

Wind Energy in New England

Wind Energy and Aesthetics: Common Views



Simulation of Kibby Expansion Project from Chain of Ponds

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Jean Vissering Landscape Architecture

PLANNING — SITING — REVIEW — PROJECT

- 1. Siting Directives**
- 2. Comprehensive and Inclusive Review Process with Clear Standards**
- 3. Identify Visually Sensitive Resources in Planning Documents**
- 4. Appropriate Project Scale**
- 5. Mitigation Techniques**
- 6. Evaluation Process for Cumulative Impacts**
- 7. Comprehensive Energy Plan**
- 8. Terminology**



Residential and Business Scale Wind Turbines



Siting a Wind Turbine on Your Property

*Putting Two Good Things Together:
Small Wind Technology &
Vermont's Scenic Landscape*



Simulation of Granite Reliable Wind Project, New Hampshire (33 turbines; VP at 2.6 miles)

Simulation by Northeast Wind

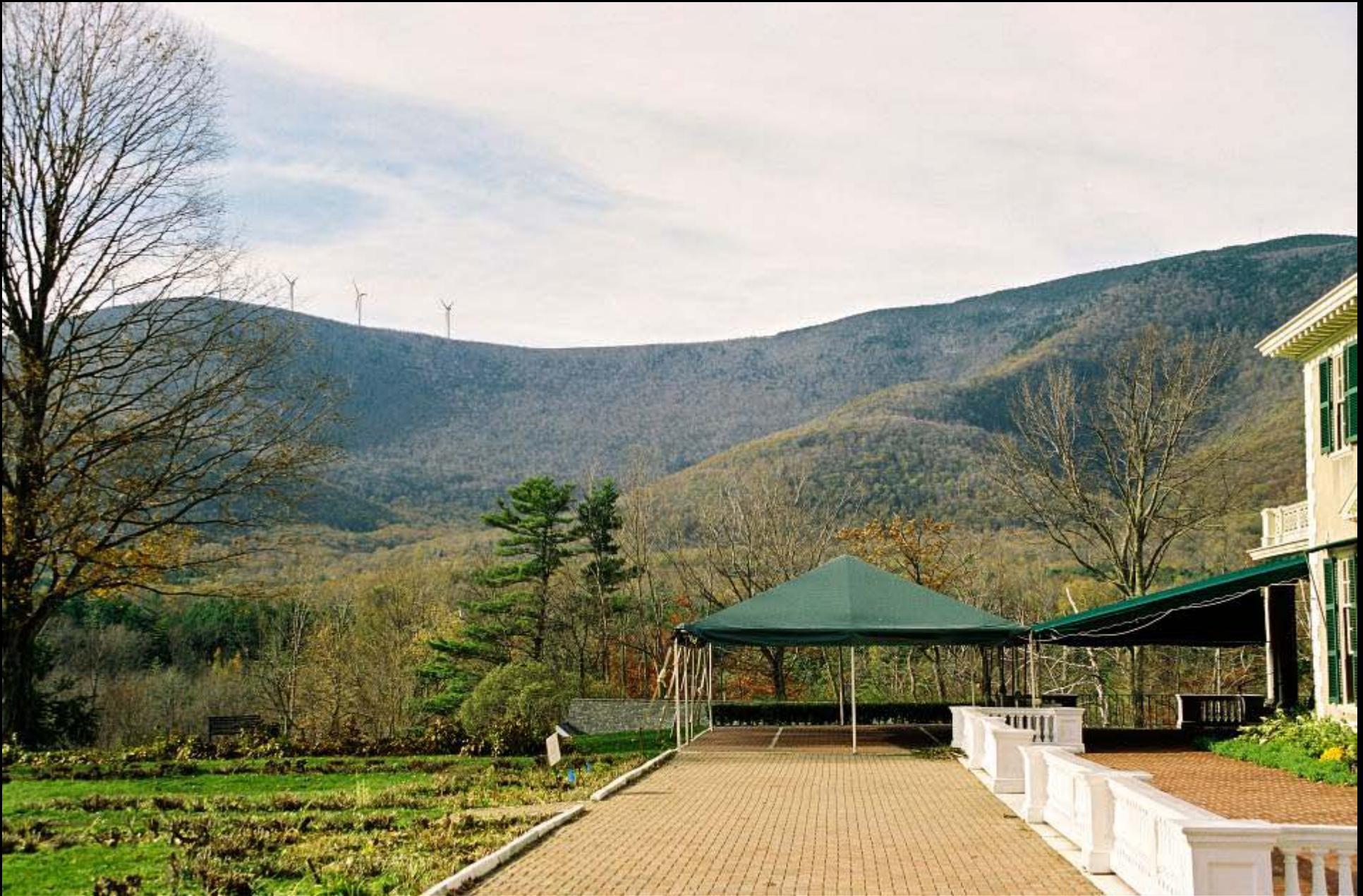


Fenner Wind Project, New York

Photograph by John Zimmerman, Northeast Wind

**Simulation of Little Equinox Wind Project from Hildene
Historic Site (Project no longer under considerations)**





Little Equinox Wind, Manchester, VT from Hildene
(not presently under consideration)

