

KIBBY WIND PROJECT

Visual Impact Assessment



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VISUAL IMPACT ASSESSMENT

Abstract: The following report examines the aesthetic impacts of the proposed Kibby Wind Power Project. The project would consist of 44 turbines located along the Kibby Range and portions of the Kibby Mountain ridge. Based on the criteria contained within the Maine Comprehensive Land Use Plan, and on standard visual impact assessment criteria, the proposed project would not result in undue adverse aesthetic impacts within the surrounding landscape. The project ridges are difficult to see generally, and are not distinctive in form or important focal points. They are not located near any designated recreational uses of either high sensitivity or of state or national significance. The proposed project would be over 15 miles away from the closest point of the Appalachian Trail. The project size is modest, occupying only two named ridges with numerous undeveloped ridges remaining around the project including the northernmost summit of Kibby Mountain itself.

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PART I: INTRODUCTION

A. Purpose of Report

This report examines the aesthetic impacts of the proposed Kibby Wind Power Project. It describes the characteristics of the proposed project including turbines, roads, and transmission lines, and how they may affect the surrounding area generally and public scenic and recreational resources within a 15-20 mile radius of the proposed project in particular. Impacts to private residences and camps are discussed generally, though as a rule access to private property for purposes of analysis is not feasible.

The proposed Kibby Wind Power Project falls within the unincorporated territories of Maine and must be reviewed by the Maine Land Use Regulation Commission (LURC). Portions of this project would occupy areas currently within the General Management (M-GN) and Mountain Area Protection Zone (P-MA). The latter includes all areas over 2700 feet (823 meters (m)) in elevation. The aesthetic effects of rezoning these portions of the Mountain to Planned Development (D-PD) are discussed.

The methodologies used in the aesthetic impact assessment are outlined below and the assessment and conclusions discussed in detail in Part II of the report. This report is accompanied by several Appendices including the following:

- Resumes of Jean Vissering of Jean Vissering Landscape Architecture; David Healey, GIS Mapping Specialist with Stone Environmental; and James Zack of XtraSpatial Productions who prepared the accompanying photo simulations.
- Project Map
- 20-Mile Radius Viewshed Map
- 15-Mile Radius Viewshed Map
- Photo Simulations
 - Sarampus Falls Rest Area
 - Jim Pond
 - Route 27 Near Vine Road
 - Kibby Mountain Fire Tower (2)
 - Porter Nideau Road on Eustis Ridge
 - Avery Peak (Appalachian Trail)

B. Author Background and Qualifications

Jean Vissering is principal landscape architect with Jean Vissering Landscape Architecture in Montpelier, Vermont. Her educational background includes both undergraduate and graduate degrees in landscape architecture. Her practice focuses on visual impact assessment, visual resource planning, community planning and design, and residential design.

Visual assessment and planning projects include housing subdivisions, ski areas, transmission lines, and communication towers, and have often been on behalf of Towns, Regional Planning Commissions and citizen organizations. She became

involved in wind energy issues in 2002 when she helped facilitate discussions with numerous stakeholders in Vermont in a series of meetings sponsored by the Vermont Public Service Department. She wrote *Wind Energy and Vermont's Scenic Landscape* outlining areas of consensus regarding the design and siting of wind energy projects in Vermont (available on line at the Vermont PSD website). Since then she has spoken around the country on the issue, and has provided informal and formal assessments for several wind projects including the Deerfield Wind project in southern Vermont on behalf of PPM and Vermont Environmental Research Associates, and for the Appalachian Trail Conservancy concerning the proposed Redington Wind Project in Maine. She has also worked on behalf of Towns and Regional Planning Commissions to provide independent evaluations of proposed wind projects and to ensure a thorough review. She is currently a member of a National Academy of Science committee examining the impacts of wind energy projects with a focus on the Mid-Atlantic states.

From 1982 until 1997 she taught at the University of Vermont including both undergraduate and graduate courses in visual resource planning, landscape design and park and recreation design. Prior to that and beginning in 1976, she worked with the Vermont Department of Forests, Parks and Recreation as a park planner, state lands planner, and reviewing projects for aesthetic impacts under Vermont's Land Use Law known as Act 250.

C. Aesthetic Assessment Methodology

Two methodological approaches have been used in assessing the aesthetic impacts of the proposed project. First, in evaluating proposed projects under its jurisdiction, the LURC refers both to the Maine Land Use Standards and Comprehensive Land Use Plan (CLUP) and to the Land Use Regulation Law, Subchapter III Land Use Standards. The underlying standard for review is as follows:

Adequate provision has been made for fitting the proposal into the existing natural environment in order to assure there will be no undue adverse effect on existing uses, scenic character, and natural and historic resources in the area likely to be affected by the proposal. (LURC rules Section: 10.24 General Criteria for Approval of Permit Applications)

Subchapter III Land Use Standards for LURC review of development projects includes the following under E. Scenic Character and Historic Features.

1. *Scenic Character*
 - a. *The design of a proposed development shall take into account the scenic character of the surrounding area. Structures shall be located, designed and landscaped to reasonably minimize their visual impact on the surrounding areas, particularly when viewed from existing roadways or shorelines,*
 - b. *To the extent practicable, proposed structures and other visually intrusive development shall be placed in locations least likely to block or interrupt scenic views as seen from traveled ways, water bodies, or public property.*

- c. *If a site includes a ridge elevated above surrounding areas, the design of the development shall preserve the natural character of the ridgeline.* (LURC Rules Section 10.25.E.1 Scenic Character, Natural and Historic Features)

Other goals and policies contained in the CLUP are discussed including particular scenic resources identified in the Plan. The Plan provides no specific guidance for evaluating or siting wind energy projects. The unique aspects of wind energy projects and their relationship to the surrounding landscape generally and to scenic resources in particular have been addressed in detail using the methodology described below.

The steps taken in preparing the visual assessment are based upon extensive field inventory work including visiting significant public use and recreation areas (e.g., driving along roads, canoeing lakes and ponds, hiking trails, and visiting village centers and historic sites), along with photographic and written documentation of views and their visual characteristics. Visual inventory work was conducted primarily during leaf-off conditions.

In October 2006 TransCanada hosted an informal public meeting in the Stratton Town Hall. Members of the public were invited to view information about the project and to talk informally with project representatives. The meeting was well attended by 40 people. Many offered suggestions about areas from where they thought the project would be visible, indicated areas they cared about and thoughts about the project in general. These comments were very helpful in determining areas from which simulation photographs should be provided and where detailed field inventory should be conducted.

This report is organized as follows:

A. Project Description: A discussion of the project elements and their visual characteristics including (see Appendix A Project Map)

1. Turbine Design: height, color, form
2. Turbine Location: miles of ridgeline, cleared areas
3. Turbine Lighting
4. Meteorological Towers
5. Access Roads
6. Power Lines: on-site and off-site collector and transmission lines
7. Substation
8. Operations and Maintenance Building and Laydown Areas

B. Project Site Characteristics

C. Regional Landscape Character: A discussion of the visual attributes and scenic, natural and historic resources of the surrounding landscape within a 15-mile radius of the project.

D. Visibility of the Proposed Project from Public Use Areas within the Region: A summary of the places from which the project would be visible. These are summarized in the Table of Views, Appendix B. The following information found in the Appendices provides useful reference.

- **Viewshed Maps:** These computer-generated maps indicate *potential* visibility of the turbines based upon topographic interference. The viewshed maps highlight open areas including lakes and ponds, open meadows, and wetlands where visibility is more likely (tan). Visibility within forested areas (shown in dark green) is expected to be minimal, though this may be influenced by forest harvesting practices. Two viewshed maps show the 15-mile study area in detail and a wider 20-mile area. Actual visibility in all areas must be field verified. The viewshed map does show with reasonable certainty areas from which the project would not be visible. The viewshed assumes all forested areas to have trees averaging (40 feet 12 m) in height. (see Appendix A which includes a 15-mile Viewshed Map; and a 20-Mile Viewshed Map. Details about how the viewshed maps were constructed are also provided in Appendix A)
- **Photographic Documentation:** photographs of the project site and from many viewpoints are included in the report and in Appendix C. Photographs used in this report were taken either by Jean Vissering or by TRC staff members as noted. All photographs of the project site were taken with the equivalent of a 50 millimeter (mm) lens, which most closely reflects what the human eye sees. Some photographs illustrating other views vary in focal length. GPS points were recorded for each viewpoint.
- **Simulation Photographs¹:** Simulation photographs were prepared for the following locations (Appendix D): Kibby Mountain Fire Tower (2); Sarampus Falls Rest Area on Route 27; Route 27 near Vine Road; Porter-Nideau Road on Eustis Ridge; and Avery Peak on the Bigelow Range on the Appalachian Trail. The simulation locations were selected based on public comments and to present a range of different settings and distances. The simulations show turbines, clearings, meteorological towers, and roads where they would be visible. (See Appendix D for a discussion of how the simulations were created.)

E. Sensitivity of Viewpoints

Some viewpoints have greater sensitivity to aesthetic impacts than others due to factors such as the expected experience level (e.g., a natural landscape without motorized vehicles or equipment), the distance from the project, the duration of view, the scenic quality of the view, and the expressed public value in either local, state or national planning or other documents. This section identifies certain

¹ A note about nomenclature: Landscape Architects generally use the term “photographic simulation” to referring to a photograph on which images of turbines or other proposed development are superimposed to “simulate” how the project will appear from particular viewpoints. Computer specialists are now using the term “photomontage” to refer to the layering of other images onto a photograph, while “simulation” refers to a virtual landscape image created using digital elevation modeling and enhancing it with digitally created images of trees, buildings, roads, etc. to mimic existing conditions. The latter have not been used in this report.

viewpoints within the study area that warrant greater analysis due to their relative sensitivity to aesthetic impacts.

F. Assessment of Visual Impacts

The assessment of visual impacts examines the **degree** to which characteristics of the proposed project may affect the overall experience of the landscape within the region as a whole or degrade views from highly sensitive viewpoints.

G. Compliance with LURC Standards and Determination of Undue Adverse Impacts

H. Conclusions

Appendices

- A. Project and Viewshed Maps
- B. Table of Views
- C. Photographs
- D. Simulations
- E. Resumes

15-MILE STUDY AREA

The focus of our analysis was an area roughly 15 miles in radius around the proposed project. Often a 10-mile radius is considered sufficient since at that distance the turbines appear very small and normally occupy a very small portion of the view. It is within 10 miles that visual impacts of wind energy projects are more likely to be significant. However, due to the geography of this area and the scenic resources that occur in the 10-15 mile radius around the project, we included all resources within this larger study area in our analysis. In a few cases scenic resources up to 20 miles away were also considered.

A Note About Project Names

The Kibby Wind Power Project occupies two complex horizontal ridges depicted on maps generally as Kibby Mountain and Kibby Range. These two project areas are referred to generally in this report as **Kibby Mountain** or **A Series** which occupies the northern area and includes 19 turbines. The northernmost and highest peak of Kibby Mountain, the site of a small fire tower and forest wardens trail, would not be developed. The 25 turbines on Kibby Range to the south are referred to as either **Kibby Range** or **B Series**. This ridge divides into two forks heading south toward Route 27 near Sarampus Falls and southeast in the direction of Antler Hill.

PART II: VISUAL IMPACT ASSESSMENT

A. Project Description

The Kibby Wind Power Project consists of 44 **turbines**,² of which 19 would be located along a ridge just south of the summit of Kibby Mountain (A Series), and 25 of which would be located on a divided ridge known as the Kibby Range (B Series). The turbines would be Vestas V-90 3 megawatt (MW) which are 263 feet (80 m) to the nacelle (hub) and a total of 410 feet (125 m) to the tip of the blades. The rotor diameter is 295 feet (90m). The turbines would be a white or off-white color. Each turbine site would consist of a .2 acre gravel pad with the turbine at the center. A larger 1 acre area will be cleared during construction but on portions of this area vegetation would be allowed to re-grow. There would also be 4 permanent **meteorological towers** which would be lattice structures at hub height (approximately 260 feet). They would be similar to the 3 existing meteorological towers that are 197 feet tall.

