

*Prepared for:*



**EXECUTIVE OFFICE OF ENERGY  
& ENVIRONMENTAL AFFAIRS**

100 Cambridge Street - Suite 900  
Boston, MA 02114

# RENEWABLE ENERGY SITING STUDY

ENV 09 POL 05



*Prepared by:*



**NOBLE & WICKERSHAM LLP**

**Megdal & Associates**

April, 2009

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>ES-1</b>
<b>1.0 INTRODUCTION.....</b>	<b>1-1</b>
1.1 Overview.....	1-1
1.2 Scope and Methodology .....	1-1
1.3 Organization of the Report.....	1-2
<b>2.0 BACKGROUND .....</b>	<b>2-1</b>
2.1 Permitting and Approval Processes .....	2-1
2.2 Massachusetts Overview.....	2-3
2.2.1 Local Issues.....	2-3
2.2.2 State Issues.....	2-4
2.2.3 Federal Issues.....	2-5
<b>3.0 NON-PROJECT SPECIFIC INTERVIEWS WITH DEVELOPERS .....</b>	<b>3-1</b>
3.1 Introduction.....	3-1
3.2 Methodology.....	3-1
3.3 Findings.....	3-3
<b>4.0 ANALYSIS OF SIX MASSACHUSETTS WIND POWER PROJECTS .....</b>	<b>4-1</b>
4.1 Purpose of Case Studies.....	4-1
4.2 Methodology .....	4-3
4.3 Findings.....	4-3
4.3.1 Hoosac Wind Project .....	4-3
4.3.2 Berkshire Wind Project.....	4-9
4.3.3 Princeton Wind Project.....	4-14
4.3.4 Orleans Wind Project.....	4-18
4.3.5 Fairhaven Wind Project .....	4-22
4.3.6 Hull Wind I and II.....	4-25
4.4 Summary of Key Case Study Results .....	4-29
<b>5.0 REGULATORY PROGRAMS IN OTHER STATES .....</b>	<b>5-1</b>
5.1 Introduction.....	5-1
5.2 Methodology .....	5-1
5.3 Summary of Findings.....	5-1
5.4 Findings.....	5-2
5.4.1 Massachusetts .....	5-2
5.4.2 Connecticut .....	5-4
5.4.3 Maine .....	5-5
5.4.4 New Hampshire .....	5-7
5.4.5 Rhode Island .....	5-8
5.4.6 Vermont .....	5-8
5.4.7 New York.....	5-9
5.4.8 Pennsylvania .....	5-11
5.4.9 West Virginia.....	5-12
5.5 Analysis of Different State Approaches to Permitting Wind Projects.....	5-14

<b>6.0</b>	<b>CONCLUSIONS .....</b>	<b>6-1</b>
<b>7.0</b>	<b>BIBLIOGRAPHY .....</b>	<b>7-1</b>

**FIGURES**

Figure 1. Locations of Six Case Study Projects.....	4-2
Figure 2. Hoosac Wind Projects – Florida and Monroe Massachusetts .....	4-4
Figure 3. Berkshire Wind Project Hancock and Lanesborough, Massachusetts .....	4-10
Figure 4. Princeton Wind Project – Princeton, Massachusetts .....	4-15
Figure 5. Orleans Wind Project – Orleans, Massachusetts .....	4-19
Figure 6. John Young Windmill .....	4-20
Figure 7. Fairhaven Wind Project – Fairhaven, Massachusetts.....	4-23
Figure 8. Hull Wind Project – Hull, Massachusetts.....	4-27
Figure 9. Timeline for Six Case Study Wind Projects in Massachusetts.....	4-31

**TABLES**

Table 1: Developer Wind Projects By State .....	3-2
Table 2. Existing and Proposed Wind Projects to be Studied in Detail.....	4-1
Table 3. Permit Requirements.....	4-3
Table 4: Summary of Actions, Venues and Rulings of Hoosac Wind Project .....	4-7
Table 5. Hoosac Wind Project Timeline.....	4-8
Table 6. Berkshire Wind Project Timeline .....	4-13
Table 7. Princeton Wind Project Timeline .....	4-17
Table 8. Orleans Wind Project Timeline .....	4-21
Table 9. Fairhaven Wind Project Timeline.....	4-25
Table 10. Hull Wind Project Timeline.....	4-28
Table 11. Summary of Case Study Results.....	4-29

**APPENDICES**

- Appendix A – Project Timelines for Case Studies
- Appendix B – State Regulatory Table
- Appendix C – Sample Interview Forms

## **ABBREVIATIONS, ACRONYMS, AND SYMBOLS**

ACOE	U.S. Army Corps of Engineers
BEP	Board of Environmental Protection
BMPs	Best Management Practices
CARE	Citizen Advocates for Renewable Energy
CCI	CCI Energy
CEI	Community Energy Inc.
CMR	Code of Massachusetts Regulations
CPG	Certificate of Public Good
CSC	Connecticut Siting Council
CWA	Clean Water Act
DALA	Division of Administrative Law Appeals
DCNR	Department of Conservation and Natural Resources
DCR	Department of Conservation and Recreation
DEC	Department of Environmental Conservation
DEM	Department of Environmental Management
DEP	Department of Environmental Protection
DisGen	Distributed Generation Systems
DNH	Declaration of No Hazard
DOER	Division of Energy Resources
DPU	Department of Public Utilities
DTE	Department of Telecommunications and Energy
EEA	Executive Office of Energy and Environmental Affairs
EENF	Expanded Environmental Notification Form
EFSB	Energy Facilities Siting Board
EHB	Environmental Hearing Board
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ENF	Environmental Notification Form
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
HB	House Bill
HMLP	Hull Municipal Light Plant
I&M Plant	Iron and manganese removal treatment plant
kV	Kilovolt
kW	Kilowatt
LURC	Land Use Regulation Commission
MEPA	Massachusetts Environmental Policy Act
MHC	Massachusetts Historical Commission
MMWEC	Massachusetts Municipal Wholesale Electric Company
MRET	Massachusetts Renewable Energy Trust
MTC	Massachusetts Technology Collaborative
MW	Megawatt
NDA	Negative Determination of Applicability
NHESP	Natural Heritage and Endangered Species Program

NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OOC	Order of Conditions
PAL	Public Archeological Laboratory
PMLD	Princeton Municipal Light Department
PSB	Public Service Board
PSC	Public Service Commission
PUC	Public Utilities Commission
RERL	University of Massachusetts' Renewable Energy Research Laboratory
RFP	Request for Proposal
ROW	Right-of-way
RPS	Renewable portfolio standard
SALDO	Subdivision and Land Development Ordinances
SEC	Siting Evaluation Committee
SEQR	State Environmental Quality Review
SHPA	State Historic Preservation Act
SHPO	State Historic Preservation Officer
SJC	Supreme Judicial Court
SOC	Superseding Order of Conditions
SPCC Plan	Spill Prevention Control and Countermeasure Plan
SWPPP	Storm Water Pollution Prevention Plan
T&E	Threatened and Endangered
USFWS	U.S. Fish and Wildlife Service

## **EXECUTIVE SUMMARY**

---

In July 2008, Massachusetts substantially changed its energy portfolio program when Governor Deval Patrick signed into the law the Green Communities Act (the Act). The Act contains a number of provisions designed to encourage the development of renewable energy resources and sets aggressive targets for the state to increase the percentage of its electric load from renewable energy generation from 4 percent in 2009 to 15 percent in 2020, and an additional 1 percent per year thereafter. In order to meet this statutory requirement, Governor Patrick has announced the goal of having 2,000 megawatts of wind power capacity in place by 2020. Meeting this goal will be challenging and will require a significant effort from both the public and private sectors.

By the most recent counts published by the American Wind Energy Association, Massachusetts currently has less than 6 megawatt (MW) of power capacity supplied by wind resources. Neighboring states to the west, north and south could be termed “way ahead” in developing wind energy projects. At the same time, several highly visible and much publicized projects remain in permitting, rather than generating renewable power.

In addition to setting goals for increased renewable energy development, the Green Communities Act also established an advisory commission to investigate many aspects of energy facility siting. The Act charged this advisory commission with the task of determining whether “current laws and regulations do not adequately facilitate the siting of renewable and alternative energy facilities, or whether they make it more difficult to site renewable energy facilities than fossil-fueled energy facilities” and “to make recommendations for changes to such laws and regulations.” (See Acts of 2008, Chapter 169, section 89.) To assist with this task, the Executive Office of Energy and Environmental Affairs (EEA) engaged TRC Environmental Corporation (TRC) to conduct a study to assess the regulatory and permitting process for wind power development in Massachusetts, identify delays associated with the local and state permitting process, and evaluate if those delays have significantly affected the development of wind power projects and imposed unreasonable costs upon project proponents. TRC was assisted in this study by Noble & Wickersham LLP and Megdal & Associates.

This report documents the findings of the study and presents conclusions and recommendations for the state to consider as it explores ways to further encourage the development of appropriate wind power projects. The methodology used in this study included three primary data collection methods:

1. Non-project specific interviews with wind power project developers active in a number of states to ascertain their perceptions of siting and permitting renewable power generation projects in Massachusetts.
2. Case studies of six recent land-based wholesale wind power projects in Massachusetts. The six projects identified for review were Hoosac Wind, Berkshire Wind, Princeton Wind, Orleans Wind, Fairhaven Wind, and Hull Wind (Nos. 1 and 2).
3. Examination of the regulations and permitting processes of eight other states to understand different approaches that may allow for improvements in the Massachusetts process.

Drawing on the results of these three methods allows clearer picture to emerge of the existing challenges facing current and potential wind power project developers in Massachusetts and provides examples from other states of ways the regulations and permitting processes could be streamlined while still protecting the public interest and the environment.

Interviews with the multi-state developers had common themes relative to permitting processes and good practices found in other states throughout New England and the mid-Atlantic region. Uniformly, the large multi-state developers stressed the importance of a project review process that was applied consistently, had clear requirements, was fair to developers and project opponents, and incorporated specified timeframes. Developers perceived Massachusetts as a difficult state in which to pursue development; other states had procedures in place that they felt made development more consistent, certain and predictable.

The case studies of projects in Massachusetts showed that appeals of local and/or state permits had a profound effect on project schedule and created uncertainty in the permitting process for project developers. Massachusetts stood out from other states in the number of times that the same issues can be argued, simply because there is opportunity for so many levels of appeal. As the timelines show (see end of Executive Summary), the ability to appeal a project numerous times, and the lengthy time requirements associated with appeals, have added substantially to the permitting schedule and associated uncertainty. Some prominent examples include:

- Hoosac Wind is a 30 MW project in the Berkshires, has remained in permitting for seven years delayed by legal appeals of a wetland permit that have been rejected by the regional staff of DEP, the commissioner of DEP, and a superior court judge. Final resolution by the Appeals Court is still a year or more away.
- Berkshire Wind is a 15 MW project in the Berkshires that has been in the development process for 10 years because of development delays caused in part by zoning by-laws, lawsuits brought about by project opponents, and several proposals for anti-wind by-laws created by a limited number of opponents that were all voted down at town annual meetings.
- Princeton Wind, a 3 MW municipal wind project delayed for 3.5 years because of zoning litigation that caused a private developer to abandon the project and required the town to assume the full cost of the project.
- Fairhaven Wind, a municipally-backed wind project in which the developer has withdrawn the zoning special permit that was issued and started its zoning approval process over due to legal appeals.

The review of regulations and permitting processes in Massachusetts and a number of adjacent or economic competitor states – Connecticut, Maine, New Hampshire, Rhode Island, Vermont, New York, Pennsylvania, and West Virginia – show that other states have established more consistent and predictable review processes for wind projects including:

1. Comprehensive project review;
2. Consolidated review and issuance of a single permit for the project (i.e., “one-stop” permitting);

3. Guidelines for various technical studies (e.g., avian study protocols);
4. Specifications and limits on allowable time periods for review; and
5. Limitation on the number of appeals, and reasons for appeals and who may appeal.

What emerges from the study of siting for wind projects in Massachusetts is that while the Massachusetts process is responsive to some of the items above, it does not do well with respect to the remainder. Most importantly, some other states have a centralized body that has the authority to issue a “one-stop permit” for renewable energy facilities. While Massachusetts has such a body, the Energy Facilities Siting Board, that board only has authority to review generation facilities larger than 100 MWs. This high threshold has the effect of excluding most wind energy projects, as they are typically much smaller than 100 MW. In contrast to Massachusetts, all other New England states have much lower thresholds. Connecticut has a 1 MW threshold; Vermont has no numerical threshold; New Hampshire has a 5 MW threshold; and Maine has a 20 acre threshold, which translates to a relatively low threshold of approximately 1 MW to 5 MW depending on site conditions.

Similarly, in these other New England states, when a project opponent appeals, the appeal goes directly to the state’s highest court. This means that multiple appeals are not possible, and therefore the time required for appeals is reduced. In Massachusetts, wind projects under 100 MW (which are all of the inland wind projects proposed to date) can be appealed to various courts and administrative agencies, and resolution of these appeals has been shown to be lengthy.

While this report focused only on wind permitting, the results appear to show that small wind projects not eligible for EFSB review can be subject to more delay than larger fossil fuel projects which can qualify for EFSB review. In answer to the question posed in the Green Communities Act, it would appear that “current laws and regulations do not adequately facilitate the siting of renewable energy facilities” and may “make it more difficult to site renewable energy facilities than fossil fueled energy facilities”.

For this report, four of the six Massachusetts projects that were reviewed as case studies took a long time during their permitting phase primarily because of appeals, which had very limited thresholds to establish merit and took an exceedingly long time to resolve. (See Table below.) Other states have mechanisms to better address resolution of differences and so have made their permitting process more certain for wind project development.

As an overall recommendation, therefore, for the state to truly work toward achieving its goal of 2,000 MW of wind power by 2020, there should be consideration of siting reform that provides renewable energy facilities with the same “one-stop” permitting process as larger fossil-fueled facilities, provides for clear and predictable siting standards, and establishes definitive timelines and improved management of the appeals process.

## **Case Study Timeline Summaries**

<b>HOOSAC WIND PROJECT TIMELINE</b>	
<b>DATE</b>	<b>DESCRIPTION</b>
Early 2001	Proponent begins discussions with landowners
August 2002	Zoning Special Permits to erect Met towers, Florida/Monroe
October 2003	Zoning Special Permits, Florida/Monroe
November 2003	Subdivision Reviews, Florida/Monroe
December 2003	Massachusetts Environmental Policy Act (MEPA) Determination – no EIR required. Certificate calls for state-funded avian / bat studies to be provided.
April 2004	Federal Aviation Administration (FAA) Issues Determination of No Hazard to Airspace
May 2004	Wetland Protection Act: Order of Conditions Issued by Florida/Monroe Conservation Commissions for on-site project work
November 2004	DEP issues Superseding Order of Conditions (SOC), following appeal of Florida wetlands Order of Conditions
November 2004	Citizens Group Appeals DEP SOC; case submitted to Division of Administrative Law Appeal (DALA) for Review
June 2005	Protection Plan to conserve Large-Leaved Goldenrod Approved by Natural Heritage Endangered Species Program (NHESP)
May 2007	DALA magistrate issues recommended decision denying approval of the project
June 2007	DEP Commissioner rejects DALA's recommendation and re-instates SOC
July 2007	Opponents appeal SOC and bring suit against DEP in Superior Court
Summer 2007	Filing for Certificate with the Dept of Public Utilities (DPU) for Transmission line
Spring/Summer 2008	Filing Notices of Intent with Florida/Monroe Conservation Commissions for Transmission line
July 2008	DPU issues Section 72 approval for distribution line
Fall 2008	Received Order of Conditions for Transmission Line in Florida / Monroe
January 2009	Superior Court upheld DEP's decision on SOC
March 2009	Opponents appeal Superior Court decision to Appeals Court
*For a detailed Project timeline see Appendix A	

<b>BERKSHIRE WIND PROJECT TIMELINE</b>	
<b>DATE</b>	<b>DESCRIPTION</b>
1996	University of Massachusetts releases study indicating Brodie Mountain is an excellent wind resource.
1998-2000	Distributed Generation Systems (DisGen) takes interest in the site and begins easement discussions with the property owners, evaluates wind data further and assesses the feasibility of the Project.
1998-2000	DisGen works with New Ashford to create a wind by-law to allow Project
2000	Wind By-law passed in Ashford
2000	DisGen cannot procure originally proposed turbines as they are no longer available and Ashford will not amend wind by-law to allow lighting of turbines. DisGen decides to construct on Hancock side of ridge instead (no zoning in Hancock)
Fall 2000	Building permit issued in Hancock, but construction required to wait for resolution of new anti-wind zoning by-law (first anti-wind zoning by-law proposed in Hancock)
2001-2002	Law Suit over Chapter 61 Conversion
May 2001	ENF submitted to MEPA for the upgrade and expansion of an existing gravel roadway providing access to the wind turbines.
May 2001	NOI's filed with Conservation Commissions in Lanesboro and Hancock for Access Road
June 2001	Lanesboro issues Order of Conditions for Access Road
June 2001	Lanesboro Order of Conditions (OOC) appealed, DEP requests analysis of other possible access, stream along access route declared intermittent voiding necessity of alternate route
July 9, 2001	MEPA certificate issued
July 28, 2001	Hancock Conservation Commission issues "favorable" OOC
August 2001	Lanesboro OOC upheld
Fall 2001	Town Meeting Held and Town votes down anti-wind by-law
Fall 2001	Applied for and received 2 <sup>nd</sup> building permit as first one expired –but construction was required to wait for resolution of another proposed anti-wind zoning by-law (second anti-wind zoning by-law proposed)
January 2002	Stream Designation as intermittent appealed
Fall 2002	Town Meeting Held and Town votes down 2 <sup>nd</sup> proposed anti-wind zoning by-law
Fall 2002	Applied for and Received 3 <sup>rd</sup> building permit as second building permit expired but construction was required to wait for resolution of another anti-wind zoning by-law (third anti-wind zoning by-law proposed)
Winter 2002	Preparation begins to obtain amendment to Hancock OOC to construct revised access road route in Hancock to avoid Lanesboro zoning restrictions
Fall 2003	Town Meeting Held and Town votes down 3 <sup>rd</sup> proposed anti-wind zoning by-law
February 2004	Notice of Project Change submitted to MEPA for a relocation of the access road due to zoning restriction.
September 2004	Notice of Project Change submitted to MEPA for use of the original access road since a Special Permit was issued to overcome a zoning restriction.
2006	Project held up in court after a suit is filed by Silverleaf Resorts, a new ski resort on Brodie Mountain, claiming the Project would affect its property values.
June 2008	DisGen sells Project to Massachusetts Municipal Wholesale Electric Company (MMWEC)

PRINCETON WIND PROJECT TIMELINE	
DATE	DESCRIPTION
December 1999 through November 2002	Over 20 articles published in local newspaper, The Landmark
March 2002	Notice of Intent (NOI) Letters to DEM, Audubon, Planning, Advisory, Building Inspection
June 2002	NHESP determination of no rare plants or animals or exemplary natural communities in the area of site.
July 2002	FAA Determination of No Hazard to Air Navigation completed.
October 31, 2002	Board of Light Commissioners public meeting. Board votes unanimously to approve and construct wind farm project
March 2004	Expanded Environmental Notification Form (EENF) completed and submitted to EEA for MEPA review.
April 23, 2004	MEPA Review and Certificate issued. PMLD received favorable MEPA review from the Secretary of the EEA.
May 2004	Site Plan Review Issued
May 2004	Site Plan Review Permit appealed to the land court. Court then remanded it for lack of sufficient reasons.
June 24, 2004	NOI for Storm Water Discharges, National Pollutant Discharge Elimination System (NPDES) General Permit issued by Environmental Protection Agency (EPA)
October 2004	Construction Permit issued by the Town of Princeton to PMLD and CEI to construct wind turbines
March 9, 2005	Planning Board issued a supplemental decision on the site plan review providing reasons for its decision.
May 10, 2005	Town of Princeton unanimously approved amendments to the Zoning By-Law designed to cure the potential deficiencies in the 2002 by-law.
September 28, 2005	Planning Board issued a new site plan review for the proposed facility based on the 2005 By-laws.
October 27, 2005	The approval was appealed to the land court.
October 5, 2005	Special Use Permit issued by DCR to PMLD to utilize Stage Coach Trail as access road.
October 28, 2005	Letter from Massachusetts Historic Commission (MHC). Agrees with Intensive Archeological Survey, completed September 2005. MHC agrees with PAL recommendation of no further historic studies.
November 14, 2005	Building Permit issued by Town of Princeton.
February 2006	Department of Telecommunications and Energy (DTE) filing for a comprehensive zoning by-law exemption.
September 2007	DTE grants zoning exemption
*For a detailed Project timeline see Appendix A	

ORLEANS WIND PROJECT TIMELINE	
DATE	DESCRIPTION
June 5, 2003	Orleans Wind Energy Committee Created
May 2004	Town Meeting adopts Wind Energy By-law
Spring 2006	Board of Water Commissioners raises a series of questions regarding watershed protection and location of access roads within the watershed. Massachusetts Technology Collaborative (MTC) consultants begin work on these issues.
May 2, 2006	FAA approves original sites proposed by Town of Orleans for wind turbines
July 2006	Board of Water Commissioners approves Protective Conditions for project based on work conducted by Environmental Protection Group
December 20, 2006	Board of Selectmen votes to request Article 97 legislation required to allow project to be built in watershed
Early January, 2007	Rep. Sarah Peake files Article 97 legislation on behalf of Town
March 15, 2007	MTC and Town file Environmental Notification Form (ENF) with MEPA
April 30, 2007	Orleans files application with MTC for Standard Financial Offer
April 24, 2007	MEPA issues Certificate for Orleans Wind Project
June 4, 2007	FAA Approval for final turbine configuration received
August 1, 2007	Orleans Site Plan Review Committee approves project site plan
September 12, 2007	Orleans Board of Water Commissioners votes against recommending release of the RFP; Orleans Board of Selectmen accepts Board of Water Commissioners' recommendation
*For a detailed Project timeline see Appendix A	

FAIRHAVEN WIND PROJECT TIMELINE	
DATE	DESCRIPTION
July 2005	Feasibility Report Completed
March 2008	Town by-law passed
May 2008	Town Issues Order of Conditions
May 2008	Developer applies for special permit
May 6, 2008	Special permit 2nd hearing held
May 27, 2008	Special permit issued
May 30, 2008	Order of Conditions is appealed
June 4, 2008	Special Permit Appealed (could take until March 2010)
July 2, 2008	DEP Issues Superseding Order of Conditions
December 2008	Developer Requests Abandonment of Special Permit in hopes of re-applying later as a municipal project and thus avoiding zoning requirements.
*For a detailed Project timeline see Appendix A	

<b>HULL WIND PROJECT TIMELINE</b>	
<b>DATE</b>	<b>DESCRIPTION</b>
Fall 1997	A group of citizens and teachers meet to discuss how to "re-power" old 40 kilowatt (kW) wind turbine the site.
Late 1998	CARE petitions (successfully) Hull Municipal Light Plant, a municipally owned utility, to take on the Project.
January 2001	RFP sent out to 12 turbine manufacturers.
April 2001	The bid from Vestas for a 660 kW turbine is accepted.
November 2001	Construction begins (one turbine).
December 16, 2001	Installation is completed.
December 27, 2001	Turbine goes online.
October 2002	Hull Municipal Light Plant decides to pursue the Project "Hull Wind 2." (2 <sup>nd</sup> turbine)
November 2004	FAA issues "Determination of No Hazard to Air Navigation."
December 2004	Hull Conservation Commission provides a letter of approval.
January 2005	Ownership of the landfill site is transferred from the Town of Hull to Hull Municipal Light.
June 2005	DEP completes the Post Closure Permit.
September 2005	Final approval from the DEP is obtained.
May 2006	Hull Wind 2 is commissioned (a Vestas V80, rated at 1.8 MW)
*For a detailed Project timeline see Appendix A	

## **1.0 INTRODUCTION**

---

### **1.1 Overview**

In July 2008, Massachusetts substantially changed its energy policy when Governor Deval Patrick signed into the law the Green Communities Act (the Act). The Act contains a number of provisions designed to encourage the more rapid development of renewable energy sources and sets aggressive targets for the state to meet at least 15 percent of its electric load through renewable energy generation by 2020. As a way to meet this statutory requirement, Governor Patrick has announced the goal of having 2,000 MWs of wind power in place by 2020. Meeting this goal will be challenging and will require a significant effort from both the public and private sectors.

In addition to setting goals for increased renewable energy development, the Green Communities Act also established an advisory commission to investigate many aspects of energy facility siting. The Act charged this advisory commission with the task of determining whether “current laws and regulations do not adequately facilitate the siting of renewable and alternative energy facilities, or whether they make it more difficult to site renewable energy facilities than fossil-fueled energy facilities” and “to make recommendations for changes to such laws and regulations.” (See Acts of 2008, Chapter 169, section 89.) The Executive Office of Energy and Environmental Affairs (EEA) engaged TRC Environmental Corporation (TRC) to conduct a study to assess the regulatory and permitting process for wind power development in Massachusetts, identify delays associated with the local and state permitting process, and evaluate if those delays have significantly affected the development of wind power projects and imposed unreasonable costs upon project proponents.

This report documents the findings of that study and presents conclusions and recommendations for the state to consider as it explores ways to further encourage the development of appropriate wind power projects.

### **1.2 Scope and Methodology**

Wind power development projects can take a variety of forms, such as land-based or off-shore projects, and the regulatory and permitting processes and issues vary for different types of development projects. In order to focus the scope of this study, the EEA directed TRC to review processes related to land-based wind power projects. Although Massachusetts has significant offshore wind resources, the issues these projects face are somewhat different and are being addressed via an integrated ocean management plan.

Another key difference in wind power development projects is the distinction between “behind-the-meter” and “wholesale” projects. Behind-the-meter wind power projects are those that are designed primarily to supply the owner’s on-site needs. Wholesale wind power projects are those that are undertaken with the intention of selling the majority of the power to the grid and are typically larger than behind-the-meter projects. EEA directed TRC to focus this study on the regulatory and permitting processes and issues facing wholesale wind power projects since they have the potential to provide a larger amount of generation capacity and will contribute most to addressing the state’s renewable portfolio standard (RPS). These larger wind power projects also

tend to have greater environmental impacts, and thus the permitting process can play a more important role in their development timelines.

The methodology used in this study includes three primary data collection methods:

1. Non-project specific interviews with wind power project developers to ascertain their perceptions of siting and permitting renewable power generation projects in Massachusetts.
2. Case studies of six recent land-based wholesale wind power projects in Massachusetts.
3. Examination of the regulatory permitting processes of eight other states to review a variety of approaches that may serve as the basis for improvements in the Massachusetts processes.

Drawing on the results of these three methods allows a clearer picture to emerge of the existing challenges facing current and potential wind power project developers in Massachusetts and provides examples from other states of ways the regulatory and permitting processes could be streamlined while still protecting the public interest and the environment.

