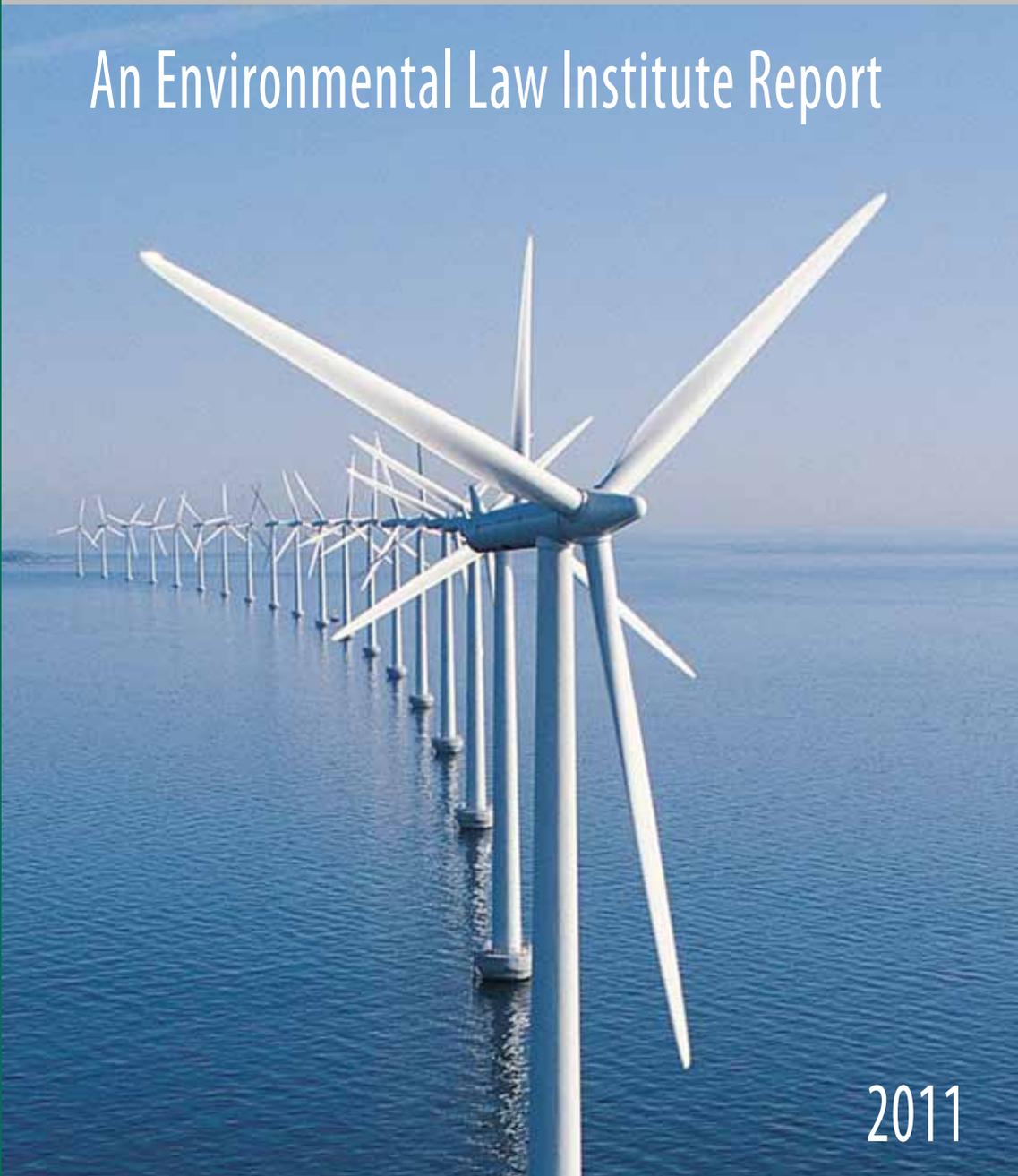


SITING WIND FACILITIES ON STATE-OWNED LANDS AND WATERS

An Environmental Law Institute Report



**SITING WIND FACILITIES ON STATE-OWNED
LANDS AND WATERS**

April 2011

An Environmental Law Institute Report

ACKNOWLEDGMENTS

This report was prepared by the Environmental Law Institute (ELI) with funding from the U.S. Department of Energy under the DOE 20% Wind by 2030 Project, Grant Award No DE-EE0000505, and supported in substantial part by the Wallace Global Fund, which has provided generous programmatic support to ELI's Wind Energy-State Program. The contents of this report do not necessarily represent the views of the Department of Energy or the Wallace Global Fund, and no official endorsement of the report or its findings by either organization may be inferred. Any errors and omissions are solely the responsibility of ELI.

Principal ELI staff members contributing to the project were James M. McElfish, Jr. and Catherine McLinn. Additional assistance was provided by Sara Gersen.

About ELI Publications—

ELI publishes Research Reports that present the analysis and conclusions of the policy studies ELI undertakes to improve environmental law and policy. In addition, ELI publishes several journals and reporters—including the *Environmental Law Reporter*, *The Environmental Forum*, and the *National Wetlands Newsletter*—and books, which contribute to education of the profession and disseminate diverse points of view and opinions to stimulate a robust and creative exchange of ideas. Those publications, which express opinions of the authors and not necessarily those of the Institute, its Board of Directors, or funding organizations, exemplify ELI's commitment to dialogue with all sectors. ELI welcomes suggestions for article and book topics and encourages the submission of draft manuscripts and book proposals.

Siting Wind Facilities on State-Owned Lands and Waters, Copyright©2011 Environmental Law Institute®, Washington, D.C. All rights reserved.
ELI Project Nos. 0833-01 and 0929-01

An electronic retrievable copy (PDF file) of this report may be obtained for no cost from the Environmental Law Institute website at www.eli.org; click on “ELI Publications,” then search for this report. [Note: ELI Terms of Use will apply and are available on site.]

(Environmental Law Institute®, The Environmental Forum®, and ELR® – The Environmental Law Institute Law Reporter® are registered trademarks of the Environmental Law Institute.)

Table of Contents

I.	INTRODUCTION	1
	Reasons to Plan for Wind Facilities on State Lands	1
	Types of State Lands Suitable for Wind Facilities	2
	Purpose of This Study	2
II.	STATE TRUST LANDS	5
III.	STATE SUBMERGED LANDS	15
IV.	STATE CONSERVATION LANDS AND OTHER STATE LANDS	21
V.	INVENTORIES OF STATE LANDS FOR WIND SITING	25
VI.	STATE LANDS OFF-LIMITS TO COMMERCIAL-SCALE WIND DEVELOPMENT	29
VII.	FINDINGS AND CONCLUSIONS	33

I. INTRODUCTION

Commercial-scale wind facilities require large areas of land. Given the increasing interest by state governments in wind power as a means of transforming the energy economy and meeting future energy needs, state governments should consider when to allow use of state-owned lands, including submerged lands, for siting of wind facilities.

About half the states have at least some experience authorizing use of some state-owned lands for wind power projects. This study identifies:

- the types of state lands and waters that are most likely to be involved in commercial-scale wind siting decisions;
- the agencies, laws, and rules that affect their potential use;
- wind facilities currently authorized or under consideration on state lands; and
- inventory mechanisms developed by states to evaluate what state lands and waters are suitable or appropriate for wind facilities.

Reasons to Plan for Wind Facilities on State Lands

While most commercial-scale wind facilities in the United States have been sited on private lands, state-owned lands and waters deserve interest from state policy makers.

➤First, states own large parcels that may facilitate the siting of commercial-scale wind generation facilities that require substantial land areas. Assembling parcels can be facilitated where there is a

single owner, such as a state lands department.

➤Second, states may own lands that are intermingled with privately-owned or federally-owned lands that are valuable for their wind energy potential. Making state lands available for inclusion in a wind project may facilitate the feasibility of projects.

➤Third, states often own some types of lands such as high mountain ridgelines or submerged lands under open waters that may be particularly valuable for their wind potential. Development of wind power in navigable waters will depend upon states authorizing the occupation of their submerged lands.

➤Fourth, states may use their lands to participate in facilitating the development of renewable power projects, beyond simply streamlining regulatory approval processes or adopting renewable energy portfolio standards.

➤Fifth, state leases of land for wind facilities may provide a source of revenue to states, including providing an additional revenue stream from publicly owned lands.

Approximately half the states already have wind projects either occupying or in the planning stages for state-owned lands and waters. These include Alaska, Arizona, California, Colorado, Hawaii, Idaho, Illinois, Kansas, Massachusetts, Michigan, Minnesota, Montana, New Jersey, New Mexico, New York, Ohio, Rhode Island, Texas, Utah, Washington, and Wyoming. Additional states will soon join this group.

Types of State Lands Suitable for Wind Facilities

In thinking about whether, and under what conditions, to use state lands for wind power projects, it is useful to distinguish among categories of lands. Each raises different concerns and legal issues that will affect states' abilities to authorize commercial-scale wind projects, as well as the form which such authorizations may need to take.

State Trust Lands – These lands are held by many states in the western U.S. to generate income for public benefit. Economic uses include grazing leases, mining, oil and gas development, timber harvests, and other uses. State trust lands are often intermingled with federally owned lands and private lands. Wind projects may occupy both state trust lands and these other private and federal lands.

State Submerged Lands – The lands that lie beneath navigable waters are owned by the states. These include submerged lands under rivers, streams, lakes, estuaries, and the Great Lakes, as well as lands beneath coastal marine waters out to an offshore limit of three miles (in most states) and just over ten miles in Texas and Louisiana. State submerged lands are held subject to a legal “public trust” obligation that limits states' ability to permanently alienate them or devote them to a permanent private use. Most states have some existing procedures for allowing some private or public uses of their submerged lands for long term uses consistent with the state's interests.

State Conservation Lands – These lands are held primarily for conservation, recreation, and habitat uses. They include state forests, parks, nature preserves, wildlife refuges and game lands. The ability to use such lands for other purposes

in addition to their primary conservation purpose is defined by state laws or, in some instances, constitutional provisions.

