Tenant is removing personal property, trade fixtures, the Solar Array and/or signs."

Question No. 6

Would all components of the solar photovoltaic panels be recyclable? Could components of the panels be reused to make photovoltaic cells or whole panels be used to make new solar panels at the end of the life of this project? Could the solar panels and/or associated components be repurposed for a different use or product?

Response

The Petitioner estimates that up to 99% of all solar photovoltaic panel components can be captured in the recycling process. These components are captured, broken down, refined, and the commodity itself can be repurposed for similar or different products.

Energy Output

Question No. 7

Have electrical loss assumptions been factored into the output of the facility? What is the output (MW AC) at the point of interconnection?

Response

Yes, electrical loss assumptions have been factored into the output of the facility. The output of the facility is 1.975 MW AC at the point of interconnection.

Question No. 8

What is the projected capacity factor (expressed as a percentage) for the proposed project? For clarity, is this capacity factor based on a ratio of AC MWh to AC MWh, or a ratio of AC MWh to DC MWh?

Response

The Project's net capacity factor is estimated to be 20.59% (Annual AC MWh Production/ (Nameplate Capacity MW AC * (8760 [hours in a year])).

Question No. 9

What is the efficiency of the photovoltaic module technology of the proposed project?

Response

20.2% Maximum Efficiency – Trina 390W

19.5% Maximum Efficiency – Risen 380W

Question No. 10

Is the project being designed to accommodate a potential future battery storage system? If so, please indicate the anticipated size of the system and where it may be located on the site.

Response

Currently, Petitioner has no plans to incorporate a battery energy storage system ("BESS"). However, it is anticipated that in the event a BESS is incorporated at the site at a later date, it will be situated on the customer side of the existing DC/AC inverters and will not disrupt the existing interconnection approval with Eversource. There is no PPA for the Project at this time, and thus any impact on the PPA is inapplicable.

Question No. 11

Would the impact of soft or hard shading reduce the energy production of the proposed project? If so, was this included in the proposed project's capacity factor?

Response

Yes, soft or hard shading would impact energy production at the facility. Shading and the other appropriate factors have been included in the production modeling assumptions for the Project.

Question No. 12

Could the project be designed to serve as a microgrid?

Response

Watertown Solar One was not contemplated to serve as a microgrid and would require extensive design changes to do so. Microgrid functionality would require the Project to have an energy storage component, or local connected load and dispatch capabilities which are not currently included in the Project's design.

Question No. 13

If one section of the solar array experiences electrical problems causing the section to shut down, could other sections of the system still operate and transmit power to the grid?

Response

Yes, for example if one of the DC/AC inverters was not producing energy, other DC/AC inverters that make up the system would continue to produce energy and deliver that energy to the grid.

Question No. 14

Do solar facilities present a challenge for the independent system operator for balancing

loads and generation (to maintain the system frequency) due to the changing (but not controlled) megawatt output of a solar facility? What technology or operational protocols could be employed to mitigate any challenges?

Response

In general, intermittent resources create a challenge for the independent service operator ("ISO") as they work to match the supply and demand of the energy markets. This challenge is driven by the relative uncertainty of production due to the availability of the intermittent resource's fuel source. For solar photovoltaic generators in particular, weather forecasts are made to anticipate the solar insolation and relative irradiance at a given time. These forecasts help the ISO anticipate supply but are not perfect. In circumstances of unanticipated production from intermittent resources (or lack thereof), the ISO (and the market incentives it has devised) encourage production from other generators in times of scarcity and discourage production in times of abundance. The ISO can curtail or dispatch resources in circumstances where the economic incentives are insufficient to balance energy supply and demand.

Additionally, in the energy markets size and scale matter. Projects under 5 MW AC that are interconnecting to the distribution network (as opposed to the transmission network) may register with the ISO as a "settlement-only generator" or choose not to register with ISO as a "load reducer". Due to the minimal impact these generators have on the overall grid, they are not subject to the same ISO oversight (not centrally dispatched nor monitored in real time). The Project at issue here is beneath that 5 MW AC threshold and will most likely exist as a "settlement-only generator" (such a designation is necessary to participate in the capacity markets).

The technology that can most help the ISO as they navigate the increasing presence of

intermittent resources on the grid is storage. The most prevalent form of storage at this time is lithium-ion BESS. By increasing the penetration of BESS's and increasing the ISO's connectivity to those systems, the grid supply demand could be better balanced and the necessity for curtailment (and potential waste) mitigated.

Site Components and Solar Equipment

Question No. 15

Referencing Sheet OP-1, provide the specifications sheets for the proposed 380 Watt and 390 Watt solar photovoltaic panels.

Response

See Attachment 1.

Question No. 16

Would the panels be mounted in a portrait or landscape fashion?

Response

The current design calls for the solar panels to be mounted on racking in a portrait orientation.

Question No. 17

How many panels will each rack hold?

Response

Each racking table will hold either 12, 16, or 20 modules and each complete row of modules will be made up of these racking tables.

Question No. 18

Is the wiring from the panels to the inverters installed on the racking? If wiring is external, how would it be protected from potential damage from weather exposure, vegetation

maintenance, or animals?

Response

The majority of the wiring will be run on the racking itself. Where wiring is not run on the racking, it would run in conduit. All PV wire is weather proof and rated up to 194°F.

Question No. 19

Referencing Figure 3 on page 9 of the Environmental Assessment (EA), Proposed Conditions Map, please provide a zoomed-in aerial map of the proposed project footprint that includes wetland buffers, and vernal pool envelope and critical terrestrial habitat distances.

Response

Attachment 2 includes is a zoomed-in aerial map depicting the project area, a 100-foot upland review area, and vernal pool envelope and critical terrestrial habitat distances as shown on Figure 5, page 24 of the Petition.

Question No. 20

What is the length (in feet) of the proposed access road in total linear feet? Are any upgrades to the existing access required to make it suitable for the construction and maintenance of this proposed solar facility?

Response

The proposed access road is approximately 475 feet in length. No upgrades to the existing cemetery roads are required.

Question No. 21

Referencing Drawings SP-1 and SP-2, the proposed aisle width between solar panel rows is 16 feet. What is the minimum aisle width at which the solar panel rows could be installed?

Response

There are a few factors that we consider when determining row spacing: Tilt of the modules and their shading effects along with storm water management recommendations. The racking manufacturers would allow, but would not recommend, installing a row immediately behind one another. Despite this ability, this design is problematic for multiple reasons. This configuration would: (1) shade most of the posterior row at all times which would limit our system generation significantly; and (2) violate stormwater management recommendations which state that our inter-row spacing should not be less than a single rows width. Thus, per stormwater requirements the minimum inter-row spacing at a 30° tilt is slightly less than 12'. Despite this stormwater minimum, such a configuration would shade the array and limit needed production.

Question No. 22

Referencing page 4 of the Petition, the Petitioner notes that two pad-mounted switchgears and two transformers are proposed. However, page 5 of the EA notes that there would be one pad-mounted switchgear and one transformer. Please clarify the quantity of transformers and switchgear. Would such equipment all be located on the proposed 10-foot by 20-foot concrete pad identified on Sheet SP-1?