### **1.3 Organization of the Report**

The report is organized as follows:

- Section 2 presents key background and general information on the regulatory and permitting processes for wind power projects and the typical challenges such projects commonly encounter in the state. This section also describes the current Massachusetts review and approval process and unique circumstances and dynamics that affect the development of wind power projects in the state.
- Section 3 presents the findings from non-project specific interviews with wind power project developers with a particular focus on the issues that they indicate prevent them from undertaking more extensive wind power project development in the state.
- Section 4 describes the findings of six case studies of recent land-based wholesale wind power projects and the various factors that contributed to a lengthy permitting process and development period for several of the projects.
- Section 5 examines the regulatory and permitting processes of eight other states and the efforts some states have made to streamline and improve their processes.
- Section 6 presents conclusions of this study and provides recommendations for changes to the Massachusetts regulatory and permitting processes that may expedite the review process for appropriate wind power project development.

## 2.0 BACKGROUND

---

While each state handles the process for reviewing a proposed wind power project somewhat differently, the same set of issues are usually addressed. Developing wind power projects typically requires construction of five components: turbines, access roads, collector systems, substations and transmission lines. Constructing and operating these facilities disturbs the land and can have a wide range of impacts on neighbors, communities and the environment. State and local governments are charged with protecting environmental resources and reviewing potential negative impacts on communities, thus a wide range of permits and approvals is normally required before such projects can go forward.

### 2.1 Permitting and Approval Processes

While the specific review processes differ from state to state and locality to locality, as a rule the environmental and other siting issues that must be addressed are essentially the same. Many states have special provisions that consolidate some or all of these reviews under one process for electric generation projects above a certain threshold size. These reviews are then handled by a single “one-stop shop” agency that issues a single consolidated approval for the project which incorporates any necessary conditions from the agencies responsible for a particular resource. Where such *consolidated processes* do not apply, permitting issues are typically handled separately, with some addressed at the local level and others at the state level in a process of *multiple permit review*. (Projects may also have to undergo federal permitting processes. Because these are generally consistent from state to state and are largely outside the control of state governments, they are addressed only for reference purposes in this report.)

In addition to the review of individual issues, some states require projects that meet certain threshold criteria to also undergo a *comprehensive environmental review*, requiring the creation of a detailed environmental impact statement that brings together all the information developed to support individually issued state (and in some cases local) permits and also typically requiring that a variety of additional possible environmental impacts be discussed and addressed.

Throughout this report, the terminology “consolidated review”, “comprehensive environmental review” and “multiple permit review” will be used to differentiate these processes. The typical categories of review that must be addressed for wind projects are listed below.

#### Review Categories

- Topics typically addressed at the local level
  - Zoning requirements – Most local zoning codes have height limitations and do not allow structures over a certain height without a special permit or variance. Wind turbines usually exceed these height limitations. In some cases, localities have adopted wind-friendly zoning regulations or model ordinances that permit development as-of-right; but if not, a special permit or variance is almost always needed. Depending on the way the project is sited and the specific ordinances of the locality, other zoning-related issues such as setbacks and use may also need to be addressed.

- Noise – some localities have noise regulations which may need to be addressed, either by zoning or other permits or by ensuring that the turbines are sited far enough from parcel boundaries that noise will not exceed mandated limits. Noise issues are typically handled at the local level via compliance with a noise ordinance, and also often at the state level (as in Massachusetts which has state-level noise regulations).
- Other local issues of concern can include shadow flicker, wetland and drainage impacts, aesthetics (including but not limited to impacts on local historic districts and sites), and construction traffic.
- Topics typically addressed at the State level
  - Rare, Threatened and Endangered Species – Species of concern may be either flora or fauna and any construction or operational activity that could produce an impact may need to be addressed. Often with wind projects, there are particular concerns with the impact of nesting or migrating birds and bats, and studies must be conducted (often at particular times of year) to ascertain the extent of impact and identify ways to mitigate those impacts. The “birds and bats” issue is so common that some states have developed dedicated resource materials to guide developers through that specific portion of the process with requirements for both pre-construction and post-construction studies.
  - 401 Water Quality Certification – Regulations intended to ensure that projects will not violate state water quality standards.
  - Storm Water Pollution Prevention Plans (SWPPPs) and Spill Prevention Control and Countermeasure Plans (SPCC Plan) for both construction and operation, under Pollutant Discharge Elimination System regulations cover stormwater runoff and the control of sediments and potential contaminants that could be contained in stormwater.
  - State Wetlands regulations, if promulgated,-intended to add additional protection of wetland resources.
  - State river and stream crossing or encroachment, if promulgated since the land under bodies of water (still or flowing) is considered public property. Some states require approval for projects that will occupy space on, over, or under water bodies.
  - Historic structures and archaeological resources review by the SHPO under any type of State Historic Preservation Act.
- Topics typically addressed at the Federal level
  - Federal Aviation Administration (FAA) – In order to build a structure over 200 feet high, the FAA must issue a “Declaration of No Hazard” (DNH) to air navigation confirming that the project does not interfere with air traffic or radar systems.
  - U.S. Army Corps of Engineers (ACOE) – Impacts to wetlands and or waterways are also regulated on the federal level via the ACOE. The ACOE regulates impacts to

wetlands under the Clean Water Act (CWA), and the impacts to navigable waters under the Rivers and Harbors Act of 1899.

- U.S. Fish and Wildlife Service (USFWS) – if federally listed endangered species are affected by a project, consultation with the USFWS will be required.
- Section 106 historic review – If the project requires a federal permit or funding, or use of federal land, then federal review of potential impacts on National Register historic properties will be conducted by the state historic preservation officer.

## **2.2 Massachusetts Overview**

Massachusetts has a comprehensive review process including the option for a consolidated permit review under an Energy Facilities Siting Board (EFSB) that covers all electrical generation projects greater than 100 MW and transmission line projects that exceed the EFSB threshold (i.e., projects of 69 kilovolt [kV] or greater that are one mile or more on new transmission right-of-way [ROW], or projects of 115 kV or greater that are ten or more miles in length on existing ROWs). EFSB-reviewed projects must also undergo environmental impact review under the Massachusetts Environmental Policy Act (MEPA). All but the very largest renewable energy projects fall below the EFSB threshold and all of the case study projects reviewed for this report are significantly below it.

For projects that fall underneath the EFSB threshold, development issues are reviewed and permitted separately, with several issues typically addressed at both the local and state levels. (One or more additional issues may also be addressed at the federal level.)

### **2.2.1 Local Issues**

At the local level in Massachusetts, wind projects typically exceed zoning thresholds related to structure height. Where wind power is not specifically addressed in the regulations, a special permit must be obtained and requires a detailed full review process and hearing. Some towns have adopted wind by-laws, to allow this process to proceed through zoning review without requiring a special permit, while still requiring site plan review of various impacts (i.e., visual, shadow flicker, noise). Alternatively, public service corporations can apply and receive exemptions from local zoning requirements via a state-level review process conducted by the Department of Public Utilities (DPU).

Under Massachusetts law, decisions on zoning approvals such as special permits can be appealed. Typically one must be an abutter to appeal and must show that the proposed use would cause harm to a privately held right or interest. Because harm to the general public interest is not sufficient, the standing rules for zoning cases are generally considered more stringent than those for environmental cases (i.e., state permit appeals), where it is generally easier to lodge an appeal. According to a lawyer interviewed for this study, courts typically take a fairly lenient view of merit on initial zoning appeals so long as standing has been established, agreeing to hear almost any reasonable case in order to preserve citizens' right to their day in court. A zoning appeal is *de novo*; that is, the court allows all issues to be relitigated and does not rely on the evidence of the local review process.

In Massachusetts, wind projects also require building permits, issued at the local level under the State Building Code. Projects also frequently need local Conservation Commission approval for wetlands permits issued under the state wetlands regulations administered by the Department of Environmental Protection (DEP). In addition, the community may adopt its own wetlands regulations which may be more stringent than the state's. Conservation Commission Orders of Conditions can be appealed by either an abutter or ten residents of the commonwealth.

### 2.2.2 State Issues<sup>1</sup>

At the state level, wind power projects may be subject to the state's comprehensive environmental review process, called the MEPA review. MEPA sets thresholds for the type of comprehensive environmental review that is needed, if any. Projects fall into three agency categories:

- No comprehensive review needed.
- Environmental Notification Form (ENF) required, and potentially a full Environmental Impact Report (EIR), at the discretion of the Secretary of EEA.
- Mandatory EIR required, after review of the ENF.

Various environmental thresholds trigger the need for an ENF. The ENF is a succinct report that discusses the extent and type of environmental impacts, and is used to solicit comments by the agencies and the public as to issues of concern and the need for further study. The MEPA Office, which is within the EEA, then evaluates the ENF and the comments received against MEPA's regulatory impact threshold levels for the preparation of an EIR, and decides if further study via an EIR is required. The process has set timelines throughout (30 days for the review of an ENF, from notice to decision, and 37 days for review of an EIR). MEPA publishes public notices announcing the availability of each report for comment (i.e., ENF, draft EIR, and final EIR) in an on-line publication called the *Environmental Monitor*. In addition to imposing its own requirements for the study of project alternatives and mitigation, MEPA works as an information clearinghouse, whereby the information derived by the ENF or EIRs is used by the permitting agencies to help prepare their own separate permit decisions.

While some of the case studies described in this report have triggered the need for an ENF because of land area impact (e.g., > 25 acres of land alteration) or other ENF thresholds, none of the projects have triggered the review thresholds requiring preparation of an EIR. Some of the applicable thresholds for the EIR are: direct alteration of 50 or more acres of land, and creation of 10 or more acres of impervious surface.

The applicant is still required to apply for each applicable state permit, and agencies will not provide individual permits until they have evaluated the information developed as part of the MEPA review. Typical state permits or agency consultations for wind projects can include: a DEP Water Quality Certification for placement of fill in wetlands or waterways, a Conservation and Management Permit ("take permit") from the Natural Heritage and Endangered Species

---

<sup>1</sup> The Massachusetts DOER's Renewable Energy and Distributed Generation Guide Book provides an excellent permitting guide to the state of Massachusetts including exhaustive detail on the MEPA and EFSB process and state and local permitting requirements. [http://www.mass.gov/Eoca/docs/doer/pub\\_info/guidebook.pdf](http://www.mass.gov/Eoca/docs/doer/pub_info/guidebook.pdf).

Program (NHESP), and a Massachusetts Historical Commission (MHC) consultation (if a project requires other state permits or funding or use of state land, and if it potentially affects a State Register property). State permits are appealable and under certain circumstances MEPA decisions regarding an EIR are as well (importantly, a MEPA decision that a project filing an ENF does not require the preparation of an EIR is not appealable).

Projects that do not trigger MEPA review can file directly for individual applicable state permits.

Virtually all environmental permits can be appealed under Massachusetts law. Criteria for standing are more lenient than with zoning issues. Typically all that is required is that the appeal be filed by either an abutter or a group of 10 or more citizens of the commonwealth. Unlike zoning appeals, which go directly to court, most state environmental permits are appealed first to an administrative law judge. Following that process, any subsequent appeal by either party would go to court. In Massachusetts there are several levels of court review (superior, appellate, and supreme) which can take long periods of time (See discussion of the appeal process for the Hoosac Case Study in Section 4.3.1).

### ***2.2.3 Federal Issues***

As in all states, wind projects in Massachusetts must comply with federal regulations and secure an FAA DNH. In some cases the ACOE is involved where there are impacts to wetlands and waterways, and the USFWS may be involved where there are impacts to federally listed rare species.

## **3.0 NON-PROJECT SPECIFIC INTERVIEWS WITH DEVELOPERS**

---

### **3.1 Introduction**

The study team conducted 16 interviews with individuals representing major renewable energy firms to ascertain their perceptions of siting renewable energy facilities in Massachusetts. Respondents were asked about their criteria for making decisions to site renewable energy projects and how their views on the relative difficulty of permitting affect those decisions. They were also asked about their direct experience with Massachusetts, if any, and how their perceptions of the siting process in Massachusetts contrasted with a group of comparison states.<sup>2</sup> In discussing their experiences in other states, they were asked to identify any best practices in permitting processes that might be considered in Massachusetts. The purpose of interviewing developers was to better understand the role of the permitting process in the decision to pursue site development and how developer perceptions of the Massachusetts permitting process may be affecting decisions to site projects in the state.

As set forth in detail in this chapter, several key themes emerged:

- Massachusetts' wind resources and large tracts of undeveloped land are more limited than many other states. As a result, the Commonwealth starts out at a comparative disadvantage, and hence must do more than other states to attract wind energy development.
- Developers value clear requirements and definitive timelines so that permitting is timely and predictable.
- Developers generally perceive Massachusetts as a difficult state to permit wind facilities due in large part to the multiple permits that must be granted and the many levels of appeal available to protect opponents.

### **3.2 Methodology**

The process for identifying firms to target for interviews involved compiling a candidate list of development companies based on where they were known to be actively engaged in project development. A preliminary list was developed based on wind projects in operation or under construction as listed on the “project” section of the American Wind Energy website. This listing identifies for each project the location, size and development company. Table 1 provides a listing of development companies and the states in the study area where they are actively engaged in project development.

---

<sup>2</sup> The comparison states initially included California, New York, and New England states which have common environmental issues such as wetlands or development in steep terrain or regulatory processes that incorporate a state level comprehensive environmental review. California was later dropped from the study as its energy/environmental regulations are currently being re-written and existing regulations soon will not be applicable. Pennsylvania and West Virginia were added to the list of comparison states early in the interview process as respondents kept raising their experiences there due to similar environmental issues and the amount of wind development that has occurred in those states.

<i>Development Company</i>	MA	ME	NH	VT	NY	PA	WV
Acciona					✓		
AES					✓	✓	✓
BP Renewables					✓		
Duke Energy						✓	
E.ON							
First Wind		✓		✓	✓		
Gamesa						✓	
Horizon		✓			✓	✓	
Iberdrola	✓		✓		✓	✓	
Invenergy					✓		✓
NextEra						✓	✓
Noble		✓	✓	✓	✓		
TransCanada		✓					
<i>There are no commercial scale wind projects on shore in Connecticut and Rhode Island.</i>							

Using internet resources, in particular news articles on individual projects, names of individual developers were identified for various projects. The resulting list contained 13 companies that either are or were recently actively involved in wind projects in Maine, Massachusetts, New Hampshire, Vermont, New York, Pennsylvania and West Virginia.

Each of the identified companies is active throughout the United States and in some cases worldwide. Six of the companies would be classified as international independent power producers while the remainder would be classified as U.S.-based independent power producers. For several of the companies, the projects in the study area states were originally sited and development initiated by predecessor companies that were subsequently acquired.

Once individual developers were identified, they were contacted via email. The communication included a letter from EEA that explained the overall purpose of the project and the desire to directly interview developers to understand their perceptions about permitting of wind facilities in the state and their thoughts on how the process might be improved.

Each potential interviewee was then contacted via phone one or more times to try to set up a phone interview. For those who were not available via phone a closing note was sent via email encouraging them to submit written comments. Of the 13 companies, discussions were held with 16 developers representing 12 companies. Interviews were conducted by phone between January 9 and March 20, 2009 and typically lasted one-half to one hour. Respondents were informed that their comments would be kept anonymous and that nothing would be specifically attributed to them or their company. This allowed discussions to be open and candid; there was a concerted effort on the part of the individual developers to be substantive in both recommendations and criticisms. The template followed for the discussions appears in Appendix C along with the letter from EEA that was sent to prospective interviewees.

### **3.3 Findings**

There were several common themes from the interviews. These are summarized below and generally follow the order of the interview outline.

#### **Experience in Massachusetts and Perceptions of Massachusetts**

As is clear from Table 1 many of those interviewed did not have direct project development experience in Massachusetts. Most had been involved in “screening” the state for potential project sites but generally did not pursue development due to a “relatively poor wind resource” and the need to involve a sizeable number of land owners in order to have a project of sufficient size. Without the ability to put together a land area that would support a 50 to 100 MW project several developers indicated that their scarce resources could be better applied to other areas. For those familiar with it, the Massachusetts permitting process was felt to be challenging and had too much opportunity for opposition to delay or derail a project.

New England in general was thought to have an adversarial climate, though with some exceptions. It was felt that New Hampshire was generally pro wind. Massachusetts on the other hand was characterized as being “afraid” of large projects, though perhaps more accepting of small projects.

#### **Comparison of Massachusetts Process with Processes in Other States**

When citing other state processes as preferable to Massachusetts, developers were quick to identify the level of review – state level review or local – and whether it could be described as a “one-stop” process. West Virginia and New Hampshire were both noted as having consolidated state level reviews: one used the public service commission as the single point of review while the other used a special energy facilities siting board. In contrast, New York has a comprehensive environmental review process (which captures all of the project issues), but for wind projects the process results in the local entity and not the state being responsible for the comprehensive review. Pennsylvania does not have a comprehensive environmental review process, so the review of some aspects of the project are conducted by local township planning boards while other aspects of the project are reviewed at the state level as part of a resource permit. One developer felt that it was through the state delegated national pollution discharge permit that would be needed for a construction related storm water permit that Pennsylvania came closest to a comprehensive review of a proposed wind project.

In comparing Massachusetts to other states, developers were also quick to note states where requirements were clearly stated and timeframes for review were well specified. Again, West Virginia was cited as an example where the submission requirements to the public service commission are clear and the review period, while felt to be “long” at 300 days, was something that developers could work with because it was clearly understood at the start of the process.

When comparing state processes, developers also noted the importance of avoiding appeals. They were quick to say that local input was critical, as most simply did not want to be in a community where they were not wanted. That said, processes that allowed well-funded, non-resident opponents to derail a project were described as frustrating and maddening. One developer summed up the issue by saying that “democracy is messy,” but that there needed to be a balance in soliciting and listening to local opinion, while still being able to approve a project that was of larger societal benefit.

The challenge of balancing local impact with larger public good was recognized as something that no process had really solved. One developer felt that the New Hampshire Site Evaluation Committee (SEC) represented about as good a balance as you were going to get. The developer particularly liked New Hampshire because the SEC was not politically appointed; he/she felt that this ensured the review process was fair and focused on the key environmental issues at hand.

### **Attitude of Regulators**

Developer comments also addressed differences in what were felt to be attitudes of regulatory agency staff, as well as apparent inconsistencies between policies expressed at one level of government and actions at a different level. Vermont was characterized as anti-development at every level. In meeting with regulatory agency staff, it was said that one felt that the staff were trying to figure out “how to kill a project”. This was in contrast to Pennsylvania DEP staff who more openly tried to be helpful.

Massachusetts was cited as having possible policy conflicts. On the one hand the state was widely recognized as being a leader in trying to promote renewable energy development. There were several references to proposed wind farms in areas where there were already recreational opportunities. The addition of wind turbines were seen by the developers as consistent with these relatively non-intensive existing land uses. However, in almost all cases the projects were opposed because they constituted development that was seen as inconsistent with conservation.

Several developers noted the differences in states that had favorable development policies alone, versus those states that had such policies and then went further to ensure that the desired outcome actually occurred. The New Hampshire Site Evaluation Committee is one example: the state has adopted policies promoting renewable energy, and then has had state staff actively involved in implementing the policy. Similarly, Pennsylvania has a number of policies promoting renewable energy development. However, the state has also gone well beyond policy: the Game Commission led development of a collaborative agreement for review and permitting of wind projects among federal and state agencies, non-governmental organizations, and developers, which provides methodologies for study protocols and agreement on expedited review.

### **Desirable Attributes for Permitting Processes**

With respect to permitting processes in general, all developers noted the importance of the following:

- Clear specification of requirements
- Clearly stated time limits
- A clear path that if followed leads to the approval necessary for development.

The need for a clear specification of requirements was wide ranging: it related to application requirements, study requirements, and the question of who constituted a party to an appeal. Several developers noted that they were not looking for someone to do their job; rather, if there was an application there needed to be a clear listing of what needed to be submitted and to whom. Since the technical issues related to wind development are generally understood, one suggestion was to create a checklist of issues to be addressed. The checklist could then be used

as a guide, both for materials submitted for a project and as the basis for accepting comments during an appeal.

Clearly specified time limits were noted because of the impact that they have on the development of a project schedule and the associated need for certainty. Time periods of importance included those allowed for review by an agency or the public as well as time limits associated with filing an appeal. Several developers made it very clear that they were not looking for the public to be excluded from the project review process. Rather, they felt that the process needed to be kept moving. Adherence by both developer and the public to specified times was important to achieving this.

In talking about a clear path, this included a process that focused on relevant issues (also referred to as issues of merit). Several times it was noted that reviews were sidetracked by issues that were irrelevant to the project. In any appeal process that relied on merit, these cases would proceed. Where issues that did not have merit were allowed to enter the process it was felt that in the end little of substance had been achieved. There was likely to be little change in the project design but substantial costs would have been incurred: costs that would eventually be passed along to the consumer.

With respect to Massachusetts, comments were more varied, reflecting in part the difference between perceptions versus actual experience in the state. New England in general was felt to have an extremely adversarial climate for wind development. Several developers noted that they did not want to develop projects where they were not wanted. Given the variation in local opinion, they consider the resolution of local issues to be a developer responsibility. Concern was expressed several times about projects that had won the acceptance of the local community, but were being held up by well-funded opponents who might come from outside the area.

It was generally felt that the recent changes that had been made in Maine were a step in the right direction. Specifically, anything that focused project review and streamlined the permitting process so that it could add certainty to the overall development process was important. Developers noted that they are looking for clarity and definition in a regulatory process so that they can better manage the risks inherent in development that can take several years from initial concept to actual revenue generation.

## 4.0 ANALYSIS OF SIX MASSACHUSETTS WIND POWER PROJECTS

### 4.1 Purpose of Case Studies

This section is devoted to the review of the six projects selected for analysis of the development process relative to permitting and approval to identify if environmental related reviews or permits have contributed to excessively long development timelines.

To assess the experiences incurred in siting renewable energy projects in Massachusetts, EEA directed that a variety of completed and pending renewable energy projects be studied. Data gathering on selected projects was to include file reviews at regulatory agencies, interviews as well as review of other readily available information. The goal was to identify if there had been delays in state and local review and associated permitting of these facilities and whether these delays significantly affected project development and imposed unreasonable costs upon the proponent.

As noted earlier, the state directed that the focus of this study be limited to on-shore development. It also directed that the study look only at wholesale projects. These projects are typically larger than special purpose projects that are designed to supply the owner's own on-site needs. Based on a review of existing and proposed wind projects in Massachusetts, TRC and EEA jointly identified the six projects listed in Table 2 as those that would be studied in detail.

Project Name	Location	Size	Developer	Status
Hoosac Wind	Monroe and Florida, MA	30 MW	Iberdrola	Still under development. Wetland permit issued by state has been under various appeals since May 2004, and is still pending, now in the Appeals Court.
Berkshire Wind	Hancock and Lanesborough, MA	15 MW	MMWEC	MMWEC has taken over the Project and it is now under construction.
Princeton Wind	Princeton, MA	3 MW	PMLD	Development phase complete. Erection of towers scheduled to begin in Spring 2009.
Orleans Wind	Orleans, MA	3 MW	Town of Orleans	Development abandoned.
Fairhaven Wind	Fairhaven, MA	3 MW	CCI Energy	Still in permit process. Developer requested a dismissal of the special permit in order to re-apply later as a "municipal project"
Hull Wind Nos. 1 and 2	Hull, MA	660 kW/ 1.8 MW	Hull Municipal Light Plant	Construction Complete. Both projects operating.

These projects are not intended to represent a statistical sample of all projects proposed for development in the state; rather they have been selected because they represent variation in size, ownership of the selected project site, different regions of the state, and differences in developer experience with wind development.

Figure 1 shows the location of each of these projects. Two of the projects (Hoosac and Berkshire) are located in the western part of the state in areas of relatively high terrain in the Berkshire Mountains where published maps indicate a wind resource in excess of class 4. Three of the projects (Orleans, Fairhaven and Hull) are located in coastal communities in the eastern part of the state where there are also significant wind resources. The sixth project (Princeton) is in central Massachusetts at a site that benefits from the wind resource of Wachusett Mountain, the tallest mountain in the area.

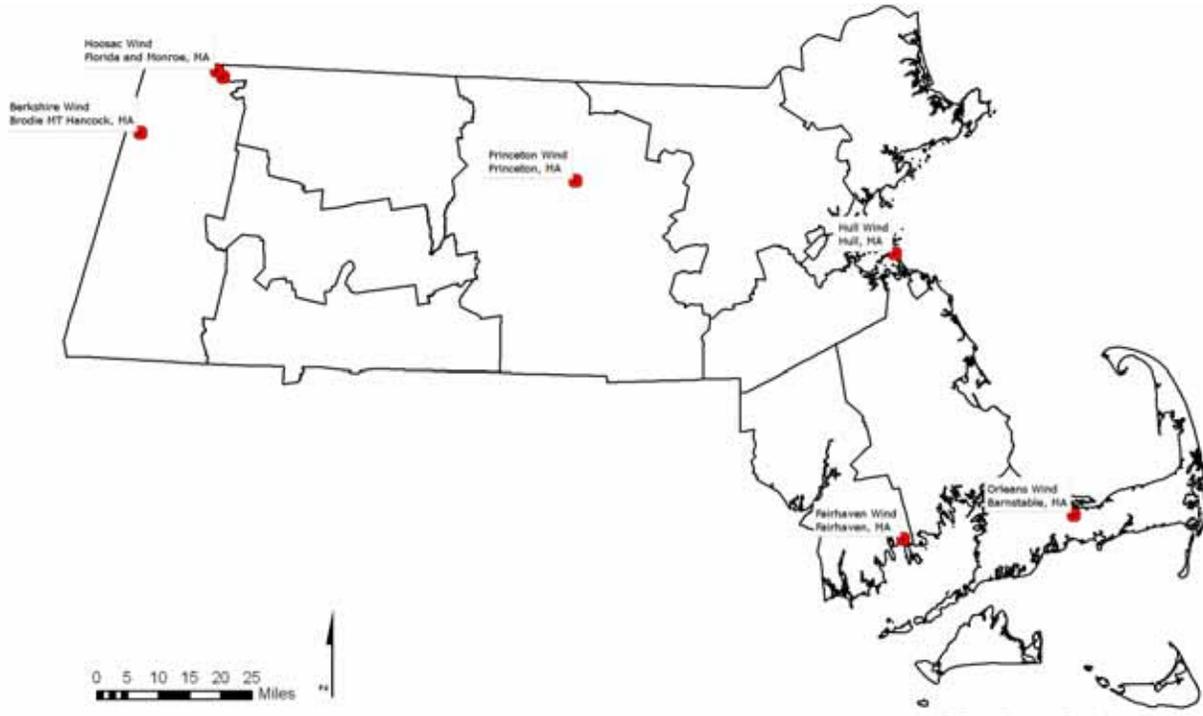


Figure 1. Locations of Six Case Study Projects

The two projects in the Berkshires were both initiated by private developers and are larger in generation size (15 and 30 MWs) than the other four projects, which are 0.66 MW to 3 MWs in size and proposed by municipalities. Some of these municipalities already own or proposed to own the projects themselves (Hull and Princeton), while other municipalities have proposed to lease the land to private developers along with ownership and operational responsibilities (Fairhaven and Orleans<sup>3</sup>).

