

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Petition of Apple Hill Solar LLC, pursuant)
to 30 V.S.A. § 248, for a certificate of public)
good authorizing the installation and)
operation of the “Apple Hill Solar Project,”)
a 2.0 MW solar electric generation facility)
located on Willow Road in Bennington,)
Vermont)

Docket No. 8454

THIRD SUPPLEMENTAL DIRECT
TESTIMONY OF MARK KANE
ON BEHALF OF PETITIONER

September 14, 2017

EXHIBITS

Exhibit AHS-MK-7	Revised Visual Simulations
Exhibit AHS-MK-8	Viewpoint Plan
Exhibit AHS-MK-9	3D Overview Plan
Exhibit AHS-MK-10	Illustrative Site Plan

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

2 A1. My name is Mark Kane. I am a land use planner and the Director of Community
3 Planning and Design at SE Group, which is a multi-disciplinary consulting firm specializing in
4 the planning, entitlement and design of public facilities, mountain and resort communities and
5 other complex projects on challenging sites. SE Group has four offices across the United States,
6 and the Vermont office is located at 131 Church Street in Burlington, Vermont.

7
8 **Q2. What is the purpose of your testimony?**

9 A2. My testimony describes changes that were implemented in the amended site plans for the
10 Apple Hill Solar Project (the “Project”) and the effect those changes have upon Project aesthetics
11 and orderly development of the region.

12
13 **Q3. Please describe the Project design revisions in the amended site plan and the overall**
14 **effects of those revisions on Project aesthetics and orderly development of the region.**

15 A3. Apple Hill Solar LLC (the “Petitioner”) requested that SE Group work to develop a
16 revised site plan that would fully screen the Project (along with the adjacent proposed Chelsea
17 Solar Project) from public views and the views of neighbors. For much of the past year, my firm
18 has worked with the Petitioner to achieve that goal. During that process, the Petitioner met with
19 representatives of the Town of Bennington (the “Town”) to get the Town’s input as the revised
20 plans progressed. The resulting revised plans fully screen the Project from public views and the
21 views of neighbors. The revised plans are included as *Exhibit AHS-ECOS-12* in the First
22 Supplemental Testimony of Brad Wilson in this docket. Generally, the revised plans incorporate

1 higher-wattage, dark-colored solar modules installed at reduced tilt and reduced module row
2 spacing to compress the Project footprint to an area roughly 40% smaller than the original site
3 plan. The reduced tilt angle also reduces the maximum height of the solar modules above the
4 ground. Because the Project footprint area is reduced, the required Project clearing area is also
5 reduced, which greatly increases the amount of existing vegetation that can be retained for
6 screening purposes, as shown on the revised plans. The revised plans also implement a taller
7 perimeter fence (10 feet), combined with a partially-opaque (85%) black mesh screening fabric
8 to further screen the Project from offsite views. The revised plans also implement robust
9 landscaping plantings in strategic locations to add another layer of screening effectiveness. The
10 revised smaller Project footprint and enhanced screening plan is the most comprehensive
11 mitigation plan of any solar project on which I have been involved in the State of Vermont.
12 Visual simulations of the revised plans from multiple viewpoints have been prepared and are
13 included as *Exhibit AHS-MKS-7*. (These simulations show the amended Project and also
14 assume that the amended version of the adjoining Chelsea Solar Project has been constructed.)
15 The visual simulations demonstrate that the Project will not have an adverse effect on aesthetics.
16 The visual simulations show that the Project would be fully screened from public and
17 neighboring viewpoints during all seasons. I also conclude that the amended Project will not
18 unduly interfere with the orderly development of the region. The Project complies with the
19 Bennington Town plan and the Bennington Regional Plan.

20

21

1 **Q4. Please describe the analysis that led to your conclusions regarding aesthetics and**
2 **orderly development of the region.**

3 A4. The analysis my firm completed for this new effort included building a 3D terrain model
4 (from LIDAR data and orthophotographs) that encompassed the area where the Project is
5 proposed and extending outward in all directions to encompass the surrounding highway
6 infrastructure, residential areas and Vermont Welcome Center. The analysis methodology relied
7 on several steps:

- 8 a. A 3D computer model incorporated the design plans provided by the Petitioner,
9 including the location of proposed solar modules, their height and form, the location
10 of proposed fence lines, inverter skid, access road, and other supportive elements.
11 The new plan modified the design to further increase the separation distances
12 between the Project and surrounding residential properties and public rights-of-
13 way.
- 14 b. The topographic basis for the 3D model was derived from high-resolution LIDAR
15 data in the area. This data set extended outwards from the project site to incorporate
16 all of the viewpoints from which simulations were prepared.
- 17 c. An aerial photograph acquired by Google (dated September 2014) was draped onto
18 this topographic elevation model to provide context about existing conditions.
- 19 d. An assortment of 3D trees and some shrubs (of varying heights and forms) were
20 added to the 3D model to reflect the existing pattern of vegetation (predominantly
21 deciduous and invasive species). The placement of these 3D trees and shrubs was
22 based on the underlying aerial photographs and site photographs taken previously

1 by SE Group. It is my assertion that the actual density of vegetation within the area
2 is much higher and be even more effective at minimizing offsite visibility than the
3 modelling would predict.

4 e. I also recommended as an integral part of the revised design, three landscape
5 mitigation zones. The first zone is along the western edge of the array between the
6 Project and the Route 7 corridor. This zone would consist of 223 individual trees
7 and shrubs (including cedars). The second area is along the northern edge of the
8 Project, approximately in the center of the array. In this zone, about 10-12 large
9 (20-24 feet) conifers are proposed to help bolster natural vegetation in screening
10 the Project from the most proximate (389 feet) residential neighbor to the north
11 (Residence #2). The last area is along southern property boundary of the Harris'
12 residence separating that parcel from the intervening remnant apple orchard. In this
13 location 142 mixed deciduous shrubs and trees are planned to strengthen the
14 screening provided by the remnant orchard. All of these proposed plantings were
15 added as 3D elements into the model and simulated as of the time of planting. It is
16 important to note that these landscape mitigation zones are based on an assumption
17 that both the Project and the adjoining proposed Chelsea Solar Project are
18 constructed. If the Chelsea Solar Project were not constructed, then the first and
19 second zones would not be necessary as they would have no effect on the visibility
20 of the Project.

21 f. The proposed design also incorporates taller fencing (10 feet) outfitted with an 85%
22 opaque mesh (black) screening material along the outside perimeter of the Project.

1 The purpose of this new fencing is to create additional screening near the arrays
2 and darken the mass of the arrays further. The fence also makes an unmitigated
3 view of the solar array impossible from most vantage points even without vegetated
4 screening.

5 g. Based on the above steps, the analysis uses the *Quechee* test to first establish
6 whether the Project creates an adverse impact with respect to the scenic beauty of
7 the area and, secondly, whether any adverse impacts would be considered undue.
8 Additionally, the analysis examines the land use regime of the property on which
9 the Project is located to evaluate whether its development adversely interferes with
10 the orderly development of region.