Other State Lands – Lands may be held by other bodies of state government for use for education, National Guard, public safety, transportation, or general services. These lands are often governed by separate laws or general property management provisions of state law.

Purpose of This Study

This study looks at how states have adopted or adapted decision making structures to support commercial-scale wind development on state-owned lands and waters.

State lands and waters can either be actively marketed for wind projects, made available for wind projects at the request of potential developers, or placed off limits to wind projects. Because it is aimed at state proprietary land use decisions, this study does not address the regulatory and siting requirements that apply to wind projects regardless of their location. These state and local siting provisions are analyzed in a separate study.¹

States should give specific attention to policies that will guide their decisions about the use of state-owned lands for wind facilities. Decisions will require consideration of compatible and incompatible resource uses. States must determine whether access should be granted and, if so, under what forms of agreement or conveyance.

¹ See generally, Environmental Law Institute, *State Enabling Legislation for Commercial-Scale Wind Power Siting and the Local Government Role* (2011)(discussion of state enabling laws and local ordinances for wind siting).

This research leads to at least two primary conclusions. First, an inventory of state-owned lands and waters will enable a state to determine whether and where wind facility siting makes sense in the context of potentially competing uses. Second, states should evaluate and revise their state lands planning and leasing regimes to address the particular needs of wind facilities. These include consideration of the length of lease terms, revenue formulas, monitoring and management requirements, and requirements for decommissioning.

II. STATE TRUST LANDS

Trust lands present the strongest opportunity for siting of commercial-scale wind facilities on terrestrial lands owned by states. This section examines current approaches to wind power on trust lands by states that have authorized or considered authorizing this use.

States in the western United States, upon admission to statehood, were granted certain former federal lands to support the construction and operation of schools and public facilities. These lands were not generally used as the site of the physical public improvements, but rather became the body of a “trust” intended to generate income to support the designated beneficiaries. Trust lands in western states are often intermingled with adjacent federally-owned and privately-owned lands, often in a “checkerboard” pattern. These states have departments or commissions whose duty it is to manage the lands, conduct leasing, and maximize income to the state, subject to other goals specified legislatively or in the state constitution. Typical economic uses of trust lands are grazing leases, mineral development leases, timber contracts, and in a few states, conservation leases.²

Trust lands can be leased for commercial-scale wind power generation if a state has developed laws and procedures for that purpose, or if it can adapt existing laws and procedures to support such proposals. A number of states have used their trust land laws and procedures to facilitate leasing for wind power facilities. In general they have (1) identified wind power as an allowable

² John A. Souder and Sally K. Fairfax, *State Trust Lands: History, Management and Sustainable Use* (1996).

use for state trust lands, (2) provided for phased programs of testing and leasing to enable wind power developers to determine the quality of the wind resource and feasibility of the project, (3) provided a formula or approach for determining the revenues due to the state, and (4) provided for a longer lease term to enable the use.

Arizona’s State Land Department has jurisdiction over the state’s trust lands. The Department must ensure that transactions “achieve the highest and best use of the land in order to maximize revenues to the Trust’s beneficiaries.”³ The Department has used its existing leasing authority to approve wind facility developments on state trust lands.⁴ Arizona state trust land can be leased in two ways: Long-term commercial leases of between 10 and 99 years can be offered via public auction.⁵ Short-term commercial leases lasting not more than ten years may be acquired without advertising or competition if an applicant directly files an application and the Department approves of doing so.⁶

The Arizona State Land Department takes the following factors into consideration when determining whether to approve a lease application: “the income potential to the Trust; proposed use; archeology; hydrology; geology; entitlements; impact to adjacent State Trust Lands; availability of utilities/ infrastructure; access; proximity to existing development; parcel size; and conformity with local jurisdiction regulations.” Leasing decisions must be

³ *Sales & Commercial Leasing Section-Real Estate Division*, Arizona State Land Department, available at <http://www.land.state.az.us/programs/realestate/sections/sales.htm> (last viewed Apr. 7, 2010).

⁴ Email from Amanda Ormond, Ormond Group, LLC (Mar.18, 2010, 09:31 EST) (on file with author).

⁵ ARIZ. REV. STAT. ANN. § 37-281.02.

⁶ ARIZ. REV. STAT. ANN. § 37-281.

approved by the Board of Appeals.⁷ The Arizona Game and Fish Department, Arizona State Museum, State Historic Preservation Office, Arizona Department of Agriculture, and the Forestry Division may review the application. At the expiration of the lease term the improvements revert to the state unless otherwise agreed.⁸

Arizona has one operating wind project on its state trust lands, and several more under review. The 30-turbine, 63 MW (megawatt) Dry Lake Wind Energy Project has been constructed on intermingled private, state, and federal lands in Navajo County. The total project covers 6,000 acres, but facilities physically occupy less than two percent of the acreage; the surrounding land is used for cattle grazing.⁹ Additional wind projects have been proposed for state trust lands. Dry Lake II, a proposed 65 MW project would be located on state and private lands.¹⁰ The proposed 500 MW Grapevine Canyon Wind Project, currently undergoing environmental review under the National Environmental Policy Act, would also be located on a combination of mixed ownership lands.¹¹

⁷ *Sales & Commercial Leasing Section-Real Estate Division, supra.*

⁸ *Application to Place Improvement Upon State Land: Information Sheet*, Arizona State Land Department, available at <http://www.land.state.az.us/programs/operations/pdfs/Application%20to%20Place%20Improvement.pdf> (last viewed Apr. 27, 2010).

⁹ Trudy Schuett, *Interior Secretary Salazar, Navajo County families dedicate Dry Lake Wind Farm*, ARIZONA RURAL HEADLINES EXAMINER (Oct. 13, 2009), available at <http://www.examiner.com/x-4805-Arizona-Rural-Headlines-Examiner-y2009m10d13-Interior-Secretary-Salazar-Navajo-County-families-dedicate-Dry-Lake-Wind-Farm>.

¹⁰ James Cartledge, *Power deal for Iberdrola's 65MW Dry Lake 2 wind farm*, Brighter Energy, Mar. 19, 2010, available at <http://www.brighterenergy.org/6507/news/wind/power-deal-for-iberdrolas-65mw-dry-lake-2-wind-farm/>.

¹¹ <http://www.wapa.gov/transmission/grapevine.htm>

The proposed 85-100 MW Big Boquillas Ranch Wind Project would be located on state trust lands and Navajo tribal lands.¹²

The **California** State Lands Commission has jurisdiction over the state's trust lands, managed for the benefit of the state teachers' retirement fund. In October 2008 the Commission issued a formal resolution that "supports the environmentally responsible development of school lands under the Commission's jurisdiction for renewable energy related projects."¹³ The Commission has broad authority to determine leasing terms and conditions, including determining where facilities may be sited; it has discretion to determine rental amounts, permit use classifications, insurance requirements, and whether competitive bidding will be used.¹⁴ California's Environmental Quality Act

¹² Alvin Trujillo, Executive Director of Navajo Division of Natural Resources, *Big Boquillas Wind Development Project* (PPT Jan. 19, 2009), available at

http://azcia.gov/Documents/PPT_ArvinTrujillo.ppt; Press Release, The Navajo Nation, Navajo President Joe Shirley, Jr., NTUA Manager Walter Haase, sign legislation, leases to move Big Boquillas Wind Project forward (Jan. 15, 2010) (on file with author).

¹³ Resolution by the California State Lands Commission Supporting the Environmentally Responsible Development of School Lands under the Commission's Jurisdiction for Renewable Energy Related Projects, California State Lands Commission (Oct. 16, 2008), available at

http://www.slc.ca.gov/Renewable_Energy/Documents/Resolution.pdf. Relevant findings include: "the Commission has a duty pursuant to State law to take all action necessary to fully develop school lands into a permanent and productive resource base; and ... much of the school lands are not currently producing revenue because they are isolated, landlocked parcels, the majority of which are desert lands; and ... the Commission believes that the State can increase its renewable energy output and fully develop school lands into a permanent and productive resource base if it supports the use of these lands for renewable energy projects."

¹⁴ Ca. Code Regs. tit. 2 § 2000.

requires environmental impact review of the project prior to leasing decisions. The Commission is considering an application to construct the 200 MW Tule Wind Project on intermingled state, federal, and tribally-owned property in McCain Valley in eastern San Diego County; only a small portion of the project would be on state lands. Lease terms for the project will likely take into account the appraised rental values of the property, plus royalty payments based on power generation.¹⁵

Colorado's State Board of Land

Commissioners manages three million acres of land and four million acres of state-owned mineral rights,¹⁶ including eight types of trust lands: school lands, lands for public buildings, penitentiary lands, University of Colorado trust lands, salt springs, internal improvements lands, Colorado State University lands, and the Fort Lewis School.¹⁷ School lands are over 91 percent of the state trust lands.¹⁸

The Board leases state trust lands for wind developments in two steps. The first “planning” lease agreement authorizes applicants to conduct studies for wind energy development, but prohibits lessees from producing any energy commercially. Within the term of the lease, however, permit holders are granted an exclusive right to negotiate a wind energy production lease

after giving the Board ninety days written notice. While the planning lease requires that Board members make a good faith effort to negotiate a wind production lease, obtaining a favorable response is not guaranteed.¹⁹

Planning lease agreements for the study of wind power are effective for two year terms.²⁰ Lessees who engage in wind energy development studies may construct meteorological towers on the property, subject to a required payment of twelve hundred dollars per tower.²¹ The Board and lessee may negotiate to extend the planning lease period for up to one additional year, and at that time the lessee may elect to reduce the size of the leased premises.²² All lessees are responsible for carrying property and liability insurance which must name the Board as well as the lessee.²³ Lease agreements give the Board the authority to inspect lessees' accounts or the property in question at any reasonable time.²⁴ All lessees are required to execute a bond at the time the lease is signed, guaranteeing that the premises will be restored or revegetated using native grasslands and such other conditions as the Board mandates.²⁵ State trust land lease agreements for wind energy development also stipulate that “[n]o more of the surface of the Premises shall be disturbed than is reasonably necessary for the purpose for which this lease is issued.”²⁶ The lease agreement also provides that the

¹⁵ Email from John Dye, Staff Counsel, Cal. Lands Commission (April 22, 2010).