Each case study includes background on the project setting followed by a summary of materials reviewed and discussions held with a focus specifically on agency reviews and permit issuance. Table 3 shows the permits and approvals required for each of the six case study projects

<sup>3</sup> The Orleans project development ended before an RFP for a developer/owner/operator was issued (See Section 4.3.3).

Table 3. Permit Requirements						
Permit	Hoosac Wind	Berkshire Wind	Princeton Wind	Orleans Wind	Fairhaven Wind	Hull Wind Nos. 1 and 2
<b>LOCAL</b>						
Zoning Special Permit	✓		✓	(1)	✓	
Building Permits	✓	✓	✓	✓	✓	✓
Conservation Commission Approval	✓	✓			✓	✓
<b>STATE</b>						
MEPA ENF/MEPA Certificate	✓	✓	✓	✓		
DTE Zoning Exemption			✓			
Department of Public Utilities Approval for Transmission Line	✓					
Endangered Species Conservation Management Plan	✓					
DEP Post Closure Landfill Permit						✓
<b>FEDERAL</b>						
FAA Approval	✓	✓	✓	✓	✓	✓
<b>Notes:</b> (1). Orleans would have required a special permit but development ended as a result of the Board of Water Commissioners vote prior to this permit being sought after.						

## 4.2 Methodology

To research the case studies, TRC examined files at MEPA and the Massachusetts Technology Collaborative’s Massachusetts Renewable Energy Trust (MRET), and interviewed developers and project attorneys who worked on the projects and other individuals involved in the development process. For discussions with developers, TRC used an interview guide (see Appendix C) to assist in solicitation of the necessary information for the case studies. In addition, TRC interviewed individuals at the MRET who were involved in all the projects. Finally, TRC looked at various news articles about the projects for information on the timeline and to find information about public opinion.

## 4.3 Findings

### 4.3.1 Hoosac Wind Project

#### **Background**

The Hoosac Wind Project is a 30 MW project located in the Towns of Monroe and Florida. It includes 20 turbines that are 1.5 MW in size. Eleven turbines will be located on the Bakke Mountain ridge in Florida and nine along Crum Hill in Monroe and Florida (See Figure 2). The height of the structures will be 213 feet from the ground to the nacelle, the structure to which a rotor attaches, and 320 feet at the vertical extension of the rotor blades. The estimated \$40 million project also involves the construction of access roads, transmission lines, an electrical substation and maintenance and equipment buildings.



Figure 2. Hoosac Wind Projects – Florida and Monroe Massachusetts

The towns of Monroe and Florida are very small and nestled in the heart of the Berkshires. Monroe has a population of 93 and is located on the Hoosac Range, which is at the northern end of the Berkshire Mountains. The town's border with Rowe lies along the Deerfield River, which enters the state at this point, heading south and eastward towards the Connecticut River. The town of Florida has a population of 676 and is located near the highest points of the Hoosac Range, which runs through the western part of town. There are several rivers and brooks, most of which lead to the Deerfield River, which makes up much of the eastern border. Both towns have excellent opportunities for hiking as they are located in or near three state forests: Monroe State Forest, Savoy Mountain State Forest, and the Mohawk Trail State Forest. Due to nearby ski areas and other recreational facilities, the transient visitor population can increase substantially on weekends and during the summer months. Spectacular fall color attracts visitors from throughout the United States.

The Hoosac project began in 2001 when KMS Mountain Energy began negotiations with land owners for the project. Later enXco took over the project and then, in 2006, the current developer, Iberdrola took over the project.

### **Permitting**

A host of permits were required for development of the project's wind measurement towers, and the project itself. On the local level these included zoning approvals, Order of Conditions, and Subdivision approvals, on the state level these included, MEPA review, a DEP superseding order of conditions, a conservation management plan approval, and a certificate of public good, and on the Federal level, the project required FAA approval (See permit list below):

- Local
  1. Special zoning permit in the town of Monroe for the wind measurement tower
  2. Special zoning permit in the town of Florida for the wind measurement tower
  3. Special zoning permit in the town of Monroe for the project itself
  4. Special zoning permit in the town of Florida for the project itself
  5. Subdivision review in Monroe [Because of multiple land parcels]
  6. Subdivision review in Florida [Because of multiple land parcels]
  7. Orders of Conditions from Monroe Conservation Commission for wetlands impacts of project site and transmission line
  8. Orders of Conditions from Florida Conservation Commission for wetlands impacts of project site and transmission line
- State
  1. Filing and review of ENF under MEPA

2. DEP Superseding Order of Conditions under the Wetland Protection Act, following citizens' appeal of Order of Conditions for project site issued by Florida Conservation Commission (the other three local Orders of Conditions listed above were not appealed)
  3. Approval of a Conservation Management Plan by the NHESP, because of impacts on the state-listed Large-leaved Goldenrod
  4. Certificate from the DPU that the project will serve the public convenience and is consistent with the public interest (required because of upgrade and extension of the electrical tie line from the project site to the nearest transmission line)
- Federal
    1. FAA approval

### **Key Development Process Issues**

During the early phase of development, the permitting went smoothly with little to no opposition. There was strong local support for the project in both Florida and Monroe, as shown by a 70 percent vote in favor of the project. Zoning special permits were granted for the wind measurement towers in both towns (2002), zoning special permits for the Project itself were granted in both towns (2003), and MEPA review of the ENF occurred without issue, as the MEPA Office determined that an EIR was not required (December 2003). The MEPA certificate did call for pre-construction avian and bat studies to be conducted at the project site, with a mixture of state and developer funding – not as a condition of project approval, but rather as a voluntary effort to improve the state of knowledge with respect to wind power impacts on wildlife. The studies were completed over the next two years.

The Project ran into some opposition when the proponent needed to obtain permits for the off-site materials staging area in Charlamont. The project applied for, and received a Negative Determination of Applicability (NDA) for work in wetlands, but the NDA was appealed by an abutting land owner. The same party appealed the Town of Charlamont's zoning special permit, but ultimately settled the case. These appeals required six months to one year to resolve.

In addition to the issues noted above, there were two major issues that affected the timing of the development of the Hoosac Wind Project:

- Appeals under the Wetlands Protection Act
- Massachusetts Endangered Species Conservation Management Plan Permit

### **Appeals under the Wetlands Protection Act**

The major increase in development time of the Project centered on permitting of the project under the Wetlands Protection Act in the town of Florida. The Conservation Commissions in both towns issued Orders of Conditions for the work on the project site. In June 2004, an appeal of the Florida decision was filed by both an abutter and a group of 10 citizens of the town. Funds for legal fees and consultant studies to support the appeal were provided by a resident of another town in the Berkshires who has been deeply involved in a variety of development projects in the region in recent years. The appeal centered on two technical issues: how are

linear feet of the banks of an intermittent stream calculated to determine if the impact threshold of >50 feet of stream bank has been met, and whether the shadow cast by a bridge built over a wetland should be considered an alteration of that wetland. The Massachusetts DEP had not previously set binding precedents on either of these issues, so this case broke new legal ground.

In response to the appeal, DEP conducted a review and asked the developer to make some improvements to their plans. When the developer made these alterations, the DEP then issued a Superseding Order of Conditions in November 2004, in effect rejecting the appeal.

A group of 10 citizens then appealed the Superseding Order of Conditions in late November of 2004. The appeal remained in the State’s Division of Administrative Law Appeals (DALA) appeal process until a decision was issued two and a half years later in May of 2007. The DALA magistrate issued a recommended decision in favor of the opponents. However, in June 2007, the DEP Commissioner issued a final decision that found that the magistrate had misread DEP’s regulations and policies, and upheld the Superseding Order in favor of the project proponent. Following that decision, a group of ten concerned citizens and abutters sued DEP and the issue went to Superior Court. In January of 2009, the court upheld DEP’s decision. In March 2009, the opponents appealed to the Appeals Court.

The Appeals Court allows appeals without any initial showing that they have any merit, and this appeal could delay the project for another year or more. The wetland permit could also be appealed after that and spend another year before the state Supreme Judicial Court (SJC).

Table 4 provides a summary of the various appeal-related actions, venues and rulings that have occurred as part of this process.

Table 4: Summary of Actions, Venues and Rulings of Hoosac Wind Project		
Action	Venue	Ruling in Favor of:
Initial Appeal of Order of Conditions June 2004	DEP	Proponents – Nov 2004
Appeal of DEP Order of Superseding Conditions – late Nov. 2004	DALA	Opponents – May 2007
Rejection of DALA’s order	DEP Commissioner	Proponents – June 2007
Lawsuit against DEP	Superior Court	Upholding DEP’s decision in favor of proponents - January 2009
Potential appeal of Superior Court Ruling	Appellate Court	n/a

Since the time of the DALA review on this project, DEP has worked to create a significantly more efficient means of addressing appeals of a Superseding Order of Conditions. Rather than send these appeals to DALA, DEP now uses their own attorneys, who are more familiar with the issues at hand and can address such an appeal more expeditiously. DEP has also set much tighter deadlines on adjudicatory appeals, with a presumed 6-month timeline for decisions. DEP is described by attorneys familiar with the process as generally complying with its new deadlines. However, the DEP decision can still be appealed to the Superior Court and other courts as described in the case study.

In addition to the above issues, the proponent also had to secure local Wetlands Protection Act Orders of Conditions and authorization from the DPU for its interconnection tie line. These permit processes went fairly smoothly, were all concluded within one year, and did not result in appeals.

**Massachusetts Endangered Species Conservation Management Plan Permit**

In addition to the wetlands appeal, the proponent encountered another major development issue, which occurred at the same time as the Wetland Protection Act appeal. This issue centered on obtaining a Massachusetts Endangered Species Conservation Management Plan Permit. The issue of concern was protection of a state-listed rare goldenrod species that occurred along the ridgelines from impacts that could result from construction of the project. Approval of this permit took 1.5 years and involved the developer submitting six revisions of its goldenrod studies and protection plan to the agency. The work involved the re-location of affected plants and costs of approximately \$60,000 to \$75,000 to purchase additional goldenrod habitat for mitigation. The plan requires monitoring of the construction area for invasive species throughout the entire construction period.

In summary, the Project has been in development for 8 years, and remains waiting for the wetlands appeal process to reach an end.

Table 5. Hoosac Wind Project Timeline	
Date	Description
Early 2001	Proponent begins discussions with landowners
August 2002	Zoning Special Permits to erect Met towers, Florida/Monroe
October 2003	Zoning Special Permits, Florida/Monroe
November 2003	Subdivision Reviews, Florida/Monroe
December 2003	MEPA Determination – no EIR required. Certificate calls for state-funded avian / bat studies to be provided.
April 2004	FAA Issues Determination of No Hazard to Airspace
May 2004	Wetland Protection Act: Order of Conditions Issued by Florida/Monroe Conservation Commissions for on-site project work
November 2004	DEP issues Superseding Order of Conditions (SOC), following appeal of Florida wetlands Order of Conditions
November 2004	Citizens Group Appeals DEP SOC; case submitted to Division of Administrative Law Appeal (DALA) for Review
June 2005	Protection Plan to conserve Large-Leaved Goldenrod Approved by NHESP
May 2007	DALA magistrate issues recommended decision upholding three conditions of Citizens Appeal of SOC
June 2007	DEP Commissioner rejects DALA's recommendation and re-instates SOC
July 2007	Opponents appeal SOC and bring suit against DEP in Superior Court
Summer 2007	Filing for Certificate with the DPU for Transmission line
Spring/Summer 2008	Filing Notices of Intent with Florida/Monroe Conservation Commissions for Transmission line
July 2008	DPU issues Section 72 approval for distribution line
Fall 2008	Received Order of Conditions for Transmission Line in Florida / Monroe
January 2009	Superior Court upheld DEP's decision on SOC
March 2009	Opponents appeal Superior Court decision to Appeals Court
*For a detailed Project timeline see Appendix A	

### ***4.3.2 Berkshire Wind Project***

#### **Background**

The Berkshire Wind Project is a 15 MW wind project located off Brodie Mountain Road in the Towns of Hancock and Lanesborough. The current plan for the project calls for ten 80-meter high 1.5 MW GE turbines situated on a ridge that runs between Sheeps Heaven Mountain and Brodie Mountain in Hancock. The planned access road is located in Hancock and Lanesborough (See Figure 3). The Town of New Ashford borders the eastern side of the referenced ridgeline of the project, but no portion of the project as currently planned is located there.

The Towns of Hancock, Lanesborough and New Ashford are very small towns with a combined population of less than 4000 (Hancock, 721, Lanesborough, 2,891, and New Ashford, 247). The population grows somewhat in the summer months, due to proximity to Tanglewood and rural recreational opportunities that attract hikers, campers and outdoor enthusiasts. In the winter people come to the area to ski Jiminy Peak, a popular ski area that is located just south of the project in Hancock.

Interest in a wind project at the site first began in 1996 when data from the University of Massachusetts Wind Lab indicated that Brodie Mountain was an excellent wind resource. A wind developer called DisGen took interest in the site in 1998 and began easement discussions with the property owners, evaluated wind data further, and assessed the feasibility of the Project.

#### **Permitting**

The project required the following approvals and permits:

- Local
  1. Building permits in Hancock and Lanesborough
  2. Zoning approval in Lanesborough, (Hancock did not have Zoning laws)
- State
  1. Approval under the Wetlands Protection Act for the access road portion of the project that is located in a wetland
  2. Filing of an ENF under MEPA
- Federal
  1. FAA approval.

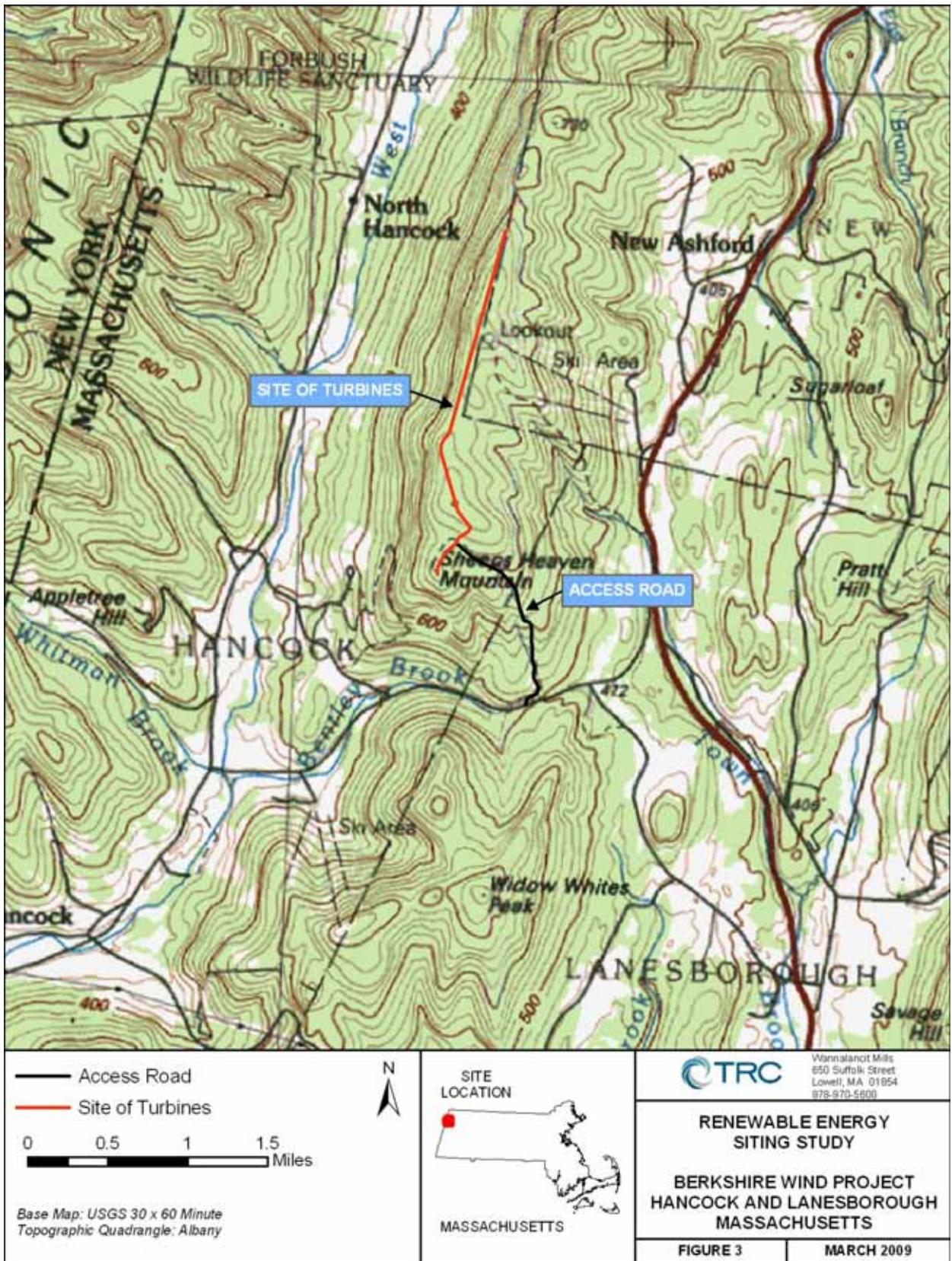


Figure 3. Berkshire Wind Project Hancock and Lanesborough, Massachusetts

## **Key Development Process Issues**

There were five major issues that have affected the development phase of the Berkshire Wind Project, which is scheduled to start construction in 2009. These issues are:

- Local Zoning Approval in New Ashford
- Delay of construction because of Proposed Anti-Wind By-Laws
- Difficulty in Financing and Turbine Size
- Law Suit over Chapter 61 Process
- Silverleaf Resorts Law Suit over Visual Impacts of the Project on property at Silverleaf
- Availability of Turbines

### *Zoning (1998-2000)*

As noted, the project site is on a ridge on the border of two towns: New Ashford and Hancock. In 1998 when the Project began, Hancock had no zoning laws and New Ashford had a typical zoning law. Due to siting issues and access, DisGen originally planned to develop on the New Ashford side of the ridge and worked with New Ashford for two years to pass a wind zoning by-law that would allow for wind turbine construction. By the time DisGen was able to contract for the turbines in 2000, the turbine model previously selected was no longer available and the new turbines were larger and required higher monopoles and FAA lighting. As a result, these new turbines did not meet the restrictions on lighting in New Ashford's new wind by-law. DisGen attempted to get the by-law revised, but at that time opposition had mounted to any additional increase of visual impacts, and the Town would not approve the change. The MEPA files indicate that numerous individuals were against the project for a variety of reasons including visual impacts, noise, and concern over avian impacts. Some opponents requested that the Commonwealth of Massachusetts issue a moratorium on wind development because of these issues. As a result of the difficulties with zoning in New Ashford, DisGen decided to pursue development on the Hancock side of the ridgeline where there was no zoning.

### *Delay of construction because of Proposed Anti-Wind By-Laws*

In the year 2000 DisGen secured a building permit to conduct its work in Hancock. However, shortly after DisGen received its building permit, an anti-wind by-law was proposed by the opposition. According to the building permit and town rules, a developer must wait for a hearing for any proposed by-law that would affect a project including by-laws proposed shortly after issuance of a building permit. Therefore, DisGen had to wait until the issue was discussed at the town meeting. Unfortunately, town meetings were held in Hancock only once a year and DisGen had to wait for close to a year. When the town meeting was finally held, the anti-wind by-law was voted down. However, by this time, the applicant's building permit had expired and when he applied for and received a second building permit, a new anti-wind by-law was proposed and this same scenario played out again delaying the project for another year, and then

this occurred a third time delaying the project again. Overall, this delayed the project for approximately 3 years during the time period from 2000 to 2003.

#### *Difficulties in Financing (2001-2004)*

From 2001 to 2004 the project worked to find investors and obtain project financing for the site in Hancock. The use of a larger turbine and questions on wind data caused some increases in the time to obtain financing and resulted in the applicant having to conduct further wind monitoring to confirm wind resources. The larger turbine also required re-design of the access road to accommodate delivery of the larger turbine. Finally, issues with proposed anti-wind by-laws (see above) increased the length of time required to secure financing.

#### *Lawsuit over Chapter 61 Conversion (2001)*

Development in Hancock involved a Chapter 61 conversion from certified forested conservation land to land used for a wind farm. This process requires public notice to allow the Town an opportunity to purchase the land if it so desires. In an effort to stop the project, the Selectmen of Hancock sued DisGen claiming they were not properly informed. However, the court eventually ruled that proper notification was made and the town lost the law suit, though the process slowed the Project's development and interfered with efforts to get financing during 2001.

#### *Silverleaf Resorts Lawsuit (2006)*

In 2006, Silverleaf Resorts, a new resort area on Brodie Mountain filed suit against the Project claiming visual impacts would affect its property values. The suit was filed even though the Project had been proposed long before Silverleaf proposed its development. The court threw out the case without prejudice.

#### *Availability of Turbines (2005 to 2006)*

Although Berkshire had obtained all of its permits by the first quarter of 2005, along with land agreements, offers of financing, and power purchase agreements, it could not procure its wind turbines. The developer stated in his status reports to Massachusetts Technology Collaborative (MTC) that GE would not provide turbines during 2005 and was essentially only selling turbines to large developers. In addition, he noted that as the permitting and financials were based on the GE turbine, a switch to alternative turbines proved difficult. DisGen completed an exhaustive review of all wind turbines available in 2005 and 2006 and in March 2006 concluded that the economics and environmental permit requirements could be achieved only by using the GE 1.5 MW turbine. DisGen was able to secure these turbines by working with other entities that had GE turbine allocations.

### **Current Status**

Massachusetts Municipal Wholesale Electric Company (MMWEC) took over the project in June of 2008. After that, they issued an RFP to purchase the turbines and plan to complete construction this year. At this point, the site is already partially developed, with the access road installed and five of the foundations excavated. Part of the remaining work will include construction of a new dedicated electrical line on an existing ROW to a substation seven miles away.

## **Project Timeline**

<b>Table 6. Berkshire Wind Project Timeline</b>	
<b>Date</b>	<b>Description</b>
1996	University of Massachusetts releases study indicating Brodie Mountain is an excellent wind resource.
1998-2000	DisGen takes interest in the site and begins easement discussions with the property owners, evaluates wind data further and assesses the feasibility of the Project.
1998-2000	DisGen works with New Ashford to create a wind by-law to allow Project
2000	Wind By-law passed in Ashford
2000	DisGen cannot procure originally proposed turbines as they are no longer available and Ashford will not amend wind by-law to allow lighting of turbines. DisGen decides to construct on Hancock side of ridge instead (no zoning in Hancock)
Fall 2000	Building permit issued in Hancock, but construction required to wait for resolution of new anti-wind zoning by-law (first anti-wind zoning by-law proposed in Hancock)
2001-2002	Law Suit over Chapter 61 Conversion
May 2001	ENF submitted to MEPA for the upgrade and expansion of an existing gravel roadway providing access to the wind turbines.
May 2001	NOI's filed with Conservation Commissions in Lanesboro and Hancock for Access Road
June 2001	Lanesboro issues Order of Conditions for Access Road
June 2001	Lanesboro OOC appealed, DEP requests analysis of other possible access, stream along access route declared intermittent voiding necessity of alternate route
July 9, 2001	MEPA certificate issued
July 28, 2001	Hancock Conservation Commission issues "favorable" OOC
August 2001	Lanesboro OOC upheld
Fall 2001	Town Meeting Held and Town votes down anti-wind by-law
Fall 2001	Applied for and Received 2 <sup>nd</sup> Building permit as first one expired –but construction was required to wait for resolution of another proposed anti-wind zoning by-law (second anti-wind zoning by-law proposed)
January 2002	Stream Designation as intermittent appealed
Fall 2002	Town Meeting Held and Town votes down 2 <sup>nd</sup> proposed anti-wind zoning by-law
Fall 2002	Applied for and received 3 <sup>rd</sup> Building permit as second building permit expired but construction was required to wait for resolution of another anti-wind zoning by-law (third anti-wind zoning by-law proposed)
Winter 2002	Preparation begins to obtain amendment to Hancock OOC to construct revised access road route in Hancock to avoid Lanesboro zoning restrictions
Fall 2003	Town Meeting Held and Town votes down 3 <sup>rd</sup> proposed anti-wind zoning by-law
February 2004	Notice of Project Change submitted to MEPA for a relocation of the access road due to zoning restriction.
September 2004	Notice of Project Change submitted to MEPA for use of the original access road since a Special Permit was issued to overcome a zoning restriction.
2006	Project held up in court after a suit is filed by Silverleaf Resorts, a new ski resort on Brodie Mountain, claiming the Project would affect its property values.
June 2008	DisGen sells Project to MMWEC

### ***4.3.3 Princeton Wind Project***

#### **Background**

This small, municipally backed project has taken over 3.5 years to complete permitting, despite widespread community support. Permitting was significantly delayed by appeals brought by project opponents; these appeals also caused this small town to lose its private development partner and the private capital that would have been invested in the project.

The Princeton Wind Project consists of two 1.5 MW turbines mounted on 70 meter towers in the Town of Princeton. Princeton is a small town of only about 4000 residents situated halfway between Worcester and Fitchburg (See Figure 6). Though the town is located considerably east of the Berkshire region, it does have many high hills including Mt. Wachusett, elevation 2006 feet above sea level, which is home to a popular alpine ski area. The town is generally bucolic in nature and made up of large tracks of forests with some farms and country roads. It is a popular destination during the autumn leaf viewing season and the area is used for bird watching and hiking. The project site is owned by Princeton Municipal Light Department (PMLD), but is surrounded by the Wachusett Mountain State Reservation, which is owned and managed by the Massachusetts Department of Conservation and Recreation (DCR).

PMLD has owned and operated an eight turbine wind farm at the site since 1984. The Project is located at the site of a previously existing wind farm that has since been removed. That project was constructed as an alternative to PMLD purchasing power from Seabrook Nuclear Power plant. The residents of the Town of Princeton voted in favor of purchasing and developing this 16 acre site as the Town's wind farm in January 1984. The existing wind farm consisted of seven 40 kilowatt (kW) Enertech and one Atlantic Orient Corporation 50 kW turbine mounted on 100' steel lattice towers which were reaching the end of their useful life by the late 1990s.

In December 1999, PMLD started the public process to look at the various options regarding the future of the wind farm. The elected Board of Light Commissioners representing the residents of the Town of Princeton decided that upgrading the existing site would be preferable to establishing a new wind farm site in town since they could take advantage of the infrastructure already in place (i.e., access road, transmission interconnect) and the site would incur minimal environmental impact compared to a new site (i.e., less tree clearing and grading).

To confirm town support, more than 1000 surveys were mailed to residents in the town and with a 58 percent response rate; the results showed that 78 percent of the respondents supported a new wind farm with larger more efficient units. In addition, a special town ballot vote was held on February 11, 2003, and the overwhelming majority of residents voted in favor of the project.

