

AESTHETIC ASSESSMENT

OF THE PROPOSED GEORGIA MOUNTAIN COMMUNITY WIND PROJECT

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I. PROJECT BACKGROUND

A. INTRODUCTION TO THE REPORT, ITS ORGANIZATION, AND CONCLUSIONS

A1. Introduction

This Aesthetic Assessment and report is submitted to Georgia Mountain Community Wind, LLC (“GMCW”) in response to its request for assistance in evaluating the aesthetic effects associated with the proposed Georgia Mountain Community Wind Project (the Project), which is proposed to be located on Georgia Mountain in the towns of Milton and Georgia, Vermont. This report will be referenced by the testimony of David Raphael, ASLA, Principal and Landscape Architect with LandWorks, the firm preparing this assessment. Thus, this report and its accompanying attachments will become a part of the overall aesthetics testimony submitted on behalf of GMCW in its application for a Certificate of Public Good (CPG) from the Vermont Public Service Board (PSB) to construct an electric wind energy generation facility under Section 248 of Title 30 of the Vermont Statutes Annotated.

The methodology for this Aesthetic Assessment includes visual and cartographic analyses, research and review. Our primary analyses assess the Project’s visibility and potential for visual and aesthetic impacts, with a focus on viewsheds from major federal, state or local roads, relationships to nearby areas of public interest, high scenic value and/or official designation as a cultural, aesthetic or recreational facility or resource, and locations that involve residential areas that are in proximity to the proposed wind Project. We have used on-site and field study to reinforce our analyses and findings, and have also documented public sentiment and concerns in this process, as set forth in articles in the local press (see page 30, footnote 7 for a listing).

The Aesthetic Analysis for this Project has been conducted within the parameters set forth in Section 248 for review of utility scale energy generation and transmission projects. The analysis thus follows and responds to the process and determinations required under the so-called Quechee Analysis, established in 1985 in the Environmental Board’s Quechee Lakes decision. This analysis also recognizes that the Public Service Board weighs “societal benefits”

when considering the aesthetic impacts of projects within its purview.

"Our analysis, however, does not end with the results of the Quechee test. Instead, our assessment of whether a particular project will have an 'undue' adverse effect on aesthetics and scenic or natural beauty is significantly informed by the overall societal benefits of the project"

PSB Docket 6860, Order of 1/28/05 at 80

Our analysis and exhibits reflect the recommendation of the Vermont Commission on Wind Energy Regulatory Policy that visual impacts within a 10-mile radius of the Project site be evaluated. This radius has been incorporated into the PSB review process. The analysis has also been informed by the Vermont Department of Public Service's report *Wind Energy Planning Resources for Utility-Scale Systems in Vermont* issued as a product of the Wind Siting Consensus Building Project in October 2002.

A2. Report Organization and Contents

This Aesthetic Analysis is organized around and relies on an extensive narrative of the Quechee "Test" as it applies to this proposal. It also includes a discussion of the aesthetic qualities of wind turbines, the dynamic nature of the Vermont landscape over time, public opinion with regard to wind farms in general, and a number of exhibits and studies, including the following:

1. Viewshed Map: Areas of Potential Visibility (see Appendix 1)
2. A series of visual simulations of the Project from several critical viewing locations within a ten-mile radius of the Project, as prepared by Vermont Environmental Research Associates, Inc. (see Table 2 at page 31 of this report)
3. Photographic inventory presenting the character of the area and views to the project area from a wide range of public locations. (see Appendix 2)
4. Documentation with regard to the "View from the Road", assessing the visibility and duration of visibility of the proposed wind turbine project site



Figure 1.
Simulated view of Georgia Mountain of the intersection
of Route 7 and Bartlett Road in Milton, VT

from local and regional public roads. (see Appendices 3 and 6)

5. Analysis of the aesthetic impacts, if any, which may result from the further development of the access roads to the wind farm site, the transmission corridor from the site to the connection site with the existing 34 kV regional transmission line on North Road.

6. Project site plans, and additional analysis and context maps (see Appendix 4)

7. A sampling of public opinion as it relates to wind energy.

8. A review of applicable town and regional plans, with a specific focus on Milton and Georgia, which is the location for the project. (see Appendix 5)

A3. Overall Conclusion

The studies, research, narratives and field work which inform this Aesthetic Assessment support the overarching conclusion that the proposed Georgia Mountain Community Wind Project will not, if constructed, result in an undue adverse impact to the aesthetics and scenic beauty of the area.

B. PROJECT BACKGROUND AND OVERVIEW OF THE AESTHETIC ASSESSMENT

B1. Project Background and Description

GMCW is a family owned and operated Vermont company run by the Harrison family of Georgia, Vermont. Jim Harrison is a life-long area resident and business owner, and he, along with his wife Janet, his son Kevin, and daughter Kathy, firmly believes in bringing clean energy and local economic benefits to their local communities and Vermont. The Harrison family owns 700 acres on the 1440 ft southeastern summit of Georgia Mountain in Milton, along the Chittenden and Franklin County line.

The primary components of the Project are 3 to 5 megawatt-plus wind turbines located on or near the summit of Georgia Mountain in Milton and Georgia. The exact number, manufacturer and size of the wind turbines have not been finalized. Turbine height would be around 400 feet from ground level to the tip of blade in its highest position. A schematic showing typical dimensions, as well as several recent photo simulations, is shown in Figure 2, below. The proposed turbine site covers a relatively short length of ridgeline, approximately .75 miles. This site has been chosen for the available wind resource as well as the existing infrastructure of access roads,

ATV trails and proximity to an existing transmission corridor. An existing meteorological tower of 132 feet in height presently exists near to or on the summit of Georgia Mountain. The site is also the location of an existing cellular tower. Arrowhead Lake, located at the western foot of Georgia Mountain, is the site of an existing hydroelectric generation station and dam.

The closest turbine to the center of Milton village is approximately 4.2 miles away, and will be situated on the southeastern end of Georgia Mountain. The closest turbine to Interstate 89 will be located on the northwestern end of Georgia Mountain and is approximately 3.3 miles from the highway centerline. The simulation from viewpoint 1 (see Table 2 pg. 31) is 3.9 miles from the nearest turbine.

The nearest residential structures to the proposed turbine sites are approximately 4/5 of a mile away and are located at the base of Ted Road in Milton near its intersection with the Westford-Milton Road. Ted Road will be the primary point of access for the Project. This existing gravel road, which is owned by the Harrison's, also services the nearby cellular and meteorological tower. The Project's existing road network will be used as appropriate and will be upgraded. Electrical collection lines conveying power from the turbines will follow a portion of the new road and connect with the existing 34.5kV transmission line owned by Central Vermont Public Service where it intersects with North Road and the Husky Injection Modeling plant entrance.

Typical turbines being considered for this Project have support towers with three blades, with an overall height from base to the top of vertically oriented blade ranging from 400 to 443 feet. The Federal Aviation Administration (FAA) standards identify lighting protocols for all structures above 200 feet in height. The wind turbines and meteorological tower will be illuminated in accordance with FAA recommendations for turbine lighting in order to address aviation safety. It is likely that 3 of the 5 nacelles will be lit at night with a single red synchronized light that slowly pulses on and off. According to the governing FAA standard¹, the lights

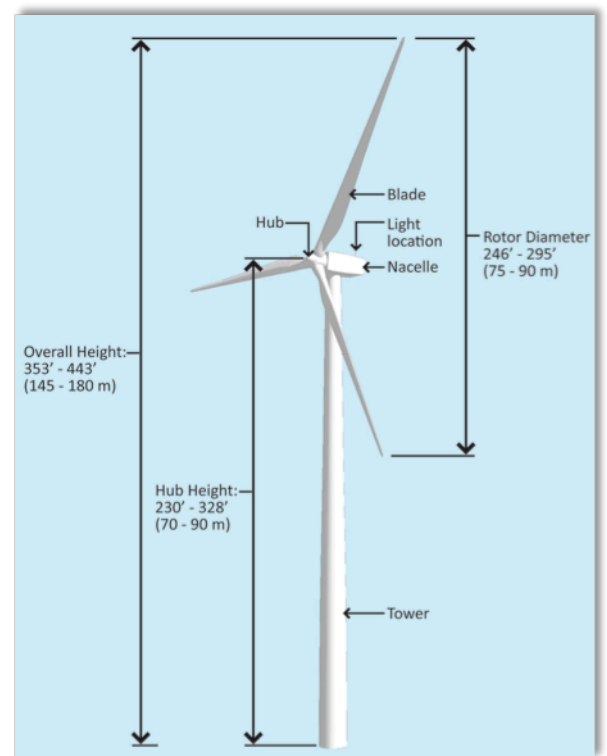


Figure 2.
Typical turbine
components

¹ U.S. Department of Transportation Federal Aviation Administration. Obstruction Marking and Lighting, Chapter 13, February 2007.

Aesthetics

A philosophy "dealing with the nature of the beautiful and with judgments concerning beauty." Beauty is defined as "...the quality or aggregate of qualities in a person or thing that gives pleasure to the senses or pleasurably exalts the mind or spirit..."

Adverse

(1) Acting or serving to oppose; antagonistic. (2) Contrary to one's interests or welfare; harmful or unfavorable. (3) Moving in an opposite or opposing direction. (4) Opposed to one's interests: unfavorable: operating to one's detriment.

Undue

(1) Exceeding or violating propriety or fitness; exceeding what is appropriate or normal; excessive; not just, proper, or legal. (2) Not appropriate or proper (or even legal) in the circumstances. (3) Lacking justification or authorization. (4) Beyond normal limits.

typically used are omni-directional, L-864 Red Flashing Lights (incandescent or rapid discharge [strobe]) with a minimum 750 candela with a 3-degree vertical beam spread.

Total Project clearing for the turbine sites and new access roads will include approximately 16.5 acres.

B2. The Aesthetic Assessment

Under Section 248 the Vermont Public Service Board must find that the Project will not have an undue adverse effect on aesthetics, giving due consideration to criterion 8 of Act 250. Act 250's Criterion 8 addresses aesthetic impact within the parameters of the so-called Quechee Analysis. The Quechee Analysis is a two-step process, which begins with assessing the nature of a project, its context and whether it will lead to adverse aesthetic impacts. This step asks the question whether the project is in harmony with its surroundings and is based on a clear understanding of the nature of the visual impacts. This step must describe the surrounding area of the project and the compatibility of the project with those surroundings. It also asks: 1) whether suitable colors and materials have been used; 2) how visible is the project; 3) how the project affects open space in the area; and, 4) whether the project has been proposed for visually sensitive land.

If the conclusion from this first step of the analysis is that the aesthetic impacts of the project are considered to be in harmony or compatible with its surroundings, then the aesthetic impacts of the project are considered not adverse. If this is not the case, then the project is considered to have an adverse impact and the second step of the analysis is required. The second step asks three questions: 1) Does the project violate any clear, written community standards intended to protect scenic beauty; 2) Does the project appear shocking or offensive to the average person; and 3) Has the applicant taken all generally available and reasonable steps to mitigate the identified adverse impacts of the project as proposed. If the answer to questions 1 or 2 is yes, or the answer to question 3 is no, then the aesthetic impact of the project is considered unduly adverse, under the Quechee Analysis.

It is also important to note that the review of wind farms within the provisions of the Quechee Analysis is a challenge insofar as the original Quechee Lakes Decision and the numerous Environmental Board cases applying it, did not necessarily anticipate grid-

connected wind farms. The analysis deals in part with the question of “fit”, as defined by visual consistency or “sameness”. Wind turbines are not visually the same as the surroundings they are typically located in. Quechee also rests heavily on a project’s visibility.

Wind turbines specifically and wind farms in general, by their very nature, are going to be visible, as they need to be located where sufficient wind resources are available, in Vermont this is typically on mountains and ridgelines, and above treeline. This latter point was a distinct finding of the Vermont Commission on Wind Energy Regulatory Policy. Thus, another way to look at the “fit” of wind farms with the Vermont landscape is in the context of the changing nature of the Vermont landscape over time. The landscape has changed to reflect the evolving culture of the state’s residents, changes in technology and in land cover and land use. This consideration informs this review and its conclusions.

