

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Petition of Reservoir Road Solar, LLC, for a	)	
Certificate of Public Good, pursuant to 30 V.S.A. §	)	
248, to construct, own, and operate a 2.375 MW	)	Case No. 24-____-PET
ground-mounted solar electric generation facility in	)	
Berkshire, Vermont	)	

PREFILED TESTIMONY OF ADAM CRARY

December 4, 2024

Summary: Mr. Crary’s testimony provides an assessment of the project’s potential impacts to the following 30 V.S.A. § 248(b)(5) natural environment criteria, including: water pollution, 10 V.S.A. § 1424a(d) outstanding resource waters, headwaters, floodways, streams, shorelines, wetlands, rare and irreplaceable natural areas, and necessary wildlife habitat and endangered species.

EXHIBIT LIST

Exhibit RRS-AC-1	Resume of Adam Crary
Exhibit RRS-AC-2	Natural Resources Assessment Memorandum
Exhibit RRS-AC-3	Distribution Line Upgrade Natural Resources Memo

Introduction

Q1. Please state your name, current employer, business address, and position.

A1. My name is Adam Crary, employed at Vanasse Hangen Brustlin, Inc. (“VHB”), and my business address is 40 IDX Drive, Building 100, Suite 200, South Burlington, Vermont. I am currently the Renewable Energy Team Leader for VHB in Vermont.

Q2. What is your education background, qualifications, and work experience?

A2. I have a B.S. in Natural Resources (Natural History and Ecology concentration) from the University of Maine. I have been a Senior Ecologist and then Director of Natural Sciences at VHB since 2009, where I am responsible in part for managing projects, technical staff, and technical work in conduct of various ecological surveys and reporting, typically under the requirements of federal, state, and local environmental regulatory programs. I also manage and coordinate the work of various other VHB services with a particular focus on energy-related projects. I have been a professional environmental consultant since 2001, specializing in natural resources identification and assessments. In addition to assessments conducted for numerous projects under 30 V.S.A. Section 248(b)(5) review, I have prepared and coordinated applications for the acquisition of numerous federal and state environmental impact permits, which involve application of expert ecological and natural resource assessment disciplines. A copy of my resume is attached as *Exhibit RRS-AC-1*.

Q3. Have you testified previously before the Public Utility Commission?

A3. Yes. I have testified (through prefiled testimony and/or live hearings) for numerous projects located across Vermont, particularly those related to electric infrastructure upgrades or replacement, or new energy generation, particularly renewables. I have also provided technical support to expert witnesses providing testimony for other projects under PUC review, including utility-scale projects, a sample of which are listed on my resume.

Q4. What is the purpose of your testimony?

A4. My testimony supports Reservoir Road Solar, LLC's ("RRS") Petition for a Certificate of Public Good ("CPG") pursuant to 30 V.S.A. § 248 with respect to RRS's proposal to construct and operate an approximately 2.375- megawatt ("MW") alternating-current ("AC") solar electric generation facility to be installed on fixed-tilt racking systems within an approximately 10.5-acre perimeter fence on portions of two adjoining properties off Reservoir Road in Berkshire, Vermont (the "Project"). Specifically, I examine whether the construction and operation of the Project complies with the following criteria:

- Outstanding Resource Waters (10 V.S.A. § 1424a(d));
- Water Pollution (10 V.S.A. § 6086(a)(1));
- Headwaters (10 V.S.A. § 6086(a)(1)(A));
- Floodways (10 V.S.A. § 6086(a)(1)(D));
- Streams (10 V.S.A. § 6086(a)(1)(E));

- 1 • Shorelines (10 V.S.A. § 6086 (a)(1)(F));
- 2 • Wetlands (10 V.S.A. § 6086(a)(1)(G));
- 3 • Rare and Irreplaceable Natural Areas (10 V.S.A. § 6086(a)(8)); and
- 4 • Necessary Wildlife Habitat and Endangered Species (10 V.S.A. § 6086 (a)(8)(A)).

