

1 1. Q. Please state your name and business address.

2 A. My name is William Jewell, and my business address is 253 Canal Street,
3 P.O. Box 799, Brattleboro, Vermont 05302.

4

5 2. Q. What is your business, profession, or occupation?

6 A. I am a landscape architect and land planner. I am the principal and owner
7 of William Jewell and Company, Environmental Consultants, with offices in Brattleboro,
8 Vermont.

9

10 3. Q. Would you please describe for the Board your educational background?

11 A. I received a bachelor of science degree in landscape architecture from
12 Pennsylvania State University, University Park, State College, P.A. in 1967, and a
13 master's degree in environmental science in 1978 from the Antioch New England
14 environmental studies graduate school.

15

16 4. Q. Please briefly describe for the Board your professional experience.

17 A. Since 1984 I have been the principal landscape architect and land planner
18 for William Jewell and Company, an environmental consulting firm offering a full range
19 of landscape design, and planning services to individuals, groups, state and local
20 governments, and public and private agencies. These services include all phases of
21 landscape design, town planning, permit facilitation, environmental impact studies, and

1 related services.

2 From 1979 to 1984 I was the district environmental coordinator for the State
3 Environmental Board, with an office in Springfield, Vermont, and prior to that I was
4 employed by the Vermont Department of Forests and Parks as a landscape architect.
5 During my tenure with the Vermont Department of Forests and Parks, I completed the
6 design and construction drawings as well as site construction supervision for Waterbury,
7 Vermont State Park, and the landscape design for Shaftsbury, Vermont State Park.

8 Prior to my employment with the State of Vermont, I was employed as a planner
9 and landscape architect for several landscape architectural firms, including Rahencamp,
10 Sachs, Wells and Associates in Philadelphia, and Bachart-Horn Consulting Engineers,
11 Planners, and Landscape Architects in York, Pennsylvania.

12

13 5. Q. Can you describe for the Board your teaching experience?

14 A. I have taught numerous courses at area colleges, including land use
15 planning, environmental law, applied geology, and numerous other environmental
16 courses at Johnson State College and at Southern Vermont College. These courses
17 include, but are not limited to, land planning courses, environmental studies courses, and
18 theories of ecology.

19

20 6. Q. Are you a member of any boards or commissions?

21 A. I have been a member of the Brattleboro Development Review Board

1 since 1998, and the Guilford Conservation Committee since 1999. I have recently been
2 appointed to the board of directors of the Ecological Landscaping Society, and have been
3 on several committees of the American Society of Landscape Architects. I am a member
4 and former chair of the University of Vermont Extension Service State Advisory Council,
5 and I am a member of the Natural Resource Advisory Committee.

6

7 7. Q. Can you briefly describe the types of projects William Jewell and
8 Company has engaged in on behalf of its clients?

9 A. We have provided a full spectrum of environmental and planning services
10 for towns and municipalities such as Cabot, Stratton, Brattleboro, Vernon, and West
11 Windsor. We have also represented numerous resorts, commercial entities, residential
12 properties, and planned unit developments throughout the State of Vermont.

13

14 8. Q. Have you testified previously with regard to aesthetics issues?

15 A. Yes, I have appeared and testified as an expert witness on aesthetics
16 before numerous town planning commissions, district environmental commissions and
17 the Environmental Board. I was also one of the participating landscape architects and
18 land planners who presented testimony and information to the Environmental Board
19 during the development of the so-called "Quechee test."

20

21

1 9. Q. Let me show you what has been marked for identification as Exhibit
2 Sutton WJ-1 and ask you if you can identify this document for me.

3 A. Exhibit Sutton WJ-1 is a copy of my resume, including my professional,
4 educational, and teaching experience, as well as a more detailed project list containing a
5 representative sampling of the types of projects which my company has worked on within
6 the State of Vermont.

7

8 10. Q. Were you at some time asked to review the prefiled testimony and exhibits
9 submitted by UPC and its consultants related to aesthetic impacts with respect to the
10 twenty-six proposed wind turbines to be located in Sheffield and Sutton, Vermont?

11 A. Yes, the town of Sutton has asked me to review the application materials
12 submitted by UPC and to evaluate the aesthetic impacts of the project proposed in that
13 application.

14

15 11. Q. Will you please describe for the Board the focus of your aesthetics
16 evaluation?

17 A. While there are numerous potential aesthetic and other environmental
18 impacts associated with the road construction, right of way clearing, and the construction
19 of the transmission lines, the focus of my aesthetic evaluation was the visual impact of
20 the proposed wind turbines from public and private viewing locations.

21

1 12. Q. Can you generally state what steps you took in preparation for your
2 aesthetic evaluation?

3 A. In preparation for performing the aesthetic evaluation related to UPC's
4 proposed wind turbines, I reviewed the applicant's prefiled testimony and its experts
5 prefiled testimony. I reviewed aerial photographs, and orthophotographs related to the
6 development site, and USGS maps and the DeLorme map for this specific area.
7 Following this review, I made visits to the site to determine the site's visibility and the
8 viewshed angles to offsite locations, and to determine the relationship of the proposed
9 turbines on the site to the site's ridgelines, tree coverage, and to determine visibility from
10 potentially sensitive locations. I also examined the areas surrounding the turbine
11 ridgelines to review both the type and intensity of forestation in these areas. Finally, I
12 reviewed the off-site locations identified in the applicant's experts prefiled testimony, and
13 reviewed other sites which would potentially be impacted by this development.

