

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Application of MHG Solar LLC for a certificate)
of public good, pursuant to 30 V.S.A. §§ 8010)
and 248, to install and operate a 500 kW group)
net-metered solar electric generation facility) Case No. 20-____-NMP
located off Richville Road in Manchester,)
Vermont, to be known as the “Richville Road)
Solar Project”)

PREFILED TESTIMONY OF THOMAS HAND

May 19, 2020

Summary: Mr. Hand’s testimony introduces the proposed Richville Road Solar Project and addresses the Project’s compliance with the following Section 248 criteria which have not been conditionally waived: (b)(1) (Orderly Development of the Region), (b)(3) (System Stability and Reliability), (b)(5) (Environmental Considerations) with respect to Air Pollution, Public Health and Safety, Historic Sites, and Use of Natural Resources, and (s)(Setbacks).

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

2 A1. My name is Thomas Hand. I am the founder of MHG Solar, LLC (“MHG”). The principal
3 business address for MHG Solar LLC is 170 Bonnet Street, Manchester Center, VT 05255.

4
5 **Q2. What is the purpose of your testimony?**

6 A2. My testimony supports the application of MHG for a Certificate of Public Good (“CPG”) to
7 construct and operate a 500 kilowatt (“kW”) group net-metering solar electric generation
8 facility (“Project” or “Facility”) pursuant to 30 V.S.A. Sections 8010 and 248. The Project
9 site is located off Richville Road in the Town of Manchester, Vermont. My testimony
10 provides an overview of the Project and describes the Project’s compliance with certain
11 Section 248 requirements.

12
13 **Q3. Please describe your professional background, qualifications, and experience.**

14 A3. I grew up in Dorset, VT and graduated from Burr & Burton Academy in Manchester, VT. I
15 attended Middlebury College and studied economics and environmental science before
16 entering the alternative energy & energy efficiency industry. I have almost fifteen years of
17 experience working in renewable energy and energy efficiency in roles ranging from energy
18 auditor to project finance. In 2010 I began developing and building solar projects in the
19 Manchester area and have completed projects with The Dorset School, Fisher Elementary,
20 Maple Street School and Manchester Elementary Middle School. I have developed
21 approximately 7,000 kW of ground-mounted and rooftop net-metered PV projects in
22 Vermont. Outside of Vermont I have worked for alternative energy firms in a variety of

1 roles including program management, project finance, and origination. I have direct solar
2 project development experience in Vermont, Minnesota, and California.

3 My resume is attached as *Exhibit MHG-TH-1*.

4
5 **Q4. Have you previously testified before the Public Utility Commission (“PUC”)?**

6 A4. Yes. I provided prefiled testimony in Pig Pen Road LLC’s net-metering application, CPG
7 No. 17-0255-NMP; Wallingford Solar, LLC’s 2.2 MW petition, Case No. 18-3084-PET; and
8 MHG’s previous net-metering applications – the Route 149 Solar Project (CPG No. 18-
9 1914-NMP), the Shields Drive Solar Project (CPG No. 18-1975-NMP), the Greenstone QSI
10 Solar Project (CPG No. 18-2014-NMP), the High Road Solar Project (CPG No. 18-2050-
11 NMP), the Greenstone Briar Hill Solar Project (CPG No. 18-2181-NMP), the Eagle Quarry
12 Solar Project (CPG No. 18-2535-NMP), and the Warren Switch Solar Project (CPG No. 19-
13 1458-NMP).

14
15 **Q5. Please provide an overview of the Project.**

16 A5. The Project is proposed to be sited on a ± 5-acre area, currently under option to be
17 purchased by MHG, which is part of a ± 8-acre vacant parcel currently owned by Blackacre
18 LLC. The Project coordinates are 43°9’59.11 North, 73°3’5.34” West (center of the solar
19 array). It will have a nameplate capacity of no more than 500 kW (AC). A Location Map,
20 Site Plans, and Elevation Plans are included in *Exhibit MHG-TH-2*.

21 The Project will be comprised of ± 2,184 photovoltaic (PV) solar modules, 375 watts
22 each, mounted on approximately 16 rows of fixed metal racks oriented east-west, and other
23 required electrical equipment. The racks will be mounted on steel piles or ground screws.