Some of the turbines would be lit at night. Current FAA guidelines recommend one red (L-864) nighttime strobe mounted on top of the nacelle of turbines at the beginning and end of each string and approximately every half mile in between. A preliminary FAA review of the project suggested that 7 out of 19 turbines may need to be lit in Series A and 18 out of 28 turbines lit in Series B. TransCanada will continue to work with FAA on refining the obstruction lighting to ensure that safety requirements are met with minimal lighting.

Existing logging roads provide excellent **access** to the site, including Spencer Bale Road, Hurricane Road, Wahl Road and two unnamed roads. The project will require 17.3 miles of new access roads. These have been sited to avoid steep grades and associated regrading. **Access roads** would be 20 to 25 feet wide while **summit roads** between turbines would require a temporary width of 32 feet, a portion of which would be allowed to revegetate following project construction. Approximately 13.8 miles of road would be above 2700 feet (823 m).

Power will run underground from the turbine to **collector lines** running along the summit roads. Above-ground collector lines would run between turbines on Kibby Mountain, then cross the valley over Kibby Stream and Wahl Road to a substation on the northeast flank of the Kibby Range near Wahl Road. Collector lines would also run between turbines on Kibby Range (B Series), then through an existing clear cut and down the mountain to the Kibby Substation. The 34.5 kilovolt (kV) collector lines would be mounted on 60-foot poles. These lines require a cleared width of 60 feet but would be located in existing cleared areas where possible.

The **Kibby Substation** would consist of a 215-foot by 415-foot fenced area accessible off Wahl Road. It would be screened from view using existing vegetation and indigenous evergreen plantings if needed. From the substation a **115kV transmission line** would extend approximately 27.7 miles to the Bigelow substation south of Stratton (see 20- Mile

² Project maps show 46 turbines, 2 of which would be eliminated after further site studies.

Viewshed Map, Appendix A). The lines would be carried on wooden H-frame structures ranging in height from 50 to 100 feet and requiring a 125-foot wide clearing. The line would follow portions of Wahl Road, then run west of Antler Hill, crossing Route 27 and the North Branch of the Dead River just west of Vine Road, then along township lines continuing west of Reed Hill. It then angles southeast and crosses the South Branch of the Dead River and Route 16 about a mile west of Stratton. It continues along the flanks of Hedgehog Hill and crosses Route 16/27. At this point the line would parallel an existing 115kV transmission line (Boralex) and continue along side this existing line until it reaches the Bigelow substation. Crossing Route 16/27 and for another approximately 1200 feet, the transmission line will be within the Appalachian Trail corridor. The trail itself would pass through the existing Boralex right-of-way (now about 150 feet wide) which would be widened an additional 125 feet to accommodate the new transmission line..

A permanent **Service Building** with associated storage area would be constructed adjacent to the Kibby Substation. The building itself would be about 3600 square feet in size and occupy an area of about 0.1 acre.

During construction, additional cleared areas would be needed for **temporary storage** of parts and equipment. These would be located in areas that have recently been cleared for forest management on the site and/or in the vicinity of the intersection of Gold Brook Road and Route 27.

B. Project Site Characteristics

The project ridges are relatively horizontal in form with small undulations. The northernmost ridge lies approximately 0.6 mile south of the summit of Kibby Mountain, the highest point along the ridge (elevation 3638 feet) and the location of a fire tower. The flanks of Kibby Mountain have been and continue to be actively logged below 2700 feet, though much of this higher elevation area has been historically logged. A major secondary forestry management road, Spencer Bale Road traverses the southern end of Kibby Mountain and provides access to the site.

Kibby Range is a long slightly undulating ridge that divides into two forks to the south and southeast. The highest point is at the northern end of the range at 3286 feet (1002m). While small saddle areas dip below 2700 feet (823m), most of the ridgeline is between 2800 feet (854m) and 3000 feet (915m) in elevation. The western fork or prong extends farthest south and is visible from Route 27 by the Sarampus Falls Rest Area. The ridge has been heavily logged and logging roads currently surround almost the entire ridge. Gold Brook Road runs along the west side of both Kibby Range and Kibby Mountain. A secondary forest management road, Wahl Road, circles the northern, eastern and part of the southern flanks of Kibby Range.

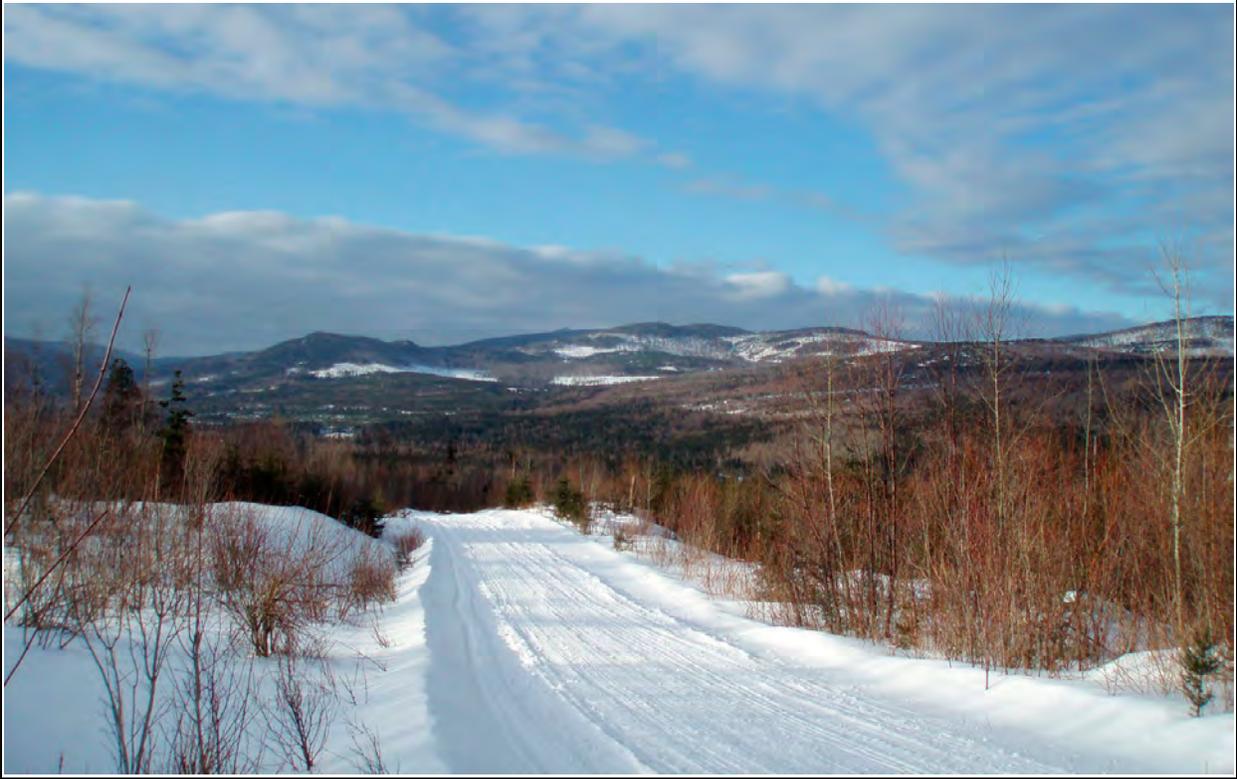


Figure 1. Kibby Mountain (A Series) from Wahl Road.
This is one of the few vantage points where the entire range is visible in close proximity.



Figure 2. Kibby Range (B Series) from Spencer Bale Road

C. Character of the Region

The project is located in the Boundary Mountains which extend southwesterly to northeasterly from New Hampshire to Attean Pond along the border between Maine and Quebec, Canada. These mountains are part of the Appalachian Mountains, but separated from the ridges to the southeast over which the Appalachian Trail runs (sometimes referred to as the “Longfellows”) by the Dead River valley. Within the 15-mile study area there are no mountains over 4000 feet in elevation, but 17 named mountains over 3000 feet (see chart of Maine’s highest peaks, Figure 4)³. The valleys in between are characterized by numerous streams, wetlands, lakes and ponds. The area has a long history of logging activities as noted on a series of historical plaques at the Sarampus Falls Rest Area on Route 27. Route 27 is the only State Route within the 15-mile radius, with the exception of a small portion of Route 16 south of Stratton. Both these roads are in the deeper valleys formed by the North and South Branches of the Dead River. In the wider plains around Stratton, the Dead River takes a meandering course and empties into Flagstaff Lake. To the south of Flagstaff Lake the Bigelow Mountain Range rises steeply and its jagged peaks form a strong and compelling focal point within the area.



Figure 3. Bigelow Range from Cathedral Pines Rest Area

³ Within a 20-mile radius there are three peaks that are over 4000 feet in elevation: West Peak (4150’), Avery Peak (4088’) and Bigelow Mountain (4150’).

A network of gravel roads run around the various Boundary Mountains. For the most part, these are private roads and used primarily by logging trucks but also by recreationalists including hunters, fishermen, snowmobilers, ATV users, and hikers. Some of the more heavily traveled roads include Gold Brook Road (also known as Beaudry Road) which runs along the west side of the project ridge and Spencer Road (also called Appleton or Hardscrabble Road) which runs north of Kibby Mountain all the way to Route 201 to the east. Other well used gravel roads include King and Bartlett Road, Tim Pond Road, Flagstaff Road and Eustis Ridge Road. While these roads are passable most of the year, high clearance vehicles are recommended and care must be taken to avoid logging trucks. For most other roads high clearance vehicles are a necessity.

There are five private sporting camps accommodating visitors in the area, Kibby Camps on Spectacle Pond, King and Bartlett Camp on King and Bartlett Lake, Tim Pond Camps, Tea Pond Camps, and the Megantic Club on Big Island Pond (private, members only).

Significant lakes and ponds within the area include Flagstaff Lake; Jim Pond; several ponds within Chain of Ponds including Natanis Pond, Long Pond Bag Pond, and Lower Pond; Tim Pond; Spencer Lake; Crosby Pond, Baker Pond, Spring Lake, Holeb Pond, Attean Pond and Big Island Pond. There are also numerous streams that are valued for fishing and provide scenic views from roadsides. The Maine Forest Service provides campsites along many lakes, ponds and popular rivers for boating. Most are primitive with no facilities.

The Appalachian Trail is outside the study area, but portions within the Bigelow Range are within 20 miles of the proposed project. Cranberry Peak within the Bigelow Range is a relatively popular hiking destination and at the edge of the study area. Within the study area there are numerous peaks, several of which have fire towers on top and many of which are accessible by informal trails or logging roads. (See Figure 4, Mountains within the 15-Mile Study Area).

Stratton is the largest village within the study area (population 700) and is about 15 miles from the project. Its setting on the shore of Flagstaff Lake and the dramatic views of the Bigelows are a draw for tourists along with access to Sugarloaf ski area and to extensive areas for hunting, fishing, snowmobiling, and hiking in the area. Eustis is a smaller hamlet to the north and Coburn Gore is at the Canadian Border. There are a number of former settlements, now consisting of a few camps at most, such as Lowelltown, Skinner, and Keough along the Montreal Maine Railroad Line.