14

15 13. Q. What other documents or documentation did you review in preparation for
16 your aesthetic evaluation?

17 A. I reviewed the Sutton Town Plan adopted on August 23, 2005; the Town
18 of Sutton Zoning and Subdivision Regulations adopted on August 23, 2005; the
19 Northeastern Vermont Development Association's Regional Plan adopted June 29, 2006,
20 and the prior Regional Plan dated November, 2000.

21

1 14. Q. In connection with your review of UPC's consultant's prefiled testimony,
2 please describe the aesthetic assessment prepared by Landworks and identified as Exhibit
3 UPC DR-2.

4 A. UPC DR-2 is a written report prepared by Landworks consisting of
5 approximately 38 pages of text and 24 attachments. The text portion of the aesthetic
6 assessment document is divided into four sections entitled, in the order they appear in the
7 document: "I, Project Background;" "II, Project Context;" "III, Quechee Analysis;" and
8 "IV, Historic Resources."

9 The attachments consist of documents ranging from a project overview map to
10 visual simulations and other documents which have little relevance to the Quechee
11 analysis such as public opinion polls and old public acceptance studies.

12

13 15. Q. What, if any, documents prepared by Landworks have you relied upon in
14 your evaluation of the aesthetic impact of this proposed project?

15 A. I believe Landworks has followed generally accepted methodologies with
16 regard to assessing the visual impacts of this proposed project. While I don't necessarily
17 agree with all of the assumptions made by Landworks in generating the attachments to
18 UPC DR-2, such as the assumption that the tree height is 60 feet in all locations, or
19 Landworks' interpretation of the data, I believe that their general methodology is
20 acceptable for my review purposes. Consequently, in preparing my analysis I have
21 assumed the accuracy of the following attachments to UPC DR-2: Attachment 1,

1 Overview Map; Attachment 5, Land Cover/Land Use map; Attachment 6, Cultural and
2 Recreational Resources Map; Attachment 8, Photographic Inventory; and Attachments 12
3 through 21, Visual Simulation Views. I have not relied on UPC DR-2, Attachments 2, 3,
4 4 and 24 since I do not believe they are relevant to a Quechee test evaluation; I have not
5 relied upon UPC DR-2 attachment 9 to the extent it contains a subjective evaluation of
6 the data and materials; and, I have not relied on Attachment 7 (Areas of Potential
7 Visibility map) since it assumes a tree height of 60 feet and therefore, in my opinion,
8 significantly understates the visual impact of the turbines; and I have not relied on
9 Attachments 9 and 11 entitled "View From the Road" since I believe based upon my field
10 work that these documents grossly understate the locations on the town roads and
11 Interstate 91 from which the turbines will be visible. I should also note that while I have
12 relied upon Landworks' visual simulations generally, (Attachments 12-21), I do not
13 believe they accurately depict the true impact or visibility of the turbines since they do
14 not appear to account for shadows or contrast with background scenery. Nevertheless, as
15 I stated earlier, I believe that the attachments that I have relied upon, except as noted,
16 follow generally accepted methodologies and therefore I have relied upon them in my
17 analysis.

18

19 16. Q. Are there other documents prepared by Landworks upon which you
20 similarly relied?

21 A. Yes, with the exceptions and qualifications noted above, I also relied upon

1 UPC DR-3, and with the exception of narrative comments by Landworks, and I relied
2 upon the visual simulations contained in UPC DR-4 and the map entitled "View From
3 the Road" contained in UPC DR-5, again, with the exceptions and qualifications
4 described in my earlier statements.

5

6 17. Q. Are there facts contained in the applicant's prefiled testimony and exhibits
7 or Landworks' visual assessment or exhibits upon which you also relied in your analysis?

8 A. There are facts contained in the prefiled testimony and exhibits submitted
9 by Dave Cowan, Scott Rowland, and Steve Vavrick dated February 21, 2006 and facts
10 contained in UPC DR-2 which I believe are important to an aesthetic evaluation. These
11 facts are as follows:

12 1. The project consists of the construction and operation of 26
13 Gamesa G-87 wind turbines with a name-plate capacity of 2 Mw each (Cowan *et al*
14 prefiled page 6).

15 2. The turbine lay-out would run along two parallel ridges in
16 Sheffield and Sutton, one being the Hardscrabble Mountain ridgeline ("southern array"),
17 and a second ridgeline that runs from Granby Mountain to Norris Mountain ("northern
18 array") (Cowan *et al* prefiled page 6).

19 3. The wind turbines will be sited a minimum of 3 rotor diameters
20 apart, or approximately 860 feet from center of turbine to center of turbine (Cowan *et al*
21 prefiled page 13).

1 4. The turbines will be supported by a conical tubular steel tower
2 which, at its widest dimension, is approximately 16 feet in diameter (Cowan *et al* prefiled
3 page 13.)