¹⁶ Colorado State Land Board, *About the State Land Board*, available at <http://trustlands.state.co.us/NewsandMedia/Pages/AbouttheSLB.aspx> (last viewed Apr. 8, 2010).

¹⁷ *The 8 Trusts Managed by the Colorado State Board of Land Commissioners*, State Board of Land Commissioners, available at http://trustlands.state.co.us/NewsandMedia/Documents/eight_trusts_SLB.pdf (last viewed Apr. 14, 2010).

¹⁸ http://trustlands.state.co.us/NewsandMedia/Documents/General_070109a.pdf (last viewed Dec. 14, 2010).

¹⁹ State Board of Land Commissioners, *Wind Energy Planning Lease* § 3, available at <http://trustlands.state.co.us/Projects/Documents/WIND%20ENERGY%20PLANNING%20LEASE.pdf> (last viewed Apr. 15, 2010).

²⁰ *Wind Energy Planning Lease*, *supra* at § 4.

²¹ *Id.* at § 3(B).

²² *Id.* at § 5.

²³ *Id.* at § 8.

²⁴ *Id.* at § 16.

²⁵ *Id.* at § 9.

²⁶ *Id.* at § 11(A).

agreement does not preclude the Board from *simultaneously leasing the same land for other surface uses*, such as livestock grazing.²⁷ Lessees' responsibilities include eradicating noxious weeds from the premises, taking measures to protect the premises, removing waste and litter from the property, and refraining from tree cutting and sewage or hazardous waste disposal on the premises.²⁸

In addition to reviewing and responding to unsolicited lease applications for state trust lands, state law directs the Board to examine the property under its control "to identify land suitable and appropriate for development of renewable energy resources."²⁹

Currently, there are four wind energy production leases covering 11,820 acres and twenty-nine renewable energy planning leases covering 70,870 acres.³⁰ Among the active projects on state trust lands are the 33 MW Ponnequin Wind Farm³¹ and the 300 MW 274-turbine Cedar Creek Wind Farm, both in Weld County.³² The State Land Board has also leased acreage to the 200 MW, 267-turbine Peetz Table Wind Farm in Logan County.³³ The proposed 100-150

²⁷ *Id.* at § 11(B).

²⁸ *Id.* at §§ 11(C)-(E), (G), (K), (P), 22(A).

²⁹ COLO. REV. STAT. § 36-1-147.5(3)(a) (2007).

³⁰ Colorado State Land Board, Renewable Energy, available at

<http://trustlands.state.co.us/Projects/Pages/RenewableEnergy.aspx> (last visited Dec. 16, 2010).

³¹ *Ponnequin Wind Farm*, Xcel Energy (2009), available at

<http://www.xcelenergy.com/SiteCollectionDocuments/docs/ponnequin-wind-farm.pdf>.

³² *Cedar Creek Wind Farm, Colorado, USA*, PowerTechnology.com, available at

<http://www.power-technology.com/projects/cedarcreek/> (last viewed Apr. 26, 2010).

³³ *Peetz Table/Logan Wind Energy Centers*, NextEra Energy Resources, available at <http://www.nexteraenergyresources.com/content/wh>

MW Silver Mountain Wind Farm Project would, if approved, be in Huerfano County on 640 acres of state trust land and 6,700 acres of private land.³⁴ The proposed 300 MW Cedar Creek II in Weld County would, if approved, cover 27,000 acres (only three percent of which will be disturbed in constructing the facility).³⁵ Colorado State University (CSU) has proposed the CSU Green Power Project.³⁶ If constructed, this 200 MW wind farm would be located on the university's Maxwell Ranch property in Larimer County. CSU has signed a lease with Cannon Power Group of San Diego to develop the wind farm.³⁷

Idaho's State Board of Land

Commissioners is responsible for leasing state trust lands; the University of Idaho's regents govern the disposition of university lands. State trust lands are leased at a rate set by the Board, usually for a term of up to twenty years; for commercial purposes trust lands may be leased up to 49 years.³⁸ For purposes of trust land leases, wind energy is a defined "commercial purpose."³⁹ The Board may consider individual applications, or call for proposals and sealed bids. At its

<re/portfolio/pdf/peetztable.pdf> (last viewed Apr. 26, 2010); Email Pete Milonas (Apr. 23, 2010, 17:25 EST) (on file with author).

³⁴ *About Silver Mountain Wind Farm Project*, available at

<http://www.silvermountainwind.com/silver-wind-farm-project> (last viewed Apr. 8, 2010).

³⁵ Traffic Impact Study: Cedar Creek II Wind Farm (Jan. 20, 2010), available at

<http://www.co.weld.co.us/departments/assets/bA5CC6d07Daa2c315916.pdf>.

³⁶ *CSU Green Power Project*, Colorado State University, available at

<http://www.green.colostate.edu/pdfs-gpp/project-overview.pdf> (last viewed July 6, 2010).

³⁷ *Update on Maxwell Ranch*, Colorado State University (June 15, 2010), available at

<http://www.green.colostate.edu/green-power-project-update-061510.aspx>.

³⁸ Idaho Code Ann. § 58-304.

³⁹ Idaho Code Ann. § 58-307(1), (4), (5).

discretion the Board may call for lease applications by public advertisement and, if more than one person files, conduct an auction. The Board awards the lease to the bidder whose proposal achieves the highest return over the course of the lease and which is capable of meeting all terms and conditions. In all cases, the Board must obtain a reasonable rental, based on “fair market value of the state land, throughout the duration of the lease.”⁴⁰

Montana’s Department of Natural Resources and Conservation’s Trust Land Management Division is primarily responsible for state trust lands. Under existing procedures, commercial opportunities for use of school trust lands are identified in compliance with the local community’s comprehensive growth plan. Alternatively, the Department or a project proponent may unilaterally identify potential project locations and then seek the proper planning and zoning permits, if any, from local government authorities.⁴¹

Prior to moving forward with a commercial-scale wind facility, developers may obtain a land use license to place an anemometer on state land to study the suitability of the site. Like a wind lease, the DNRC issues this license, but unlike a wind lease, the license does not involve public bidding.⁴²

Once an appropriate site for a wind energy development has been identified, the Montana DNRC releases a public request for

proposals seeking private wind power developers to come forward with project proposals.⁴³ The State Board of Land Commissioners scores all responses and the lease is offered to the company with the highest score.⁴⁴ Decisions to proceed with a project are subject to Montana’s Environmental Policy Act, which requires an environmental impact assessment.⁴⁵ The DNRC and State Board of Land Commissioners are authorized to enter into lease agreements “upon terms and conditions that the board may reasonably determine to be in the best interests of the beneficiary.”⁴⁶ Trust lands may be leased for a term up to 99 years for commercial purposes.⁴⁷

The Judith Gap Wind Farm, which became operational in 2006, was Montana’s first wind farm. The 135 MW wind energy facility consists of 90 turbines located on a combination of state school trust lands (13 turbines) and private land (77 turbines).⁴⁸ Horizon Wind Energy proposed another wind farm on school trust land near Martinsdale in central Montana, and the leasing decision was approved in 2009.⁴⁹ The state approved construction of up to 15 wind turbines as part of a proposed 58 megawatt project that also includes adjacent

⁴⁰ Idaho Code Ann. § 58-307(11).

⁴¹ *Commercial Leasing*, Trust Land Management Division, Department of Natural Resources and Conservation, available at <http://dnrc.mt.gov/trust/REMB/leases.asp> (last viewed Sept. 10, 2010).

⁴² *Wind Energy Development on School Trust Lands: Getting Started*, Department of Natural Resources and Conservation, available at http://dnrc.mt.gov/trust/wind/getting_started.asp (last viewed Sept. 10, 2010).

⁴³ *Wind Energy Development on School Trust Lands: Getting Started*, *supra*.

⁴⁴ *Commercial Leasing*, *supra*; MONT. CODE ANN. § 77-1-904(1). See MONT. CODE ANN. § 77-1-903.

⁴⁵ MONT. CODE ANN. §§ 75-1-101 to 75-1-220.

⁴⁶ MONT. CODE ANN. § 77-1-904(2).

⁴⁷ *Commercial Leasing*, *supra*; MONT. CODE ANN. § 77-1-904(1).

⁴⁸ *Wind Energy Development on School Trust Lands*, Department of Natural Resources and Conservation, available at <http://dnrc.mt.gov/trust/wind/default.asp> (last viewed July 30, 2010).

⁴⁹ *Martinsdale Wind Power Project*, Montana Department of Natural Resources and Conservation, available at <http://dnrc.mt.gov/trust/wind/martinsdale.asp> (last viewed July 30, 2010).

private lands.⁵⁰ The Coyote Wind Project will be located near Springdale, Montana.⁵¹ It is the third major wind farm to be approved for construction on state land in Montana. When completed, the facility will utilize 36 turbines generating 64.8 megawatts of electricity on private land, and 8 turbines generating 14.4 megawatts of electricity on state school trust land.⁵² Montana has issued requests for proposals for the construction of wind farms on other state-owned properties. Three requests for proposal involved school trust lands in Toole and Glacier counties, as well as a request for the second phase of the Martinsdale Wind Power Project described above on 19,462 acres of school trust land.⁵³

Nebraska's Board of Educational Lands and Funds is responsible for the management and control of all school, university, agricultural college, and state college lands.⁵⁴ The Board has the authority to lease these lands at auction for fair market value.⁵⁵ The Board of Educational Lands and Funds is authorized by the state legislature to lease "any school or public land belonging to the state and under its control" for the purpose of exploring and

⁵⁰ Associated Press, *State OKs wind turbines near Martinsdale*, BILLINGS GAZETTE, May 3, 2010, available at http://www.billingsgazette.com/news/state-and-regional/montana/article_fa93c365-1a4d-57ef-98f6-326b5b353023.html.