C. PUBLIC OPINION AND THE AESTHETICS OF WIND

C1. Overview

The need for renewable energy sources has only increased in this era of “Peak Oil”, with its dwindling supplies and concomitant fluctuation of prices for the primary commodity, a barrel of crude. Global Warming has been identified as a critical challenge to humanity, and the primary response to its threat center on the reduction of our collective carbon footprint. This factor has contributed to the increased awareness of and desire to pursue alternatives for energy generation. Wind power offers one of several compelling options.

In relation to the proposed Georgia Mountain Community Wind Project, it is important to consider a number of key factors when assessing visual impacts from this Project. These factors include: 1) the historic working landscape of the state that has always tapped into its renewable resources; 2) that given this tradition of a resource based landscape it is important to understand that the mountain site proposed for this Project is not pristine and, in fact, has been utilized for extensive motorized recreation, has an historic and current logging operation, has a cell tower facility situated just below its summit, as well as an existing hydroelectric dam and generating station at Arrowhead Lake, at the foot of the mountain; and, 3) the public’s increasing support for wind energy in light of the

recognition that wind provides a viable alternative to other forms of more harmful and unsustainable energy generation.

C2. Wind Power is a Part of the Historic and Evolving Vermont Landscape

Windpower as an energy source in Vermont traces its origins in part to the small-scale water pumping windmills prevalent in the agricultural landscape of the late nineteenth and early twentieth century, although many of the so-called American Farm Windmills still exist and still work today.

Vermont also contributed to the dawning of modern day utility-scaled wind power in this country with the construction of a wind turbine on Grandpa's (or Grandfather's) Knob in the Rutland area:

"One of the most memorable wind machines was the Smith-Putnam machine built near Rutland, Vermont during the 1940's. The huge machine with 175-foot blades was designed to deliver 1250 kW to the Vermont power grid. For a short time it delivered 1500 kW; but, wartime material shortages and lack of money brought an end to this project after high winds broke one of the two 8 ton blades."

The Windpower Book by Jack Park, Cheshire Books, Palo Alto, Calif., 1981, p. 15.

Other attempts to generate wind power were made in the 1970's and 80's. Turbines were installed in Morrisville and at Vermont Technical College. In 1980 and 1981, four 200-kilowatt turbines were installed on Little Equinox and operated until Green Mountain Power (GMP) removed them in the mid-1980's. Then, from 1989–1994, GMP operated two experimental 100-kilowatt turbines on Little Equinox as a test run prior to the implementation of their more ambitious facility in Searsburg. Little Equinox proved to be an important stepping-stone between older less reliable technology and today's modern wind machines.

Recently, the Public Service Board approved plans for a 40 MW wind electric generating facility, consisting of 16 turbines, in Sheffield, Vermont. Deerfield Wind, a proposed 45 MW wind generating facility proposed to be built in Searsburg and Readsboro, expanding on the existing Searsburg project, is currently under review by the PSB.



Figure 3.
The aesthetics of wind turbines have improved dramatically since the first commercial scale wind turbines were constructed in Vermont.

C3. Polls and Surveys

Public opinion also may be relevant in the Quechee Analysis as well, as it is instructive in understanding how a project may be viewed from the perspective of the “average person”. There have been a number of local, national and international studies and reports which have addressed the public reaction and acceptance of utility scale turbines, their towers, and the associated landscape modifications required for the siting of such installations. The work of Paul Gipe and others, as well as numerous surveys and studies, have addressed the public’s perception of wind power, and there is evidence that wind energy development is gaining support.

A recent poll conducted by the Vermont Department of Public Service found that 90% supported a wind farm being built within the view of their home, with 75% strongly supporting the development of a wind farm within view of their home.² This factor is coupled with the reality that the state must seek other sources of energy generation than its traditional sources given the eventual phase out of Vermont Yankee and the increasing demand for electricity.

Research presented in the publication Wind Power In View has also highlighted increased public understanding and acceptance of wind generation as a viable alternative to fossil fuels; of relevance to placing wind farms in the Maine landscape is the view presented by noted landscape architect Robert Thayer who stated that well designed and “well sited wind energy projects can achieve a serviceable beauty common to other working landscapes.”³

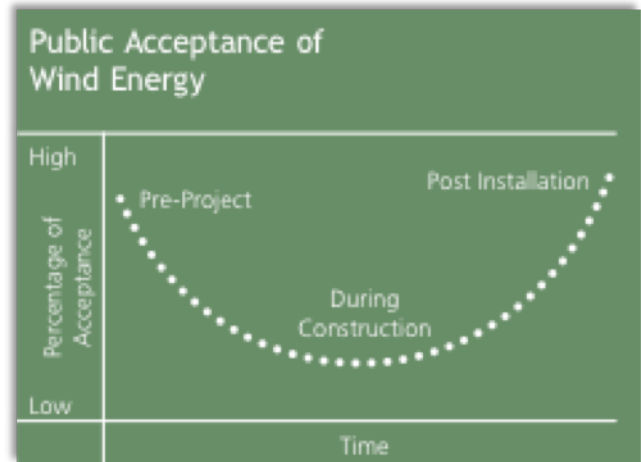


Figure 4.

The trend for public acceptance of wind energy projects, adapted from *Wind Power in View Energy Landscapes in a Crowded World*, Pasqualetti/Gipe/Righter, p. 163.

² Vermont Department of Public Service website on Vermont’s Energy Future - <http://www.vermontenergyfuture.info/Final>

³ Wind Power in View, Pasqualetti, Gipe, et al. Academic Press, San Diego, 2002, p. 37

"During the next two or three decades the American vernacular landscape will change and change and change again, ceaselessly reflecting the unprecedented complexity and rate of economic, technical and social change... the vernacular landscape is often the first to indicate changes in lifestyle and attitude, because it is the built form that shapes the lives of most Americans"

John Stilgoe in *Landscape and Images* 2005.

Another recent poll, the ORC Macro survey, is also informative. Certainly, those who responded to the ORC Macro survey fall into the category of Quechee's "average person", as they were randomly selected from a sampling of 400 Vermonters. This poll indicated growing support for wind energy, finding that eight out of every ten Vermonters (81%) would consider wind turbines on mountain ridges beautiful or acceptable. The survey also found that 43% of Vermonters chose wind compared to 30% in a 2002 statewide poll.

Similarly, results from Senator Bill Doyle's annual Town Meeting Day Survey question from 2006: "Should windmills be built on VT ridgelines?" provided the following responses: Yes 73%, No 11%, and Undecided 13%.

Other studies also show that after installation, attitudes toward wind energy change noticeably among those most affected, the residents near the site (Paul Gipe, *Tilting at Windmills*). The Searsburg *Public Acceptance Study: One Year Post Construction*, prepared by James Palmer of Clinton Solutions for the Searsburg Project, clearly demonstrates Gipe's assessment: Residents responded to a "with turbines" and "without turbines" sequence of scenic views. The percent of respondents who viewed the turbines as a negative impact on the scene was "significantly reduced" in the post construction survey. The study went on to say, *"This is yet another indication of increased acceptance of the project following construction"* (p 4).

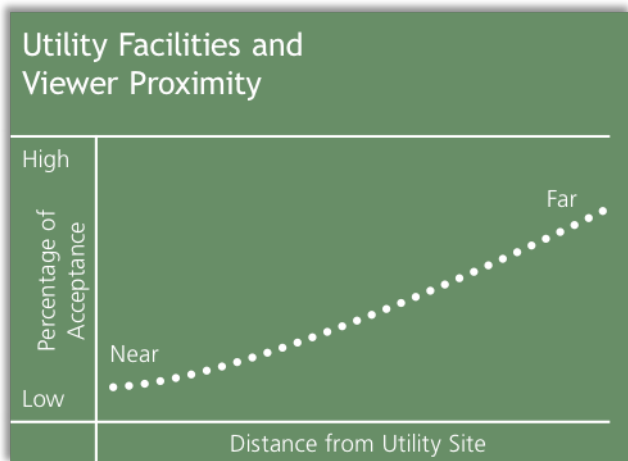


Figure 5.

The farther away from a utility facility a person is, the less likely that person will find the utility objectionable

The study found that during the pre-construction period, 30% of responders were big supporters of wind. Post construction, over 50% were big supporters of wind. Of those who were surveyed, 35% who did not support the project decreased to 17% after the project was built. This would be important information to share with local residents in Milton and Georgia.

C4. The Aesthetics of Wind Turbines and Wind Farms

In preparing analyses for assessing the aesthetics of wind turbines, it is important to take a close look at the visual qualities of the wind turbine and towers, and their placement in an array.

There is a wide range of opinion on the beauty of turbines; this section forwards some general considerations with regard to the aesthetics of wind.

The origins of windpower in this country are traced as far back as 1633 when the Dutch built a wind-powered mill on the island of Manhattan. Eric Sloan in his wonderful book *Our Vanishing Landscape* describes this legacy:

"The great seal of New York (City) is built around a windmill design and, though few recognize the fact, the windmill was basic for the beginning of this richest city's industrial career. Very much like the present day experience of approaching New York's skyline, the account of nearing Manhattan in 1710: '...as we sailed into the harbor the horizon was pierced by scores of windmills, taller than any we have seen elsewhere.'"

As already mentioned, wind turbines are a familiar site in Vermont's historic landscape. The modern day wind turbine - sleek, aerodynamic, and with a relatively small footprint - is, for many, a thing of beauty, a work of applied art. The windmill is arguably the most aesthetically pleasing utility scale form of power generation and represents the integration of modern day technology with an ageless and infinite source of energy, Mother Nature's wind. As has been documented, many find the sight of wind turbines to be pleasing and engaging, as well as a symbol of a more sustainable future. The form and lines of the turbines are, in and of themselves, an artistic form and expression of modern technology.

Noted Vermont artist Sabra Field, who is famous for her renderings of quintessential Vermont landscapes, has weighed in on the wind debate. In her words from a December 15th VPR commentary, windmills "fit the Vermont ethic of independence as well as the Vermont aesthetic of the well tended farmscapes." She describes them as "big, beautiful white turbines" and kinetic sculptures on the skyline of our cultural landscape, beautiful in themselves. In our view, the aesthetic argument supporting wind turbines is strengthened if an artist of Field's caliber, with a trained "eye" for aesthetics, finds turbines so visually pleasing.

It is interesting to note that historically there has always been resistance to change and the advent of new technology in the American landscape. Indeed, this resistance has been based, in part, in the paradox between our love of nature and fascination with the

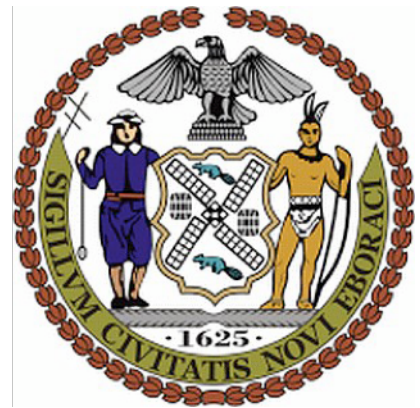


Figure 6.
The great seal of New York
(City)

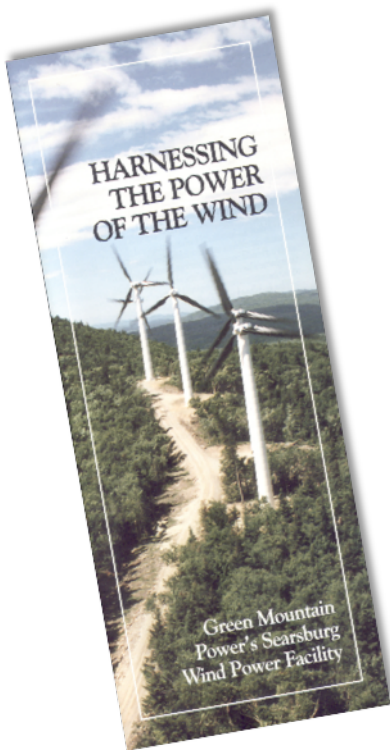


Figure 7.

Tourist oriented brochures such as this one illustrate public interest in wind energy and provide information about the benefits of wind

machine, as extensively discussed in Leo Marx's study *The Machine in the Garden*. Henry David Thoreau, in his famous tome *Walden*, decries the discordant sound of the "iron horse's" whistle and bemoans the intrusion of the burgeoning railroad system on the tranquility of his pond. Early windmills, as far back as the 12th century, were drawing protests from "neighbors" when erected for grain milling, not necessarily for aesthetic reasons, but in part because they posed competition for watermill-produced grain.