1 On-site electrical equipment is expected to include \pm 4 PV string inverters of 125 kW (AC)
2 each, and electrical collector system components consisting of underground conduit, wire,
3 AC combiner panel boards, AC switchgear, and AC power zone for service to the PV
4 system auxiliary equipment. The Project will connect to the existing Green Mountain Power
5 Corporation (“GMP”) distribution line that runs along Richville Road.

6 All electrical equipment will be installed in compliance with the National Electric
7 Code (“NEC”), and access to the Project site will be secured in compliance with the NEC.
8 The solar field will either be surrounded by a minimum 7’-high fence mounted on driven
9 posts which would be secured and kept close to ground level for security and safety or, a
10 “solar scrim” protective backing will be utilized to cover exposed wiring on the backside of
11 the panels. Both options would comply with the NEC. If a fence is installed it will have
12 openings of 7 x 12 inches along the bottom to allow for migration of wood turtles as
13 described further in Exhibit MHG-MLS-1.

14 Additionally, all switchgear equipment will be inside UL-listed and code-approved
15 locked electrical enclosures. Electrical lines that connect the string combiners to the
16 inverters and switchgear enclosure, and from the switchgear enclosure to the riser to the
17 pole-mounted transformers, will be located inside conduit. Appropriate electrical warning
18 signs and/or placards will also be placed around the Project site, to the extent required by
19 the NEC. These measures taken together will adequately protect public health and safety.

20 Representative spec sheets for the Project’s equipment are included with my
21 testimony as *Exhibit MHG-TH-3*. The final selection of specific equipment will be made
22 after the CPG is obtained, depending upon market availability and EPC contractor

1 specifications. MHG expects that the final equipment to be selected will be materially the
2 same as indicated in this Application in terms of the Project's footprint and AC capacity.

3
4 **Q6. Please describe the proposed net-metering group and explain how the group will be**
5 **structured.**

6 A6. The Project is a group net-metered 500 kW (AC) solar electric generation project. MHG will
7 be the group administrator. Once group members are added, MHG will provide GMP with
8 the allocation amounts, meters, and account numbers per Commission rules. The procedure
9 for adding and subtracting meters from the group will be at the sole discretion of MHG.
10 The binding dispute resolution process for any disputes is as follows: all disputes between
11 the group members will be settled by the group administrator, MHG, in its sole discretion.
12 In no event will MHG require the PUC, the Department of Public Service, or GMP to
13 resolve a dispute within the group net-metering system. I am the designated contact person
14 for MHG for both the Applicant and the group administrator. My mailing address is PO
15 Box 1169, Manchester Center, VT 05255.

16
17 **Q7. Is the Project eligible for a net-metering Certificate of Public Good under PUC Rule**
18 **5.104?**

19 A7. Yes. The proposed Project is eligible for a Section 248 CPG as a Category III net-metering
20 system. The Project has a system capacity of 500 kW AC and the Project site has been
21 deemed by the Town of Manchester Selectboard and Planning Commission and the
22 Bennington County Regional Commission (BCRC) as a Preferred Site location. See PUC

1 Rule 5.103 (“Preferred Site” (7)) and *Exhibit MHG-TH-4 (letters from Manchester*
2 *Selectboard and Planning Commission and BCRC)*.

3 The Project will operate in parallel with facilities of the electric distribution system.
4 It employs a renewable energy resource—solar energy—and its electrical output is intended
5 primarily to offset the electricity requirements of the group member(s).
6

7 **Q8. How will MHG handle the Renewable Energy Credits (“RECs”) created by the**
8 **Project?**

9 A8. MHG will transfer the RECs to the interconnecting utility, GMP.
10

11 **Q9. Please discuss the anticipated Project construction activities and schedule.**

12 A9. Construction of the Project is expected to take approximately 8 to 12 weeks following
13 receipt of the necessary approvals depending on weather and other logistical constraints.
14 The first phase of construction will be to conduct site work, which could include limited tree
15 clearing to prepare the site for racking installation. The second phase of construction will
16 involve the installation of the steel piles or ground screws, racking for solar panels and
17 inverters. The final phase of construction will involve securing the solar modules, wiring the
18 inverters, installing the data acquisition system, installing the perimeter fence or solar scrim,
19 and planting the vegetative screening as depicted on the provided Site Plan in *Exhibit*
20 *MHG-TH-2* and the Landscape Mitigation Plan *Exhibit MHG-LT-2*. Following
21 completion of these activities, the system will be tested and commissioned for continuous
22 operation.

