**STATE OF VERMONT**
**PUBLIC UTILITY COMMISSION**

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| Petition of Norwich Upper Loveland Solar LLC for a certificate of public good pursuant to 30 V.S.A. §§ 248 and 8010, authorizing installation and operation of a 500 kW (AC) photovoltaic group net-metering system in Norwich, Vermont | ) ) ) ) ) | 21-___-NMP |

# PREFILED TESTIMONY OF MARTHA STASKUS ON BEHALF OF NORWICH UPPER LOVELAND SOLAR LLC

August 30, 2021

Ms. Staskus' testimony describes the project and schedule, and addresses the following applicable Rule 5.100 requirements and Section 248 criteria: Rule 5.107 advance notice requirements; preferred siting, orderly development & municipal screening (30 V.S.A. § 248(b)(1), § 248(s) & Rule 5.103); system stability and reliability and impacts upon the transmission system (30 V.S.A. §§ 248(b)(3) and 248(b)(10)); aesthetics & historic sites (30 V.S.A. § 248(b)(5)) ; air and water purity & greenhouse gas emissions (30 V.S.A. § 248(b)(5)); noise (30 V.S.A. § 248(b)(5)); public health & safety (30 V.S.A. § 248(b)(5)); solar setbacks (30 V.S.A. § 248(s)); waste disposal (10 V.S.A. § 6086(a)(1)(B));water conservation (30 V.S.A §248(b)(5) & 10 V.S.A. § 6086(a)(1)(C)); sufficiency of water and burden on existing supply (10 V.S.A. § 6086(a)(2) & (3)); soil erosion (30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(4)); (30 V.S.A. § 248(b)(5) transportation systems/traffic (30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(5)); educational and municipal impacts (30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(6) and (7)); primary agricultural soils (30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(9)(B)); development affecting public investments (30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(9)(K)); and decommissioning (PUC Rule 5.107(C)(12)).

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**PREFILED TESTIMONY OF**
**MARTHA STASKUS ON BEHALF OF**
**NORWICH UPPER LOVELAND SOLAR LLC**

## 1. Introduction

Q1. Please state your name, occupation, and business address.

A1. My name is Martha Staskus. I am Chief Development Officer of Norwich Technologies, Inc. ("Norwich Solar"), which has offices at 15 Railroad Row, Suite 101, White River Junction, Vermont 05001.

Norwich Solar is a research, development and EPC (engineering, procurement and construction) company servicing local schools, municipalities, businesses and non-profits, to develop and make available solar generating benefits. Environmental sustainability and economic development are integral components of our business and we therefore focus on reducing energy costs for schools, municipalities, and non-profits to allow these entities to provide more critical services. For example, one half of our 2020 Vermont projects provided solar net metering credits and savings to affordable housing organizations including Champlain Housing Trust, Springfield Housing Authority, Twin Pines Housing Trust, Randolph Area Community Development Corp., Capstone Community Action and Housing Vermont. We also work closely with local landowners,

farms and businesses to help lower their energy costs, and/or to create new revenue streams. Norwich Technologies' SunTrap patents look at next generation bulk energy storage for greater renewable energy penetration nationwide and snowshedding patents improve winter production for solar projects in our cold Vermont climate. We amplify our local impact by prioritizing the hiring of local employees, subcontractors, and suppliers.

Norwich Upper Loveland Solar LLC is a Vermont limited liability company. Before the solar electric generating system is commissioned, the limited liability company's membership interests will be purchased and owned by an individual, organization, or investor seeking long term ownership of the solar generating system. Norwich Solar's 2020-21 projects are primarily financed by local banks and lending institutions at the time the LLC and membership interest transfers. These LLC owners/investors leverage federal tax savings to bring these investments into the Vermont economy.

Q2. Please describe your educational background and professional experience.

A2. I hold a University of Vermont Bachelor of Science degree in Environmental Studies and have more than 25 years of experience evaluating, siting, developing, and permitting a variety of sizes of renewable energy projects in Vermont and across New England. At Norwich Solar, I am responsible for the development of our clean energy projects. Previously, at Vermont Environmental Research Associates, Inc. (VERA), clients included

private landowners, electric utilities, national renewable energy development companies, as well as the State of Vermont where I was responsible for project management services ranging from development through installation and operational monitoring of non-residential wind and solar projects. I serve on the Town of Waterbury Planning Commission as Vice Chair, and previously served over ten years on the Development Review Board. I am a Director and Vice Chair for Renewable Energy Vermont. See Exhibit NUL MS-1 Resume, which sets forth my educational background and professional experience in more detail.

