

**STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL**

Burlington Solar One, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a 3.5-megawatt AC solar photovoltaic electric generating facility located at Lot 33, Prospect Street, Burlington, Connecticut and associated electrical interconnection.

Docket No. 497

March 16, 2021

**BURLINGTON SOLAR ONE, LLC’S RESPONSES TO THE CONNECTICUT SITING COUNCIL’S (SET ONE) MARCH 3, 2021 INTERROGATORIES**

The applicant, Burlington Solar One, LLC (“Burlington Solar One” or “the Applicant”), respectfully submits this response to the Council’s (Set One) Interrogatories, dated March 3, 2021, in the above-referenced Docket. In response to the Council’s Interrogatories, Burlington Solar One states as follows:

**Notice**

- 1. Since the original filing of notice to abutters, did the Applicant receive any abutter or neighbor comments on the proposal? If so, provide a summary of the comments received.**

Yes, the table below details the respective feedback/input that the Project received from local property owners and community members.

<b><u>Property Owner / Neighbor or Community Member</u></b>	<b><u>Subject</u></b>	<b><u>Summary</u></b>
Richard Corliss	Location and Views	Richard wanted to know exactly where the project would be in relation to his property. Verogy provided a summary and sent the viewshed and simulation map that showed no anticipated seasonal or year-round views were anticipated.
Larry Ruel	Visibility & Electricity Sale / Offtake	Larry wanted to know who was getting the power from the project and whether the project would be visible from the road.

Richard & Ewelina Czerczak	Location, Views of Array, Impact to them as Property Owners	Richard & Ewelina first reached out via a phone call and then transitioned to email for more specific questions regarding the project. The Applicant later met Czerczak's in person at a March 9th meeting where abutting property owners and members of the Whigville Preservation Group were present. Primary concerns raised by the Czerczak's were the location and proximity of the proposed project to their property and the anticipated views of the project.
Mark & Patricia Smaldone	Location, Views of Array, Impact to them as Property Owners	Mark & Patricia first reached out via email to discuss the proposed project and more specifically, the applicants plans to screen the solar panels for abutting property owners. Primary concerns raised by the Smaldone's included that the solar panels should not be visible to abutting property owners or the community on a year-round basis. Additional questions were asked regarding the decommissioning and removal of the proposed project from the property, and who is responsible to complete that. The Applicant responded to these questions directly and has further prepared a decommissioning plan for the project. The Applicant later meet with the Smaldone's in person at a March 9th meeting where abutting property owners and members of the Whigville Preservation Group were present.
John & Karen Hebert	Location, Views of Array, Impact to them as Property Owners	John and Karen Reached out via a phone call and the Applicant later met Karen Hebert in person at a March 9th meeting where abutting property owners and members of the Whigville Preservation Group were present. Primary concerns raised by the Hebert's included the location and visibility of the proposed project from surrounding properties.
James Rigdon	Location and Potential Impact to Surrounding Neighborhood	James reached out via the project website and had questions regarding the location and requested an additional map of the project. Questions regarding traffic and noise were also asked and addressed. Finally James asked why a sign had not yet been posted regarding a public hearing. Since this communication was received in December 2020, a Public Hearing had not yet been scheduled for the project.

Jon Crane	Proposed Project Location, Visibility, Whigville Preservation Group	Jon Crane & Tom Morrow provided a letter on behalf of the Whigville Preservation Group in response to the proposed project offering the following comments: It is our request that the project include appropriate, natural, year-round screening to keep the solar operation from being visible, particularly on the west and north sides. It would benefit our Whigville community, as a whole, to not have to look at it from Stone Road and Main Street. The Applicant has produced the provided Landscaping plan in response to this commentary and other similar commentary from neighbors to the project. As a result of the March 9th meeting and discussions with neighboring property owners, the applicant is currently in the process of addressing concerns surrounding the current proposed location of the project. The summary of feedback and suggested modifications to the design was also provided to the Council on March 11, 2021. The Applicant is currently working through the engineering and reviewing feasibility of moving the array further south.
Tom Morrow	Proposed Project Location, Visibility, Whigville Preservation Group	Jon Crane & Tom Morrow provided a letter on behalf of the Whigville Preservation Group in response to the proposed project offering the following comments: It is our request that the project include appropriate, natural, year-round screening to keep the solar operation from being visible, particularly on the west and north sides. It would benefit our Whigville community, as a whole, to not have to look at it from Stone Road and Main Street. The Applicant has produced the provided Landscaping plan in response to this commentary and other similar commentary from neighbors to the project. As a result of the March 9th meeting and discussions with neighboring property owners, the applicant is currently in the process of addressing concerns surrounding the current proposed location of the project. The summary of feedback and suggested modifications to the design was also provided to the council on March 11, 2021. The Applicant is currently working through the engineering and reviewing feasibility of moving the array further south.
Craig Carder	Project Impacts to Surrounding Properties	Craig first reached out via email to request additional information about the project. Craig asked to speak about the project over a Zoom Meeting and the Applicant and Craig were able to meet via Zoom on March 11th and discuss the proposed project. the Primary focus was about potential views of the project and current efforts by the applicant to address potential views of the project.