⁵¹ *Coyote Wind Farm*, Montana Department of Natural Resources and Conservation, available at <http://dnrc.mt.gov/trust/wind/Coyote.asp> (last viewed Aug. 2, 2010).

⁵² Associated Press, *Montana Land Board Approves Wind Project*, ABC News, Jan. 19, 2010, available at <http://abcnews.go.com/Business/wireStory?id=9605748>.

⁵³ Karl Puckett, *DNRC to consider new wind farm leases*, GREAT FALLS TRIBUNE, Apr. 22, 2010.

⁵⁴ Neb. Rev. Stat. § 72-201(1).

⁵⁵ *Id.*; Neb. Rev. Stat. §§ 72-205, 72-233.

developing wind energy opportunities.⁵⁶ Wind energy leases may not exceed 40 years.⁵⁷ However, all wind agreements terminate after 10 years if the lessee fails to commence construction of a wind energy conversion system during that time.⁵⁸ Sixteen thousand acres of land managed by the Board of Educational Lands and Funds are subject to wind development agreements.⁵⁹

New Mexico's State Land Office leases state trust lands for wind energy development under the State Land Office's commercial lease program. The leases run for 35 years and provide for an annual rental payment for the occupied lands. Through mid-2010, the state had leased (or granted lease options) for six projects on 115,720 acres of trust lands for wind development.⁶⁰ For example, the Caprock Wind Ranch pays the state \$32,000 annually for lease of 1,840 state trust acres; of the 80 turbines constituting this project, only 8 are on state trust lands.

Oklahoma's Constitution gives the Commissioners of the Land Office the authority to sell, rent, dispose of, and manage school lands and other public lands.⁶¹ A company must first propose lands

⁵⁶ *Id.* at § 72-272.

⁵⁷ *Id.* See email from Richard Edacott, Executive Director, Nebraska Board of Educational Lands and Funds (Aug. 24, 2010, 15:56 EST) (on file with author). In 2010, the legislature enacted authority expressly empowering the Board to enter into long-term lease agreements. This legislation is important because wind development companies are unlikely to secure funding without long-term lease opportunities. *Id.*

⁵⁸ Neb. Rev. Stat. § 76-3002.

⁵⁹ Edacott, *supra*.

⁶⁰

<http://www.nmstatelands.org/default.aspx?PageID=65>

⁶¹ Okla. Admin. Code § 385:25-1-3; The Commissioners of the Land Office, available at

for a wind development. The Commissioners then study the properties to ensure they are suitable for wind development (*i.e.*, that the properties do not contain valuable oil and gas or environmentally sensitive areas). If the results of this investigation are satisfactory, a negotiation on the lease contract terms is initiated. The Commissioners must then put the proposed lease out for public bid.⁶² The public procedure for school land surface leases requires the Commissioners to provide notice to prospective lessees containing a general legal description of land, directions to property, minimum annual bid requirements, minimum cash deposit requirements, and the term of the lease.⁶³ The Commissioners retain the right to refuse any bid at auction.⁶⁴ Under the terms of the contract, the lessee may assign rights under the lease with the Commissioners' approval, but subleasing may only occur under limited circumstances.⁶⁵ Commercial leases may not exceed 55 years; however, most are capped at 40 years.⁶⁶ The Commissioners have leased approximately 8,000 acres for wind farms and are currently working on leases for an additional 10,000 acres of land for proposed projects. With the exception of one wind farm, all are expected to begin construction in 2011.⁶⁷

South Dakota's Commissioner of School and Public Lands manages trust lands for the

<http://www.clo.state.ok.us/> (last viewed Aug. 24, 2010).

⁶² Email from Keith Kuhlman, Director, Real Estate Management, Commissioners of the Land Office (Aug. 24, 2010, 17:35 EST) (on file with author).

⁶³ Okla. Admin. Code § 385:25-1-23(1).

⁶⁴ *Id.* at §§ 385:25-1-23(4), 385:25-1-34(b)(3).

⁶⁵ *Id.* at §§ 385:25-1-30, 385:25-1-31.

⁶⁶ *Id.* at § 385:25-1-32; Okla. Stat. tit. § 64-101; Email from Keith Kuhlman, *supra*.

⁶⁷ Email from Keith Kuhlman, Director, Real Estate Management, Commissioners of the Land Office (Aug. 25, 2010, 10:11 EST) (on file with author).

state. The Commissioner has authority to sell or lease such lands and may solicit or accept proposals for commercial leases, but is not required to do so. In addition to grazing and agricultural leases and mineral leases, the law provides for leases for "commercial or forestry purposes" so long as they are "consistent with the stewardship of the schools and public lands."⁶⁸ Bids for commercial leases may be accepted at public auction, as long as the amount is above the "minimum rental rate." Prospective bidders must provide a development plan and financial statement, and state decisions must consider the fees offered as well as the potential lessee's management experience and financial capacity. Commercial leases of trust lands for any purpose may not exceed 99 years.⁶⁹ The Office of School and Public Lands has granted a number of options to wind developers, but no active commercial wind projects are yet constructed and operating on these lands.

Texas has authority to lease state trust lands for numerous purposes, including wind projects. The General Land Office (GLO) can lease state Public School Fund lands and the University of Texas system can lease Permanent University Fund lands. However, nearly all onshore wind projects in Texas to date have been developed on private lands. In the mid-1990s, the GLO leased trust land for the Texas Wind Power Project, which is located on a combination of private land and state PSF land in Culberson County. The GLO leased the land under a 25-year lease to the Lower Colorado River Authority, which pays a royalty based on electricity production. The 35 MW project began operations in 1995 and has generated \$880,000 in royalties for the

⁶⁸ S.D. Codified Laws §§ 5-1-7, 5-1-7.2.

⁶⁹ S.D. Codified Laws § 5-1-7; S.D. Admin. R. 4:01:07:02-07.

fund.⁷⁰ In general, there are no formal applications or permitting requirements for commercial-scale wind projects located on PSF lands.⁷¹ Parties interested in leasing PSF land for the purpose of installing a wind farm must contact the Renewable Energy Division of GLO. The Division will proceed by confirming that the land in question is PSF land to which GLO has surface rights, and that there are no other existing leases that conflict with the proposed use. Once GLO verifies that it may properly lease the land in question, it may do so under appropriate terms and conditions.⁷²

Utah's School and Institutional Trust Lands Administration (SITLA) manages 3.5 million acres of state trust land for the support of public schools and other beneficiary institutions.⁷³ SITLA does not distinguish wind leases from other types of surface leases.⁷⁴ Wind leases are categorized broadly as "special use leases," which include all surface leases other than those designated for grazing.⁷⁵ When an applicant applies to SITLA for a surface lease, the agency publishes notice of the application, and then negotiates lease terms with both the original applicant and any competing applicants.⁷⁶ Competing proposals are evaluated for income potential, timetable for

development, likelihood of satisfactory performance, and desirability of proposed use.⁷⁷ All lease applications are submitted for review to the state Resource Development Coordinating Committee, which is an informational clearinghouse.⁷⁸ Alternatively, SITLA may issue a request for proposals for any lands on which the director has determined that development potential exists. Proposals are evaluated with the same criteria as are bids.⁷⁹

SITLA may issue special use leases for surface uses of trust lands for a term of up to 51 years.⁸⁰ Under special circumstances, the agency may issue leases for a term of up to 99 years.⁸¹ Special use lease agreements define the rights of the lessee and lessor, annual rentals and percentage rents, technical and financial reporting requirements, notification procedures, conditions of lease forfeiture, and state protection from liability associated with the lessee's actions on leased premise.⁸² SITLA first issued a lease for the development of wind resources on school trust lands in 2009.⁸³ First Wind Energy, the lessee, is expected to place eleven 2.5 MW wind turbines on this property.⁸⁴ The development will be part of the much larger Milford Wind Project, which is expected to produce a total of 200 megawatts of electricity using 159 turbines.⁸⁵

⁷⁰ <http://www.glo.state.tx.us/sustain/windpower.html>

(last visited Dec. 16, 2010).

⁷¹ Email from Adan Martinez, Legal Services Division, Energy Section, Texas General Land Office (May 7, 2010, 12:58 EST) (on file with author).

⁷² *Id.*

⁷³ Email from John W. Andrews, Associate Director/Chief Legal Counsel, Utah School and Institutional Trust Lands Administration (Aug. 27, 2010, 14:26 EST) (on file with author).

⁷⁴ *Id.* See Utah Code Ann. § 53C-4-201.

⁷⁵ Email from John W. Andrews, Associate Director/Chief Legal Counsel, Utah School and Institutional Trust Lands Administration (Aug. 27, 2010, 14:26 EST) (on file with author).

⁷⁶ Email from John W. Andrews, *supra*; Utah Admin. Code r. 850-30-500(2).

⁷⁷ Utah Admin. Code r. 850-30-510(1)(a)(iv).

⁷⁸ Email from John W. Andrews, *supra*; Utah Admin. Code r. 850-30-150.

⁷⁹ Utah Admin. Code r. 850-30-310.

⁸⁰ *Id.* at 850-30-200(1).

⁸¹ *Id.* at 850-30-200(2).

⁸² *Id.* at 850-30-600.

⁸³ *SITLA issues first wind power lease*, State of Utah School and Institutional Trust Lands Administration, Feb. 10, 2009, available at http://www.utahtrustlands.com/news/docs/2009_02_10-News_Release-FirstWind.pdf.