4 5. The turbines require a concrete foundation approximately 20 feet
5 in diameter and 30 feet deep (Cowan *et al* prefiled page 13).

6 6. The total height of the turbine is 398.6 feet with the blade tip in the
7 vertical position. (Cowan *et al* prefiled page 14).

8 7. Each turbine will have a transformer mounted in the rear of the
9 nacelle (Cowan *et al* prefiled page 15.)

10 8. Transmission lines will be placed on poles approximately 35 feet
11 tall up to 65 feet tall (Cowan *et al* prefiled page 16).

12 9. Site development will require an upgrade of existing roads and the
13 construction of a roadway system between turbine sites, clearing and grading of a work
14 area for each turbine, installation of turbine foundations, erection of the turbines, burial of
15 the 34.5kV underground power collection system between turbines; construction of a
16 34.5kV overhead collection system between the ridgelines and substation; construction of
17 a project substation and construction of an operations and maintenance center. (Cowan *et*
18 *al* prefiled page 18). The project will require the construction 6.1 miles of roads and for
19 the crane transit during erection of the project, roads will need a minimum 10 foot
20 earthen shoulder on either side (Cowan *et al* prefiled page 19).

21 10. Each turbine will require a work space area of 1.1 acres, and that

1 work area will be cleared of vegetation and leveled to a maximum of 5% grade during
2 construction (Cowan *et al* prefiled page 19.)

3 11. A total of 119 acres of vegetated cover will be required to be
4 removed for the construction of the project (Cowan *et al* prefiled page 20).

5 12. Due to the height of the turbines and pursuant to current FAA
6 regulations, at least 15 of the 26 proposed turbines will be lit with a red blinking light
7 (Cowan *et al* prefiled page 26).

8 13. The southern array, as described above, is approximately 1 mile
9 long, and the northern array is approximately 2 miles in length from end to end (UPC
10 DR-2 page 3). Sheffield village is approximately 2.4 miles from the closest turbine on
11 Hardscrabble Mountain, and Sutton village is approximately 3.4 miles from the closest
12 turbine on Hardscrabble Mountain (UPC DR-2 page 3).

13 14. The closest turbine to Interstate 91 is located on Granby Mountain
14 and is approximately .85 from the highway center line (UPC DR-2, page 4).

15 15. There are numerous single family residences within two miles of a
16 turbine site with the nearest single family residential home to the Hardscrabble Mountain
17 array being approximately .28 miles from a turbine, and residential structures
18 approximately .65 miles from the Granby-Norris array. (*See generally* UPC DR-2, page
19 4, and UPC CRV-21a and 21b).

20 16. Turbine sites will be visible from public viewing locations such as
21 the Wheeler Mountain overlook, the Miller's Run school in Sheffield, the beach at Crystal

1 Lake State Park, and the King George School in Sutton.

2

3 18. Q. Mr. Jewell, let me show you what has been marked for identification as
4 Exhibit Sutton WJ-2 , and ask you to identify this exhibit for the Board.

5 A. Exhibit Sutton WJ-2 is a raised topographical map showing the areas and
6 locations where a photographic array was developed for various viewshed locations. The
7 exhibit identifies the viewshed locations and is indexed to correspond to the individual
8 photographs.

9

10 19. Q. Can you please describe for the Board how this photographic array was
11 developed?

12 A. The photographic array was developed after review of the UPC exhibits
13 and several days of field work. Each of the sites was individually field verified

14

15 20. Q. Why were these viewshed locations chosen?

16 A. The viewshed locations shown on Exhibit WJ-2 were selected because
17 they represent views from a variety of directions facing both the proposed north and
18 south turbine arrays. These include views from the east, west, north and south, and
19 demonstrate the prominence and visibility of the proposed development site. The
20 viewshed locations were also chosen to show the visual impact from either highly
21 traveled roads or places of public congregation, and to demonstrate the impact of the

1 turbines from a variety of residential locations in close proximity to the proposed
2 development.

3

4 21. Q. Let me show you what has been marked for identification as Exhibits
5 Sutton WJ-3 , through Sutton WJ-19, and ask you to identify these exhibits for the Board.

6 A. Exhibits Sutton WJ-3, Sutton WJ-4, Sutton WJ-5, are photographs taken
7 from three separate locations from the Route 91 southbound lane in Sheffield, and
8 Exhibit Sutton WJ-6, Sutton WJ-7, Sutton WJ-8 and Sutton WJ-9 are photographs taken
9 from Route 5 south in Sutton and Barton, Vermont. Exhibits Sutton WJ-9 is a photograph
10 taken from Route 5 in Barton looking south. Exhibit WJ-10 is a photograph taken from
11 just north of Crystal Lake State Park in Barton. Exhibit WJ-11 is a photograph taken from
12 the beach at Crystal Lake State Park. Exhibit WJ-12 is a photograph taken from the
13 Gregory property off Underpass Road in Sutton. Exhibit WJ-13 is a photograph taken
14 from the Mathers property on King George Farm Road in Sutton. Exhibit WJ-14 is a
15 photograph taken from the King George School parking lot. Exhibit WJ-15 is a
16 photograph taken from Dareos Road in Sutton. Exhibit WJ-16 is a photograph taken from
17 the Brouha property off King George Farm Road in Sutton. Exhibit WJ-17 is a
18 photograph taken from the Brouha property off King George Farm Road in Sutton.
19 Exhibit WJ-18 is a photograph taken from Underpass Road across from the cemetery
20 above the Sutton town offices. Exhibit WJ-19 is a photograph taken from Michaud Drive
21 and North Ridge Road in Sutton. Exhibit WJ-20 is a photograph taken from Burke Road

1 looking toward the village of Sutton.