Figure 4: Mountains Within 15-Mile Study Area⁴	Height*
Snow Mountain	3960
East Kennebago Mountain	3791
Kibby Mountain	3638
Boil Mountain	3601
Tumbledown Mountain	3542
Caribou Mountain	3375
Pisgah Mountain	3355
Kibby Range	3286
Spencer Bale Mountain	3285
Sisk	3270
Smart Mountain	3245
Cranberry Peak	3213
Bag Pond Mountain	3173
Number 5 Mountain	3168
Three Slide Mountain	3112
Peaked Mountain	3037
Round Mountain	3027
* Data from Maine's Highest Summits at americasroof.com and from peakbaggers.com	

⁴ This includes only named mountains. There are many unnamed mountains within the study area as well.

D. Visibility of the Proposed Project Within the Region

In general, views of the proposed project would be relatively limited due to intervening ridges and forest cover. Nevertheless, every wind project will be visible from some locations. This section describes the locations from which there would be views of the proposed project and the general characteristics of these views (see also Table of Views, Appendix B). Photographs and simulations from selected viewpoints are in Appendices C and D. An analysis of the significance of the views and the visual impacts of the proposed project on these views is discussed in sections E, F, G, and H following this section.

Descriptions of viewpoints are organized by distance from the project (nearest to farthest). The distance from the proposed project (closest turbine) is indicated in parentheses next to the viewpoint location title. The maximum number of turbines which could be visible within the area is also noted⁵. In many cases not all turbines would be seen from any one viewpoint but different turbines may be viewed as one moves (e.g. paddles) around the area (e.g. pond).

Note: Viewpoint Numbers in bold type are linked with the Viewshed Maps (Appendix A) and photo illustrations (Appendix C).

Areas with no visibility of the project

There would be no visibility of the project from Meyer's Beach on Flagstaff Lake, from Spencer Lake, Attean Pond, Holeb Pond, Holeb Falls or the Moose River, Fish Pond, Enchanted Pond, Pierce Pond, Whipple Pond, Moore Pond, Bail Pond Bog Pond, Tobey Ponds, Boulder Pond, Egg Pond, Rock Pond, Iron Pond, Twin Island Pond, Trout Pond, Big and Little Indian Ponds, Shaw and Lower Shaw Ponds, Tea Pond, Big and Little Island Ponds, L Pond, Beaver Pond, Long Pond, Secret Pond, Little Kennebago Lake, and Stratton Brook Pond. There would also be no visibility from ponds: Shallow, Chase, Butler, Wing, Beattie, Barrett, Everett, Chittenden, Bear, Long (King and Bartlett TWP), Little King, Rock, Iron, Prick, and Joe Pokum Ponds

There would also be no visibility of the project along Spencer Road, or from the summits of King Mountain or Peaked Mountain.

Viewpoints within ½ mile of the project

Views within a half mile are considered to be **foreground** views. In these locations details can be perceived such as the texture of leaves on a tree, and objects appear larger and more

⁵ Visibility was determined using viewshed analysis. This analysis counts any visibility of a turbine, even the tip of a blade so that estimated numbers that are visible are likely to be exaggerated in terms of the overall visual impact. See Appendix D for a detailed description of how numbers of turbines visible was determined.

prominently. There are no significant viewpoints within a half mile. Hunters, snowmobilers and loggers use existing logging roads and the forests generally within this distance, but there are no camps, public roads, or designated recreation areas. Spencer Bale Road (1) is within this distance and would provide access to the project. (See Figures 1 and 2, and Appendix C.)

Viewpoints within 1 mile

Viewpoints between a half mile and up to 5 miles are considered to be middleground views. Given the size of wind turbines, one could argue that foreground views be extended to a mile away.

- Kibby Mountain Fire Tower (0.6 mile) (Simulation) (Viewpoint 2)

The Kibby Mountain fire tower is accessible off Gold Brook Road from a logging road that would provide access to the northern portion of the proposed project. A 3-mile trail leads to a 15-foot raised platform which provides 360° views. Both the Kibby Mountain and Kibby Range portions of the proposed project would be seen from the fire tower at distances ranging from just under a mile away and extending to about 7 miles away to the south. There would be unobstructed views to a full panorama of other mountains in the surroundings including Spencer Bale, Tumbledown, Three Slide, Peaked, Caribou, Megantic in Canada, Sisk, Snow, Bag, and Round. In the distance the Bigelows are visible along with Flagstaff Lake, and the Sugarloaf-Saddleback Range.⁶ (See Appendix C, Photos of Project Site and Surroundings) There is one private camp that shares its access with a portion of the fire warden's trail⁷. The proposed project would not be visible from the camp.



Figure 5. View from Kibby Mountain Fire Tower to A and B Series (.6 mile)
Left: southern ridges of Kibby Mountain (met tower in center); Right: Kibby Mountain ridges (closer) and Kibby Range behind⁸

⁶ A local motel owner who caters to hikers estimated that about 150 hikers ascend Kibby Mountain during the summer and about a dozen others during other times of year.

⁷ Camp owner provided permission to visit the camp.

⁸ These two photos do not match perfectly. A pole on the south side of the fire tower makes it difficult to take a pan of the two portions of the project area.

- Gold Brook Road (0.8 mile) (Viewpoints 2 and 3)

Gold Brook Road (also known as Beaudry Road) is a major logging road running west of the project site. It is also used by recreationalists for access into the backcountry for hunting, fishing, snowmobiling, ATV users, and hiking. Gold Brook Road continues along the west side of the project ridges for about 15 miles. There are several viewpoints which are documented on the Viewshed Maps and illustrated below and in Appendices A and C. From the 12 mile marker and along Spencer Road (running east-west north of the project) there are no views of the project ridges. The project ridges can not be seen from any points along Spencer Road which extends about 20 miles where it joins Route 201. This stretch is very scenic with far less vegetative disturbance than along Gold Brook Road. There are no private camps along Gold Brook Road. There is one forest campsite which would not have views of the proposed project.



Figure 6. Views from Gold Brook Road (2 miles)
Left to Kibby Mountain (A Series); Right to Kibby Range (B Series)

- Wahl Road (0.8 mile) (Viewpoints 3a-f)

Wahl Road provides access to logging trucks and others around nearly the entire Kibby Range (B Series). There would be a few viewpoints of the project site, the substation and transmission lines along this road. One branch of the road leads to an area between the two forks of Kibby Range and would serve as an access road to the project. There are views south toward the Bigelow Range, Flagstaff Lake and the Sugarloaf to Saddleback range. The immediate foreground however has been recently logged and logging operations appear to be ongoing all along Wahl Road. There are no camps along Wahl Road.

Viewpoints within 5 Miles

Areas within 5 miles are considered to be middleground views. At this range in very clear conditions the form of individual trees can be perceived but not the details such as

leaves or bark. In clear weather conditions vegetated areas may be perceived in warmer color ranges including shades of green, yellow, or red rather than the blue or purple range that is characteristic of distant views (beyond 5 miles). Within the middleground range, objects or groups of objects such as proposed wind turbines would be visible but part of a larger landscape setting including, for example, landforms, water features and vegetation patterns.

- Route 27 (1.5 miles) (Simulation) (Viewpoints 5 and 6)

The proposed project would be visible in only a few locations along Route 27: by Sarampus Falls and a few locations to the south at distances ranging from 1.3 miles to 3 miles away. Route 27 is a Maine Scenic Byway and also known as The Arnold Trail in reference to Benedict Arnold's voyage up the Dead River in his attempt to defeat British Troops in Canada during the Revolutionary War. Numerous views of mountain summits alternate with dense forests, wetlands and ponds along Route 27 as it twists and turns along the North Branch of the Dead River. In all but a few of these views, mountain summits other than Kibby are seen.

There are two rest areas along Route 27 at Sarampus Falls and on Natanis Pond. Both provide scenic settings and Sarampus Falls has picnic tables and historic plaques about the history of logging in the areas. A small part of the project (6-11 turbines) would be seen from the Sarampus Falls Rest Area. The project would not be visible from the Natanis Pond Overlook Rest Area. There are several other quick glimpses of the project south of Sarampus Falls including an area near Vine Road (simulation). Only a few of the B Series turbines can be seen within these views.

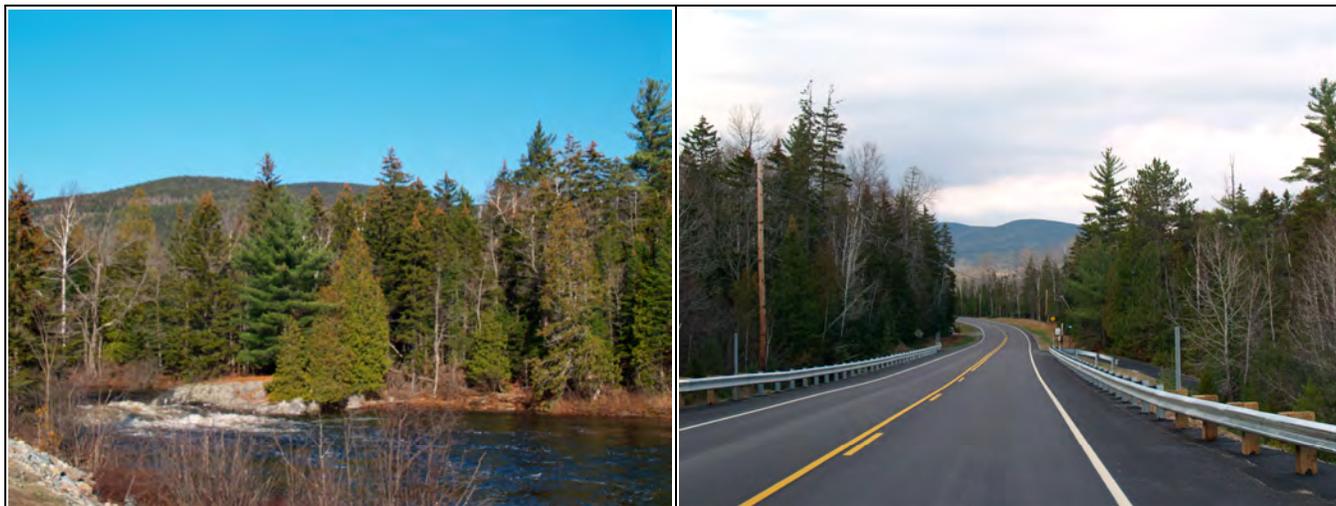


Figure 7. Views from Route 27 (1.2-3 miles)

Left is to Sarampus Falls; Right is about 3 miles south near Vine Road. Both views are of portions of Kibby Range (B Series)

- Chain of Ponds: Natanis, Long, Bag and Lower Ponds (1.9 miles) (Viewpoint 7)

The northern end of Chain of Ponds and the northeastern shore are within Maine Public Reserve Lands. There are lovely views from Natanis Point looking down the lake

toward the Bigelow Range. From a private campground at Natanis Point blades of 3 turbines may be visible. Area recreational opportunities include a 4-mile paddle along Chain of Ponds. Views of up to 15 turbines are possible from the western edges of Bag and Lower Ponds. There are some primitive campsites on the shore from which visibility of the project is unlikely. Canoeists are cautioned that despite the beauty of paddling along these ponds, the presence of Route 27 and its abundant logging trucks makes it quite noisy at times⁹.