Paul Rochford	Visibility of Proposed Project	Paul reached out on behalf of the Burlington Land Trust to offer the following comment: "The Whigville solar project should be constructed in such a way that renders the solar panels as invisible as possible. It would benefit the Whigville community not to have to look at it from Stone Road & Main Street."
Dana Briere	Request for Additional Information	Dana reached out as a resident in Burlington and asked for an additional overview map of the project. Dana also had questions regarding other larger solar projects Connecticut.

**2. Please provide a summary of project features and/or project changes that were implemented in response to neighborhood concerns, e.g. landscaping plans.**

As a result of recent meetings and discussions that Burlington Solar One has had with neighboring property owners, Burlington Solar One is currently in the process of addressing raised concerns regarding the current proposed location of the Project. On March 11, 2021, Burlington Solar One provided the Council with a summary of the feedback and suggested modifications it received respecting the Project’s design. The Applicant is currently working through the engineering and reviewing the feasibility of moving the array further south. The Applicant has committed to modifying the fence design, increasing the proposed height from seven (7) feet to eight (8) feet, and including privacy slats.

**Project Development**

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

The following permits are anticipated to be required for construction and operation of the Burlington Solar One facility:

- a. Connecticut Department of Energy and Environmental Protection (“CTDEEP”), General Permit for the Discharge of Stormwater and Dewatering Wastewater from Construction Activity;
- b. Town of Burlington, Building Permit; and
- c. Town of Burlington, Electrical Permit.

The Applicant will obtain and hold the above-referenced permits.

**4. Referencing page 5 of the Application, did the Zero Emissions Renewable Energy Credit (ZREC) contract require approval by the Public Utilities Regulatory Authority? If yes, when was the contract approved?**

Yes, the Public Utilities Regulatory Authority (“PURA”) is statutorily required to approve the state’s Zero Emission Renewable Energy Credit (“ZREC”) and Low Emission

Renewable Energy Credit (“LREC”) contracts. PURA approved Burlington Solar One’s LREC contracts for the Facility on October 29, 2019.

- 5. Is the 15-year ZREC contract extendable beyond its initial term? If yes, if the contract expires and is not renewed and the solar facility has not reached the end of its lifespan, will the Applicant decommission the facility or seek other revenue mechanisms for the power produced by the facility?**

At this time, the fifteen (15)-year LREC / ZREC contract is not extendable beyond its initial term. After the expiration of the Facility’s fifteen (15)-year LREC contract, the Applicant anticipates that it will sell “Class One” renewable energy credits (“RECs”) on the spot market. The Applicant also intends to engage in the sale(s) of electricity and capacity as additional revenue sources for the Project.

- 6. Is the alternating current megawatt capacity of the facility fixed at a certain amount per the ZREC contract? Is there an option that allows for changes in the total output of the facility based on unforeseen circumstances?**

Pursuant to Burlington Solar One’s respective contracts for the Facility, the Project will be eligible to sell a “Maximum Annual Quantity” (“MAQ”) of RECs per year at a designated price. If the Project generates less than the MAQ in any given year, there are no penalties; if the Project generates more than the MAQ in any given year, Eversource will not buy those surplus RECs under the contract terms and they can be sold on the spot market.

- 7. Did the Applicant participate in ISO-NE Forward Capacity Auction (FCA) #15 during February 2021? If yes, did the proposed project clear the auction, i.e. receive a Capacity Supply Obligation? If no, does the Applicant plan to participate in future FCAs? Explain.**

No, Burlington Solar One did not participate in the ISO-NE Forward Capacity Auction (“FCA”) #15 during February 2021. However, the Applicant does intend to participate in future Forward Capacity Auctions. More specifically, the Applicant anticipates that it will participate in the next available Forward Capacity Auction.

### **Proposed Site**

- 8. In the lease agreement with Prospect Street LLC, are there any provisions related to site restoration at the end of the project’s useful life? If so, please provide any such provisions.**

Yes, Section 12.1 of the subject Lease Agreement addresses site restoration at the end of the Project’s useful life. Section 12.1 of the Lease is reproduced in its entirety below:

ARTICLE XII  
Termination and Surrender

Section 12.1 - Condition of Premises. Upon expiration or other termination of this Lease, the Solar Arrays and any improvements constructed on the Leased Premises by Tenant shall be removed by Tenant. 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. Tenant shall remove or commence substantial efforts to remove the Solar Array and other such trade fixtures and signs within one hundred twenty (120) days after expiration or other termination of the Lease, or such additional time as may be granted by Landlord.

Section 12.2 - Holding Over. If the Tenant remains on the Leased Premises beyond the expiration of the Lease Term or any renewal or extension thereof, without the written consent of the Landlord, such holding over shall be deemed to create a month to month tenancy at a rate equal to one hundred and twenty-five percent (125%) of the monthly Basic Rent, subject to all other terms and conditions of this Lease in effect immediately prior to such expiration, except those relating to the term of this Lease.

- 9. Is the site parcel, or any portion thereof, part of the Public Act 490 Program? If so, how does the municipal land use code classify the parcel(s)? How would the project affect the use classification?**

No, neither the site parcel, nor any portion thereof, is part of the Public Act 490 Program. Presently, the property is zoned I-2 (“Industrial”) by the Town of Burlington, and the current tax use code for the property is 4410.