As a result of town interest, PMLD installed a meteorological tower to assess wind resources, and then in January 2002 issued a formal request for qualifications for a development partner. The Town chose Community Energy Inc. (CEI) to develop, fund, and own the project. CEI would lease the land from the Town and sell its electricity back to the Town. CEI and the Town continued to do wind monitoring and environmental studies through 2004.

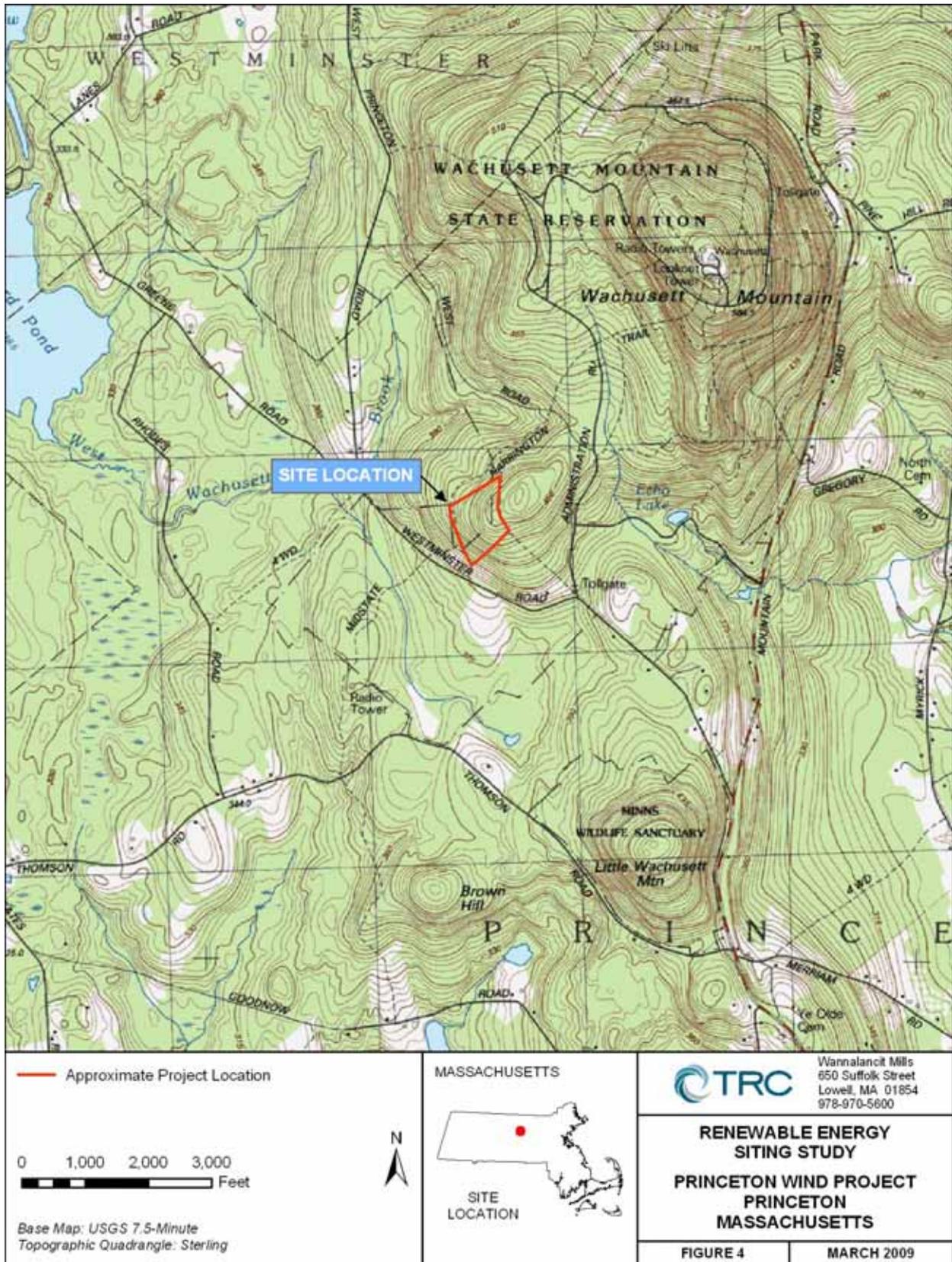


Figure 4. Princeton Wind Project – Princeton, Massachusetts

## **Permitting**

Permitting for the project went smoothly except for the appeal of the special permit as described below. A list of the permits required for the Princeton project is as follows:

- Local
  1. Town special permit
  2. Building permit
- State
  1. Filing of an ENF under MEPA
  2. National Pollutant Discharge Elimination System (NPDES) general permit for stormwater runoff
- Federal
  1. FAA approval
  2. Key Development Process Issues

There were two major issues that affected the timeline of the Princeton Wind Project:

- Appeal of Site Plan Approval
- Spillover Issues from Lengthened Permitting Issues

### **Appeal of Site Plan Approval**

The development process was significantly lengthened as a result of appeals of the Town's site plan approval by individuals who were concerned about visual impacts, noise impacts and safety issues. Discussion with the PMLD and records of the EFSB zoning exemption decision indicated that one of the opponents was a restaurant owner who was concerned about visual impact affecting his business, and another opponent stated he was most concerned about ice falling off the blades and the resulting safety hazard, though he noted he was opposed to the project because of visual and noise impacts as well. The opponents appealed the special permit in May 2004 to the Land Court, and then the Land Court remanded the permit back to the Town for lack of sufficient basis in the decision. The Planning Board issued a supplemental decision providing reasons for its decision and sent it back to the Land Court. This process took a significant amount of time and in an effort to identify a path around the delay, PMLD worked with the Town to help re-write the Town by-laws to more specifically allow for wind turbines. In September of 2005, after the Town of Princeton issued its new wind by-law, PMLD filed for and received another site plan review approval. However, this decision was again appealed and spent time in the Land Court. Finally, to avoid further setbacks in the project schedule, the developer requested a zoning exemption from the Department of Telecommunications and Energy (DTE). PMLD was finally issued a DTE zoning exemption in September 24, 2007, almost 3 ½ years after PMLD first applied for local approval.

During the appeal process CEI was purchased by Iberdrola, a large international wind farm developer. Iberdrola pulled out of the Project because of the costs of the lawsuits associated with the appeal process and the small size of the project. The developer explained that the small 3 MW project was not worth the cost and resources for Iberdrola to pursue when comparatively, Iberdrola could develop projects orders of magnitude larger in other states more easily that would be more profitable. As a result, PMLD lost its development partner and became responsible for the funding and full development of the Project.

**Spillover Issues from Lengthened Permitting Process**

The increase in permitting time had spillover effects as PMLD could not order its turbines until permitting was completed. As there is a long lead time to procure wind turbines, this in turn moved the construction schedule back. The longer permitting time also pushed back final project financing. The developer noted that the longer permitting time affected project cost to procure the turbines since turbine cost has been rising at a brisk rate each year. Erection of the turbine towers will not occur until Spring 2009, thus overall, the Project took almost 10 years to develop after PMLD first evaluated the Town’s interest in the project in 1999 (refer to detailed timeline below.)

**Project Timeline**

Table 7. Princeton Wind Project Timeline	
Date	Description
December 1999 through November 2002	Over 20 articles published in local newspaper, The Landmark
March 2002	NOI Letters to DEM, Audubon, Planning, Advisory, Building Inspection
June 2002	NHESP determination of no rare plants or animals or exemplary natural communities in the area of site.
July 2002	FAA Determination of No Hazard to Air Navigation completed.
October 31, 2002	Board of Light Commissioners public meeting. Board votes unanimously to approve and construct wind farm project
March 2004	EENF completed and submitted to EEA for MEPA review.
April 23, 2004	MEPA Review and Certificate issued. PMLD received favorable MEPA review from the Secretary of the EEA.
May 2004	Site Plan Review Issued
May 2004	Site Plan Review Permit appealed to the land court. Court then remanded it for lack of sufficient reasons.
June 24, 2004	NOI for Storm Water Discharges, NPDES General Permit issued by EPA
October 2004	Construction Permit issued by the Town of Princeton to PMLD and CEI to construct wind turbines
March 9, 2005	Planning Board issued a supplemental decision on the site plan review providing reasons for its decision.
May 10, 2005	Town of Princeton unanimously approved amendments to the Zoning By-Law designed to cure the potential deficiencies in the 2002 by-law.
September 28, 2005	Planning Board issued a new site plan review for the proposed facility based on the 2005 By-laws.
October 27, 2005	The approval was appealed to the land court.

Table 7. Princeton Wind Project Timeline	
Date	Description
October 5, 2005	Special Use Permit issued by DCR to PMLD to utilize Stage Coach Trail as access road.
October 28, 2005	Letter from Massachusetts Historic Commission (MHC). Agrees with Intensive Archeological Survey, completed September 2005. MHC agrees with PAL recommendation of no further historic studies.
November 14, 2005	Building Permit issued by Town of Princeton.
February 2006	DTE filing for a comprehensive zoning by-law exemption.
September 2007	DTE grants zoning exemption
*For a detailed Project timeline see Appendix A	

#### ***4.3.4 Orleans Wind Project***

##### **Background**

The proposed Orleans Wind Project consisted of two nominal 1.5 MW wind turbines within the Town of Orleans watershed area (See Figure 4). The Town of Orleans has a population of a little over 6000 people and is located on the inner “elbow” section of Cape Cod. The town is dotted with bogs and ponds in the western part of town, with many inlets, islands and harbors along the eastern coast of the town. The town has a large retirement community and the population increases substantially during the summer tourist season. As the town is close to the Atlantic, it has good wind resources and there were in fact early wind mills located in the area. Figure 5 shows the Jonathan Young Windmill, located on Route 28 in Orleans, Massachusetts that was built in the 1700s to grind grain.

The project site is situated in town owned watershed that occupies approximately 500 acres of land dedicated to the protection of, and production of, drinking water. The site contains six groundwater wells and related electrical and conveyance infrastructure that pump groundwater to an adjacent iron and manganese removal treatment plant (the “I&M Plant”). The project plan called for one turbine near the site of the current met tower which is on a hill approximately 850 feet north-northwest of the I&M Plant. The second turbine was to be located in the northern section of the watershed area, approximately 1,270 feet southeast of Giddiah Hill Road and approximately 750 feet east of an existing power line ROW. The watershed area is generally undeveloped and covered by a dense forest of conifer and deciduous trees. The turbine sites were chosen in part due to their setback from neighbors. The nearest residential neighbors are at least a quarter of a mile from either of the two turbine locations.

The Orleans Project started in the summer of 2003 when a Town subcommittee was created to investigate the feasibility of a wind project in the Town. Several town meetings were held and Orleans voted in strong support of a wind development project in their town including adoption of a Wind Energy By-law (May 2004) that would allow the Town to issue a special permit for the Project.



Figure 5. Orleans Wind Project – Orleans, Massachusetts



Figure 6. John Young Windmill

Orleans obtained assistance from the MTC including funding for: a meteorological tower (October 2003), a feasibility study (March 2005), avian studies, including a spring and fall radar study (2005) and many other studies amounting to over \$800,000 in funding. In addition, MTC agreed to deliver two MTC-owned turbines to the site in the fall of 2006. Orleans would have to finance these turbines, but this would expedite the Project schedule by avoiding the long lead time required to order and procure a wind turbine. Thus with the Town's public support of the project and substantial assistance from MTC, the Project appeared to be heading down a successful development path. The plan was that the town would issue an RFP to hire a developer to finalize project plans and undertake construction.

In the spring of 2006, there were concerns raised by the Board of Water Commissioners regarding watershed protection as the Project was located in watershed protection land. These concerns focused on the impact of constructing access roads on the Town's water supply lines at the site and the general issue of how to ensure that construction and operation of the project would not affect the Town's water quality. The concerns were largely addressed through evaluation and selection of alternative sites and construction and design measures to avoid disturbance to the watershed. As a result, the Site Plan Review Committee approved the Project. Later, the Board of Selectmen voted to request Article 97 legislation to allow the project to be built in the watershed.

## **Permitting**

Permitting for the project went fairly smoothly, though was not completed due to the stoppage of the project as described further below. The project required the following approvals and permits:

- Local
  1. Approval from the Board of Water Commissioners, since they have responsibility for overseeing the site
  2. Article 97 legislation – Approval to use open space land protected by Article 97
  3. Special permit from the town
- State
  1. Filing of an ENF under MEPA
- Federal
  1. FAA approval

## **Key Development Process Issues**

In September of 2007 the Board of Water Commissioners voted against issuing the RFP for development of the Project, thereby effectively stopping its development. While the town had largely worked out all concerns of the Water Commissioners with respect to impacts on town watershed land, the majority of the Board still voted against the Project. The Board stated that they had concerns regarding who was going to manage and oversee the project, the level of financial risk to the Town, and the size of the turbines, which had increased in height and size since those proposed at the outset of the project. The person on the Water Board who did vote in favor of the project felt that these issues were not clearly associated with the jurisdiction of the Board of Water Commissioners.

Individuals at MTC, the organization that had provided substantial funding were disappointed in this outcome, as were the Town Selectmen who had voted previously for the project, and the vast majority of the town which had supported the project.

## **Project Timeline**

Table 8. Orleans Wind Project Timeline	
Date	Description
June 5, 2003	Orleans Wind Energy Committee Created
May 2004	Town Meeting adopts Wind Energy By-law
Spring 2006	Board of Water Commissioners raises a series of questions regarding watershed protection and location of access roads within the watershed. MTC consultants begin work on these issues.
May 2, 2006	FAA approves original sites proposed by Town of Orleans for wind turbines
July 2006	Board of Water Commissioners approves Protective Conditions for project based on

Table 8. Orleans Wind Project Timeline	
Date	Description
	work conducted by Environmental Protection Group
December 20, 2006	Board of Selectmen votes to request Article 97 legislation required to allow project to be built in watershed
Early January, 2007	Rep. Sarah Peake files Article 97 legislation on behalf of Town
March 15, 2007	MTC and Town file ENF with MEPA
April 30, 2007	Orleans files application with MTC for Standard Financial Offer
April 24, 2007	MEPA issues Certificate for Orleans Wind Project
June 4, 2007	FAA Approval for final turbine configuration received
August 1, 2007	Orleans Site Plan Review Committee approves project site plan
September 12, 2007	Orleans Board of Water Commissioners votes against recommending release of the RFP; Orleans Board of Selectmen accepts Board of Water Commissioners' recommendation
*For a detailed Project timeline see Appendix A	

### 4.3.5 Fairhaven Wind Project

#### **Background**

The proposed Fairhaven Project consists of two 1.5 MW turbines (either GE 1.5sl or Vestas V82) mounted on towers approximately 80 meters high. The site is located on a large town owned parcel of land on Sconticut Neck in Fairhaven, Massachusetts adjacent to Little Bay (See Figure 7). The northern end of the site includes the town's wastewater treatment plant, and electricity for the project is proposed to supply the plant's electrical load requirements, with excess electricity provided to the town of Fairhaven.

Fairhaven, Massachusetts, has a population of 16,000 people, is sited on Buzzards Bay on Massachusetts' south coast and borders the City of New Bedford. The seaside location once fostered success in whaling and other sea-related businesses and the town remains a popular place to both live and visit. The town has 30 miles of coastline, 8 public marinas and attracts visitors with a wide range of seaside recreation opportunities. Its history in commerce, such as whaling and the oil boom have given the town an abundance of historic architecture including a high school housed in a "castle".

The town became interested in wind energy as a way to reduce its electricity costs and feasibility studies helped show that the Town had excellent wind resources and a project could be cost effective. The site was chosen in part because of its proximity to the wastewater treatment plant, its proximity to Buzzards Bay, which allows it to capture the important southwest winds coming from that direction, and the relatively large parcel of land that allows for adequate setback from adjacent land uses.



Figure 7. Fairhaven Wind Project – Fairhaven, Massachusetts

The Town explored the feasibility of a wind project by obtaining MTC funding to first perform a site screening analysis in February 2005, and then obtained additional MTC funding to complete a feasibility study in July 2005. The Town decided to lease the site to a developer who would own and operate the project. The Town issued an RFP in May of 2006 for a developer and selected CCI Energy (CCI). Shortly after this, the Town worked to address issues of concern through an MTC funded shadow flicker study and an acoustical study. The studies showed noise impacts were within required limitations and shadow flicker impacts were not significant (i.e., shadow flicker would only affect adjacent properties for a few hours each year and were very conservatively performed and did not account for tree shading of impacts). After this, the Town passed a by-law to allow wind development.

### **Permitting**

The major issue in permitting was appeal of the Special permit, which has caused delay of the project. The permits required were as follows:

- Local
  1. Town special permit
  2. Construction permit from the town
  3. Building permit
- State
  1. Filing of an ENF under MEPA
  2. National Heritage and Endangered Species Program approval
  3. Authorization under the Wetlands Protection Act
  4. NOI for Stormwater Discharges
  5. MHC approval
- Federal
  1. FAA approval

### **Key Development Process Issues**

There was one major issue that increased the development time of the Fairhaven Project; this was an appeal of the Special Permit granted by the Town.

### **Special Permit Appeal**

The key increase in development time in this project resulted from an appeal of the special permit granted by the Town in May of 2008. The appeal was made by individuals who were concerned about shadow flicker, noise, and visual impacts, though the environmental analysis done on these issues showed minimal impacts. The appeal is especially troublesome for the developer as it is holding up the Project's financing. In addition, CCI had wanted to secure

MTC’s pre-purchased turbines, but was forced to forego this opportunity as MTC requires permitting to be complete before they can promise the turbines to a developer.

According to the appeal schedule, resolution of the appeal could take as long as until March 2010. In an attempt to move the permitting process along, the proponent has requested dismissal of the special permit and plans to re-apply as a “municipal project”. According to the Town’s zoning by-laws, if a project provides more than 50 percent of its electricity to the Town, it can qualify as a “municipal project” and such projects do not require zoning approval. The Town originally wanted CCI not to use this designation so that full permitting (i.e., full public involvement) of the project could take place, but has since indicated it will allow this project to take this path. An issue with pursuing this approach is whether the developer will now be considered a municipal developer under the tax code. If this is the case, CCI would not be able to depreciate its investment or claim the federal wind tax credits, which would affect the overall financials of the Project.

**Project Timeline**

Table 9. Fairhaven Wind Project Timeline	
Date	Description
July 2005	Feasibility Report Completed
March 2008	Town by-law passed
May 2008	Town Issues Order of Conditions
May 2008	Developer applies for special permit
May 27, 2008	Special permit issued
May 30 2008	Order of Conditions is appealed
June 4, 2008	Special Permit Appealed (could take until March 2010)
July 2, 2008	DEP Issues Superseding Order of Conditions
December 2008	Developer Requests Abandonment of Special Permit in hopes of re-applying later as a municipal project and thus avoiding zoning requirements.
*For a detailed Project timeline see Appendix A	

***4.3.6 Hull Wind I and II***

**Background**

Two wind projects have been constructed in Hull in the past 8 years, referred to as Hull Wind I and Hull Wind II. Hull Wind I is a 660 kW wind turbine located adjacent to the Town’s school, and Hull Wind II is a 1.8 MW turbine located on the Town’s landfill (See Figure 8). Hull Wind II was erected after the success of Hull Wind I.

The Town of Hull is located out on a narrow strip of land known as Nantasket Peninsula, which juts into Massachusetts Bay. Hull is the southern land point at the entrance to Boston Harbor. The town is bordered by Hingham Bay to the west, Massachusetts Bay to the north and east, and the towns of Cohasset and Hingham to the south. Hull’s population is about 10,500, which increases to over 16,000 during the summer vacation season. Electricity is supplied to the residents by the Hull Municipal Light Plant (HMLP), a municipally owned utility. Annual average power consumption is approximately 6 MW (corresponding to an energy use of

approximately 53,000 megawatt hours per year [MWh/yr]). HMLP purchases most of its electricity at wholesale from the MMWEC. Hull has a long history of land-based wind energy use, beginning at least 200 years ago, when wind was used to produce salt. The site of Hull Wind I was referred to as “Windmill Point” as early as the 1820’s. Hull’s exposure to large open ocean areas in almost all directions makes the town ideal for wind development.

A unique aspect of the Hull wind turbine projects was that the town already had recent experience using wind power. In the 1980s the Town of Hull installed a 40 kW turbine adjacent to the high school. This turbine produced a respectable amount of energy and substantially helped reduce the school’s electric bill. In March of 1997 a windstorm damaged the 40 kW turbines beyond repair. By the fall of 1997 a group of citizens, led by local champion Malcom Brown, formed CARE (Citizen Advocates for Renewable Energy) and held meetings to discuss how to “re-power” the site. CARE successfully lobbied the municipally-owned electric utility, Hull Municipal Light Plant, to take on the project.

CARE enlisted the help of the Massachusetts Division of Energy Resources (DOER) and the University of Massachusetts’ Renewable Energy Research Laboratory (RERL). In 1998, RERL conducted a series of detailed technical studies related to siting issues, wind resource data, economic evaluation, and a review of environmental and regulatory issues. In June 2000, a town-wide meeting was held to discuss the new turbine. The results of the meeting were overwhelmingly positive and as a result, Hull Municipal Light Plant issued an RFP. Construction began in November 2001 and on December 27, 2001, Hull Wind I, a Vestas V47 (660 kW) turbine, went online.

Hull Wind II also was permitted quite smoothly. In August of 2002, the town solicited public opinion about constructing this second turbine and the results showed people were overwhelmingly in favor of the project. Feasibility studies, wind and environmental assessments were made from 2002 to 2004 and minimal permitting was required (FAA approval and post closing landfill permit). Hull II was commissioned in May 2006.

### **Permitting**

Because the owner of the projects is a municipal light plant, both projects were exempt from local zoning requirements. They required only the following permits/approvals.

#### **Hull I**

- Local
  1. Town vote to move forward
- Federal
  1. FAA approval



Figure 8. Hull Wind Project – Hull, Massachusetts

## Hull II

- Local
  1. Hull Conservation Commission approval
- State
  1. Post Closing Landfill Permit from MA-DEP (necessary for use of a closed landfill site)
- Federal
  1. FAA approval

### **Key Development Process Issues**

The owner of the projects is the Hull Municipal Light Plant, and in Massachusetts, municipal light plants are exempt from zoning requirements. As such, the development processes of these projects did not require a special zoning permit and were not subject to the potential for an appeal of the town's special permit. In addition, the Town and MTC noted there were other important factors that may have helped reduce opposition including: 1) a history of wind turbines in the Town (people were already familiar with their visual impacts from the previous turbine at Windmill Point and understood firsthand the minimal noise impacts, especially in comparison to Logan air traffic noise levels), 2) the decision to have the Town be the owner and operator of the turbines (creating a sense of buy-in and ownership by the public), 3) excellent siting (i.e., the turbines are generally sited away from residential areas at the High School and at the Town Landfill), and 4) excellent wind resources.

### **Project Timeline**

Table 10. Hull Wind Project Timeline	
Date	Description
Fall 1997	A group of citizens and teachers meet to discuss how to "re-power" old 40 kW wind turbine the site.
Late 1998	CARE petitions (successfully) Hull Municipal Light Plant, a municipally owned utility, to take on the Project.
January 2001	RFP sent out to 12 turbine manufacturers.
April 2001	The bid from Vestas for a 660 kW turbine is accepted.
November 2001	Construction begins (one turbine).
December 16, 2001	Installation is completed.
December 27, 2001	Turbine goes online.
October 2002	Hull Municipal Light Plant decides to pursue the Project "Hull Wind 2." (2 <sup>nd</sup> turbine)
November 2004	FAA issues "Determination of No Hazard to Air Navigation."
December 2004	Hull Conservation Commission provides a letter of approval.
January 2005	Ownership of the landfill site is transferred from the Town of Hull to Hull Municipal Light.
June 2005	DEP completes the Post Closure Permit.

Table 10. Hull Wind Project Timeline	
Date	Description
September 2005	Final approval from the DEP is obtained.
May 2006	Hull Wind 2 is commissioned (a Vestas V80, rated at 1.8 MW)
*For a detailed Project timeline see Appendix A	

#### 4.4 Summary of Key Case Study Results

The table and bar chart below summarize the results of the case studies. Three of the six case studies experienced substantial increases in development time as a result of various appeal processes. Fairhaven and Princeton had appeals to local zoning approvals and the Hoosac project was delayed for many years and remains so due to an appeal on its Wetlands related Order of Conditions that has gone through several court systems. A troublesome aspect of the appeals is that a single abutter or small group of citizens can effectively delay a project even if there is wide community support as in the case of Princeton and Fairhaven. In the case of Orleans, the Board of Water Commissioners voted against the project even though the rest of the town was in favor, and issues affecting watershed land had been addressed.

A comparison of Hull and Princeton wind projects is interesting as they are similar in that they were both proposed by a municipal electric company, both already had turbines installed at the site from prior projects, and both had broad public support for the new projects. However, the timelines of the outcomes of the processes were very different. Princeton had an extra 3.5 years added to its schedule due to appeals of the special permit and their decision to finally seek a zoning exemption from the DTE, whereas Hull asserted it required no zoning review (due to its designation as a municipal utility doing work on town land) and eliminated this delay. The superintendent of the PMLD indicated they may also have been able to avoid zoning review, but decided to go through the process at first in order to do their due diligence as much as possible.

Another common theme of the case studies is that several projects had difficulty procuring turbines. This was an issue in Orleans, Princeton, Fairhaven, and Berkshire. MTC's purchase of the turbines appeared to be an attempt to solve this issue, but interestingly, the Orleans project ended prior to being able to use the turbines, and Princeton, and Fairhaven were both precluded by MTC from buying the turbines: Princeton because it was a municipal electricity provider, and Fairhaven because of the status of its appeal and financing.

Table 11. Summary of Case Study Results			
Project	Major Issues	Length of Permit Time Increase	Total Development Time
Hoosac	Permitting of the project under the Wetlands Protection Act – issues regarding calculation of stream crossing impacts and use of box culverts. Massachusetts Endangered Species Conservation Management Plan Permit.	4.5 years; delay so far is a result of wetlands appeal process, DALA review, and superior court review. Potential for further appeals that could last two more years (i.e., appeals to district court and supreme court). Approximately 2 years.	8 years and still awaiting a potential additional appeal.