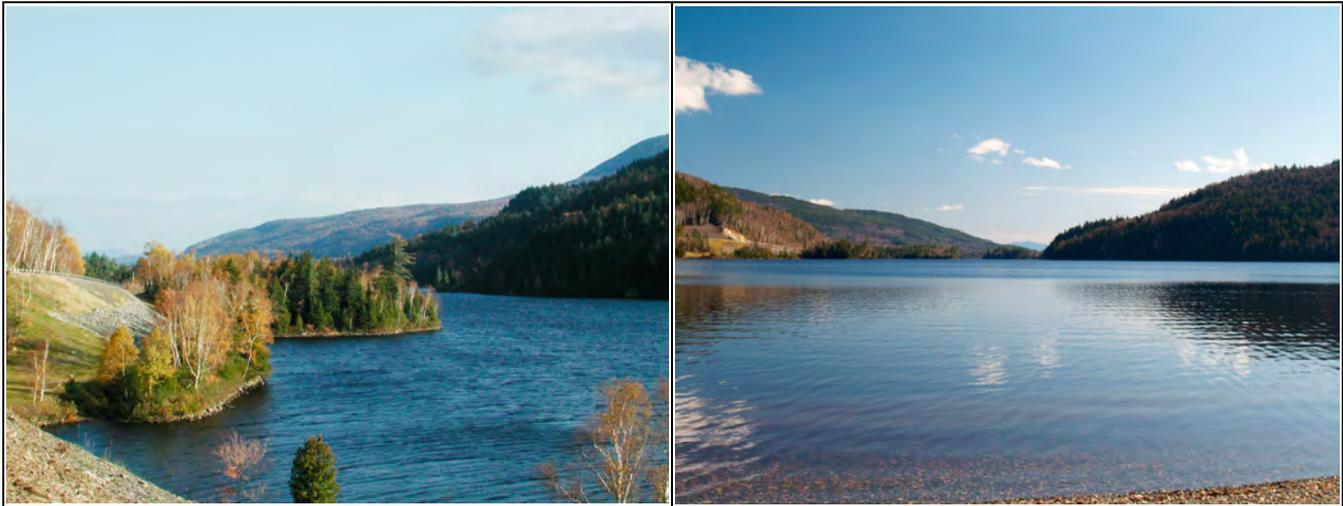


Figure 8. Chain of Ponds - Natanis Pond (6 miles)

Left is from the scenic overlook; Right from the Campground beach. The only views would be of the tips of three turbine blades from the view at right.

- Spectacle Pond (3 miles)

This small pond known as the location of Kibby Camps has been used for a number of recreational activities including Campfire Club of America, Ducks Unlimited, and Unity College. Viewshed maps indicate potential visibility of up to 13 turbines, but trees surrounding the pond may substantially block views.

- Round Mountain Pond (4 miles)

There are several camps on this small pond. About 13 turbines would potentially be visible from the western end of Round Mountain Pond.

- Jim Pond (5.1 miles) (Simulation) (Viewpoint 9)

Jim Pond is one of the more accessible ponds to the general public with a boat launch on the western shore suitable for motor boats and a smaller launch at the southeastern end accessible by canoes and kayaks. A portion of Kibby Range (B Series) is seen to the northwest between Antler Hill and other unnamed foreground hills. Portions of up to 24 turbines may be visible as one moves around the lake. Most views would include only a few turbines. The turbines would be visible from several camps on the pond. Antler Hill, Shallow Pond Mountain, Chase Pond Mountain, and another unnamed hill are

⁹ From the following website: outdoors.maintoday.com/paddlingtrips

prominent foreground features looking west and north from Jim Pond. Round Mountain and Snow Mountain can be seen to the west. Antler Hill blocks views of A Series on Kibby Mountain. The turbines would not be visible from the boat launch, camping area or the western shore.



Figure 9. Jim Pond (4.5 miles)
A portion of the Kibby Range (B Series) is seen between foreground hills.

- Other small Ponds

There are other small ponds within the 5 mile radius that may have views of the turbines. Douglas Pond, Hurricane Pond, Blakeslee Lake, Little Jim Pond, Chase Pond, and Blanchard Pond have potential for views of up to 13 turbines.

Viewpoints from 5-10 Miles

These are considered to be distant views and the project ridges are most likely to appear bluish in color. Beyond 8 miles the turbines, though visible, become more difficult to see except in clear conditions and generally occupy a small part of overall views.

- Snow Mountain (6.5 miles)

Snow Mountain is one of the higher and more prominent peaks in the area. There is a trail to the summit off Route 27 that is accessible to the general public and private access

from the Megantic Club. There is a fire tower at the top, although the top cabin recently fell off. Nevertheless, one can see views of the surrounding area including the Kibby ranges from the summit without climbing the tower.

- King and Bartlett Lake (8 miles) (Viewpoint 10)

A few of the A Series turbines are likely to be visible from the eastern portions of King and Bartlett Pond. They would not be visible from the camp area itself. Foreground ridges including King and Bartlett Mountain block a significant portion of the project from the lake.

- Eustis Ridge: Porter Nideau Road (9 miles) (Simulation) (Viewpoints 11a/b)

Eustis Ridge Road heads west from Route 27 leading to residential areas along the south side of the ridge, and to a small picnic area in a grove of maples overlooking Flagstaff Lake, the Bigelow Range, and portions of the Sugarloaf-Saddleback range. There would be no views of the Kibby Wind Power Project from the picnic area. Porter-Nideau Road branches off to the north side of Eustis Ridge. There are two areas with foreground meadows from which there would be views of the project. Only the Kibby Range (B Series) turbines would be visible from the road, but residents may be able to see A Series turbines as well (up to 44 turbines).



Figure 10. Porter Nideau Road on Eustis Ridge (9 miles)
View to Kibby Range with Antler Hill in Middleground right.

- Flagstaff Lake (9 miles) (Viewpoint 13)

Flagstaff Lake is very popular for boating, camping and swimming. It offers stunning views to the Bigelow Range just to the south. Portions of Flagstaff Lake are within 10 miles of the proposed project. Views of some of the turbines are likely from some open water areas along the southern and eastern portions of the lake.



Figure 11. Flagstaff Lake South Shore (12 miles)

Kibby Ranges can be seen behind trees on this portion of the lake. This area is part of the Bigelow Preserve.

- Flagstaff Road Causeway (10 miles) (Viewpoint 12)

This is a well used road especially in summer as it provides access to Meyer's Beach on Flagstaff Lake. The short causeway provides beautiful views looking south over the Dead River to the Bigelow Range. To the north the Kibby Range (Series B) is visible. Portions of Kibby Mountain (A Series) turbines may be seen but are generally blocked by intervening topography. (Note: this road is sometimes referred to as Cemetery Road.)



Figure 12. Flagstaff Road Causeway (10 miles)
Kibby Range (B Series) is seen in distance with Antler Hill in Middlground (middle right).

- Crosby Pond, Coburn Gore (10 miles)
About 5 of the A Series turbines may be visible from this pond.

Viewpoints from 10-15 Miles

At these distances the turbines would appear tiny and would occupy only very small portions of views.

- Flagstaff Lake (10-15 miles+) (Viewpoint 13)
Within the portions of Flagstaff Lake at these distances visibility is most likely from the eastern and southern portions of the “new lake.” From many locations the project is blocked by trees along the shoreline. From a few locations the mountain ridges can be seen just over the trees. The project would not be visible from Meyer’s Beach or from most campsites along the shoreline.
- Tim Pond (11 miles) (14)
Viewshed analysis indicated potential visibility of 24 B Series turbines from the southern and middle portions of the pond. The pond is surrounded by trees which are likely to prevent visibility from most of the pond.
- Flagstaff Mountain Road (11.3 miles) (Viewpoint 15)
Along the flanks of Flagstaff Mountain there is an open overlook providing a 180° view across Flagstaff Lake, the Sugarloaf-Saddleback Range, and up to the Kibby Range. The

B Series turbines would be visible from this location, especially during leaf-off conditions. Intervening trees are likely to prevent views of most A Series turbines.

- Cranberry Peak (15 miles) (Viewpoint 16)
Cranberry Peak provides a relatively easy climb close to Stratton and offers beautiful views over Flagstaff Lake. The proposed project would be visible along with numerous other mountains in the Boundary range and the nearby Longfellow or Sugarbush-Saddleback range.
- Spring Lake (15 miles)
A small area on the eastern end of Spring Lake appears to have some potential for visibility of the project.

Viewpoints 15-20 Miles

These areas are technically outside of the study area due to the significant distance from the proposed project. However we assessed a few of the more sensitive viewpoints within this radius. The proposed project would be seen in the background and occupy a very small portion of overall views.

- Flagstaff Lake (15-20 miles+) (Viewpoint 13b)
There is potential visibility of the proposed project along the eastern arm of Flagstaff Lake. The ridges are visible from Safford Brook campsite (20 miles) in the Bigelow Preserve. The campsite is used for canoe camping and by hikers in the Bigelow Range.



Figure 13. Flagstaff Lake, Safford Brook Campsite (18 miles)

- Avery Peak, West Peak and The Horns in the Bigelow Range (15.7 miles)
(Simulation) (Viewpoint 17)

The project would be visible from open ridge areas along the Bigelow Range. The Kibby mountain ranges are seen as part of a wide panorama of mountain peaks throughout the region, and with a backdrop of other mountains behind. Crocker, Sugarloaf, Redington and other peaks in the Longfellow would be seen in closer proximity.

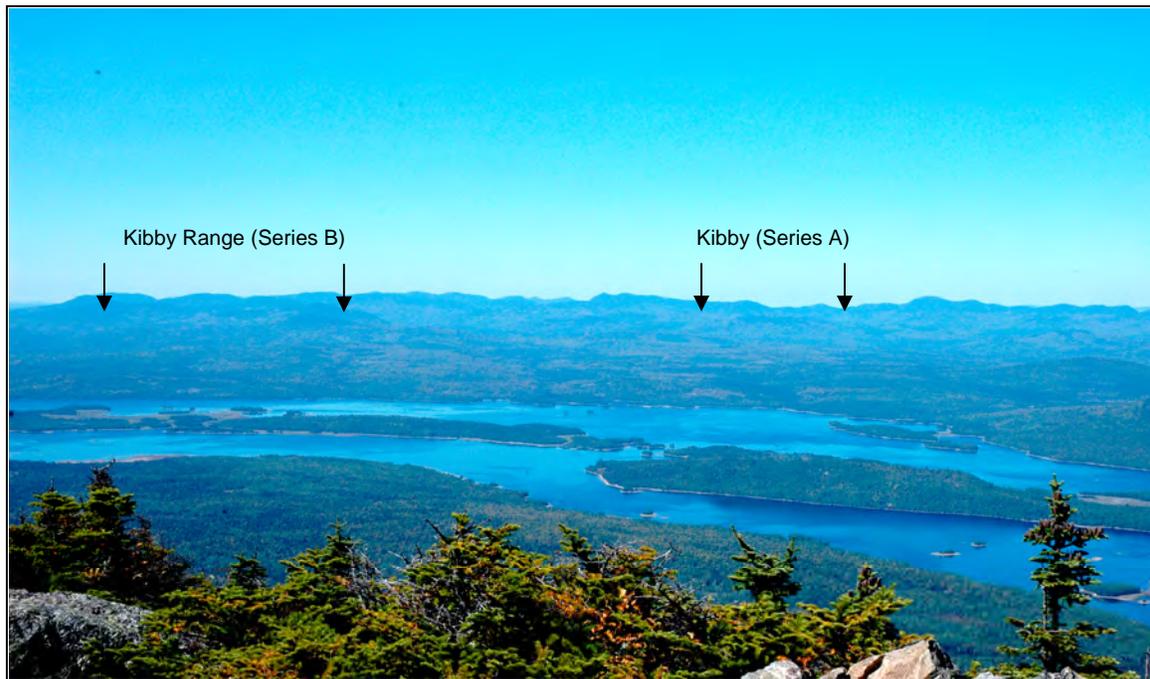


Figure 14 West Peak in Bigelow Range

Kibby Range is to the left; Kibby Mountain middle right. More distant mountains are seen beyond. Flagstaff Lake is in the foreground.

- Kennebago Lake (17 miles)
Our viewshed analysis indicates potential visibility of a few turbines from a very small area on Kennebago Lake.