1. Siting Wind Energy Projects: Locational Directives

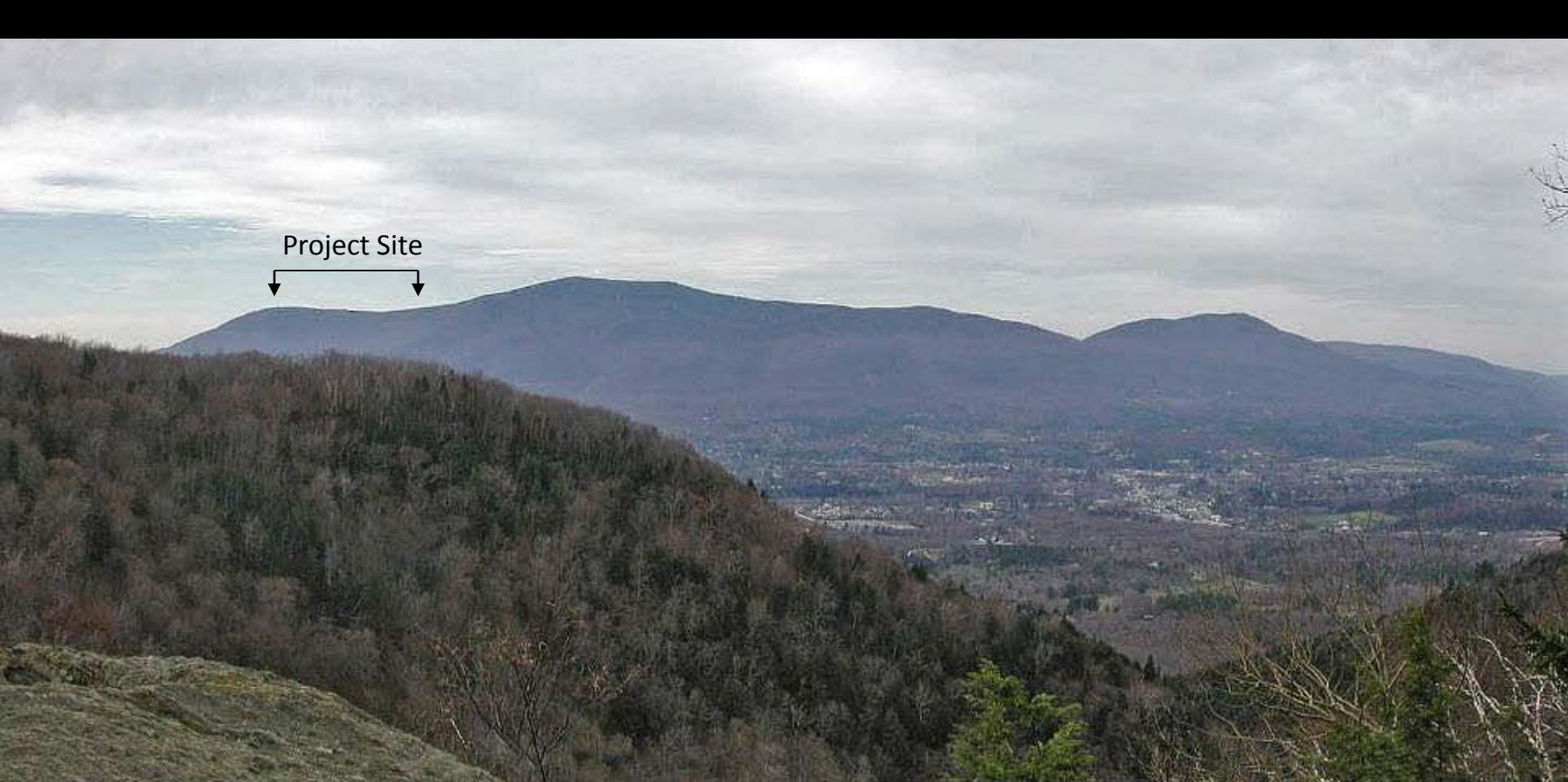


Black Nubble from Saddleback Junior, Appalachian Trail, Maine



18-Turbine Black Nubble Wind Project, Maine (Denied)