Response

The Petitioner intends to install one transformer. The transformer would be located on a concrete pad as shown on plan sheet SP-1.

Interconnection

Question No. 23

Is the project interconnection required to be reviewed by ISO-NE?

Response

Petitioner initially filed interconnection applications with Eversource Energy, conducted Distribution System Impact Studies through Eversource, and earlier in February of 2020, signed an interconnection agreement with Eversource. As part of the interconnection agreement executed with Eversource, Petitioner provided notice to Eversource indicating that it intends to participate in the wholesale markets. Based on the size and scale of the project, as well as other generators on the applicable distribution circuit, Petitioner and Eversource do not anticipate any additional interconnection agreement or study need be signed or performed with ISO-NE.

Question No. 24

Referencing page 5 of the Petition, the Petitioner notes that, "Eversource will be responsible for all necessary permits/approvals (if any) for this interconnection construction." Would the demarcation point of the Petitioner's/Eversource's control (or responsibility for permitting) be at the proposed equipment pad or where the proposed underground connection route terminates near the existing electric distribution line on Platt Road, or another location?

Response

The demarcation point, indicating the change of ownership from Eversource to Petitioner, will be the area where the distribution interconnection occurs on Platt Road.

Question No. 25

Is the existing electrical distribution on Platt Road three-phase or would it have to be upgraded from single-phase to three-phase?

Response

The existing electrical distribution on Platt Road is three-phase (13.8 kV). The Petitioner does not need to complete any distribution line upgrades for the Watertown Solar One LLC project.

Public Safety

Question No. 26

Would the project comply with the National Electrical Code, the National Electrical Safety Code and any applicable National Fire Protection Association codes and standards?

Response

Yes.

Question No. 27

Where is the nearest federally-obligated airport? Is a glare analysis required to comply with FAA policy?

Response

Bradley International Airport, Windsor Locks, Connecticut. A glare analysis is not required to comply with FAA policy. All necessary FAA approvals and sign offs have been secured.

Question No. 28

With regard to emergency response:

a. Is outreach and/or training necessary for local emergency responders in the event

of a fire or other emergency at the site?

b. Could the proposed access accommodate emergency vehicles?

c. In the event of a brush or electrical fire, how would the Petitioner mitigate potential electric hazards that could be encountered by emergency response personnel?

d. Could the entire facility be shut down and de-energized in the event of a fire? If so, how?

Response

a. The Petitioner is prepared to assist in the event that outreach and or training is requested by local emergency responders.

b. Yes. The proposed access road has been designed to accommodate emergency service vehicles.

c. Watertown Solar One will have the ability to be de-energized remotely in the event of a brush or electrical fire.

d. Yes, the facility can be de-energized remotely in the event of a fire. The Petitioner will be able to access the SCADA system that can tell the recloser to close the remotely operable breaker so the system can be de-energized

Question No. 29

Are there any drinking water wells on the site or in the vicinity of the site? If so, how would the petitioner protect the wells and/or water quality from construction impacts?

Response

There are wells associated with the Mt. Olivet Cemetery on the larger parcel. There are no anticipated ground water impacts from the construction activity planned for the project.

Vibrations from installation of the racking system are not expected to cause sediment releases, and no disruption to well water flow or quality is anticipated. As a result, no special precautions are warranted.

Environmental

Question No. 30

Referencing page 13 of the EA, how many acres of edge forest would be cleared to construct the project?

Response

Approximately 11.85 acres of edge forest would be cleared for the project.

Question No. 31

Did the Petitioner conduct a Shade Study Analysis? Would shading present any challenges for the proposed project? If so, provide acreage of trees that would be removed to mitigate for shading? How were the limits of tree shading determined?

Response

The Petitioner conducted a shade analysis. Shading would not present any challenges for the project, as the proposed limits of clearing are designed to avoid an effect from shading on project production. The limits of tree shading were determined utilizing the shade study analysis, field survey of tree heights and review of existing topography.

In general, clearing for the project at the west, north and east is integral to the solar development and associated stormwater management installations. At the southern end of the project area, shading mitigation requires approximately 1.93 acres of tree clearing. An additional approximately 0.9 acre within the southern end is Old Field habitat, which contains a limited number of trees.

Question No. 32

The Greenhouse Gas (GHG) Assessment in Appendix M of Council Petition No. 1352 compared the life cycle GHG emissions from a solar project to a scenario where the solar project is avoided and an equivalent amount of natural gas-fired electric generation operated for the estimated life of the solar facility. For the proposed project, how would the net GHG emissions (or reduction) over the life of the solar facility and carbon debt payback be affected under this natural gas-fired generation versus proposed solar generation scenario?

Response

Using the methods and general assumptions provided in Appendix M of Council Petition No. 1352 as a foundation and applying those principles proportionally to the subject project (Petition No. 1417) we estimate that there would be an 83% reduction in GHG emissions by pursuing solar instead of natural gas.

Specifically, over 20 years we estimate the Watertown Solar One project will generate 67,955 MWh of electricity, while emitting approximately 20,286 tons of CO_2e. To achieve the equivalent MWh production over 20 years, a natural gas generator would emit an estimated 116,345 tons of CO_2e. See the figure below.

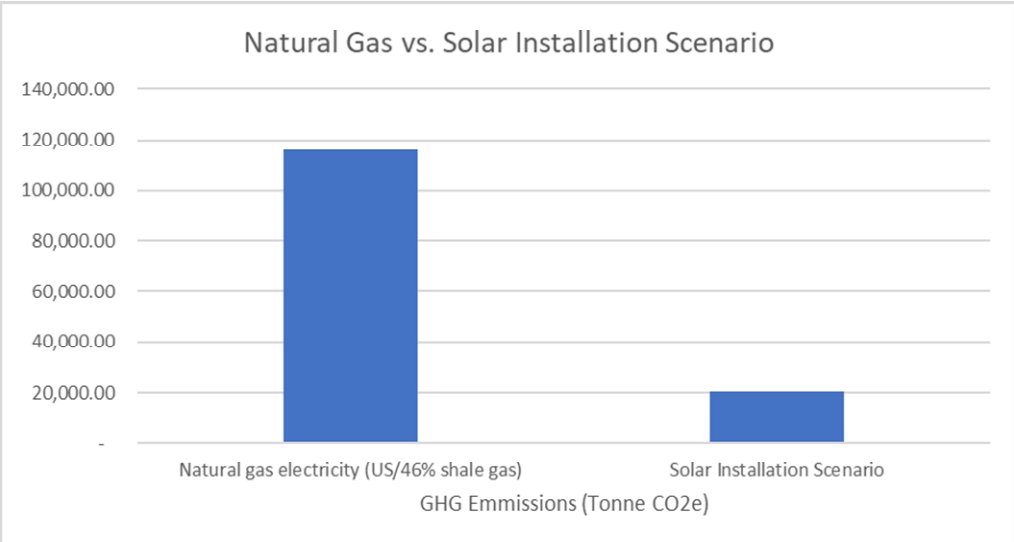


Figure: Greenhouse Gas Emissions over 20-years for Natural Gas Scenario vs. Solar Scenario per 67,955 MWh.

For additional detail as to the equivalencies used to arrive at the above conclusions, please see Attachment 3.