**Table 11. Summary of Case Study Results**

<b>Project</b>	<b>Major Issues</b>	<b>Length of Permit Time Increase</b>	<b>Total Development Time</b>
<b>Berkshire</b>	Local Zoning Approval Difficulty in Financing Law Suit over Chapter 61 Process Silverleaf Law Suit Availability of Turbines Property Ownership Issue	Two years of time spent working with Town of New Ashford to pass a wind by-law Other increases in development time not permit oriented (i.e., law suits, financing issues, and property ownership)	11 years only just now anticipating construction
<b>Princeton</b>	An appeal of the Town's special permit made by individuals concerned about safety issues, noise, and visual impacts.	3.5 years of issues around special zoning permits, development of zoning laws, and eventual need to go through DTE zoning exemption process	10 years to approval: construction pending
<b>Orleans</b>	Concerns raised by the Board of Water Commissioners regarding watershed protection which ultimately stopped the project.	No permit delays, but Water Commissioners voted against the project after 4 years of development	4 years prior to abandonment of project
<b>Fairhaven</b>	An appeal of the Town's special permit made by individuals concerned about shadow flicker, noise, and visual impacts.	Potential for 2 year increase in development time according to appeal schedule	More than 4 years and still is not permitted; appeal may not be decided for 2 more years
<b>Hull</b>	No major issues.	No permit delays.	Hull I: 4 years to operation Hull II: 4 years to operation

Timeline for Six Case Study Wind Projects in Massachusetts													
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Hoosac	Timeline												
	Timeline Notes												
Berkshire	Timeline												
	Timeline Notes												
Orleans	Timeline												
	Timeline Notes												
Princeton	Timeline												
	Timeline Notes												
Fairhaven	Timeline												
	Timeline Notes												
Hull (I & II)	Timeline for Hull I												
	Timeline Notes												
	Timeline for Hull II												
	Timeline Notes												

**KEY**

Development proceeds with no permitting delays, though other non-permitting delays may exist.

Indicates increase in development time because of permitting

Project voted down by Board of Water Commissioners

**NOTES**

H1: Appeals to Hoosac Order of Conditions.

B1: Series of anti-wind by-laws, each of which were voted down, but delayed construction

O1 - Project stopped by Board of Water Commissioners vote against the project

P1: Opponents of project appeal to the land court and eventually developer goes through DTE zoning exemption process.

F1: Project opponents appeal the special permit granted by the town

## **5.0 REGULATORY PROGRAMS IN OTHER STATES**

---

### **5.1 Introduction**

This section looks at Massachusetts' regulatory program and eight other state regulatory programs associated with the permitting and environmental review of on-land wind projects. The states examined are: Massachusetts, Connecticut, Maine, New Hampshire, Rhode Island, Vermont, New York, Pennsylvania, and West Virginia. The goal was to compare what other states have done to improve and or expedite the review process for wind projects. The specific states were chosen to provide a comparison with the five other New England States, plus special states of interest that have unique programs with respect to evaluation and permitting of wind facilities.

### **5.2 Methodology**

The methodology included evaluation of other state statutes and regulations. Information was derived from on-line law databases, state agency websites, and interviews with other attorneys or state officials to address particular questions and confirm the analyses.

Appendix B provides a comparison of energy facility siting regulations by state.

### **5.3 Summary of Findings**

The primary findings are as follows:

- Many states, including Massachusetts, have centralized “siting boards” that conduct “one-stop” project review. Massachusetts has a uniquely high threshold among New England states for using this one-stop process as a generation facility must be 100 MWs or larger. This threshold in practice excludes all inland wind energy projects, as these projects are typically less than 100 MW. Connecticut has a 1 MW threshold, Vermont's threshold is 0, New Hampshire's threshold is 30 MWs but with a provision that a project between 5 MW and 30 MW can request siting board review, and Maine has a 20 acre threshold that could effectively apply to projects between 1 MW and 5 MW.
- Many states provide for a single appeal from the centralized permitting board to the state supreme court. This limits the number of appeals and diminishes the time they take. Massachusetts also provides for appeals directly to the state's highest court but only for projects 100 MW or larger.
- Many states attempt to integrate other state and local agencies into the one-stop permitting process. Massachusetts has the ability to perform consolidated review under the EFSB process but the EFSB threshold of 100 MW effectively precludes on-land wind projects from this review.
- A number of states have developed clear siting standards and pre-construction study protocols to make project review more predictable. Massachusetts currently has no such standards.

- A number of states have defined timelines for the completion of project review. For example, Connecticut law provides for a 6-month project review, while Maine calls for 6-9 months.
- In some states siting board decisions pre-empt local ordinances. In Rhode Island, the siting board is the licensing and permitting authority for all licenses that would be required for siting, construction or operation of an energy facility except those where the state has delegated authority under federal law. In Connecticut, the siting board has similar authority through its ability to affirm, modify or revoke local zoning and/or wetland restrictions. In Massachusetts authority to pre-empt local ordinances is available only in special circumstances.

## **5.4 Findings**

### **5.4.1 Massachusetts**

Massachusetts has an Energy Facilities Siting Board (EFSB) with a consolidated permitting process. This consolidated process is only available for large projects that are 100 MW in size or greater and or transmission line interconnection projects that exceed the EFSB threshold (i.e., projects of 69 kV or greater that are one mile or more on new transmission ROW, or projects of 115 kV or greater that are ten or more miles in length on existing ROWs). Thus far, all proposed land-based wind projects in Massachusetts have been well below these thresholds. Thus, this threshold in effect excludes wind energy facilities, and can be said to be discriminating against them, despite other state laws and policies that favor such facilities.

Massachusetts also has a comprehensive environmental review process, called the MEPA, which precedes and informs state permitting. MEPA review is triggered by various environmental thresholds which, if exceeded, require the filing of an ENF. The ENF is a succinct report that discusses the extent and type of environmental impacts, and is used to solicit comments by the agencies and the public as to issues of concern and the need for further study. The Secretary of EEA evaluates the ENF and comments received against MEPA's pre-set impact threshold levels and decides whether the preparation of an EIR is required. The process has set timelines throughout, and MEPA publishes public notices announcing the availability of each report for comment (i.e., ENF, draft EIR, and final EIR) in the on-line Environmental Monitor.

While some of the case studies described in this report have triggered the need for an ENF because of land area impact (i.e., > 25 acres of land alteration) or other ENF thresholds, none of the projects have triggered the review thresholds requiring preparation of an EIR. Some of the applicable thresholds for the EIR are: direct alteration of 50 or more acres of land, and creation of 10 or more acres of impervious surface. Thus the MEPA review for the Massachusetts on-land wind projects to date is either not required at all, or limited to only filing of an ENF. If an ENF is required, the applicant can only apply for state permits after the MEPA process is complete. Projects that do not trigger MEPA simply need to file for individual applicable state permits.

Typical state permits or agency consultations for wind projects can include: a DEP Water Quality Certification for placement of fill in wetlands or waterways, a DEP wetlands Superseding Order of Conditions, a Conservation and Management Permit ("take permit") from

the NHESP, and a MHC. State permits are appealable and under certain circumstances MEPA decisions are as well.

With respect to local review in Massachusetts, wind projects typically require a variance via a special permit from zoning to account for their height above typical standards limiting the height of structures. Some towns have adopted wind by-laws, to allow this process to proceed through zoning review without a variance, but site plan review of various impacts (i.e., visual, shadow flicker, noise) is still typically required. Significantly, proponents of smaller energy projects may seek an exemption from the application of local zoning law from the Division of Public Utilities provided the proponent is found to be a “public service corporation” and that the project is necessary for public welfare. (Independent power providers have been found to be public service corporations by the DPU, but this ruling has not yet been tested in court.)

Beyond zoning related permitting, a common locally required permit is a wetlands order of conditions from the Conservation Commission. Other local requirements may apply, such as a local historic district review, and the proponent will ultimately need a building permit. All of these local permitting decisions are potentially appealable (see discussion of Fairhaven and Princeton in the Case Study Section of this report).

Although the current EFSB process, given its high MW threshold, would not be applicable to most land-based wind projects, the process is noteworthy. All applicants for proposed generating facilities must seek a petition for approval of construction from EFSB. Such an applicant may also petition the EFSB for a certificate of environmental impact and public interest, which consolidates and eliminates other state and local permitting processes and, if the applicant is successful, results in a certificate that is a “composite” of all individual permits. For the EFSB to conduct this review it must be demonstrated that (i) the applicant cannot meet a state or local standard, (ii) a state or local process has been unduly delayed, (iii) the applicant believes there are inconsistencies among resource use permits, (iv) the applicant believes that a “nonregulatory” condition has been imposed, (v) a state or local disapproval would bar construction (other than on state or municipal land), or (vi) there is a delay caused by a permit appeal. In addition, the Board may also consider an application if a local or state permit impacts the responsibilities of the Board. With regard to the composite certificate issued by the EFSB, that portion of the certificate that relates to a particular state or local agency’s jurisdiction shall be enforced by that agency.

The EFSB permitting process is adjudicatory in nature and can be time consuming. For the obligatory construction approval process, the EFSB has up to a year to render its decision. A decision on the petition for a certificate of environmental impact and public interest must be made no later than 180 days from the date of the petition’s filing. Interested individuals and organizations can potentially become parties in interest in an EFSB proceeding, including 10 citizens alleging damage to the environment. Any appeal of an EFSB decision goes to the State’s highest court, the Massachusetts Supreme Judicial Court. The Court will determine whether an EFSB decision violates law, is supported by substantial evidence, or was arbitrary and capricious or an abuse of discretion.

The Massachusetts DOER’s Renewable Energy and Distributed Generation Guide Book provides an excellent permitting guide to the Commonwealth of Massachusetts including

exhaustive detail on the MEPA and EFSB process and state and local permitting requirements. [http://www.mass.gov/Eoca/docs/doer/pub\\_info/guidebook.pdf](http://www.mass.gov/Eoca/docs/doer/pub_info/guidebook.pdf).

#### 5.4.2 Connecticut

Connecticut uses a consolidated permitting process for evaluating electric generating facilities. Responsibility for review of proposed major electric generating projects, including wind projects lies with the Connecticut Siting Council (CSC or Council). The Council is a nine-member board comprised of representatives from the DEP and the Public Utility Control Authority, a designee of the Speaker of the House and the Senate President, and five Governor's appointees. Major generating facilities must obtain a *Certificate of Environmental Compatibility and Public Need* (Certificate) from the Commission.

Connecticut promotes renewable energy projects in several ways. The most noteworthy way in which Connecticut promotes renewable energy is that the Council has jurisdiction over *any proposed renewable energy project that would generate > 1 MW of electricity*. In Connecticut, wind power is not distinguished from other forms of renewable energy.

A second way in which Connecticut favors renewable energy projects is that a more permissive approval standard is imposed for renewable energy projects. Regular energy projects must meet a public need standard; renewable projects need only meet a public benefit standard. A third way that renewable energy projects are favored is that for such projects the Council must render its decision on the application within 180 days, which is a shorter time period than for non-renewable projects.

The review process begins at the local level 60 days prior to the filing of the application for a Certificate. During this time the applicant must consult with the municipality in which the facility will be located regarding the proposed facility, public need, site selection process, and environmental effects of the proposed facility. The municipality may conduct public hearings and meetings as it deems necessary. Within 60 days of initial consultation the municipality issues its recommendations to the applicant. Municipal zoning and inland wetland agencies may regulate and restrict the location of an electric generating facility. Such action must be taken within 65 days of the application for a Certificate, and, significantly, such a locally imposed restriction may be appealed (by any aggrieved party) to the Council, which may affirm, revoke, or modify such order by a vote of 6 (of 9) members.

The Council must consult with and solicit written comments from other state agencies prior to hearings, and such agencies may file additional comments during the hearing process. Other state agencies do not issue permits regarding the siting of energy projects within the Council's jurisdiction. For example, DEP would not issue a wetlands permit, but rather it would comment on wetlands issues in the CSC proceeding, which would then have an opportunity to make wetlands specific conditions in the permit. Exceptions to this are air and water permits issued by DEP pursuant to federally delegated authority.

Application requirements for a Certificate which allows facility construction are enumerated in a set of rules that include but are not limited to: detailed project description, statement of purpose, statement of need, overall reliability of the facility, environmental impacts, proposed site map,

mitigation measures, and identification of federal, state, and local agency approvals needed. The application is a comprehensive review of all issues associated with the project.

Once the application has been submitted, the Council will review and may reject the application within 30 days if the application fails to comply with specific requirements. A public hearing must be held in the county in which the proposed facility will be located and the record must remain open 30 days after the hearing. The Council conducts adjudicatory hearings to reach its determinations. There is the potential for broad participation in Council hearings: any of the municipal or state entities who received notice of the application, a nonprofit, or such other person as the Council deems appropriate may be a party to the Council hearing. The Council must render a decision within 180 days of receipt of the application.

A party to the Council decision may appeal it to Superior Court. There the Court will conduct a review of the matter limited to the administrative record, overturning a Council decision only upon a showing of a violation of law or a showing that the ruling was clearly erroneous or an abuse of discretion. By-law appeals of Council decisions “shall be privileged” with respect to trial assignment in Superior Court.

### **5.4.3 *Maine***

The primary review authority for energy facilities and other major facilities in Maine is the DEP, which issues Site Development Permits. In the unorganized territory of northern Maine, the Maine Land Use Regulation Commission (LURC) is the primary permitting authority and undertakes a comprehensive permitting process. A new electric generating facility also needs to obtain a Certificate of Public Convenience and Necessity from the Maine Public Utilities Commission.

In April of 2008 Maine passed a new law entitled an Act to Implement Recommendations of the Governor’s Task Force on Wind Power Development, which does in fact implement a number of recommendations from a February 2008 report issued by the Governor’s Task Force on Wind Power Development and alters the permitting process at both DEP and LURC. The centerpiece of Maine’s new law is a section on the Expedited Permitting of Grid-Scale Wind Energy Development. The primary purpose of the law is to expedite the permitting process for large wind energy projects at DEP for the organized section of the state and at the LURC for the portions of the unorganized section of the state to which the new law applies. (The LURC may add areas within its jurisdiction to the expedited permitting area for wind energy development.) Rather than set a megawatt limit for what constitutes grid-scale, the new law defines “grid-scale wind energy development” as a project that either occupies an area of land or water in excess of 20 acres, or where the project will result in 3 acres or more of built area that is not revegetated. This threshold is low (i.e., the 20 acres could translate to 1 MW to 5 MW depending on site conditions) and therefore would include many wind projects.

The new law does not deal in any way with municipal permitting. Maine cities and towns are free to restrict wind development through zoning and wetlands regulation. Furthermore, local permit appeals are unaffected by the new law.

The new law facilitates the permitting of wind projects at DEP and LURC in a number of ways. First, the law narrows the scope of potential scenic impacts in either a DEP Site Development

Permit process or a LURC permitting process by providing that only impacts to “scenic resources of state or national significance” be considered. “Scenic resource of state or national significance” are defined to include a variety of different types of resource areas. DEP/LURC may require that a visual impact assessment be provided by the applicant, but it is presumed that a visual impact assessment will not be required for those portions of the development’s facilities that are located more than 3 miles (horizontally) from a scenic resource of state or national significance.

Second, the law requires that DEP/LURC complete its permit application review within 185 days, or if a hearing is held, in 270 days. These time limits apply to all DEP permits, and as there are potentially a number of other DEP permits that a wind project applicant will need to obtain in addition to the Site Development Permit (e.g., Natural Resources Protection Act, Stormwater, 401 Water Quality Certification), this is an important requirement. Under Maine’s Site Development Law other agencies such as the Department of Inland Fisheries and Wildlife help develop the conditions imposed by DEP in the Site Development Permit.

The new permit review deadline is consistent with DEP’s existing practice of integrating the various permits it issues for projects. Applicants are encouraged to attend a pre-application meeting, at which point they meet their DEP project manager and discuss the required DEP permits. Applicants may then submit a single set of permit application documents to the project manager who will manage the work of the appropriate DEP bureaus on the various permits.

The DEP appeals process has been expedited by the new law in a number of ways. First, it alters the normal role of the Board of Environmental Protection (BEP), an administrative body that typically can assume control over DEP permit reviews on matters that present important policy issues or that have generated substantial public interest. For grid scale wind projects, BEP cannot assume control of the permitting process. Second, if an appeal of a DEP decision on a grid scale wind project is taken to the BEP, the PUC Chairman or designee will sit as a nonvoting member on the Board for the hearing. Third, an appeal of a DEP or a BEP decision on a grid scale wind project can be taken directly to state’s highest court (the Supreme Judicial Court), rather than to the Superior Court (from which an appeal to the SJC would then be possible).

Maine DEP has issued two guidance documents to facilitate the permitting of wind projects, one for performing avian and bat studies and the other on DEP’s standards for noise and shadow flicker.

Both DEP and LURC have the power to conduct hearings that include the taking of testimony. Although review under LURC provides a regulatory permitting “umbrella” and allows other state and federal agencies to comment on the project, specific permit applications may need to be submitted. These include but are not limited to: ACOE Section 404 Permit, Federal Aviation Administration approved lighting plan, Maine Department of Environmental Protection Notice of Intent (NOI) to File NPDES Stormwater General permit, and Maine Department of Transportation road opening or entrance permits.

#### 5.4.4 *New Hampshire*

New Hampshire does not have a comprehensive environmental review requirement that applies to all development in the state. Rather for energy facilities the state has established the Site Evaluation Committee (SEC) which through a prescribed adjudicatory process provides for a review of all potential impacts associated with the development of energy facilities. The applicability of SEC review varies as a function of project size. Projects larger than 30 MW are subject to SEC review while those less than 5 MW are exempt from SEC review. Projects between 5 MW and 30 MW have the option of pursuing SEC review or following a more traditional path of seeking permits for impacts to individual resources as well as going through whatever local review is required.

The SEC is comprised of department heads who represent environmental services, parks and recreation, forest and lands, economic development, transportation, health and human services, and the state's Public Utilities Commission and energy and planning office. The SEC is responsible for issuing a *Certificate of Site and Facility* for energy facilities and has the authorization to impose terms and conditions on such certificates. The SEC process starts with the developer filing an application that describes the project, its location, proposals for studying and solving potential environmental impacts, and the applicant's financial, technical, and managerial capability for construction and operation of the proposed facility. In addition, the applicant must provide sufficient information to satisfy the application requirements of each state agency having jurisdiction, under state or federal law, to regulate any aspect of the construction or operation of the proposed facility, and must include each agency's completed application forms.

The SEC must decide whether or not to accept the application within 60 days of filing. Within 30 days of the acceptance of the application, the SEC will hold at least one public hearing within each county in which the proposed facility will be located. Within five months of the acceptance of the application, all participating state agencies must report their progress including outlining draft permit conditions and specifying additional data requirements necessary to make a final decision. A final decision from each state agency having jurisdiction is required no later than eight months after the application has been accepted. The SEC then conducts an adjudicatory hearing, and must render a final permitting decision within nine months of the acceptance of the application.

In 2007 legislation was passed to help expedite the permitting process for renewable energy projects. For a renewable project, the SEC must decide whether to accept the developer's application within 30 days of its submission (versus 60 for non-renewable projects). All participating agencies must report on their progress within 90 days of the application's acceptance for a renewable project, while for other energy projects agencies have 5 months to file this report. All participating state agencies must submit a final decision on the parts of the application that relate to their jurisdiction within 180 days (versus 8 months for non-renewable projects). The committee must render a final permitting decision within 240 days of the acceptance of an application (versus 9 months for non-renewable projects).

The SEC's final certificate incorporates terms and conditions specified by state agencies having jurisdiction over the project. The SEC may not issue a certificate if any of the other state agencies having jurisdiction have withheld their authorization. While in practice the SEC

certificate serves to eliminate the need for any zoning variance, planning board approval or building permit it must have considered local input in order to comply with the requirement that the project be consistent with orderly development and have respected the views of local governing bodies.

Applicants often work with the Administrator of the Public Information and Permitting Unit within the Department of Environmental Services as they prepare to submit an application. This person serves as a pre-filing ombudsman, but is unable to provide any assistance post-submission. A working group of the Energy Policy Commission has recommended the creation of a state coordinator position to guide applicants all the way through the wind energy siting process, but the position has yet to be created.

In 2008, the New Hampshire legislature passed HB 310, which prohibits municipalities from unreasonably limiting or hindering small wind systems 100 kW or less. For example, municipalities are proscribed from using generic building height ordinances to restrict system height, requiring setbacks from property boundaries greater than 150 percent of the system height, and setting allowable noise limits lower than 55 decibels at the property line.

#### ***5.4.5 Rhode Island***

The Rhode Island Energy Facility Siting Board (EFSB) has exclusive jurisdiction over the siting of all electricity generating projects >40 MW. The process is both comprehensive in scope and consolidated as state and local agencies that would in the normal course have regulatory authority over the siting of such large energy projects are directed by the siting board statute to engage in their application and hearing processes rather than issue permits. In addition, the Siting Board may task particular state or municipal agencies to act at its direction and produce for it advisory opinions. The Siting Board process starts with the developer filing an application that includes a detailed project description, site plan, financial data, a detailed description of environmental and cumulative impacts, demonstration of need, a complete life-cycle management plan, an alternatives study, and identification of Federal, state, and local agencies that may exercise authority over an aspect of the facility.

Following the filing of the application, the Siting Board reviews the application for completeness and gives notice to the municipality in which the proposed facility will be located. The Siting Board process includes two public notice periods and, a preliminary and final adjudicatory public hearing process. Each designated agency renders an advisory opinion. The EFSB will issue its final decision no later than 120 days after commencement of the final hearing. The complete EFSB process takes approximately 12 months.

Wind projects under the 40 MW threshold do not proceed through the Siting Board for permitting and approval. Such projects must obtain individual permits (e.g., wetlands permits, local zoning, building permits, special permits, etc.) from local and state agencies with jurisdiction. In addition, sites within 200 feet of a coastal feature will require consistency approval from the Rhode Island Coastal Resource Management Council.

#### ***5.4.6 Vermont***

In Vermont, all electric generating projects, including alternative energy projects, are reviewed by the Vermont Public Service Board (PSB), a quasi-judicial body. The PSB consists of a full-

time Chairman and two part-time members appointed for six-year terms by the Governor. Additionally, the PSB is staffed by attorneys and experts, including but not limited to financial analysts, environmental analysts, engineers, and policy analysts.

Approval by the PSB includes a Certificate of Public Good (CPG), where the PSB weighs the impacts of a proposed project against the benefits it provides to the citizens of Vermont. The PSB permitting process consolidates both state and local permitting. The review is comprehensive in that it incorporates a site-specific environmental analysis of all potential impacts (i.e., aesthetic, wildlife, wetlands, landscape, etc) in addition to general issues such as project need, reliability and economic value. The PSB incorporates review criteria from Act 250, Vermont's land use law. A project must demonstrate that it will not have an "undue adverse effect on aesthetics and the scenic and natural beauty of the area". Currently, there are no wind energy-specific guidelines (i.e., noise, shadow flicker) established by the PSB.

Once filed with the PSB, the CPG application must also be submitted to the Vermont Department of Public Service, the respective utility, the municipal planning commission and municipal legislative body (typically the select board), Regional Planning Division, and the Agency of Natural Resources. Notified municipal or regional commissions can hold public hearings and make recommendations to the PSB, but cannot issue independent rulings. There is a special notice rule for wind projects: petitioners must provide notice to all towns within a radius of ten miles of each proposed turbine. The notice must include an assessment of the impact on the towns within the 10-mile radius and must include a viewshed analysis that details the aesthetic impacts of the proposed turbines.

The PSB will then hold a prehearing conference to determine how the project (or the case) will be managed, and identify potential active parties (special criteria must be met to become a "party" or intervener) and agencies, along with any potential issues. The PSB will also establish a project review schedule that includes a site visit, a public hearing, and deadlines for the filing of motions to intervene. The purpose of the public hearing is to allow the PSB to hear comments and concerns regarding the proposed project from the general public.

The PSB process is adjudicatory. The Agency of Natural Resources appears as a party in the PSB proceeding and provides recommendations regarding potential environmental impacts. The PSB Rules of Practice provide for intervention by right under certain circumstances or permissive intervention taking into account a number of factors.

Review under the PSB has no statutory time limit for a CPG to be issued, thus the process has the potential to be protracted. An aggrieved party may appeal a final order of the PSB to the Vermont Supreme Court. There is a published "Citizens' Guide to the Vermont Public Service Board's Section 248 Process" that explains all aspects of the PSB review process.

#### ***5.4.7 New York***

In New York a new electricity generation facility needs to secure state and local permits, as well as go through State Environmental Quality Review (SEQR). New York used to have a state board for energy facility siting, but in January of 2003 the New York State Board on Electric Generation Siting and the Environment ceased to exist. The Board had exclusive jurisdiction over the siting of power plants >80 MW.

The SEQR process is a comprehensive review process that evaluates potential impacts of all project developments. The process starts with the applicant filing an environmental assessment form that describes the project, its location and its potential effects to the natural as well as built environment. The completed form is submitted to potentially involved agencies and is the basis for the determination of the “action” and its assumed level of impact as well as the agency that will be responsible for leading the review of the project, referred to as the “lead agency”. The information required to make the determination on the classification of the project is well specified and the state has for sometime offered guidance to developers for all projects going through the state review process.

Wind projects typically are classified as Type 1 actions and so are required to prepare an EIS. This document describes existing conditions in the area of project development and presents an evaluation of impacts according to a well specified outline of topics to be addressed. Additional issues can be included for evaluation as a result of “scoping” meetings that are used to present the project to the public and obtain their input. The EIS goes through a series of reviews that start with a draft of the document which based on public comment is revised and presented as a final EIS. All of the actions required by the lead agency are well specified with time limits on notification of the public, time for public review as well as a deadline for when a finding must be made.

The EIS is based on the best definition of the project that is available at the time of filing. Technical sections address in more or less detail conditions as they relate to regulated resources and depending on the approach selected by the developer may be sufficient to support subsequent permit applications. Additional information for permit applications may be required, especially for wind projects where exact turbine locations may need to be adjusted due to information that becomes available only as detailed project studies are undertaken. Still, the EIS provides a comprehensive, albeit worst case scenario that can allow a project to proceed with exact conditions for regulated resources (wetland, streams) addressed in individual permits issued by the Department of Environmental Conservation. To date, the lead agency for wind projects has typically been the town planning board.

The Department of Environmental Conservation (DEC) with responsibility for state air, water, land and other resources is involved in wind projects through the issuance of permits for wetland and stream crossings, reviewing potential impacts to state listed threatened and endangered (T&E) species, and recommending appropriate pre- and post-construction bird and bat surveys.

The DEC permitting process ordinarily occurs as a regulatory process, but the DEC may determine to have an administrative law judge conduct an adjudicatory hearing and develop a recommended decision for the DEC Commissioner if it finds that the matter raises significant issues, including the reasonable likelihood that a permit will be denied or can be granted only with major modifications to the project.

The DEC has developed guidelines for conducting avian and bat studies for proposed wind energy projects. Apart from these guidelines, New York does not treat renewable energy projects differently from other energy projects.

What stands out in the review of regulations in New York as they relate to wind is that the lead agency for the comprehensive review has typically been the local planning agency. The

argument can be made that this is a large responsibility for a group for whom this is not their full time occupation. Alternatively, with a local agency as the lead agency it has the effect of putting the decision about a project in the hands of those most affected.

#### **5.4.8 Pennsylvania**

In Pennsylvania, wind farm proponents have to obtain both state and local permits. Pennsylvania has a Public Utilities Commission, but only “public utilities” that provide power directly to the public are regulated by it. (For such public utilities, the PUC’s jurisdiction is exclusive and there is no MW threshold.)