- 10. Is any portion of the site currently in productive agricultural use? If so, how many acres and is it used by the property owner or is it leased to a third party?**

The property contains approximately eight (8) acres of tillable and hayed land; however, this area is outside the leased area for the proposed solar array. Burlington Solar One believes that this area is used by the property owner, as it is not presently leased to a third-party.

- 11. Referencing page 21 of the Application, provide a decommissioning plan to summarize the plans to remove equipment and restore the site after the operational life has been reached and/or the project is removed from service.**

The decommissioning plan for the Facility is attached hereto as Exhibit A.

- 12. Would all components of the solar photovoltaic panels be recyclable? Could components of 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?**

Burlington Solar One estimates that up to 99 percent (%) of all solar photovoltaic panel components can be captured in the recycling process. These components are captured,

broken down, and refined—and the commodity itself can be repurposed for similar or different products.

**13. Provide the distance, direction and address of the nearest property line and nearest off-site residence from the solar field perimeter fence.**

The respective distances, directions, and addresses of the nearest property lines and nearest off-site residences from the solar field perimeter fence are provided below:

Address	Owner	Distance to Property Line	Distance to Residence
30 Main Street	Hebert	130'	860'
34 Main Street	Hebert	75'	Vacant
44 Main Street	Pavlik	48'	690'
48 Main Street	Smaldone	52'	765'
Stone Road	Hebert	60'	Vacant
56 Stone Road	Czerczak	42'	130'
62 Stone Road	Gaski	35'	600'
72 Stone Road	Diaz	35'	680'
29 Wildcat Road	Carder	300'	460'

**Energy Output**

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

Yes, electrical loss assumptions have been factored into the output of the Facility. The output of the Facility is 3.5 MW AC at the point of interconnection.

**15. What is the efficiency of the photovoltaic module technology of the proposed project?**

The maximum efficiency of the Trina 400W Modules is 20.2 percent (%) and the maximum efficiency of the Risen 380W Modules is 19.4 (%) percent.

**16. Would the power output of the solar panels decline as the panels age? If so, estimate the percent per year.**

Yes. The Facility's panels have been modeled with an assumed production degradation rate of 0.5 percent (%) per year.

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

Currently, the Applicant has no plans to incorporate a battery energy storage system (“BESS”) into the Project’s design, as there is no program in Connecticut that promotes such systems. However, in the event that a BESS is incorporated in the future, it is anticipated that it would be located on the customer side of the existing DC/AC inverters and would not disrupt the existing interconnection approval with Eversource. If a BESS were to be installed in the future, the Applicant does not anticipate any resulting impact(s) to the LREC contract.

**18. Could the project be designed to serve as a microgrid?**

The Project was not initially contemplated to serve as a microgrid, nor is the current interconnection design suitable to accommodate microgrid functionality. Having the Project serve as a microgrid would require extensive design changes. By way of example, microgrid functionality would require that the Project have an energy storage component or local connected load and dispatch capabilities, which are not currently included in the Project’s design.

**19. 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?**

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

**20. 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?**

Generally speaking, Burlington Solar One believes that intermittent resources create a minor challenge for the independent service operator (“ISO”) as the ISO works 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, however, they 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 it navigates the increasing presence of intermittent resources on the grid is storage. At this time, the most prevalent form of storage is lithium-ion BESS. By increasing the penetration of BESSs 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) is mitigated.

**21. Pursuant to CGS §16-50p(c), a public benefit exists when a facility is necessary for the reliability of the electric power supply of the state or for the development of a competitive market for electricity. Public benefit exists if the Council finds and determines a proposed electric generating facility contributes to forecasted generating capacity requirements, reduces dependence on imported energy resources, diversifies state energy supply mix and enhances reliability. Please respond to the following:**

**a) Would the proposed facility be necessary for the reliability of the electric power supply of the state? Explain why or why not.**

No; the Applicant does not believe that the Project is *necessary* for the reliability of the electric power supply of the state. This is due to the relatively small size of the Project and because it will interconnect to the electric distribution network, as opposed to the transmission network. While the Project will enhance grid reliability, the project is not necessary for the reliability of the power supply of the state. The Project will, however, reduce the demand for power on the distribution circuit that it is interconnected to during peak demand hours. This demand reduction, in turn, will increase grid reliability (albeit in a limited amount due to the relative size of the Project) through decreasing aggregate system demands at peak times.

**b) Would the proposed facility be necessary for the development of a competitive market for electricity? Explain why or why not.**

Yes. The Project participated in and was subsequently awarded LREC contracts in the Year 8 competitive auction for LRECs/ZRECs, which was administered by the state’s electric distribution companies. The purpose of this auction is to permit the development of low emission and zero emission generation technologies in Connecticut, at the most cost-effective price. Given Governor Lamont’s declared policy in Executive Order No. 3 of decarbonizing the state’s electric generation

fleet and by virtue of the Project's participation in the LREC/ZREC auction, it follows that the Facility is necessary for the development of a competitive market for electricity.

**c) Would the proposed facility contribute to the forecasted generating capacity requirements? Explain why or why not.**

No; given the relatively small size of the Project, and because it will interconnect to the distribution network as opposed to the transmission network, the Project will not directly factor into the respective calculation for forecasted generation in ISO-NE territory. Notwithstanding, the Project will reduce demand for power on the distribution circuit to which it interconnects. Over time, such reduction in demand on the relevant distribution circuit may be considered in forecasted requirements, however such impact(s) will be indirect.