Viewpoints Over 20 miles

The following sites are included as scenic viewpoints, but are well outside the study area.

- Crocker Mountain (21 miles) (Viewpoint 18)
Crocker Mountain is the closest peak along the AT west of Route 16/27. There is a small viewpoint on the southeast side of Crocker where portions of the two project ridges are visible. The Bigelow Range dominates the foreground, and is seen at about 7 miles away. Cranberry Peak partially blocks views of the Kibby ridges which are seen in the far background along with other mountains.

- Jackman Rest Area Route 201 (21 miles) (Viewpoint 19)
A rest area just south of Jackman provides a scenic overlook of Wood and Attean Ponds in the foreground. Portions of the Kibby ranges can be seen in the background but numerous intervening mountains make them difficult to see.

E. Sensitivity of the Viewpoints

Even when there is high visibility throughout a region (which is not the case here), this does not necessarily mean that there will be undue adverse visual impacts. The relative sensitivity of viewing areas is important to determine and is the first step in analyzing potential impacts. This section identifies particular areas and scenic resources that are likely to have greater sensitivity and may require a more detailed analysis.

In general, all public use areas including roads, recreation areas, historic or cultural resources, town or village centers, and natural or wilderness areas are considered to be potentially sensitive. However certain factors such as the proximity to the project, the expectations of users for a natural or non-motorized experience, or the public recognition of the value of the resource may make some sites more sensitive to aesthetic impacts than others. Sensitivity does not necessarily imply that development should be prohibited. Rather it is necessary to examine carefully the degree of sensitivity of the resources involved on the project site and from viewpoints, and the degree to which these resources would be degraded, and negatively influence the experience of users.

Several factors affecting the sensitivity of views are addressed below. Characteristics of the proposed project which may influence the experience of sensitive sites area follow.

- **Viewer Expectations/Experience Level**

Sensitivity levels tend to be linked to viewer expectations and the level of concern for scenic quality. The US Forest Service's Visual Management System identifies sensitivity levels by the importance of the travel route (national vs. local) and by the degree of concern for scenic qualities of the users. There is also a continuum of experience levels from primitive and non-mechanized recreational pursuits to highly developed and fully mechanized recreational pursuits. Of concern within the study area would be the following types of recreation areas.

- Major Travel Routes

Major travel routes include Routes 27 and 16. Route 27 is listed as one of Maine's Scenic Byways.¹⁰ There would be very few views from either of these

¹⁰ Maine's website identifying Scenic Byways (http://www.maine.gov/mdot/projects-grant-applications/scenic_byways.php) provides the following description of Route 27: State Route 27 in the Carrabassett River Valley lies in the western mountains of Maine. It is a principal corridor connecting the State of Maine with the Canadian Province of Quebec. The Appalachian Trail crosses the southern portion of this state-designated Scenic Byway. The area has outstanding scenic quality, which the byway brings to users with a number of scenic turnouts, which also provide access to the Carrabassett River for recreational uses. The area is a year-round recreational destination, as well as a major tourist route.

routes. The closest occur on Route 27 and are generally quick glimpses encompassing only a few of the turbines. The only other roadway with significant views of the project is Gold Brook Road which is a private road predominantly used by logging vehicles and views generally include considerable logging activity and debris. There would be no views from Spencer Road, one of the more scenic stretches of backcountry roads within the area.

o Hiking Trails

The major and most significant hiking trail in the area is the Appalachian Trail (AT). The project is about 15.7 miles from the AT at its closest point. From the Bigelow peaks the project would be seen with a backdrop of mountains behind, making the turbines less visible (see Simulation, Appendix D). Other scenic viewpoints along the AT such as Saddleback Junior or Mount Abraham are 25 or more miles away. The foreground ridges, including Redington, Black Nubble and Crocker are prominent within these views, while the Boundary Mountains generally appear blue in color and at a great distance. The AT will cross the project transmission line corridor but in the immediate context of Route 27 and the adjacent Boralex transmission line.

Other hiking trails in the area include Cranberry Peak which is also very far away (15 miles). Few other mountains receive frequent use, but Tumbledown Mountain and Kibby Mountain provide relatively easy climbs with fire towers providing good views at the top. The project would be visible from the fire towers on Tumbledown Mountain and Kibby Mountain. Though not a major hiking destination, the Kibby summit viewpoint should be considered a sensitive viewing area due to proximity to the proposed project (less than a mile away). Despite the clearcutting and logging roads visible from the summit fire tower, it provides a panorama of views of peaks and ridges. Snow Mountain is another nearby hike with a similar number of users.

o Parks/Recreation Areas

There are no state parks or national parks in the 15-mile study area, but there are numerous Maine forest campsites located primarily around lakes and ponds as well as boat access areas. Few of these would have views of the proposed project. Two exceptions would be possible views from a campsite on Holeb Pond near Turner Brook at a distance of about 13 miles and a campsite on Flagstaff Lake by Safford Brook about 18 miles from the proposed project.

There are two private campgrounds within the study area, Cathedral Pines in Eustis and another at Natanis Point at the north end of Chain of Ponds. There would be no visibility from the Cathedral Pines campground or beach area. The tops of a few turbines would be visible from the Natanis Point campground.

There are also three Maine Reserve parcels managed by the State Bureau of Parks and Lands within the study area. The largest includes the Bigelow Range

and portions of the shoreline of Flagstaff Lake. Flagstaff Lake is a valued recreational resource and has several primitive campsites along the shoreline. There would be little visibility of the project from these campsites except from those in the eastern arm of the lake (see discussion above). The northern end of Chain of Ponds around Natanis Pond and the northeastern shore of Long Pond are also within the Maine Reserve lands. The project would not be visible from the reserve lands along the eastern shore of Chain of Ponds. A third area of Reserve Lands is located around Holeb Pond and the Moose River. There would be no visibility from these areas except a small area on the northern end of Holeb Pond east of Turner Brook (see above).

Other noted recreation areas include canoe routes along the North Branch of the Dead River from which the turbines could be visible from a few areas looking upstream. There would also be no visibility near Grand Falls, from Long Falls Dam area, or from the Dead River between with a possible exception of a small area south of Halfway Brook.

Views from portions of the lakes and ponds adjacent to three sporting camps are likely. As many as 12 turbines may be visible from Spectacle Pond, 16 turbines from King and Bartlett Lake (but not from the camp itself) and 24 turbines from the southern end of Tim Pond. There would be no views from Big Island Pond.

o Scenic Areas

Noted scenic areas within the study area include Sarampus Falls, Grand Falls, and Holeb Falls. The tops of about six turbines would be visible from the Sarampus Falls Rest Area and from the grassy area near the falls, but the project would not be visible from Grand Falls, Long Falls or Holeb Falls.

o Waterbodies

This region abounds in lakes, ponds, and streams. Several are noted in the CLUP as having high recreational and scenic value (see Figure 15). Flagstaff Lake is the largest lake within the study area and undoubtedly a significant regional focal point. The distinctive Bigelow range to the south greatly enhances views from the lake as well as views around the region. The Kibby ranges are not particularly visible or noticeable from the lake and are seen at a considerable distance (about 15 miles).

Other important water bodies in the area include Jim Pond from which up to 24 turbines along the Kibby Range (B Series) could be visible (simulation) at a distance of about 5 miles. From most locations only 8-10 turbines would be visible at a time. This pond has public access and several private camps. Chain of Ponds and especially Natanis Pond are very visible from Route 27 and are also considered to be high value recreational resources. The project would not be visible from Route 27 in views over Natanis Pond. The project would be most visible from the southern ponds, Bag and Lower from which up to 15 turbines may be visible from the eastern edges.

The project would be visible from portions of King and Bartlett Lake. The surrounding land is privately owned and accessible primarily to guests.

The project would be visible from a tiny portion of Holeb Pond on the northern shore, but would not be visible from Attean, Wood or Little Big Wood Ponds to the north, nor from Spencer Lake, Fish Pond or Enchanted Pond.

○ Wilderness/Natural Areas

No designated wilderness areas occur within the study area.

○ Historic Sites

Within the study area there are numerous old settlements, logging camps, and a few old farmsteads which are noted as historic sites. Nearly all are in forested settings and none of the sites are known to have potential views of the proposed project.

● **Designations of Local, State, or National Landscape Significance**

When a resource is identified in local, regional or state planning documents it implies increasingly broad public consensus as to the value and importance of the resource. Several sources were used in determining whether or not resources of local, state or national significance exist within the study area. The Comprehensive Land Use Plan (CLUP) of the Maine Land Use Regulation Commission identifies notable resources, and areas. Also the State of Maine Bureau of Parks and Lands lists parks, historic sites, trails and other areas of state wide importance. The Maine Department of Environmental Protection (DEP) has developed rules with respect to aesthetic impacts (Chapter 315: Assessing and Mitigating Impacts to Existing Scenic and Aesthetic Uses) and lists types of resources which should be protected. A search of Stratton and Flagstaff Lake region websites also reveals local resources that are of importance.

Within the study region the CLUP identifies two “major public lands within the jurisdiction used for recreational purposes” (Table 1, page 63). One is the federally owned Appalachian Trail a national park and national scenic trail which is mentioned numerous times in the CLUP and in the DEP rules on scenic resource protection. Although it is not within the 15-mile study area, the Appalachian Trail is within the larger region, and is the only resource of national significance. A second resource of state-wide significance noted in the CLUP is the Bigelow Preserve. Portions of the Bigelow Preserve along Flagstaff Lake are within the study area. Cranberry Peak is at the edge of the study area at 15 miles. The more prominent peaks are further: The Horns (16.5 miles away), West Peak (17.5 miles away) and Avery Peak (18 miles away). Crocker Mountain, the closest mountain along the AT west of Route 27/16 is about 21 miles away. The simulation from Avery Peak (Appendix D) shows that from the Bigelow Peaks the project is seen with a backdrop of more distant mountains which would further diminish its visibility. At these distances, it would be seen as a very small portion of a wide panorama of mountains, hills, and lakes.

In the Appendices, CLUP also lists lakes and ponds of value along with a scenic character rating. The following table lists lakes and ponds within the study area according to the management class. CLUP rates Scenic Character as outstanding (O),

significant (S) or unrated (-). We have included notes as to project visibility¹¹ and approximate distances from the proposed project where there is a potential for visibility.

Figure 15: Lakes and Ponds within 25 miles of the Proposed Kibby Wind Power Project					
Lake or Pond	Township	Size (acres)	Visibility*	Scenic Rating**	Distance From Project* (miles)
Management Class 1: High Value, Least Accessible, Undeveloped Lakes					
Enchanted Pond	Upper Enchanted	330	NV	O	
Jones Pond	Wyman	36	NV	-	
The Horn's Pond	Wyman	10	NV	O	
Dixon Pond	Pierce Pond	17	NV	-	
Little Enchanted Pond	Little Enchanted	35	NV	-	
Loon Pond	Attean	55	NV	-	
Tobey Pond #1	T05 R07 BKP WKR	35	NV	O	
Management Class 2: Especially High Value, Accessible, Undeveloped Lakes					
Attean Pond	Attean	2745	NV	O	
Chain of Ponds	Chain of Ponds	700	V	O	2
Crosby Pond	Coburn Gore	150	V	O	9
Flagstaff Lake	Dead River	20,300	V	S	9
Jim Pond	Jim Pond	320	V	O	4
Pierce Pond	Pierce Pond	1650	NV	O	
Spencer Lake	Hobbstown	1819	NV	O	
Tim Pond	Tim Pond	320	LV	O	11
Management Class 3: Potentially Suitable for Development					
Horseshoe Pond	Coburn Gore	37	V	-	9
Mud Pond	Jim Pond	14	NV	-	
Management Class 4: High Value Developed Lakes					
Arnold Pond	Coburn Gore	148	V	O	10
Holeb Pond	Holeb	1055	LV	O	13
Big Kennebago Lake	Davis	1700	LV	O	16
Management Class 5: Lakes Approaching Heavily Developed Status¹²					
Lower Enchanted Pond	Lower Enchanted	20	NV	-	
Northwest Pond	Massachusetts Gore	45	NV	-	
Shaw Pond	T03 R04 BKN WKR	45	NV	-	
Management Class 6: Remote Ponds					
Benjamin Pond	Attean	121	NV	-	
Boulder Pond	T05 R07 BKN WKR	30	NV	-	
Cedar Pond	Holeb	5	NV	-	
Clear Pond	Lowelltown	21	NV	-	
Clearwater Pond	Attean	34	NV	-	
Dixon Pond	Pierce Pond	17	NV	-	
Little Enchanted	Upper Enchanted	35	NV	-	
Gordon Pond	Upper Enchanted	28	NV	-	
Hall Pond	T05 R07 BKN	42	NV	-	

¹¹ Visibility indicates that the project or portions of the project would be visible from more than a very small area of the lake or pond. In most cases only a small portion of the proposed project would be visible. Distance is only listed for those locations from which the project may be visible.