Responsibility for management of protected resources in Pennsylvania is divided among several agencies. The DEP has responsibility for protection of air quality, land, and waters of the state while four other agencies share responsibility for administering programs protecting and managing T&E species and other species of special concern. The Pennsylvania Fish and Boat Commission oversees programs protecting fish, reptiles, amphibians and aquatic organisms. The Pennsylvania Game Commission has responsibility for wild birds and mammals. The Department of Conservation and Natural Resources (DCNR) manages programs relative to native wild plants, terrestrial invertebrates, significant natural communities and geologic features. The USFWS is responsible for federally listed, proposed and candidate species under the Federal Endangered Species Act.

The state has not adopted a comprehensive environmental review program but rather permits various activities on a resource specific basis. Pennsylvania has no special mechanism for reviewing electric generating facilities. The state’s approach to wind development is best described in the brief document that the state has prepared entitled “Process and Regulation Specific to Wind Farm Development”. In this document it is stated that “DEP regulates impacts rather than entities per se.” The potential impacts for which DEP has regulatory authority are effects to water and wetlands from road building and general facility construction. The state is divided into six regions with each regional office or the county conservation district when acting under authority of DEP responsible for development within its jurisdiction.

In 2005 DEP took special action with regard to coordination with the DCNR and other agencies responsible for protection of special resources in the state. The department issued guidance on how wind farm developers and others applying for DEP permits, authorizations and plan approvals must interact so as to protect special concern species and resources. As part of its permitting process DEP requires submission of a Project Planning and Environmental Review Form to the DCNR, the Pennsylvania Game Commission, Pennsylvania Fish and Boat Commission and the USFWS. These agencies must identify potential project impacts and work with the applicant on studies and/or mitigation needed to avoid adverse impact. Such coordination must be completed and any conflicts resolved before DEP will issue its permits. Typically the primary DEP permit for a proposed wind farm is the NPDES permit for construction activities affecting >5 acres. Information on these requirements and the necessary forms are available online.

In separate guidance on land development, DEP encourages that for large or potentially controversial projects there be early contact with municipal officials and “prospective neighbors” to address local concerns that could affect planning and/or design. DEP also encourages early

contact with the Department and a pre-application conference especially when multiple permits are involved. DEP cautions that all required permit applications should be submitted so as to allow sufficient time for review prior to the project's expected construction date. DEP notes that its permit coordination policy "generally" requires that all permits related to the same project be released simultaneously to "ensure a thorough environmental review and consistent department action".

In addition to these state efforts to achieve a measure of comprehensive and coordinated project review, the state has also helped foster coordination between developers, federal, state and local regulatory agencies and non-governmental organizations. The result of this effort has been the formation of a 30 member collaborative. Led by the Pennsylvania Game Commission, the Pennsylvania Wind and Wildlife Collaborative has developed a Wind Energy Voluntary Cooperation Agreement which includes protocols for avian and bat studies that "are intended to enable wind energy development to occur in a more amenable and disciplined manner..."

The DEP permitting process is regulatory. An appeal of a DEP permit goes to the Pennsylvania Environmental Hearing Board (EHB) where an adjudicatory hearing is conducted. Standing is fairly strict there: To establish standing before the EHB an individual must show that they have a "substantial" interest in the subject matter of the particular litigation which surpasses the common interest of all citizens in seeking compliance with the law; a "direct" interest that was harmed by the challenged action; and an "immediate" interest that establishes a causal connection between the action complained of and the injury they suffered. A party may be allowed to intervene on similar grounds.

Significantly, DEP's action that is the subject of an appeal to the Environmental Hearing Board is not stayed pending disposition of the appeal unless the Environmental Hearing Board grants special dispensation. The party seeking the stay must show a high degree of success on the merits and must post a bond.

There is no process in Pennsylvania by which state and local processes are consolidated. In Pennsylvania, either the county or township is likely to have zoning regulations and a permitting process pursuant to these regulations. Documentation of information to support response to Subdivision and Land Development Ordinances (SALDO) can be extensive and vary widely from community to community. Projects covering several thousand acres likely are within the jurisdiction of several towns and therefore need to submit different documents to support decisions in each township. Local engineers or retained outside engineers typically assist the planning agency in their review of project information documents. To assist local communities in development of wind resources, a sample model wind ordinance was developed that built on earlier work done by representatives from the Governor's Office, DEP, DCNR, the Pennsylvania State Association of Township Supervisors, and the County Commissioners Association. This was intended as a template that municipalities could adapt to their special needs. It specifically addressed setbacks, noise, design, lighting, and provisions for waiver of certain of these requirements.

#### ***5.4.9 West Virginia***

Responsibility for protection and management of West Virginia's natural resources is divided between the DEP and the Department of Commerce (DOC). The former has major programs

related to air, mining and reclamation, land restoration, and water and waste management. Within the DOC, separate divisions have responsibility for the state's forest lands, natural resources including wildlife, hunting, and fishing as well as state parks, tourism, and energy. The Division of Energy is responsible for policy as it relates to fossil and renewable and energy efficiency initiatives but it has no direct involvement in project review and/or permitting.

Responsibility for review of proposed electric generating projects, including wind projects, lies with the Public Service Commission (PSC). Three commissioners supported by a technical staff process and act upon petitions filed by exempt wholesale generators of electricity. In addition, the PSC also supervises rates and services of all public utilities and most common carriers in the state. Commissioners are appointed by the Governor and serve for six years.

Application requirements for a siting certificate which allows facility construction are enumerated in a set of rules that also include a 30 day pre filing notification requirement as well as an overall 300 day period for project evaluation. Materials needed for filing are specified down to the scale of accompanying maps and an evaluation of the impacts of the generating facility on the viewshed within a one mile radius of the proposed facility. The comprehensive review includes an evaluation of construction and operation. Approval of a proposed facility is contained in an "order" which grants a siting certificate which typically contains a number of terms and conditions. Principal among these are the need to file evidence that all permits necessary for construction have been obtained from the USFWS, West Virginia Division of Natural Resources, West Virginia Division of Culture and History and the West Virginia State Historic Preservation Office.

Review of a project's siting application is a formal adjudicatory proceeding. In addition to the full siting certificate application, testimony is filed in response to staff questions and preparers of technical materials presented in the siting application are presented as witnesses before the Commission. Opponents have the opportunity to submit questions and provide additional testimony to be considered in the overall project evaluation.

In addition to the requirements for the siting application, the DEP had posted online information relative to their permits. Specifically, the DEP includes in their website a "permitting handbook". While not extensive it does provide guidance relative to air, water and waste permits. DEP permits for typical wind farm related activities are issued at the state level.

There is no local review of proposed projects subject to the jurisdiction of the PSC. At the applicant's discretion public information meetings can be held but are not required. By legislative authority, the PSC has been given authority to override all county and other local zoning that might apply to a proposed project.

## 5.5 Analysis of Different State Approaches to Permitting Wind Projects

*The following is a summary of the key points about how different states permit wind projects:*

**One-Stop Permitting.** There is considerable variety among the states that were reviewed with respect to siting boards.<sup>4</sup> Only two of the nine states reviewed lack siting boards (New York and Maine). Two of the seven states with siting boards have MW thresholds so high as to make their siting boards essentially irrelevant for land based wind development (Massachusetts – 100 MW threshold; Rhode Island – 40 MW threshold). Of the remaining states with siting boards, two have renewable-specific thresholds: the Connecticut board threshold is just 1 MW for renewable energy projects while in New Hampshire for renewable projects more than 5 MW and less than 30 MW, the applicant has the option of choosing SEC review or can be subject to SEC review as the result of petition by interested parties. Vermont’s board reviews all energy projects (except where the facility is operated solely for the owner’s consumption). The Maine threshold is 20 acres, which translates to approximately 1 MW to 5 MW. Connecticut, Rhode Island, and Vermont siting boards consolidate both state and local permitting, while New Hampshire’s only coordinates state permitting, meaning that a wind developer in New Hampshire still needs to obtain permits from other state agencies. Thus, of the states with siting boards only Connecticut and Vermont have one-stop permitting with a low MW threshold consolidating both state and local permitting processes.

**Where One-Stop Permitting Process, Level of Involvement of Other State Agencies and Local Boards.** In states with siting boards, other state agencies and local boards are involved in a variety of ways. Connecticut’s siting law, which consolidates all state and local permitting for qualifying energy projects at the siting board, ensures significant involvement of other interested state agencies and local boards. Designated state agencies and affected local boards must be given notice of the application. The board must consult with and solicit written comments from these other state agencies. The applicant must consult with the municipality, which then has 60 days to give its recommendations (and which may conduct public hearings and meetings). In addition, in Connecticut a municipal zoning commission or wetlands board may regulate and restrict a proposed energy facility, but such order must be made within 65 days of the application to the board, and the board may affirm, revoke, or modify such order by a super-majority (6 out of 9).

Rhode Island’s siting board rules also ensure significant involvement of other state and local agencies, as all state and local agencies that would ordinarily issue a permit for siting a facility must follow their normal application and hearing procedures but must forward their findings to the board rather than issue a decision. In addition, the board may direct state or local agencies to issue it advisory opinions on matters within its jurisdiction.

Similarly, in New Hampshire, the applicant submits a single application but it must contain information that satisfies the application requirements of each state agency that ordinarily would have jurisdiction. The agencies then work with the siting board to develop draft permit conditions for the board’s certificate.

---

<sup>4</sup> To simplify the comparison of different states’ approaches in this section, boards or councils that function as energy facility siting boards are referred to as siting boards or boards.

In Vermont, the Agency of Natural Resources is named as a party to proposed energy facility proceedings and must provide recommendations about potential environmental impacts. No other state agency is so designated. In addition, broad notice must be given to all town and regional boards, which can then hold hearings and make recommendations to the board, but cannot issue independent rulings. In Massachusetts, the statute does not require the participation of other state agencies and local boards, but it does provide that the siting board certificate, if issued, shall be a composite of individual permits and that portions within the jurisdiction of a state agency or local board shall be enforced by said agency or board.

***Special Standard of Review for Renewables.*** Connecticut is the only state reviewed where the siting board has a special standard of review for renewable energy projects. While traditional energy projects in Connecticut must meet a public need standard, renewable energy projects need only meet a *public benefit* standard.

***Where No One-Stop Permitting, Level of Coordination of Other Agencies.*** Several of the states that were reviewed that either do not have siting boards or that have boards that are effectively unavailable to land-based wind projects have significant coordination between state agencies in the permitting of energy projects. In both Maine and Pennsylvania, agencies other than DEP do not issue their own permits but rather seek to influence the conditions imposed by DEP in its permit. Furthermore, in Pennsylvania, state agencies collaborated to develop protocols for bird and bat studies.

***Federal/State Agency Coordination.*** Pennsylvania has achieved some coordination with federal permitting authorities for wind development projects. For instance, federal agencies joined with state agencies to form the Pennsylvania Wind and Wildlife Collaborative to develop the bird and bat protocols mentioned above.

***Designated Areas for Renewable Energy/Wind Development.*** In Maine, the new expedited permitting law for grid scale wind power applies to the entire organized part of the state except for waters subject to tidal influence, as well as to specific sections of the unorganized section of northern Maine.

***Standards/Guidelines for Wind Projects.*** A number of states have developed protocols for bird and bat studies for proposed wind power projects: New York, Pennsylvania, and Maine. Maine has also issued a guidance document for noise and shadow flicker studies. In addition, the new Maine statute provides that with regard to scenic impacts of grid scale wind projects, the test is whether the project would have an unreasonable adverse effect on a scenic resource of *state or national significance*, which is a defined term in the statute. Further with regard to scenic impacts, the statute provides that DEP/LURC may require that a visual impact assessment be provided by the applicant, but there is a rebuttable presumption that a visual impact assessment will not be required for those portions of the development's facilities that are located more than 3 miles (horizontally) from a scenic resource of state or national significance.

***Hearings and Appeals.*** In all of the states that were reviewed the siting board procedures are adjudicatory. In the states where wind development projects would not go before a siting board, different procedures exist. In New York, for example, the DEC issues permits as is customary for an environmental agency, but it may determine that it is appropriate to conduct an adjudicatory hearing if a significant issue is presented or there is likely to be a denial or a major

modification required. In Pennsylvania, DEP issues permits without adjudicatory hearings, but an appeal of a DEP permit goes to the Pennsylvania Environmental Hearing Board, where an adjudicatory hearing takes place. In Massachusetts, outside of the siting board process a wind project is likely to need a number of permits. A wetlands permit is particularly likely. Because the wetlands appeal process can be protracted, DEP has taken steps to expedite this process by establishing a presumptive 6-month timeline for an administrative appeal of a DEP Superseding Order of Conditions and establishing a policy whereby cases may be heard by DEP hearing officers rather than by DALA Administrative Law Judges.

***Specified Time Periods.*** A number of states have taken steps to shorten the permit review time for renewable energy projects. In New Hampshire, legislation passed in 2007 expedited somewhat the permit review process for renewable energy projects (see New Hampshire section above for specifics). In Connecticut, the siting board will render a decision on a renewable energy project within 180 days (as opposed to a year for most other projects). In Maine, the new expedited permitting statute for grid-scale wind requires the permit review be completed in 185 days or 270 days if a hearing is held (applies to both DEP and LURC permit reviews).

***Public Process.*** In Connecticut and New Hampshire, the siting boards must hold at least one hearing in the affected county; in Rhode Island the rule is the same with regard to the affected town. For wind projects in Vermont, applicants must notify all municipal governments (including the planning commissions) and regional planning commissions within a 10-mile radius of each proposed turbine. The notice must include an assessment of the impact on the towns within the 10-mile radius and must include a viewshed analysis that details the aesthetic impacts of the proposed turbines.

***Facilitation of the Permitting Process.*** Other steps are being taken to facilitate the permitting of wind development. Two of the states reviewed, Massachusetts and Pennsylvania, have model wind by-laws and Maine has a set under development. Maine has the closest thing to a permitting ombudsman for energy projects in the form of an assigned DEP project manager. An applicant in Maine is encouraged to have a pre-application meeting with this project manager, at which time the requisite permits and the process are discussed. The applicant then submits a single, multi-part application to the DEP project manager who coordinates the review by different sections of the Department. Massachusetts, Vermont and Connecticut all have guidance documents for participating in their siting board permitting processes easily located on their siting board websites. New York has a “cookbook” to guide developers through the state environmental review process that is also available on their website.

***Ability of Other Parties to Participate in Permitting Process.*** For standard regulatory processes, depending on the permitting program, there may or may not be opportunity for significant public involvement. For example, in Pennsylvania public notice of every complete individual NPDES Construction Permit and Erosion & Sediment Control Permit application is published in the *Pennsylvania Bulletin*. The notice provides for a 30-day period for submittal of public comments, including requests or petitions for public hearings. All of the siting boards have rules for who can participate as a party or an intervener in the board proceedings. For example, Vermont’s siting board rules provide that the board may in its discretion allow a person to permissively intervene in a proceeding and that in making this decision the board will consider (1) whether applicant’s interests will be adequately protected by other parties, (2) whether alternative means exist by which applicant’s interests may be protected, and (3) whether

intervention will unduly delay the proceeding or prejudice the interests of the existing parties or the public. In Massachusetts, parties in interest before the siting board include any person showing that they “may be substantially and specifically affected by the proceeding” and also includes 10 citizens alleging damage to the environment.

***Appeal Process:*** Normally appeals of state level permits stay construction pending the appeal’s outcome, either by-law or as a practical matter as developers and lenders typically do not want to commence construction without having the required permits in hand. Pennsylvania has an interesting rule that limits the circumstances that a stay will be imposed as a matter of law. A Pennsylvania DEP final order appealed to the Environmental Hearing Board is not stayed pending disposition of the appeal unless the appealing party (1) can show a high degree of likelihood of success on the merits and (2) posts a bond. In terms of who can participate on appeal, there is variation among the states, but all states require some showing of standing. In a number of states, the appeal from the siting board goes to the state’s highest court: this is the case in Massachusetts, Vermont, New Hampshire, and Rhode Island. In Maine, under the new expedited permitting statute for grid-scale wind projects, a person aggrieved by a DEP (or BEP) decision regarding a large wind project can appeal it directly to Maine’s highest court. Reviewing courts as a general matter give agency decisions deference, typically confining the facts reviewed to those presented on the record and only overturning decisions where there are errors of law or where the court finds the agency holding an abuse of discretion or arbitrary and capricious. In Massachusetts and Connecticut, judicial review of siting board decisions is given priority by statute.

## 6.0 CONCLUSIONS

---

The purpose of this study was to assess the regulatory and permitting process for wind power development in the Commonwealth of Massachusetts, identify delays associated with the permit process, and evaluate whether those delays had significantly affected wind power development in Massachusetts. The study also sought to identify permitting strategies and practices that should be considered for incorporation into the Massachusetts permitting process.

The methodology used in this study included three primary data collection methods: 1) non-project specific interviews with wind power project developers to ascertain their perceptions of siting and permitting renewable power generation projects in Massachusetts; 2) case studies of six recent land-based wholesale wind power projects in Massachusetts; and 3) examination of the regulations and permitting processes of eight other states to understand a variety of approaches that may allow for improvements in the Massachusetts processes.

The results of the non-project specific interviews with wind developers consistently showed that they are looking for a permitting process with the following characteristics:

- Clear specification of requirements;
- Clearly stated time limits; and
- A clear path that if followed will lead to the approvals necessary for development.

However, the non-project specific interviews with the developers and the results of the six case studies both showed that the frequency of appeals, their long and uncertain time requirements, and the work involved in addressing the appeals, made these three key permitting characteristics less achievable in Massachusetts than elsewhere.

By virtue of the need to address separate local and state permitting requirements, and the lack of a consolidated review process for the size of wind power projects proposed, the Massachusetts permitting process is subject to appeal for every permit at multiple levels, creating a redundancy of review and substantial delays. This study reveals that other states have addressed this issue with some form of “one-stop shopping” or a consolidated permitting process with fewer levels of appeal and more of an emphasis on resolution of technical issues. Local input is managed more effectively and is reflected in project decisions where there is less opportunity for unaffected parties to endlessly debate issues not important to the host communities.

In order for Massachusetts to move forward and pursue its goal of 2,000 MW of wind power by 2020, the findings of this study clearly demonstrate that the Commonwealth of Massachusetts must consider reform relative to the permitting process for proposed wind power development projects. A single project application (i.e., “one-stop shopping”) that results in a single project certificate, with conditions to address environmental issues and concerns of the host community, should be considered. As this study has shown, there is no one way to do this, but nearby states with similar environmental issues, active local communities, and landowner concerns, provide good examples of permitting processes and procedures that have made their states more attractive for wind power development than Massachusetts.

## 7.0 BIBLIOGRAPHY

---

- Anderson, Charis. SouthCoastToday.com. "Fairhaven wind project point to get turbines." December 7, 2007.
- Anderson, Charis. SouthCoastToday.com. "Fairhaven wind developer needs investors." February 22, 2008.
- Anderson, Charis. SouthCoastToday.com. "One hurdle down, one to go for Fairhaven wind project." May 13, 2008.
- Anderson, Charis. SouthCoastToday.com. "Fairhaven wind project get Planning Board approval." May 15, 2008.
- Anderson, Charis. SouthCoastToday.com. "Group appeals Fairhaven wind project approval." May 30, 2008.
- Anderson, Charis. SouthCoastToday.com. "Opponents of Fairhaven wind project take their fight to court (8 p.m.)." June 10, 2008.
- Anderson, Charis. SouthCoastToday.com. "State upholds approval of Fairhaven wind project." July 18, 2008.
- Anderson, Charis. SouthCoastToday.com. "Fairhaven optimistic about wind project." September 20, 2008.
- Anderson, Charis. SouthCoastToday.com. "Fairhaven wind project developer dodges lawsuit." December 27, 2008.
- Anderson, C. 2009. "Fairhaven wind project developer dodges lawsuit," <http://www.windaction.org/news/19308>. Accessed March 2009.
- Baystate Environmental Consultants, Inc. Environmental Notification form. Prepared for Berkshire Wind Power Project for the Upgrade and Expansion of an existing Gravel Roadway providing Access to the 18 Proposed Wind Turbine Towers on Brodie Mountain and Sheeps Haven Mountain in Lanesborough and Hancock, Mass. May 2001.
- Baystate Environmental Consultants, Inc. Notice of Change Application for EOE No. 12532. Project Name: Berkshire Wind Power Project. Project Location: Off Brodie Mountain Road, Hancock and Lanesborough, Mass. February 2004.
- Baystate Environmental Consultants, Inc. Notice of Change Application for EOE No. 12532. Project Name: Berkshire Wind Power Project. Project Location: Off Brodie Mountain Road, Hancock and Lanesborough, Mass. September 2004.

- Commonwealth of Massachusetts, Executive Office of Energy and Environmental Affairs. 2007. Hoosac Wind Project, enXco, Inc. Final Decision on Appeal. June 20, 2007.
- DOER Publication. Renewable Energy & Distribution Generation Guidebook. *A Developer's Guide to Regulations, Policies and Programs that Affect Renewable Energy and Distributed Generation Facilities in Massachusetts*. A Publication of The Massachusetts Division of Energy Resources. April 2001.
- Dubester, Laura. CET. New England's Largest Wind Project Teams Up With CET, CSGS and Constellation Newenergy to Provide More "Green" Power Options. Westborough, MA. December 2, 2003.
- Epsilon Associates, Inc. 2004. Expanded Environmental Notification Form. Princeton Wind Farm Infrastructure Improvements, Princeton, MA. March 1, 2004.
- Ferreira, Joao. MTC. 2007. "Wind turbine project a maybe for Town Meeting discussion." March 9, 2007.
- Ferreira, Joao. MTC. 2007. "WindWise Fairhaven blows open door of closed session." March 28, 2007.
- Guide to DEP Permits & Other Authorizations. Commonwealth of Pennsylvania. Edward G. Rendell, Governor. 2007.
- Hull Wind. "History of Hull's Wind Project":  
<http://www.hullwind.org>.
- Jodi Stemler Consulting. Wind Power Siting Regulations and Wildlife Guidelines in the United States. April 2007.  
[http://www.fws.gov/Midwest/eco\\_serv/wind/guidance/AFWASitingSummaries.pdf](http://www.fws.gov/Midwest/eco_serv/wind/guidance/AFWASitingSummaries.pdf)
- Kahn, R.D., (2000). "Siting Struggles: The Unique Challenge of Permitting Renewable Energy Power Plants." *The Electricity Journal*, March 2000.
- Manwell, James F., MacLeod, John, Wright, Sally, DiTullio, Lynn, and McGowan, Jon G. Hull Wind II: A Case Study of the Development of a Second Large Wind Turbine Installation in the Town of Hull, MA. American Wind Energy Association. Windpower 2006 Conference. June 2006
- Massachusetts Department of Environmental Protection. Gov. Patrick: Protect the Environment, Streamline the Permit Process. Plans Propose 20% Cut in Time to Permit, Reform of Wetland Appeals Process.
- Massachusetts Technology Collaborative, Renewable Energy Trust. (MTC). 2005. Cape Cod Community College Wind Energy Project, Town of Orleans Wind Energy Project, Wind Turbine Supply and Optional O&M Services. Nils Bolgen. September 9, 2005.

Milton, Susan. MTC. "Orleans won't pursue deal for municipal turbines." September 13, 2007.

MTC. 2007. "Fairhaven Community Wind Project Documents," [http://masstech.org/Project%20Deliverables/Comm\\_wind/Fairhaven/Fairhavendocs.htm](http://masstech.org/Project%20Deliverables/Comm_wind/Fairhaven/Fairhavendocs.htm). Accessed March 2009.

New Hampshire Office of Energy and Planning. Energy Programs. Accessed April 2009. <http://www.nh.gov/oep/programs/energy/StateEnergyPlan.htm>

Planning Board, Town of Princeton, MA regular meeting. 2005. Princeton Wind Farm Infrastructure Improvements, Princeton, MA – Met Towers and Wind Turbines. September 28, 2005.

Planning Board, Town of Princeton, MA public hearing. 2006. Princeton Wind Farm Infrastructure Improvements, Princeton, MA – Supplemental Decision for the Municipal Light Department Wind Farm. Wednesday, May 3, 2006.

Planning Board, Town of Princeton, MA regular meeting. 2007. Princeton Wind Farm Infrastructure Improvements, Princeton, MA – Westminster Road. October 24, 2007.

Planning Board, Town of Princeton, MA public hearing. 2008. Princeton Wind Farm Infrastructure Improvements, Princeton, MA – Wind Farm issues with rotator assembly and other issues pertaining to wind turbines. April 22, 2008.

Planning Board, Town of Princeton, MA public hearing. 2008. Princeton Wind Farm Infrastructure Improvements, Princeton, MA – Wind Farm issues with abutters and other turbine issues. May 13, 2008.

Planning Board, Town of Princeton, MA regular meeting. 2008. Princeton Wind Farm Infrastructure Improvements, Princeton, MA – Wind Farm Project Update. May 21, 2008.

Princeton Municipal Light Department. 2007. Petition for exemption from the Zoning Ordinance of the Town of Princeton for purposes of construction and operation of a wind electric generating facility. September 2007.

Princeton Municipal Light Zoning Department. 2006. Docket. Petition of Princeton Municipal Light Department to the Department of Telecommunications and Energy for an exemption from the Town of Princeton, MA Zoning By-Laws, pursuant to G.L. c. 40A, §3 and 220 C.M.R. §1.04(1). Filed February 15, 2006.

RenewableEnergyWorld.com. "PPM Energy Buys Rights to Northeast Wind Power Projects," <http://www.renewableenergyworld.com/rea/news/story?id=44377>. Accessed March 17, 2006

Stafford, Scott. Berkshire Eagle. "Wind project get a new life in N. Ashford," <http://www.wind-watch.org/news>. Accessed November 2007.