Question No. 33

Referencing page 29 of the EA, how many acres of Prime Farmland Soils would be impacted by the proposed project?

Response

Approximately 12.1 acres mapped as Prime Farmland Soils would be impacted by the project.

Question No. 34

Referencing pages 8 and 9 of the Petition, the Petitioner would utilize biodegradable oil for the inverter step-up transformer(s). Explain why it is considered biodegradable. How quickly does it degrade in the environment?

Response

The transformers use, "less flammable seed oil" derived from 100% edible seed oils and uses food grade additives, its environmental and health profile is unmatched by other dielectric coolants. Its biodegradation rate and completeness meet the U.S. Environmental Protection Agency (EPA) criteria for "Ultimate Biodegradability" classification."

Question No. 35

What effect would runoff from the drip edge of each row of solar panels have on the site drainage patterns? Would channelization below the drip edge be expected? If not, why not?

Response

The rows of solar panels are not considered "closed systems," because there are gaps

between each module (both north/south and east/west). As such, the drip edge of each solar panel will not have an impact on the Site's drainage patterns, as stormwater will flow off the panels at multiple locations as the panels follow the contours of the existing land. For the same reason, after construction is complete and the Site is fully stabilized, channelization along the drip edge is not expected.

Question No. 36

Would the proposed project be consistent with the 2015 U.S. Army Corps of Engineers Vernal Pool Best Management Practices?

Response

The methodology used to assess potential impacts from the proposed Facility to on-Site vernal pool habitats is consistent with the 2015 U.S. Army Corps of Engineers Vernal Pool Best Management Practices (BMPs). Per these BMPs, the landscape condition of the vernal pool was evaluated to determine the existing and proposed quality of the terrestrial (non-breeding) habitat. Pools with 25% or less developed areas in the critical terrestrial habitat (CTH) are identified as having high priority for maintaining this development percentage (including site clearing, grading and construction). The vernal pool assessed on the Site currently maintains less than 25% development. This vernal pool will remain consistent with the 2015 U.S. Army Corps of Engineers Vernal Pool BMPs post-development.

The proposed Habitat Enhancement Area will be located within the CTH of the on-Site vernal pool. The 4 to 7-year mowing restriction will allow the area to revert to late old field habitat and create a soft ecotone that can provide cover and more optimal habitat for obligate vernal pool breeding species. In addition, this improved cover/habitat will provide a more suitable migratory pathway to the forest block located east of the Facility for these seasonally

transient, vernal pool dependent wildlife.

Question No. 37

Referencing pages 8 and 9 of the Petition, please provide a Spill Prevention, Control and Countermeasure Plan.

Response

No liquid fuels are used in the operation of the Facility and none will be stored on site after construction is complete.

Petroleum product spill prevention, control and countermeasures are addressed in the Wetland and Vernal Pool Protection Plan and contained in the Environmental Notes, Section 4, Sheet DN-2 of the Project Plans. *See* Petition, Exhibit G, Appendix A (Project Plans) and Appendix B, Wetland and Vernal Pool Protection Plan.

Question No. 38

Referencing page 20 of the EA, for Wetland 1 and Wetland 2, could a 100-foot buffer be utilized? How would utilizing a 100-foot buffer impact the project?

Response

The minor encroachment into the 100-foot upland review area for Wetland 1 and Wetland 2 results from grading associated with the stormwater management basin at the northwest corner of the project area. The basin's size, and thus the encroachment into the upland review area, is the direct result of the Petitioner's compliance with a required drop in Hydrologic Soil Group required by draft Appendix I of the DEEP General Permit. It is possible that strict adherence to a 100-foot upland review area would result in loss of electrical generation capacity from the project.

Question No. 39

What is the length of the posts and to what depth would the posts be driven into the ground to provide structural stability? Are any impacts to groundwater quality anticipated? If so, how would the Petitioner manage and/or mitigate these impacts?

Response

Verogy anticipates that posts 14 feet in length would be utilized, and that they would be driven into the ground to a depth of 8 feet to 10 feet. No impacts to groundwater quality are anticipated from either the installation or the ongoing presence of the posts and the Project as a whole. Thus, no management or mitigation actions are warranted.

Question No. 40

Describe the visibility of the proposed facility from the residences located on the east side of Platt Road within the areas depicted in orange in the viewshed map. Does Photo-simulation #1 depict some seasonal or year-round visibility of solar panels on the left side of the photo-simulation?

Response

As indicated on the viewshed map presented in Appendix G to the EA, seasonal visibility may be experienced from one to three residential properties on the east side of Platt Road in the area of the Mt. Olivet Cemetery entrance and facility maintenance area. In general, mature trees are found along Platt Road and within the cemetery property. As such, any visibility during leaf-off conditions will be partially obstructed.

The left side of photo-simulation #1 does not depict any solar panels; there is no change in that area from photo #1 to photo-simulation #1.

Question No. 41

Describe the visibility of the proposed facility from the residences located north of Winding Brook Farm Road and located within the orange areas of the viewshed map.

Response

As indicated on the viewshed map presented in Appendix G to the EA, seasonal visibility may be experienced from several properties on the north side of Winding Brook Farm Road at distances of approximately 1300 feet to 1800 feet. In general, visibility during leaf-off conditions will be partially obstructed by intervening mature vegetation at property lines associated with intervening properties. Visibility from those locations will also depend on the type and maturity of landscaping present at each property.

Question No. 42

Please submit photographic site documentation with notations linked to the site plans or a detailed aerial image that identify locations of site-specific and representative site features. The submission should include photographs of the site from public road(s) or publicly accessible area(s) as well as Site-specific locations depicting site features including, but not necessarily limited to, the following locations as applicable:

For each photo, please indicate the photo viewpoint direction and stake or flag the locations of site-specific and representative site features. Site-specific and representative site features include, but are not limited to, as applicable:

1. wetlands, watercourses and vernal pools;
2. forest/forest edge areas;
3. agricultural soil areas;
4. sloping terrain;
5. proposed stormwater control features;
6. nearest residences;
7. Site access and interior access road(s);

8. utility pads/electrical interconnection(s);
9. clearing limits/property lines;
10. mitigation areas; and
11. any other noteworthy features relative to the Project.

A photolog graphic must accompany the submission, using a site plan or a detailed aerial image, depicting each numbered photograph for reference. For each photo, indicate the photo location number and viewpoint direction, and clearly identify the locations of site-specific and representative site features show (e.g., physical staking/flagging or other means of marking the subject area).

The submission shall be delivered electronically in a legible portable document format (PDF) with a maximum file size of <20MB. If necessary, multiple files may be submitted and clearly marked in terms of sequence.

Response

The Remote Field Review exhibit is included as Attachment 4.

Facility Construction

Question No. 43

Referencing page 16 and Exhibit C of the Petition, has the Petitioner had any additional meetings with the Department of Energy and Environmental Protection (DEEP) Stormwater Division since January 2020? Has the Petitioner submitted its application to the DEEP Stormwater Division for a Stormwater Permit, including its Stormwater Pollution Control Plan (SWPCP)? Provide the status of the Stormwater Permit and the SWPCP.