1 The Project site currently contains approximately 0.8 acre of trees and small shrubs.
2 It is anticipated there will be some tree and shrub clearing on the Project site to allow for the
3 installation of solar equipment and to reducing shading of the modules.

4
5 **Q10. Please discuss the operation and maintenance activities for the Project.**

6 A10. The system will be monitored remotely in real time, with an online system. The system will
7 inform MHG about, for example, a sudden drop in power output, or an unusual output
8 amount from one series of modules to the next. Site visits will be conducted on an as-
9 needed basis. A long-term operations and maintenance contract will be in place with a
10 maintenance company that will be responsible for keeping the system operating properly and
11 for keeping the site mowed.

12
13 **Q11. Please describe the plans for access to the site.**

14 A11. The site will be accessed through the southeast corner of the Project via existing public
15 roads in the area including Richville Road, as shown in *Exhibit MHG-TH-2*. No
16 additional roads are proposed for the Project.

17
18 **Q12. Has the Petitioner provided 45-day notice to adjoining landowners and the entities
19 listed in Commission Rule 5.107(B)?**

20 A12. Yes, I certify that MHG provided advance written notice of this application by letter dated
21 and mailed on November 22, 2019 to all applicable entities listed in Commission Rule
22 5.107(B), including all adjoining landowners (based upon information supplied by the Town

1 of Manchester). A copy of the advanced written notice of this application was filed on
2 ePUC on November 22, 2019, and assigned Case No. 19-4677-AN.

3
4 **Q13. Has the Petitioner received any comments in response to the 45-day notice?**

5 A13. MHG received comments from the Agency of Natural Resources (“ANR”), email comments
6 from residents of several neighboring properties, and public comments during Town
7 meetings open to the public. A summary of the comments received and MHG’s responses
8 are provided as *Exhibit MHG-TH-5*.

9
10 **Q14. What are the plans for the site when the Project reaches the end of its useful life?**

11 A14. When the Project reaches the end of its useful life, a determination will be made whether it
12 can be re-powered (after any necessary regulatory approval), or whether it will be
13 decommissioned and the site restored to its current condition. If decommissioned, the
14 Project equipment will be removed from the site and sold, re-used, recycled, and/or
15 disposed of in accordance with applicable waste laws and regulations in existence at that
16 time, and the site will be restored to its condition prior to the installation of the facility to the
17 maximum extent practicable, in accordance with the decommissioning plan attached to my
18 testimony as *Exhibit MHG-TH-6*.

19
20
21 **Q15. Is the Site subject to an Act 250 Land Use Permit, and if so, will the Project interfere
22 with the satisfaction of any condition contained in the Act 250 Land Use Permit?**

23 A15. No Act 250 Land Use Permits have been identified for the Project parcel.

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Q16. Please summarize the benefits the Project will provide to Vermont.

A16. This Project will be located on a Preferred Site as defined by the net metering rules, and will help the State meet its goal of fostering locally produced solar energy. The Project will also support local renewable energy jobs by employing Vermont consultants for the development work, and will employ Vermont businesses for installation work, both to the extent commercially feasible.

The Project will also help to achieve the 2016 Vermont Comprehensive Energy Plan goal for the state to receive 90 percent of its energy from renewable resources by the year 2050, as solar power is needed to meet that goal.

SECTION 248 CRITERIA

Orderly Development of the Region – 30 V.S.A. § 248(b)(1)

Q17. Will the Project unduly interfere with the orderly development of the region?

A17. No, it will not. The Project is consistent with the energy and land use goals articulated by the Town of Manchester and the Bennington County Regional Commission, as discussed below. Additionally, the Project will not cause impacts to the public roadways or on other types of public services or infrastructure as it will utilize existing roadways. Moreover, the Town of Manchester Selectboard and Planning Commission and the Bennington County Regional Commission have deemed the Project site as a “Preferred Site.” *Exhibit MHG-TH-4.*

Excerpts from the Town and Regional Plans are provided as *Exhibits MHG-TH-7 and MHG-TH-8.*

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Q18. Is the Project consistent with the Town Plan, and any specific land conservation measures contained therein?