11
12 **Q5. Please describe the visual context of the amended Project.**

13 A5. The context of the Project is depicted on the included *Exhibit AHS-MK-8* and *Exhibit*
14 *AHS-MK-9* (Viewpoint Plan / 3D Overview Plan). An illustrative site plan highlighting the
15 major components of the Project is provided as *Exhibit AHS-MK-10*. As illustrated on the
16 Viewpoints Plan (*Exhibit AHS-MK-8*) and the 3D Overview Plan (*Exhibit AHS-MK-9*), the
17 existing visual character of the site is dominated by the extensive highway infrastructure. The
18 site sits within a broader valley terminated to west by the foothills of the Green Mountains and to
19 the east by rolling hillsides. The northbound lanes of Route 7 define the western edge of the
20 property on which the Project is proposed. Route 7 is a divided, limited-access highway in the
21 immediate vicinity of the Project and the roadways associated with the Route 7/VT 279
22 interchange are highly travelled according to the Vermont Agency of Transportation Route logs

1 with an Average Annual Daily Traffic (AADT) of about 9,000 vehicles. To the south of the
2 Project, in the center of the Route 7/VT 279 interchange is the Vermont Welcome Center rest
3 area which consists of a rest area structure, parking areas and some outdoor spaces. The parking
4 area is on the northern side of the Welcome Center, facing the Project Site. The Welcome
5 Center structure is oriented towards long-range range views of the Bennington Battle Monument
6 (approximately 1.13 miles to the south and slightly west) and Mount Anthony (approximately
7 3.10 miles to the south and west). To the north of the Project location are lands associated with
8 a former apple orchard. The shared property line between the Project and this property includes
9 mature trees. The area to the north is generally low density residential set within highly wooded
10 neighborhoods. The nearest neighbor (Residence #2) is approximately 389 feet north of the
11 Project fence. Apple Hill Road, which provides access to the Project Site is set within this
12 wooded environment and has very truncated long-range views to the south given the density of
13 trees. The area east of the Project location is currently forested private property. The terrain of
14 the Project site slopes gently from the northeast to the southeast. The elevation of the cleared
15 area to be used for the modules is 778 feet at the northeast corner and slopes gently to a low
16 point of 710 near the southwest corner. Overall the average grade of the area to be used is about
17 9% with a total vertical change of 68 feet.

18
19 **Q6. Please describe the viewpoints demonstrated in the revised visual simulations.**

20 A6. Five (5) critical viewpoints were selected from which 3D perspective views of the Project
21 were simulated and which are shown graphically on *Exhibit AHS-MK-8*, Viewpoints Plan.
22 These views had previously been considered in my earlier testimony on the Project. The

1 summary table below provides a description of each of these viewpoints including the direction
2 of view, the elevation (feet at eye level) of observers, the elevation difference (feet, + or -)
3 between the observer and the closest panel in the array and the overall linear distance (feet)
4 between this viewpoint and the closest panel.

Viewpoint Description	Direction of View	Elevation of Observer	Observer Elevation Relative to Closest Panel	Distance to Closest Panel
Vermont Welcome Center	North	663 ft.	- 61 ft.	1,350 ft
Route 7 Northbound Lane	Northeast	705 ft.		
Residence 1	South	795 ft.	+ 55 ft.	960 ft.
Residence 2	South	762 ft.	+ 36 ft.	350 ft.
Residence 3	Southwest	804 ft.	+ 33 ft.	392 ft.

5
6 The simulated views were developed using a combination of SketchUp, Maxwell Render and
7 Photoshop software. This set of software produces high-resolution model simulations with a
8 focal length of 52mm, equivalent to the human eye. Modeling for each Viewpoint assumed an
9 eye level height of 5'5". For an accurate representation of the Project, the 11"x17" simulations
10 should be held approximately 17.2 inches away from the viewer's eye. Zooming in or looking at
11 these simulations from distances closer than 17.2 inches is the equivalent of using binoculars or
12 other devices to assist in viewing the Project. The standard practice for visual analysis considers
13 visibility to the unaided eye. The simulations from each Viewpoint assumed three conditions:

14 a. Existing Conditions - Existing conditions reflect leaf-on conditions from each
15 Viewpoint. The placement of elements in each view was based on available site

1 photographs and aerial photographs. SE Group staff did not visit any private properties to
2 develop the existing condition view. No clearing for the Project was assumed for these
3 views.

4 b. Summer Conditions - The simulation assumed clearing for the Project was
5 complete and all components for the Project were installed. It also assumed a date and
6 time of August 18th at 10:30 AM from which the modeling software determined the
7 angle of the sun and cast shadow and light accordingly. All deciduous trees and shrubs
8 were assumed leaf-on.

9 c. Winter Conditions - For the winter condition, again clearing and Project
10 components were assumed to be complete and all components for the Project were
11 installed. These winter simulations assumed a date and time of November 8 at 1:30 pm.
12 Again, light and shadow were rendered accordingly. No ground snow was simulated.
13 Deciduous trees and shrubs are assumed to be leaf-off. No atmospheric factors (snow,
14 rain, clouds, fog, haze) were simulated in any of these conditions. The inclusion of such
15 factors would likely degrade potential visibility, particularly from distance.

16 For these 3d simulations, the proposed Chelsea Array is also included, along with mitigation
17 elements proposed with that project.

18 In addition to the 3D simulations, I have prepared cross-sections from each viewpoint to the
19 Project site. These cross-sections illustrate the relationship between the viewpoints and the
20 Project, highlighting the linear distances and vertical relationships. They also indicate where
21 existing vegetation will remain along the site line, where new mitigation plantings are proposed
22 and the location of the fencing.

1 **Q7. Please describe the Viewpoint: Vermont Welcome Center in more detail.**

2 A7. The Vermont Welcome Center is located south of the Project (about 1,350 feet) within
3 the interchange area between Route 7 and Route 279. The Welcome Center is oriented so that
4 the parking area is on the north side of the structure with the views from the building itself
5 oriented towards the south and focusing on the Bennington Battle Monument.

6 a. Existing Conditions: Welcome Center (Eye Level): This is the existing view from
7 the parking area of the Welcome Center looking northward. It shows the existing
8 foreground trees in the parking lot plus the existing vegetation to the north on the Project
9 site. (See *Exhibit AHS-MK-7*, Fig. AHS-04).

10 b. 3D Perspective: Welcome Center - Summer (Eye Level): This image is also
11 taken from the Welcome Center looking northward. Looking to center of the image in
12 the approximate location where the Project is proposed, the simulation confirms that the
13 existing area of woods that are preserved continue to fully screen views from this vantage
14 point. (See *Exhibit AHS-MK-7*, Fig. AHS-05).

15 c. 3D Perspective: Welcome Center – Winter (Eye Level): This image is taken from
16 the same position as above. The trees are shown in winter (leaf-off) condition. The
17 array is over 1,350 feet away to the north. Natural vegetation within the subject property
18 and along the Route 7 corridor screen views from this location. The dark mass of the
19 solar array, coupled with the screening fence help additionally limit the ability to detect
20 the existence of the Project. No unscreened visibility of the Project is possible based on
21 this analysis. (See *Exhibit AHS-MK-7*, Fig. AHS-06).