There are also indications that wind power is now being connected with the future sustainability of our communities and is part of the changing American landscape. Additionally, wind power and its potential impacts to tourism, often cited as a concern for Vermont, has not become a major issue. In fact, there is increasing evidence, as supported by a recent article in the *Boston Globe's* February 22nd Sunday Travel Section, that wind power can promote sustainability and tourism. "Reaping the Wind" describes how North Dakota is responding positively to a future economy spurred by wind energy investment; a new economy that includes opportunities for tourism associated with the wind. The article describes how locals living with the wind, and how Chippewa Indians embrace the wind and want to harness it. Jessie Cree, leader of the Turtle Mountain Band, describes it in this manner: "It has a spirituality...the old people...they were able to see the wind. They would be able to see the spirit of the wind." Indeed, a new turbine provides power for the community college on the reservation. In this same region, enterprising young people have coupled snow kiting with wind energy education and other locals, such as those who have been farming this land for generations, see new opportunities in a landscape that is not static. Janet Schill, from one such farm family has written about this in her book "Winds of Change":

"Now here we are, changing the landscape once again. ...Huge blades turn over and over using the wind's power to generate the electricity to send down the transmission lines to farms, towns and cities."

"Reaping the Wind" by Tom Haines, *Boston Globe*, Travel Section, 2-22-2009.

Individuals who have researched the before and after impacts and impressions of wind farms have found that over time these projects win broad based support, if not overt enthusiasm. We are still in a transition period to this form of energy and the acceptance of anything new has always been measured and slow to emerge.

In the words of Robert Thayer, “the intrusion on the visual landscape was being countered ‘by an accrual of positive environmental symbolism.’”⁴

Karin Hammarlund’s piece “Society and Wind Power in Sweden,” also found in *Wind Power in View*, makes some additional conclusions regarding design and aesthetics on a societal level:

- A landscape’s sensitivity to change varies because it depends upon dynamic factors including socioeconomic conditions, and the landscape’s structure and accessibility.
- People’s experiences of a given landscape should not be generalized because an individual’s perceptions of landscapes are affected by local conditions, cultural tradition, and individual economic circumstances.
- An individual landscape’s long tradition of coexistence between many land uses can facilitate the siting of a wind farm.
- The public’s reaction to a landscape is strongly affected by their possible uses of and access to the landscape. A landscape’s social qualities must be evaluated along with its visual qualities in order to plan and design for the entire landscape.

Pristine

(1) Remaining in a pure state; uncorrupted or untouched by civilization. (2) Of, relating to, or typical of the earliest time or condition; primitive or original.

C5. Conclusion Regarding Public Opinion and the Aesthetics of Wind

The understanding of change in Vermont’s landscape over time is an important concept that will allow us to “get our arms around” the modern day wind turbine and its place in this state’s physical environment. Vermont has a long tradition of the working landscape. It is myth and a misconception to consider our hills and ridges pristine. The Vermont landscape is an evocation of our cultural and economic interests over time. Many of Vermont’s hilltops and ridgelines have been logged or are already developed with fire towers, cell towers and ski resorts, all serving their purpose, and all part of an evolving physical and cultural landscape. Indeed land uses on Georgia Mountain reflect this, with the presence of a cell tower facility and ATV trails. Some of the most prominent mountains have been developed for human uses, there are roads, buildings, and towers atop Mt. Mansfield, a public road to the top of Burke Mountain, a scenic drive, restaurant, cell tower and FAA relay

⁴ “Exoskeletal Outer-Space”, by Robert W. Righter, from *Wind Power in View*, Pasqualetti, Gipe, et al, Academic Press, San Diego, 2002, pp. 25 and 37.

structures on the summit of Equinox, and so on. The Winter 2005-06 cover of *Vermont Life*, shown in Figure 8 illustrates this. Ski areas have substantial impacts on naturally wooded mountainsides, but are now considered part of our identity and scenic landscape. Like silos and ski runs, wind turbines can become accepted as part of this working landscape.⁵



Figure 8.

The Winter 2005-06 cover of *Vermont Life*, showing ski trail development as an integral component of Vermont's scenic landscape.

⁵ This overview of the aesthetics of wind is derived from the author's report entitled "Aesthetic Assessment of Proposed Sheffield Wind Farm, prepared for First Wind LLC, as part of Docket 7156 and dated 2/17/06.

II. THE QUECHEE ANALYSIS

Summary

The Aesthetic Assessment as part of the Petitioner's application for a Certificate of Public Good is based almost entirely on the Quechee Analysis. Thus, an extensive viewshed analysis and aesthetic assessment has been conducted within the parameters of the Quechee Decision. In this section, the first step of the analysis essentially describes the Project, its surroundings and compatibility with those surroundings, its visibility and its impact on open spaces, and whether or not the Project will have an adverse impact on aesthetics. If the Project is considered to have an adverse impact, the second step must be conducted. This second step is undertaken to address community standards, whether the Project is offensive to the average person, and the mitigation measures the applicant has employed. This step must conclude whether or not the Project will have an undue adverse impact on the aesthetics and scenic beauty of the Project area. This assessment concludes that the Georgia Mountain Community Wind Project **will not have an undue adverse impact** on the aesthetics and scenic beauty of the Project area.

Discussion

This aesthetic review focuses on the cluster of the 5 turbines on the mountain ridge and addresses the potential visual impacts that result from project construction, including those that might result from the associated access roads and electrical connector lines. The siting of the Project has mitigated some of the potential impacts by proposing a location that already includes access road and utility infrastructure – a cell tower installation, as well as forest resource management, including logging activities. The turbines are located within an area of about .5 to .75 miles in length on the western side of the mountain summit. The summit area itself does not include important or outstanding visual or physical qualities, lacks any identified public hiking trails or vantage points and does not contain important scenic assets such as geological outcrops or distinctive landforms. In addition, the context for the Project, in the towns of Georgia and Milton in the Northern Champlain Valley, includes a mixed pattern of residential, commercial and industrial development all within the Project viewshed. The development of locally generated power from a working landscape environment is within the tradition of the area, which includes hydropower projects, agriculture and the harvesting of forest resources. This fit is further reinforced by 1) the development pattern of the area which includes the adjacent

hydroelectric facility on Arrowhead Lake, and extensive transmission line corridors in the Project vicinity; 2) the evolution of this landscape as it continues to accommodate nearby industrial development including the Husky complex and the Georgia Industrial Park, and 3) the availability of the power generated to a local client base. The Project will be visible from a number of public vantage points in the area, including intermittent views along roads, very limited views along Interstate 89, the western shore of Arrowhead Lake, and in limited locations within the village areas of Milton and Fairfax (from behind the school complex and just south of the village). The Project will also be visible from the waters of Lake Champlain, but the impact of this visibility is reduced due to the distance from the Project, its limited visual presence when compared to the extent of landscapes and panoramas visible from the lake, and the ability of viewers to orient them away from the view. The Project environs within the 10-mile viewshed radius do not include extensive tourism infrastructure or outstanding scenic resources, other than the lake, and these limited areas or resources will not be unduly impacted. Nonetheless, given the mountain's prominence in the area and the visual change that will accrue from the introduction of 5 grid connected turbines, the assessment concludes that there will be the potential for an adverse impact from the Project.

Given this conclusion, the assessment addressed the second step of the Quechee Analysis, which requires the applicant to address the three questions that related whether or not the Project is shocking or offensive to the average person, whether the applicant has taken reasonable steps to mitigate the Project's aesthetic impacts, and if the Project, if built, would violate any clearly written community standards.

The average person viewing this Project would not be shocked or offended because the majority of the public viewing areas are at a sufficient distance from the proposed turbines that the turbines would not dominate the view. Where the Project would be visible from public roads, the views will be intermittent due to vegetative screening along the roads and, due to the speed of the vehicle, the duration of the view would be limited. Drivers along Interstate 89 would have a direct view of the Project with the closest turbine being 3.9 miles from the Project. Due to the speed of the vehicles on the interstate, their views would be limited. The landscape at Arrowhead Lake is already developed with an historic hydroelectric facility, and thus locally generated wind power is consistent with this tradition. The presence of the turbines will not materially change the

recreational atmosphere present at those locales where the Project will be visible, such as limited portions of the surface waters of Lake Champlain, and the operation of the turbines will not impact the individual's experience with respect to sun, water quality or noise. The Project will not violate any clear, written community standard. In fact, the Town of Milton 2008 Comprehensive Plan has as a goal to facilitate renewable energy development in Milton, citing in particular the potential for development of wind energy on Georgia Mountain. There are no standards in the Georgia Town Plan that specifically restrict wind power development on Georgia Mountain, and while the landform is considered "noteworthy" the language does not imply or indicate that the aesthetic or scenic values would be violated by such a development. Finally, the layout and clustering of the project elements, the limited impacts and design of the access roads and electrical connectors, and the proximity to an existing transmission line collectively constitute a project that has been sufficiently mitigated with effective site design and project qualities. Given that this Project consists of only 5 turbines clustered together, it is at a scale that is quite different than the typical wind energy project, which often have anywhere from a minimum of 16 turbines (Sheffield, Vt.) to as many as 60 (proposed for Oakfield Maine). Thus the assessment readily concludes that the Georgia Mountain Community Wind Project, if constructed, will not result in an undue, adverse impact on aesthetics or the scenic beauty of the area.

A. THE FIRST STEP OF THE QUECHEE ANALYSIS

A1. What is the Nature of the Project Surroundings?

A1.1 Physiography of the Region

The Project site and environs is set at the boundary of the Champlain Valley (which is referred to as the Champlain Valley Lowlands Region) and the Green Mountains. Georgia Mountain itself is considered to be part of the Hinesburg - Oak Hills Thrust Fault which is comprised of highly metamorphosed rock typical of the Green Mountains, in this case primarily quartzite. This thrust fault is considered to be the western edge of the Green Mountains. As with other regions of the Green Mountains, the surface material of Georgia Mountain includes both bedrock and glacial till, typical of the final periods of glaciations in Vermont. The steep topography of the summit environs and particularly the western slopes is attributable to the forces which created the thrust faults. The Champlain Valley Lowlands to the west of

the Project site are comprised primarily of shales, dolomites and sandstones which reflect their unique geological history which includes a period when the glacial Lake Vermont isolated the summit of Georgia Mountain as an island some 10,000 years ago and laid down the valley's famous clay soils which resulted from the retreat of the glaciers and the consequent drainage and sedimentation which flowed out of the mountains to the east.

Georgia Mountain is approximately 1440 feet above sea level and is part of a range of hills that include unnamed summits to the west and south of about 1100 to 1200 feet in elevation. To the west there are some distinct mountains such as Arrowhead and Eagle Mountain, which are part of the Champlain Valley Thrust Fault and separate from the Georgia Mountain upland. The southern slopes of Georgia Mountain are considered to be part of the Mallet's Bay Watershed, with the northern slopes draining to the Lamoille River. There are, as with any Vermont landscape, some areas on the mountain where wetlands are located as well as bedrock outcrops, and the bulk of the mountain and its slopes are vegetated.

A1.2 The Region

The previous section entitled the "Physiography of the Region" sets out "the lay of the land" for the area surrounding the Georgia Mountain Wind Project, and for the Project site itself. The land uses in the immediate vicinity of the Project site include industrial, commercial and residential development which is characteristic of Milton and the town of Georgia just to the north, as both communities have grown as part of the outer ring of towns in the Greater Burlington Metropolitan area. This mix of nearby and historic land uses also includes the hydroelectric facility at the Arrowhead Lake Dam. The Husky manufacturing complex is on Husky Drive just to the southwest of Georgia Mountain, approximately 1.6 miles from the turbine sites. The commercial and industrial development along Route 7 in the center of the developed area of the Town of Milton, is between 2 to 2-1/2 miles to the southwest of the Project site. There is a residential subdivision in Milton that is accessed from both Westford and North Roads and that development is also 1.6 miles from the Project site.