Response

The Petitioner met with the CT DEEP Stormwater team in January 2020 for purposes of a pre-permit submission meeting. The Petitioner submitted its application to the CT DEEP Stormwater division for a Stormwater Permit in July of 2020. This submission included a

Stormwater Pollution Control Plan. The Petitioner has since spoken with the Stormwater Division and they mentioned that the application is under the 60-day review period and is anticipated to conclude review on or about September 13th, 2020.

Question No. 44

With regard to earthwork required to develop the site, provide the following:

a) In what areas would the site be graded?

b) What is the desired slope within the solar array areas?

c) Could the solar field areas be installed with minimal alteration to existing slopes?

d) If minimal alteration of slopes are proposed, can existing vegetation be maintained to provide ground cover during construction?

e) Referencing Sheet T-1, do the amounts of cut and fill (approximately 14,015 cubic yards each) associated with site grading include the cut and fill for the proposed access road? If no, estimate any additional amounts of cut and fill in cubic yards for the access road.

f) If there any is excess cut resulting from site grading plus access road work, would this material be removed from the site property or deposited on the site property, e.g. used to construct the proposed berm noted on page 33 of the EA?

Response

a) Grading is required to remove existing soil stock piles, in areas where slopes exceed 30%, and in the areas where storm water management features are proposed.

b) In general, the desired slope within solar arrays is 30% or less.

c) Existing slopes include locations that have been used by the cemetery for soil

stockpiling. With the exception of these areas, the project has been designed to minimize alterations to existing slopes.

d) Where practicable, existing vegetation will be maintained during construction.

e) The cut and fill shown as associated with site grading includes a portion of the access road. An additional portion of the access road not included may result in an additional 100 cubic yards of cut, which would be spread throughout the project site.

f) It is anticipated that soils from within the property will be utilized for construction of the berm and otherwise spread around the project area. It is not anticipated that any soils will be removed from the property.

Question No. 45

Would topsoil be stripped from the site prior to grading? If so, would the topsoil be spread over the disturbed areas once grading is complete? If not, how would growth of new vegetation/grasses be promoted within the graded areas if nutrient rich soils are not present?

Response

Yes, existing topsoil will be stripped from earthwork areas prior to excavation and grading and will be reused on site as top dressing for reestablishing vegetation.

Question No. 46

Page 4 of the Petition notes that the racking system posts would be pile-driven, or ground screws would be spun into the ground. Would one post installation method be a primary method and the other a backup? How would the Petitioner determine which method to use? In the event that ledge is encountered, what methods would be utilized for installation?

Response

In general, racking manufacturers utilize the geotechnical survey results and pull-out tests to assess what type of racking system, including foundation type (driven beams/drilled piers or ground screws), should be designed to ensure that the racking structure is soundly supported. If refusals in these two tests are encountered due to dense subsurface conditions, a ground screw option can be utilized in compact conditions. If ledge is encountered, drilling of holes backfilled with grout are utilized.

Due to the results from the Geotechnical study (*See* also Response to Interrogatory No. 48 below) and the pull-out tests performed, the racking design will likely incorporate Ground Screws with pre-drilling, as necessary.

Question No. 47

What is the minimum access road width required for post-construction use?

Response

The minimum road width for post-construction use is 12 feet.

Question No. 48

Has a comprehensive geotechnical study been completed for the site to determine if site conditions support the overall project design? If so, summarize the results. If not, has the Petitioner anticipated and designed the project with assumed subsurface conditions? What are these assumed conditions?

Response

A geotechnical investigation, including borings, analysis and laboratory testing has been performed. Subsurface conditions were found to include Subsoil, Glacial Till, and Weathered Rock. The geotechnical report finds:

> Ground screws should be designed and installed by a specialty contractor with a minimum of 5 years of experience with designing and installing ground screw systems. The specialty contractor should also be licensed by the manufacturer of the selected ground screw system. The axial capacity of the ground screws must be confirmed during installation using the designer's recommended torque resistance. Predrilling is anticipated to install the ground screws due to the relative density of Site soils and the presence of cobbles and boulders.

The results of the geotechnical study will be utilized by the selected racking manufacturer in their final design of the racking system. (*See* also Response to Interrogatory No. 46).

Maintenance Questions

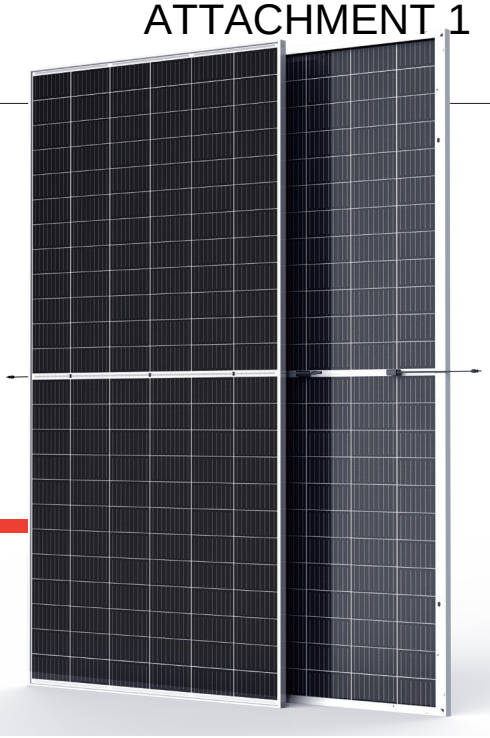
Question No. 49

Would the petitioner store any replacement modules on-site in the event solar panels are damaged or are not functioning properly? If so, where? How would damaged panels be detected?

Response

No, replacement modules would not be stored on-site. Damaged panels would be detected and marked for replacement one of two ways, either remotely through alarms in the monitoring system or during routine site inspections by operations and maintenance technicians.

ATTACHMENT 1



THE

DUOMAX twin

BIFACIAL DUAL GLASS 144 CELL MULTI BUSBAR MODULE

PRODUCTS	POWER RANGE
TSM-DEG15MC.20(II)	390-410W

144-Cell
MONOCRYSTALLINE MODULE

390-410W
POWER OUTPUT RANGE

20.2%
MAXIMUM EFFICIENCY

0~+5W
POSITIVE POWER TOLERANCE

Founded in 1997, Trina Solar is the world's leading total solution provider for solar energy. With local presence around the globe, Trina Solar is able to provide exceptional service to each customer in each market and deliver our innovative, reliable products with the backing of Trina as a strong, bankable brand. Trina Solar now distributes its PV products to over 100 countries all over the world. We are committed to building strategic, mutually beneÿcial collaborations with installers, developers, distributors and other partners in driving smart energy together.

Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse Gases Emissions Veriÿcation
OHSAS 18001: Occupation Health and Safety Management System

High power output

- Up to 410W front power and 20.2% module efficiency with half-cut and MBB (Multi Busbar) technology enabling higher BOS savings
- Lower resistance of half-cut cells ensures higher power

Certified to perform in highly challenging environments

- High PID resistance through cell process and module material control
- Resistant to salt, acid, sand, and ammonia
- Proven to be reliable in high temperature and humidity areas
- Certified to the best fire class A
- Minimizes micro-crack and snail trails
- Certified to 5400 Pa positive load and 2400 Pa negative load

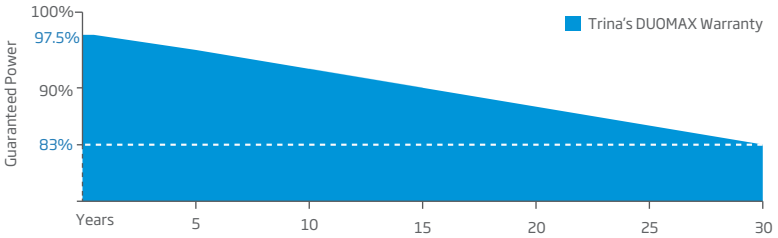
High energy generation, low LCOE

- Up to 25% additional power gain from back side, depending on the albedo
- Excellent 3rd party validated IAM and low light performance with cell process and module material optimization
- Low temp coefficient (-0.35%) and NMOT increases energy production
- Better anti-shading performance and lower operating temperature
- Higher power from same installation footprint as standard modules

Easy to install, wide application

- Frame design enables compatibility with standard installation methods
- Deployable for ground mounted utility, carports, and agricultural projects
- Safe and easy to transport, handle, and install like normal framed modules

Trina Solar's DUOMAX Performance Warranty



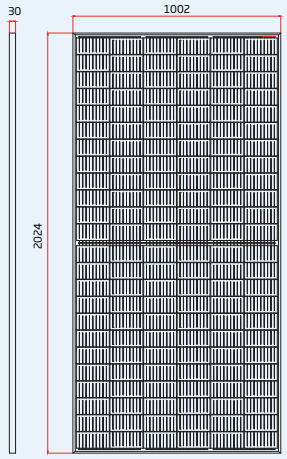
From the 2nd year to the 30th year, the average annual power decline will be no more than 0.5%.

Trinasolar

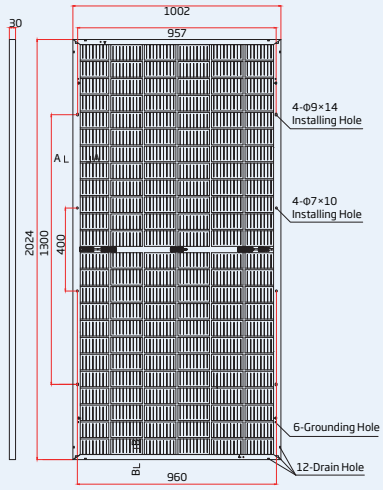
DUOMAX twin

BIFACIAL DUAL GLASS 144 HALF-CELL MBB MODULE

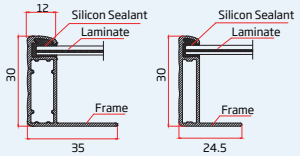
DIMENSIONS OF PV MODULE (mm)



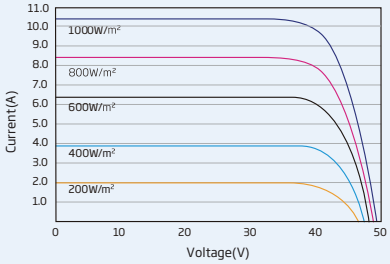
Front View



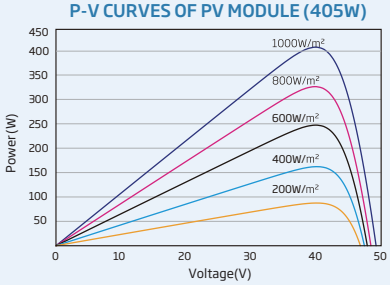
Back View



I-V CURVES OF PV MODULE (405 W)



P-V CURVES OF PV MODULE (405W)



ELECTRICAL DATA (STC)

Peak Power Watts-P_{MAX} (Wp)*	390	395	400	405	410
Power Output Tolerance-P_{MAX} (W)	0 ~ +5				
Maximum Power Voltage-V_{MPP} (V)	40.2	40.5	40.8	41.1	41.4
Maximum Power Current-I_{MPP} (A)	9.71	9.76	9.81	9.86	9.91
Open Circuit Voltage-V_{OC} (V)	48.5	48.7	48.9	49.1	49.3
Short Circuit Current-I_{SC} (A)	10.25	10.29	10.33	10.37	10.41
Module Efficiency η_m (%)	19.2	19.5	19.7	20.0	20.2

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.
*Measuring tolerance: ±3%.

ELECTRICAL DATA (NMOT)

Maximum Power-P_{MAX} (Wp)	295	299	302	306	310
Maximum Power Voltage-V_{MPP} (V)	37.7	38.0	38.3	38.6	38.9
Maximum Power Current-I_{MPP} (A)	7.82	7.86	7.90	7.93	7.97
Open Circuit Voltage-V_{OC} (V)	45.7	45.9	46.1	46.3	46.5
Short Circuit Current-I_{SC} (A)	8.26	8.29	8.33	8.36	8.39

NMOT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

Electrical characteristics with different rear side power gains (referenced specifically to 405 Wp front)**

Maximum Power-P_{MAX} (Wp)	425	446	466	486	506
Maximum Power Voltage-V_{MPP} (V)	41.1	41.1	41.1	41.1	41.1
Maximum Power Current-I_{MPP} (A)	10.35	10.85	11.34	11.83	12.33
Open Circuit Voltage-V_{OC} (V)	49.2	49.3	49.4	49.5	49.6
Short Circuit Current-I_{SC} (A)	10.89	11.41	11.93	12.44	12.96
P_{max} gain	5%	10%	15%	20%	25%

Power Bifaciality:70±5%.

MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Orientation	144 cells (6 × 24)
Module Dimensions	2024 × 1002 × 30 mm (79.69 × 39.45 × 1.18 inches)
Weight	26.0 kg (57.3 lb)
Front Glass	2.0 mm (0.08 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	POE/EVA
Back Glass	2.0 mm (0.08 inches), Heat Strengthened Glass (White Grid Glass)
Frame	30mm (1.18 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0 mm² (0.006 inches²) Portrait: 280/280 mm (11.02/11.02 inches) Landscape: 1900/1900 mm (74.80/74.80 inches)
Connector	Trina TS4

TEMPERATURE RATINGS

NMOT (Nominal Moudule Operating Temperature)	41°C (±3°C)
Temperature Coefficient of P_{MAX}	- 0.35%/°C
Temperature Coefficient of V_{OC}	- 0.25%/°C
Temperature Coefficient of I_{SC}	0.04%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum SystemVoltage	1500V DC (IEC)
	1500V DC (UL)
Max Series Fuse Rating	20A

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

WARRANTY

12 year Product Workmanship Warranty

30 year Power Warranty

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 35 pieces

Modules per 40' container: 665 pieces

** Back-side power gain varies depending upon the specific project albedo

Trinasolar

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

Version number: TSM_DEG15MC20_EN_2020_RED

www.trinasolar.com

HIGH PERFORMANCE
BIFACIAL PERC MONOCRYSTALLINE MODULE

RSM144-6-370BMDG-390BMDG

144 CELL MONOCRYSTALLINE MODULE

370-390Wp POWER OUTPUT RANGE

1500VDC MAXIMUM SYSTEM VOLTAGE

19.5% MAXIMUM EFFICIENCY

risen solar technology

About Risen Energy

Risen Energy is a leading, global tier 1 manufacturer of high-performance solar photovoltaic products and provider of total business solutions for residential, commercial and utility-scale power generation. The company, founded in 1986, and publicly listed in 2010, compels value generation for its chosen global customers. Techno-commercial innovation, underpinned by consummate quality and support, encircle Risen Energy's total Solar PV business solutions which are among the most powerful and cost-effective in the industry. With local market presence and strong financial bankability status, we are committed, and able, to building strategic, mutually beneficial collaborations with our partners, as together we capitalise on the rising value of green energy.