2 22. Q. Do each of the photographic exhibits which you have identified above
3 accurately depict and represent the scenes which you observed on the date and time the
4 photographs were taken?

5 A. Yes, each of the photographs accurately depicts the views of summits and
6 ridgelines from the various locations to which I have testified, and which are shown on
7 the location map composite identified as Exhibit Sutton WJ-2.

8
9 23. Q. Can you briefly describe for the Board what you believe to be of
10 importance with regard to each of the photographic exhibits?

11 A. As a general statement, I believe the photographs demonstrate at least
12 three concepts. First, the photographs demonstrate the scenic resources of this area and
13 the context in which the UPC turbines are proposed to be built. This is an extremely
14 scenic section of the state, is very rural and is almost totally devoid of commercial or
15 industrial uses. Second, the photographs depict just how close the proposed turbines are
16 to the homes, roads, schools and other viewing locations. We are not here reviewing a
17 project where the viewer would be seven or eight miles from the project. In this case the
18 viewers would be, in many cases, only a mile or two from the turbines.

19 Thirdly, the photographs and other exhibits show the large number of viewing
20 locations and the potential long duration of these views. Unlike many aesthetic
21 evaluations where the viewsheds are of limited length or duration, in this case the

1 viewsheds impact on numerous roads, such as Route 5 and Route 91 and for many
2 viewers, such as nearby homeowners or people at Crystal lake, the views will be long in
3 duration.

4
5 24. Q. What is your understanding of the review criteria under Section 248 with
6 regard to a proposed project's impact on aesthetics?

7 A. It is my understanding that pursuant to Section 248, prior to issuing a
8 certificate of public good, the Board must make a determination that a project, such as
9 these proposed turbines, will not have an undue, adverse affect on aesthetics or scenic
10 and natural beauty, giving due consideration to the Environmental Board's methodology
11 for determining aesthetic impacts under Act 250.

12
13 25. Q. Are you familiar with the Environmental Board's methodology for
14 determining aesthetic impacts under Act 250?

15 A. Yes, the Environmental Board, pursuant to 10 V.S.A. Section 6086(a)(8),
16 is required to positively find and conclude that a project will not have an undue adverse
17 affect on aesthetics or scenic and natural beauty. The Environmental Board's analysis is
18 based upon a 1985 decision rendered by the Environmental Board entitled in re: Quechee
19 Lakes Corporation, L.U.P. 3W0411-A-EB. Essentially, the Quechee aesthetic analysis
20 involves a two prong process. First, the Board must determine whether or not the impact
21 of the proposed project will be adverse, and if the answer is yes, the Board must

1 determine whether such impact would be "undue." A project found to be adverse is
2 deemed to have an undue adverse impact on aesthetics if: 1) the project violates a clear
3 written community standard intended to preserve the aesthetics or scenic beauty of the
4 area; or 2) the project would offend the sensibilities of the average person; or 3) the
5 applicant has failed to take generally available mitigating steps to improve the harmony
6 of the project with its surroundings.

7

8 26. Q. With regard to the first prong of the Quechee test, what were your
9 determinations and conclusions with regard to whether or not the proposed wind turbines
10 would have an "adverse" impact on aesthetics?

11 A. After applying the facts, based upon my photo analysis and the exhibits
12 identified above, and based upon my field work, I concluded that, under the principles set
13 out in the Quechee aesthetics test, the proposed wind turbine project would have a
14 definite and profound adverse impact on aesthetics and scenic and natural beauty in the
15 area. In reaching this conclusion, I analyzed the same questions utilized by the
16 Environmental Board in its Quechee test analysis, and applied those questions to the UPC
17 wind turbine project. Essentially, the questions utilized by the Environmental Board to
18 determine whether or not a project is "adverse" and their application to this wind turbine
19 development are as follows:

20 i. **"What is the nature of the project's surroundings?"**

21 A. The project is proposed to be sited on the ridgelines in an extremely rural

1 area of the towns of Sheffield and Sutton. These lands in the town of Sutton are
2 designated in the town of Sutton Zoning Regulations as part of the "Woodlands and
3 Recreation" zoning district, which is an area intended to protect the natural resource
4 value and the scenic resources of the lands in this zoning district. The ridgelines are
5 generally surrounded by large tracts of mixed forest containing deciduous and evergreen
6 trees and more distant farms and farm fields. There are numerous class 3 town roads and
7 adjacent residential structures, some of which are located one mile or less from the
8 proposed turbine structures. A review of the exhibits indicates that there are in excess of
9 fifty homes within a two to three mile radius of the proposed turbine structures located
10 off these rural town roads.