1 d. Site Sections: Welcome Center: This cross-section highlights the significant
2 distance and grade relationships between the Project and the Welcome Center. The array
3 is 1,350 feet away from the Welcome Center structure. The preservation of
4 approximately 220 feet of existing woodland provides considerable buffering and
5 eliminates any unscreened or unfiltered view. (See **Exhibit AHS-MK-7**, Fig. AHS-07).
6

7 **Q8. Please describe the Viewpoint: Route 7 North in more detail.**

8 A8. The Route 7 North viewpoint is located along the northbound lane of Route 7 as it moves
9 parallel to the western edge of the property. This is a highly transient location with the expected
10 observer to be moving within a car at a relatively high speed and as such the duration of any
11 view would be of short duration even in the absence of screening. Existing woods along the
12 edge of the property and extending west onto lands within the route right-of-way provide
13 screening at present.

14 a. Existing Conditions: Route 7 North (Eye Level): This image is taken from a
15 location along Route 7 heading north and slightly south of the proposed Solar Project. At
16 this point the Apple Hill array is 1,060 feet away from the observer. (See **Exhibit AHS-**
17 **MK-7**, Fig. AHS-08).

18 b. 3D Perspective: Route 7 North - Summer (Eye Level): This image is taken from
19 the same location along Route 7 heading north and slightly south of the proposed Project.
20 A very narrow opening in the existing woods along the corridor would (absent additional
21 screening) allow for a short duration view of a small portion of the adjoining Chelsea
22 Solar Project. Landscape mitigation proposed for the Chelsea Solar Project and shown in

1 the site plan, however, effectively screens the Project. Additional understory plantings
2 that are not captured by the 3D modeling process would further prevent any views from
3 this highly transient viewpoint. (*Exhibit AHS-MK-7*, Fig. AHS-09). However, without
4 the development of the adjoining proposed Chelsea Solar Project, no visibility of the
5 Project would be possible.

6 c. 3D Perspective: Route 7 North - Winter (Eye Level): The winter view would
7 possibly show a brief glimpse of a small portion of the adjoining Chelsea Solar Project
8 beyond for drivers that are intent on looking for it. I used the term “possibly” because the
9 model does not account for the retained understory. The effectiveness of the retained
10 understory is greater than depicted given its density. Even so this potential fleeting
11 glimpse is highly mitigated by the inclusion of the screening fencing, landscape
12 mitigation and the use of the darker photovoltaic modules. These mitigation measures
13 also accentuate the general screening that the understory provides, and cause the Project
14 to blend into the background. Additionally, the growth of proposed mitigation plantings
15 will, in time even further degrade potential views. (See *Exhibit AHS-MK-7*, Fig. AHS-
16 10). However, without the development of the adjoining proposed Chelsea Solar Project,
17 no visibility of the Project would be possible.

18 d. Site Sections: Route 7 North: This cross-section highlights the distance and grade
19 relationships between the Project and the Route 7 North Viewpoint, but does not extend
20 the entire 1,060 feet to the Apple Hill Array. The preservation of approximately 150 feet
21 of existing woodland prevents any unscreened or unfiltered view. The inclusion of
22 mitigation plantings along the western edge of the Chelsea Solar Project array and the 10-

1 foot screening fence bolster the efficacy of this retained vegetation and cause the Project
2 to blend into the background. (See **Exhibit AHS-MK-7**, Fig. AHS-11).

3
4 **Q9. Please describe the Viewpoint: Residence 1 in more detail.**

5 A9. Residence 1 is the property of Libby Harris. The viewpoint from Residence 1 reflects the
6 view from the Harris property along Apple Hill Road which is located north of the Project. The
7 remnant apple orchard separates the Project from this location. I made no attempt to visit or view
8 the Project site from this private property, but based this analysis on views from the adjacent
9 property owned by the Petitioner's affiliate and aerial photographs of the area.

10 a. Existing Conditions: Residence 1 (Eye Level): This image is taken from a
11 location adjacent to Ms. Harris's home, north of the Project and looking south. In the
12 foreground is the existing open lawn. In the mid-ground is a stone wall and apple trees
13 that separates the Harris property from properties owned by the Petitioner's affiliate. The
14 Project is minimally 960 feet away from this location and 55 feet lower in elevation. It is
15 positioned to the viewer's center. (See **Exhibit AHS-MK-7**, Fig. AHS-12).

16 b. 3D Perspective: Residence 1 – Summer (Eye Level): This image is taken from a
17 location adjacent to Ms. Harris's home, north of the Project and looking south. In the
18 foreground is the existing open lawn. In the mid-ground is a stone wall and apple trees
19 that separates the Harris property from properties owned by the Petitioner's affiliate. The
20 Project is minimally 960 feet away from this location and 55 feet lower in elevation. No
21 unscreened or unfiltered visibility of the Project is possible based on this analysis.

22 (**Exhibit AHS-MK-7**, Fig. AHS-13).

1 c. 3D Perspective: Residence 1 – Winter (Eye Level): Like the image above, but
2 rendered in winter (leaf-off) conditions, the visibility of the Project remains precluded by
3 the continued effectiveness of retained vegetation and the use of the taller screening fence
4 which masks and diminishes the view of the panels. Also, the use of dark backing on the
5 panels is particularly helpful in this location as the photovoltaic surface is facing away
6 from the observer. No unscreened or unfiltered visibility of the Project is possible based
7 on this analysis. (See *Exhibit AHS-MK-7*, Fig. AHS-14).

8 d. Site Sections: Residence 1: This cross-section highlights the distance and grade
9 relationships between the Project and the Residence 1 Viewpoint. The preservation of
10 existing trees (apples) in the mid-ground, coupled with the significant grade change,
11 prevents any unscreened direct or unfiltered view. The distance to the Project and the 10-
12 foot screening fence also bolster the efficacy of these other mitigation features causing
13 the Project to blend into the background. (See *Exhibit AHS-MK-7*, Fig. AHS-15).

14
15 **Q10. Please describe the Viewpoint: Residence 2 in more detail.**

16 A10. Residence 2 is located northwest of the Project and is separated at present by existing
17 woods. This property is accessed via Russet Drive off Apple Hill Road. I made no attempt to
18 visit this private property, but based the analysis on photographs taken from the Project site and
19 aerial images.

20 a. Existing Conditions: Residence 2 (Eye Level): This image is taken from a
21 location at Residence 2, north of the Project and looking south. The foreground is
22 dominated by existing woods. The Project is minimally 1,502 feet away from this

1 location and 60 feet lower in elevation. The Project is positioned to the left of center of
2 the view. (See **Exhibit AHS-MK-7**, Fig. AHS-16).

3 b. 3D Perspective: Residence 2- Summer (Eye Level): This image is taken from
4 Residence 2, northwest of the Project. As illustrated in the Site Section (**Exhibit AHS-**
5 **MK-7**, Fig. AHS-19), with the development of the adjoining proposed Chelsea Solar
6 Project there would be approximately 150 feet of woodlands preserved between the
7 residence and the that Project's fence. As the 3D perspective illustrates, this existing and
8 retained woodland forms a visual barrier to views further south. The inclusion of
9 proposed large evergreen trees near the Project (20-24 feet in height) and the use of the
10 10-foot-tall screening fence preclude unscreened or unfiltered visibility of the Project.
11 (See **Exhibit AHS-MK-7**, Fig. AHS-17). However, without the development of the
12 adjoining proposed Chelsea Solar Project, no visibility of the Project would be possible
13 and the previously described evergreen trees would not be necessary.