⁸⁴ *Id.*

⁸⁵ *Id.*; Amy Joi O'Donoghue, *School Trust Land leased for wind project*, DESERET NEWS, Feb. 11,

Washington's Department of Natural Resources manages 1 million acres of state trust lands, leasing them for a variety of purposes which may include wind power. This is in addition to several million acres of submerged lands also potentially available for lease. The DNR has not adopted special procedures for its wind power leases; its adopted procedures address mining, oil and gas leasing, communication site leasing, and agricultural and grazing leases.⁸⁶ Nevertheless, PSE's Wild Horse Wind and Solar Project is located partly on leased state trust lands in Kittitas County.⁸⁷

Wyoming's Board of Land Commissioners within the Office of State Lands and Investments has the authority to manage, lease, and dispose of all state trust lands.⁸⁸ The Board may lease state land for wind energy development, which is considered an "unseverable interest in the surface estate."⁸⁹ Applications to lease state lands for wind energy development must include a description of the proposed location and estimated value of the improvements to be constructed on the leased premises.⁹⁰ Applicants must demonstrate that all proposed leases comply with any applicable

2009, available at <http://www.istockanalyst.com/article/view/StockNews/articleid/3029444>.

⁸⁶

<http://www.dnr.wa.gov/BusinessPermits/Leasing/Pages/Home.aspx>

⁸⁷

<http://washingtondnr.wordpress.com/2010/03/15/wind-power-projects-on-state-trust-land-are-creating-clean-energy/> (last visited Dec. 16, 2010).

⁸⁸ Wyo. Stat. Ann. § 36-2-107(a); *Board of Land Commissioners*, Wyoming Office of State Lands and Investments, available at <http://slf-web.state.wy.us/admin/boards.aspx> (last viewed Sept. 1, 2010).

⁸⁹ Wyo. Rules and Regulations, ch. 6 § 3(a).

⁹⁰ *Id.* at § 6(a).

planning and zoning laws.⁹¹ In the event that two or more applications are filed to lease the same parcel of land for wind development, the Office of State Lands and Investments may decide to issue a Request for Proposals "to solicit competitive wind energy lease offers."⁹²

The Board may issue wind leases for terms up to 75 years, so long as the specified period does not exceed the anticipated economic life of the lessee's proposed improvements.⁹³ Additional lease terms prohibit lessees from assigning or subleasing their rights under a wind energy lease without first obtaining approval from the Board (in the case of assignments) or the Director of the Office of State Lands and Investments (with regard to subleases).⁹⁴

The Office must also approve any "improvements" that will be constructed on the leased premises. These decisions are based upon whether the lessee is in compliance with the applicable wind energy lease, whether the proposed improvements are necessary for wind energy conversion to electricity, and whether impacts to state lands will be minimized.⁹⁵

Wyoming has 23 wind lease agreements on about 47,000 acres of state land. Five of those have operational wind farms.⁹⁶ One of these existing facilities is the Wyoming Wind Energy Center, located in Uinta

⁹¹ *Id.* at § 6(f).

⁹² *Id.* at § 6(d).

⁹³ *Id.* at § 5(a)-(b).

⁹⁴ *Id.* at §§ 8(a), 9(a).

⁹⁵ *Id.* at § 10(a)-(b).

⁹⁶ Matt Joyce, *States proposed wind rules for trust land*, TRIB.COM, Feb. 28, 2010, available at http://trib.com/news/state-and-regional/article_43cea5e6-e10f-5fe8-8bb5-825e93780f60.html

County on both private and state lands.⁹⁷ There are 80 wind turbines at this facility, rated at a total of 144 MW.⁹⁸ Additional commercial-scale wind developments are proposed for state lands. Duke Energy has proposed the construction of a two hundred megawatt wind project near Glenrock in Converse County.⁹⁹ A second wind facility has also been proposed near Glenrock. If constructed as planned in 2011, the 66-turbine 100 MW Pioneer Wind Park would be located on both private and state trust lands.¹⁰⁰

Wyoming also recently leased 1,280 acres of state land for a facility in Campbell County called the Third Planet Windpower Project. This project, if built, will be located on a combination of state and private lands, and will contain 133 wind turbines.¹⁰¹ Another project, the Clipper Project, is a proposed wind farm in Converse County. If constructed, its 800 turbines will generate 2,000 megawatts of electricity. State lands constitute 7,614 acres of the project and will

⁹⁷ Erin Buller, *Capturing the Wind*, UINTA COUNTY HERALD, July 11, 2008, available at http://www.uintacountyherald.com/V2_news_articles.php?heading=0&page=72&story_id=1299.

⁹⁸ *Id.*; Wyoming Wind Energy Center, NextEra Energy, available at <http://www.nexteraenergyresources.com/content/where/portfolio/pdf/wyoming.pdf> (last visited Aug. 5, 2010).

⁹⁹ *Duke Energy planning wind farm near Glenrock*, BILLINGS GAZETTE NEWS SERVICE, July 21, 2009, available at http://billingsgazette.com/news/state-and-regional/wyoming/article_1dd517e0-7619-11de-a724-001cc4c002e0.html.

¹⁰⁰ Justin Pittman, *Wasatch agrees to power purchase agreement with RMP*, GLENROCK INDEPENDENT, July 15, 2010, available at <http://www.glenrockind.com/atf.php?sid=3324>.

¹⁰¹ *Company plans Wyoming wind farm*, BILLINGS GAZETTE NEWS SERVICE, June 22, 2009, available at <http://www.wind-watch.org/news/2009/06/22/company-plans-wyoming-wind-farm/>.

house 51 of the turbines.¹⁰² Lastly, Wasatch Wind proposed to construct the 109 MW Black Mountain Wind Park in Natrona County. The project, primarily planned for federal lands, will include 40 acres of state-owned land.¹⁰³

Other states in the western U.S. have trust land programs that might house wind projects. North Dakota administers trust lands, but to date all wind energy projects have been sited on private lands in the state.

State trust land programs can play an important role in the development of wind projects in the American West. This role can be enhanced and improved if state trust land departments *explicitly designate wind as an authorized use for these lands*. Because of the testing and wind surveys needed to determine the feasibility of commercial-scale wind on particular parcels, state trust land programs typically should provide for a phased approach to leasing or offering such lands for lease. In addition, the programs need to provide leases that are long enough to support construction, operation, and decommissioning of wind facilities. These activities are likely to require longer leases than typically required by such traditional trust land surface leases as those for agriculture, grazing, or logging.

¹⁰² Joan Barron, *Firm eyes big Converse wind farm*, CASPER STAR-TRIBUNE, Apr. 11, 2009, available at <http://www.wind-watch.org/news/2009/04/11/firm-eyes-big-converse-wind-farm/>.

¹⁰³ Tom Morton, *Firm plans wind farm*, CASPER STAR-TRIBUNE, Mar. 2, 2010, available at http://trib.com/news/local/article_d718991c-03c0-5884-926c-f09e0d7db464.html.

III. STATE SUBMERGED LANDS

States have an extraordinary amount of control over whether commercial wind facilities will be sited in their navigable waters. Under U.S. law, the states are the owners of the submerged lands under their navigable waters. The original states own their submerged lands as an attribute of sovereignty, as successors to the interests of the English crown.¹⁰⁴ Successive states admitted to the Union were held to have the same rights under the equal footing doctrine, a constitutional doctrine ensuring that newer states are admitted with the same rights and responsibilities as the original states.¹⁰⁵ The federal Submerged Lands Act further makes it clear that coastal states also own the submerged lands out to three miles offshore in the ocean and three marine leagues in the Gulf of Mexico.¹⁰⁶

The states do not have complete latitude in managing or conveying these submerged lands. Submerged lands are subject to the judicially-defined “public trust doctrine,” which requires that they be managed for a long-term public benefit. The Supreme Court more than a century ago held that the ownership of these submerged lands is “different in character from that which the State holds in lands intended for sale... It is a title held in trust for the people of the State that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein freed from the obstruction or interference of private

¹⁰⁴ *Martin v. Waddell’s Lessee*, 41 U.S. (16 Pet.) 367 (1842).

¹⁰⁵ *Pollard v. Hagan*, 44 U.S. (3 How.) 212 (1845).

¹⁰⁶ 43 U.S.C. §§ 1301-1315. The larger area in the Gulf is based on the terms by which those states were acquired from the foreign governments that previously held their lands.

parties.” While allowing leases and improvements for public purposes and public benefits, such property “cannot be placed entirely beyond the direction and control of the State.”¹⁰⁷ Thus, states cannot sell these submerged lands. However, under the public trust doctrine, states may decide to lease such lands for wind power if they determine it benefits the public to do so, subject to appropriate regulations.

Submerged lands will be particularly important for siting wind facilities in the Great Lakes (where state title extends to the middle of each lake), in larger estuaries such as the Chesapeake Bay and Puget Sound where the states own the entire bottom, and in the Gulf of Mexico where the expanded state submerged land zone offers greater potential for siting of turbines than the three-mile limit applicable to the other seaboard coastal states.

Some states have developed explicit procedures and programs for the lease of submerged lands for wind power. Absent such procedures, most states will need to adapt pre-existing provisions originally designed for other purposes. Existing leasing and permitting provisions are typically aimed at authorizing uses of near-shore state submerged lands by marinas, piers, or docks, by commercial oyster beds, or by pipelines and cables. Some state laws and regulations contain explicit preferences or restrictions that authorize leasing of submerged lands only to riparian or littoral owners of the adjacent uplands. Others contain provisions that presuppose only very limited areas of occupation, or that set nominal rental rates based on assumptions about the uses (such as fishing docks). Such limiting provisions will need to be changed

¹⁰⁷ *Illinois Central Railroad Co. v. Illinois*, 146 U.S. 387 (1892).

if wind facilities are to be encouraged as a desired use of the state's submerged lands.