Q3. Have you previously testified before the Public Utility Commission ("PUC" or "Commission") or in other judicial or administrative proceedings?

A3. Yes, I have presented testimony and submitted prefiled testimony to the PUC on behalf of a number of applications for group net-metered solar facilities and Section 248 filings.

Q4. What is the purpose of your testimony?

A4. My testimony describes the Project, the proposed installation schedule, introduces the other witness submitting testimony in support of the Project, and addresses the following applicable Rule 5.107 requirements and Section 248 criteria: Rule 5.107 advance notice requirements; preferred siting, orderly development, aesthetics, historic sites & municipal screening (30 V.S.A. § 248(b)(1), 30 V.S.A. § 248(b), & 30 V.S.A. § 248(s) & Rule 5.103); system stability and reliability and impacts on the transmission system (30 V.S.A. §§

248(b)(3) and (b)(10)); noise (30 V.S.A. § 248(b)(5)); air and water purity & greenhouse gas emissions (30 V.S.A. § 248(b)(5)); public health & safety (30 V.S.A. § 248(b)(5)); solar setbacks (30 V.S.A. § 248(s)); waste disposal (10 V.S.A. § 6086(a)(1)(B)); water conservation (30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(1)(C)); sufficiency of water and burden on existing supply (30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(2) & (3)); soil erosion (30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(4)); transportation systems/traffic (30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(5)); educational and municipal impacts (30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(6) & (7)); development affecting public investments (30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(9)(K)); and decommissioning (PUC Rule 5.107(C)(12)).

Q5. Please identify the other witnesses offering testimony in support of this filing.

A5. Ms. Dori Barton of Arrowwood Environmental provides testimony on natural resources.

## 2. Project Description, Location and Schedule

Q6. Please describe the proposed Project and its location.

A6. This Vermont electric customers' group net meter Project is a 500 kW AC ground-mounted solar electric generation facility sited on a portion of property at 201 Upper Loveland Road, Norwich, Vermont. Geographic coordinates are: 43.724132°N, -72.291876°W. The array is set back approximately 455± feet from the traveled way of Upper Loveland Road, the nearest public roadway. Access to the Project will be off Upper Loveland Road via the

existing cell tower access drive. The Vermont Department of Taxes SPAN number is 450-142-13090.

The site is a combination of woods and 150 foot wide cleared transmission corridor land. The host parcel is subject to an Act 250 Land Use permit number 3W0917 for the cellular communications tower. There are no Natural Resources Conservation Service (NRCS) prime agricultural designated soils within the Project area. The Project proposed clearing and limit of disturbance (LOD) will be approximately ±8.20 acres. See the Project Site Plan - Exhibit NUL MS-2. Elevations are set forth in Exhibit NUL MS-3.

The solar array is typical of an installation of its type and size, comprised of photovoltaic panels on fixed-tilt ground mounted racks, anchored to the ground using purpose-built posts. The solar panels will be secured on fixed-tilt racking, anchored to the ground using purpose-built posts. The racking structures support the bottom of the solar panels approximately 3 feet above existing grade and the top of the solar panels at approximately 10 feet above grade. The panel racking will be arranged in multiple rows generally running east-west with panels facing to the south. The solar array equipment, other than the crystalline panels themselves, will be galvanized metal and will have a light gray finish. The panels will have an anti-glare coating and are expected to be a dark color.

String inverters, mounted discretely on the back side of the racking will be compliant with IEEE 1547 Standard for Interconnection and Interoperability of Distributed Resources with Associated Electrical Power Systems Interfaces (2018) and UL 1741 SA. See Exhibit NUL MS-4, Equipment Datasheets.

The electric power will travel between the rows enclosed in code compliant conduit below ground, connecting to string inverters, an AC combiner panel and AC disconnect electrically and interconnect to three new pole-mounted transformers owned by Green Mountain Power Corporation ("GMP"), typical of transformers used throughout GMP's distribution system. A GMP line extension will connect the new pole-mounted transformers to GMP's existing distribution circuit. See Exhibit NUL MS-2.