**d) Would the proposed facility reduce dependence on imported energy resources? Explain why or why not.**

Yes. The Project will represent a clean, local source of renewable energy that will help meet the state's energy requirements domestically, thereby reducing Connecticut's reliance on imported energy resources. Further, as a renewable resource, the Project will be powered entirely by sunlight and will not require the consumption (and correspondingly, importation) of fuels (e.g., natural gas, coal, oil, etc.) for its operation and production.

**e) Would the proposed facility diversify the state's energy supply mix? Explain why or why not.**

Yes. Despite the Project's relatively small size, it will diversify Connecticut's energy supply mix by adding another renewable energy resource into the state's portfolio of energy sources. In Connecticut, renewable energy remains vastly out supplied by natural gas and nuclear generation resources, and the Project, if constructed, will increase the number of available renewable energy resources in the state.

**f) Would the proposed facility enhance reliability? Explain why or why not.**

Yes; as a distributed generation resource, the Project will increase the reliability of the overall electric grid. As mentioned in (a) above, the Project will reduce the demand for power on the distribution circuit that it is interconnected to, thereby reducing the MWhs needed from centrally-located generation facilities. In aggregate, this should serve to alleviate stress on the grid. Additionally, as grid technologies advance and storage systems become more prevalent, distributed generation should serve to shield customers from mass grid shutdowns through further circuit compartmentalization (microgrids).

## Site Components and Solar Equipment

**22. Provide the specifications sheets for a) proposed inverters and b) solar photovoltaic panels.**

The respective specification sheets for the proposed inverters and solar photovoltaic panels are attached hereto as Exhibit B.

**23. Referencing page 56 of the Application, the top of the solar panels would reach a height of about 10 feet. How high above grade would the bottom of the solar panels be?**

The bottom of each panel will be approximately three (3) feet above grade.

**24. How many panels will each rack hold?**

Each racking table will hold either twelve (12), sixteen (16), or twenty (20) modules. Each complete row of modules will be comprised of these racking tables.

**25. 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?**

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 weatherproof and rated up to 194° F.

**26. What is the length (in feet) of the existing access route that would be utilized for the project? Are any upgrades, such as gravel, required to make it suitable for the construction and maintenance of this proposed solar facility?**

The length of the existing access road that would be utilized for the Project is approximately 1,400 feet. The road is comprised of asphalt millings (80%) and gravel (20%). No upgrades to the road are required in connection with the construction and maintenance of the Facility.

**27. What is the aisle width between the solar panel rows from panel edge to panel edge? What is the minimum aisle width at which the solar panel rows could be installed?**

The inter-row spacing for this Project is twelve (12) feet. The minimum aisle width of the rows will be approximately twelve (12) feet or larger than the proposed module plane width. This is credited to the fact that any inter-row spacing that is less than the module plane width runs the risk of rendering the array as an impervious surface for CTDEEP Stormwater purposes.

## **Interconnection**

### **28. Is the project interconnection required to be reviewed by ISO-NE?**

The Applicant initially filed interconnection applications with Eversource and was later notified that the Project passed Application Review. Eversource also determined that the proposed generation will not have an impact on the distribution system. Currently, Burlington Solar One has signed interconnection agreements with Eversource.

Based on the size and scale of the Project—as well as the size/scale of other generators on the applicable distribution circuit—the Applicant and Eversource do not anticipate that any additional interconnection agreement(s) or study(ies) will need to be signed or performed with ISO-NE.

### **29. Is a System Impact Study from the electric distribution utility and/or ISO-NE required for the interconnection process? Does the Applicant have an Interconnection Agreement and with whom? Provide the status of such studies and agreements.**

On February 10, 2020, Burlington Solar One received Contingent Approval from Eversource, which provided, in relevant part: “Eversource has completed the Application Review for the above stated project and has determined that the proposed generation will not have an impact on the distribution system.”

A Distribution System Impact Study was not required by Eversource for the interconnection of the proposed Project. As indicated in Interrogatory Response No. 28 above, Burlington Solar One currently holds an interconnection agreement for the Facility with Eversource.

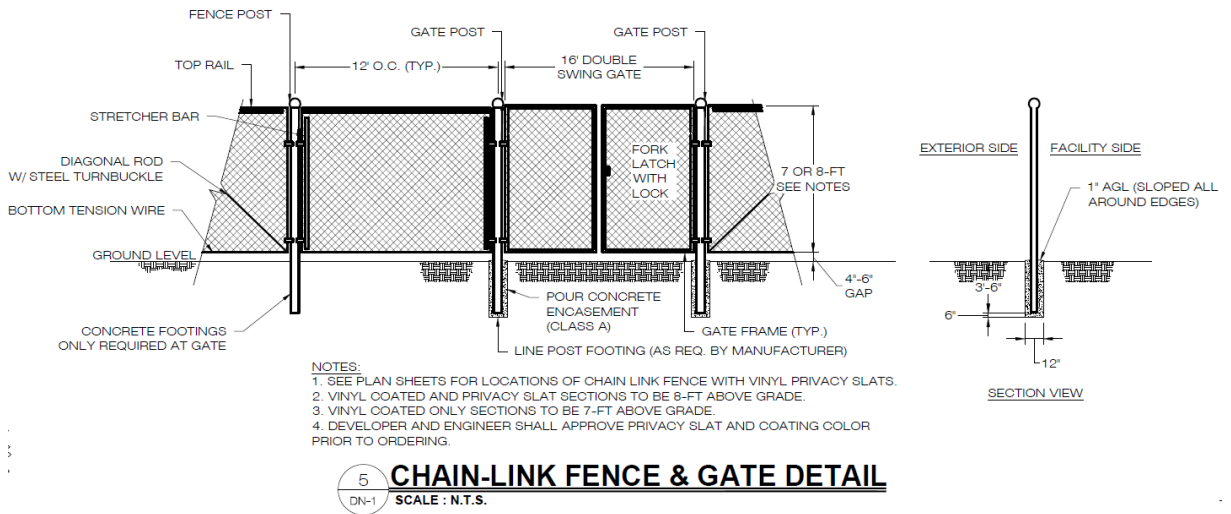
### **30. Is the existing electrical distribution on Prospect Street three-phase or would it have to be upgraded from single-phase to three-phase?**