14 c. 3D Perspective: Residence 2 - Winter (Eye Level): This image, rendered from the
15 same place as above, illustrates the condition in leaf-off. The dark color of the screening
16 fence and the black backing of the panels (they are oriented away from the observer),
17 considerably lessen visibility. The panels visible here are part of the adjoining proposed
18 Chelsea Solar Project, not the Project. The large evergreen trees near the adjoining
19 Chelsea Solar Project (20-24 feet in height) address a specific area where, because of the
20 shape of the terrain, glimpses of the array might have been possible. The inclusion of
21 these mitigation measures preclude unscreened or unfiltered visibility of the adjoining

1 Chelsea Solar Project causing it to blend into the background. (See *Exhibit AHS-MK-7*,
2 Fig. AHS-18).

3 d. Site Sections: Residence 2: This cross-section highlights the distance and grade
4 relationships between the adjoining proposed Chelsea Solar Project and the Residence 2
5 Viewpoint. It highlights the approximately 150 feet of existing woods that separates the
6 views. It also shows the location of the large evergreens and screening fence and how the
7 array is placed within the landscape. (See *Exhibit AHS-MK-7*, Fig. AHS-19).

8
9 **Q11. Please describe the Viewpoint: Residence 3 in more detail.**

10 A11. Residence 3 is located to the northeast of the Project site beyond a remnant apple orchard
11 on a separate parcel under the control of a Petitioner affiliate. I made no attempt to visit this
12 private property, but based the analysis on photographs taken from the Project site and aerial
13 images.

14 a. Existing Conditions: Residence 3 (Eye Level): This image is taken from a
15 location at Residence 3, northeast of the Project and looking south. A present, this view
16 looks south across foreground trees and the remnant apple orchard. The terrain falls
17 away which greatly lessens possibility of a view of the Project. (See *Exhibit AHS-MK-7*,
18 Fig. AHS-20).

19 b. 3D Perspective: Residence 3- Summer (Eye Level): This image is taken from
20 Residence 3, northeast of the Project. The foreground is dominated by existing trees and
21 the remnant apple orchard. The nearest panel for the Project is more than 385 feet away.
22 The Project array falls away from the observer in this view and, when coupled with

1 natural vegetation and the screening fence, makes unscreened or unfiltered visibility of
2 the Project impossible. (See **Exhibit AHS-MK-7**, Fig. AHS-21).

3 c. 3D Perspective: Residence 3 - Winter (Eye Level): This image, rendered from the
4 same place as above, illustrates the condition in leaf-off. The dark color of the screening
5 fence and the black backing of the panels (they are oriented away from the observer),
6 considerably lessen visibility. The inclusion of these mitigation measures precludes
7 unscreened or unfiltered visibility of the Project causing the Project to blend into the
8 background. (See **Exhibit AHS-MK-7**, Fig. AHS-22).

9 d. Site Sections: Residence 3: This cross-section highlights the distance and grade
10 relationships between the Project and the Residence 3 Viewpoint. It highlights the
11 existing vegetation that separates the views. It also shows the location of the existing
12 apple trees, the screening fence and how the array falls away from the observer. (See
13 **Exhibit AHS-MK-7**, Fig. AHS-23).

14
15 **Q12. What are the results of the first prong of the *Quechee* test for the amended Project?**

16 A12. The first prong of the *Quechee* test asks five basic questions, which are used to determine
17 whether the Project would result in an adverse impact with respect to the visual resource. These
18 questions are:

19 *Quechee* Q1.1: “What is the nature of the project’s surroundings? Is the project located
20 in an urban, suburban, rural or recreational resort area? What land uses presently exist? What is
21 the topography like? What structures exist in the area? What vegetation is prevalent? Does the
22 area have particular scenic value?”

1 Answer 1.1: While the Project site is presently wooded with invasive and other species,
2 areas to the south are highly impacted by highway infrastructure including significant ramping
3 and overpasses associated with the US Route 7/VT 279 interchange. Existing mixed hardwood
4 vegetation within the Property is approximately 50-70 feet in height. The site used for the
5 Project is generally sloping southward from the northern property line at approximately 9%
6 resulting in about 68 feet of grade change from northeast to southwest. While the views to the
7 south from the Project site are much more scenic (with long-range views of Mount Anthony and
8 a patchwork of rolling meadows) the views of the Project site in the immediate area is dominated
9 by the highway infrastructure and does not have a particularly high scenic value.

10 Quechee Q1.2: “Is the project’s design compatible with its surroundings? Is the
11 architectural style of the buildings compatible with other buildings in the area? Is the scale of
12 the project appropriate to its surroundings? Is the mass of the structures proposed for the site
13 consistent with land use and density patterns in the vicinity?”

14 Answer 1.2: The property on which the Project is planned is not a visual focal point
15 within the broader landscape. The components of the Project are low in height and follow the
16 natural shape of the landform. The distance between the Project site and offsite viewpoints
17 greatly lessens the perception of scale. The design of the Project has numerous layers of
18 effective visual mitigation which screens off-site view and causes the Project to disappear into
19 the background (significant setbacks, retention of natural vegetation, new landscaping, use of
20 darker and taller screening fencing and the use of darker frames holding the photovoltaic
21 modules). The reduction in the footprint of the Project further helps improve its scale relative to
22 the immediate surroundings. However, the scale of the Project is not detectable to viewers from

1 off-site locations because of the design features in place that prevent unscreened and unfiltered
2 views.

3 Quechee Q1.3: “Are the colors and materials selected for the project suitable for the
4 context in which the project will be located?”

5 Answer 1.3: While the materials and colors are not currently observed within the
6 landscape, the materials and forms used for the Project aid in causing the Project to blend into
7 the landscape undetected. The matte-black color of the photovoltaic frames that support the
8 photovoltaic panels are less visible given their dark color. The photovoltaic surfaces are non-
9 reflective and a dull, dark color that has a similar albedo (or surface reflectivity) to natural
10 grasses, meadows and fields. The use of a 10-foot tall fence with affixed black mesh fabric (85%
11 opaque) helps to further prevent the Project from view through existing vegetation or new
12 landscaping. The Project does not require any exterior lighting.

13 Quechee Q1.4: “Where can the project be seen from? Will the project be in the viewer’s
14 foreground, middle-ground or background? Is the viewer likely to be stationary so that the view
15 is of long duration or will the viewer be moving quickly by the site so that the length of view is
16 short?”