- Stafford, Scott. Berkshire Eagle. "Florida, Monroe wind turbine project slows," [http://www.berkshireeagle.com/headlines/ci\\_9156000](http://www.berkshireeagle.com/headlines/ci_9156000)" Accessed February 2009.
- The Commonwealth of Massachusetts, Executive Office of Environmental Affairs. 2003. Certificate of the Secretary of Environmental Affairs on the Environmental Notification Form. Prepared for Hoosac Wind Project, Deerfield and Hudson, MA. December 26, 2003.
- The Commonwealth of Massachusetts, Executive Office of Environmental Affairs. 2004. Certificate of the Secretary of Environmental Affairs on the Environmental Notification Form. Prepared for Princeton Wind Farm Infrastructure Improvements, Princeton, MA. April 23, 2004.
- The Commonwealth of Massachusetts, Executive Office of Environmental Affairs, MEPA Office. ENF. Prepared for Hoosac Wind Project. April 2004.
- The Landmark. 2006. Article: Mollica will drop windmill lawsuits. May 4, 2006.
- The Massachusetts Energy Facilities Siting Board. The Energy Facilities Siting Handbook: An Overview of the Energy Facilities Siting board Review Process. <http://www.mass.gov/Eoeea/docs/dpu/siting/shandbook.pdf>. Accessed April 2007.
- The SEQR Cookbook. A Step-by-Step Discussion of the Basic SEQR Process. State Environmental Quality Review Act. Revised 2004. [http://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/cookbook1.pdf](http://www.dec.ny.gov/docs/permits_ej_operations_pdf/cookbook1.pdf)
- Town of Fairhaven Department of Public Works/Wastewater Treatment Center Site. Wind Turbine Feasibility Study. Prepared by ESS Group, Inc., Northern Power Systems, and LaCapra Associates, Inc. for performing work sponsored by the RET and administered by the MTC. Prepared for Princeton Wind Farm Infrastructure Improvements, Princeton, MA. July 2005.
- Weston & Sampson. Wind Energy Facility Financial Feasibility Study. Prepared for Town of Orleans, Mass. February 2009.
- Willis, Jessica. Berkshire Eagle. "Wind permit yanked; Ruling takes air out of Hoosac project," <http://www.wind-watch.org/news/2007/05/17/wind-permit-yanked-ruling-takes-air-out-of-hoosac-project> . Accessed May 2007.

## **APPENDIX A**

### **Project Timelines for Case Studies**

HOOSAC WIND PROJECT TIMELINE	
DATE	DESCRIPTION
Early 2001	KMS Mountain Energy begins discussions with landowners
August, 2002	Special Permits to erect Met towers, Florida/Monroe
September 2002	Met towers installed
November 2002	Met towers damaged due to severe ice storm
December 2002	Met towers re-installed
November 2002	Phase I Avian risk Assessment conducted
January 2003	Florida and Monroe authorize town lease
Spring 2003	Breeding Bird Survey conducted
August 2003	Natural Resource characterization
October 2003	Zoning Special Permits issued, Florida/Monroe
Winter 2003	Noise Analysis
Winter 2003	Phase I Archaeological Assessment
November 2003	Subdivision Approvals issued, Florida/Monroe
December 2003	MEPA Determination – no EIR required. Certificate calls for avian / bat studies to be provided.
April 2004	FAA Issues Determination of No Hazard to Airspace
May 2004	Wetland Protection Act: Order of Conditions Issued by Florida/Monroe Conservation Commissions
November 2004	DEP issues Superseding Order of Conditions (SOC), following appeal of Florida wetlands Order of Conditions
June 2004	Citizens Group appeals wetlands OOC issued by Florida ConCom to DEP
Fall 2004	Raptor Migration Survey conducted
November 2004	DEP issues Superseding Order of Conditions (SOC)
November 2004	Citizens Group Appeals DEP SOC; case submitted to DALA for Review
June 2005	State Conservation Management Permit to conserve Large-Leaved Goldenrod Approved by NHESP
February 2006	PPM Energy purchases Hoosac Wind from enXco
Late summer and fall 2006	Bat Detection Survey conducted
February 2007	Governor Patrick signs legislations allowing the towns of Florida and Monroe to enter into payment agreements
May 2007	DALA magistrate upholds three conditions of Citizens Appeal of re SOC
June, 2007	DEP Commissioner rejects DALA's ruling and re-instates SOC
July 2007	Opponents appeal SOC and bring suit against DEP in Superior Court
Summer 2007	Implementation of Goldenrod Protection Plan
Summer 2007	Joint Filing, with Massachusetts Electric, for Section 72 Certificate with the DPU for Transmission line
Spring / Summer 2008	Filing Notices of Intent with Florida/Monroe Conservation Commissions for Transmission line
July 2008	Department of Public Utilities Approval for Transmission Line
Summer / Fall 2008	Received Order of Conditions from Florida/Monroe Conservation Commissions for Transmission Line
January 2009	Superior Court upheld DEP's decision
March 2009	Opponents appeal Superior Court decision to Appeals Court

BERKSHIRE WIND PROJECT TIMELINE	
DATE	DESCRIPTION
1996	University of Massachusetts releases study indicating Brodie Mountain is an excellent wind resource.
1998-2000	DisGen takes interest in the site and begins easement discussions with the property owners, evaluates wind data further, and assesses the feasibility of the Project.
1998-2000	DisGen works with New Ashford to create a wind by-law to allow Project
2000	Wind By-law passed in Ashford
2000	DisGen cannot procure originally proposed turbines as they are no longer available and Ashford will not amend wind by-law to allow larger turbines. DisGen decides to construct on Hancock side of ridge instead (no zoning in Hancock)
Fall 2000	Building permit issued in Hancock, but construction required to wait for resolution of new anti-wind zoning by-law (first anti-wind zoning by-law proposed in Hancock)
October 2000	Hancock building inspector rescinds 10 building permits, because he could not reach sites via access road defined in permit applications despite notification that access route had changed.
2001-2002	Law Suit over Chapter 61 Conversion
January 2001	Appeal to state board of building supervisors results in reinstatement of building permits
May 2001	ENF submitted to MEPA for the upgrade and expansion of an existing gravel roadway providing access to the wind turbines.
May 2001	NOI's filed with Conservation Commissions in Lanesboro and Hancock for Access Road
June 2001	Lanesboro issues Order of Conditions for Access Road
June 2001	Lanesboro OOC appealed, DEP requests analysis of other possible access, stream along access route declared intermittent voiding necessity of alternate route
July 9, 2001	MEPA certificate issued
July 28, 2001	Hancock Conservation Commission issues "favorable" OOC
August 2001	Lanesboro OOC upheld
Fall 2001	Town Meeting Held and Town votes down anti-wind by-law
Fall 2001	Applied for and received 2 <sup>nd</sup> Building permit as first one expired but construction was required to wait for resolution of another proposed anti-wind zoning by-law (second anti-wind zoning by-law proposed)
January 2002	Stream Designation as intermittent appealed
January 2002	Hancock building inspector rescinds 8 permits for Tucker property for failure to prosecute construction despite ongoing appeals of the Lanesboro Conservation commission OOC and DEP's classification of a stream as intermittent
January 2, 2002	Draft interconnection agreement with WMECO
Fall 2002	Town Meeting Held and Town votes down 2 <sup>nd</sup> proposed anti-wind zoning by-law
Fall 2002	Applied for and Received 3 <sup>rd</sup> Building permit as second building permit expired –but construction was required to wait for resolution of another anti-wind zoning by-law (third anti-wind zoning by-law proposed)
Winter 2002	Preparation begins to obtain amendment to Hancock OOC to construct revised access road route in Hancock to avoid Lanesboro zoning restrictions
May 2002	Interconnection agreement with WMECO and approval of interconnection design by New England ISO

<b>BERKSHIRE WIND PROJECT TIMELINE</b>	
<b>DATE</b>	<b>DESCRIPTION</b>
February 5, 2005	Interconnection agreement with WMECO and approval of interconnection design by New England ISO
February 2004	Notice of Project Change submitted to MEPA for a relocation of the access road due to zoning restriction.
September 2004	Notice of Project Change submitted to MEPA for use of the original access road since a Special Permit was issued to overcome a zoning restriction.
May 1, 2006	Hancock Zoning ordinance that would have limited wind turbines to 120 foot tip-height is defeated in a vote
June 19, 2006	New building permits issued after expiration of previous permits
2006	Project held up in court after a suit is filed by Silverleaf Resorts, a new ski resort on Brodie Mountain, claiming the Project would affect its property values.
June 2008	DisGen sells Project to MMWEC

PRINCETON WIND PROJECT TIMELINE	
DATE	DESCRIPTION
December 1999 through November 2002	Over 20 articles published in local newspaper, The Landmark
December 18, 1999	First Public meeting to discuss future of site
January 2000	Survey mailed to every resident in Princeton
May 2000	Survey results published
July 2000	UMASS provides one 130' meteorological station
January 2001	Residents in vicinity of wind farm interviewed
January 2002	PMLD issues RFQ for partners
March 2002	NOI Letters to DEM, Audubon, Planning, Advisory, Building Inspection
April 8, 2002	1 <sup>st</sup> Public Information Hearing
May 2002	Noise Study, Photo Simulation, Shadow Analysis, and Wind Data Analysis completed by Renewable Energy Research Laboratory. Determined that wind turbine sounds are generally quite, well masked, and virtually inaudible at greater distances than 200 meters.
May 2002	Preliminary Acoustic Noise Impact Assessment completed by PB Power. The new turbines will generate 40 dba at 1800'. 40 dba is the noise level of a quiet urban residential neighborhood.
May 20, 2002	2 <sup>nd</sup> Public Information Hearing
June 2002	NHESP determination of no rare plants or animals or exemplary natural communities in the area of site.
June 29, 2002	PLMD sponsors community visit to Town of Hull
July 2002	FAA Determination of No Hazard to Air Navigation completed.
July 24, 2002	Meeting with Stakeholder: Wachusett Mt Advisory Council
August 22, 2002	Meeting with Stakeholder: Audubon Citizens Advisory Council
September 2002	Bird Risk Study completed by Dr. Paul Kerlinger. He concluded that risk associated with repowering is likely to be low and not significant and not a potential threat to avian populations.
September 3, 2002	Board of Light Commissioners public meeting to discuss stakeholder issues
October 8, 2002	Board of Light Commissioners public meeting to discuss stakeholder issues
October 22, 2002	Board of Light Commissioners public meeting. Board approves private partnership as best choice for PMLD.
October 31, 2002	Board of Light Commissioners public meeting. Board votes unanimously to approve and construct wind farm project.
December 2002	Wind Resource Evaluation completed.
December 10, 2002	Board of Light Commissioners public meeting. Board no longer requires bond as backup plan for project.  Board of Light Commissioners held 24 additional public meetings with the wind farm as topic of discussion prior to special town Vote on February 11, 2003.
February 11, 2003	Special Town Vote to approve new wind project. 74 percent of the voters approve the project.
March 2004	EENF completed and submitted to EEA for MEPA review.
April 23, 2004	MEPA Review and Certificate issued. PMLD received favorable MEPA review from

PRINCETON WIND PROJECT TIMELINE	
DATE	DESCRIPTION
	the Secretary of the EEA.
May 2004	Shadow Flicker Modeling and Results completed by Wind Engineers.
May 2004	Solar Shadow Analysis, completed by PB Power
May 2004	Solar Flicker Analysis, completed by Renewable Energy Research Laboratory
May 2004	Site Plan Review Issued
May 2004	Site Plan Review Permit appealed to the land court. Court then remanded it for lack of sufficient reasons.
June 24, 2004	NOI for Storm Water Discharges, NPDES General Permit issued by EPA
October 2004	Construction Permit issued by the Town of Princeton to PMLD and CEI to construct wind turbines
November 2004	Alternatives Analysis completed in response to Historic and Cultural Resource Survey
February 2, 2005	Article 97/Senate bill 40: PMLD requests legislative support for Senate bill 40. DCR and PMLD mutually developed the Article 97 legislation that allows DCR to grant an easement over Stage Coach Trail in exchange for a greater amount of land owned and controlled by the PMLD and the Town of Princeton.
March 9, 2005	Planning Board issued a supplemental decision on the site plan review providing reasons for its decision.
May 10, 2005	Town of Princeton unanimously approved amendments to the Zoning By-Law designed to cure the potential deficiencies in the 2002 by-law.
May 10, 2005	Annual Town Meeting (Home Rule) vote to approve Article 97 easement transfer. This vote allows the Town of Princeton to exchange its easement to the wind site for easement over Stage Coach Trail for access to wind farm.
September 2005	Intensive Archeological Survey completed. Study found no significant archeological resources and recommends no further studies.
September 28, 2005	Planning Board issued a new site plan review for the proposed facility based on the 2005 By-laws.
October 27, 2005	The approval was appealed to the land court.
October 5, 2005	Special Use Permit issued by DCR to PMLD to utilize Stage Coach Trail as access road.
October 28, 2005	Letter from Massachusetts Historic Commission (MHC). Agrees with Intensive Archeological Survey, completed September 2005. MHC agrees with PAL recommendation of no further historic studies.
November 14, 2005	Building Permit issued by Town of Princeton.
February 2006	DTE filing for a comprehensive zoning by-law exemption.
September 2007	DTE issues zoning exemption

<b>ORLEANS WIND PROJECT TIMELINE</b>	
<b>DATE</b>	<b>DESCRIPTION</b>
June 14, 2007	Geotechnical studies completed
June 28, 2007	MTC Board of Directors reserves \$3.72 million for a REC contract with the Orleans project developer under Standard Financial Offer
June 29, 2007	MTC completes draft RFP, including draft lease and all appendices, charts, maps, etc. and transmits to Orleans to prepare for issuance
August 1, 2007	Orleans Site Plan Review Committee approves project site plan
August 17, 2007	Scheduled date for issuance of RFP by Town of Orleans – extended until September 17 at request of Town
September 12, 2007	Orleans Board of Water Commissioners votes against recommending release of the RFP; Orleans Board of Selectmen accepts Board of Water Commissioners' recommendation
September 19, 2007	Orleans Board of Selectmen votes to invite Orleans Board of Water Commissioners to meet to discuss issues related to wind development within the Town
September 25, 2007	Orleans Boards of Water Commissioners and Selectmen confirm that they will not proceed with the Orleans Wind Project at the current time, but leave the door open for wind projects in the future.

<b>FAIRHAVEN WIND PROJECT TIMELINE</b>	
<b>DATE</b>	<b>DESCRIPTION</b>
July 2005	Feasibility Report Completed
May 2006	Town Issues RFP for Wind Development of Parcels
April 4, 2007	MTC Presentation – an overview of the feasibility study results
May 2, 2007	Shadow Flicker Study – an estimate of the extent of shadow flicker effects on residences
May 10, 2007	Acoustic Study – a study of sound effects from the proposed wind turbines. Prepared by Tech Environmental, Inc. of Waltham, MA
May 11, 2007	Acoustic Study Supplemental Information
May 9, 2007	MTC Presentation – overview of Shadow Flicker Study and Preliminary Acoustic Study
May 9, 2007	Financial Consultant Presentation – an overview of commercial terms and financial benefits to the Town of Fairhaven
March 2008	Town by-law passed
May 2008	Town Issues Order of Conditions
May 2008	Developer applies for special permit
May 6, 2008	Special permit 2nd hearing held
May 27, 2008	Special permit issued
May 30, 2008	Order of Conditions is appealed
June 4, 2008	Special Permit Appealed (could take until March 2010)
July 2, 2008	DEP Issues Superseding Order of Conditions
December 2008	Developer Requests Abandonment of Special Permit in hopes of re-applying later as a municipal project and thus avoiding zoning requirements.

<b>HULL WIND PROJECT TIMELINE</b>	
<b>DATE</b>	<b>DESCRIPTION</b>
Early 1980s	Town develops and installs a 40 kW turbine adjacent to the high school.
Spring 1985	The 40 kW turbine starts producing energy.
March 1997	A wind storm damages the old 40 kW turbine beyond repair.
Fall 1997	A group of citizens and teachers meet to discuss how to "re-power" the site.
Late 1998	CARE is formed.
Late 1998	CARE petitions (successfully) Hull Municipal Light Plant, a municipally owned utility, to take on the Project.
Fall 1999	A wind resource study is completed along with discussions of regulatory issues, noise, and economic viability.
June 16, 2000	Town-wide public meeting called to discuss the proposed project.
January 2001	RFP sent out to 12 turbine manufacturers.
April 2001	The bid from Vestas for a 660 kW turbine is accepted.
November 2001	Construction begins (one turbine).
December 16, 2001	Installation is completed.
December 27, 2001	Turbine goes online.
August 2002	A questionnaire is sent out to Hull residents asking if residents are interested in acquiring a second turbine. The response was strongly in favor (95 percent).
October 2002	Hull Municipal Light Plant decides to pursue the Project "Hull Wind 2." (2 <sup>nd</sup> turbine)
2003 – 2004	Hull Wind 2 planning underway including siting, wind resource studies, and economic evaluation.
April 2004	Town meetings held to discuss the proposed Hull Wind 2 Project.
November 2004	FAA issues "Determination of No Hazard to Air Navigation."
December 2004	Hull Conservation Commission provides a letter of approval.
January 2005	Ownership of the landfill site is transferred from the Town of Hull to Hull Municipal Light.
June 2005	DEP completes the Post Closure Permit.
September 2005	Final approval from the DEP is obtained.
May 2006	Hull Wind 2 is commissioned (a Vestas V80, rated at 1.8 MW)
Early 2007 – Present	Planning underway to install a set of 4 turbines off-shore, roughly 15 MW.

**APPENDIX B**

**State Regulatory Table**

**Table B-1. Comparison of Energy Facility Siting Processes in MA, CT, RI and ME**

	MA	CT	RI	ME
Statute and Regulations	<p>M.G.L. ch. 164, § 69G-R. This law establishes the Energy Facility Siting Board and its powers. See also 980 CMR 1.00 – 12.00 (EFSB Rules).</p> <p>M.G.L. ch. 40A, § 3 provides that a “public service corporation” may seek an exemption from the application of municipal zoning law from the DPU.</p>	<p>Conn. Gen. Stat. § 16-50g – 50ee (Ch. 277a, Public Utility Environmental Standards Act). This law establishes the CSC and its powers.</p>	<p>R.I. Gen. Laws § 42-98-1 et seq. (Creation and Powers of RI Energy Facility Siting Board)</p>	<p>12 MRSA § 685-B (LURC), 35-A MRSA § 3451 et seq. (new expedited permitting of grid scale wind projects statute), 38 MRSA 341-D (BEP jurisdiction), 344 (DEP Permitting), 346 (Appeals), 482 et seq. (Site Location of Development Act). Maine does not have an energy facility siting board equivalent.</p>
Siting Council's Jurisdiction: Exclusive or Permissive?	<p>A generating facility applicant must seek a petition for approval of construction from the EFSB. ch. 164, § 69J1/4. An applicant that proposes to construct such a facility <i>may</i> petition the EFSB for a certificate of environmental impact and public interest, which process eliminates other state and local permitting processes. The EFSB shall consider such a petition if the applicant (i) cannot meet a state or local standard, (ii) a state or local process has been unduly delayed, (iii) if the applicant believes there are inconsistencies among resource use permits, (iv) if the applicant believes that a “nonregulatory” condition has been imposed, (v) a state or local disapproval would bar construction (other than on state or municipal land), or (vi) delay caused by a permit appeal. ch. 164, § 69K1/2. In addition, the Board may also consider an application if a local or state permit impacts the responsibilities of the Board. Id.</p>	<p>Exclusive. § 16-50x(a)</p>	<p>Exclusive. § 42-98-4.</p>	<p>N/A</p>
Threshold	<p>A proposed generating facility capable of operating at a gross capacity of 100 MW or more. ch. 164, § 69G.</p> <p>For the zoning exemption under ch. 40A, § 3 there is no size threshold but the applicant must be found to be a “public service corporation.” Private energy suppliers have been found to be public service corporations by both the DPU and</p>	<p>All renewable energy facilities generating one MW or more. § 16-50i(a)(3).</p>	<p>All energy generating facilities of 40 MWs or more (10 MW or more for the generation of electricity by water power). § 42-98-3.</p>	<p>Expedited permitting rules apply to “grid scale wind energy development projects,” defined as projects that occupy a land or water area &gt; 20 acres or 3 acres of built area that are not be revegetated. 35-A MRSA § 3451(4)</p>

**Table B-1. Comparison of Energy Facility Siting Processes in MA, CT, RI and ME**

	MA	CT	RI	ME
	<p>lower courts, but the Supreme Judicial Court has never been presented with this question.</p> <p>See next section on permits potentially needed if the project is &lt;100 MW.</p>			
Relationship with other state and local processes	<p>When the EFSB issues a certificate of environmental impact and public interest with respect to a generating facility, no state or local agency shall require any approval, consent, permit, certificate, or condition for the construction, operation or maintenance of the facility, nor take any action that would delay its construction, operation or maintenance. The EFSB certificate, if issued, shall be in the form of a composite of all individual permits, and that portion of the certificate which relates to a particular state or local agency's jurisdiction shall be enforced by that agency. ch. 164, § 69K1/2.</p> <p>In the case of a project that is &lt;100 MW, a land-based wind project may, depending on the particular project characteristics, need the following state and local permits:</p> <p><u>State</u></p> <ul style="list-style-type: none"> <li>- MEPA environmental review</li> <li>- Natural Heritage and Endangered Species Conservation and Management Permit</li> <li>- Massachusetts Highway Department Access Permit</li> <li>- MHC Consultation</li> <li>- DEP Wetlands Superseding Order of Conditions</li> <li>- DEP 401 Water Quality Certification</li> <li>- DEP Chapter 91 Waterways License</li> <li>- DCR Construction Permit</li> <li>- Article 97 Parklands Transfer</li> <li>- Coastal Zone Management – Federal Consistency Review</li> </ul>	<p>The Council is required to involve interested state agencies and municipalities in the application process. Siting Council applicants must give affected municipal boards and designated state agencies notice of an application being made to the Siting Council. § 16-50(b).</p> <p>The Council shall consult with and solicit written comments from other state agencies prior to hearings, and such agencies may file additional comments during the hearing process. § 16-50(h). DEP has responsibility to "investigate and report" to the Council on applications, which prior to 10/1/73, were within DEP jurisdiction. Id. This is consistent with the Council's practice of making a condition of a Council permit that DEP air and water permits be issued (clean air and clean water permits are issued pursuant to federal law).</p> <p>Applicant must consult with the municipality, which may conduct public hearings &amp; meetings. Within 60 days of consultation, municipality must give its recommendations to the applicant, who shall provide them to the Siting Council. § 16-50(e).</p> <p>A municipal zoning commission or wetland agency may regulate and restrict the proposed location of a facility, but such order must be made not more than 65 days after application is filed with the Siting</p>	<p>All state and local agencies that would ordinarily issue a permit for the siting of a major energy facility shall follow their application and hearing procedures but rather than issue a permit they shall forward their findings to the Siting Board. § 42-98-7.</p> <p>The Siting Board can also designate particular state and local agencies to act at its direction for the purpose of issuing advisory opinions. § 42-98-9. Such advisory opinions shall not be considered appealable final agency decisions. § 42-98-10. Agencies issuing advisory findings may also hold hearings.</p> <p>The Siting Board will have at least one hearing in affected municipality. For an electricity generating facility, town may request that an environmental study be performed by applicant, the cost of which shall not exceed the lesser of \$100,000 or .1% of capital cost of project. Board will "conclusively" determine if study should be performed, and this decision shall not be the basis for an interlocutory appeal or otherwise delay Board's process. § 42-98-9.1.</p> <p>For projects that do not go before the siting board, all state and local permits will need to be obtained. At the state</p>	<p>The new expedited permitting statute for grid scale wind development is designed to expedite the issuance of (a) a DEP siting permit in the organized portion of Maine, and (b) the issuance of a LURC permit in the parts of the unorganized portion of Maine that is covered by the legislation. In the organized portion of Maine, there is still the need to obtain other DEP permits depending on the development impacts. Such potentially necessary permits include a Natural Resources Protection Act permit and a Stormwater Management Act permits, both issued by DEP. The expediting permitting law for grid scale wind projects does not affect municipality's authority to regulate wind energy development. P.L. ch. 661, Section E (123<sup>rd</sup> Legislature).</p> <p>In the unorganized portion that the law applies to, there is no longer the need for rezoning to be allowed by LURC; grid scale wind is now a permitted use in all unorganized areas covered by the legislation.</p> <p>There is no formal coordination between state and local processes. A wind developer would still need to get a transmission line permit approval from the Public Utilities Commission, as well as any necessary local permits in the organized portion of Maine. Because of Maine's site development law, rather than having to get separate permits from other state agencies (such as the Department of Inland Fisheries and Wildlife and the Maine</p>

**Table B-1. Comparison of Energy Facility Siting Processes in MA, CT, RI and ME**

	MA	CT	RI	ME
	<p>- DPU Section 72 proceeding for transmission line (this permit required whether consolidated EFSB permitting or not)</p> <p><u>Local</u></p> <p>- Zoning – possible special permit process before planning board or ZBA</p> <p>- Conservation Commission wetlands Order of Conditions</p> <p>- Local Historic District review</p> <p>- Building Permit (This permit still required for &gt;100 MW project)</p>	<p>Council, and such order may be appealed (by any aggrieved party) to the Council, which may affirm, revoke, or modify such order by a vote of 6 (of 9) members. § 16-50x(d).</p>	<p>level, the primary permitting agency is the Department of Environmental Management (DEM). DEM issues wetlands permits, administers the NPDES program, and regulates wildlife impacts. For coastal impacts, Rhode Island has a Coastal Resource Management Council that has permitting authority over development impacts in the coastal zone.</p> <p>At the local level, a wind developer would need to obtain approval under a town's zoning law, and in all likelihood would need a special use permit. Towns can also regulate wetlands more stringently than the state.</p>	<p>Historic Preservation Commission), these agencies seek to influence the conditions imposed by DEP in the Site Development Permit.</p>
Standard for Granting Approval	<p>There is no special standard for the EFSB's review of renewable energy projects. A number of factors are taken into consideration when determining whether to grant a petition to construct a generating facility under Section 69J1/4 or to grant a certificate of environmental impact and public interest under Section 69K1/2 and Section 69O1/2.</p> <p>With regard to the zoning exemption for public service corporation projects under ch. 40A, § 3, an exemption from the application of municipal zoning law will be granted if it is found by DPU that the proposed use is "reasonably necessary for the convenience or welfare of the public."</p>	<p>A more permissive standard is imposed for renewable energy projects. Regular energy projects must meet a public <i>need</i> standard; renewable projects need only meet a public <i>benefit</i> standard. Compare § 16-50p(a)(3)(A) with § 16-50p(c)(1).</p>	<p>An applicant to the Siting Board must show that the facility is (a) necessary to meet state needs "for energy of the type to be produced by the proposed facility;" (b) cost-justified; (c) complies with all laws or for reasons of public welfare warrants a waiver; (d) will not cause unacceptable harm to the environment and will enhance the state's socioeconomic fabric. § 42-98-11.</p>	<p>Multi-factor decision at both DEP and LURC. The new statute significantly provides that with regard to scenic impacts of grid scale wind projects, the test is whether the project would have an unreasonable adverse effect on a scenic resource of <i>state or national significance</i>. 35-A MRSA § 3452.</p> <p>Further with regard to scenic impacts, the statute provides that DEP/LURC may require that a visual impact assessment be provided by the applicant, but there is a rebuttable presumption that a visual impact assessment will not be required for those portions of the development's facilities that are located more than 3 miles (horizontally) from a scenic resource of state or national significance.</p> <p>With regard to the site development law, Maine law enables municipalities to register with DEP so that they may be delegated authority to conduct site development reviews and issue site development permits. DEP</p>

**Table B-1. Comparison of Energy Facility Siting Processes in MA, CT, RI and ME**

	MA	CT	RI	ME
				retains the power to review and, if necessary, overturn a municipal decision under the site development law. 38 MRSA § 489-A.
Guidelines or Standards to Facilitate the Review of Wind Projects?	No	No	No	DEP has issued guidance for bird/bat studies and noise/shadow flicker studies. The statute provides that with regard to aesthetic impacts, if the proposed turbine is more than 3 miles from a scenic resource of state or national significance, there is a rebuttable presumption that a visual impact assessment need not be prepared. 35-A MSRA § 3452(4).
Time for Decision/ Expedited for Renewables?	<p>For a petition to construct a generating facility under Section 69J1/4, the Board shall make its determination within 1 year from the date of filing. See Section 69J1/4.</p> <p>For a petition to grant a certificate of environmental impact and public interest under Section 69K1/2, the Board shall hold a public hearing not less than 60 days and not more than 90 days after the date of filing. The Board shall render its decision as expeditiously as possible, but in no event later than 180 days from the date of filing. Section 69O1/2.</p>	For renewable energy projects, Council's decision shall be rendered 180 days after application filed (as opposed to a year for most other projects). § 16-50p(a)(2)(B).	<p>Siting Board's regular timeline is as follows:                      Within 60 days of receipt of application, convene a preliminary hearing, and within 45 days of initiating the hearing conclude it, determining, among other things, which agencies should play advisory role. § 42-98-9. Agencies must make their advisory filings within 6 months after designation. § 42-98-9. The final hearing must commence within 45 days of receipt of agency advisory opinions, be concluded within 60 days, and within 60 days after its conclusion a final decision rendered. § 42-98-11.</p> <p>RIDEM does not appear to have designated time periods for its permit reviews.</p>	New statute provides that both DEP and LURC review of grid scale wind projects be completed in 185 days or, if a hearing is held, in 270 days. See 12 MRSA § 685-B(2-C), and 38 MSRA § 344 (2-A).