A18. Yes. The Manchester Town Plan sets forth an “Energy Mission” which highlights an energy mission to encourage and support “the development of renewable energy resources in Manchester.” *Exhibit MHG-TH-7*–Town Plan at 9. The Town Plan sets forth the Town’s intention to implement a renewable energy resource plan which would identify sites suitable for renewable resources which would not include protected wetlands, river corridors or rare natural communities. Prime agricultural soils and identified cultural and scenic resources must also be considered. The Town Plan acknowledges the balance between identifying and protecting critical resources but allowing “reasonable area for renewable energy development.” *Id.* at 10. Based on the location of the Project site, the Project will not use land or resources that are specifically contemplated for development or land conservation under the Town Plan. The Project is sited to avoid interference with Manchester’s scenic ridgelines, surface water resources, forest resources, geologic resources and will follow recommended procedures to ensure protection of the agricultural soils located at the Project Site. *Exhibit MHG-TH-7*–Town Plan at 10-20; *Ponessi PFT at 7; Exhibit MHG-TH-2.*

Finally, as stated in the March 10 letter, the Town of Manchester Selectboard and Planning Commission identified the Project site as a “Preferred Site,” while also noting that the Project would need to implement visual screening as set forth in the Draft Manchester Energy Plan (and as required under section 248(b)91)(B)). *Exhibit MHG-TH-4.* As discussed in more detail below, the Project will be screened from view with mitigation

1 plantings that will be consistent with the Town's requirements for energy projects of this
2 nature and size and in compliance with the Town's screening requirements. *Exhibit MHG-*
3 *TH-2.*

4
5 **Q19. Has the Town of Manchester adopted a solar screening bylaw or ordinance under 24**
6 **V.S.A. § 4414(15) or § 2291(28)? If so, please explain the Project's compliance with**
7 **the ordinance/bylaw.**

8 A19. Yes, the Manchester Land Use & Development Ordinance Section 7.3.5. requires that the
9 energy generation facility must be screened by a buffer that: (1) is at least 12 feet wide, (2) is
10 maintained as a landscaped or naturally vegetated area, and (3) has a minimum of 4 large
11 trees (at least 30 feet tall at maturity) and 12 small trees (less than 30 feet tall at maturity) or
12 shrubs for every 100 feet. However, "the tree requirement may be waived for solar facilities
13 on lots without adequate area to provide large trees within the buffer that would not shade
14 the solar panels." (Available at [http://manchester-vt.gov/wp-](http://manchester-vt.gov/wp-content/uploads/2018/06/Manchester-Land-Use-Development-Ordinance-6-19-2018.pdf)
15 [content/uploads/2018/06/Manchester-Land-Use-Development-Ordinance-6-19-2018.pdf](http://manchester-vt.gov/wp-content/uploads/2018/06/Manchester-Land-Use-Development-Ordinance-6-19-2018.pdf)).

16 During the public process that led to the Town Planning Commission and
17 Selectboard designating the Project site a Preferred Site, MHG agreed to comply with the
18 screening requirements set forth in Section 4.5 of the draft Manchester Energy Plan dated
19 February 18, 2020, which are substantially the same as the Ordinance requirements (other
20 than the specific tree height and combination considerations). See *Exhibit MHG-TH-4,*
21 *Draft Energy Plan.* MHG also adjusted the screening plan to incorporate the express
22 request from the Town made during the "Preferred Site" designation meetings, to limit the
23 mature tree height to 10-12 feet in order to retain views of the Mt. Equinox ridgeline. As

1 captured in an email from the Zoning Administrator, Janet Hurley to MHG on January 7th,
2 2020, “Since the panels will not be above 9 feet tall, landscape screening would not have to
3 be tall. It should not be monocultural and should also be planted in a manner that is not
4 linear but reflects a random or natural pattern.” As shown on the Site Plan and the
5 Landscape Mitigation Plan, the Project will comply with Section 4.5 of the draft Manchester
6 Energy Plan and with the Town’s express height limitations for the screening. *Exhibits*
7 *MHG-TH-2 & MHG-LT-2.*

8
9 **Q20. Has the Bennington Regional Plan received an affirmative determination of energy**
10 **compliance from the Department of Public Service (“DPS”) under 24 V.S.A. § 4352?**

11 A20. Yes. The Department of Public Service certified the Bennington County Regional Plan
12 (“Regional Plan”) and Bennington County Regional Energy Plan (“Regional Energy Plan”) as
13 compliant with the requirements of 24 V.S.A. § 4352 for enhanced energy planning on
14 June 21, 2017.