Simulation by National Park Service

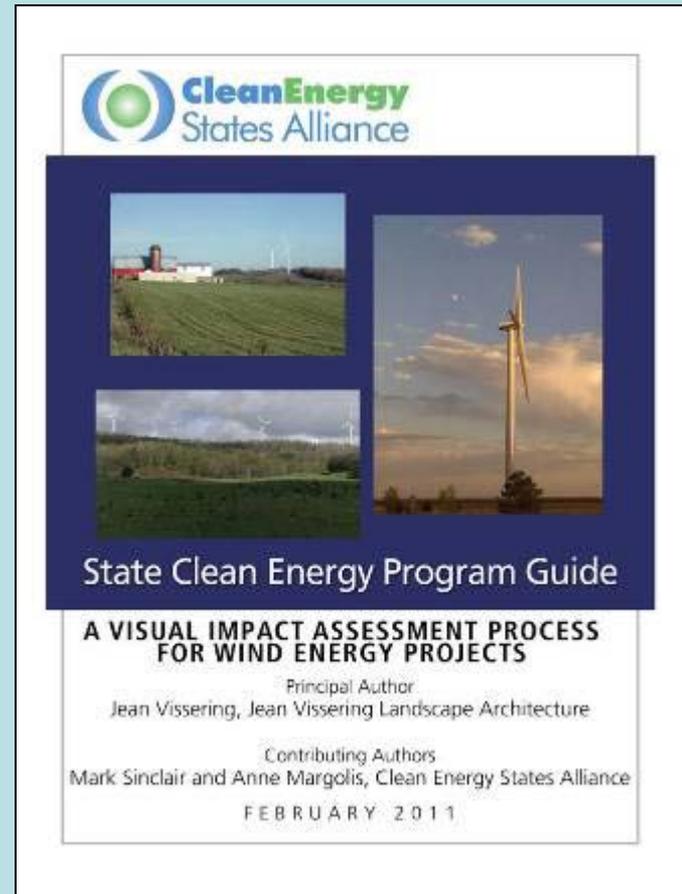


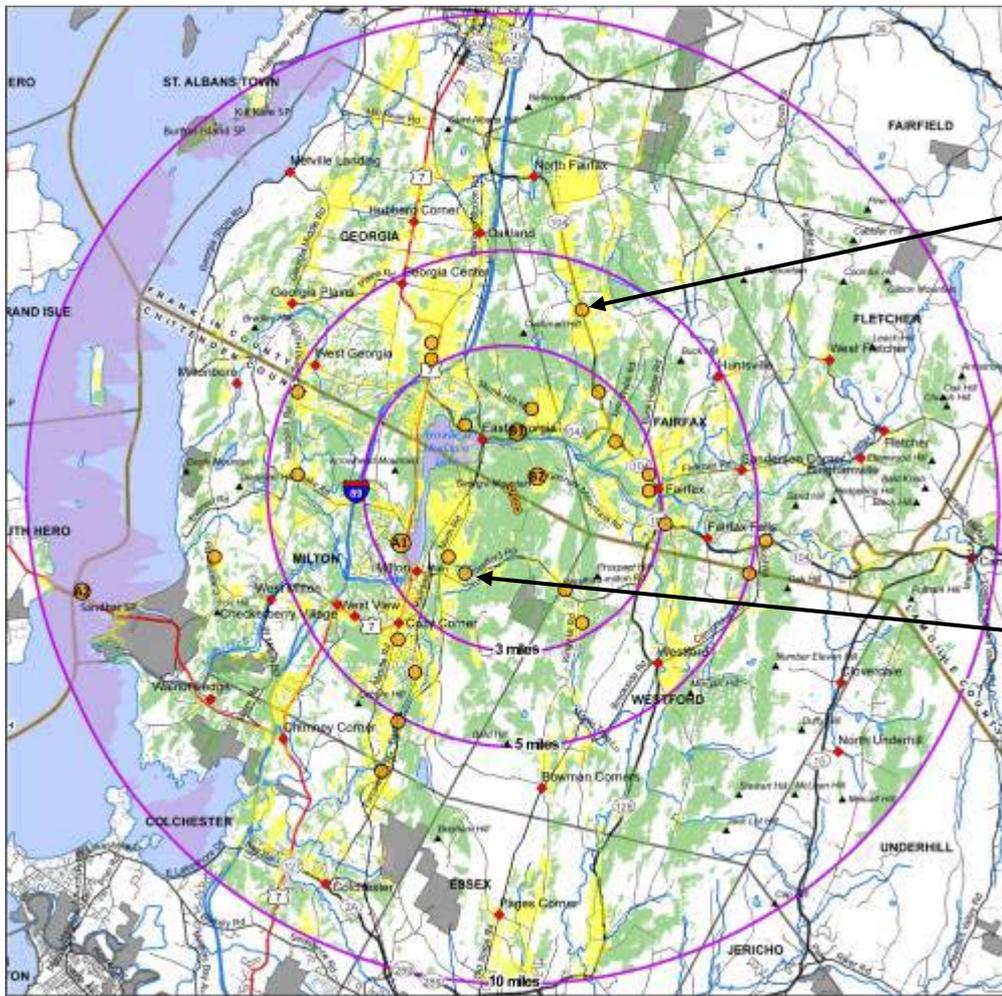
Project Site

Equinox and Little Equinox from Appalachian Trail/Long Trail

2. Comprehensive Review Process with Clear Standards

- 10 mile Radius Study Area (20 off-shore or larger projects)
- Standards for Simulation photographs
 - Illustrate Most scenic viewpoints
 - Clear weather conditions
 - Photos free of Obstructions (power poles, temporary eyesores)
 - Show associated project infrastructure (roads and clearing)
- Clear methodology, including defining unreasonable visual impacts
- Approve, deny and modify for rational reasons





-  Illustrated Viewpoint
-  Simulation Viewpoint

Legend	
	Proposed Turbines
	Village
	Summit
	Interstate
	US Highway
	State Route or Class 1
	Town Class 2
	Town Class 3
	Town Class 4
	Other Road
	Railroad
	Rivers and Streams
	Lakes and Ponds
	Distance from Turbines
	Town Boundary
	County Boundary
	Public Conserved Lands
POTENTIAL AREAS OF VISIBILITY	
	Potential Views in Forested Areas
	Potential Views in Non-Forested Areas
	Potential Views from Open Water
	Turbines Not Visible

APPENDIX 2. VIEWPOINTS MAP
Georgia Mountain Community Wind Project

Prepared by Jean Vissering Landscape Architecture and Stone Environmental Inc.



Simulation of 5-turbine Georgia Mountain Wind Project, Vermont (portion) (.7 miles)

Simulation by Saratoga Associates



Simulation of 5 turbine Georgia Mountain Wind Project, Vermont (portion) (.7 miles)

Simulation by Saratoga Associates



Panorama Simulation of Georgia Mountain Wind Project, Vermont (.7 miles)

Simulation by Saratoga Associates



Panorama Simulation of Wind Project in Maine (Project since modified)

Simulation by T.J. DeWann Associates



Simulation of 21 Turbine Lowell Wind Project, Vermont (1.2 miles)

Simulation by Landworks



Simulation of 21-Turbine Lowell Wind Project, Vermont (6.8 miles)

Prepared for Green Mountain Power by Landworks



3. Planning:

Identify Important Scenic and Sensitive Resources

Documented Scenic Resources provide a guide for decision makers.