In Georgia, to the northwest of the Project site there is a larger scale industrial park type development area as well as residential development to the west of Route 7. To the west of the Project running all the way to the Fairfax Town Line is a wooded area of varied topography, which is part of the range of hills surrounding Georgia Mountain itself. In Fairfax there is more rural residential type development pattern, with scattered residences and remnant agricultural lands to the west of the Lamoille River. The village of Fairfax is on lower elevation lands between 2.6 and 3 miles to the east of the Project site.

Overall, this area is in transition from a historically rural agricultural type land use pattern with interspersed villages to a more residential and commercial with light industrial pattern, with subdivisions and single family home developments springing up throughout the area over the last decade or two. To the west, in Milton and Georgia more commercial and industrial development, as well as denser residential development along the Route 7 corridor has become the more typical land use pattern, with Milton having more extensive development spreading south from Arrowhead Lake. Evidence of the continuing development of Milton can be found in the increasing rate of population growth and comparisons with the rest of Chittenden County. The town grew at 2.1% between 1980 and 1990 compared to the rest of Chittenden County, which grew at 1.3 % during this time period. From 1990 to 2000 Milton grew at 1.2 %, which was about the same rate as the County as a whole, which grew at 1.1%. Projections going forward indicate that Milton will continue to grow a bit faster than the rest of the County.

A1.3 A Sampling of Photos of Project Environs

The following photographs reflect existing conditions and views in the Project area.⁶ Additional photographs are provided in Appendix 2, and Project simulations from a variety of views are included in Appendix 4.

1. Roadside conditions along Route 7 in Milton with Georgia Mountain in background



⁶ These photographs were taken with a Canon Powershot Digital Camera with varying focal lengths and are not intended to be used for photographic simulation purposes.

2. Transmission Line in Milton Village



3. Historic dam site at Arrowhead Mountain Lake



4. Cell tower complex just below the summit



5. ATV trails and summit landscape



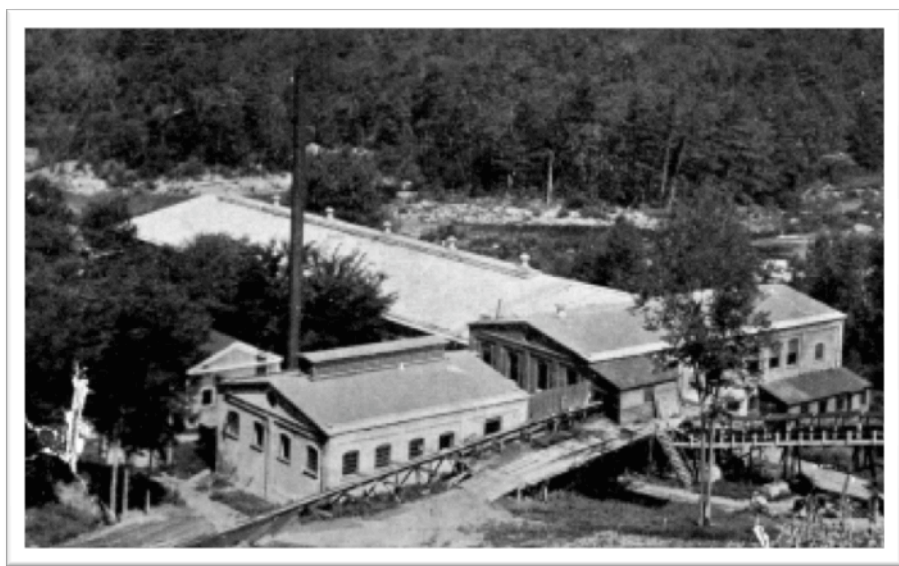
6. Meteorological tower and temporary study platform on summit



7. Beginning of Ted Road



8. Milton Mill 1900-1920 *courtesy of Special Collections, Bailey/Howe Library, University of Vermont*



9. Upper Falls 1907-1908, *courtesy of St. Albans Historical Society*

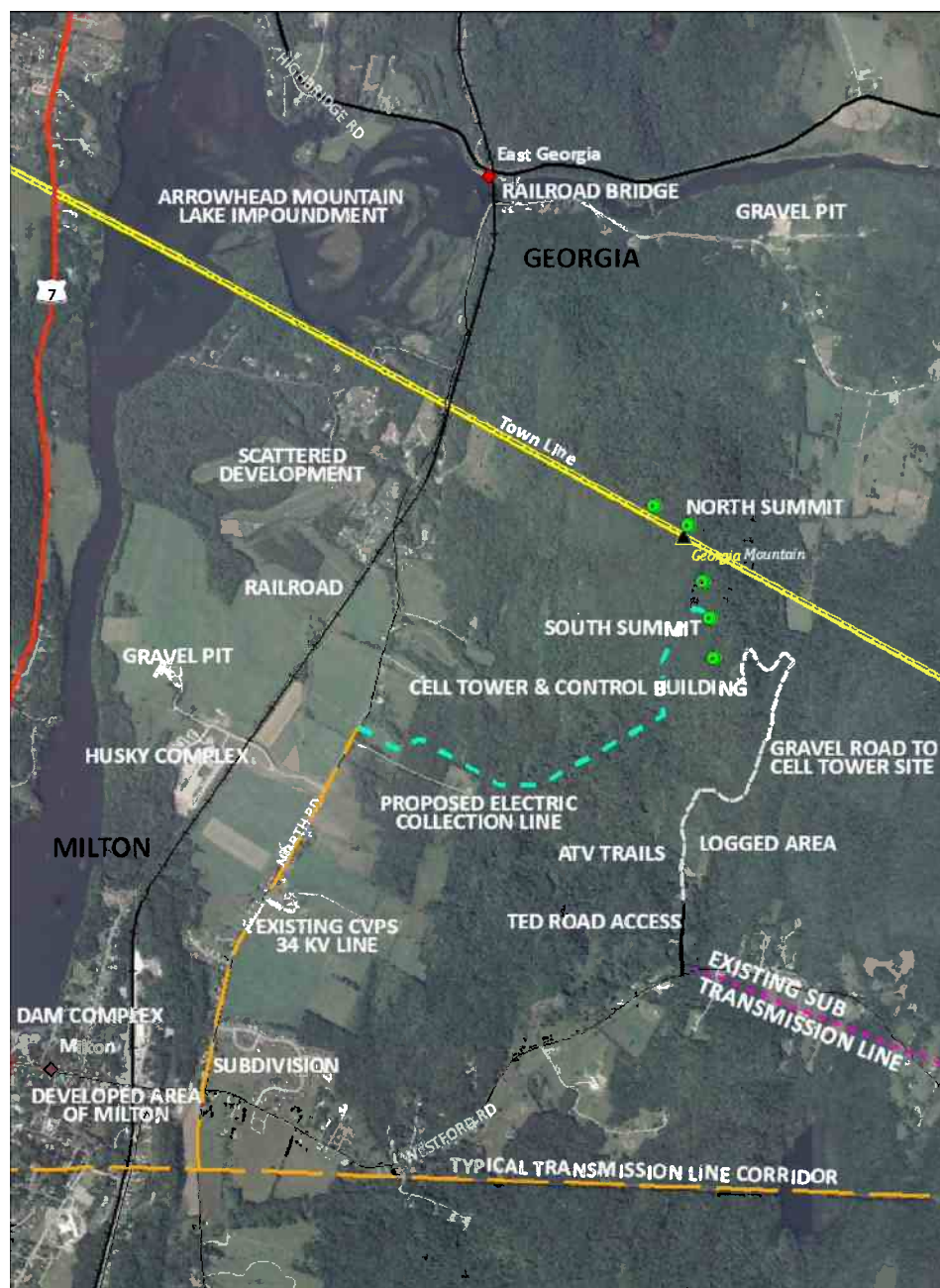


A1.4 The Project Site and Vicinity

The immediate Project area includes the south summit of Georgia Mountain where the turbines would be located and the southern slopes of the mountain which will have the access road and the electrical collection line down to an interconnection point along North Road. Mixed hardwoods characterize the summit with a predominance of oaks and continuous forest cover. There are very few lookouts and no designated public hiking trails to the summit. There are rough trails both on and around the summit as well as leading down the south slopes which are used by ATV enthusiasts - these trails are also accessible to snowmobiles in the winter months. An existing gravel road climbs up the mountain's south side to serve a cell tower complex, which includes several structures and the tower itself, which is sited just below the summit and the proposed wind turbine locations. Currently, a meteorological tower is in place to measure the wind resource in advance of installing the actual turbines. The uses of and development patterns on Georgia Mountain reinforce the conclusion that the mountain and its summit are not pristine, undeveloped areas.

Some areas of the mountainsides were logged. The current owners bought the property with an existing forest management plan, in effect. There are open fields along Ted Road with large 20-acre tracts that were clear cut and chipped prior to GMCW buying the property.

Diagram 1. Aerial View of Project Site and Vicinity-This view shows the road and trail networks on Georgia Mountain, the cell tower site, and other land uses and development in the vicinity of the project.



A2. Is the Project Compatible with its Surroundings?

Although there is a long tradition of wind power and wind energy development in Vermont that has been cited elsewhere in this Aesthetic Assessment, the functional characteristics of wind turbines and towers require them to be of a certain scale and sited in a manner so as to most effectively capture the wind resource for energy generation. However, if one takes a broad view of the Vermont landscape and its evolution over time, the place and presence of wind energy facilities have been and can become an accepted component of the landscape. With the development of more wind farms, including the growing number of residential scale wind turbines, wind energy and its associated infrastructure will become part of an accepted and expected form of the “working landscape”, just as the advent of ski areas dramatically changed the aesthetics and forms of Vermont mountainsides but have become an expected and compatible form of development in the Green Mountains.

The addition of wind energy to the current Vermont landscape over time will reinforce the sense that this form of energy generation belongs to the Vermont landscape in a manner consistent with the adaptation of Vermont’s landscape over time to reflect new trends and developments which affect land use and land use patterns.

In the Project area land uses are quite varied and the area includes extensive commercial and industrial development along with infrastructure such as the Interstate, existing cell tower at the site, transmission corridors and hydroelectric facilities. This range of land uses and the fact that much of the surrounding landscape is developed translates into a more amenable and accepting environment for this proposed new type of energy infrastructure, particularly because the lake at the base of the Mountain has been developed to harness another important renewable resource – hydro power.

As compared to other recent proposals, this is also a very modest project in terms of the proposed number of turbines. As the accompanying sketches show, the siting

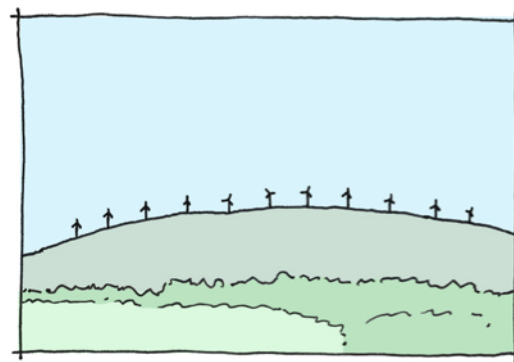


Illustration 1. An illustrative view of a typical grid scale wind project in Vermont of 11 to 16 turbines arrayed in a linear fashion along a ridge line.

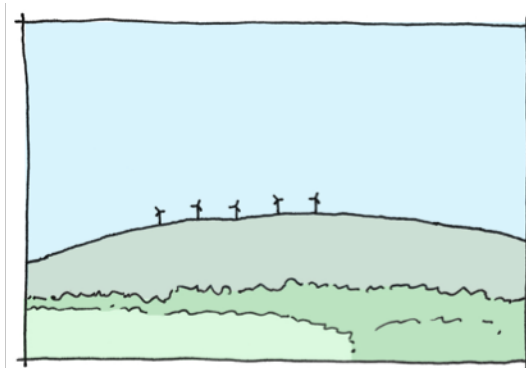


Illustration 2. An illustrative view (looking easterly) of the broad face of Georgia Mountain showing a five turbine array. Fewer turbines results in a less dominant visual quality and promotes a better fit with the surrounding landscape.