15
16 **Q21. Is the Project consistent with the Regional Plan, including the Energy Plan**
17 **component?**

18 A21. Yes. The Regional Plan recommends supporting economical and environmentally sound
19 development of the region’s renewable energy resources, including solar energy. The
20 Regional Plan also contains a number of high-level policies and recommendations
21 concerning land use but does not specifically identify the Project parcel for conservation. Its
22 most specific guidance with regard to energy siting is that “[c]ommercial-scale solar energy
23 facilities occupy large open areas and should not be sited at important gateway locations or

1 in the foreground of viewsheds that have been identified by communities as being of
2 particular value.” See *Exhibit MHG-TH-8*– Regional Plan at p. 115. The Project is not
3 sited at such a location and any visual impacts will be mitigated as set forth in the Landscape
4 Mitigation Plan. Indeed, the Regional Commission’s letter designating the Project site a
5 Preferred Site recognized that the site “has access to sufficient solar energy resources and
6 does not contain any known critical environmental, local or regional constraints that would
7 interfere with development of the site.” *Exhibits MHG-TH-4; MHG-LT-2*.

8 Accordingly, the Project is consistent with the Regional Plan and its Energy
9 component.

10
11 **Need for the Project – 30 V.S.A. § 248(b)(2)**

12 **Q22. Is the Project required to meet the need for present and future demand for service**
13 **which could not otherwise be provided in a more cost-effective manner through**
14 **energy conservation programs and measures and energy efficiency and load**
15 **management measures?**

16 A22. This criterion has been conditionally waived by the Commission for net-metered solar
17 projects under Rule 5.111(B).

18
19 **System Stability and Reliability – 30 V.S.A. § 248(b)(3)**

20 **Q23. Will the Project adversely affect system stability and reliability?**

21 A23. The Project will not adversely affect system stability and reliability.

22 MHG filed a complete Interconnection Application pursuant to PUC Rule 5.500
23 with GMP on September 20, 2019. GMP accepted MHG’s application on September 26,

1 2019 and completed a Fast Track Analysis for the Project on October 9, 2019. A one-line
2 diagram of the Project is provided as *Exhibit MHG-TH-9*.

3 Based upon the results of the Fast Track Analysis, GMP performed a Feasibility
4 Study to determine whether the Project could be safely interconnected to the GMP
5 distribution grid and what changes or upgrades would be needed to facilitate the Project's
6 interconnection. GMP issued the Feasibility Study on November 25, 2019 which also
7 includes the complete Fast Track Analysis. See *Exhibit MHG-TH-10*.

8 The Feasibility Study determined that the Project can move forward without the
9 need for a System Impact Study or a Facilities Study. As is standard for Feasibility Studies,
10 the following system upgrades were identified as being the Applicant's responsibility in order
11 for the Project to interconnect to the GMP distribution system:

12 1. Construction of a small line extension;
13 2. Installation of a PCC recloser;
14 3. Payment of the transmission ground fault overvoltage protection scheme tariff fee
15 after the implementation of the protection solutions as part of the GMP capital project
16 process and prior to interconnection.

17 4. The Project's inverters must reconnect using the ISO-NE SRD gradual ramp rate
18 of 2% of maximum current output per second with a modified reconnection time of 6.5
19 minutes; and

20 5. The Project's inverters must comply with the "Inverter Source Requirement
21 Document of ISO New England."

22 MHG understands and accepts that it will be required to meet the requirements and
23 pay for the upgrades identified above, and will commit to do so through a Generator

1 Interconnection Agreement, an executable version of which GMP provided to MHG on
2 November 25, 2019.

3 The analysis and documents provided by GMP confirm that the Project may be
4 safely interconnected with GMP's distribution grid without having an adverse impact on
5 system stability and reliability, provided that the required system requirements and
6 modifications are made.

7
8 **Economic Benefit – 30 V.S.A. § 248(b)(4)**

9 **Q24. Please describe the economic benefits of the Project to the State and its residents.**

10 A24. This criterion has been conditionally waived by the Commission for net-metered solar
11 projects under Rule 5.111(B).