In accordance with PUC Rule 5.107(C)(5), the Site Plan includes the following information:

(a) Proposed facility location and any project features;

(b) Approximate property boundaries and setback distances from those boundaries to the corner of the nearest project-related structure, approximate distances to any nearby residences, and dimensions of all proposed improvements;

(c) Proposed utilities, including approximate distance from source of power, sizes of service available and required, and approximate locations of any proposed utility or communication lines;

(d) A description of any areas where vegetation is to be cleared or altered and a description of any proposed direct or indirect alterations to or impacts on wetlands

or other natural resources protected under 30 V.S.A. § 248(b)(5), including the limits of disturbance and the total acreage of any disturbed area;

(e) Detailed plans for any drainage of surface and/or sub-surface water and plans to control erosion and sedimentation both during construction and as a permanent measure;

(f) Locations and specific descriptions of proposed screening, landscaping, groundcover, fencing, exterior lighting, and signs;

(g) Plans of any proposed access driveway, roadway, or parking area at the project site, including grading, drainage, and traveled width, as well as a cross-section of the access drive indicating the width, depth of gravel, paving, or surface materials;

(h) The latitude and longitude coordinates for the proposed project; and

(i) The presence and total acreage of primary agricultural soils as defined in 10 V.S.A. § 6001 on each tract to be physically disturbed in connection with the construction and operation of the net-metering system, the amount of those soils to be disturbed, and any other proposed impacts to those soils.

The array equipment will be surrounded by a wildlife fence 8-foot high, with mesh size no smaller than 6 inches by 6 inches extending from the ground level up to three feet or higher and secured by a locked gate. In the event a fence is not installed, all energized equipment will be rated for outdoor use, securely shielded by locked enclosure covers, and otherwise compliant with NEC code "Guarding of Live Parts." See Exhibit NUL MS-4 - Equipment Data Sheets.

In summary, the principal Project components include:

- multiple rows of solar panels[1] mounted on a racking system anchored to the ground;
- ten (10) string inverters each having a capacity of 50 kW (AC), for an aggregate nameplate capacity of 500 kW (AC);
- electrical lines enclosed in code compliant conduit, connecting the panel rows, string inverters, AC combiner panel and AC disconnect pedestal;
- three (3) 167 kVA pole-mounted transformers on a new GMP distribution pole;
- a GMP line extension to connect to the existing GMP distribution system;
- access off the existing cell tower drive; and
- a wildlife fence 8-foot high, with mesh size no smaller than 6 inches by 6 inches extending from the ground level up to three feet or higher and secured by a locked gate. In the event a fence is not required, energized equipment will be rated for outdoor use, securely shielded by locked enclosure covers and otherwise compliant with NEC code "Guarding of Live Parts."

Q7. Please briefly describe Project installation and maintenance.

A7. Installation includes extension of the driveway, establishing a temporary staging area, and site clearing of remaining vegetation within the proposed clearing and construction limit of disturbance (LOD). Equipment installation will follow with setting cable in conduit in the ground, setting rack posts, followed by rack, and panel and inverter attachments and

[1] The exact number and wattage will be determined at time of procurement.

wiring to connect the array components. According to Vermont Department of Environmental Conservation, all areas within the site area have the potential for ground disturbance under the stormwater permit criteria due to driving vehicles or other activities during construction. For the state Construction Stormwater Discharge Permit and PUC request for clearing information the entire LOD will be considered. The Site Plan exhibit identifies 8.20± acres within the LOD. The Project will obtain coverage under the Agency of Natural Resources Department of Environmental Conservation Stormwater Construction General Permit prior to commencement of installation. Disturbed areas will be seeded and mulched following equipment installation.

Throughout operation, the facility will be monitored remotely with periodic onsite inspections and maintenance. The Project grounds, including space between the solar panel rows, will remain vegetated and maintained.

Q8. Does the Project require secondary containment for the release of coolant from transformers?