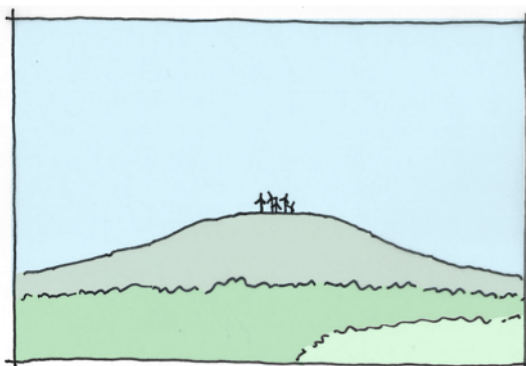


Illustration 3. An illustrative view looking (south easterly) of one end of Georgia Mountain with the proposed turbine array clustered together as a result of the project's smaller footprint and sensitive siting.

of three to five turbines limits the Project's profile from various vantage points, and it doesn't spread out along a linear ridgeline in the manner of projects with 4 to 6 times the number of individual towers and turbines.

The design of the wind turbines themselves have characteristics which enable them to be more compatible with their surroundings and these include: 1) the narrow width and tapered forms of the towers which support the turbines; 2) the blades or rotors of the turbine, which are also tapered in an aerodynamic form; and 3) the light coloration of the towers and rotors which help them blend into the sky, whether partly cloudy or overcast, reducing their presence and prominence in the visual landscape. The color and forms also result in diminishing visibility over distance, with the rotors, in particular, difficult to see from distances over 6 miles. Another factor limiting visibility is the climate of the Milton area and extent of the viewing period – those days during which the Project will be seen. The accompanying table provides a sense of climate conditions throughout the year, which will reduce Project visibility. In this part of Vermont, regular cloud cover, inclement days that can characterize a third of any given season, and the minimal presence of recreational activity in the winter season will further reduce any potential adverse effects from the visibility of the project. In fact, the most recent compilations of weather data by the National Weather Service indicate that for the Milton area in the month of August 2008, there were 22 days with cloudy to partly cloudy cover and in February 2008, there were 23 days with cloudy to partly cloudy cover. Precipitation further impacts visibility. For example, in February 2008, 17 days of the month precipitation were recorded. In August 2008, 11 days with precipitation were recorded for the area. It is commonly accepted that weather conditions in Vermont are variable, and there is no question that atmospheric conditions will affect Project visibility – even fair weather clouds will provide a background that may visually “absorb” the turbine forms, and on days that are inclement, Project visibility will be very limited.

Two other factors are often considered when assessing landscape and land use compatibility in association with wind energy facilities: shadow flicker conditions and noise. The impacts from shadow flicker will be limited due to the number of turbines and the distance of any residences or locations that might be potentially affected. The same circumstances will affect the impact of noise, as the distances to the bulk of the residences in the vicinity of the project are 1/2 to 3/4 of a mile minimum, reducing the potential for shadow flicker and

noise impacts to those residences. The noise study, prepared by Resource Systems Group (RSG) for this Project, reveals that noise from the turbines will be within accepted guidelines.

Finally, the use of existing roads and trails for the access road to the Project site and the careful siting and limited clearing associated with the proposed electrical collection line in close proximity further reduces the potential for incompatibility with surrounding patterns and existing conditions already present on or in the vicinity of the mountain. A compact, Hendrix configured electric collection line on poles 30 to 35 feet high with clearing widths of 5 to 25 feet are being designed. The electrical collection line between the turbines will be underground. Taken together all of these factors help to mitigate the visual impacts of the turbines and facilitate some degree of “fit” with the surrounding landscape.

A3. Are the Colors and Materials Selected for the Project Suitable for the Context Within Which it is Located?

The Project’s primarily colors and materials are those associated with the turbines themselves. The turbine rotors and towers will be a light or white color, which is the best choice for enabling the structures to blend into background sky and atmospheric conditions. Wood poles will be used for the electrical lines - and these are the standard material used for distribution and subtransmission power lines in this region and thus are suitable and appropriate.

A4. What is the Project’s Impact on Open Space?

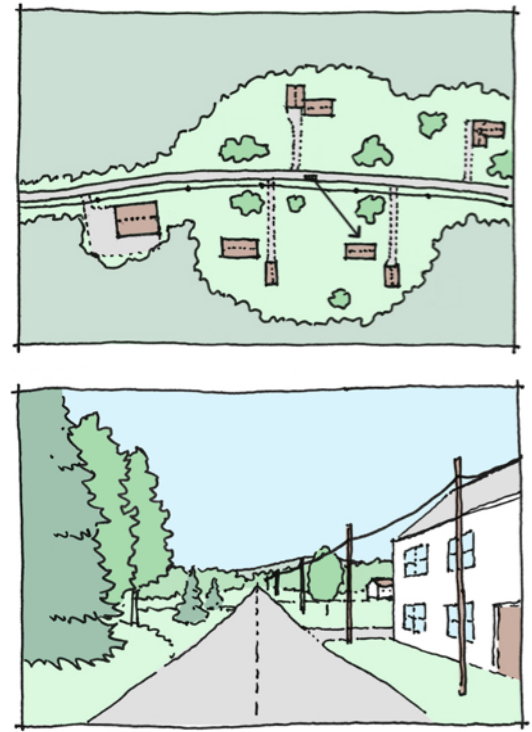
The impact on existing open space is negligible. The Project is proposed for privately owned property and thus will not result in the loss of any open space, whether in private or public ownership. The visual impact of the Project on public investments and public vantage points is addressed in the next section, but the review conducted concludes that no appreciable effect will occur on the use and enjoyment of any public open space or facility when this Project is constructed.

A5. Where is the Project Visible From?**Table 1. PROJECT VISIBILITY FACTS**

	Area	Percent of study area	Percent of viewshed
Total study area (10-mile radius of all turbines)	323 sq. mi.	100%	
Total potential viewshed within study area (see Appendix 1)	149 sq. mi.	46%	
Non-forested potential viewshed within 10-mile radius (see Appendix 1)	65 sq. mi.	20%	44%
Forested potential viewshed within 10-mile radius (see Appendix 1)	84 sq. mi.	26%	56%
Total area of open water within study area	42 sq. mi.	13%	
Total area of open water within study area with potential visibility	22 sq. mi.	7%	15%
	Distance	Percent	
Total miles of road within study area	704 mi.		
Total miles of road traveled (see Appendix 3)	188 mi.	27%	
Total miles of road traveled where ridgeline is visible (see Appendix 3)	16 mi.	2%	
Total miles of road traveled with intermittent views of ridgeline (see Appendix 3)	6 mi.	0.85%	

Initial feedback from local officials, as well as, published reports of the Project indicate that there is support for the Project⁷, which often translates into less concern with regard to visual impacts. For example, the Milton Selectboard has indicated support for the Project, and Mr. Harrison provides testimony, which addresses Georgia Mountain Wind's outreach effort. People are beginning to recognize the viability and importance of wind energy, as highlighted in the introduction to this assessment, and this change in attitude translates into a more open "view" of wind energy and the structures and development associated with it. It is nevertheless important to demonstrate that visibility and the overall viewshed, is tempered by many disparate factors, from distance of views and orientation, to foreground development and vegetation. The accompanying analyses address these type of considerations.

This review has relied on a number of individual assessments to reach the conclusion that the visibility of the Project is relatively limited. There are specific locations from area roads and nearby developments which will have potential views of the Project and these views are addressed in the following summaries and accompanying maps: 1) View from The Road map (see Appendix 3); 2) View From the Road Matrix (see Appendix 6); 3) Viewshed Map: Areas of Potential Visibility (see Appendix 1)⁸; 4) Table 3: Matrix of Viewpoints from Public



Illustrations 4 and 5. Views to the proposed project site and the turbines themselves are often completely blocked or filtered through intervening roadside vegetation, building development and utility lines. The plan view of a roadside condition reinforces this conclusion.

⁷ Newbeck, Phil (2008, October 4). Wind turbines visible from parts of Westford, *Special to the Mountain Gazette*

Monroe, Michelle (2008, August 14). Wind turbines on horizon locally, *St. Albans Messenger*

Page, Candace (2008, November 3). Georgia family proposes to build wind farm in Milton, *The Burlington Free Press*

Page, Candace (2008, November 3). Family business tackles wind development, *The Burlington Free Press*

⁸ A viewshed analysis, in this instance, is based on available GIS data that is designed for regional scale analysis and in many instances can overestimate the area of visibility at a local scale. This is true because a viewshed analysis is based on raster data, which is actually a grid of pixels (or cells), each with an assigned value and is of satellite or high altitude origin. This is opposed to vector data, or what most people think of when they picture a map. The lines on a road map, the points that indicate villages, and the polygons that enclose a town are good examples of a vector map and its components (points, lines, polygons). This type of data looks the most realistic to people, and when used in GIS applications can generate the most accurate data. The sharpness or accuracy of maps created from raster data, on the other hand, depends on the size of the pixel relative to the size of the area being mapped. One meter, or even 3 meter pixels of an entire city can give a very detailed picture; 10 meter pixels look very blocky of the same area, but may be fine for an entire state. All raster data used for the viewshed analysis was obtained from VCGI. The pixel cells for this data are 30 meters and therefore provide for less accuracy.

Investments Within 10-mile Radius (see page 40); and 5) Visual Simulations of Viewpoints from selected locations within the viewshed as prepared by VERA, as part of this application.

The Aesthetic Assessment includes extensive review of potential visibility from the roads and other public spaces within the Project viewshed. This analysis is a major component of assessing overall Project visibility. Several overarching conclusions include: 1) the extent of roadside development and the overall development patterns in the Project area reduce the potential for visual impacts from a three or five turbine Project; 2) heavy roadside vegetation throughout the viewshed creates intermittent views along many of the roads located within the 10 mile radius; and 3) the viewshed has scenic and aesthetic qualities, but they are not unique in Vermont nor have any been singled out as being of statewide or national significance, aside from Lake Champlain itself, which is at the edge of the viewshed.

Key Viewing Points Within Project Viewshed

A number of key viewing locations or vantage points have been evaluated as to the nature and extent of the potential visual impact from the Georgia Mountain Community Wind Project. The discussion that follows evaluates the visual impacts at these locations. Table 2, below, identifies the locations from which visual simulations were taken. These simulation viewpoints are noted in the following discussion.⁹

Table 2. VISUAL SIMULATION LOCATIONS

Viewpoint #	Approximate Distance to Nearest Turbine (mi.)	Location
1	3.9	I-89 Bridge over Lamoille River, Milton
2	1.7	Route 104A at Georgia-Fairfax Town Line
3	3.0	Route 7 at I-89 Exit 18, Georgia
4	2.5	Route 7 at Arrowhead Reservoir, Southwestern Shore

⁹ Appendix 3: View From The Road Map, provides a comprehensive assessment of where and for what length views of the Project will be possible from roads within the Project area.

Table 2. VISUAL SIMULATION LOCATIONS

Viewpoint #	Approximate Distance to Nearest Turbine (mi.)	Location
5	4.4	Route 7 Intersection with Bartlett Road, Milton
6	1.9	Intersection of Westford Road and Hunting Ridge Lane, Milton
7	8.9	Route 2 Causeway to South Hero
7	8.9	Panorama from Route 2 Causeway
8	2.7	BFA High School, Fairfax

Interstate 89. There will be limited views from Interstate 89 due to intervening development, vegetation and topography. The simulation prepared from Viewpoint #1 (I-89 Bridge over Lamoille River, Milton) shows one of the few areas along the Interstate where a view of the Project will be possible. The existing view will change, but the change is not so extreme or dramatic, as portrayed in the simulation, to warrant an adverse conclusion - the turbines are slender and the glimpse is momentary due to the speeds commonly traveled along the Interstate. The Interstate itself is not scenic in this area and represents a major development intrusion onto the landscape. Additionally, this is not considered an outstanding scenic view area, and because the turbines are arrayed along what appears to be a low ridge above intervening topography, this view will not be altered so dramatically to even conclude that an adverse impact will occur.

Arrowhead Mountain Lake. Views of the Project from the area in the vicinity of the existing dam (Viewpoint #4) are consistent with the historic use of local resources for energy generation. The dam relies on water; the Georgia Mountain Community Wind Project relies on another renewable resource - wind. The dam creates an industrial landscape with which the wind Project is compatible.