17 Answer 1.4: As described above, the primary public viewshed of the Project is from areas
18 within immediate adjacency along Route 7 and VT 279. Two viewpoints (Vermont Welcome
19 Center and Route 7 North) are the most representative of this viewshed. From these locations,
20 the Project site will be part of the mid-ground. The likely observer is either someone who is
21 stationary (at least temporarily) at the Vermont Welcome Center rest area or someone who is
22 navigating the roadways on part of the interchange. For the former (Vermont Welcome Center),

1 while we expect the duration of view towards the Project site to be somewhat longer, the
2 simulations show (See **Exhibit AHS-MK-7**, Fig. 04-07) unfiltered or unscreened views are
3 eliminated due to the considerable distance and intervening vegetation. For the latter, the posted
4 speed limits in and around the interchange indicate 55 miles per hour. Given the complexities of
5 the road network, however, we believe that for passengers seeking out the Project, views of the
6 Project have been prevented. Any view would also be highly constrained by the fact that the
7 orientation of the viewer is in nearly constant flux as his/her vehicle moves rapidly through the
8 viewshed. When combined with the effective screening provided (See **Exhibit AHS-MK-7**, Fig.
9 08-11), the array will recede in the background.

10 Quechee Q1.5: “What is the project’s impact on open space in the area? Will it maintain
11 existing open space or will it contribute to the loss of open space?”

12 Answer 1.5: While the Project will require clearing, and convert existing vegetation (and
13 invasive species) into a different land use, this loss of vegetation does not necessarily contribute
14 to a long-term loss of open space. The Project requires minimal alteration of the underlying
15 terrain. The components of the Project (panels, inverter structures, and transformers) will,
16 following the useful life of the Project, be removed and the land restored swiftly to an
17 undeveloped condition. Areas of sensitive environmental issues (wetlands) have been avoided in
18 the plan. The amount of clearing has been dramatically reduced from the original proposal and
19 minimized to the extent possible. The significant buffer of the Project with respect to its
20 surroundings also makes any perception of a loss of open space difficult at best.

21 While the development of the Project does require clearing, and introduces a new land use in the
22 area, this type of use has been contemplated and permitted elsewhere within the Rural

1 Conservation (“RCON”) zoning district. The design of the Project effectively prevents visibility
2 to the public and neighbors. The Project even in winter conditions would be effectively screened
3 and disappear into the background. The Project has provided large setbacks to the public
4 roadways and nearby residential properties and, given its orientation and the low scale of its
5 components, does not adversely impact the broader and longer-range views of the landscape, or
6 the viewshed of the area from public and neighboring viewpoints. The level of anticipated
7 aesthetic impact is negligible. The Petitioner has taken significant design modifications to lessen
8 and eliminate its visual impacts on its surroundings. As noted above, this layering of mitigative
9 strategies extends from the property line to the array and, as evidenced in the simulations
10 prepared, promotes visual compatibility in all seasons. Given this, I conclude that the Project
11 would not create an adverse aesthetic impact on the scenic resources.

12
13 **Q12. Even though you have concluded that there would be no adverse impact on**
14 **aesthetics, have you looked the second prong of the *Quechee* test for the amended Project?**

15 A12. Yes. The second prong of the *Quechee* analysis is undertaken once the first prong has
16 determined that a proposed development will result in an adverse impact on scenic resources.
17 The second prong of the analysis evaluates whether or not the proposed development’s impacts
18 would be unduly adverse. Although I have concluded that the Project will not have an adverse
19 aesthetic impact on scenic resources, it is my normal practice to continue to examine the Project
20 with respect to the second prong of the *Quechee* test. The *Quechee* test continues by evaluating
21 whether the impact of the Project would be unduly adverse. This is done by addressing three
22 fundamental questions which provide clarity on whether or not community standards are violated

1 as a result of the impacts, whether the aesthetic incompatibility of the Project is so great as to be
2 “shocking or offensive” to an average person or whether the Applicant has provided reasonable
3 mitigation to address identified impacts.

4 Quechee Q2.1: “Does the project violate a clear, written community standard intended to
5 preserve the aesthetics or scenic beauty of the area?”

6 Answer 2.1: No. Although Section 248 does not require local permitting of projects
7 seeking a Certificate of Public Good, local plans and regulations are reviewed under the second
8 prong of the *Quechee* analysis where it has been determined that a Project may have a potential
9 adverse visual impact. The Commission has noted that “[i]n order for a provision to be
10 considered a clear, written community standard, it must be ‘intended to preserve the aesthetics or
11 scenic beauty of the area’ where the proposed project is located and must apply to specific
12 resources in the proposed project area.” *Petition of Georgia Mountain Community Wind, LLC*,
13 *Docket No. 7508, Order of Vt. Pub. Serv. Bd. (Jun. 11, 2010) at 52*. The Commission clarified
14 that generalized statements and general scenic resource policies that are not focused on a
15 particular scenic resource or that fail to offer specific guidance or measures to protect the
16 resource cannot be considered “clear written community standards.” *Id. at 53*. I have, as part
17 of this analysis, reviewed the local and regional plans relative to this criterion. I also recognize
18 that the Commission held in its Order of February 16, 2016, in Docket 8302 that the Chelsea
19 project violated the Bennington Town Plan because it was located in the RCON zone. I am also
20 aware that the Commission has previously approved commercial ground-mounted solar projects
21 that are visible from off-site locations in the Bennington RCON district.

1 **Bennington Town Plan**

2 My analysis of the Bennington Town Plan for this matter relies on the one adopted in 2010
3 (which is included in the First Supplemental Testimony of Brad Wilson in this docket as ***Exhibit***
4 ***AHS-ECOS-13***), although as I discuss later, my view would be the same under the 2015 Town
5 Plan (which is included in the First Supplemental Testimony of Brad Wilson in this docket as
6 ***Exhibit AHS-ECOS-14***). My review of this document includes relevant sections on land use and
7 scenic resources elements of the Town Plan.

8 **Land Use**

9 Bennington has identified the lands within which the Project is set as within the RCON
10 district and defines the characteristics of this district as follows:

11 *“The purpose of the Rural Conservation District is to preserve this distinctive*
12 *rural character while accommodating low density residential development in a*
13 *manner that avoids the need for public water supply and public sewer systems.”*

14 The RCON district covers a significant percentage of the town outside of the urban
15 growth areas and is essentially a transitional land use between more dense/intensive development
16 and forest lands.

17 **Development in the RCON district is not limited to low density residential**
18 **development.**

19 The language of the Town Plan does not limit development to “low density residential
20 development” as the only land use outcome within the RCON district. My position on this is
21 supported by the fact that the RCON district encompasses a significant portion of the Town, and

1 numerous types of uses (including other commercial ground-mounted solar installations) exist
2 and have been developed within the district that are not “low density residential” in use or form.

3 The primary purpose of the district is to “preserve the distinctive rural character” with the
4 accommodation that when residential uses are proposed they should be developed without
5 municipal services. This supports my earlier observation that other, non-residential uses, have
6 been approved and developed within the RCON district that ostensibly have not compromised
7 the “distinctive rural character”. The act of “accommodation” for a use does not imply it is at the
8 exclusion of all else. This focus on promotion of uses that do not require municipal services is a
9 traditional method in land use planning to promote a more rural pattern of development.

10 The Project site is not located within public, open space or conserved parcels of land as
11 identified on Map 7-3 of the Town Plan. It is not identified in the Town’s Park and Open Space
12 Plan for conservation purposes. The Town by-laws (which are included in the First
13 Supplemental Testimony of Brad Wilson in this docket as ***Exhibit AHS-ECOS-19***) specifically
14 mention and allow the following commercial development in the RCON district: mineral
15 extraction, sawmill, colleges, electric facilities, cultural institutions, bed and breakfasts, golf
16 courses, cemetery, kennels, and veterinary clinic. The Projects fits within the permitted use
17 “electric facilities,”.