12 Nonetheless, I would like to note the ways in which the Project will provide
13 economic benefits. The Project will contribute positively to the local and State economy
14 through the use of in-state engineers, contractors, and consultants for the development
15 phase, and for the installation phase to the extent commercially feasible. The Project will
16 also pay municipal and educational property taxes. In addition, the owners of the site parcel
17 will receive annual lease payments for the term of the lease. The solar power derived from
18 the Project will be utilized by the net-metering group members and provide them with long-
19 term energy cost savings.

20

1 A27. The Project's solar panels will annually produce electricity without directly creating any
2 greenhouse gas emissions during operations. It will produce emission-free electricity during
3 times of peak summer demand and thereby lessen the need for peaking plants that utilize
4 fossil fuels (and thereby effectively reducing overall CO2 emissions). The only greenhouse
5 gas emissions associated with the Project will be minimal and limited to those related to
6 construction-related vehicles and periodic vehicle trips for required operational maintenance.
7 As a result, the Project will not have an undue adverse effect on greenhouse gas emissions as
8 any impacts will be minor and temporary in nature.

9
10 **Air Pollution – 10 V.S.A. § 6086(a)(1)**

11 **Q28. Will the Project cause undue air pollution?**

12 A28. No, it will not cause undue air pollution. The construction of the Project would result in
13 only temporary emission of minimal levels of air pollutants. These emissions would
14 primarily be generated by typical construction equipment and would not result in any
15 permanent increase in hydrocarbon emissions from those generated during a typical
16 construction project, or be out of character with the surrounding area. Any dust potentially
17 resulting from construction activities can be controlled through the use of water. The
18 proposed operation of the Project would only result in infrequent and minimal emissions
19 associated with occasional visits to the site to conduct maintenance operations. These
20 temporary and infrequent emissions will not cause undue air pollution.

21
22 **Q29. Will the Project have an undue adverse effect with respect to noise impacts?**

1 A29. No, it will not. The sound generated by Project construction will be of limited duration and
2 will be comparable to the sound generated by light construction equipment, and likely much
3 less than the existing road noise from vehicular traffic on Richville Road. Construction
4 activities for the Project will be limited to the hours between 7:00 A.M. and 7:00 P.M.,
5 Monday through Friday, and between 8:00 A.M. and 5:00 P.M. on Saturdays, as needed.
6 Construction will not occur on state or federal holidays or Sundays unless authorized by the
7 Commission upon request.

8 With respect to potential noise impacts during operations, the Project's only
9 components that generate sound that may be audible from off-site locations (i.e., beyond the
10 Project parcel) are the transformers and the inverters. The inverters will be located in the
11 second southernmost row of panels, and the transformers near the southeastern corner of
12 the solar array.

13 Estimates of the expected sound levels from the Project's inverters and transformers
14 were developed using the manufacturer's specified maximum sound levels for the
15 equipment, and well-established principles of how multiple sound sources are added
16 together, and the attenuation of sound over distance. The estimates are conservative in that
17 I have assumed that all of the electrical equipment is operating simultaneously at its
18 maximum sound levels. Likewise, I have not accounted for any ambient background noise
19 (noted above for reference only) or the attenuating effect of any vegetation currently on the
20 property or that which will be planted in accordance with the screening ordinance, or
21 topography located between the sound source and off-site receptors.

22 The daytime and nighttime Project-related sound levels at the nearest residence are
23 estimated to be 39.1 dBA (daytime), 37.4 dBA (nighttime). Note that the inverters are

1 approximately 230 feet and the transformer is approximately 165 feet to the northeast of the
2 closest residence. The nighttime sound level was for the transformers only, because the
3 inverters do not operate in the absence of sunshine on the panels and will therefore not
4 produce any sound. The calculations and supporting information are provided as *Exhibit*
5 *MHG-TH-11*.

6 It is my understanding that these sound levels are comparable to or lower than the
7 levels of other solar projects previously approved by the PUC. Thus, the Project will not
8 have an undue adverse effect with respect to sound.