11 ii. **"What is the context of the project?"**

12 A. The project is situated on the summits of Hardscrabble Mountain, Granby
13 Mountain, Norris Mountain, and adjacent summits and ridgeline. These areas are
14 extensively forested. The project will require an upgrade of existing roads and
15 construction of a roadway system between turbine sites, clearing and grading for work
16 areas associated with each turbine, installation of 20-foot wide by 30-foot deep concrete
17 turbine foundations, the erection of the turbines, burial of an underground power
18 collection system between turbines, construction of an overhead collection system
19 between the ridgelines and substation, which may include pole heights up to 65 feet tall.
20 The project will require the construction of approximately 6.1 miles of roads, and both
21 the northern and southern arrays will span over three miles in length.

1 iii. **"Is the project located in an urban, suburban, village, rural, or**
2 **recreational/resort area?"**

3 A. The proposed wind turbine project is located in a rural area part of which
4 has been specifically designated in the town of Sutton zoning regulations as the
5 "Woodlands and Recreation" district in which no commercial or industrial development
6 is permitted.

7 iv. **"What is the topography like?"**

8 A. The topography, and particularly Hardscrabble Mountain, Granby
9 Mountain, and Norris Mountain, as well as the adjacent ridgelines, as the photos
10 demonstrate, are defined topographic features in the landscape and are visible from many
11 locations in the valleys below.

12 v. **"What vegetation is present in the area?"**

13 A. The area consists of large tracts of deciduous and evergreen trees. Because
14 of the heights of the trees vis-a-vis the height of the proposed wind turbines, the
15 vegetative cover will have little or no impact in screening the 398-foot turbines from off-
16 site views.

17 vi. **"Is the project's design compatible with its surroundings?"**

18 A. The proposed wind turbines are totally incompatible with any land uses or
19 structures in the area. If viewed strictly as a land use, the construction of these proposed
20 wind turbines would constitute and industrial development in the middle of an area which
21 has been designated for forestry and recreational use. There are clearly no structures

1 similar in size, height or design to the proposed wind turbines any where in the Northeast
2 Kingdom, or to my knowledge, any where in the state of Vermont.

3 vii. **"Is the scale of the project appropriate to its surroundings?"**

4 A. The scale of the project is massively out of proportion to any structures
5 currently existing within this area. The turbines are not in scale with any existing similar
6 or observable structures from any of the viewing locations examined as part of this
7 aesthetics evaluation, and as the exhibits demonstrate, when perched on the ridgelines of
8 Hardscrabble Mountain and Norris Mountain, the wind turbines will dominate the
9 viewsheds of a large number of residents and tourists in the Sheffield-Sutton area, and
10 will be visible from as far away as 15 miles.

11 viii. **"Is the mass of the structures on the site consistent with the
12 land use and density patterns within the vicinity?"**

13 A. The mass of these structures is intrinsicy inconsistent with land use and
14 density patterns in the vicinity. These structures are so out of context with the area that
15 there are no structures this size for which a comparison can even be made.

16 ix. **"Where can the proposed project be seen from?"**

17 A. The wind turbines will be viewable from a multitude of locations and by
18 thousands of viewers annually. They will be visible from major roads such as Route 5
19 and Interstate 91, and from public recreational facilities such as the Crystal Lake beach.
20 The project will also be seen from many residences in the vicinity of the ridgelines,
21 including many residences within a mile or two of a proposed turbine site.

1 x. **"Will the project be in the viewer's foreground, middle**
2 **ground, or background?"**

3 A. I believe this question was generated by the Environmental Board based
4 on the assumption that most aesthetic evaluations would involve limited viewsheds or
5 limited viewing angles to a proposed project. However, in this case, the project can be
6 seen from multiple viewsheds and from multiple locations. Consequently, whether the
7 turbines will be in the viewer's foreground, middle ground or background depends on the
8 viewer's location. For those residing within a mile or two of the ridgeline and given the
9 height and massing of the turbines, the turbines will be in the foreground. Other
10 residences and viewers along Route 5 and Interstate 91 will view the turbines as mid-
11 ground objects, and more distant viewers, such as those 5 to 6 miles distant and beyond
12 will view the turbines as background elements in the landscape.

13 xi. **"Is the project located in a visually sensitive area, including**
14 **ridgelines, steep slopes, shorelines, and flood plains?"**

15 In the Quechee decision, on page 19 of the Findings of Fact, Conclusions of Law,
16 and Order of that decision, the Board stated its position with regard to the development
17 on ridgelines as follows:

18 The expert witnesses agreed that certain types of landforms
19 are especially sensitive to change, because these landforms
20 tend to be visible from a wide area where they are seen by
21 large numbers of people. These sensitive areas include

1 ridgelines, steep slopes, shorelines, and flood plains. Other
2 features are sensitive because they are aesthetically unique;
3 examples may include historic structures, wetlands, and
4 natural areas. In evaluating a project proposed in a sensitive
5 area, the Board and District Commission should give
6 special attention in assuring the scenic qualities of these
7 sites will be maintained.

8 In this application, there is no question but that this development is proposed on a
9 ridgeline, and in the town of Sutton it is proposed on a ridgeline which has been
10 designated for scenic protection.