**Table B-1. Comparison of Energy Facility Siting Processes in MA, CT, RI and ME**

	MA	CT	RI	ME
Nature of Permitting Process (e.g., standard regulatory permitting or an adjudicatory process)	The Board reaches its decision on a petition to construct, or a petition for a certificate of environmental impact and public need, through an adjudicatory process, which includes motions practice and the cross examination of witnesses. See 980 CMR 1.06.	Council conducts hearings that include testimony and cross-examination, as each party has the right to “present such documentary evidence and to conduct such cross-examination as may be required for a full and true disclosure of the facts.” § 16-50o.	The Siting Board has an Adjudicatory Process. Cross examination permissible. § 42-98-11.  RIDEM is a regulatory agency and issues permits without adjudication. An appeal of a RIDEM permit will be heard by an administrative hearing officer in an adjudicatory proceedings. The hearing officer will render a recommended decision for the RIDEM Director.	DEP may choose to have a hearing and take testimony when considering a site development permit application. 38 MSRA § 485-A.  LURC may have a hearing on a development application that includes testimony and cross examination. 12 MSRA § 685-B; LURC Rules.
Who can participate in administrative process?	The statute provides who the parties in interest can be in the EFSB proceeding. Parties in interest include such persons or organizations permitted to intervene in an administrative proceeding under Ch. 30A, which includes any person showing that they “may be substantially and specifically affected by the proceeding” and also includes 10 citizens alleging damage to the environment. Section 69N, as well as Ch. 30A, Sections 10 and 10A.	Any of the municipal or state entities who received notice of the application, a nonprofit, or such other person as the Council deems appropriate may be a party to the Council proceeding. § 16-50n.	Under the EFSB’s rules, a person may intervene in a proceeding where a statute confers this right, if an interest is directly affected that is not adequately represented by existing parties, or if the person’s participation is in the public interest. EFSB Rules of Practice and Procedure, 1.10.  At RIDEM, a party in interest may appeal a permit decision.	At LURC, if a hearing is conducted a petition to intervene shall be granted if it is demonstrated that the petitioner is or may be substantially and directly affected by the proceeding. LURC Hearing Rules, Section 5.13.
Appeal Rights/Reviewing Court/Standard of Review	See above section on Ch. 30A regarding appeal rights.  Any appeal of an EFSB decision may be filed with the Supreme Judicial Court. Ch. 164, Section 69P (incorporating ch. 25, Section 5). Any proceeding in any court affecting an order of the EFSB shall have precedence over all other civil matters, except election cases. Id. Barring unusual circumstances, no evidence beyond that contained in the record shall be introduced before the court. Ch. 30A, Section 14. Any judicial review will consider whether the decision conforms with law, was supported by substantial evidence, or was arbitrary and capricious or an abuse of discretion. Id. and Ch. 164, Section	Only a party to the Council decision may appeal it. § 16-50q.  The appeal is to Superior Court. § 16-50q. Any judicial review of the certificate “shall be privileged with respect to assignment for trial in the Superior Court.”  The appeal is before a judge and the facts are confined to the administrative record. The court shall affirm the decision of the Siting Council unless the court finds that the Council’s decision is in violation of constitutional or statutory provisions, in excess of the statutory authority of the agency, clearly erroneous in view of the	Any person who has exhausted all administrative remedies and who is aggrieved by a final agency order may seek judicial review of that order. § 42-35-15. The appeal will be on the administrative record before a judge, and the standard for review is essentially the same as in Massachusetts – in violation of law or arbitrary and capricious. Id.  An appeal of an EFSB final order is to the RI Supreme Court. § 42-98-12.	A person aggrieved by a DEP or BEP decision re an expedited wind project can appeal directly to Maine’s Supreme Judicial Court. 38 MSRA § 346(4). (A DEP decision can still be appealed to the BEP, and a BEP decision still can be appealed to Superior Court.) Under the new law, BEP (a 10 person citizen board) may not take permitting review responsibility for grid-scale wind projects from DEP. 38 MSRA § 344 (2-A).  A person aggrieved by a LURC decision may appeal it to Superior Court. 12 MSRA § 689; 5 MSRA § 11001.  Under Maine’s Administrative Procedure Act,

**Table B-1. Comparison of Energy Facility Siting Processes in MA, CT, RI and ME**

	MA	CT	RI	ME
	<p>69P.</p> <p>As noted above, outside of the EFSB process a wind project in MA is likely to need a number of permits. A wetlands permit is particularly likely. Because the wetlands appeal process can be protracted, DEP has taken steps to expedite this process by establishing a presumptive 6-month timeline for an administrative appeal of a DEP Superceding Order of Conditions and establishing a policy whereby cases may be heard by DEP hearing officers rather than by DALA Administrative Law Judges.</p>	<p>reliable, probative and substantive evidence of the whole record, or arbitrary, capricious or characterized by abuse of discretion. § 4-183(j). The burden is on the plaintiff to establish these grounds challenging an administrative decision.</p>		<p>the reviewing court "shall not substitute its judgment for that of the agency on questions of fact" and applies essentially the same standard of review as in Massachusetts – in violation of law or arbitrary and capricious. 5 MSRA § 11007.</p>
Board Composition	<p>Board composed of Sec. of Energy and Environmental Affairs (Chairman), Sec. of Housing and Econ. Development, Comm. of DEP, Comm. of DER, 2 commissioners of the commonwealth utilities commission, and 3 gubernatorial appointees</p>	<p>9 member board: the Commissioner of Environmental Protection or his designee; Chairman of the Public Utilities Control Authority or designee; one designee of the Speaker of the House and one of the Senate President; 5 governor's appointees. § 16-50j(b).</p>	<p>Three member board: PUC Chairperson; DEM Director; and the associate director of administration for planning. § 42-98-5.</p>	<p>The BEP is an environmental board of 10 members appointed by the Governor subject to legislative review. If the DEP permit is appealed to the BEP, the DPU Chair sits as a non-voting member on the Board. 38 MSRA § 341-D(4)</p>
Facilitated/Coordinated Application Process?	<p>See description above regarding EFSB "composite permit".</p>	<p>Siting Council will hold at least one hearing in the county in which the facility is to be located. § 16-50m(a).</p>	<p>See above description of way in which Siting Board integrates input from other agencies and municipalities.</p>	<p>DEP allows project applicants to submit a single, multi-part application for all requisite DEP permits. This application is submitted to a DEP project manager, who then coordinates the review by different parts of DEP. Applicants are encouraged to begin with a pre-application meeting with this project manager where the requisite permits and the process are discussed. DEP is also developing a model municipal wind ordinance.</p>
Guidance Document for Navigating Energy Siting Permitting Process?	<p>A guidance document explaining the EFSB's adjudicatory process is posted on the EFSB's website.</p> <p>DOER also has a handbook providing guidance on renewable energy development</p>	<p>Yes. On CSC website there is an application guide for an electric generating facility.</p>	<p>No</p>	<p>No; see discussion of pre-application meeting with DEP above</p>

**Table B-1. Comparison of Energy Facility Siting Processes in MA, CT, RI and ME**

	MA	CT	RI	ME
Federal Agency Coordination?	No	No	No	Maine has a number of working agreements with the ACIE regarding impacts to U.S. waters.

**Table B-2. Comparison of Energy Facility Siting Processes in VT, NH, NY and PA**

	VT	NH	NY	PA
Statute and Regulations	30 V.S.A. §248. This law establishes the Public Service Board process for permitting new electric generating facilities.	RSA 162-H. This law creates a comparison of Energy Facility Siting Process Site for VT, NH, NY and PA Evaluation Committee (SEC) for energy facilities.	6 NYCRR § 617 (SEQR). N.Y. Pub. Serv. Law art. 10; 16 NYCRR Ch. VIII.	Only proposed projects by "public utilities" that provide power directly to the public are regulated by the Public Utilities Commission. 66 Pa.C.S.A. § 102. Otherwise, for all other electricity generating facilities, a number of state and local approvals must be obtained.
Siting Council's Jurisdiction: Exclusive or Permissive?	Exclusive. § 248(a)(2)(A).	The SEC plays a coordinating role for other state agencies and conducts its own permitting process. The SEC process overrides local government permitting. RSA 162-H:4, 6-a; 162-H:16(l).	New York no longer has a state siting board. NYPSL Article X, which established the New York State Board on Electric Generation Siting and the Environment, sunset on January 1, 2003. The Board had exclusive jurisdiction over the siting of new power plants.	Exclusive for public utilities (see above).
Threshold	Any MW level, except where the facility is operated solely for on-site consumption by the owner. § 248 (a)(2).	The SEC reviews all proposed energy facilities >30 MW. For renewable energy projects, the SEC may review projects greater than 5 MW and less than 30 MW either on its own motion or by petition of the applicant. RSA 162-H:2, XII.	The New York Siting Board previously only considered facilities that generated 80 MW or more. NYPSL § 68.	No threshold for public utilities. For other facilities, permits are triggered based on site conditions.
Relationship with other state and local processes	Projects that come under Section 248 review are exempt from local zoning and Act 250 review (District Environmental Commission / Environmental Board review).  For wind generation facilities, applicant must provide notice at least 45 days prior to filing with the Public Service Board to all municipal planning commissions, municipal	The proponent submits a single application to the SEC that contains sufficient information to satisfy the application requirements of each state agency having jurisdiction. 162-H:7. The participating agencies work with the SEC to develop draft permit conditions for the SEC certificate.  The agencies submit "final decisions" to the SEC. Provided that the other state agencies grant the project permits, the SEC then holds an adjudicatory hearing and	To permit an energy generation project in New York, the proponent must obtain state and local permits and go through state environmental quality review (SEQR), whereby a "lead agency" (either local or state) determines the environmental significance of a proposed action.  The Department of Environmental Conservation (DEC) issues permits for wetland and stream crossing impacts, review potential impacts to state	Typically the primary state permit for a wind farm in PA is the National Pollutant Discharge Elimination System (NPDES) permit for construction activities affecting >5 acres. PA, like most states, has been delegated the power to administer this program by EPA. DEP will not issue this permit unless other state and federal regulatory programs have been complied with.  In PA an area of significant

Table B-2. Comparison of Energy Facility Siting Processes in VT, NH, NY and PA				
	VT	NH	NY	PA
	<p>governments, and regional planning commissions for all towns wholly or partially within a radius of a minimum of 10 miles of each proposed turbine. § 248(f); PSB Rule 5.403. Notice must include a viewshed analysis that details the aesthetic impact of the proposed turbines. Id.</p> <p>Notified municipal or regional commissions can hold public hearings and make recommendations to the Public Service Board, but cannot issue independent rulings.</p> <p>The Agency of Natural Resources appears as a party in the proceeding, providing recommendations about potential environmental impacts. § 248(a)(4)(E).</p> <p>Copies of the petition are provided to several other state agencies at the time of filing. § 248(a)(4)(c).</p>	<p>ultimately issues or denies a certificate for a renewable energy facility. RSA 162-H:6-a.</p> <p>SEC must hold at least one public hearing in the county where the project is proposed. RSA 162-H:6-a.</p> <p>An assistant attorney general is appointed as counsel for the public, and accorded the rights and privileges of an attorney representing a formal party. RSA 162-H:9.</p> <p>NH recently passed a law that takes effect in July 2009 that prohibits municipalities from unreasonably hindering small wind systems (100 kws or less). For example, municipalities are proscribed from using generic building height limits, requiring setbacks greater than 150 percent of system height, or placing noise limits below 55 decibels at the property line. RSA 674:62.</p>	<p>listed threatened and endangered species, and recommend appropriate pre- and post-construction bird and bat surveys.</p> <p>Local agencies have to date been the lead agency for wind projects requiring an EIS.</p>	<p>concern is wildlife. PA has three state agencies that regulate different types of wildlife. These agencies, along with federal agencies and other organizations created the PA Wind and Wildlife Collaborative, which developed a number of protocols regarding the study of bird and bat populations, the potential impacts of a wind farm, and post-construction monitoring. When species under the jurisdiction of a wildlife agency are at issue, the agency conducts an environmental review of the project and informs the DEP permitting process.</p> <p>There may be additional DEP permits that are necessary, including a wetlands encroachment permit or a waterways encroachment and fill permit.</p> <p>There is no process in PA by which state and local processes are consolidated. In PA, either the county or township is likely to have zoning regulations and a permitting process pursuant to these regulations.</p> <p>The state agencies have developed a model local wind zoning by-law.</p>

	VT	NH	NY	PA
Standard for Granting Approval	Multi-factor decision, same standards apply to renewable and non-renewable projects.	The SEC must find that the project will not interfere with the orderly development of the region; will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural environment and public health and safety; applicant has adequate financial, technical, and managerial capabilities. RSA 162-H:16. The SEC must also find that the proposed facility "will not unduly interfere with the orderly development of the region with due consideration having been given to the views of municipal and regional planning commissions and municipal governing bodies." RSA 162-H:16, IV(b).	N/A; in New York there are a variety of permits with different approval standards.	N/A; in PA there are a variety of permits with different approval standards.
Guidelines or Standards to Facilitate Review?	None at this time.	Draft wind-specific guidelines have been created, but have yet to be adopted.	The DEC has developed guidelines for conducting bird/bat studies at commercial wind sites.	Yes, see discussion of bird and bat protocols above.
Time for Decision/ Expedited for Renewables?	No time limit for decisions.	Somewhat expedited process for renewable energy facilities due to 2007 legislation. See RSA 162-H:6-a. For a renewable project, the SEC chairperson must decide whether to accept the developer's application within 30 days of its submission (versus 60 for non-renewable projects). All participating agencies must report on their progress within 90 days of the application's acceptance (outlining draft permit conditions and specifying additional data requirements necessary to make a final decision) for a renewable project, while for other energy projects agencies have 5 months to file this report. All participating state agencies must	No special treatment for renewables.  The SEQR process has timelines for each step of the review process.	DEP has different timelines for its various permits.

**Table B-2. Comparison of Energy Facility Siting Processes in VT, NH, NY and PA**

	VT	NH	NY	PA
		submit a final decision on the parts of the application that relate to their jurisdiction within 180 days (versus 8 months for non-renewable projects). The committee must render a final permitting decision within 240 days of the acceptance of an application (versus 9 months for non-renewable projects).		
Nature of Permitting Process (e.g., standard regulatory permitting or an adjudicatory process)	Adjudicatory. PSB Rules of Practice, 2.00.	Adjudicatory. RSA 162-H:10.	<p>The DEC permit process may be standard regulatory permitting, although the DEC may determine to hold an adjudicatory hearing conducted by an administrative law judge.</p> <p>The decision to hold an adjudicatory hearing is based on whether the DEC's review (with input from interested parties and the public) raises significant issues relating to any findings the department is required to make pursuant to the Environmental Conservation Law, including the reasonable likelihood that a permit will be denied or can be granted only with major modifications because the project, as proposed, may not meet statutory or regulatory criteria. DEC Regulations, 621.8.</p>	DEP permitting decisions are regulatory. An appeal of a DEP decision goes to the Environmental Hearing Board, where the process is adjudicatory.
Who can participate in the administrative process?	People may intervene either by right or permissively. PSB Rules of Practice, 2.209. In exercising its discretion to allow permissive intervention, Board will consider (1) whether applicant's interests will be adequately	A person may intervene if they demonstrate that their substantial interests might be affected by the proceeding or that a provision of law entitles them to intervene, and that the "interests of justice and the orderly and prompt conduct of the proceedings would not be impaired by allowing the intervention." SEC	If DEC determines to hold an adjudicatory hearing, a person will be conferred party status upon:  (i) a finding that the petitioner has filed an acceptable petition; (ii) a finding that the petitioner has raised a substantive and	Permit-dependent. Public notice of complete individual NPDES Construction Permit and Erosion & Sediment Control Permit applications are published in the <i>Pennsylvania Bulletin</i> . The notice provides for a 30-day period for submittal of public comments, including

	<b>VT</b>	<b>NH</b>	<b>NY</b>	<b>PA</b>
	protected by other parties, (2) whether alternative means exist by which applicant's interests may be protected, and (3) whether intervention will unduly delay the proceeding or prejudice the interests of the existing parties or the public. Id.	Rules, 202.11.	significant issue or that the petitioner can make a meaningful contribution to the record regarding a substantive and significant issue raised by another party; and (iii) a demonstration of adequate environmental interest. DEC Regulations, 624.5.	requests or petitions for public hearings.
Appeal Rights/Reviewing Court/Standard of Review	An aggrieved party may appeal a final order, judgment or decree of the board to the Vermont Supreme Court. 30 V.S.A. § 12; 25 V.S.A. § 815.	Any party or person directly affected by the decision may appeal to the NH Supreme Court, but only after filing a motion for rehearing with the SEC. See RSA 12-H:11 and RSA 541:3 – 541:6. No new additional evidence will be heard by the Court, which will only vacate the SEC decision for an error of law or if a clear preponderance of the evidence demonstrates that the SEC order was unjust or unreasonable. RSA 541:13.	As in Massachusetts, an ALJ's decision in an adjudicatory hearing is a recommended decision made to the DEC Commissioner. A DEC Commissioner's final permitting decision may be appealed to a court under Article 78 of the New York Civil Practice Laws and Rules. This appeal must first be taken to the New York State Supreme Court (a lower court in New York). Pursuant to CPLR 7802, a court may allow other interested persons to intervene in a proceeding. This provision grants the court broader authority to allow intervention in an Article 78 proceeding than in a regular civil action which requires a showing that the proposed intervenor claim or defense and the main action have a common question of law or fact.  The standard of review is the normal administrative review standard: in violation of law, arbitrary and capricious, or not supported by substantial evidence. N.Y. Civil Practice	All DEP decisions may be appealed to the PA Environmental Hearing Board.  To establish standing before the EHB an individual must show that they have a "substantial" interest in the subject matter of the particular litigation, which surpasses the common interest of all citizens in seeking compliance with the law; a "direct" interest that was harmed by the challenged action; and an "immediate" interest that establishes a causal connection between the action complained of and the injury they suffered. EHB Practice and Procedure Manual. A party may be allowed to intervene on similar grounds. Id. Before the EHB, DEP has the burden of proof where it issues an order, and the applicant has the burden of proof where DEP has issued a denial. EHB Rules, 1021.122. An appeal of an EHB decision may be brought to the Commonwealth Court. The

Table B-2. Comparison of Energy Facility Siting Processes in VT, NH, NY and PA				
	VT	NH	NY	PA
			Laws and Rules § 7803.	Court will uphold the EHB decision unless it finds that it is not supported by-law or substantial evidence. 2 Pa.C.S.A. § 704.  A local permitting decision may be appealed to the Court of Common Pleas.
Board Composition	The PSB is comprised of 3 members appointed by the Governor, subject to consent of the senate. The chairperson shall be nominated, appointed and confirmed in the manner of a superior judge. 30 V.S.A. § 3.	The SEC is comprised of 14 members: the Comm'r of Dept. of Env Services or designee; Director of Div of Water; Comm'r of Dept. of Resources & Economic Development or designee; Comm'r of Dept. of Health and Human Services or designee; Exec. Dir. of Fish & Game Dept.; Dir. of Office of Energy & Planning or designee; Dir. of Div. of Parks & Rec.; Dir. of Div. of Forests & Lands; Dir. of Div. of Air Resources; Comm'r of Dept. of Transportation or designee; Commissioners of Public Utilities Commission (3); Staff engineer	The state currently does not have a siting board.	PUC is made up of 5 members appointed by the Governor.
Facilitated/Coordinated Application Process?	Yes	The SEC application shall contain sufficient information to satisfy the application requirements of each state agency having jurisdiction. 162-H:7.	There is no coordination in the application process. Each applicant must apply for separate local and state agency permits.	Yes, the PA wildlife agencies coordinate their review with the DEP permitting process.
Guidance Document for Navigating Energy Siting Permitting Process?	A Guide to Vermont Public Service Board's Section 248 Process is available on the PSB website.	No	Yes, the SEQR cookbook provides guidance on the EIS process.	No one document that does this, but collectively the PA agencies have put a lot of helpful material on the regulatory process online.
Federal Agency Coordination?	No	No	No	Yes, see discussion above regarding PA Wind and Wildlife Collaborative.

**APPENDIX C**

**Sample Interview Forms**

## MA Project Development Questions

---

### Background

At the request of the Massachusetts Executive Office of Energy and Environmental Affairs, TRC is conducting a study to assess the regulatory process for wind development in Massachusetts. We are talking with representatives from a variety of organizations that are involved in the industry to gather their perspectives.

EPA selected 6 case study projects in MA and specifically chose your project as an important one to consider. MTC recommended we talk to you to help document the permitting process and development issues the Project encountered.

We very much appreciate your taking the time to speak with us; your input will be extremely valuable to this process. We hope to have a wide-ranging and candid discussion with you today. Please be assured that all of your responses will be kept anonymous, meaning that while we will draw insights from the thoughts you share and may even quote directly from our discussion, we will not attribute comments directly to any individual or company.

Our report will be presented to the state in mid-April. Our understanding is that they intend to use it to help improve the statutes and regulations that guide the wind development process. Thank you in advance for sharing your thoughts.

---

### Introduction

- What is/was your role on the project?
- How did you get involved?
- Had you been involved in any similar projects prior to this?

### This Project

- How did this project come about?
- What were the key siting issues that made this location attractive?
- Our team has done some background research on the project and we have some sense of the timeline. We'd like to walk through the development history with you to make sure we have the full picture.
  - When did Project development first start?
  - What permits were required (zoning, special permit, wetlands, FAA)
    - \_\_\_\_\_ zoning
    - \_\_\_\_\_ special permit
    - \_\_\_\_\_ wetlands
    - \_\_\_\_\_ FAA
    - \_\_\_\_\_ other?

- Can I confirm the timeline for each of these with you?
  - [Ask for each permit] Did you encounter any issues or challenges in obtaining the permit?
- Have there been other non-permit related issues that affected development?
- Do you have any documentation you think it would be helpful for us to review to get a fuller understanding of your experience? Perhaps a timeline?
- Where are you now in the project development?
  - Are there outstanding issues?
  - When do you anticipate development being completed?

### **Reflection**

- As you reflect on the permitting process in Massachusetts, what would you like to see changed?
- Given your experience, is there anything you would do differently if you could?
- Do you have any recommendations for the state on how to better support development of wind resources in MA?

**Thank you for your time**

## **Background**

At the request of the Massachusetts Executive Office of Energy and Environmental Affairs, TRC is conducting a study to assess the regulatory process for wind development in Massachusetts. We are talking with representatives from a variety of organizations that are involved in the industry to gather their perspectives.

We very much appreciate your taking the time to speak with us; your input will be extremely valuable to this process. We hope to have a wide-ranging and candid discussion with you today. Please be assured that all of your responses will be kept anonymous, meaning that while we will draw insights from the thoughts you share and may even quote directly from our discussion, we will not attribute comments directly to any individual or company.

Our report will be presented to the state in mid-April. Our understanding is that they intend to use it to help improve the statutes and regulations that guide the wind development process. Thank you in advance for sharing your thoughts.

---

## **Discussion Questions**

### **A. Background**

1. Can you **confirm your title** for me and briefly **describe the role you play** for your organization in developing wind power projects?
2. **How long** have you been involved with wind power? **How many wind projects** have you been involved with? Where are they located and what are their status?

### **B. Your Organization's Approach**

3. When you look at developing a wind project, what are the **key criteria** that draw you to a particular state and location?
  - a. *[Interviewer note: Follow up on whether they have **specific thresholds** they are seeking for each of the criteria they mention.... Specific numeric targets for the quality of the wind resource, number of land parcels to be assembled, transmission costs, etc.... ]*
4. Could you rank these key criteria? You stated [X] criteria, these were: [a, b, c, etc.]. Which is the most important? 2<sup>nd</sup> ?...
  - a. In particular, among the factors that affect your development decisions, what is the **relative importance of a state's permitting process**?
    - i. *[Interviewer note: try to get them to give a **numeric rank of the importance of permitting** if they did not already do so above]*
  - b. What **aspects** of a state's permitting process **most affect your assessment** of the ease of permitting in that state? [Need to explore carefully – ask about appeals/Siting Board/other issues]

### C. Experience with Massachusetts

5. Have you ever **considered developing a project in Massachusetts**?
  - a. If not, why not?
  - b. If so, what happened?
6. What is your **perception of Massachusetts** as a potential site for wind development?
7. What factor, if any, does the current Massachusetts permitting process have in your view that most affects the state as a potential wind development site?
  - a. How **easy is it to understand** the Massachusetts permitting process?
  - b. Please think through each component of the process and factors that affect your ability to develop cost-efficient and effective wind projects. Are there any **particular areas of concern**?
    - i. [Any comments on length, complexity, predictability/degree of uncertainty, and appeal process need to be noted by category.]
    - ii. [FOR ALL CONCERNS EXCEPT THE APPEAL PROCESS] PROBE: Where in the process does this need the most improvement(s)?
8. Assuming all things being equal (wind resources, land...) **What would have to change** for you to seriously consider developing a project in Massachusetts?
9. Have you come across **any aspects of permitting in other states** that you consider to be particularly optimal from a developers' point of view?
10. What would you **recommend Massachusetts do to improve** the permitting process from a developer's point of view?

### D. Conclusion

11. Do you have any **additional thoughts** you would like to share?

**Thank you for your time**