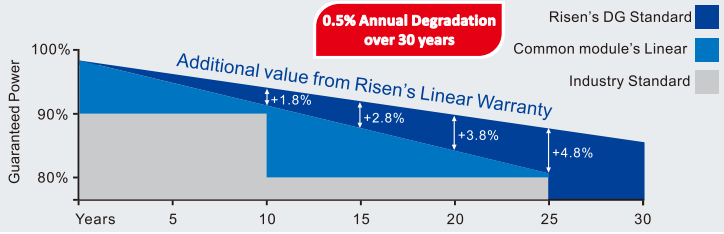
ISO9001
ISO14001
OHSAS18001

KEY SALIENT FEATURES

- Global, Tier 1 bankable brand, with independently certified state-of-the-art automated manufacturing
- Bifacial technology enables additional energy harvesting from rear side (up to 25%)
- Industry leading lowest thermal co-efficient of power
- Industry leading 12 years product warranty
- Excellent low irradiance performance
- Excellent PID resistance
- Positive tight power tolerance
- Dual stage 100% EL Inspection warranting defect-free product
- Module Imp binning radically reduces string mismatch losses
- Warranted reliability and stringent quality assurances well beyond certified requirements
- Certified to withstand severe environmental conditions
  - Anti-reflective & anti-soiling surface minimise power loss from dirt and dust
  - Severe salt mist, ammonia & blown sand resistance, for seaside, farm and desert environments
  - Excellent mechanical load 2400Pa & snow load 5400Pa resistance

LINEAR PERFORMANCE WARRANTY

12 year Product Warranty / 30 year Linear Power Warranty



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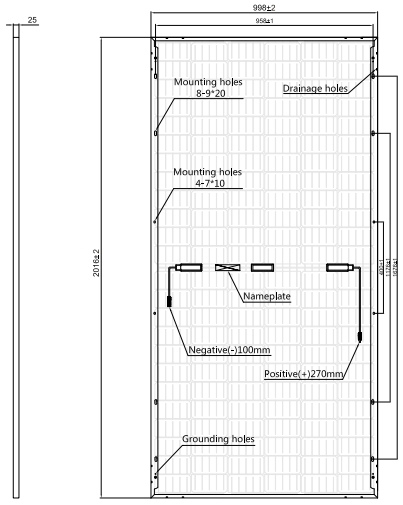
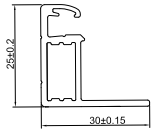
Tashan Industry Zone, Meilin,
Ninghai 315609,Ningbo | PRC
Tel: +86-574-59953239
Fax: +86-574-59953599
E-mail: info@risenenergy.com
Website: www.risenenergy.com

THE POWER OF RISING VALUE

Dimensions of PV Module

Unit: mm





ELECTRICAL DATA (STC)

Model Number	RSM144-6-370BMDG	RSM144-6-375BMDG	RSM144-6-380BMDG	RSM144-6-385BMDG	RSM144-6-390BMDG
Rated Power in Watts-Pmax(Wp)	**370**	**375**	**380**	**385**	**390**
Open Circuit Voltage-Voc(V)	47.60	47.75	48.00	48.15	48.30
Short Circuit Current-Isc(A)	9.90	10.00	10.10	10.20	10.30
Maximum Power Voltage-Vmpp(V)	39.80	39.90	40.05	40.15	40.25
Maximum Power Current-Impp(A)	9.30	9.40	9.50	9.60	9.70
Module Efficiency (%)	18.5	18.8	19.0	19.3	19.5
Encapsulated Cell Efficiency (%)	20.8	21.1	21.4	21.6	21.9

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.
Power production tolerance: 0~+3%

REARSIDE POWER GAIN BIFACIAL FACTOR:75%±5

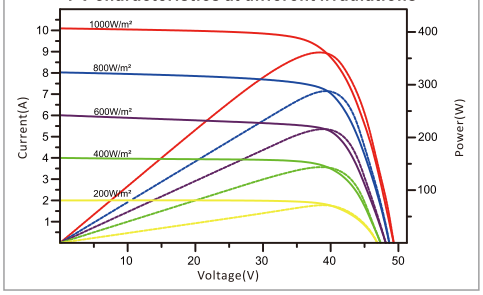
Model Number		RSM144-6-370BMDG	RSM144-6-375BMDG	RSM144-6-380BMDG	RSM144-6-385BMDG	RSM144-6-390BMDG
10%	Power Output(Wp)	407	413	418	424	429
15%	Power Output(Wp)	426	431	437	443	449
20%	Power Output(Wp)	444	450	456	462	468
25%	Power Output(Wp)	463	469	475	481	488

ELECTRICAL DATA (NMOT)

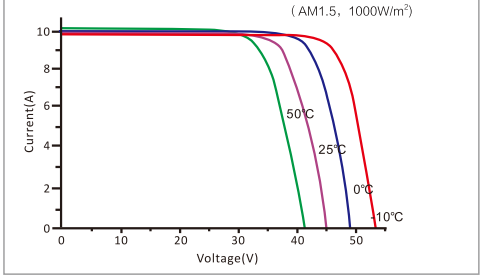
Model Number	RSM144-6-370BMDG	RSM144-6-375BMDG	RSM144-6-380BMDG	RSM144-6-385BMDG	RSM144-6-390BMDG
Maximum Power-Pmax (Wp)	276.7	280.3	284.4	288.1	291.8
Open Circuit Voltage-Voc (V)	43.8	43.9	44.2	44.3	44.4
Short Circuit Current-Isc (A)	8.12	8.20	8.28	8.36	8.45
Maximum Power Voltage-Vmpp (V)	36.5	36.6	36.7	36.8	36.9
Maximum Power Current-Impp (A)	7.59	7.67	7.75	7.83	7.92

NMOT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

RSM144-6-390BMDG
I-V characteristics at different irradiations



I-V characteristics at different temperatures
(AM1.5, 1000W/m²)



MECHANICAL DATA

Solar cells	Monocrystalline, 6" half cell
Cell configuration	144 cells (6×12+6×12)
Module dimensions	2016×998×25mm
Weight	26kg
Superstrate	2.0 mm, ARC Glass
Substrate	2.0 mm, Glazed Glass
Frame	Anodized Aluminium Alloy type 6063T5, Silver Color
J-Box	Potted, IP68, 1500VDC, 3 Schottky bypass diodes
Cables	4.0mm² (12AWG), positive 270mm length, negative 100mm length
Connector	Risen Twinsel PV-SY02, IP68