A8. No. The Project will use three GMP pole-mounted transformers that utilize mineral oil. This type of transformer is deployed throughout GMP's service territory and is compliant with GMP's specifications (Distribution Standard #T-01, 3.1, 12/13) that meet or exceed ANSI C57.12.00-2010, C57.12.20-2005, C57.12.90-2006 and all other applicable ANSI, IEEE, EEI, NEMA, and OSHA Standards.

Q9. Please describe how equipment will be transported to the site.

A9. Project materials and equipment will be transported to the site by common transportation vehicles over Vermont state and town roads. No oversized or overweight trucks or permits are necessary.

Q10. What is the schedule for construction and commencement of operation?

A10. The Project is planned to be installed and commissioned within one year of issuance of the Certificate of Public Good.

Q11. What are the proposed hours for installation activities and related deliveries?

A11. Installation activities and related deliveries will occur between 7:00 AM and 7:00 PM Monday through Friday, and on Saturdays between 8:00 AM and 5:00 PM if required to meet the Project schedule. No installation activities or deliveries will occur on Sundays or on state or federal holidays.

### 3. Preferred Site Designation, Orderly Development, and Municipal Screening [30 V.S.A. § 248(b)(1), § 248(s) & PUC Rule 5.103]

Q12. Does the site meet the definition of a Preferred Site pursuant to PUC Rule 5.103?

A12. Yes. The Norwich Selectboard and Planning Commission and the Two Rivers-Ottauguechee Regional Commission ("TRORC") have each designated the Project location as a Preferred Site under PUC Rule 5.103. Please refer to Exhibit NUL MS-5.

Q13. Has the Town adopted a screening ordinance or temporary bylaw requirement for ground-mounted solar electric generation facilities pursuant to either 24 V.S.A. §§ 2291(28) or 4414(15)?

A13. No.

### 4. Rule 5.105 Advance Notice & Comments

Q14. Commission Rule 5.107(B) & (C)(11) requires an Applicant proposing a net-metering project to certify that parties entitled to receive a 45-day advance notice were provided 45-day notice and to summarize any comments received in response to the 45-day notice filing for a project. Please summarize any comments received for this Project in response to the 45-day letters served.

A14. The Applicant mailed and e-filed the 45-day notice letter on July 14, 2021. The Vermont Division for Historic Preservation ("VDHP") and the Vermont Agency of Natural Resources ("VANR") provided comment.

The VDHP provided an email on August 30, 2021 reporting that based upon its project review, it had no concerns with regards to archaeology or historic architecture. Please refer to Exhibit NUL MS-10.

The VANR provided email comments on August 4, 2021 regarding stormwater management, northern long-eared bats, pool breeding amphibian habitat and wetlands.

As stated earlier, as the installation will result in one or more acres of earth disturbance, the Project will obtain coverage under the Agency of Natural Resources Department of Environmental Conservation Stormwater Construction General Permit prior to commencement of installation. Site assessments of wildlife, wildlife habitats and threatened and endangered species were conducted in June and July 2021. Based upon these assessments, the Project has been designed to avoid any adverse impact on the natural resources. See Exhibit NUL DB-2.

### 5. System Stability and Reliability and Impacts on the Transmission System [30 V.S.A. §§ 248(b)(3) and 248(b)(10)]

Q15. Will the Project have an undue adverse impact on system stability or reliability or adversely impact the transmission system?

A15. No. GMP issued a Fast Track Report dated July, 2021. See Exhibit NUL MS-7. GMP and the Project executed a Feasibility Study Agreement, however the results of that study have not yet been issued. The Applicant has budgeted for and will be responsible for paying for all necessary interconnection costs designated as Applicant's responsibility in the Feasibility Study, as required by Rule 5.500.

### 6. Aesthetics & Historic Sites [30 V.S.A. § 248(b)(5)]

Q16. Will the Project have an undue adverse effect on aesthetics or historic sites?

A16. No. The Applicant's Aesthetics and Orderly Development Assessment, Exhibit NUL MS-6, confirms that the Project will not result in an undue adversely aesthetic effect. As well,

Exhibits NUL MS-6 and NUL MS-10 confirm that there are no undue adverse impacts to historic resources.

## 7. Noise, Greenhouse Gas Emissions/Air & Water Purity [30 V.S.A. § 248(b)(5)]

Q17. Please describe any sources of noise associated with the proposed Project.