¹² Management Class 5 also includes heavily developed lakes. None are in the study area.

Helen Pond	Peirce Pond	15	NV	-	
High Pond	Pierce Pond	7	NV	-	
Horseshoe Pond	Attean	50	NV	-	
Long Bog	Holeb	19	NV		
Long Pond	Attean	37	NV	-	
Loon Pond	Attean	37	NV	-	
Lost Pond	Attean	5	NV	-	
McKenney Pond	Upper Enchanted	9	NV	-	
Round Pond	Appleton	5	NV	-	
Tobey Pond #1	T05 R07 BKN	35	NV	-	
Tobey Pond #2	T05 R07 BKN	32	NV	-	
Tobey Pond #3	T05 R07 BKN	14	NV	-	
Unnamed Pond	Attean	12	NV	-	
Unnamed Pond	Attean	5	NV	-	
Unnamed Pond	Holeb	2	NV	-	
* Visibility: NV= no visibility; LV= limited visibility; and V= visibility					
** O=Outstanding; S= Significant; - = Unrated					

- **Number of Users**

To some degree the number of users affects the degree of sensitivity of a scenic or recreational resource. The study area is most heavily used for hunting, fishing, and snowmobiling. Camping, boating are also common, followed by hiking. Internet searches¹³ for area outdoor activities direct those searching for hiking and canoeing to the Bigelow Range, Flagstaff Lake, and Chain of Ponds. Among hikers Kibby Mountain and Snow Mountain are less used.

- **Existing Development Context**

In evaluating sensitivity, the existing character of the surrounding area is important to assess. Generally a less disturbed landscape is more sensitive to human alternations than one which is already developed or altered. Although the Kibby ridges as well as the surrounding area have been heavily logged and are surrounded by numerous logging roads, there are few other permanent structures. From most viewpoints in the immediate vicinity (within 3 miles) the landscape appears to be a working landscape into which the introduction of wind turbines would seem reasonably compatible. Nevertheless, the wind turbines would result in contrast with the predominant elements in the landscape: evolving forest and roads. Wind turbines are large, white vertical elements which would appear different from existing landscape elements. From views further way (4-8 miles) the turbines would be most often seen from either roadways or ponds. In these settings cars, trucks and/or motorboats may be present along with camps. The turbines would occupy a smaller part of the overall views (where they are visible at all) but nevertheless would be elements that contrast with the surrounding green hills and other natural elements that tend to dominate views from many public use areas in the region. The vegetative management patterns become less distinct to the untrained eye at greater distances. At greater distances (over 8 miles), the turbines would become harder to see except in clear weather conditions, though they would be identifiable as distinctly human-made elements.

¹³ Sites: Outdoors.maintoday.com; trails.com

From few areas within the surrounding context is one far from evidence of timber harvesting. The predominance of a working landscape throughout the project study area suggests that the context is not one where an entirely undisturbed landscape setting is a predominant expectation.

- **Proximity to the project**

Proximity influences the prominence of a wind project in several respects. The turbines would appear larger in closer proximity and would occupy a larger part of the overall view. In some locations it may be possible to see project details such as roads and clearings. At very close range, sounds from the turbines may be audible, but this is not expected to affect any sensitive viewing areas near the Kibby Project. As noted above, the locations from which the project would be observed at close range tend to be those that are heavily logged with abundant evidence of associated logging equipment in the landscape. There are no sensitive viewing areas within the foreground (1/2 mile). The summit fire tower of Kibby Mountain is the closest viewing area at 0.6 mile away at the closest point and extending to 6.5 miles away at the farthest point (simulation).

Other relatively proximate viewpoints of the proposed project include Chain of Ponds (2-6 miles), Sarampus Falls (2 miles), and Jim Pond (5 miles).

- **Exposure or Duration of View**

Generally a quick glimpse of a project is less significant than seeing a project over an extended time or distance. From roads in the area the project would be seen only for short durations. It would be most prominent along Gold Brook Road where the two ridges come in and out of view on several occasions as one drives between Route 27 and Mile 10. Views of potentially longer duration would occur on Jim Pond while paddling along the western shoreline. Intermittent views are possible from small portions of Chain of Ponds. Similarly there would be potential views of long duration along some portions of Flagstaff Lake though from a very long distance. The direction, means and location of travel (motorized vs. non-motorized craft) on these lakes and ponds varies so exact durations of view and the degree to which it might interfere with particular activities is difficult to predict.

Project Related Factors

- **Scale of project**

Scale is a relative concept and must always be judged in relation to the surroundings of an object or group of objects. Scale refers to both the vertical height of the proposed project, as well as to the horizontal area it occupies. While the turbines themselves are extremely large, their size is difficult to distinguish from the smaller turbines such as those at Searsburg in Vermont unless they are seen side by side. The height of the turbines generally is problematic only when they overwhelm the size of the mountain or landform itself. On these large mountains of Maine the turbines appear relatively small. Perhaps more relevant is the overall area the project would occupy within views and the extent to which they dominate critical views (the

latter question is addressed further in the following section on visual impacts). Because the Kibby project is located on two ridges in a very complex system of numerous hills and mountains, it is difficult to see the entire project from most locations. Equally important in the perception of the scale of the project, is that it would be surrounded by numerous other undeveloped mountain peaks and ridges. From vantage points like Jim Pond, Chain of Ponds and Route 27 only a few of the turbines are seen at any one time. From all viewpoints numerous other undeveloped mountains and hills would dominate views. Views from these vantage points would remain predominantly natural. Even from the summit of Kibby Mountain and the fire tower the turbines would occupy a narrow arc of the view with the remaining views of undeveloped ridgelines. From this vantage point the turbines are seen below the viewer and with a background of distant mountains further reducing their apparent scale.

The turbines would occupy a larger portion of the view from Eustis Ridge but they would be seen at a considerable distance (8 miles away). The 24 B Series turbines would be the most noticeable from this vantage point while the A Series turbines are even farther at 13 miles away and are largely hidden by intervening hills. From Flagstaff Lake it is the views to the south of the Bigelow Range that are dominant and seen at only 5 miles away whereas the Kibby Wind Power Project would be over 10 miles away and occupy only a small part of the overall views. From the Bigelow Mountains themselves the project is well over 15 miles away and the turbines are seen with a backdrop of more distant mountains which considerably reduces its scale and visibility.

- **Lighting**

Some of the turbines are expected to be lit at night with a slowly pulsing red light mounted on top of the nacelle. A recent FAA review suggested that a maximum of 25 of the 44 turbines would be lit. On very clear nights these lights may be visible from at least 10 miles, though they would be tiny and difficult to see from these distances. Red lights will result in less contrast with the dark night sky than white lights but would introduce an element that is not currently part of this landscape. The greatest impacts from night lighting would be to camps on ponds in close proximity and with views of the project. From Jim Pond, for example, lights may be visible on clear nights. The lights would not be visible from the two private campgrounds on Natanis Pond and Cathedral Pines, and are unlikely to be visible from most of the primitive campsites around lakes and ponds in the region. The lights would also be visible from a few homes along Porter-Nideau Road on clear nights.

- **Views of Roads and Power Lines and Other Project Infrastructure**

Views of other project infrastructure may exacerbate visual impacts by increasing visual clutter or perceived project scale. Some views will be inevitable from high elevation viewing areas, but if they are common or from highly sensitive viewing areas, or if large areas of project infrastructure are visible, the visual integrity of the mountain summits may be unduly compromised. In general there would be few off-site views of roads and power lines or power line clearing of the Kibby Wind Project.

Roads have been sited to avoid steeper slopes which would require greater cut and fill and removal of vegetation, and therefore avoid the potential for off-site visibility. Both the 34.5kV collection system and the 115kV transmission line are well sited to minimize views from sensitive off-site locations.

In general, the transmission corridor is designed to run along the grade or to be hidden behind other hills. Road crossings would be one of the few points of visibility, and selective clearing along with planted vegetation would help reduce its visibility of both the poles and the line clearing.

One of the more sensitive viewing locations would be from the trails on the Bigelow Range from which small portions of the transmission line corridor may be visible, but they will not be very noticeable. At a minimum of 2.5 miles away from the AT, the transmission line poles are not likely to be visible from ridgetop portions of the Trail. The poles would temporarily be visible from the AT near the Route 16/27 road crossing. The line will parallel an existing 115kV transmission line in this location adding an additional 125 feet to the existing 150-foot wide corridor clearing. Existing plantings help screen the existing Boralex transmission corridor and poles and similar plantings will be installed to screen the proposed transmission corridor.

Selective clearing practices along with new plantings will minimize visibility of the transmission line corridor and poles at road crossings including Route 16/27, Route 16 west of Stratton, and Route 27 north of Stratton. These settings are presently densely forested so that views of the poles would be minimal. Poles are also set back from each crossing a minimum of 100 feet, and in most cases much further. The Kibby Substation will be well screened from view with existing and if necessary, planted vegetation.

Roads are most likely to be visible from the Kibby Mountain fire tower, especially those in A Series. Some of these roads would be on the south side of the ridge and, therefore, not visible. A few sections of B Series roads and some openings may be visible from the Kibby Mountain fire tower. Some of the collector lines would be visible as well but most would be blocked by intervening topography. Views from Snow Mountain may include some road clearing along the western prong of the B Series, but the power line cut should be minimally visible. Some visibility of roads is possible along Gold Brook Road, but these should be minor and no more visible than existing logging roads in the area. No project infrastructure other than turbines would be visible from Chain of Ponds or Sarampus Falls. From Vine Road it is possible that some clearing around one turbine may be visible. From Jim Pond neither the roads nor the power line cut should be visible. No infrastructure should be visible from more distant viewing locations such as Eustis Ridge or Flagstaff Lake.

F. Assessment of Visual Impacts

This section provides an evaluation of whether the views of the project described above would result in undue visual impacts. In other words, would the project significantly degrade

important views throughout the region; or would it degrade particular scenic resources of statewide or national importance? Assessment focuses on the viewpoints that appear to be the most sensitive as well as the collective impacts throughout the region. Given the analysis above, the most significant resources within the study area are the lakes and ponds, especially those identified in the Maine CLUP as Management Class 2 and noted as “high value, accessible, undeveloped lakes.” (See Figure 15) Class 1 lakes are significant as well but their inaccessibility makes the views less likely to be seen by recreationalists and there would be little visibility of the project from these lakes. Both the relatively undeveloped nature of the Class 2 lakes and ponds along with their accessibility makes them potentially more sensitive to the presence of a wind project in the view. Thus the analysis focuses on the aesthetic impacts to **Chain of Ponds, Jim Pond, Flagstaff Lake, Crosby Pond and Tim Pond.** Attean Pond, Pierce Pond, and Spencer Pond are also within the study area but would have no views of the proposed project. We also examine other viewpoints including Porter Nideau Road on Eustis Ridge, Kibby Mountain fire tower, Route 27, the Bigelow Range, and Cranberry Mountain though these viewpoints are considered less sensitive due to either very limited views, limited use, or to the considerable distance from the proposed project. Also discussed is the perception of remoteness around the project site. Finally, the overall impacts of the views of the project throughout the area are assessed.