The existing electrical infrastructure on Prospect Street is three-phase and would not need to be upgraded to facilitate the interconnection of the Burlington Solar One Project.

## **Public Safety**

### **31. Referencing page 24 of the Application, would the proposed fence have barbed wire? Would the fence include a gap at the bottom for small wildlife movement? Provide a drawing of the fence/gates.**

The proposed fence would not have barbed wire. As designed, the fence includes a gap at the bottom to allow for small wildlife movement. A drawing of the proposed fence/gates is produced on the next page.



**32. Identify and provide the distance and direction to the nearest federally-obligated airport? Is a glare analysis required to comply with Federal Aviation Administrative (FAA) policy?**

Robertson Field Airport, located in Plainville, Connecticut, is the closest federally-obligated airport to the site. It is located approximately 4.6 miles to the southeast of the proposed Facility. Because Burlington Solar One received a “No Hazard to Air Navigation” determination from the FAA, a glare analysis is not required for the Project. It is the Applicant’s understanding that the FAA would have requested a glare study prior to issuing its “No Hazard to Air Navigation” determination, if one were needed.

**33. Are high voltage signs required for any area of the solar site?**

High Voltage” signage is not necessary for the Project, because there will be no high voltage present on the Site. “High voltage” is generally defined as above 69k volts, while “Medium Voltage” is between 600 volts and 69k volts. For the Facility equipment that utilizes Medium Voltage (e.g., the transformers and switchgear), the respective manufacturer is required to have the proper, required signage posted thereon, which includes Arc Fault warning signs.

**34. With regard to emergency response:**

- a. Is training necessary for local emergency responders in the event of a fire or other emergency at the site?**

Burlington Solar One is prepared to provide assistance and/or training in the event that such assistance or training is requested by local emergency responders.

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

In the event of a brush or electrical fire, Burlington Solar One would notify local emergency response personnel and de-energize the system remotely, so as to mitigate any potential electric hazards to emergency response personnel.

- 35. Are there any wells on the site or in the vicinity of the site? If so, how would the Applicant protect the wells and/or water quality from construction impacts?**

Yes, there are wells located in the vicinity of the site. However, Burlington Solar One does not anticipate that ground water impacts will result from the construction activity planned for the Project. Any vibrations that may result from installing the racking system for the Facility are not expected to cause sediment releases, and no disruption(s) to well water flow and/or quality is anticipated. As a result, no special precautions relative to the wells are warranted.

- 36. Would any fuels be stored on site during construction? If so, provide fuel storage/spill prevention control details.**

The Applicant does not anticipate storing any fuels onsite, other than the fuel that is present within the standard construction equipment and vehicles that will be utilized on the property. The Applicant's proposed Petroleum Materials Storage and Spill Prevention plan for the Project is attached hereto as Exhibit C. The plan instructs, in relevant part, that any refueling of construction vehicles will occur on an impervious pad onsite that will be located at least 100 feet away from any nearby wetlands or watercourses.

- 37. Please provide a Spill Prevention, Control and Countermeasure Plan.**

Please see Exhibit C.

- 38. Has the manufacturer of the proposed solar panels conducted Toxicity Characteristic Leaching Procedure (TCLP) testing to determine if the panels would be characterized as hazardous waste at the time of disposal? Please submit the specifications that indicate the proposed solar modules would not be characterized as hazardous waste. If the project is approved, would the Petitioner consider installing solar modules that are not classified as hazardous waste through TCLP testing?**

Burlington Solar One does not believe that it is appropriate to base its module selection on whether the modules pass the TCLP test. Burlington Solar One notes that no other types of project the Siting Council reviews is asked questions about TCLP compliance. Cellular antennas, fuel cell facilities, natural gas cogeneration facilities and distribution and transmission lines all may be constructed with materials that would fail the TCLP test. This make sense, since, as is discussed in greater detail below, the TCLP test is only used to

determine how a particular substance should be disposed of. Thus, until the modules are to be disposed, the TCLP test does not come into play.

The reason for this is that the TCLP test is designed to simulate the reactions a waste would undergo if it were landfilled. The material is crushed into a fine powder and rainwater simulations are undertaken to simulate how the material will behave in landfill conditions and whether hazardous substances will leach from the material. *See* 40 CFR section 261.24. Almost any electronic equipment would therefore have the potential to fail the TCLP test, including computers, phones and television sets. Obviously, these materials can all be used safely during their useful lives, however, they must be disposed of more carefully.