- Local Planning**
- Regional Planning**
- State Planning**
- National Planning**

SCENIC VALUES OF THE HIGH PEAKS AREA

Documented Significance

- National Park and National Scenic Trail with historic and recreational importance.
 - Appalachian Trail specifically identified in LURC and DEP documents as high value recreation area.
 - Numerous protected lands in immediate vicinity; ongoing protection efforts.
-

Scenic Quality

- Outstanding sequence of views from rugged high peaks including extended rocky summits.
 - Presently highly scenic foreground, middleground and background
 - Intact landscape with few intrusions of built elements.
-

Viewer Expectations

- A.T. regarded as “footpath in the wilderness”
 - Provides an opportunity to experience a wild and natural setting
 - This section is regarded as one of the most wild and remote sections of the Trail
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Uniqueness of Resource

- Extended opportunities to hike in high open alpine summits is unusual
 - Highest concentration of peaks over 4,000 feet elevation in Maine
 - Black Nubble is a distinctly shaped mountain within the Longfellow Range
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Duration of View

- Overall visibility from 8 high elevation peaks, 3 shelters and from Orbiton Stream
 - 5 mountain summits have extended open rocky summits
 - Over 32 miles of trail circle the project site, about 3 days of hiking
-

Proximity to Project

- 7 mountains are located from 3-6 miles away from the project, including some of the most spectacular open summits in Maine.
 - From 3 mountains the project is viewed as an adjacent ridge.
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4. Appropriate Project Size (Scale)

- Height
- Horizontal Scale (# turbines)

San Geronio Wind Facility, California

Photo by David Polanski



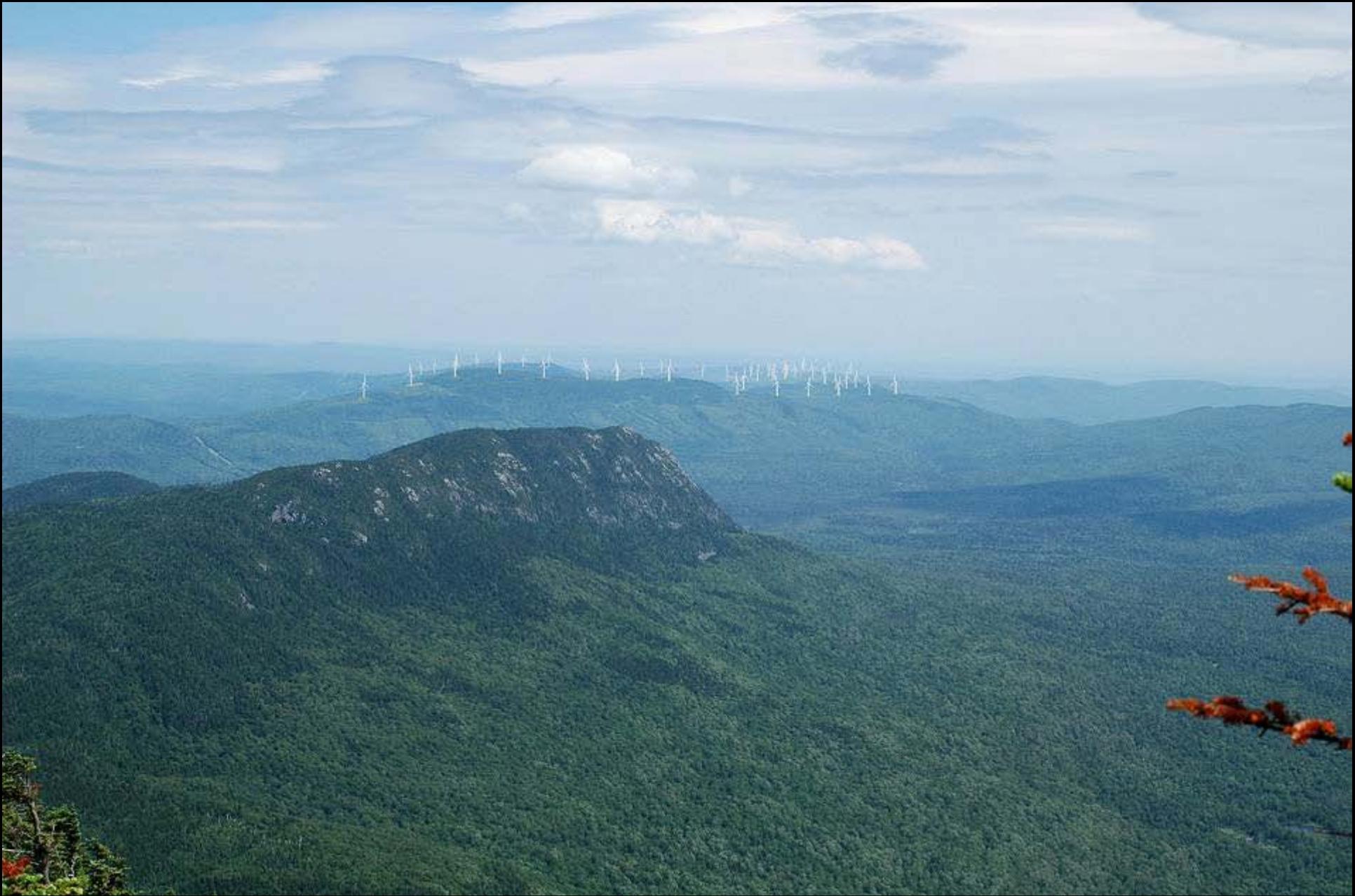
Simulation of 5-Turbine Georgia Mountain Wind Project, Vermont (2.5 miles)