5 Under my direction, VHB prepared a Natural Resource Assessment memorandum (“NR
6 Memo”) provided as ***Exhibit RRS-AC-2***, on which I rely when making my assessments
7 per these criteria.

8 As described in the NR Memo, assessments were conducted within an
9 approximately 96-acre overall “Study Area,” which includes the Project components
10 (e.g., the array, access, perimeter fence, staging, and interconnection, etc.). In making
11 my assessments, Project support staff at VHB and I have relied upon the Project plans
12 developed by VHB using information provided by Petitioner and its design/consultant
13 team. In making my assessments, I also rely on Mr. Sam Carlson’s Project description.
14 Project support staff and I have also reviewed the site plans for the Project (***Exhibit RRS-***
15 ***SC-2***), which incorporate VHB’s suggestions to avoid and minimize natural resource
16 impacts as well as best management practices and details. The results of VHB’s specific
17 assessments are included in detail in the above-referenced memorandum, and generally
18 summarized below.

19

SECTION 248 CRITERIA
Outstanding Resource Waters
(10 V.S.A. §1424a(d)(2) & (13))

Q5. Is this Project located on any segment of the waters of the state that have been designated as outstanding resource waters by the Water Resources Board, former Water Resources Panel, or the Agency of Natural Resources?

A5. No. As described in Exhibit *RRS-AC-2*, the Project is not located in the vicinity of waters that have been designated as outstanding resource waters.

Water Purity, the Natural Environment
and Public Health, Safety, and Water Pollution
(30 V.S.A. § 248(b)(5) & 10 V.S.A. § 6086(a)(1)-(8))

Q6. Will this Project result in undue water pollution?

A6. No, for the reasons enumerated under the specific water-related criteria discussed below, and as also discussed further in the prefiled testimony of Stephanie Wyman.

Headwaters
(10 V.S.A. § 6086(a)(1)(A))

Q7. Is the Project located in a Headwaters area, and if so, will it reduce the quality of ground or surface water?

A7. Yes, the Project is located in a headwaters area but it will not reduce the quality of ground or surface water. Specifically, the Project site contains ground and surface water protection areas (“SPAs”) as mapped by the Agency of Natural Resources (“ANR”) and would, under 10 V.S.A. § 6086(a)(1)(A), be considered a headwaters area. As described in *Exhibit RRS-AC-2*, the Project will adhere to applicable regulations regarding the

1 quality of groundwater and surface waters, which are also discussed in more detail by
2 Project witness Stephanie Wyman through evaluation of Project waste disposal and
3 stormwater management and permitting considerations.

4 Further, with respect to the groundwater SPAs, the Project is designed consistent
5 with the approved Source Protection Plan for the public water supply wells associated
6 with these SPAs and avoids Project activity within the 200' isolation zone around each
7 well, except where the existing access road currently crosses this area. As discussed in
8 greater detail in *Exhibit RRS-AC-2*, the Project will incorporate Best Management
9 Practices ("BMPs") within that isolation zone and has consulted with the Department of
10 Environmental Conservation ("DEC") on these BMPs.

11 As such, the Project will not reduce the quality of ground or surface water within
12 this headwaters area.

13
14 **Floodways**

15 (10 V.S.A. § 6086(a)(1)(D) & 1424a(d)(3))

16 **Q8. Is the Project within a floodway, floodway fringe, or river corridor, and if so, will it**
17 **have an undue adverse effect on such areas, or endanger the health, safety, and**
18 **welfare of the public or riparian owners during flooding?**

19 A8. Yes, portions of the Project are located within a FEMA Flood Zone A (100-year
20 floodplain, or floodway fringe) as well as River Corridor associated with Trout Brook. In
21 order to utilize the existing gravel access road to the site, it will require upgrades to the
22 existing culverted crossing as well as temporary road widening to allow construction
23 equipment access. As described in *Exhibit RRS-AC-2*, the access road upgrades will

1 require a Flood Hazard and River Corridor (“FHARC) permit from the Vermont DEC,
2 among other permits associated with access road upgrade work in this riparian area
3 described below. With adherence to the permit when obtained, the Project will not
4 restrict or divert the flow of flood waters (floodway or floodway fringe), or endanger the
5 health, safety, and welfare of the public, or of riparian landowners during flooding or
6 from potential erosion.