Therefore, it is only when the items have reached the end of their useful life and need to be disposed of that the TCLP test comes into play. There are several reasons for this. First, the TCLP test is only for wastes, not for useful items that are still being utilized. Secondly, it is only for those items that, due to their chemical composition, may become hazardous waste when they are disposed of. Depending of the chemical composition of the item in question, the TCLP test may not even be warranted, as can be seen from an excerpt of the TCLP test itself, contained on the next page. In that excerpt, one can see that if individual chemicals are present in a waste at sufficiently low levels, “the TCLP need not be run.”

<p style="text-align: center;">METHOD 1311</p> <p style="text-align: center;"><u>TOXICITY CHARACTERISTIC LEACHING PROCEDURE</u></p> <p>1.0 SCOPE AND APPLICATION</p> <p>1.1 The TCLP is designed to determine the mobility of both organic and inorganic analytes present in liquid, solid, and multiphasic wastes.</p> <p>1.2 If a total analysis of the waste demonstrates that individual analytes are not present in the waste, or that they are present but at such low concentrations that the appropriate regulatory levels could not possibly be exceeded, the TCLP need not be run.</p>
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Based on this background, it becomes clear that Burlington Solar One will only need to accomplish TCLP testing if it wishes to landfill the panels and the panels contain a sufficient amount of hazardous constituents such that the TCLP test would be appropriate under section 1.2 of Method 1311.

Perhaps most importantly, the TCLP test is not an appropriate metric for the installation of solar panels. It is only a test for waste to be disposed under the requirements of RCRA. RCRA, however, provides for exemptions to what constitutes a waste, including recycled materials. Scrap metal, for example, is not subject to RCRA hazardous waste regulation when recycled. *See* 40 CFR section 261.6(a)(3)(ii). Similarly, shredded circuit boards that are recycled (provided that they are stored in containers sufficient to prevent a release to the environment prior to recovery and are free of mercury switches, mercury relays and

nickel-cadmium batteries and lithium batteries) are excluded from the definition of hazardous waste under RCRA. *See* 40 CFR section 261.4(a)(14).

Given that Burlington Solar One intends to recycle the materials comprising the Project—most of which will be scrap metal—it is unlikely that the solar modules will constitute a waste, much less a hazardous waste. If, at the time of disposal, Burlington Solar One wishes to landfill these panels, it will conduct any required testing at that time and ensure that such panels meet all such relevant standards.

**39. Do the proposed solar modules contain per- and polyfluoroalkyl substances (PFAS)?**

No; neither the Trina nor Risen modules proposed for the Project contain PFAS substances. Please see the letters contained in Exhibit D for additional information.

**Environmental**

**40. Please respond to the February 24, 2021 comments from the Council on Environmental Quality.**

Burlington Solar One appreciates the feedback it received from the Council on Environmental Quality (“CEQ”) regarding its Project. Starting with the discussion of the Eastern Box Turtle, Burlington Solar One responds to the February 24, 2021 CEQ comments as follows:

1. Eastern Box Turtle: The turtle protection plan (the “Plan”) is intended to provide adequate protection to the known extant population of Eastern Box Turtles residing around the proposed project site. As an initial matter, it should be noted that CT DEEP (the agency of cognizance over the protection of this species) approved the Plan. After the CEQ provided its commentary on the instant Application, Burlington Solar One submitted a motion to the Council, seeking its permission to access the site on or before April 1, 2021 for the sole purpose of installing the exclusionary fencing, as indicated in the Plan. Burlington Solar One is committed to ensuring that the schedule proposed in the Plan, and approved by the CTDEEP, remains on track. Although Burlington Solar One does not have direct control over the existing mining and stockpiling area, the owner-operator of the gravel mining operation has committed to temporarily cease work in the so-identified “Relocation Zone” while turtle relocations are underway.

2. Core Forest: While Burlington Solar One understands CEQ’s position regarding the Project’s potential impacts to Core Forest, the alternative development opportunities for the proposed project parcel are not as environmentally beneficial as a solar energy facility. More specifically, the current zoning of the parcel is I-2 (Industrial). According to the Town of Burlington’s planning and zoning regulations, the purpose of the Industrial Zone (the site’s current zoning designation) is “to provide for offices, warehouses, light assembly and other compatible uses in what is commonly thought of as an industrial park.” Permitted



uses in the Industrial Zone currently include: Office Buildings, Warehouses and Distribution Facilities. When comparing other, alternative land use opportunities for the site in question, the development and operation of a solar energy generating array may very well be more beneficial from an environmental perspective. That is comparatively speaking, of course, to constructing far more permanent and intrusive structures, such as a warehouse or a distribution facility, that would also result in impact(s) to natural resources to operate successfully. Permitted land use of the parcel in question is industrial by nature and it is Burlington Solar One's understanding that the likelihood of additional development at the site is high.

3. Wetlands Habitat: The proposed Project design currently adheres to all required wetlands and watercourse setbacks that are necessary to protect their respective water quality, as is necessary under the CTDEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (the "General Permit").

4. Groundwater. Burlington Solar One agrees with the CEQ's comments and has provided a Spill Prevention Control and Countermeasure Plan to the Council, in accordance with Interrogatory No. 37.