Route 7 Along and North of Arrowhead Mountain Lake. The simulation prepared as Viewpoint #4 (Route 7 at Arrowhead Reservoir, Southwestern Shore) presents the 5 turbines along the ridge of Georgia Mountain and is a prominent view. While this change is substantial enough and close enough to warrant an adverse determination, because of the Project context and the overall fit of the Project to its locale from a land use development and energy generation perspective, this determination does not extend to the

conclusion of undue adverse. This Project will not be shocking to the average viewer. The simulation from Viewpoint #3 (Route 7 at I-89 Exit 18, Georgia) in the vicinity of the Georgia Public Library is one of the few locations along Route 7 where the Project is visible, and this is from a developed area near to Exit 18 on the Interstate. Given that this area is developed with industrial and commercial land uses, some of which are visible in the simulation, and is not highly scenic, a view of the Project will not undermine any visual qualities and will be consistent with what is already present. This fact, coupled with the clustering effect, which results from the angle of view to the Project, reduces its visual presence and thus the view from this perspective cannot even be considered to have an adverse impact. Further north along Route 7 towards St. Albans in Georgia there will be only intermittent views interspersed with long stretches of intervening topography, trees & extensive roadside vegetation. These views will be of such short duration and increasingly distant so as to greatly reduce any visual impacts. No views are possible of the Project from the elementary school or town offices in Georgia Center. There will be no undue adverse impact from this view.

Route 7 from Milton South. Similar conditions exist for Project visibility from Route 7 south of Milton, where only momentary glimpses are possible. The exception to this is a short stretch of visibility in Milton Village, as shown in the simulation from Viewpoint #5 (Route 7 Intersection with Bartlett Road, Milton). Given the foreground conditions, the presence of an existing 115kV electric transmission line nearby, and the industrial/commercial land uses present, it can be concluded that this is a “working” commercial landscape in transition, with infill and individual development projects ongoing. Thus, the visual impacts of the GMCW Project, as seen in this simulation visible above the commercial development, will be limited, and cannot be construed as adverse when viewed as adverse, or “in opposition” to what is already physically present in the landscape, and how that landscape is viewed by the public. In fact, the Project will complement the notion of a community developing economically and physically into the 21st century.

Overall, views of the Project from the Interstate, Arrowhead Lake and Route 7 will show the complete array in a linear or clustered fashion, but this view is from the context of busy highway along a man made lake with a major dam constructed at the southern end of the lake. Views of the Project from in and around the more developed sections of Milton will be within the context of other structures and developments. This factor reduces the potential for adverse visual

impacts insofar as these foreground elements define a mixed use developed landscape that is already impacted by the presence of or view to infrastructural elements such as power lines, transmission corridors, industrial building sites and parking lots, interstates or wind turbines.

In many instances, the view of the Project will be of a cluster of turbines very closely sited, such as in Viewpoint #3 from the Interstate Exit 18. Other views show the turbines at varying distances, and depending on the vantage point, the turbines are de-emphasized by virtue of foreground elements as seen in Viewpoints #5 (Route 7 Intersection with Bartlett Road, Milton) and #6 (Intersection of Westford Road and Hunting Ridge Lane, Milton).

Another consideration can be made when analyzing Viewpoints #4 and #5 - they demonstrate the role of weather conditions and distance. The Arrowhead Lake view is closer in than the Bartlett Road view and the blue, cloudless skies provide enough contrast to allow the turbines to stand out - but the panorama here is wide (wider than the simulation presents) and the 5 turbines are readily visible but not overwhelming or dominant in the panoramic view. The Route 7/Bartlett Road simulation, over a 4.4 mile distance, presents an array of turbines that are barely noticeable given all the elements in the foreground, and this fact coupled with all the visual information along the highway, and the fact that view here is typically from a moving car, further reduces the potential for visual impact and discordance with the surrounding landscape.

North Road and Westford Road. There is one major housing development and the simulation from Viewpoint #6 illustrates the view from this development at Hunting Ridge Lane, which is the closest housing development to the Project. Many, if not most, of these residences are oriented in a manner that does not look directly at the Project, which will limit daily visibility, and many of those residences with backyard views do have a treeline, which may reduce or eliminate views. North Road (north of Shotwell Lane) is home to Husky Industries. The Husky facility is a large, readily visible industrial development that provides local employment - the GMCW Project is consistent with this use and although visible due to the nature of the turbine, tower structure and rotors, its footprint is actually much smaller than that of Husky's or industrial parks to the north in Georgia and St. Albans. Although it may be concluded that some individuals residents in the vicinity of this Project may consider the Project to be adverse, the average person, taking into account all

the mixed commercial and industrial development in the vicinity, the tradition of landscape use and development for both timber and motorized sports, it can be concluded that the Project when viewed from most locations in this area cannot be considered to be adverse, and in those locations where that determination might be made, the visibility will not be unduly adverse, given the context and conditions present. This change is not inconsistent with the current land uses on the mountain, given the historic role of the mountain as a resource base for logging activity, as the site of a visible cell tower, and for extensive recreational motor sports using ATVs.

Traveling west along Westford Road, views are almost non-existent (see Appendix 3, The View from the Road Map) except for a 3/4-mile stretch with intermittent views along the section of the road just east of the Milton-Westford town line. Here, the views from vehicles will be sporadic and alternated with roadside treelines that will limit the visual impacts. Additionally, the turbines will be viewed more as a cluster than a broad array, also limiting the potential for visual impacts. There is only one very brief stretch of roadway that will have direct view of the Project.

Route 104. Most of this stretch through the town of Fairfax has intermittent views through housing and related development. There are many open fields and farmlands which will have potential views of the Project, particularly north of the intersection with Route 104A. The mitigating factor here is the orientation of the road in a northwest/southeast direction, which is away from the Project rather than focused on it. Additionally, when heading southeast the eye is unquestionably drawn to the stunning views of Mt. Mansfield and the Green Mountain Range, almost directly in the line of sight. There are open views over farmland. There is limited if any visibility from the Fairfax village center due to its location in a hollow, but further south there will be a clear view of the Project from the athletic fields behind Bellows Free Academy. This view is simulated in Viewpoint #8 (BFA High School, Fairfax). This is one of the few vantage points for the Project that can be considered a major public gathering place.

There is a lot of activity in this location and the focus is certainly not of the hills and ridges to the west. There are foreground elements such as utility lines, buildings, fences, and other components of the athletic complex. This is the school's "backyard", and the focus is on the school and the sports venues. It is also interesting to note that there are now several schools in Vermont which have wind turbines

located on their grounds, including the Danville High School, the Addison Elementary School, the Dover and Mt. Holly Elementary Schools (located right on State Highway Route 103) and there is a prominent turbine at the main entrance to the University of Vermont campus. There is an educational opportunity associated with turbines located near to or on school grounds. Nonetheless it is possible that some of those who attend sporting events would be surprised to see the change in view from the athletic fields, and the proximity of the turbines, at 2.7 miles distant, will make them readily visible. This could be a location where that change could be considered adverse.

Note that after the intersection with Route 128, Route 104 turns eastward and drops in elevation to its location along the banks of the Lamoille River. The reconnaissance of this initial section of the highway heading east yielded the conclusion that the Project will not be visible from the remainder of this route due to its low elevation and vegetative screening.

Route 104A. There are intermittent views and two stretches of a 1/2 mile or greater where the Project will be seen from. Some of these views will be across open fields and remnant farmlands. The road is not heavily developed nor densely settled. There is a commanding view of Mount Mansfield to the south near the eastern end of the road, which serves as a focal point for eastbound travelers. The western end of the road is near the I-89 interchange and is in a more developed area. The simulation presented in Viewpoint #2 (Route 104A at Georgia-Fairfax Town Line) shows what the Project will look like from one of the more open stretches of the road. Given the relative proximity to the Project from this view (about 2 miles) and the fact that the landscape here is in part relatively intact with regard to an historic settlement pattern and the scenic qualities associated with a classic Vermont landscape, there is the possibility in some of these locations that a view of the Project could be considered to have an adverse impact on scenic beauty.

At the Arrowhead Lake Fish and Wildlife Access there will be the potential to see at least two of the turbines and their towers and portions of the other three (top of nacelle and rotors only). The nearest turbine will be about 1.3 miles distant and the array will be appear as a cluster rather than spread out along the ridge, reducing its visual presence and prominence. While it can be argued that this is a scenic area, it is qualified by the presence of the railroad bridge and the fact that the lake itself is a man-made impoundment

designed to generate electricity via hydropower and the associated facilities. Once a fisherman or paddler has launched, the option exists to boat or fish in areas without visibility of the Project or to orient away from the Project. These can be considered mitigating factors that will limit the adverse impact to aesthetics in this locale.

Route 2 and Lake Champlain. Very distant views of the Project site are possible from South Hero (near the edge of 10 mile radius), and for approximately 2/3 of the western end of the causeway. There is an additional distant view traveling east on Route 2 that is more focused ahead on the road and not of the mountain, as you approach the Interstate. There are no views along Route 2 otherwise in the stretch between the Lake and the Interstate. The view from the causeway as shown in the simulation of Viewpoint #7 from the Route 2 Causeway on Lake Champlain between Milton and South Hero will be so far distant that the visual impact here will be more one which creates curiosity rather than offense, and will not undermine the other scenic and visual qualities which are present here. The ridge of Georgia Mountain appears to be an integral part of the long low ridgeline topography which is characteristic of this section of the Lake. At this location the view is as much to the south and southwest (of the broad expanse of the lake and the Adirondacks) and to the southeast, where Mt. Mansfield and the high ridge of the Greens are visible. In addition to Viewpoint #7, a simulation site from the Route 2 Causeway between Milton and South Hero, an additional Viewpoint #7 was prepared to show the Project turbines in panoramic view. This view is not unlike the type of view that an individual would take in from this vantage point. When viewed in this context, the potential visual impact from the Project is significantly reduced. Given the distance to the Project at almost 9 miles and the breadth of more engaging views possible at this location, the view of the Project may not even result in an adverse impact to aesthetics or scenic beauty at this location. Tourists traveling south into the Champlain Valley will most likely react positively to a visible example of Vermont's green heritage - the clean renewable energy created by an appropriately scaled wind project.

In terms of the overall visual impact of the Project to those who frequent the shores and waters of Lake Champlain, several considerations mitigate the potential for an adverse impact. These considerations include:

- A) The nearest lakeshore is over 6 miles from the closest turbine. The views of the turbines will not be overwhelming

or particularly dominant. None of the lakeshore along the eastern shore of the Lake (other than the western shore of Hathaway Point) will have any views of the Project and only the tip of South Hero and small portions of Savage and Burton Islands will have visual access to the Project, if there is no intervening vegetation. Only a portion of Burton Island is within the Project's ten-mile radius. These views will be far enough away to limit any visual impacts. Note that the lakeshore and views from the lakeshores and lake itself, while highly scenic in many instances, are not necessarily views of pristine environments. Even Mt. Mansfield has structures and towers on its summit, which are visible from many vantage points. Much of the lakeshore has been developed with camps.

B) The broad panorama provides long views in many other directions, to the long extent of the Greens, Adirondacks to the west, and of the lake itself - these are the views that are and will be focused on.

C) The viewshed map indicates that only about 1/2 of the waters within the 10-mile radius will have potential views of the Project. The waters of the lake constitute about 12% of the Project area within the 10-mile Project radius. Of this 12% only 6% will have the potential for views of the Project.

D) The eye will be drawn to the key visual landmarks, Mt. Mansfield, the Adirondacks, islands, and not to the Project per se.

E) From many vantage points it is likely that the turbines will appear clustered rather than spread out in a long array.

F) As stated, viewers will more likely see this as a curiosity rather than an intrusion, again, given the size and scale of the turbines as they will appear from viewpoints on the lake.

G) It is also important to note that those recreational enthusiasts who are sensitive to the views of the Project can readily redirect or re-orient their boats, anchor in another location, or find many areas of the lake where the Project will not be visible from or will be so small in scale so as to have a negligible impact on their experience or enjoyment of the lake and its environs.

Secondary Views. It should be noted that there are locations in the Project area, which will have views along secondary roads and from open areas along those roads.