A17. The solar panels produce no noise, and the inverters and transformers produce only minimal noise. The nearest non-host residence is approximately 325± feet from the array. A sound analysis was conducted to estimate potential impacts from the Project and is provided as Exhibit NUL MS-8. The combined impact of all noise-emitting equipment is 27.4 dBA from the nearest off-site residence. During the limited installation period, sounds typical of construction equipment will be generated by the installation activities.

Q18. Will the Project have an undue adverse impact to air quality or with respect to greenhouse gas emissions?

A18. No. In fact, as a renewable energy source powered by the sun, this Project will contribute to reducing greenhouse gas emissions. Based upon 2021 US EPA equivalency numbers, the approximately 900,000 kWh/year of electricity that is expected to be generated by the Project equates to 638 metric tons/year of avoided CO2 emissions. Over a 25-year period, the Project is estimated to avoid approximately 15,950 metric tons of greenhouse gases (https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator).

Importantly, the State of Vermont is part of the U.S. Climate Alliance, a coalition of states committed to upholding the commitments of the Paris Agreement, to keep temperature increases below 1.5 degrees Celsius by committing to reduce collective net GHG emissions at least 50-52 percent below 2005 levels by 2030, and to collectively achieve overall net-zero GHG emissions as soon as practicable and no later than 2050. See http://www.usclimatealliance.org/alliance-principles. In May 2017, Governor Phil Scott and Massachusetts Governor Charles Baker jointly wrote to the US Secretary of Energy stating:

> The impacts of climate change have already been felt in our states. We have seen the impacts of rising sea levels, increasingly severe flooding, heat waves, droughts, and decline in snow cover. These impacts threaten the people of our states and put an intense burden on our economies.

See https://governor.vermont.gov/content/paris-climate-agreement-letter.

Earlier this month, the Intergovernmental Panel on Climate Change issued its 6th report, another alarming wakeup call that immediate GHG emissions reductions are necessary, as explained in the UN Secretary General's announcement accompanying the report:

> "**IPCC Working Group 1 Report is a code red for humanity. The alarm bells are deafening, and the evidence is irrefutable: greenhouse gas emissions from fossil fuel burning and deforestation are choking our planet and putting billions of people at immediate risk. Global heating is affecting every region on Earth, with many of the changes becoming irreversible**."

*See* United Nations Secretary-General's statement on the IPCC Working Group 1 Report on the Physical Science Basis of the Sixth Assessment, August 9, 2021.

In 2020, the Vermont Legislature passed the Global Warming Solutions Act ("GWSA"), adopting legislative findings that emphasize the need for more action:

> *A climate emergency threatens our communities, State, and region and poses a significant threat to human health and safety, infrastructure, biodiversity, our common environment, and our economy.*
>
> ***
>
> According to the IPCC and the World Bank, *a failure to substantially reduce emissions over the next ten years will require even more substantial reductions later and will increase the costs of decarbonization. Delaying necessary policy action to address the climate crisis risks significant economic damage to Vermont.*
>
> ***
>
> By implementing climate mitigation, adaptation, and resilience strategies, Vermont will also position its economy to benefit and thrive from the global transition to carbon neutrality and national and international efforts to address the crisis.
>
> ***
>
> According to the Vermont Agency of Natural Resources, the adverse impacts of climate change in Vermont include an increase in the severity and frequency of extreme weather events, a rise in vector-borne diseases including Lyme disease, more frequent cyanobacteria blooms, adverse impacts to forest and agricultural soils, forest and crop damage, shorter and irregular sugaring seasons, a reduction in seasonal snow cover, and variable and rising average temperatures that result in uncertain and less snowfall.

*See* Act No. 153 (2020), § 2 (Legislative Findings) (emphasis added).

The GWSA expressly requires that the State of Vermont undertake actions to significantly reduce Vermont's greenhouse gas emissions by meeting mandated emissions reduction levels slated to decrease beginning in 2026. As required by

the GWSA mandates, the Project represents a viable and meaningful means to mitigate climate change and reduce Vermont's GHG emissions in the near term.

