

**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. 20-1261-NMP
located off Richville Road in Manchester,)
Vermont, to be known as the “Richville Road)
Solar Project”)

SUPPLEMENTAL PREFILED TESTIMONY OF CHRISTOPHER PONESSI

August 11, 2020

Summary: Mr. Ponessi’s testimony addresses concerns raised during the public comment period concerning the Project’s potential impacts in relation to flooding on and around the Project site.

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

2 A1. My name is Christopher M. Ponessi, P.E., and I am a professional civil engineer in the State
3 of Vermont. I am currently a partner and president of Mance Engineering Partners, P.C.,
4 with offices in Bennington and Manchester, VT. I head the Manchester office, which is
5 located at 114 Cemetery Avenue, Suite A-2, P.O. Box 1446, Manchester Center, VT 05255.
6

7 **Q2. Have you previously submitted testimony in this proceeding?**

8 A2. Yes, I submitted prefiled testimony on behalf of MHG Solar LLC (“MHG”) that was part of
9 the application for the Richville Road Solar Project (“Project”) on May 19, 2020.
10

11 **Q3. What is the purpose of your supplemental testimony?**

12 A3. The purpose of my supplemental testimony is to address the concerns regarding flooding on
13 or around the Project parcel raised in the public comments filed by Richard Cody, Anne
14 Lemke, and Cynthia Bush and the comments included in the motion to intervene filed by
15 MaryFran and Joseph Charbonneau, Cosmo Penge, and Timothy and Dody Boucher.
16

17 **Q4. Ms. Lemke commented, “I am concerned about the very close proximity to the**
18 **heavily travelled Richville Road. This has got to create additional water problems on**
19 **a very small floodplain area status but also the actual “floods” we have experienced**
20 **on Richville right in that area and in our neighborhood, as well.” Please respond to**
21 **her comment, and in particular, explain whether the Project will have an impact on**
22 **flooding in or around the Project parcel particularly when considering the history of**
23 **flooding in the area and its proximity to Richville Road?**

1 A4. No, as I stated in my prefiled testimony, the Project will not restrict or divert the flow of
2 floodwater or significantly increase the peak discharge of a river or stream within or
3 downstream from the Project. *Ponessi PFT at 4.* Moreover, the Project will not create any
4 new impervious area. The solar panels will be supported on steel piles or screws that will be
5 driven into the ground (foundations). These are the only components of the Project that
6 will be exposed to floodwaters as they will extend below the base flood elevation (“BFE”)
7 and enter the ground. All other Project components (solar panels, racking, inverters,
8 transformers) will be above the BFE. The foundations have de minimis volume
9 (approximately 0.06 cubic feet per foundation) and as such will not restrict or divert the flow
10 of floodwaters relative to the current condition on the site, nor will they increase the peak
11 discharge from the site. Simply put, other than the widely spaced, low volume steel post
12 foundations, the Project is raised above floodwaters and will therefore not exacerbate
13 flooding in the area.

14
15 **Q5. During the town meetings, the topic of flooding was discussed, specifically, ice jams**
16 **at the Bourne Brook railroad bridge. Some neighbors, including Mr. Boucher in his**
17 **comments to the PUC, were concerned about the potential for an ice jam and**
18 **resulting flooding that could impact their property to the east (upstream). Please**
19 **respond to this topic and comment, and in particular, explain whether the Project**
20 **will have an impact on ice jams or obstructions at the Bourne Brook railroad bridge.**

21 A5. In response to this comment, I produced a map that simulates flooding caused by an ice jam
22 at the Bourne Book railroad bridge. On the map – Exhibit MHG-CP-2 -- I established the
23 base elevation of a large section of the railroad tracks at approximately 690 feet. Once water

1 exceeds the 690 foot threshold it will begin to flow over the tracks and continue westward.
2 Based on this analysis, you can see the floodwater would dissipate over a large section of the
3 railroad tracks which are at an elevation of approximately 690 feet before reaching an
4 elevation that would flood either Richville Road or the neighboring homes which are all at
5 an elevation of greater than 691 feet. In the attached map, 691 feet is set as the extent of ice
6 jam-induced flooding as that represents 1 foot above the tracks, at which point water would
7 be freely flowing over and across the tracks and exiting the area. As the map illustrates, even
8 at 691 feet, neither Richville Rd nor the neighboring houses see impacts and furthermore
9 more, the Project would not increase or alter this baseline condition. In conclusion, and as
10 stated previously, the Project will not increase flood elevations and therefore will not result
11 in flooding upstream or downstream of the project.

12
13 **Q6. Several comments stated that the solar project, and its fence in particular, would**
14 **cause debris to be blocked and flood waters to get diverted to other areas including**
15 **neighboring properties. What flooding impact, if any, would a fence comparable to**
16 **the one identified in *Exhibit MHG-TH- 3 and* as depicted on the site plan (*Exhibit***
17 ***MHG-TH-2(Rev.)*) have on the project Parcel and surrounding areas?**

18 A6. The proposed fence is an agricultural style fence with opening that are approximately 6 x 6
19 inches or larger near the ground. This fence will allow floodwater to pass through with de
20 minimis impedance. In the event that floodwaters do carry debris into the Project fence
21 there is potential for flow to be reduced in that particular section of fence. However, in the
22 context of the overall site and the length of fence involved (approximately 1,710 linear feet),
23 this will not increase flooding risk to neighbors. The topography of the site is such that

1 potential floodwaters (from the Bourne Brook to the north) of the Project parcel flow from
2 the northeast to the southwest in a gradual, relatively continuous grade. At the point of any
3 particular obstruction, the topography of the site will cause the water to continue west or
4 southwest to exit the site, *away* from the homes across Richville Road. The water will simply
5 flow downhill around any localized debris that may be caught on the fence towards the
6 southwest or west, and away from the homes without impacting neighboring parcels.

7

8 **Q7. Does that conclude your testimony at this time?**

9 A7. Yes, it does.