**41. Referencing page 34 of the Application, there is a statement that the Applicant's findings relative to project-specific core forest impacts have been provided to CT DEEP Forestry Division. Has the Applicant received any comments from CT DEEP Forestry Division? If so, explain.**

To date, the extent of the comments received from the CTDEEP Forestry Division regarding the Project are contained in the *Material Impact to Core Forest Determination Letter*, dated December 1, 2020. The Council has already been provided with a copy of this letter.

**42. Did the Applicant 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?**

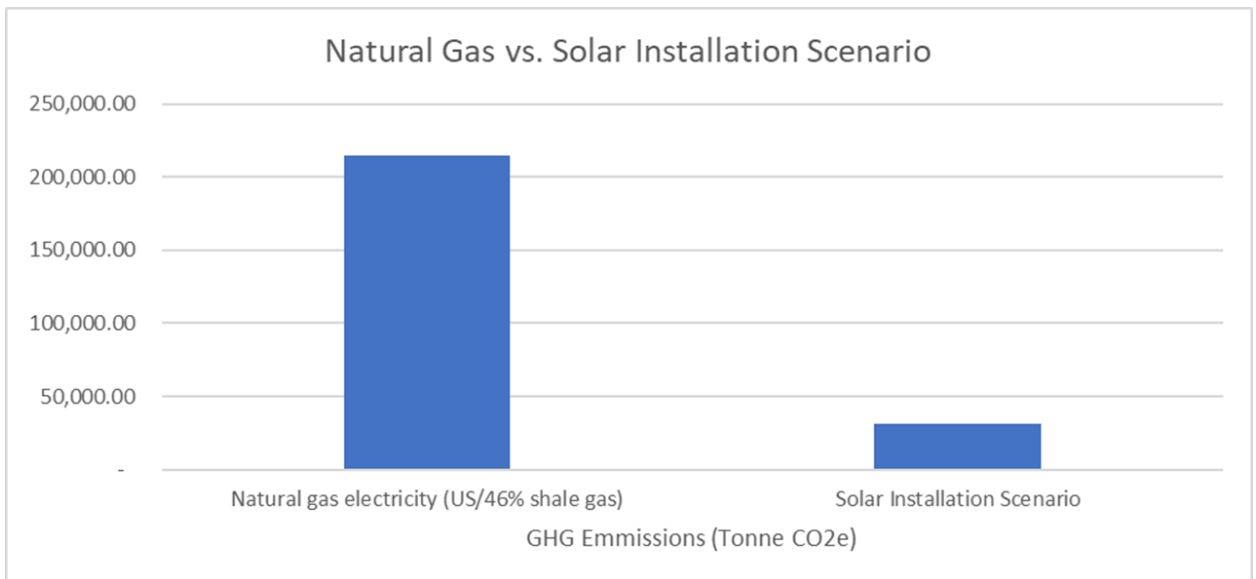
The Applicant included shading analysis in the production modeling software for the Project. The anticipated electricity production of the proposed Project includes losses due to shading.

**43. 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?**

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 instant Project, Burlington Solar One estimates that there would be an 86 percent (%) reduction in GHG emissions by pursuing solar instead of natural gas.

Specifically, over twenty (20) years, Burlington Solar One estimates that the Project will generate 125,322 MWh of electricity, while emitting approximately 30,934 tons of CO<sub>2</sub>e. To achieve the equivalent MWh production as the Project over twenty (20) years, a natural gas generator would emit an estimated 214,562 tons of CO<sub>2</sub>e. Please refer to Figure 1 below.

*Figure 1 Greenhouse Gas Emissions over 20 Years for Natural Gas Scenario vs. Solar Scenario per 125,322 MWh*



For additional detail as to the equivalencies used to arrive at the above conclusions, please see the excel spreadsheet attached hereto as Exhibit E.

**44. Referencing Appendix F of the Application, the DEEP Natural Diversity Database letter dated January 7, 2021 (NDDDB Letter) note that in addition to the Box Turtle Protection Plan presented in The Natural Resource Assessment, six additional protective measures are required to protect the eastern box turtle. Would the Applicant be able to accommodate these additional protective measures noted by DEEP? Explain.**

Yes, the Applicant is able to accommodate the additional protective measures noted by the CTDEEP in its Final Determination Letter (the “Letter”) issued for the Project. Since Burlington Solar One received the Letter, it has worked with Eric Davison of Davison Environmental to plan for and secure the equipment that is needed to successfully execute the Turtle Protection Plan, including the additional protective measures noted by the CTDEEP in its Letter.

- 45. On page 2 of the NDDB Letter, DEEP notes that, “Please be advised that a DEEP Fisheries Biologist will review the permit applications you may submit to DEEP regulatory programs to determine if your project could adversely impact the slimy sculpin...If you have not already talked with a Fisheries Biologist about your project, you may contact the Permit Analyst...” What is the status of the Applicant’s consultations, if any, with a DEEP Fisheries Biologist regarding potential impacts to the slimy sculpin? Has the Applicant received any additional correspondence from DEEP since the NDDB Letter?**

At this stage of the process, the Applicant has not had any consultation with the CTDEEP Fisheries Division. The Applicant is not aware of any process for applicants to approach the Fisheries Division biologists for a pre-application consultation. The NDDB application indicates that once a permit is filed, a Fisheries biologist will be assigned to the Project. At such time, the Applicant is hopeful that it will get feedback on any design measures they feel may be appropriate to further protect fisheries habitat.