18 **The Project is not sited in a prominently visible location on a hillside.**

19 The Town Plan also provides that in the RCON zone:

20 *“Development in this area cannot be sited in prominently visible locations on*
21 *hillsides or ridgelines, shall utilize earth tone colors and non-reflective materials*

1 *on exterior surfaces of all structures, and must minimize clearing of natural*
2 *vegetation.”*

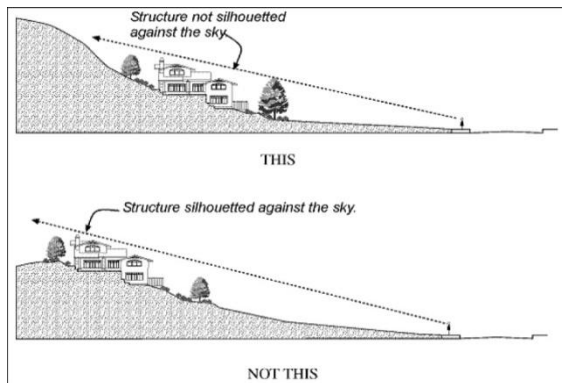
3 As noted before, the overall gradient of the Project site is approximately 8%. Its rise
4 relative to its surroundings is modest with the closest panel to the Vermont Welcome Center
5 being only around 50 feet upgradient and over 1,350 feet away. This is not a prominent location
6 from any public or neighboring view. While it might be classified as a “hillside” in the sense
7 that it does rise upwards from south to north, it is not, in my opinion, a “prominent” hillside.
8 Further, even if the Project site were considered a hillside, the Project is not sited in a
9 prominently visible location.

10 The Town by-laws support my interpretation. The references to “hillside” and “ridgeline”
11 in the Town Plan are vague and not clearly defined. Looking for clarity in the By-laws, the By-
12 laws provide illustrations which address the potential visual impact of new development
13 (specifically residential) on hillsides and ridgelines and how the placement of such development
14 can “alter the natural appearance of the topography as viewed from the highway”. While the
15 illustrations in the By-laws do not expressly define “prominently visible locations”, they do
16 strongly suggest that the “proper” siting of a structure on a hill is to place it lower on that hill to
17 avoid breaking the ridgeline or creating a silhouette of new development against the sky, or to
18 avoid siting it prominently which might “significantly impact the natural appeal of the hillside
19 view.” By extension, if new development takes these measures and places new development
20 below the ridgeline so as to prevent it from becoming silhouetted against the open sky, and/or
21 avoids significantly impact the natural appeal of a hillside view, then it would be less prominent
22 with respect to observers along the roadways. The Project is not located along the ridgeline nor

1 does it extend upwards such that it breaks the skyline from nearby adjacent public roads or
2 residential areas, nor is it visible (much less prominently visible) in a way that significantly impacts
3 the view (see By-laws example 4B).

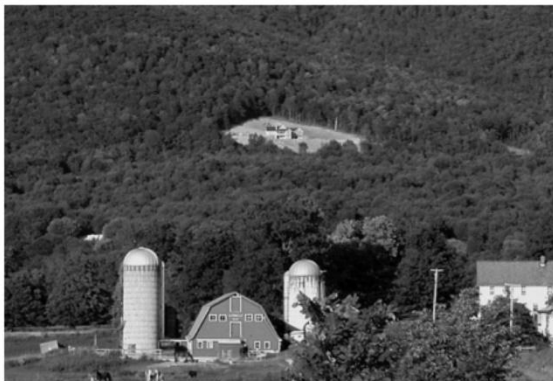
4 The following are examples in the By-laws, see ***Exhibit AHS-ECOS-18***, which is included
5 in the First Supplemental Testimony of Brad Wilson in this docket), show the Project (even using
6 the original plans for the Project) is not on a “prominently visible” location on a hillside or
7 ridgeline nor on a “hillside” at all.

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5A. Proper and improper siting of a building on a ridge; the building should not be silhouetted against the sky when viewed from a public road.

5B. The house on top of this hill significantly alters the natural appearance of the topography as viewed from the highway.



4B. A large swath of trees was cut and the house was sited prominently in the center of the opening, significantly impacting the natural appeal of the hillside view.

Moreover, the Petitioner has gone to great lengths to make the Project fully screened.

Even assuming the Project site is on a hillside, the Project is not sited in a prominently visible location on a hillside as discussed above. As to the revised plans, the Project is not visible, and even if tiny aspects of it were visible, it certainly would not be prominently visible. Nor is it sited on a prominently visible portion of a hillside. As shown on the numerous cross-sections I have prepared with my original testimony, and for the revised plans, the low gradient of the site is

1 made decidedly less prominent by its considerable distance away from public and private
2 vantage points. Looking more regionally within the landscape and within the RCON district,
3 many hills of much greater relief and visual prominence are readily observed. Under the revised
4 plans, the Project will not be visible and, therefore, could not conceivably be sited in a
5 prominently visible location.

6 **The Project uses compatible colors.**

7 The amended Project has chosen colors (darker fencing, photovoltaic frames), added
8 vegetation and expanded buffers all of which lessens its visual impact to surrounding areas and
9 are compatible with earth tone colors. The language describing this district makes it clear that
10 “out of site is out of mind” in many respects; if it is not in a prominent location and has taken
11 steps to promote visual congruity and lessened its impact on clearing then it is consistent with
12 how development should occur.

13 **The Project has minimized clearing.**

14 The Town Plan language regarding “minimizing” clearing is vague as there is no clear
15 guidance as to what the requirements are. Minimizing clearing is not a standard that restricts
16 development, but rather a best practice implemented in connection with the development itself.
17 Here, however, the projects have minimized clearing, and the area cleared is not visible from
18 public vantage points. On this last point, the Project will be clearing vegetation, but as noted
19 above, the amount of clearing has been reduced (from 10.6 acres to 9.67 acres) and represents
20 the minimum possible for this use. The Project has minimized clearing. Moreover, the amount
21 of clearing needed for the Project is minimal relative to its use, much like it would be expected

1 that a golf course, mineral extraction or cemetery (all uses allowed in the RCON district) would
2 minimize their expected clearing impacts.