TEMPERATURE & MAXIMUM RATINGS

Nominal Module Operating Temperature (NMOT)	45°C±2°C
Temperature Coefficient of Voc	-0.29%/°C
Temperature Coefficient of Isc	0.06%/°C
Temperature Coefficient of Pmax	-0.37%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	20A
Limiting Reverse Current	20A

PACKAGING CONFIGURATION

	40ft	20ft
Number of modules per container	880	400
Number of modules per pallet	40	40
Number of pallets per container	22	10
Packaging box dimensions (LxWxH) in mm	2110×1130×1140	2110×1130×1140
Box gross weight[kg]	1100	1100

Our Partners:

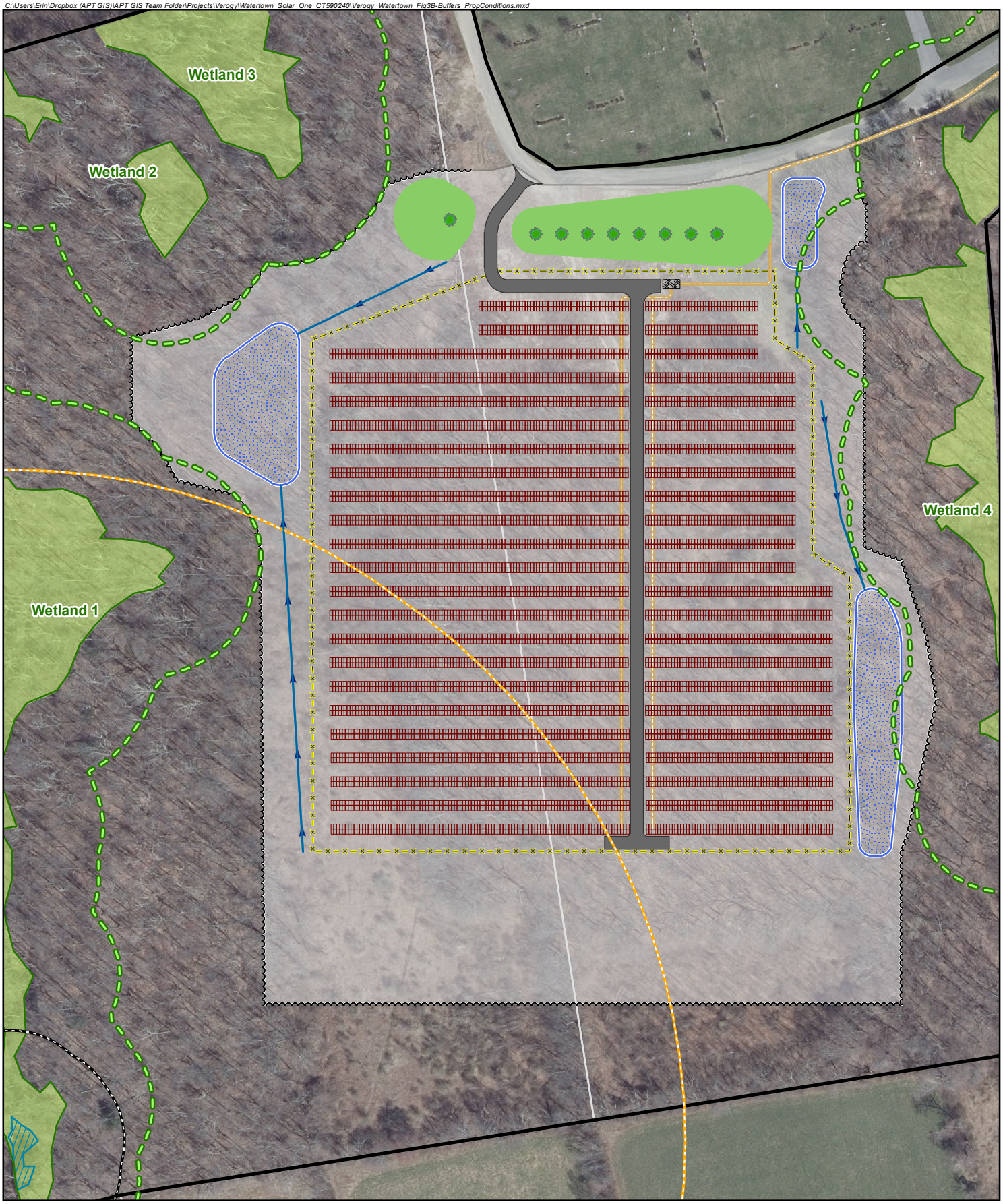
CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

THE POWER OF RISING VALUE

ATTACHMENT 2

ATTACHMENT 2

C:\Users\Erin\Dropbox (APT GIS)\APT GIS Team Folder\Projects\Verogy\Watertown_Solar_One_CT590240\Verogy_Watertown_Fig3B-Buffers_PropConditions.mxd



Legend

- Approx. Parcel Boundary (CTDEEP)
- Site
- Municipal Boundary
- Vernal Pool
- Delineated Wetland Boundary
- Delineated Wetland Area
- Watercourse (CTDEEP)
- Limit Of Disturbance
- Solar Modules
- Conc. Equipment Pad
- Gravel Access Road
- Grass Berm
- Stormwater Basin
- Landscape Screening (Evergreens)
- Treeline (Clearing Limit)
- Perimeter Fence
- Stormwater Swale
- Interconnection Path
- 100' Upland Review Area
- 100' Vernal Pool Envelope (VPE)
- 100'-750' Critical Terrestrial Habitat (CTH)

Map Notes:
Base Map Source: CTECO 2019 Aerial Photograph
Map Scale: 1 inch = 150 feet
Map Date: August 2020

150 75 0 150 Feet

N W E S

Response to Comment # 19
Proposed Conditions Map

Proposed Solar Facility - Watertown Solar One
669 Platt Road
Watertown, Connecticut

Watertown Solar One, LLC

ALL-POINTS TECHNOLOGY CORPORATION

ATTACHMENT 3

NextEra Petition 1352		
Forestland Acres Removed	95.3	
AC System Size	19.99	
MWh/Year	39,000	
AC Capacity Factor	22.27%	
Degradation	0.50%	
20-year Production (MWh)	744,038.00	
Life Cycle Emissions (20-years)		
Type	MT CO2e	MT CO2e per MW AC
Solar Panels/Infra	134,152.00	6,710.96
		MT CO2e per Acre
Wood Chips	6,121.00	64.23
Wood Products	24,205.00	253.99
Lost Forest Carbon	13,739.00	144.17
Land Clearing & chipping	288.00	3.02
Carbon sequestration, plantings	(672.00)	
Total Life Cycle Emissions	177,833.00	

Annual Production Estimate (MWh)
39,000.00
38,805.00
38,610.98
38,417.92
38,225.83
38,034.70
37,844.53
37,655.31
37,467.03
37,279.69
37,093.30
36,907.83
36,723.29
36,539.67
36,356.97
36,175.19
35,994.31
35,814.34
35,635.27
35,457.09
744,038.25