Maine has developed an explicit framework to support leasing its submerged lands for wind energy. Maine's Ocean Energy Task Force was established in late 2008 to, among other things, "identify potential economic, technical, regulatory, and other obstacles to development of grid-scale offshore wind resources in Maine and federal coastal waters" and to make recommendations needed to "overcome any state laws or policies that might serve as obstacles to vigorous and expeditious environmentally responsible development" of wind facilities in these waters.¹⁰⁸

Under Maine's public trust doctrine, the state is responsible for ensuring that submerged state lands are protected for public navigation, fishing, marine habitats, and other natural uses. The state can authorize "government-supervised, private

¹⁰⁸ Maine Executive Order 20 FY 08/09 (November 7, 2008) established Maine's Ocean Energy Task Force. The primary mission of the Task Force was to recommend strategies to: "Meet or exceed the goals established in the Maine Wind Energy Act, Title 35-A, section 3404(2)(B), to install at least 2,000 megawatts of wind capacity by 2015 and at least 3,000 megawatts by 2020, 300 of which could be located in coastal waters." The Task Force was also directed to "identify potential economic, technical, regulatory, and other obstacles to development of grid-scale offshore wind resources in Maine and federal coastal waters, and recommend solutions to overcome those obstacles; promote research and testing to facilitate siting of offshore wind energy facilities; foster in-state growth of diverse wind and other alternative energy related businesses; encourage ocean-based tidal and wave energy development where appropriate; and "Overcome any state laws or policies that might serve as obstacles to vigorous and expeditious environmentally responsible development of grid-scale wind and tidal energy generation facilities in Maine's coastal waters and adjoining federal waters in a manner that generates significant benefits for Maine people." *Id.*

utilization of these resources for the public good and in a manner that provides fair compensation to the public."¹⁰⁹ The process for approving non-aquaculture projects on state submerged lands requires review by both the Department of Conservation (DOC) and the Department of Environmental Protection (DEP). Leasing decisions by DOC "must consider public trust-related uses and resources of the areas affected" while also setting "fair compensation for the private use of public resources."¹¹⁰ Projects, such as wind energy developments, that require regulatory permits are also reviewed by the Maine DEP, whose environmental findings and conclusions are relied upon by the DOC.¹¹¹

Legislation enacted in 2009 based on recommendations of the Maine Ocean Energy Task Force streamlines the state Department of Conservation's decision-making role in order to initiate offshore trial wind projects more efficiently.¹¹² A further law enacted in April 2010 establishes rental

¹⁰⁹ Jeff Pidot, *An Independent Study of Submerged Lands Leasing and Regulatory Issues Affecting Wind Power Development in Maine's Coastal Waters*, Prepared for the Maine State Planning Office 6 (2009), *avail. at* http://www.maine.gov/spo/specialprojects/OETF/Documents/Pidot_windpower_report_final.pdf. The publicly-owned submerged lands are defined by state law as "All land from the mean low-water mark or a maximum of 1,650 feet seaward of the mean high water mark...out to the seaward boundary of territorial waters...", "All land below the mean low-water mark of tidal rivers upstream to the farthest natural reaches of the tides," "All land below the natural mean low-water mark of ponds...", and "The river bed of international boundary rivers." *Submerged Lands*, Maine Bureau of Parks & Lands, *available at* <http://www.maine.gov/doc/parks/programs/sublands/index.html> (last viewed Apr. 27, 2010); Me. Rev. Stat. Ann. tit. 12, § 1801(9).

¹¹⁰ ME. REV. STAT. ANN. tit. 12, § 1861 *et seq.*; Jeff Pidot, at 5, 7-8.

¹¹¹ Jeff Pidot, at 7.

¹¹² P.L. 2009 c.270, sec. B-1.

fees for wind *demonstration* projects in state waters, and directs the Department of Conservation to “establish a lease rental formula for use of public submerged lands for *commercial scale* offshore energy projects by 2011.”¹¹³ Eighty percent of the rental payments, plus any funds received from the federal government for offshore alternative energy leasing activities, are designated to a newly established Renewable Ocean Energy Trust. The Trust funds are to be used by the state in equal amounts for two purposes:

- Research and monitoring and other efforts to avoid, minimize and compensate for potential adverse effects of renewable ocean energy projects on *noncommercial and other wildlife and natural resources*, and
- Resource enhancement and research programs to deal with such adverse effects on *commercial fishing and related activities*.¹¹⁴

Commercial wind leases of offshore state submerged lands are authorized for a term of up to 30 years. The DOC may issue lease options or leases of two to five years in advance of a commercial lease to support permitting, testing, and pre-operation construction as needed.¹¹⁵ State law bars Maine municipalities from enacting or enforcing ordinances that would prohibit siting of renewable ocean energy projects,

¹¹³ Email from Dan Prichard, Submerged Lands Program, Maine’s Bureau of Parks and Lands (May 3, 2010, 14:55 EST) (on file with author); *An Act to Implement the Recommendations of the Governor’s Ocean Energy Task Force*, P.L. ch. 615, LD 1810 (enacted April 7, 2010). Both the 2009 and 2010 laws address other forms of ocean renewable energy, including tidal and wave energy projects.

¹¹⁴ ME. REV. STAT. ANN. tit. 12, § 1863-A, as added in 2010.

¹¹⁵ ME. REV. STAT. ANN. tit. 12, § 1862(13), as added in 2010.

including their associated facilities.¹¹⁶ The new state laws establish goals, including installation of at least 300 MW of wind generation capacity by 2020 and at least 5,000 MW by 2030, in Maine coastal waters or “proximate federal waters.”¹¹⁷

The **Texas** General Land Office’s administration of the state’s school fund trust lands includes the state’s submerged lands extending three marine leagues (10.3 statute miles) from the coast line into the Gulf of Mexico.¹¹⁸ In Texas there are no formal applications or permit requirements. The process begins with an expression of interest, a determination by the GLO’s Renewable Energy Division that the submerged land is leasable, and then a competitive or negotiated lease.¹¹⁹ The GLO has conducted competitive bidding for offshore wind sites. The leases provide for a rental and then for a royalty based on energy production.¹²⁰ Texas has awarded leases to several companies for offshore wind development on state submerged lands in the Gulf, and as of 2010 had signed eight such leases.¹²¹ The state executed its first lease

¹¹⁶ ME. REV. STAT. ANN. tit. 30-A § 4361(2), as added in 2010.

¹¹⁷ ME. REV. STAT. ANN. tit. 35-A § 3404(2), as amended in 2010.

¹¹⁸ Tex. [Nat. Res.] Code Ann. § 33.001 et seq., § 51.001 et seq.

¹¹⁹ Tex. [Nat. Res.] Code Ann. §51.123.

¹²⁰ Tex. [Nat. Res.] Code Ann. §51.124. Competitive award for offshore wind sites, *see*

http://www.glo.texas.gov/glo_news/hot_topics/article/offshore-wind-energy.html;

<http://www.baryonyxcorp.com/news/PR002-16-07-2009-Baryonyx-Corp.pdf>

¹²¹ E.g., *Mustang Project*, Baryonyx Corporation, available at

http://www.baryonyxcorp.com/mustang_project.html

; *Rio Grand Project*, Baryonyx Corporation, available at

http://www.baryonyxcorp.com/rio_grande_project.html

[ml](#). Five leases are held by Coastal Point Energy LLC, formerly Wind Energy Systems Technology LLC.

agreement in 2005 for a wind research facility on submerged lands preliminary to a commercial wind project.¹²² Texas has been able to move forward with lease of its offshore submerged lands for commercial wind because its existing leasing programs for offshore oil and gas development provide a close analogy to development and occupation of these lands for commercial wind facilities.

Michigan is examining the potential for granting access to its submerged lands in the Great Lakes for commercial-scale wind facilities. Access to these public trust lands is regulated by the Michigan Department of Environmental Quality under a 1994 law.¹²³ This law provides for permits, but also authorizes the DEQ to grant long term uses of submerged lands by lease or use agreement. This long term lease authority has previously been used for marinas, ferry operations, boat yards, and bulk loading docks. The lease rate is determined by the DEQ and must compensate the state for the occupation of these lands.¹²⁴

However, the existing law allows leasing of Michigan's Great Lakes submerged lands only to riparian owners (shoreline owners), a requirement that the state's Great Lakes Wind Council has determined is "unsuitable for offshore wind" because wind projects will usually occur at a greater distance from the shoreline than these traditional uses and will usually involve a different type of user.¹²⁵ The Council has recommended amendment of the law to provide for non-riparian leases, as well as enactment of a

separate comprehensive law that would address the identification of potential lease areas, provide for conducting site assessments, specify application requirements, require operating and decommissioning plans, and define methods and amounts of compensation to the state (via rentals and royalties), among other topics.¹²⁶ The Council has recommended a rental rate of \$3 per acre per year plus "annual royalty payments in an amount determined by the Michigan Public Service Commission...[but not] less than 3 percent of the gross revenue of the project each year." The Council notes that in the interests of fostering wind development, "the Michigan Public Service Commission may want to retain the flexibility to waive royalties for early projects in order to encourage development, as necessary." It further recommended establishment of a Great Lakes Wind Energy Trust Fund that would be funded, at least in part, by royalty payments.¹²⁷ Legislation was introduced in November 2010 to facilitate offshore wind development.¹²⁸

Like other states, **Ohio** has authority under state law to grant use of its submerged lands in Lake Erie for purposes consistent with its public trust obligations. In January 2011, outgoing Governor Ted Strickland signed a lease option with an offshore wind developer to support wind turbines in the Lake on a 5707-acre parcel; the agreement calls for testing and environmental studies, annual payments of \$45,000 per year for two years, and the opportunity to seek a long

¹²² Wind Power Lease for Research, Analysis, and Potential Production of Wind-Generated Electricity, WL-000002, Agreement between State of Texas and Galveston-Offshore Wind, L.L.C. (Sept. 19, 2005).

¹²³ Mich. Cons. L. §§ 324.32501-324.32516.

¹²⁴ Report of the Michigan Great Lakes Wind Council (Sept. 1, 2009), at 19-20.

¹²⁵ Id., citing Mich. Cons. L. § 324.32504.

¹²⁶ Report of the Michigan Great Lakes Wind Council (Sept. 1, 2009), at 32.

¹²⁷ Report of the Michigan Great Lakes Wind Council (Oct. 1, 2010), at 25.