The following standards, often used in evaluating the significance of aesthetic impacts and provide additional perspective as to how this particular project would affect views from the sensitive viewpoints described above.

- **Scenic Quality**

Certain landscapes are recognized as having particular qualities that contribute to high scenic quality. Generally these qualities relate to landscape diversity and involve combinations of landforms with distinct shapes, rocky summits in combination with diverse vegetative patterns or unique water features. Often such landscapes are seen in photographs of the region, and the Bigelow Range especially in combination with Flagstaff Lake is a perfect example. Similarly the Appalachian Trail is recognized for its scenic attributes including numerous high-elevation open ridges with dramatic views. While the landscape around Kibby Mountain is certainly scenic in many respects, there is nothing distinct about this landscape that raises it into the category of having outstanding scenic beauty. Indeed, moderate scenic quality is actually preferred for wind projects rather than degraded landscapes where such projects may exacerbate visual clutter¹⁴ (see below).

- **Intactness**

¹⁴ This is the author’s opinion based upon observations of many wind projects. The repetition of like elements that are characteristic of wind projects is an aspect that may increase their visual appeal for many people. Repetition provides a sense of order which is an essential element of scenic quality in combination with diversity. When wind projects are sited in areas of good wind so that there is a visual connection between the site and the structures (moving blades) the sense of order is further enhanced. Often moderately scenic landscapes have an inherent simplicity or order. Numerous contrasting or disparate elements (e.g. cell towers, ski slopes, buildings, or wind turbines) when combined together may exacerbate visual clutter and landscape degradation.

Intactness refers to the degree to which the landscape retains either natural qualities or qualities inherent in pre-industrial agricultural or other types of cultural landscapes. From most foreground areas (within roughly a mile) logging activities dominate views, and include roads, machinery, piles of logs, and slash. From Route 27 which is protected by a vegetative buffer, logging activities are less obvious and to the average observer these ridges appear to be uniformly forested and therefore relatively intact. Most lakes and ponds are similarly protected by forested buffers, and the Class 2 lakes and ponds noted above are also relatively undeveloped with only a few camps around the shorelines. Thus, while the overall landscape may be considerably modified, the public value of leaving buffers around scenic resources such as lakes and ponds suggests that due consideration be given to the views from these areas.¹⁵ Nevertheless, one is never far from evidence of logging activity in this landscape. This is characteristic of a working landscape where there is a close connection between resource (wind) and harvest (turbine). Within the study area there are no landscapes where explicit public values are expressed for retaining an experience of being in a wild and undisturbed landscape. Even the Sarampus Falls Picnic Area on Route 27 provides information about the strong historical connections between humans and the land.



Figure 16. Logging and Landscape

From vantage points like Jim Pond (left) the harvesting practices on Kibby Range are noticeable but subtle due to the distance and buffers around the lake. In other areas such as the overlook on Flagstaff Mountain Road (right) foreground logging opens up views, but forest practices on very distant mountains, like Kibby Range seen to the right behind Antler Hill cannot be perceived.

- **Focal Point**

Distinct focal points often enhance scenic values. As noted many times earlier, the Bigelow Range forms the dominant focal point in this region and it is visually enhanced by the contrasting flat, watery landscape of Flagstaff Lake area often seen in the foreground. This is the iconic image of the Stratton/Eustis area. The so-called “Longfellows” (Crocker/Sugarloaf to Saddleback) are also a visually distinct

¹⁵ It should be noted that vegetative buffers around lakes and ponds are intended for water quality protection as much as for scenic protection.

mountain chain the rises like a wall to the south. The prominent “Nubbles” contrast in form with surrounding more rolling mountains. The scree slopes on Crocker and Redington are also distinctive. Sugarloaf and Saddleback are also prominent and from a few locations their ski slopes are visible also drawing attention. No such distinguishing shapes or features distinguish the Kibby ranges. Many people, even locals have trouble picking them out in the landscape.

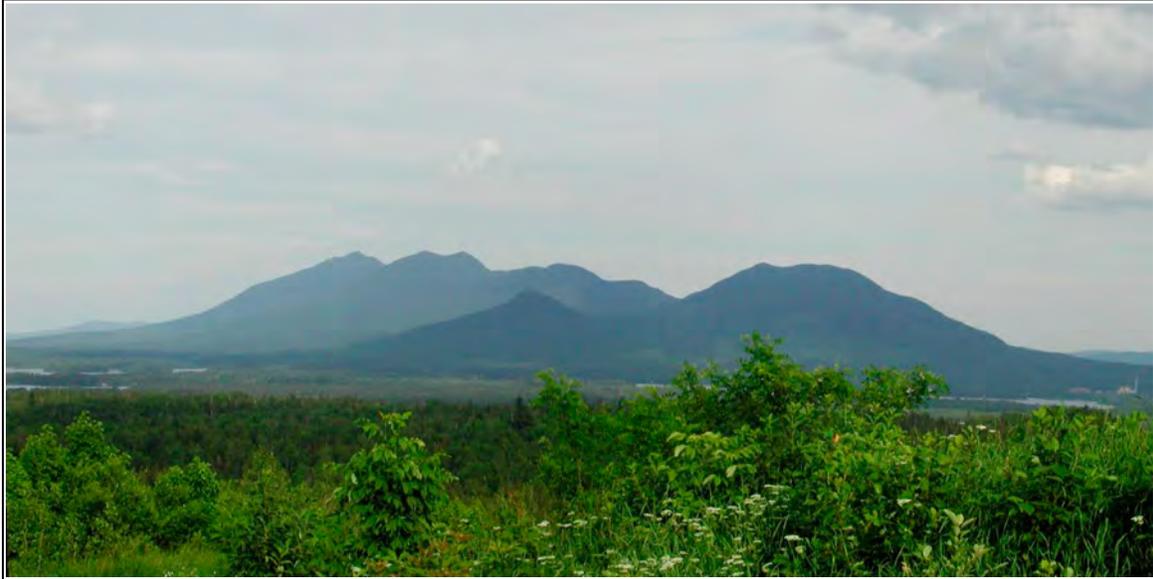


Figure 17. View of Bigelow Range from Eustis Ridge



Figure 18. View of the Eastern End of the Sugarloaf-Saddleback Range (“Longfellows”)

- **Uniqueness**

All landscapes are distinct in some way, but as noted above the Kibby ranges have no particularly distinct features. They are not the tallest mountains in the areas, nor are they known as important hiking destinations. The numerous lovely lakes, ponds, streams and wetlands in the surrounding area are important resources, but they are not unique.

There are a few trails in the study area, but none are notable with the exception of the hikes in the Bigelows. These hikes however, are at a significant distance from the proposed project. There are informal trails and fire towers throughout the area that provide access to mountain summits and views above the trees.

- **Degree of Contrast**

The concept of degree of contrast has been widely used in evaluating visual impacts, but it is a much more difficult test for wind turbines. There is no question that tall white wind turbines would contrast with their surroundings. They can't be screened and FAA strongly prefers white turbines. Ironically, it is contrast that contributes to scenic beauty in both natural and cultural landscapes (e.g. the dramatically steep Bigelows rising above placid Flagstaff Lake, the spire of classic white churches set on a town green, or vertical lighthouses on Maine's shorelines). It may even be this contrast that makes many people find wind energy projects attractive. White is a generally more attractive color than industrial gray (cell towers) and combined with the repetition of like elements and their logical link to a particular resource (wind) made observable with the turning blades, there may be both a contrast and a connection that works¹⁶. Nevertheless, even attractive elements are not appropriate everywhere, especially on sites with valued or identified scenic resources, or locations that are prominent within sensitive views.

The Kibby Wind Power Project turbines would appear as contrasting elements in many views. At close range, the context of a working forest would reduce the contrast. From greater distances as viewed from lakes, ponds, and Route 27, the project would contrast with its surroundings, but in combination with the reasonable scale (few turbines seen at any one time) and the abundance of other hills and mountains that dominate all views, the project should fit reasonably well into most views around the area

- **Degree of Prominence of the Proposed Project**

Degree of prominence is the extent to which the project would be seen throughout the region and the degree to which it stands out in particularly sensitive views. When a project becomes a strong focal point that conflicts with other important regional focal points, this may raise issues of undue prominence. Proximity to the project, number of turbines in the view, the duration of views, and the sensitivity of the viewing location or expectations of the viewer all play a role. As a rule, the Kibby

¹⁶ Paul Gipe discusses the idea of the link between perceived utility and aesthetic preferences. See for example, Pasqualetti, M.J., P. Gipe, and R.W. Righter, eds. 2002. *Wind Power in View: Energy Landscapes in a Crowded World*. San Diego: Academic Press.

Wind Power Project would be seen very intermittently throughout the region. Its general prominence from sensitive viewing areas would be relatively low as follows:

- Chain of Ponds

Several factors reduce the prominence of the project from Chain of Ponds. Foreground ridges tend to block most views so that only the tops of about 5 turbines are seen from most locations. The lower end has the greatest exposure to views of the B Series turbines, but foreground trees would block most views. Route 27 runs along the east side of the lakes and its noise and visual presence diminish the sense of remoteness of paddling on the lake. From the road, however, Chain of Ponds contributes greatly to the visual experience of driving and no turbines would be seen in views of the Ponds.

- Jim Pond (Simulation)

From Jim Pond the project would be relatively prominent due to a combination of the extent of the lake from which the project would be visible, its relative proximity (4-5 miles) and its relatively undeveloped setting. Nevertheless, only 24 turbines along the eastern prong of B Series would be visible, and from most viewpoints only 8-10 are likely to be in the view at any one time. The view occupies a relatively small portion of the overall views around the pond which includes several foreground hills, wetlands to the northeast and views toward Round and Bag Pond Mountains. The project would not be visible from the two campsites on the Pond.

- Flagstaff Lake

As the largest and most heavily used lake in the region, Flagstaff Lake is an important regional resource. Several factors reduce the impacts of the project. At over 10 miles away from the project the turbines would appear tiny and occupy a very small portion of the views around the lake. Most importantly, the stunning views of the Bigelow Mountains from Flagstaff Lake tend to draw observers' attention in that direction. By contrast the Kibby ranges are extremely difficult to either identify or to see due to trees along most of the shoreline. The project ridges are behind trees from most of the campsites within the Bigelow Preserve. The project would not be visible from Meyer's Beach, a popular destination, which faces south to the Bigelow range with no views of the proposed project. There is the potential for views of the entire project from the lake itself, but at such great distances, the project would be difficult to see and certainly not be a prominent feature. Although the shoreline itself is largely undeveloped, the village of Stratton is on the shore along with the very prominent Stratton Energy Center.

- Tim Pond

Tim Pond is over 10 miles away and surrounded by trees. Where views of the project are possible at all, they would occupy a small portion of the views around the pond.

- Crosby Pond

Crosby Pond in Coburn Gore would be about 10 miles away from the proposed project with potential visibility of only 6 turbines. Only a small portion of the turbines are likely to be visible due to intervening ridges.