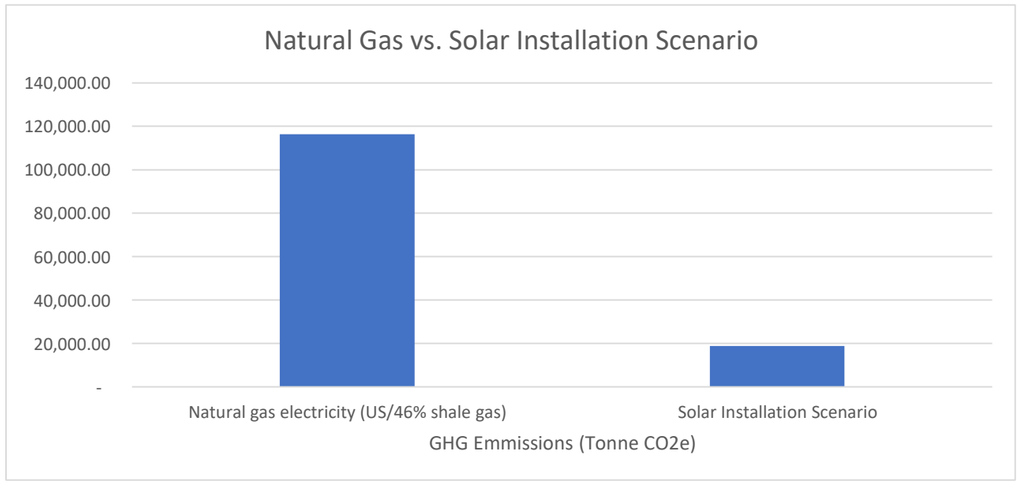
Verogy Petition 1417		
Forestland Acres Removed	11.860	
AC System Size	1.975	
MWh/Year	3,562	
AC Capacity Factor	20.59%	
Degradation	0.50%	
20-year Production (MWh)	67,955.00	
Life Cycle Emissions (20-years)		
Type	MT CO2e	MT CO2e per MW AC
Solar Panels/Infra	13,254.14	6,710.96
		MT CO2e per Acre
Wood Chips	761.75	64.23
Wood Products	3,012.29	253.99
Lost Forest Carbon	1,709.81	144.17
Land Clearing & chipping	35.84	3.02
Carbon sequestration, plantings	(0.31)	46 evergreens at 0.0068 tons/shrub/year
Total Life Cycle Emissions	18,773.52	

Annual Production Estimate (MWh)
3,562.00
3,544.19
3,526.47
3,508.84
3,491.29
3,473.84
3,456.47
3,439.18
3,421.99
3,404.88
3,387.85
3,370.92
3,354.06
3,337.29
3,320.60
3,304.00
3,287.48
3,271.04
3,254.69
3,238.41
67,955.49

Area of Disturbance (Acres)
16.57
Pre-Cleared Area (Acres)
4.71
Area Deforested (Acres)
11.86

Natural Gas Figures (NextEra Petition 1352)		
Production (MWh) 20-years	744,038	
Life Cycle Emissions (20-years) (NextEra Petition 1352)		
Type	MT CO2e	MT CO2e per MWh
Natural gas electricity (US/46% shale gas)	1,273,861.00	1.71

Verogy Petition 1417		
Production (MWh) 20-years	67,955.00	
Life Cycle Emissions (20-years) (NextEra Petition 1352)		
Type	MT CO2e	MT CO2e per MWh
Natural gas electricity (US/46% shale gas)	116,345.17	1.71
Solar Installation Scenario	18,773.52	0.28
Percentage Reduction	84%	



ATTACHMENT 4

ATTACHMENT 4

REMOTE FIELD REVIEW

ALL-POINTS TECHNOLOGY CORPORATION

CONNECTICUT SITING COUNCIL PETITION NO. 1417

WATERTOWN SOLAR ONE
669 Platt Road
Watertown, Connecticut

PREPARED FOR:

VEROGY

PREPARED BY:
ALL-POINTS TECHNOLOGY CORPORATION, P.C.
567 Vauxhall Street Extension – Suite 311
Waterford, CT 06385

Photographed July 31, 2020

PHOTO LOG

Photo Locations
Photo Markers
Site
Approx. Parcel Boundary (CTDEEP)
Delineated Wetland Boundary
Delineated Wetland Area
Vernal Pool
Watercourse (CTDEEP)
Limit Of Disturbance
Solar Modules
Conc. Equipment Pad
Gravel Access Road
Grass Berm
Stormwater Basin
Treeline (Clearing Limit)
Perimeter Fence
Stormwater Swale
Interconnection Path
Landscape Screening (Evergreens)

N
300 150 0 300 Feet
1 inch = 300 feet

ALL-POINTS TECHNOLOGY CORPORATION

Watertown Solar One, LLC

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
1	**MT. OLIVET CEMETERY LOOKING SOUTH**

ALL-POINTS TECHNOLOGY CORPORATION

Watertown Solar One, LLC

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
2	**MT. OLIVET CEMETERY LOOKING SOUTH**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
3	**MT. OLIVET CEMETERY LOOKING SOUTH**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
4	**PROPOSED ACCESS ROAD LOOKING EAST**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
5	**MT. OLIVET CEMETERY LOOKING SOUTH**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
6	**EASTERN PORTION OF PROPOSED BERM LOOKING SOUTH**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
7	**NORTHEASTERN PORTION OF PROPOSED FACILITY LOOKING NORTH**

PHOTOGRAPHED ON 7/31/2020

PHOTO	DESCRIPTION
8	**FOUR CARDINAL POINTS**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
9	**WESTERN PORTION OF PROPOSED BERM LOOKING SOUTHWEST**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
10	**PROPOSED SMALL WESTERN BERM LOOKING EAST**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
11	**LOOKING SOUTHWEST ALONG PROPOSED FENCELINE**

PHOTOGRAPHED ON 7/31/2020

PHOTO	DESCRIPTION
12	**FOUR CARDINAL POINTS**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
13	**LOOKING WEST**

ALL-POINTS TECHNOLOGY CORPORATION

Watertown Solar One, LLC

PHOTOGRAPHED ON 7/31/2020

PHOTO	DESCRIPTION
14	**FOUR CARDINAL POINTS**

PHOTOGRAPHED ON 7/31/2020

PHOTO	DESCRIPTION
15	**FOUR CARDINAL POINTS**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
16	**LOOKING EAST**

ALL-POINTS TECHNOLOGY CORPORATION

Watertown Solar One, LLC

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
17	**LOOKING SOUTHEAST**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
18	**LOOKING EAST**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
19	**LOOKING EAST**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
20	**LOOKING SOUTHEAST**

PHOTOGRAPHED ON 7/31/2020

PHOTO	DESCRIPTION
21	**FOUR CARDINAL POINTS**

PHOTOGRAPHED ON 7/31/2020

PHOTO	DESCRIPTION
22	**FOUR CARDINAL POINTS**

PHOTOGRAPHED ON 7/31/2020

PHOTO	DESCRIPTION
23	**FOUR CARDINAL POINTS**

PHOTOGRAPHED ON 7/31/2020

PHOTO	DESCRIPTION
24	**FOUR CARDINAL POINTS**

PHOTOGRAPHED ON 7/31/2020

EXISTING

PHOTO	DESCRIPTION
25	**LOOKING NORTH**