9
10 **Transportation – 10 V.S.A. § 6086(a)(5)**

11 **Q30. Will the Project have an undue adverse impact with regard to transportation systems?**

12 A30. No. The Project will require only a limited number of truck trips during construction.
13 Otherwise its transportation impact will be limited to occasional visits for maintenance or
14 mowing. The adjacent public roads will not be physically impacted by the Project, nor will
15 there be any material increase in traffic. Therefore, the Project will not have an undue
16 adverse impact with regard to transportation.

17
18 **Educational Services – 10 V.S.A. § 6086(a)(6)**

19 **Q31. Will the Project cause an unreasonable burden on the ability of the Town of**
20 **Manchester to provide educational services?**

21 A31. No. The Project will not create any full-time permanent jobs, and thus no new school-aged
22 children would enter the system. Thus, the town will not have new burdens to its school
23 system. To the contrary, the state education funding system will be benefited by the Project,

1 due to state education taxes paid by the Project. Therefore, the Project will not have an
2 undue adverse impact with regard to educational services.

3
4 **Municipal Services – 10 V.S.A. § 6086(a)(7)**

5 **Q32. Will the Project place an unreasonable burden on the ability of the Town of**
6 **Manchester to provide municipal or governmental services?**

7 A32. No. The Project will not require any municipal water or sewer, nor any unique fire, police,
8 or rescue services, and will be installed to conform to all applicable electrical and fire codes.
9 Therefore, the Project will not have an undue adverse impact with regard to municipal
10 services.

11
12 **Historic Sites – 10 V.S.A. § 6086(a)(8)**

13 **Q33. Please describe the Project’s potential impact to on-site archaeological resources.**

14 A33. The Project site is already disturbed regularly by agricultural use and there are no known
15 instances of archaeological resources being present on the site.

16 Scott Dillon of the Vermont Division for Historic Preservation (“DHP”) performed
17 a review of the Project site on May 15, 2020. DHP communicated to MHG that there are
18 two areas in the northern part of the Project site that are deemed to be archeologically
19 sensitive (due to the soils, topography, and presence of former river channels) and thus
20 require a Phase I survey. DHP also advised that the southern part of the Project site was not
21 considered archeologically sensitive. Consistent with DHP procedures used for other
22 projects, MHG will work with DHP throughout the CPG process to establish the
23 parameters of the Phase I survey (e.g., test pits) and, if necessary based on the results of the

1 Phase I, identify mitigation measures that will allow the Project to proceed in a manner that
2 does not have an undue adverse impact to historic sites including archeological resources.
3 MHG understands that DHP will file a formal letter with the PUC once MHG has filed its
4 complete application.

5
6 **Q34. Will the Project have an undue adverse effect on extant historic sites or structures**
7 **located on or off site?**

8 A34. No. As Lucy Thayer indicates in her Aesthetic Assessment Report, the Project's visibility
9 from public viewpoints within a highly localized area will be mitigated by the Landscaping
10 Mitigation Plan. The Project Site is not located in any of the historic districts designated in
11 the Town Plan. Accordingly, the Project will not have an undue adverse effect on extant
12 historic sites. Moreover, the Project site is not currently an open space or generally open to
13 or used by the public. Additionally, no designated or official public use for or access to the
14 Project site is anticipated. *Exhibit MHG-LT-1.*

15 Thus, the Project will not have an undue adverse impact with regard to extant
16 historic sites.

17
18 **Public Investments – 10 V.S.A. § 6086(a)(9)(K)**

19 **Q35. Will the Project have an undue adverse impact with regard to public investments?**

20 A35. No. The closest public investment is Richville Road which is approximately 84 feet east of
21 the Project site. US Route 7 is approximately 0.56 miles east of the Project site. The Project
22 will not impact or create any adverse burdens on public investments given the limited and

1 temporary use of public roads during construction and operation. Therefore, there will be
2 no adverse burden or endangerment of this public investment.

3
4 **Setbacks – 30 V.S.A. § 248(s)**

5 **Q36. Does the Project comply with the minimum setbacks set forth in 30 V.S.A. § 248(s)**
6 **and Commission Rule 5.113?**

7 A36. Yes. The Project's solar panels and support structures are a minimum of 50 feet from the
8 nearest property line, and a minimum of 100 feet from the nearest edge of the travelled
9 portion of any municipal or state highway, including Richville Road. *See Exhibit MHG-*
10 *TH-2.*

11
12 **Q37. Does that conclude your testimony at this time?**

13 A37. Yes, it does.

14