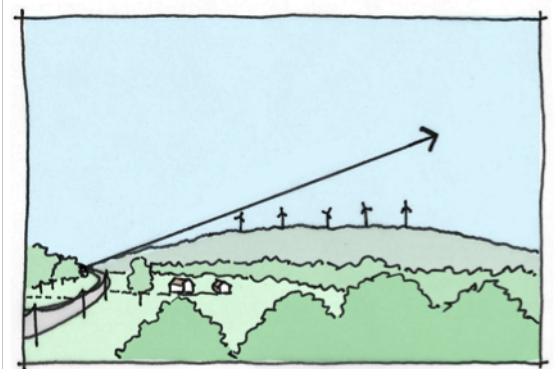


Illustration 6. Depending on vantage point along the road, topography and vegetation may block views of the Project

Views are typically for glimpses or for 2/10 – 4/10 mile long stretches and scattered on residential roads through Georgia, Westford, Fairfax, and Milton. The views are primarily due to short breaks in the roadside treelines or from areas where cleared fields and farmlands are present. Given the overall mileage of roads traveled, which were selected for having potential visibility or for being through roads and not remote or dead end gravel roads, there is minimal visibility of the Project - amounting to only 2% of the 188 miles analyzed. Table 1 provides a summary of these conditions. Based on field observations, distance from the Project, length and nature of the view, and the number of potential viewers, the visual impacts may not even be considered adverse from most, if not all of these locations.

The Matrix and Map (See Appendices 3 and 6) provide more detail about views within the project viewshed. The following table highlights visibility characteristics from the public investments within the viewshed area. See Cultural Resource Map (Appendix 4) for locations of these public investments. It is important to note that the foregoing review focuses on roads and vantage points from which the project may potentially be seen. It must be noted, however, that there are many more locations within the Project's 10-mile radius from which the Project **will not** be seen. Tables 1 and 3 provide, in part, the basis for this conclusion. In fact, the non-forested Project viewshed - areas from which the project may be seen - constitutes only 19% of the lands within the 10-mile radius of the Project.

Additional Considerations. The limited visibility of the Project overall, and several distinct factors facilitate the Project's placement within it's context. These considerations include:

1) Siting - The Georgia Mountain Project proposes to develop five turbines as a cluster on the mountains summit. Their configuration translates into a greatly reduced profile and “visible presence” in the landscape when viewed from many vantage points

2) Scale - For a grid scaled energy generation project, this proposed Project has a very modest footprint as a 3 to 5 turbine development. For comparison, the Sheffield Wind Project has 16 turbines and a more extensive footprint. This scale not only reduces its potential visibility but when viewed from afar, the Georgia Mountain Community Wind Project will not be a dominant element

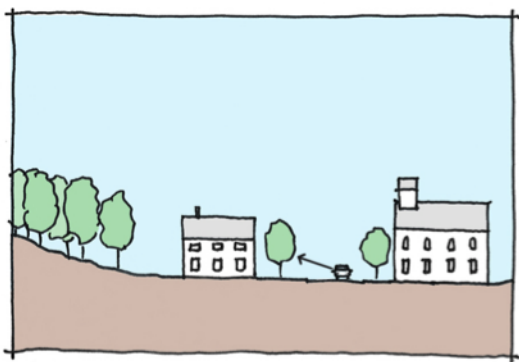


Illustration 7. In locations such as Fairfax village and along Main Street and Route 7 in Milton, the density of village development and its associated buildings, trees and topography limit or eliminate views of the project.

in the viewshed.

3) Night-time Visibility - The lighting of the turbines will be, as required, in conformance with Federal Aviation Administration standards for the night lighting of above ground structures for air traffic safety. This lighting will be in accordance with FAA standards.¹⁰

Lighting is typically a red blinking light, which is rapid discharge incandescent, or strobe type light, and is omni-directional. These are the types of lights visible throughout Vermont on cell towers, water towers near airports, etc. (The three blinking lights on top of the radio towers in Waterbury, visible from Interstate 89, are familiar sights to Vermonters that do not typically offend travelers. Thus the lighting of one or more of the turbines at night will not be a major impact due to the fact that such night -time lighting is readily present on cell towers and tall structures in the region and is an expected and familiar component of the visual landscape at night. They will not constitute a hazard or distraction. People do not spend extensive time outdoors, particularly in the winter months, and thus the public's viewing of these lights will be limited.

Due to the limited vertical beam spread the visual impact from these lights is reduced - typically viewers do not see these lights directly and they do not produce glare as they are designed to be visible primarily to aircraft and not to viewers on the ground. In addition, the visibility of these lights will be mitigated by the distance of the lights from potential viewing related to historic or scenic resources that are identified elsewhere in this assessment. FAA requirements continue to evolve. Any final lighting plan will need to be developed in compliance with all applicable FAA standards.

**Table 3. MATRIX OF VIEWPOINTS FROM PUBLIC INVESTMENTS
WITHIN THE 10-MILE RADIUS**

Location	Approximate Distance to Nearest Turbine (mi.)	Not Visible*	Visible	Glimpse or Limited Visibility	NOTES
CAMBRIDGE VILLAGE BALLFIELD	9.33	●			No apparent views

¹⁰ U.S. Department of Transportation Federal Aviation Administration. Obstruction Marking and Lighting, Chapter 13, February 2007.

**Table 3. MATRIX OF VIEWPOINTS FROM PUBLIC INVESTMENTS
WITHIN THE 10-MILE RADIUS**

Location	Approximate Distance to Nearest Turbine (mi.)	Not Visible*	Visible	Glimpse or Limited Visibility	NOTES
NORTH FAIRFAX TOWN FOREST	6.65		●		Possible views from southern edge of forest
J & L FOUNDATION FIELD	3.03		●		View of project site make up a small portion of wide panoramic view
WESTFORD TOWN COMMON	4.34			●	No views of Georgia Mountain, possible view of portion of turbines
BIRCH HILL	5.41	●			No apparent views
GEORGIA TOWN FOREST	3.3	●			No apparent views
GEORGIA MUNICIPAL FOREST	8.32			●	Forested area, but views may be visible on edges of and through forest canopy
ROTARY HEALTH PATH	8.92			●	Possible distant view
FAIRFIELD SWAMP WMA	9.48			●	Possible distant view
FAIRFIELD SWAMP -	9.22			●	Possible distant view
ARROWHEAD MOUNTAIN LAKE F&W ACCESS	1.36		●		Turbines would be fairly aligned, which would keep visibility within a narrow field of vision (Sears Access Area at Arrowhead Lake)
GEORGIA MUNICIPAL FOREST	8.32	●			No apparent views
FAIRFAX MUNICIPAL FOREST	3.76	●			No apparent views
FAIRFAX STATION FISHING ACCESS	3.86	●			No apparent views

**Table 3. MATRIX OF VIEWPOINTS FROM PUBLIC INVESTMENTS
WITHIN THE 10-MILE RADIUS**

Location	Approximate Distance to Nearest Turbine (mi.)	Not Visible*	Visible	Glimpse or Limited Visibility	NOTES
VAN EVEREST AA	7.27	●			No apparent views
SAND BAR STATE PARK	7.5			●	Georgia Mountain does not appear to be visible due to intervening topography, but distant views of turbines may be possible. General orientation of lakeshore views is toward lake to the west, and existing mature trees would block potential views in many locations within park.
PETERSON DAM AA CANOE ACCESS	4.84	●			No apparent views
MILTON TOWN FOREST	1.45		●		Possible views
SEARS ACCESS AREA	7.67	●			River Access off Rt. 2 near outlet to Lake Champlain- No apparent views
LAMOILLE RIVER F&W ACCESS	8.12	●			No apparent views
HERITAGE PARK	8.65			●	Possible distant view
MALLETTS BAY STATE PARK	7.76	●			No apparent views
COLCHESTER POND AA	8.14			●	Possible distant view through nearby transmission lines
INDIAN BROOK RESERVOIR	8.92	●			No apparent views

**Table 3. MATRIX OF VIEWPOINTS FROM PUBLIC INVESTMENTS
WITHIN THE 10-MILE RADIUS**

Location	Approximate Distance to Nearest Turbine (mi.)	Not Visible*	Visible	Glimpse or Limited Visibility	NOTES
SAND BAR WMA	8.75			●	Possible distant views from lakeshore, but existing mature trees would likely block most potential views. General orientation of lakeshore views is toward lake to the west.
EAGLE MT.	6.41	●			No apparent views
GILSON MT. WMA	9.71	●			No apparent views
CEDAR SWAMP	5.21		●		Possible views
MUNSON WETLANDS	7.47	●			No apparent views
LOWER LAMOILLE RIVER WMA	6.98			●	Possible views from river's edge
CAMBRIDGE	9.58	●			No apparent views

* Not Visible = 0-5% visibility over entire area or length at location

B. THE SECOND STEP OF THE QUECHEE ANALYSIS

The previous section discussed some viewpoints from which the Project's visual impacts may be considered adverse. However, before a project may be found to have undue adverse aesthetic impacts, one of the three following conditions must exist:

1. The project violates a clear written community standard intended to preserve the aesthetics or scenic, natural beauty of the area.
2. The project offends the sensibilities of the average person. The project, when viewed as a whole, is offensive or shocking, because it is out of character with its surroundings, or significantly diminishes the scenic qualities of the area.

3. The applicant has not taken generally available mitigating steps which a reasonable person would take to improve the harmony of the proposed project with its surrounding.

This final step of this Aesthetic Analysis will address these questions.

B1. Does the Project Violate a Clear Written Community Standard Intended to Preserve the Aesthetics or Scenic Beauty of the Area?

"A clear written community standard is one which addresses a particular area (e.g. a part of a town, or a stretch of road), and which clearly identifies the resources to be protected. General statements about the value of rural character do not constitute a clear written community standard."

Question 1 of the second step in the Quechee Analysis is in part answered by reference to two important community documents: The Town Plan and the Regional Plan. The development boundaries of the Georgia Mountain Wind Project are located in the Towns of Milton and Georgia and under the purview of the Chittenden County Regional Planning Commission (CCRPC) and the Northwest Regional Planning Commission (NWRPC). Therefore, we reviewed these local and regional plans and compiled the following summary of the pertinent references/sections (see Appendix 5, Excerpts from the Town and Regional Plan). It can be concluded from this review that the Project does not violate a clear, community standard intended to preserve the aesthetics or scenic beauty of the area in accordance with the Quechee Analysis.

The CCRPC invested two and a half years in the preparation of the 2006 Regional Plan and it was adopted on August 28, 2006. Regional plans, in general, contain overriding goals, policies and recommendations, which are characteristically advisory and non-compulsory in nature. Statements are usually made in terms of "encourage," "support," "promote," and "should," which has been ruled by some legislative bodies as non-mandatory language. Regional plans, as a matter of policy, are focused on broader issues, which affect the region as a "whole," and typically do not consider impacts on an individual town. Thus, while it is important to consider relevant regional policies in this Quechee analysis, these must be weighed against the independent and more specific standards provided in the local town plans.

Although the Chittenden County Regional Plan makes reference to the sensitive nature of siting wind turbines and the potential impact

on scenic views, the plan does not clearly identify resources of aesthetic value or outline policies for their protection. In fact the Plan claims *"Wind power can enhance Vermont's energy self-reliance, is relatively quiet, and has minimal impacts on air and water quality, which mostly relate to site design and development."* The Plan further recommends *"Municipal land-use regulations...should encourage larger-scale renewable energy sources as principal uses."*

The Northwest Regional Plan serves the municipalities of Franklin and Grand Isle Counties, and includes the Town of Georgia. As a regional plan serving many communities, goals are primarily communicated as guidelines and suggestions and are reflected in the language as recommendations to encourage, support, and assist municipalities. An example is on page 2, in which the plan says that it *"reflects the goals of the region and should contribute to a healthy and prosperous future for the land, the water, wildlife and the people who live or visit here."*

Although the goals of the regional plans are broad and far-reaching, they do lay the groundwork for their member municipalities to establish guidelines and standards for wind power and alternative power generation facilities. Recommendations outlined as primary considerations in planning a power facility include sensitivity to site location in terms of national or state recognized scenic vantage points or historic landmarks, consideration of supporting infrastructure and operational requirements when selecting a site, noise mitigation strategies including the possibility of establishing a noise setback, the need to protect wildlife habitats, ecological systems, water and air quality, economic structures, and cultural features in developing the proper site for a potential project, and a focus on minimal disturbance of site and surrounding environment. The regional plan takes into consideration the topography required for wind projects and highlights the lack of high elevation land (above 2,500 feet) within its borders. While the assumption of a minimum number of potential wind projects is made, a promotion of education surrounding issues of utility scale facilities is concurrently reflected within the plan.