- 46. 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?**

The rows of panels are not contiguous, because there are one-half inch (½”) gaps between each module (in all directions). Therefore, the drip edge of each solar panel, individually, will not have an impact on the site’s drainage patterns. Stormwater will flow off the panels at multiple locations, as the panels follow the contours of the land. Channelization along the drip edge or below the drip edge is not expected due to water flowing off the panels in multiple locations. Therefore, energy dissipaters were deemed unnecessary for the Project.

- 47. 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?**

The Applicant anticipates that it will use posts that measure fourteen (14) feet in length for the Project. The Applicant expects that the posts will be driven into the ground to a depth of eight to ten feet (8’ – 10’). No impacts to groundwater quality are anticipated from either the installation of the posts, or their ongoing presence, or the Project as a whole. Thus, no management or mitigation actions are warranted.

- 48. Where is the nearest national, state and/or locally-designated scenic road from the proposed site? Describe the visibility of the proposed project from the nearby scenic road.**

The Applicant identified State Highway 69 as the closest state-designated scenic roadway. State Highway 69 is located approximately seven tenths (0.7) of a mile to the west of the site. There are currently no projected views of the Project from State Highway 69.

- 49. Referencing page 56 of the Application, it states, “Burlington Solar One has been proactively developing a detailed landscaping plan...Upon its completion, the landscaping plan will be publicly available at the Project’s website...” Please provide a copy of the latest landscaping plan.**

The current version of the Project’s landscaping plan is attached hereto as, Exhibit F.

- 50. 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.**

The requested submission(s) is attached hereto as Exhibit G.

### **Facility Construction**

- 51. Has the Applicant met with the DEEP Stormwater Division? If yes, when? Please describe any recommendations, comments or concerns about the project provided by the Stormwater Division.**

Yes, the Applicant met with the CTDEEP Stormwater Division on December 16, 2020 to discuss the Project's compliance with the final draft of *Appendix I*. Following the meeting, and prior to submitting its application for the CTDEEP General Permit, the Applicant made the following design modification(s) to the Project: *Provide a separate detail sheet for each basin including results from two test pits per basin.*

**52. Does the Petitioner intend to consult with the DEEP Dam Safety program regarding permitting requirements, if any, for the proposed stormwater basins?**

During the Applicant's December 16<sup>th</sup> Meeting with the CTDEEP, Anna Laskin of CTDEEP Dam Safety reviewed the Burlington Solar One Project Plans and noted the following: *It was determined based on water volume storage, height of berms and water discharge locations at grade level that no further dam safety requirements are needed for this proposal.*

A copy of correspondence(s) received from CTDEEP Dam Safety and CTDEEP, respectively, is included herein as Exhibit H.

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

**a) Will the site be graded? If so, in what areas?**

Yes, in the northwest and southern areas of the site.

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

The desired slope within the solar array areas is eight percent (8%). The Project's current design is: 1-5% (58% of area); 6-7% (20% of area); 8% (22% of area)

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

Yes; the solar field areas can be installed with minimal alteration to existing slopes onsite.

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

Staged grubbing operations will maintain ground cover during Project construction.

**e) Estimate the amounts of cut and fill in cubic yards for the access road(s)**

None; Burlington Solar One intends to use the existing access road(s) at the site and does not intend to construct any additional access road(s) in connection with the development of the Project.

**f) Estimate the amounts of cut and fill in cubic yards for solar field grading.**

The estimated amounts of cut and fill for the solar field grading are 12,000 cubic yards of cut and 7,000 cubic yards of fill, respectively.

**g) If there is excess cut, will this material be removed from the site property or deposited on the site property?**

If there is excess cut, the material will be deposited on the site property; specifically, within the site's existing earth work/removal operations area.

**54. 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?**

Yes, topsoil will be stripped from the site prior to grading. Approximately six to eight inches (6 – 8”) of topsoil will then be re-spread over the disturbed areas onsite and landscape-raked prior to seeding.

**55. How would the posts (that support the racking system) be driven into the ground? In the event that ledge is encountered, what methods would be utilized for installation?**

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 that was performed for the Project (*see also* Response to Interrogatory No. 56, below) and the pull-out tests performed, the racking design will likely incorporate ground screws with pre-drilling, as necessary.

**56. 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 Applicant anticipated and designed the Project with assumed subsurface conditions? What are these assumed conditions?**

A geotechnical investigation, including borings, analysis and laboratory testing was performed at the site. Subsurface conditions at the site were found to include Subsoil, Fine Sand and Silt, Medium Sand, Gravel with Cobbles and Boulders. The Applicant, in concert with the Solar Racking Vendor, has determined that the best method of foundation

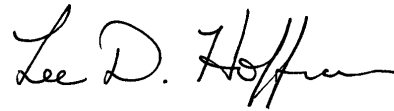
installation would be to 100 percent pre-drill and utilize ground screws in lieu of driven posts.

### Maintenance Questions

**57. Would the Applicant store any replacement modules on-site in the event solar panels are damaged or are not functioning properly? If so, where?**

No, the Applicant does not anticipate the need to store any replacement modules on the site.

Respectfully Submitted,  
East Windsor Solar One, LLC



By: \_\_\_\_\_

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