11

12 27. Q. Mr. Jewell, what if any, conclusions did you reach with regard to the
13 second prong of the Quechee test, and specifically, what is the basis for your
14 conclusions?

15 A. The second prong of the Quechee tests seeks to determine whether or not a
16 project's adverse aesthetic impact is "undue." To assess this determination, the Quechee
17 test asks the three questions I have testified to above. First, does the project violate a
18 clear, written community standard intended to preserve the aesthetic, scenic or natural
19 beauty of the area. Second, does the project offend the sensibilities of the average person
20 - is it shocking? Lastly, has the applicant failed to take generally available mitigating
21 steps which a reasonable person would take to improve the harmony of the proposed

1 project with its surroundings? If any one of these questions cannot affirmatively and
2 positively be answered by the Board, then the project is deemed to have an undue adverse
3 impact on aesthetics or scenic and natural beauty.

4
5 28. Q. What are your conclusions with regard to the project's compliance with the
6 first question, to wit, does the project violate any clear written community standards
7 intended to preserve the aesthetics or scenic, natural beauty of the area?

8 A. The Sutton town plan, identified as Exhibit Sutton RM-1, contains
9 specific, unambiguous language which is clearly intended to preserve the scenic and
10 natural beauty of the area UPC proposes to devote to the construction of its turbines in
11 the town of Sutton.

12 The Environmental Board, in applying the Quechee test, looks to town plans,
13 open land studies, zoning regulations, and regional plans to discern whether a clear
14 written community standard exists, and whether that clear written community standard is
15 applicable to the aesthetic impacts of a particular project. The clear written community
16 standard must be intended to preserve the aesthetics or the scenic beauty of the area
17 where the project is located.

18 The Sutton town plan, in its "Scenic Features and Resources" section, (VI B)
19 specifically identifies "scenic protection areas" which are defined to include all lands
20 above 2,000 feet in elevation. The plan further specifically identifies "Norris Mountain
21 and adjacent summits," and high elevation ridgelines and summits in the Willoughby

1 State Forest as locations within the scenic protection areas. The Town Plan states in
2 unequivocal terms that "... the town shall, nevertheless, preserve its undeveloped
3 highland and time honored natural horizons as a birthright for our children."

4 In addition to the above, in the "Proposed Land Use" section of the Sutton town
5 Plan, (III C-7), the specific type of project proposed by UPC and the specific location in
6 which it is proposed are found to be inappropriate for development. The plan on page 15
7 states as follows: "Wind energy development is a potential industrial activity for high
8 elevation ridgelines in the northern portion of the town (Norris Mountain and the adjacent
9 summits, and the higher elevation summits and ridgelines in the Willoughby State
10 Forest.) However, such developments, because of their visual impact, the accompanying
11 noise, and their potential impact on wildlife and the environment are not appropriate for
12 these areas."

13 The language cited in the two sections above represent clear, unequivocal written
14 community standards as those terms are defined in numerous Environmental Board
15 decisions, and the UPC proposal to build turbines in Sutton in precisely the areas where
16 turbines are prohibited for visual and scenic reasons, is a violation of the clear written
17 community standard set forth in the town plan. Based upon the above, the UPC proposal
18 would have an undue adverse impact on aesthetics and scenic and natural beauty as those
19 terms are defined by the Environmental Board in the Quechee decision.

20 In addition, it should be noted that the town of Sutton zoning and subdivision
21 regulations dated August 23, 2005 and identified as Exhibit Sutton RM-2 designate the

1 lands upon which UPC proposes to construct its turbines as part of the "woodlands and
2 recreation district." In the zoning and subdivision regulations, the "purpose" of this
3 zoning district is defined at Table 205.04 in Exhibit Sutton RM-2 as follows:

4 The purpose of the woodlands and recreation district is to
5 protect the natural resource value of lands which are
6 essentially undeveloped, lack direct access to public roads,
7 are important for wildlife habitat, have potential for
8 forestry use, have one or more physical limitations to
9 development, or include significant natural, recreational, or
10 scenic resources. No additional community facility services
11 will be provided in these areas in the future.

12
13 In the woodlands and recreation district, all commercial and industrial activities
14 and land uses, are strictly prohibited and are neither permitted uses or conditional uses in
15 this zoning district.

16 Again, the town of Sutton zoning bylaws and subdivision regulations establish a
17 clear and unequivocal written community standard for evaluating aesthetic impact as
18 those terms are defined by the Environmental Board in a Quechee test evaluation. The
19 UPC proposal to place 400-foot industrial wind turbines on lands which have been set
20 aside to protect their "scenic resources," and for which such uses are prohibited, is clearly
21 a violation of the town's written community standard and renders the project's impacts
22 undue and adverse with regard to aesthetics.