The Northwest Regional Plan makes many suggestions for the development of wind projects yet does not convey any sense of hindrance to such projects, provided that siting and mitigation measures are appropriately considered. In fact, the plan contains a short discussion on current sources of energy and the likelihood of continued availability from these sources and goes on to state the

importance of developing alternative and sustainable forms of energy in the region, *“Wind energy offers the prospect of creating an increasing share of electrical production with greatly reduced effects on air pollution compared to conventional generation methods.”* A thorough review of proposed wind projects with the understanding of the Section 248 review process by well-informed municipalities is encouraged, *“so that in the case of a proposed commercial project, the local community will have maximum participation for a positive outcome.”*

The Town of Milton recently adopted its Comprehensive Plan on April 12, 2008. While the Plan contains many references to relevant issues such as aesthetics and renewable energy, there are no provisions specific enough to constitute a “clear, written community standard intended to preserve the aesthetics or scenic beauty of the area” under the Quechee test.

For example, the Comprehensive Plan includes as one of the Town’s fundamental goals *“Emphasis is placed on preservation of Milton’s scenic ridgelines.”* The Plan then includes a section devoted to Aesthetic Resources, which one might assume scenic resources, including ridgelines, would be identified and addressed. However, the Plan makes no reference to scenic ridgelines in this section and no specific ridgelines are recognized. It does reference previous research conducted for Husky over 10 years ago in an effort to name the Town’s aesthetic resources. The Plan indicates that a *“list of more than 20 scenic viewsheds...were identified on a cursory ‘windshield survey’ conducted by Milton Planning Department Staff...and a ranking of these viewsheds was prepared...”* However, the Plan dismisses the relevance and authority of this study by saying *“This selection and ranking of viewsheds in no way reflects the opinions of the Milton Planning Commission. Additional research is needed to fully identify and properly evaluate Milton’s aesthetic resources.”* Moreover, the goals associated with aesthetic resources provide no guidance or control with regard to development on scenic ridgelines or in the area that the wind project is proposed. In the absence of clear identification of the resources to be protected, the proposed project does not violate an applicable community standard as outlined in the Milton Comprehensive Plan.

The Plan does have a section on Conservation Areas, which includes areas *“at the highest elevations and other environmentally sensitive areas..., which have been delineated in and around...Georgia Mountain...”* However, there is no mention of their value to the Town’s scenic resources, nor are there any goals or policies outlined

for this section. There is some ambiguous reference to facilitating conditional uses that are appropriate in the Agricultural/Rural Residential District, but not as a matter of law. This section also indicates that the boundaries of the district are not accurate and that adequate information needs to be obtained to precisely delineate the district. Because the relevance of these Conservation Areas to scenic and aesthetic values is not articulated in the Comprehensive Plan, it cannot be concluded that the project violates a clearly written community standard under the Quechee test.

The Milton Plan has also divided the Town into planning areas. The Georgia Mountain Wind Project falls within the East Milton Area, which is described as a low-density residential area that has the highest potential for resource utilization. The intent of this area is *"that low intensity planned residential developments occur here while taking into account the need to provide for resource utilization..."* Although agriculture is given as one example of a potential resource, wind utilization is not mentioned or discouraged and cannot be ruled out as a possibility. Furthermore, there are no goals or policies that distinctly deter or forbid development in the East Milton Area, including on the ridgelines of Georgia Mountain. In fact each of the six goals listed in this section only include affirmative statements regarding development and other community activities.

The Energy section of the Plan provides the most specific language supporting wind resource development stating, *"The Town should focus its efforts toward energy efficiency, energy conservation, land use planning, renewable energy resources and transportation... Renewable energy resources such as wood, solar energy, cogeneration, wind generation, biomass, and hydroelectricity are other sources of energy that may also help Milton reduce its dependence upon petroleum and other non-renewable resources."* The Plan even makes explicit reference to the proposed project and acknowledges that wind measurement equipment has been installed on Georgia Mountain. There are no comments, suggestive or otherwise, indicating the Town's disapproval or exclusion of this type of development. In fact the Plan further substantiates wind development by listing as a goal *"Facilitate renewable energy including, but not limited to wind, solar, wood and hydro including the existing Lamoille River dams."* Wind energy is not differentiated between domestic- and industrial-scale. Moreover, the Plan includes an Economic goal promoting *"industrial and large-scale commercial development."*

Like Milton, the Town of Georgia's Municipal Plan contains no provisions specific enough to constitute a "clear, written community

standard intended to preserve the aesthetics or scenic beauty of the area” under the Quechee test. The Plan does include a section on Scenic Resources, and identifies Georgia Mountain as a “noteworthy” land feature (p. 25). The Plan “encourages” the preservation of such noteworthy features, but provides no further policies that distinctly prohibit or preclude development on the ridgelines of Georgia Mountain. It does offer some suggestions for minimizing visual impacts, such as innovative design and layout of development, vegetative buffers and screening, or purchasing of development rights (p. 26). In fact, this suggests that development might occur on noteworthy land features. Without clearly defined, unambiguous policies for preserving the noteworthy features of Georgia Mountain, it can be concluded that the proposed Project does not violate an applicable community standard as outlined in the Scenic Resources section of the Georgia Municipal Plan.

There is some additional language in Section III.A Topography and Geology, that suggests “*developments on ridges and hilltops be discouraged*” and their “*aesthetic impacts should be prevented.*” However, there are no additional goals or policies affirmatively forbidding development in such areas, and none specifically addressing development on Georgia Mountain. Moreover, there is language in the Energy section of the Plan, which *supports* the development of electrical wind energy projects. For example, the Plan states “*anything Vermonters can do to reduce their dependency on imported energy resources will show significant benefit to the states economy,*” and that “*we should begin to look more seriously at alternative energy sources for our future needs. Emphasis should be placed on renewable energy sources such as wood, methane, ethanol, wind, solar, and hydro*” (p. 52). The Plan further promotes “*reducing the use of and dependence on expensive and polluting energy sources*” and “*using renewable energy resources*” (p. 53).

We have reviewed the applicable local and regional plans of the other communities within a 10-mile radius of the Project, and did not identify any provisions that would suggest that the Project violates a clear written community standard in any such plans. In conclusion, the applicable Regional and Town plans do not contain “clear, written community standards intended to preserve the aesthetics or scenic beauty of the area” because there are no mandatory provisions or language, which are considered a clear guide for protecting scenic values under Step 2 of the Quechee analysis.

B2. Does the Project Offend the Sensibilities of the Average Person? Is the Project, When Viewed as a Whole, Offensive or Shocking, Because

it is Out of Character with Its Surroundings, or Significantly Diminishes the Scenic Qualities of the Area?

The basis for answering this component of the Quechee Test is established through the introductory narrative and the preceding sections of this report. The first part of the question speaks to the sensibilities of the average person, someone who may not be directly affected by the Project, but who can view the Project as proposed in a manner that is not clouded by the potential for impacts that will directly affect them in a personal way. Through the polls and studies cited as well as anecdotal experience there is increasing evidence that the average Vermont person finds that such projects do not unduly impact their sensibilities, and who sees wind energy as a desirable alternative to fossil fuels. Wind turbines provide symbolic, as well as actual, representations of a “green” and sustainable future. In Sheffield, townspeople voted to support the proposed wind farm. In Searsburg, consistent with the PSB findings on the Docket, follow up studies demonstrated substantial local acceptance for the project.

The developers of Georgia Mountain Community Wind have undertaken a comprehensive public outreach effort, and their findings, as outlined elsewhere in this report and in the testimony of Mr. James Harrison, indicate widespread support for this Project. This may be in part due to the project context in a growing portion of Chittenden County that has commercial, industrial, and infrastructural development as integral part of its land use patterns, a pattern within which the proposed Georgia Mountain Community Wind Project can readily fit, and not be construed as being out of character on many of its merits. Finally, given the land use patterns and aesthetic qualities of the Project environs and the fact that the scenic qualities of the area are valued but not celebrated or elevated to the distinction of being unique, precious, pristine or intact, it can be concluded that the Project, as proposed, will not significantly diminish the scenic qualities of the area. Thus it can be concluded that the Project will not be shocking or offensive to either the average person or when viewed as a whole.¹¹

¹¹ The Public Service Board Findings #179 and 180 in Docket 7156/ The Sheffield Wind Project concluded that: 1) (in #179) “...the average person viewing the project would not be shocked or offended because the majority of the public viewing areas are at a sufficient distance from the proposed turbines that the turbines would not dominate the view.” and 2) (in Finding #180) “There would be limited views of the project from most of the major roads in the area. Where the project would be visible from a road the visibility would be intermittent due to vegetative screening along the roads and, due to the speed of the vehicle, the duration of the view would be limited.” (Docket 7156, pp. 62 and 63). Both of these conditions apply to the Georgia Mountain Community Wind Project, and in the instance of visibility from roads, the assessment found that there are highly limited views from the 4

B3. Has the Applicant Failed to Take Generally Available Mitigating Steps which a Reasonable Person Would Take to Improve the Harmony of the Proposed Project With Its Surrounding?

There are a number of mitigating steps, which the developer has taken to improve the Project's harmony with its surroundings. Given that wind turbines cannot be hidden, and have to be sited above treeline or on prominent topographic features in order to be able to generate sufficient energy to make the Project cost effective, this Project has been proposed for a site that can readily accommodate the Project with limited impacts. This is a "small footprint" project with 3 to 5 turbines, largely using existing access and utility corridor. Thus, the decision to site the Project here and to develop it at a certain scale represents a reasonable mitigation measure in and of itself. As stated, wind energy projects must be sited where the wind is, so this Project has been proposed for a prominent summit that will have suitable access to the resource.

Other appropriate, effective and reasonable mitigation measures already incorporated into the Project design include but are not limited to the following steps:

- The collocation of the access road with an existing road and existing trails to minimize new clearing and grading for road construction. The primary turbine development area has really been confined to a narrow band of about 3,300 feet of the mountain ridgeline. Additionally, within the primary wind turbine development area at the mountain summit, the electrical collection line will be located underground. The above ground electrical connector lines and the access roads will be located within a forested area of the mountain's southern and southwestern slopes. Where the electrical corridor departs the road, it will be sited within a narrow 25' wide ROW, limiting its visibility and visual impact. The road itself, at 17 feet in width, will require variable clearing for grading, but cleared areas will be kept to a minimum - typically 35 to 50 feet in width. Taken together, these design features serve to mitigate the overall visual and physical impacts to the mountain landscape itself. The electrical connections between the turbines will be undergrounded, another mitigation measure.

state highways, Routes 7, 2, 128 and 104 in the project viewshed, and other than a few sections where there would be short glimpses, there is only 1 location where the project will be readily visible from Interstate 89. See "The View from the Road" matrix and map for more detail.

- The use of light colored Project components to facilitate the blending of the structure with its atmospheric backgrounds.
- The outreach effort, while not a mitigation measure in and of itself, represents a good faith effort on the part of the developer by providing informational and educational material about the Project, informing the public and those living within the project's viewshed about Project details and outcomes. This Project represents an effort by a local family on locally owned property to generate power for Vermont.
- The fact that wind turbines and towers can be decommissioned and removed is another important potential mitigation measure. All of the Project elements can be removed or taken down to grade once the useful life of the Project is complete. Thus, the site can be returned to a condition closely resembling that which existed before construction.¹²

¹² The Public Service Board, in Docket 7156 concluded that light colored turbines, and the proper placement of the turbines, access roads, electrical connector lines and the proximity to a transmission corridor all constituted "generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings." (Docket 7156, pp. 68).

OVERALL CONCLUSION

Thus, and based on the review, findings and conclusions contained in this Aesthetic Assessment, it can be concluded that **the Georgia Mountain Community Wind Project will not result in an undue, adverse impact on aesthetics** because: 1) the Project does not violate a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area; 2) the Project does not offend the sensibilities of the average person and is not out of character with its surroundings or significantly diminishes the scenic qualities of the area; and 3) the applicant has taken generally available mitigating steps which a reasonable person would take to improve the harmony of the Project with its surroundings.