¹²⁸ Mich. H.B. 6567, H.B. 6564, S.B. 1591 (2010)

term lease to develop the project if interim conditions are met.¹²⁹

California has not yet been faced with a proposal for offshore wind. Its State Lands Commission has authority to permit use of California's submerged lands, and to evaluate whether an offshore wind facility or other submerged land proposal would meet the state's public trust doctrine -- meaning that it must bear some connection to commerce, navigation, fisheries, recreation, open space, or "changed public need."¹³⁰

The regulations provide that leases or permits for tidal or submerged lands "shall generally only be issued to riparian or littoral upland owners or use right holder" but further provide that "such leases or permits may be granted to the best qualified applicant irrespective of riparian or littoral status."¹³¹ The length of the lease term is not specified but shall be "no longer than necessary to accomplish the intended use or purpose."¹³² California's Environmental Quality Act will require environmental impact review of a proposed project.¹³³

Although it is likely that an offshore commercial-scale wind project could meet the public trust requirements, the Commission would deny a lease application if it believed that "the project would interfere with other public trust uses."¹³⁴

Many other states are considering the use of state submerged lands for wind facilities, but most have not systematically addressed the

¹²⁹ J. Funk, "In last official act, Gov. Ted Strickland eases way for Lake Erie wind turbines," *Cleveland Plain Dealer* (Jan. 7, 2011).

¹³⁰ Cal. Pub. Res. Code § 6301; Cal. Code Regs. tit. 2, § 2000.

¹³¹ Cal. Code Regs. tit. 2, § 2000(c).

¹³² Cal. Code Regs. tit. 2, § 2004.

¹³³ California Public Resources Code § 21000 et seq.

¹³⁴ Email from Mario DeBernardo, Legislative Liaison, California State Lands Commission (April 26, 2010).

need to adapt existing leasing and permitting regimes under state law to these newer uses.

Some states have recognized that the greatest potential for offshore wind lies in federal waters of the Outer Continental Shelf, and have accordingly aimed their efforts at dealing with transmission and support facilities that may need to traverse state submerged lands. In June 2010, the Department of the Interior executed a Memorandum of Understanding with Maine, New Hampshire, Massachusetts, Rhode Island, New York, New Jersey, Delaware, Maryland, Virginia, and North Carolina "to achieve region-wide strategies and produce specific recommendations to facilitate the development of Atlantic offshore wind resources."¹³⁵ This MOU, which has a four-year term, is intended to promote and foster collaborative decisions on offshore wind in federal waters. The **Atlantic Offshore Wind Energy Consortium** established by the MOU may also affect consideration of related facilities in state waters. The MOU contemplates that the states will, with the support of federal agencies, focus on the permitting and regulatory process, on data and science needs including inventory of

¹³⁵ MEMORANDUM OF UNDERSTANDING between THE UNITED STATES DEPARTMENT OF THE INTERIOR and THE STATES OF MAINE, NEW HAMPSHIRE, MASSACHUSETTS, RHODE ISLAND, NEW YORK, NEW JERSEY, DELAWARE, MARYLAND, VIRGINIA, and NORTH CAROLINA, to CREATE AN ATLANTIC OFFSHORE WIND ENERGY CONSORTIUM TO COORDINATE ISSUES OF REGIONAL APPLICABILITY FOR THE PURPOSE OF PROMOTING THE EFFICIENT, EXPEDITIOUS, ORDERLY AND RESPONSIBLE DEVELOPMENT OF THE WIND RESOURCES OF THE ATLANTIC OUTER CONTINENTAL SHELF (June 2010), available at <http://www.boemre.gov/ooc/PDFs/AtlanticConsortiumMOU.pdf>

relevant marine resources and uses, and on investment and infrastructure challenges.¹³⁶

In **Virginia**, recent legislation shifted regulatory jurisdiction for approving wind facilities with capacities under 100 MW from the State Corporation Commission to the Department of Environmental Quality, and directed the DEQ to develop a “permit by rule” for these wind facilities.¹³⁷ Effective December 22, 2010, the DEQ approves applications as long as the application meets the requirements of the published rules.¹³⁸ While most of these are regulatory provisions that apply to private as well as state lands, some of the provisions relate specifically to wind facilities located on state submerged lands, thus establishing requirements for these lands. The regulations require preparation of special studies and additional information for location of the project site in a Coastal Avian Protection Zone, for example.¹³⁹ Special provisions apply for facilities creating disturbances within one mile of a sea turtle nesting beach.¹⁴⁰ Leases of state submerged lands for wind facilities remains under the control of the Virginia Marine Resources Commission.¹⁴¹

Rhode Island has recently prepared a special area management plan (SAMP) addressing ocean resources under the general authority of the federal Coastal Zone Management Act. A significant portion of the SAMP focuses on wind power uses of state and federal waters offshore. Released on October 19, 2010, the Rhode Island Ocean SAMP identifies specific areas suitable for wind projects.¹⁴² The focus of the state siting section is on “suitable sites for offshore wind energy within state waters,” because these are the waters where the state’s Coastal Resources Management Council is authorized to “grant licenses, permits and easements for the use of coastal resources.”¹⁴³

¹³⁶ *Id.*

¹³⁷ 2009 Va. Acts ch. 854 (codified at VA. Code § 10.1-1197.5 et seq.), available at <http://www.vawind.org/Assets/Docs/081510/legp504.pdf>.

¹³⁸ 27 Va. Regs. Reg. 6 (Nov. 22, 2010) (to be codified at 9 VA. ADMIN. CODE 15-40-10 et seq.).

¹³⁹ 9 VA. ADMIN. CODE 15-40-40(A).

¹⁴⁰ 9 VA. ADMIN. CODE 15-40-60.

¹⁴¹ Va. Code §§ 28.2-1205, 18.2-1208.

¹⁴² Rhode Island CRMC, *Ocean Special Area Management Plan*, available at <http://seagrant.gso.uri.edu/oceansamp/> Chapter 8 (Oct. 19, 2010).

¹⁴³ *Id.*, Chapter 8, at 76, citing R.I. Gen. Law § 46-23-6(4)(iii).

IV. STATE CONSERVATION LANDS AND OTHER STATE LANDS

Many states provide for economic activities on at least some state conservation lands. These may include timber harvests from state forests and wildlife areas, oil and gas production from conservation lands and refuges, and provisions for rights-of-way crossing state lands. These activities are usually managed under legislative authorizations that specify the management standards and tradeoffs to be made in allowing revenue-generating uses. In general, limitations are best discerned by reading the statutes and regulations governing the state lands in question.

States also own other lands that are not primarily held to generate income but that may be suitable for wind facilities. Most states have a patchwork of authorities to lease or convey these other state lands, and will need to determine whether it is in their interest to seek additional statutory authority if wind facilities are to be encouraged.

This section offers some examples of the kinds of considerations that may arise in authorizing wind power on conservation or “other” lands not chiefly held for income.

Hawaii’s Department of Land Natural Resources has authority to lease state conservation lands for wind power projects. The Department’s Land Division is responsible for managing state lands “in ways that will promote the social, environmental and economic well-being of Hawaii’s people and for ensuring that these lands are used in accordance with the goals, policies and plans of the State. Lands that are not set aside for use by other government agencies...are made available to the public

through fee sales, leases, licenses, grants of easement, [and] rights-of-entry.”¹⁴⁴ The Kaheawa Wind Farm, Hawaii’s largest, is located on state conservation land leased from the Department.¹⁴⁵ The wind farm became operational in 2006 and includes twenty turbines for a total capacity of 30 MW.¹⁴⁶ A second phase (also on adjacent state land) is undergoing review. The initial project is expected to generate about \$7 million in lease payments to the state over its lifetime.¹⁴⁷

Alaska’s Division of Mining, Land, and Water within the Department of Natural Resources is the primary manager of state land holdings, including state trust lands.¹⁴⁸ It may lease state lands for commercial or industrial purposes so long as the lessee complies with all applicable building and zoning requirements.¹⁴⁹ All lands to which “Alaska holds title or to which Alaska may become entitled” are available for lease, including tide land, submerged land, and shore lands.¹⁵⁰ Persons interested in leasing state lands must apply at the regional office

¹⁴⁴ <http://hawaii.gov/dlnr/land/>

¹⁴⁵ *Wind Farms*, Hawaiian Electric Company, available at <http://www.renewablehawaii.com/portal/site/heco/menitem.508576f78baa14340b4c0610c510b1ca/?vgnextoid=51e39e7d9dfbb110VgnVCM1000005c011bacRCRD&vgnnextfmt=default&cpsexcurrchannel=1> (last visited July 27, 2010).

¹⁴⁶ *U.S. Wind Energy Projects – Hawaii*, AWEA, available at <http://www.awea.org/projects/Projects.aspx?s=Hawaii> (last visited July 27, 2010).

¹⁴⁷ <http://www.hightechmaui.com/pdf/Kaheawa-Wind-Power.pdf>

¹⁴⁸ Divisions within Department of Natural Resources, available at <http://dnr.alaska.gov/commis/pic/divisions.htm#mlw> (last updated May 21, 2010). Additional leasable lands are held by the University of Alaska, the Alaska Railroad Corporation, and the Alaska Mental Health Trust Authority.

¹⁴⁹ ALASKA ADMIN. CODE tit. 11, § 58.020.

¹⁵⁰ ALASKA ADMIN. CODE tit. 11, § 58.300.

nearest the land in question.¹⁵¹ Applicants may be required to submit a development plan with their application, which, if approved, must be fulfilled within five years or the individual risks cancellation of the lease.¹⁵² Applicants must also submit an Environmental Risk Assessment questionnaire, and an Alaska Coastal Management Program questionnaire if seeking a lease within the coastal zone.¹⁵³ If the land is unclassified, “a plan must be adopted and classification issued.”¹⁵⁴ The proposal must then go through agency, public, and if applicable, coastal management review. Approved leases may be subject to surveys and appraisals. “If the lease is issued competitively, a notice of the offering must be published, and an auction held.”¹⁵⁵ In some circumstances, a lease for state land may be issued on a non-competitive basis.¹⁵⁶

Leases may be for varying terms depending on the lessor and type of lease. Short-term leases issued by Alaska’s Division of Mining, Land, and Water carry a maximum term of just ten years, and are not renewable if originally obtained via a non-competitive process. Regular term competitive leases may not exceed 55 years. Holders of competitive leases “may be offered a preference right (the right to a new lease or sale without competition) if the state decides to issue another lease or sell the property at the end of the lease term.”¹⁵⁷

The Pillar Mountain Wind Project, currently Alaska’s largest wind facility, is

¹⁵¹ ALASKA ADMIN. CODE tit. 11, § 58.320.