23 UPC's consultant, Landworks, has apparently taken the position that the above
24 language in the Sutton town Plan should not be applied as a clear written community
25 standard because the language is somehow ambiguous, and/or does not constitute a
26 "standard." They further claim that there is inconsistent language in the plan which

1 renders all of the language in the plan moot or ineffective. Neither of these arguments,
2 however, have, in my opinion, any merit. Even a lay person reading the Sutton Town
3 Plan can identify that the plan embodies clear and direct language with regard to the
4 preservation of its ridgelines, and particularly the ridgelines which are specifically
5 identified in the plan as the same ridgelines UPC proposes to develop. The
6 Environmental Board has on numerous occasions reviewed language very similar to that
7 contained in the Sutton Town Plan and found that language to constitute a clear written
8 community standard. Moreover, it is impossible for Landworks to deny or evade the
9 simple fact that the zoning regulations absolutely prohibit this development from
10 occurring in the Woodlands and Recreation zoning district, and that zoning regulations
11 prohibiting or limiting development have been held by the Environmental Board to
12 constitute clear written community standards.

13 I believe that the photographs further demonstrate Landworks' understatement of
14 the viewing locations from which these turbines will be prominent features in the
15 landscape. For example, compare UPC-DR-5 with Exhibits Sutton WJ-3 through Sutton
16 WJ-5. In this example, Landworks has represented in UPC-DR-5 that there will only be
17 "brief views" from what appears to be singular location on Interstate 91 southbound near
18 the Barton-Sheffield town lines. In reality, that "brief view" extends for at least a mile
19 along Interstate 91 and can hardly be characterized as brief. Moreover, given the close
20 proximity and size of the turbines to the interstate, the turbines for this stretch of road
21 will dominate the viewshed for almost the entirety of the area shown on Sutton WJ-2 in

1 the three photographs taken from Interstate 91. In addition, given the size and close
2 proximity of the turbines to Route 5, there is little question but that the turbines will
3 dominate the views from many locations along this well-traveled road, and from many of
4 the roads accessed from Route 5. Perhaps equally important is the fact that exhibits
5 Sutton WJ-10 and Sutton WJ-11 show the magnitude of the views from Crystal Lake to
6 the proposed northern array. Again, for the thousands of individuals who utilize the
7 Crystal lake area for boating, swimming and hiking, the turbines will occupy a prominent
8 portion of the east facing viewshed.

9

10 29. Q. What is your professional opinion with regard to whether or not the
11 project would offend the sensibilities of the average person or be deemed shocking?

12 A. A project which is found to have adverse aesthetic impacts, such as this
13 project, will also be found to be "undue" if the project offends the sensibilities of the
14 average person. The Environmental Board stated in the Quechee decision, which gave
15 rise to the Quechee test, that the issue was whether "the project, when viewed as a whole,
16 is offensive or shocking because it is out of character with its surroundings, or
17 significantly diminishes the scenic qualities of the area." In various decisions issued by
18 the Environmental Board since the Quechee decision, it has stated generally that a project
19 is shocking and offensive if it offends the sensibilities of the average person. Essentially,
20 it will offend the sensibilities of the average person when it is so out of character with its
21 surroundings that it is deemed to diminish the aesthetic qualities of the area in which it is

1 proposed to be located. This can occur when the size and scope of the project are out of
2 character with the surrounding area, or where the project is so out of scale that its impacts
3 cannot be mitigated.

4 In this case, there is no question but that the placement of 398-foot night-lighted
5 structures with rotating blades are so out of character with their surroundings due to their
6 size and scale that they must be found to be shocking and offensive under the Quechee
7 test. This is particularly so with regard to projects such as this where, because of the
8 project's scale, the project's impacts cannot be mitigated.

9

10 30. Q. Do you have any other comments with regard to exhibit UPC DR-2?

11 A. As I've stated earlier, while I have no disagreement with the general
12 methodology used by Landworks to create the exhibits associated with UPC DR-2, I do
13 not believe that some of the more important exhibits accurately reflect the visual impact
14 of this project. For example, Exhibit UPC DR-3, as we have discussed, is a map which
15 suggests the area of potential visibility within a 10 mile radius of the turbine sites. This
16 map, however, assumes a uniform tree height of sixty feet. Based upon my field
17 observations, I believe this assumption is not accurate, and certainly not uniform
18 throughout the designated viewing area. Consequently, UPC DR-3, in my opinion,
19 significantly understates the areas of potential visibility. Further, any map that considers
20 tree height, such as this potential visibility map, does not consider views through the
21 forest canopy, or views created where selective cutting has occurred. An example of this

1 can be seen by comparing UPC CRV-4 with UPC DR-3. The prior exhibit shows
2 numerous open areas which have been created by individual land owners or farmers from
3 which views would be available.

4 UPC DR-5 fails to account for many of the residential views from nearby
5 residences, since it only evaluates the view from select roads. By omitting the smaller
6 Class III roads and driveways off Class III roads, where many of the residences are
7 located, Exhibit UPC DR-5 does not represent the impact on many of these residences.

8 Exhibit DR-2 also contains arguments by Landworks to justify a project which,
9 they tacitly admit, is totally out of harmony with its surroundings. These attempts, such
10 as suggesting that windfarms should be treated differently from other projects under the
11 Quechee test, or that unscientific public opinion polls or impacts on property value are
12 factors to consider under the Quechee test, are irrelevant to the whole purpose of the
13 Quechee test and the reason it was created. Landworks' suggested modifications to the
14 Quechee test would seriously undermine the Quechee test and potentially justify the
15 construction of almost any incongruous, large scale development in the landscape. To
16 allow wind turbines on scenic ridgelines based on the argument that that is where the
17 wind is more prevalent, is no different than a large retail commercial development such
18 as Wal-Mart arguing that its projects must be located in scenic view corridors adjacent to
19 heavily traveled roads because that's where the buying public is located. Once a precedent
20 is established for creating exemptions from the Quechee test for large scale
21 developments, the Quechee test will, in my opinion, fail to provide the protections it was

1 intended to provide when created by the Environmental Board.