- Porter-Nideau Road (Eustis Ridge) (Simulation)

A few residents along Porter-Nideau Road would have views of most of the Kibby Range turbines (B Series). At about 8 miles away these would be

noticeable but not dominant in views. Lights would be visible on clear nights. These impacts would affect relatively few homes, would occur at a considerable distance away, and would have little effect on important public views in this area.

o Kibby Mountain Fire Tower (Simulation)

Views from the fire tower on Kibby Mountain would include the full sweep of the proposed project though it occurs in a relatively narrow arc of the entire 360° panorama. This impact also does not seem unreasonable given the relatively low use of this mountain, and the extensive remaining views toward numerous undeveloped mountains within the panorama. Moreover, the viewer looks down on the project so that it is seen with a backdrop of other mountains which would diminish the prominence of the project. The project ridges do not appear as critical, distinct, or dominant landforms within the view. Roads and logging activities are presently easily visible within close proximity. This is not a trail¹⁷ or overlook that is noted in public documents as having particular scenic or recreational value and it is a single point, not an extended stretch or series of valued mountain summits with proximate views of the proposed project.

o Route 27 (Simulation)

Route 27 is the major public transportation route through the project area and is noted for its scenic character. The proposed project would not degrade the scenic character of this road since it is only very infrequently seen, and when seen only a few of the turbines would be visible. Only a few turbines would be seen from the Sarampus Falls Rest Area and are unlikely to detract from the scenic waterfall that is the focal point at this location. It is entirely possible that for travelers along Route 27, the turbines would appear as an attraction. The Searsburg wind turbines were noted on area scenic driving tours, as have other projects in New York been identified on area websites as something for visitors to see. There would be two transmission line crossings of Route 27, neither of which would be particularly noticeable. The crossing areas of heavily wooded and not in areas where there are other scenic features.

o Bigelow Mountains (Simulation)

The spectacular and popular views from the Bigelow Mountains would not be degraded by the proposed project which is located between 15-18 miles away. The project would be seen with a backdrop of more distant mountains from this location further diminishing its prominence and making it very difficult to see except in clear weather conditions. It would occupy only a very small portion of the overall views from these mountain summits.

- **Contribution to Visual Clutter**

Visual Clutter results from the cumulative effect of discordant built elements that contrast with surrounding patterns or surrounding elements of form, line, color and texture. This would not be an issue with the proposed project since visibility of project infrastructure other than turbines is expected to be minimal. The relative simplicity of this landscape generally, along with the generally horizontal and

¹⁷ The trail to Kibby Mountain is listed in the Appalachian Mountain Club's guidebook to the High Peaks region of Maine along with hikes up numerous other mountains in the area.

unspectacular ridges with uniform forest cover would further reduce any concerns with visual clutter. Wind projects often appear less cluttered than other forms of development due to the repetition of repeated simple forms, especially when there is no other existing site development such as cell tower or buildings. Project infrastructure is expected to be visible primarily from the Kibby Mountain fire tower. Roads are already part of the view from this perspective and the visibility of roads along the ridge would not result in excessive visual clutter. The transmission line will be visible briefly at road crossings. Existing woods at these areas will substantially screen the line from view. The views of the transmission line from the AT are in the context of an existing transmission line corridor and Route 27 and impacts are likely to be minimal.

- **Impacts to Wildlands**

During public meetings and field visits some people expressed concerns about introducing a wind energy project into an area where there is currently minimal development with the exception of logging roads and logging activities. The Boundary Mountains is an area that is viewed as still retaining a sense of wildness. The protection of wildlands is a subject worthy of consideration, but at present there are no designations which provide a meaningful basis for evaluating important wildland values or how they should be judged. Neither the project site, nor its surroundings have been designated as wildlands or roadless areas.

The project is unlikely to substantially diminish the sense of remoteness of the surrounding area. There is an impressive array of mountain ridges and hills surrounding the project in all directions. Some of the most scenic, most visually diverse, and least disturbed areas are north and east of the project site along Spencer Road. The project would not be seen from most of this area.

Additionally wind turbines are generally very quiet. Unlike housing developments, wind farms are seldom full of people, traffic, or activity.

- **Mitigation Potential**

Mitigation assumes that a reasonable site has been selected and that a reasonable fit can be achieved through project design or off-site compensations. The site for this project has been very well selected for minimal visual impacts in numerous respects. Other ridges were considered for development but rejected in order to retain a project of a reasonable scale in relation to its surroundings. The site was also selected for reasonably accessible terrain and minimal disturbance of areas over 2700 feet (823 m). The highest summit of Kibby Mountain would remain undeveloped. The Kibby ridges are not visual distinctive ridges within the region and the Kibby Mountain ridge (A Series) is very difficult to see from almost anywhere. The complex ridgelines and numerous intervening ridges mean that in most views only a few of the turbines can be seen. It also means that in nearly all views there are numerous other mountains that can be seen as well.

In addition roads and power lines have been well sited and designed to reduce visual impacts. Existing logging roads are used where possible. Generally roads have been placed on the western slopes to avoid visibility from sensitive viewing areas such as Jim Pond and Route 27. Power line corridors have been similarly sited so that existing topography screens the corridor from view. Where the transmission line corridor approaches the Appalachian Trail near Route 16/27, TransCanada will work with the National Park Service with regard to appropriate routing and design to address potential visual concerns. Screen plantings similar to those installed for the existing and adjacent Boralex transmission line have been proposed.

Benefits of the project would include an open access agreement that would allow recreational use of the property for hunting, snowmobiling and other recreational pursuits. While other mitigation measure will be considered as we continue to evaluate the proposed project, the project as currently designed fits very well with relatively few adverse impacts and none that could be considered undue.

G. Rezoning Criteria and Land Use Review Standards for Determining Acceptable vs. Undue Aesthetic Impacts

The analysis above demonstrates that while the proposed Kibby Wind Power Project would affect views from a few locations, it by no means reaches a level of undue aesthetic impacts. No project can avoid visibility from some residences and some recreation areas. However, neither the ridges themselves nor the views of the project involve unique or highly significant scenic resources. The project would not detract from important regional focal points and would generally be a subordinate element in nearly all views around the area.

The LURC review process in this case must first determine that a zoning change for the project ridges is warranted. Portions of the proposed project would be located in areas currently zoned as General Management (M-GN) while areas over 2700 feet (823 m) in elevation are zoned as High Mountain Areas (P-MA). Regarding the P-MA areas, the CLUP notes the “fragile nature of these environments” (page 54) as well as the “mountains and the scenic, natural, recreational, economic and other values they possess are limited resources in Maine.” Wind power unlike many forms of development must be located where wind resources are, and the high mountains of Maine offer some of the best sites within the northeastern United States. If we assume alternative, non-polluting power is essential, the goal is to find sites on which a project can be designed that would minimize impacts to fragile and unique resources. Many high elevation mountains will not be appropriate due to the particular resources involved such as overly steep terrain or unique scenic values. The site must also be able to accommodate associated infrastructure without resulting in high visibility of roads or power lines from off site scenic viewpoints.

From a visual point of view the Kibby Ranges are relatively indistinct horizontal ridges, difficult to see from most locations, and are relatively low in elevation in relation to many surrounding mountains in the region. Nor are they near the more scenic and popular recreational resources. The terrain allows roads to be designed at modest grades without requiring significant cut and fill. The highest summit in the range and the site of the Kibby Mountain fire tower would remain undisturbed while the lower elevation ridges to the south

would be developed. These ridges are lower than many surrounding mountains and considerably lower than the much more visually prominent mountains to the south such as the Bigelow Range, Black Nubble, Redington, Crocker, Sugarloaf to Saddleback mountains many of which are close to or over 4000 feet in elevation. Numerous mountains surrounding the Kibby ridges would not be developed and would continue to provide intact high elevation environments. Visually there is an inherent fit when wind energy projects are located on sites where there is an excellent wind resource, especially when the ridges involved are not visually distinctive in form or location, and are not unreasonably visible or prominent from surrounding sensitive use areas.

The general standard for approval of the proposed projects under LURC review is as follows:

Adequate provision has been made for fitting the proposal into the existing natural environment in order to assure there will be no undue adverse effect on existing uses, scenic character, and natural and historic resources in the area likely to be affected by the proposal. (LURC rules Section: 10.24 General Criteria for Approval of Permit Applications)

Assessment:

The project is located within a scenic but not spectacular area that includes numerous mountain peaks, streams and ponds. Forest harvesting is an integral part of the landscape historically and today. While portions of the project are visible from many ponds in the area, views of turbines would not dominate the views in the region generally or from any particular viewing locations. From most viewpoints, only a few of the turbines would be visible. Neither the ridges themselves, nor views of the project ridges are unique or distinct.

Other more specific review criteria are:

2. *Scenic Character*

- a. *The design of a proposed development shall take into account the scenic character of the surrounding area. Structures shall be located, designed and landscaped to reasonably minimize their visual impact on the surrounding areas, particularly when viewed from existing roadways or shorelines,*

Assessment:

Siting is critical with wind energy projects and the proposed Kibby Wind Power Project is extremely well sited to minimize views from sensitive public viewing areas. The wind turbines cannot be hidden from view, but intervening hills, mountains and ridges minimize the numbers of turbines that can be seen from viewing areas, and in most cases block views entirely. Site terrain is generally moderate in slope so that roads and transmission lines can be constructed with minimal site alterations and with very little off-site visibility.

- b. *To the extent practicable, proposed structures and other visually intrusive development shall be placed in locations least likely to block or interrupt scenic views as seen from traveled ways, water bodies, or public property.*

Assessment:

The project would not block or interrupt scenic views or be visually intrusive from any public viewing locations. Views from public roads are intermittent and infrequent. From areas accessible from hiking trails the project occupies a small portion of the overall views; and in most cases is seen at a considerable distance. From the shorelines and water bodies from which the project would be visible, it would not dominate views. Because the project is located along two ridgelines, and is surrounded by numerous other mountains and hills, its visibility is extremely limited and most often only portions of the project would be visible, if at all, especially from nearby viewing areas.

- c. *If a site includes a ridge elevated above surrounding areas, the design of the development shall preserve the natural character of the ridgeline. (LURC Rules Section 10.25.E.1 Scenic Character, Natural and Historic Features)*

Assessment:

Viewed from offsite locations the wind turbines would be seen emerging from the forested ridgeline. One exception would be the Kibby Mountain fire tower from which the project would be seen below the viewer receding to the south. This would be the only vantage point from which project infrastructure including some roads and site clearing would be visible. Even from this vantage point, most of the ridge forest would remain intact. Existing logging roads and clear cuts are currently visible from this vantage point.

H. Conclusions

The Kibby Mountain Wind Project would not have undue adverse impacts on the scenic and natural beauty of the surrounding area. The project is very well sited and designed. No wind project can be hidden from view, but this project would result in no undue impacts to highly valued or unique scenic resources. The Boundary Mountains consist of abundant mountains, lakes and streams. It is a scenic but not spectacular landscape with none of the mountains exceeding 4000 (1220 m) feet and the project ridges not among the highest even within its surroundings. The summit of Kibby Mountain, the highest portion of the project ridges and the site of a fire tower overlook, would not be developed. The complex system of numerous mountains limits visibility from most viewpoints. The proposed project would be over 15 miles from the closest point along the Appalachian Trail. The spectacular Bigelow Mountains form the dominant focal point in the region and most views are oriented in that direction. The numerous lakes and ponds are the primary scenic resource surrounding the project site and visibility from these is limited. Where there are views they are generally of only a portion of the project. The proposed project would not be a dominant element in any views. Project infrastructure such as roads and transmission lines would be minimally visible off site.

APPENDIX A

VIEWSHED MAPS

- **Project Map**
- **15-Mile Radius Viewshed**
- **20-Mile Radius Viewshed**
- **Viewshed Methodology**