3 **Scenic Resources**

4 The Town of Bennington completed a Scenic Resource Inventory in 2004 which is
5 extensively referenced in the Town Plan. As part of this inventory the Town identified specific
6 scenic views and several important “gateway” features. As noted in the Town Plan:

7 *“Special attention should be given to visual gateways: points of transition along a*
8 *public highway where it is evident that the traveler is arriving at a unique place.*
9 *Gateways are located at entry points to the historical downtown and at places*
10 *along rural highways where significant visual elements of the town’s landscape*
11 *first appear.”*

12 One of the specific gateway points referenced in the 2004 Scenic Resource Inventory is
13 along Route 7 heading southward just north of the Project site. This gateway is described as:

14 *“From the north, as Route 7 sweeps around a bend and begins to descend toward*
15 *the valley, a gateway scene featuring the Battle Monument set against Mount*
16 *Anthony comes into view in dramatic fashion. This sweeping view is one of the*
17 *most distinctive in Bennington. The commercial buildings adjacent to the*
18 *intersection at the bottom of the hill are not particularly attractive, although they*
19 *do create an abrupt change from the rural to the developed landscape of Town.”*

20 As I have previously concluded, views looking southward towards the Bennington Battle
21 Monument, Old Bennington and the village all within the shadow of Mount Anthony are clearly
22 highly scenic and of high value. The Project, located on the east (opposite) side of Route 7 to the

1 aforementioned commercial buildings, may be at the edge of this defining view but will not be
2 visible and as such will not distract or visually compromise the gateway experience. The low
3 height of the Project, its ability to follow the natural grade, and the retention of significant
4 existing vegetation on the periphery of the site all eliminate adverse impacts. Our discussion
5 above on the Route 7 North viewpoint highlighted the measures taken to eliminate adverse
6 impacts from the corridor. The second “gateway” in the Scenic Resource Inventory is along VT
7 279 west of its interchange with Route 67. This is approximately 0.75 miles from the Project
8 site. The most defining characteristic of this gateway area is the longer-range views of the Green
9 Mountains (to the east) which act as the visual terminus. As I have previously testified, the
10 components of the Project are very low compared to surrounding vegetation, are effectively
11 screened and will not adversely affect this long-range view. That conclusion is reinforced by the
12 fact that even if the Project were visible, the fore and mid-ground views from this gateway are
13 already visually impacted by adjacent commercial development and the highway infrastructure
14 when looking in the direction towards the Project site.

15 **Town Plan Conclusions**

16 From an aesthetic perspective, the Project has taken into consideration the intention and
17 purpose of the RCON land use district of the Town Plan. The Project site is proximal to the
18 necessary infrastructure to convey the generated power, is placed within a site that is not
19 prominent relative to its surroundings, has a very limited viewshed, portions of which are already
20 compromised by significant highway infrastructure, and does not degrade other, more significant
21 long-range views. While many parts of Bennington are highly scenic and the iconic views of the
22 Battle Monument as viewed from distant vantage points is unique in the State, the Project site

1 has little contribution in supporting the town's scenic character. Further, the design features of
2 the Project as described above, visually isolate it from its surroundings, only adding to its efforts
3 to preserve the distinctive rural character. The Town Plan's provisions regarding "visual
4 gateways" do not provide "specific guidance or measures to protect the resource" and only assert
5 that "special attention should be given". This is not a clear standard intending to preserve the
6 aesthetics of the area.

7 **Bennington County Regional Plan**

8 The Bennington County Regional Plan ("Regional Plan") is the guidance document
9 prepared by the Bennington County Regional Commission which provides an overarching policy
10 framework for land use and development within the region. The Regional Plan recognizes that
11 the appearance of the regional landscape is a critical determinant of the character and
12 attractiveness of the region. It highlights the importance of the basic landscape form of the
13 region; broad valleys set against backdrops of wooded hillsides. The Regional Plan goes on to
14 describe the range of policy tools that can leverage local scenic inventories to protect important
15 resources. The Regional Plan (both the 2007 and 2017 versions) set forth multiple goals
16 supporting the Project. The goals of the 2007 Regional Plan (see ***Exhibit AHS-MK-4***), which
17 was in effect at the time the petition for the Project was filed, include:

- 18 • "Energy planning should emphasize the use of diverse and reliable supplies of energy
19 resources in an efficient and environmentally sound manner." (see page 6, ***Exhibit***
20 ***AHS-MK-4***)
21 • "Particular attention should be given to the development of renewable energy
22 resources in the area." (see page 6, ***Exhibit AHS-MK-4***)

1 • “Land use, transportation, economic development, and housing policies and
2 strategies should support the efficient use of energy resources.” (see page 6, *Exhibit*
3 *AHS-MK-4*)

4 • “Reduce the flow of energy dollars leaving the Bennington region by decreasing our
5 reliance on non-local energy sources.” (see page 6, *Exhibit AHS-MK-4*)

6 • “Encourage the development of renewable energy resources.” (see page 6, *Exhibit*
7 *AHS-MK-4*)

8 The goals of the 2017 Regional Plan (see *Exhibit AHS-ECOS-15*, included in the First
9 Supplemental Testimony of Brad Wilson in this docket) include:

10 • “Utilization of local natural resources should support regional economic and
11 renewable energy development while ensuring that such development, including any
12 resource extraction, is accomplished in an environmentally sensitive manner.” (page 7)

13 • “Solar [] energy resources should be accessed to meet a significant share of the
14 region’s energy needs.” (page 7)

15 • “Production of energy from local renewable sources [can] have profound impacts on
16 the regional economy.” (page 48)

17 • “Development of the region’s available renewable energy resources (specifically
18 biomass for space heating and solar, wind, and small hydro for electricity) will help
19 reduce reliance on unstable and expensive imported energy. Of course, greater
20 utilization of those resources also will benefit the regional economy by directing money
21 that would otherwise be exported from the region to employ people locally to develop
22 and operate the energy systems. (page 48)

- 1 • “Alternative energy in the form of “renewable” sources such as solar [], can provide
2 significant amounts of clean energy well into the future. Developing those resources is
3 extremely important.” (page 174)
- 4 • “[M]uch of the region’s future renewable energy will need to be derived from local
5 sources.” (page 181)
- 6 • “Energy from the sun can be used to [] generate electricity (using photovoltaic panels)
7 at either a small or large commercial scale. Solar energy technologies are proven and
8 continually being refined. They also have a relatively minor environmental impact and
9 yield significant net energy (environmental costs and energy expenditures are primarily
10 associated with production of solar panels and other equipment).” (page 182)
- 11 • “Local sources of energy, including biomass for space heating and a distributed
12 electricity network benefiting from local renewable resource based generation, will
13 provide lasting economic benefits.” (page 41)
- 14 “Production of energy from local renewable sources [can] have profound impacts on
15 the regional economy.” (page 48)
- 16 • “Development of the region’s available renewable energy resources (specifically
17 biomass for space heating and solar, wind, and small hydro for electricity) will help
18 reduce reliance on unstable and expensive imported energy. Of course, greater
19 utilization of those resources also will benefit the regional economy by directing money
20 that would otherwise be exported from the region to employ people locally to develop
21 and operate the energy systems.” (page 48)

1 • “Bennington County has abundant biomass (primarily wood) renewable energy
2 resources as well. Recent assessments have found that forests located just within
3 Bennington County could provide over 150,000 cords of wood per year for fuel (in
4 addition to timber harvested for other purposes). This wood can be used as cordwood in
5 wood burning furnaces and stoves, or can be processed into wood pellets (there are
6 several nearby manufacturers that use mostly locally sourced wood) for use in efficient
7 and clean burning pellet stoves and furnaces, or chipped for use in institutional or
8 community direct burn or wood gasification facilities.” (page 178)

9 **Regional Plan Conclusions**

10 All of the goals mentioned above support the Project. There is no provision of the
11 Regional Plan that is violated by the Project.

12 Quechee Q2.2: “Has the Applicant failed to take generally available mitigating steps
13 which a reasonable person would take to improve the harmony of the proposed project with its
14 surroundings?”