8 **Streams**

9 (10 V.S.A. § 6086(a)(1)(E))

10 **Q9. Please describe any streams or waterways in the Project vicinity.**

11 A9. As described in *Exhibit RRS-AC-2*, VHB conducted on-site investigations and
12 delineations of the streams and surface waters within the Project Study Area. VHB
13 delineated several perennial and intermittent stream channels, including a segment of
14 Trout Brook and several unnamed tributaries, entering the Study Area from the north,
15 east, and west. Enosburg Falls Reservoir, an impoundment of Trout Brook, is also within
16 the Study Area. The Project array is sited to avoid all streams and riparian buffers
17 including from the reservoir. In order to utilize the existing access road, however, work
18 in Trout Brook will be required to replace and upgrade the existing culverted crossing,
19 which is expected to improve instream conditions by modernizing the crossing to
20 improve flow and organism passage. Upgrades to the existing road will also require
21 work within the riparian buffer, which will not create new impacts to the buffer as the
22 work is being done to an existing riparian area encroachment. Indirect impacts will be
23 avoided by adherence to erosion and sediment control measures required under a

forthcoming construction stormwater discharge permit. The upgrades will also be required to adhere to a Vermont DEC Stream Alteration Permit as well as a federal Department of the Army general permit for work in federal waters. Therefore, with adherence to the required permits, the Project will not alter the natural condition of Trout Brook and its riparian system. A complete description of methodologies and findings from VHB's natural resources assessments, including details of on-site stream delineations, is included in *Exhibit RRS-AC-2*.

Q10. Will the Project maintain the natural condition of streams?

A10. Yes. See *Exhibit RRS-AC-2* and my answer above for more details.

Q11. Will the Project impact stream buffers?

A11. Yes. See *Exhibit RRS-AC-2* and my answer above for more details.

Shorelines

(10 V.S.A. § 6086(a)(1)(F))

Q12. Does the Project involve the development of any shorelines?

A12. No. As described in ***Exhibit RRS-AC-2*** The Project is adjacent to the Enosburg Reservoir, which by naming convention would have a shoreline. The Project design utilizes a buffer from the reservoir limits, which is avoided. The Project would not impact the current character or condition of the shoreline.

22

23

Wetlands

(10 V.S.A. § 6086(a)(1)(G))

Q13. Will the Project comply with the rules of the Secretary of the Agency of Natural Resources relating to significant wetlands?

A13. Yes. VHB conducted wetland investigations within the Study Area and delineated several wetland complexes. VHB is of the opinion that several wetland complexes would meet the parameters of Class II significant wetlands. VHB conducted site visits with Vermont DEC Wetlands Ecologists Julie Follensbee on November 2, 2022 and Krystal Sewall on July 3, 2024, who confirmed the classification and boundaries of the delineated wetlands.

The Project has been designed to avoid impacts to Class II wetlands and wetland buffers to the extent practicable. There will be minor wetland and some buffer impacts associated with the access-road widening required for the construction phase of the Project. The Petitioner will be required to obtain a Vermont Wetlands Permit authorization for those activities that are not Allowed Uses under the Vermont Wetland Rules. All Project work will be conducted in accordance with those permit conditions. Accordingly, the Project will conform to the Vermont Wetland Rules and will not have an undue adverse impact on wetlands. See *Exhibit RRS-AC-2* for further details regarding the delineations and this assessment.

**Rare and Irreplaceable Natural Areas,
Necessary Wildlife Habitat, & Endangered Species**
(10 V.S.A. § 6086(a)(8) & 1424a(d)(4)-(9))

Q14. Is the Project located in any significant natural communities or rare and irreplaceable natural area (“RINA”), or will it have any impact on any such areas?

A14. No. As described in *Exhibit RRS-AC-2*, there are no areas that would be considered RINA within the Project Study Area.