2 In addition, Landworks' suggestion that Vermont's landscape is a "changing
3 landscape" ignores the fact that not all change is good or beneficial. Certainly the
4 landscape will evolve over time, but that does not necessarily mean that obtrusive large
5 scale deviations from historic land uses are appropriate. More importantly, to allow a
6 development such as this to be built, given its mass and scale and its proximity to
7 Interstate 91, Route 5, Crystal Lake, and numerous residential properties, would create a
8 precedent for future developments which itself could define the "context" question in the
9 Quechee decision. Once miles of ridgelines in Sutton and Sheffield are developed with
10 400-foot wind turbines, the next developer seeking to develop other Vermont ridgelines
11 would certainly be able to argue under the Quechee decision that the "context" of its
12 proposed development is in harmony with the UPC development.

13 31. Q. Do you have an opinion as to whether or not the project as proposed by
14 UPC will unduly interfere with the orderly development of the region after giving due
15 consideration to the recommendations of municipal and regional planning commissions,
16 the recommendations of the municipal legislative bodies, and the land conservation
17 measures contained in the plan of any affected municipality?

18 A. It is my opinion that the development as proposed by UPC to place 26
19 398-foot turbines in two arrays covering over three miles in length on the ridgelines of
20 the higher elevations in the towns of Sutton and Sheffield will unduly interfere with the
21 orderly development of this region and be inconsistent with both the language in the

1 Sutton Town Plan and the recently enacted regional plan.

2 Specifically, as I have testified to earlier, the land conservation measures
3 contained in the Sutton Town Plan identify Norris Mountain and adjacent summits as
4 being inappropriate locations for wind energy development and the Sutton Town Plan, in
5 its "Preservation Plan" section seeks to conserve and protect as "Scenic Protection Areas"
6 lands above 2,000 feet in elevation. Moreover, there is little question from reading the
7 survey results contained in Appendix A of the Sutton Town Plan, or in reading the body
8 of the Plan itself, that the orderly development of this region does not include large scale
9 industrial or commercial development on the town's ridgelines. The "Proposed Land Use"
10 section of the Plan, on page 13, contains "a strong statement of the vision of our future"
11 and that vision is to maintain the "scenic beauty of our forested ridgelines, highlands and
12 vistas." It is also my understanding that the Town of Sutton citizens, at its annual town
13 meeting held on March 2, 2006 voted overwhelmingly to oppose the UPC application,
14 and that the Sutton town selectboard and Sutton planning commission are both providing
15 testimony in this proceeding in opposition to the UPC application.

16 The regional plan for the Northeast Kingdom, which was adopted on June 29,
17 2006, contains, I believe, several strong conservation guidance statements. Initially, on
18 page 15 of the regional plan, in the "Rural Areas" section, the plan states that these areas
19 "receive very little commercial or industrial development, unless it occurs in an
20 established industrial park, in an area specifically designated in the local zoning bylaw, or
21 occurs in an appropriate scale for its rural surroundings." The UPC turbine proposal is in

1 such a rural area but is not to occur in an established industrial park, nor in any area
2 specifically designated in the local zoning bylaw. In fact, it is proposed to be located in
3 an area in Sutton where the zoning bylaws strictly prohibit any commercial or industrial
4 development. Finally, as discussed in my testimony earlier, the turbines are massively out
5 of scale for their rural surroundings.

6 On page 3 of the new regional plan, in the section entitled "Future Land Use and
7 Development Goals" the first two land use and development goals cited in the regional
8 plan are as follows: 1) "Traditional development patterns should be maintained and new
9 development should be encouraged to follow these patterns;" 2) "New developments
10 should be compatible with existing land uses and agree with local plans." The UPC
11 turbine proposal neither follows traditional development patterns nor is it compatible
12 with existing land uses or in agreement with local plans.

13 Finally, and perhaps most importantly, in the energy section of the Regional Plan
14 entitled "Energy Strategy", the Regional Plan on page two of that section states that the
15 Regional Planning Commission held two hearings in the fall of 2005 on the proposed
16 plan and particularly language in the plan related to the development of commercial
17 scaled wind energy turbines in the Northeast Kingdom. The Regional Plan states that at
18 both of the two public hearings held in the fall of 2005, the vast majority of the area's
19 citizens were "adamantly opposed" to any language in the Regional Plan which would
20 support large scale commercial wind energy in the area. As a result the newly adopted
21 Regional Plan and the plan that would be in place if the UPC turbines are constructed

1 does not contain a position supporting their development and in fact when read with other
2 sections of the plan, would demonstrate that the construction of the turbines would be
3 contrary to specific conservation language in the plan and affect the orderly development
4 of the region.