Finally, the 2016 Vermont Comprehensive Energy Plan ("CEP") recognized these concerns and expressly endorsed the build-out of community scale solar distributed generation as a mitigation strategy to combat climate change:

> Renewable generation technologies deployed on a small scale are currently more expensive than other sources of electricity. Even so, these *smaller----scale renewable projects offer great potential, given the need for zero----and low----emission energy supply; for long----term affordability and price stability, as helped by the low----cost or no----cost fuels required to generate most forms of renewable electricity; for energy security and stability; and for a diverse resource mix, along with the expressed preferences of Vermonters for greater use of renewable resources, especially distributed and community----scale resources. Fostering small----scale and distributed renewable energy is an objective of the CEP.*

CEP at 243 (emphasis added), available at https://outside.vermont.gov/sov/webservices/Shared%20Documents/2016CEP_Final.pdf

Any limited air emissions or greenhouse gas emissions associated with installation will be primarily from fossil-fueled vehicles and equipment used for deliveries, worker transportation, and installation activities. The emissions will be typical of construction projects, will be short-term, subject to state regulations, and will not be adverse.

Throughout its operation, the Project will generate no air pollution, with the exception of minimal vehicle emissions associated with periodic site and equipment maintenance visits.

Q19. Will the Project have an undue adverse impact on water purity?

A19. No. As discussed on the Arrowwood Environmental Report, Exhibit NUL DB-2, the Project will avoid undue adverse impacts to water resources. Additionally, as explained in my testimony, the Project will appropriately address waste disposal and soil erosion prevention.

## 8. Public Health & Safety [30 V.S.A. § 248(b)(5)]

Q20. Describe the impact on public health and safety.

A20. Unlike fossil fuels, this solar generation project will not create any waste or other emissions that would be harmful to public health and safety. The Project equipment and design satisfies all applicable safety codes, including NEC and NESC. The Project transformers will be compliant with GMP's specifications (Distribution Standard #T-01, 3.1, 12/13) that meet or exceed ANSI C57.12.00-2010, C57.12.20-2005, C57.12.90-2006, and all other applicable ANSI, IEEE, EEI, NEMA, and OSHA Standard. The Project inverters will be compliant with IEEE 1547 Standard for Interconnection and Interoperability of Distributed Resources with Associated Electrical Power Systems Interfaces (2018) and UL 1741 SA. Further, all energized equipment will be rated for outdoor use, securely shielded, include locked enclosure covers, and otherwise compliant with NEC code "Guarding of Live Parts." See Exhibit NUL MS-4, Equipment Datasheets.

**9. Solar Setbacks [30 V.S.A. § 248(s)]**

Q21. Does the Project design comply with the minimum setback requirements that apply to a 500 kW ground-mounted solar electric generation?

A21. Yes. As illustrated on the Site Plan, Exhibit NUL MS-2, the Project meets the 50 foot property boundary setback. The Project also meets the 100 foot setback from the nearby state or municipal road as measured from the edge of the traveled way.

**10. Waste Disposal [10 V.S.A. § 6086(a)(1)(B)]**

Q22. Will the Project involve any discharges or injections of groundwater or otherwise adversely impact water purity?

A22. No. The Project will meet all applicable Vermont Department of Health and Vermont Department of Environmental Conservation ("DEC") regulations regarding the disposal of wastes and will not involve the injection of waste materials or any harmful or toxic substances into groundwater or wells.

The Project has no onsite sanitary wastewater systems, and therefore no associated injection of sanitary wastewater into the ground. The soil erosion measures discussed below will avoid adverse stormwater impacts. Stumps from tree clearing will be ground onsite and utilized onsite. Any waste generated during construction and operation of the Project will be disposed of in accordance with applicable Vermont DEC regulations.

**11. Water Conservation [10 V.S.A. § 6086(a)(1)(C)]**

Q23. Please describe any water conservation measures.

A23. The Project itself will not utilize water. Use of water will be limited to what is necessary to control dust during installation and to promote germination of seed.

**12. Sufficiency of Water and Burden on Existing Supply [10 V.S.A. § 6086(a)(2) & (3)]**

Q24. Please describe the sufficiency of water and the burden on existing water supply.

A24. As previously stated, the Project will require limited water supply. The Project will not unreasonably burden existing water supply.