Q15. Will the Project destroy or significantly imperil any necessary wildlife habitat (“NWH”)?

A15. No. As described in *Exhibit RRS-AC-2*, there is not any necessary wildlife habitat within the study area except two potential vernal pools, which would be considered NWH if confirmed as providing breeding habitat for the required biota. VHB has conservatively assumed they are vernal pools and therefore subject to a 100 foot buffer to protect an upland envelope surrounding the pools. The Project array entirely avoids these buffers but does require some activity associated with upgrading the existing access road and reconductoring an existing overhead line that is currently within the envelope. Neither activity would result in a permanent impact to the envelope function.

Q16. Will the Project have an undue adverse effect on any endangered species?

A16. No. As described in *Exhibit RRS-AC-2*, based on database and field reviews, there are no rare, threatened, or endangered (“RTE”) plant species known to occur within or adjacent to the Project site. It is VHB’s understanding that the Project’s tree clearing is

1 not enough to warrant additional study or conservation measures regarding protected bat
2 species known from the vicinity. As further detailed in *Exhibit RRS-AC-2*, the Project
3 will not affect any RTE species.

4
5 **Distribution Line Upgrades**

6 **Q17. Have the potential natural resource impacts of the distribution line upgrades**
7 **required for the Project been evaluated?**

8 A17. Yes. VHB conducted a review within a 150'-wide distribution corridor study area along
9 the portions of the Village of Enosburg Falls Water & Light Department's ("VOEF")
10 distribution system that requires upgrades to interconnect the Project ("Distribution
11 Upgrade Study Area") and prepared a supplement to its NR Memo as *Exhibit RRS-AC-3*.
12 Information on the location of Distribution Line Upgrades was provided by VOEF after
13 review of the System Impact Study ("SIS") conducted for the Project (*Exhibit RRS-SC-*
14 *5*). As described in detail in this supplemental memo, the existing line passes through
15 residential lawns, agricultural fields, naturalized areas outside of the overhead line
16 corridor, and downtown Enosburg Falls. Planned system upgrades will largely consist of
17 reconductoring and voltage upgrades following the existing line, with in-kind pole
18 replacements where necessary.

19 Within the Distribution Upgrade Study Area, wetland and surface water resources
20 were identified, assessed, and mapped using the methodology described in my
21 supplemental memo (*Exhibit RRS-AC-3*). These resources and associated buffers along
22 with existing and proposed distribution upgrades are depicted on Attachment 1 to *Exhibit*

1 ***RRS-AC-3.*** Other natural resources reviewed by VHB were not found during desktop or
2 field review within the Study Area including: outstanding resource waters, shorelines,
3 rare and irreplaceable natural areas, endangered species, or necessary wildlife habitat.

4 DEC District Wetlands Ecologist Krystal Sewell reviewed VHB's wetland
5 mapping with respect to where structure removal/replacement locations are proposed to
6 occur and confirmed the mapped wetland boundaries and classifications of these mapped
7 wetlands.

8
9 **Q18. Will the distribution line upgrades result in any undue adverse impacts on natural**
10 **resources?**

11 A18. No. Based on the review of the distribution line upgrades, VHB has concluded that the
12 Project will not result in any undue adverse impacts to natural resources. With respect to
13 wetlands, while the distribution line upgrade work alone would not trigger the need for
14 permit authorization under the state Vermont Wetland Rules or a Pre-Construction
15 Notification under the federal USACE Section 404 Vermont General Permit, activities
16 associated with the Distribution Line Upgrades will be reviewed under the wetland
17 permits that the Project will obtain as a single and complete project. No separate
18 collateral permit authorizations are anticipated to be required prior to conducting the
19 distribution line upgrade work described above. For these reasons, it is my opinion that
20 no further natural resource assessments are necessary, the Project will not result in new
21 natural resources impacts, and no other separate environmental permits are necessary for
22 Project interconnection upgrades beyond what the Project is required to obtain.

1

2 **Q19. Does this conclude your testimony?**

3 A19. Yes.