Simulation by Saratoga Associates and Northeast Wind



Simulation of 15 Turbine Deerfield Wind Project, Vermont (4 miles)

Simulation by Northeast Wind



Simulation of 48-Turbine Wind Project in Maine (Since Revised) (7.7 miles)

Simulation by National Park Service



Simulation by Northeast Wind

5. Mitigation Techniques: Turbine Relocation/Reduction



- Turbines set back from foreground peak
- Appear at lower elevation



Mitigation Techniques: FAA Hazard Lighting



Simulation of 21-Turbine Lowell Wind Project, Vermont (6.8 miles)

Prepared for Green Mountain Power by Landworks

Mitigation: Roads and Clearing

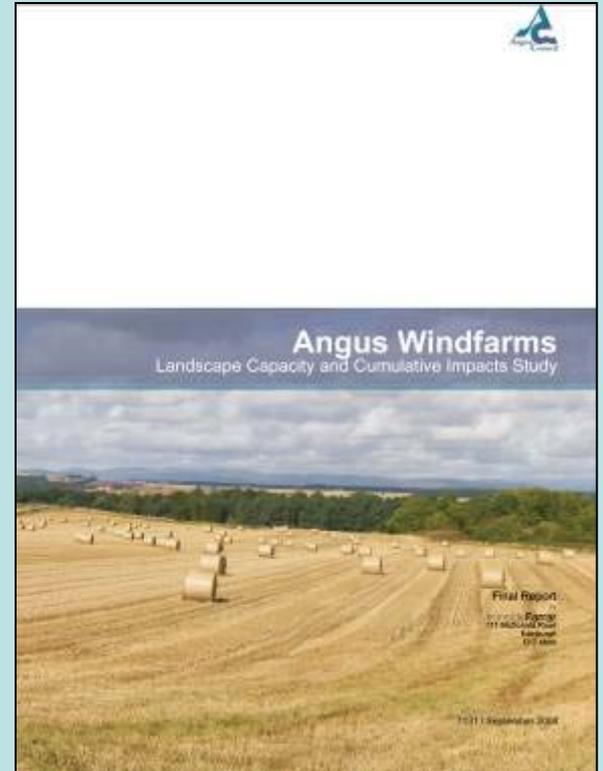


Roads During Construction Phase of Project

- Visual impacts will decrease after 5 years
- Impacts likely to be minimal when viewed from below.
- May be a concern when viewed from highly sensitive areas from above (e.g. hiking trail) in close proximity: Consider revegetation

Ensuring Public Confidence (cont.)

6. Evaluate Cumulative Impacts



7. Comprehensive Energy Plan

Energy Planning: Connect wind projects to actual reductions in GHG emissions.

8. Terminology

Wind Farm

Wind Energy Project

Industrial Wind

NIMBY

**Concern For One's
Property/Community/Place**

Corporations

The End



Madison Wind Project, New York (7-turbines)