15 Answer 2.2: I believe the Petitioner has gone above and beyond generally available
16 mitigating steps that a reasonable person would take to improve the harmony of the Project with
17 its surroundings. As described above, the Petitioner has proposed plans that would harmonize
18 the Project with its surroundings by eliminating adverse visual impacts from public and
19 neighboring views.

20 Quechee Q2.3: “Does the project offend the sensibilities of the average person? Is it
21 offensive or shocking because it is out of character with its surroundings or significantly
22 diminishes the scenic qualities of the area?”

1 Answer 2.3: No. I do not believe that the Project would offend an average person. As
2 described above the average person will not see the Project. As described above the Project will
3 have no adverse effect on scenic qualities. As I have previously concluded, the impacts of the
4 design are not adverse. The measures taken in the design to limit offsite impacts and promote
5 compatibility to the surroundings are considerable. The Project does not introduce secondary
6 factors which often can contribute to how a project “fits” into its setting. These factors include
7 such things as traffic, noise, exterior lighting, dust, odors, glare or other nuisances which often
8 are at the root of public objections.

9 Under both prongs of the *Quechee* analysis and after due consideration of the amended
10 Project and its planned design, I have concluded that it would be neither adverse nor unduly
11 adverse with respect to the aesthetics and scenic beauty of the area. This conclusion relied on
12 my detailed analysis of the proposed design, the setting, and the measures planned to limit offsite
13 visibility and promote harmony with adjacent public and private areas.

14
15 **Q13. Would any of your conclusions change under the 2015 version of the Bennington**
16 **Town Plan?**

17 A13. No. The Town Plan in effect at the time the petition for the Project was entered was the
18 2007 version. My conclusions herein would not change under the 2015 version of the Town
19 Plan. In the 2015 version, the Town has amended the Town Plan to include specific rules related
20 to solar facilities (see the last 5 pages of the 2015 Town Plan, included as ***Exhibit AHS-ECOS-***
21 ***14***, included with the First Supplemental Prefiled Testimony of Brad Wilson in this docket), and
22 the Town has passed a solar screening ordinance (see ***Exhibit AHS-ECOS-17***, included with the

1 First Supplemental Prefiled Testimony of Brad Wilson in this docket). I have assumed that those
2 rules and the ordinance are enforceable even though they discriminate against solar as compared
3 to other commercial uses. I have also assumed that the Town applies those rules uniformly
4 across solar projects in Bennington. Regardless, the Project is fully screened from public and
5 private views as discussed above. It is also sited within existing vegetation which screens the
6 Project. As a result, it would satisfy the Town's specific rules and ordinance.

7
8 **Q14. Does the amended Project unduly interfere with the orderly development of the**
9 **region?**

10 A14. Under 30 V.S.A. §248(b)(1), the Commission must find that the construction of the
11 Project will not unduly interfere with the orderly development of the region, with due
12 consideration given to the recommendations of the municipal and regional planning
13 commissions, the recommendations of municipal legislative bodies, and the land conservation
14 measures contained in the plan of any affected municipality. For the reasons described above
15 and below, I conclude that the Project does not unduly interfere with orderly development of the
16 region. Indeed, my conclusion is quite to the contrary, as a renewable energy project in a well-
17 sited location that is screened from public and neighboring views, the Project furthers the orderly
18 development of the region. Moreover, as described above, the language of the Town and
19 Regional Plans do not establish standards that the development of the Project would violate. The
20 land on which the Project is planned has not been identified as conservation lands nor is it
21 prohibited from development. No easement or legal constraints prohibit the development of the
22 property. As discussed above, the description of RCON district in the Town Plan establishes that

1 the “preservation of distinctive rural character” is the intended land use objectives within the
2 district. While low-density residential uses are accommodated, the Town Plan and the by-laws
3 that support it, permit other uses so long as they are not located on “prominent hillsides or
4 ridgelines”, use “earth tone colors and non-reflective materials on exterior surfaces of all
5 structures” and “minimize clearing of natural vegetation”. It is my assertion that the Project
6 complies with each of these measures:

7 **Hillside**

8 As noted above, the gradient of the site on which the Project is planned is only around
9 9% slope. Its rise relative to its surroundings is modest with the closest panel to the Vermont
10 Welcome Center being only around 50 feet upgradient and over 1,350 feet away. This is not a
11 prominent location from any public or neighboring view. The view of the Project site is not
12 within the defined scenic gateways and when viewed from locations in the south, is seen in
13 context with developed landscape. The Town Plan has no standard as to what constitutes a
14 “hillside” or “ridgeline”. In developing my original testimony, I used the term hillside in a
15 colloquial manner and as broad of a context as possible—any land with even minimal slope—so
16 as to then focus on the issue of the prominence or visibility of the project. Any references to
17 “hillside” *in Exhibit CS-MK-2* were in no way intended to testify as to whether in fact the
18 Project site was a hillside within the meaning of the Town Plan. The Town Plan also has no
19 definition of “prominently visible”. Even in a general sense, the land upon which the Project sits
20 is not “prominent” in its visibility. See, *Exhibit CS-MK-2*, at 19. Nor is the Project (under any
21 definition) located in a prominently visible location on a hillside as the Project is set back on top
22 of the land and is fully screened from street level.

1 **Color and Appearance**

2 The design of the Project makes any unscreened or unfiltered view impossible. Through
3 a combination of multi-layered mitigation steps, the design effectively eliminates views of the
4 Project. The periphery of the Project site is maintained as large blocks of woods with large
5 buffers to adjacent public and private areas. These contribute to my conclusion that the Project
6 does not create an adverse impact.

7 **Clearing**

8 The Town Plan also refers to “minimizing” the clearing of natural vegetation in the
9 RCON District. The Town Plan provides no standard as to how the minimization goal is to be
10 applied. As noted in several instances, the Project’s clearing has been reduced from the earlier
11 design and reflects the minimum possible while still realizing the planned use. The increased
12 setbacks and buffers preserve natural vegetation. Minimizing clearing is not a standard that
13 restricts development, but rather a best practice implemented in connection with the development
14 itself. Best practice varies with the type of project being developed and this Project has
15 minimized clearing. See, ***Exhibit CS-MK-2*** to the Kane Pft. at 19. For example, in Docket 7763
16 in which the Commission issued a certificate of public good for an electric facility in the RCON
17 District, 15 acres of clearing was required for the project. The goal of minimizing clearing was
18 met because nothing in addition to what was reasonably required for the project was cleared.
19 Minimize clearing is more aptly characterized as a best practice in designing an otherwise
20 permitted use, not a standard that can prevent a project in the first place.

21 Further I would assert that the planned outcome for the RCON district is not adversely
22 impacted by the Project. In addition to satisfying the underlying design parameters for all

1 development within the RCON District, the Project does not expand municipal water or sewer
2 infrastructure that might, under some circumstances, increase the pressure on higher residential
3 densities. The planned use includes a decommissioning plan that, unlike any other conceivable
4 type of use, assures that if, for whatever reason, the Project no longer makes sense, the
5 components of the Project will be removed.

6
7 **Q15. Does this conclude your testimony?**

8 A15. Yes.