**13. Soil Erosion [10 V.S.A. § 6086(a)(4)]**

Q25. Will the Project cause unreasonable soil erosion or a reduction in the capacity of the land to hold water, so that a dangerous or unhealthy condition may result?

A25. No. Project installation will be performed in accordance with the *Vermont Standard and Specifications for Erosion Prevention and Sediment Control* (2020). The Project will apply for coverage under the Agency of Natural Resources DEC Construction General Permit. Please refer to Exhibit NUL MS-2.

Earth disturbance will occur from preparing the site, including shade management, and installing the electrical infrastructure and racking posts. For the state Construction

Stormwater Discharge Permit, the Project Proposed Clearing and Limit of Disturbance (LOD) will be 8.20± acres.

**14. Transportation Systems/Traffic [10 V.S.A. § 6086(a)(5)]**

Q26. Please describe the potential impact with respect to the use of public roads during installation.

A26. There will be no long-term transportation impacts, and only short-term, periodic traffic from work crews and equipment deliveries during installation. Project materials and equipment will be transported to the site by common transportation vehicles over Vermont state and town roads. No oversized or overweight trucks or permits are necessary. All deliveries will be in accordance with applicable permits and requirements.

**15. Impacts on Educational Services and Municipal Services [10 V.S.A. § 6086(a)(6) and (7)]**

Q27. Please describe the potential impact with respect to the provision of educational and municipal services.

A27. No educational or municipal services will be burdened by the Project. The Project will not require or affect educational services. Use of municipal roads to transport equipment and materials will be limited in duration and similar to many other small-scale projects.

**16. Primary Agricultural Soils [10 V.S.A. § 6086(a)(9)(B)]**

Q28. Please address potential impacts to prime agricultural soils ("PAS").

A28. There are no Natural Resources Conservation Service (NRCS) prime agricultural designated soils within the Project area and therefore there will be no potential impact to prime agricultural soils See Exhibit NUL MS-2.

**17. <u>Development Affecting Public Investments [10 V.S.A. § 6086(a)(9)(K)]</u>**

Q29. Act 250 Criterion 6086(a)(9)(K) provides:

> A permit will be granted for the development or subdivision of lands adjacent to governmental and public utility facilities, services, and lands, including highways, airports, waste disposal facilities, office and maintenance buildings, fire and police stations, universities, schools, hospitals, prisons, jails, electric generating and transmission facilities, oil and gas pipe lines, parks, hiking trails and forest and game lands, when it is demonstrated that, in addition to all other applicable criteria, the development or subdivision will not unnecessarily or unreasonably endanger the public or quasipublic investment in the facility, service, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to the facility, service, or lands.

Please address whether any such public investments are in the vicinity of the Project, and whether the Project will unnecessarily or unreasonably endanger the public or quasi-public investment in any facility, service, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of, or access to any such facility or service.

A29. The Project will not unnecessarily or unreasonably endanger public or quasi-public investments in facility, service, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of the public’s use or enjoyment of, or access to any such

facility or service. Due to the limited amount of time required for installation, the Project will not adversely impact the public's use of proximate roadways. In addition, the following facts further support that there will be no undue adverse impacts on public investments as a result of this Project:

- As explained in the Project Aesthetic Assessment, the Project will not result in an undue adverse impact to aesthetics. Exhibit NUL MS-6.
- The Town as well as the Regional Planning Commission have designated the site as a preferred site for this solar facility. Exhibit NUL MS-5.

The Project also creates a number of benefits with local, statewide, and regional significance, including supporting renewable energy development and construction related jobs, contributing to Vermont's GHG electricity sector emissions, reducing Vermont's dependence on out-of-state electricity sources, and the Renewable Energy Credits ("RECs") will be transferred to GMP to be retired. The Project will also benefit public investments in that it will generate new tax revenues to the Town and to the Vermont Education Fund. Lastly, the Project will provide GMP ratepayers the opportunity to reduce their electric expenses through participation in the Vermont net-metering program.

**18. <u>Decommissioning [PUC Rules 5.107(C)(12) & 5.904(A)]</u>**

Q30. Please describe the plan for decommissioning.

A30. The plan for decommissioning is set forth in Exhibit NUL MS-9.

## 19. Conclusion

Q31. Does this conclude your testimony?

A31. Yes.

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