¹⁵² ALASKA ADMIN. CODE tit. 11, § 58.510.

¹⁵³ *Leasing State Land Factsheet*, Alaska Department of Natural Resources 1 (2001), available at http://dnr.alaska.gov/mlw/factsht/lease_land.pdf.

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ *Leasing State Land Factsheet*, *supra* at 2.

located on state lands controlled by Alaska’s Department of Natural Resources.¹⁵⁸

Located on Kodiak Island, the facility became operational in 2009 and is comprised of just three 1.5 megawatt turbines. Kodiak Electric Association, an electric cooperative, installed the turbines and is responsible for distributing the generated electricity to the city of Kodiak and the surrounding rural area.¹⁵⁹ The Eva Creek Wind Farm has been proposed by Golden Valley Electric Association. If developed, this 24 MW facility will be located near Healy on state land owned by the Department of Natural Resources.¹⁶⁰

New Jersey does not have a law regarding the siting of commercial-scale wind energy facilities on state-owned land. Under existing laws, conservation lands belonging to several New Jersey Department of Environmental Protection (NJDEP) divisions may be leased. For example, the Commissioner of the NJDEP is authorized to sell or lease lands acquired for public hunting and fishing grounds and game refuges and assigned to the Division of Fish, Game and Wildlife, if it is in the best interest of the state to do so.¹⁶¹ The Fish and Game Council must be given an opportunity to review the proposed lease and make recommendations prior to its execution. All leases are made in the name of the State of New Jersey at a price and with conditions established by the State House

¹⁵⁸ Sam Friedman, *KEA Wins National Award*, KODIAK DAILY MIRROR, February 16, 2010, available at <http://www.kodiakdailymirror.com/?pid=19&id=8494>.

¹⁵⁹ *Renewable Power*, Kodiak Electric Association, available at <http://www.kodiakelectric.com/renewable.html> (last visited June 21, 2010).

¹⁶⁰ Dermot Cole, *GVEA Proposes Healy Wind Farm to Boost Renewable Power*, FAIRBANKS DAILY NEWS-MINER, April 29, 2010.

¹⁶¹ N.J. STAT. ANN. § 23:8A-1.

Commission.¹⁶² The NJDEP's Division of Parks and Forestry may grant individuals and corporations rights to construct and operate utilities for profit upon state parks, forests, lands, and waters.¹⁶³ The grant of such privileges must be made in the name of the State of New Jersey, and the department is responsible for setting the price and conditions.¹⁶⁴ The NJDEP is also empowered to lease lands under its control in order to *acquire* other lands or interests for "incorporation into the State park and forest system."¹⁶⁵ State law recently authorized the creation of the Solar and Wind Energy Commission to study the feasibility of siting solar and wind generation on state-owned property.¹⁶⁶

Indiana's Department of Natural Resources has authority to lease state lands, including park lands, but leases may not exceed four years unless the lessee makes a \$200,000 capital investment in state real property, the improvements become property of the state upon expiration of the lease, and the lease is approved by the Natural Resources Commission.¹⁶⁷ The lessee must provide information on resulting jobs, wages, construction, and other economic factors.¹⁶⁸ These provisions for lease are not closely related to wind power issues. However the

state is developing guidelines for offshore wind developments on Lake Michigan.¹⁶⁹

Many of **West Virginia's** state lands are under the control of the Public Land Corporation (PLC) within the Division of Natural Resources.¹⁷⁰ The PLC's board is composed of six members appointed by the governor, including the Executive Director of the Real Estate Division, Director of the Division of Natural Resources, Commissioner of the Department of Culture and History, Secretary of the Department of Administration, and two members with knowledge of the historical, cultural, biological, and aesthetic significance of the state's public lands.¹⁷¹ The PLC may authorize the lease of state lands by an affirmative vote of a majority of the board.¹⁷² Prior to reaching a decision regarding the sale or lease of state-owned land, the PLC must appraise the land in question and hold a public hearing.¹⁷³ Notice of the hearing must be provided to all members of the state legislature, the heads of political subdivisions within the geographic region that the public lands are located, and by publication.¹⁷⁴ A decision on a lease must be rendered within one year of initiation of the leasing process.¹⁷⁵ West Virginia does not currently lease any state lands for wind facilities.

¹⁶² *Id.*

¹⁶³ N.J. STAT. ANN. § 13:1L-6(a).

¹⁶⁴ *Id.*

¹⁶⁵ N.J. Stat. Ann. § 13:1L-8.

¹⁶⁶ Email from Alma Rivera, Administrative Analyst, New Jersey Board of Public Utilities, Office of Clean Energy (May 10, 2010, 10:44 EST) (on file with author); P.L. 2009, c. 239. See also Patty Salkin, *NJ Enacts Suite of Renewable Energy Laws*, Law of the Land (Apr. 19, 2010), available at <http://lawoftheland.wordpress.com/2010/04/19/nj-enacts-suite-of-renewable-energy-laws/>.

¹⁶⁷ Ind. Code § 14-19-1-2.

¹⁶⁸ Ind. Code § 14-19-1-3.

¹⁶⁹ Travis Murphy, Renewables Program Manager, Indiana Office of Energy Development (telephone interview, July 19, 2010)

¹⁷⁰ W. VA. CODE § 5A-11-1(a).

¹⁷¹ *Id.* at § 5A-11-2(b)-(c).

¹⁷² *Id.* at § 5A-11-2(f).

¹⁷³ *Id.* at § 5A-11-5(a)(2); Email from Joe Scarberry, Department of Natural Resources Land and Streams Division (July 22, 2010, 13:54 EST) (on file with author).

¹⁷⁴ *Id.* at § 5A-11-5(a)(3)-(4).

¹⁷⁵ *Id.* at § 5A-11-5(a)(6), (c).

Alabama also has no wind projects on state lands, but its Department of Conservation and Natural Resources has the duty to determine the best use of “unused lands” and with the approval of the Governor to “use such lands for the purpose for which they are suited.”¹⁷⁶

Pennsylvania’s Bureau of Forestry has authority under state law to offer mineral leases on state forest lands, and does so, but may need separate legislative authorization to offer leases for wind energy development.¹⁷⁷

¹⁷⁶ Ala. Code §§ 9-15-2, 9-15-14.

¹⁷⁷ PA Environment Digest Daily, “DCNR: Move Cautiously On Leasing More State Forest Land For Drilling” (Feb. 23, 2010), *available at* <http://paenvironmentdaily.blogspot.com/2010/02/dcnr-move-cautiously-on-leasing-more.html> (last visited Dec. 16, 2010).

V. INVENTORIES OF STATE LANDS FOR WIND SITING

While states have taken different approaches to wind facilities on state-owned lands and waters, a highly useful course is to inventory state-owned lands. Such an inventory can enable states to determine in advance: (1) where proposals for such facilities might be anticipated, (2) where they are incompatible with other uses or values, and (3) where they should be encouraged because of their potential to produce renewable energy on sites compatible with other land uses.

Several states have inventoried their state-owned lands and submerged lands for these purposes. These inventories, examining state land holdings and meteorological data about wind velocities and prevalence, enable states to determine the potential utility of state lands and waters for wind power generation. They also enable states to determine whether to devote time and effort to a leasing regime or program targeted toward wind projects. If there is not a sufficient wind resource, or if the only locations of adequate wind are on highly sensitive conservation lands, then the state can decide not to pursue development of a leasing regime. Conversely, the state may be able to identify high value opportunities for focusing wind development, and then solicit applications. This could result in higher returns to state treasuries and speedier deployment of wind power in the state. Such inventories can be conducted under legislative direction or by executive or agency action.

Several states have directed state agencies to conduct statewide inventories of all state-owned lands or a subset of state-owned lands.

In 2008, **Massachusetts** legislators enacted the Green Jobs Act. That Act directed the Secretary of Energy and Environmental Affairs to investigate opportunities for developing the clean energy sector in Massachusetts, including identifying “real property owned by the commonwealth available and suited for the installation and operation of renewable energy generating facilities.”¹⁷⁸ In 2009, Massachusetts produced an inventory identifying “facilities and lands owned by the Commonwealth” suitable for or hosting existing, planned, and potential renewable energy facilities, including commercial-scale wind power.¹⁷⁹ The report identified enough state lands to support siting up to 947 MW of “utility-scale” wind generation capacity, and 42 MW of “sub-utility-scale” wind facilities. Most of the lands identified in the report as suitable for utility scale wind generation are managed by the Massachusetts Department of Conservation and Recreation. The Massachusetts inventory did not assess offshore wind opportunities within waters

¹⁷⁸ Acts 2008, Chap. 307, § 12: “The secretary of energy and environmental affairs may allocate \$100,000 in fiscal year 2009 from the Massachusetts Alternative and Clean Energy Investment Trust Fund, established by section 35FF of chapter 10 of the General Laws, to commission a study to investigate the clean energy sector in the commonwealth. The study shall include, but not be limited to, an examination of: (i) the future workforce needs of the commonwealth’s clean energy sector; (ii) the current growth rate of said sector, including the number of in state jobs and businesses; (iii) the current levels of private investment in said sector; (iv) *real property owned by the commonwealth available and suited for the installation and operation of renewable energy generating facilities*; (v) energy efficiency opportunities on real property owned by the commonwealth; and (vi) the future funding requirements of the center.” (emphasis supplied).

¹⁷⁹ Mass. Exec. Office of Energy and Env’tl. Affairs and Mass. Clean Energy Center, *Commonwealth of Massachusetts Renewable Energy and Energy Efficiency Potential at State-Owned Facilities and Lands* (Feb. 20, 2009).

under the jurisdiction of the Commonwealth.¹⁸⁰

In January 2010, the **New Jersey** legislature created the Solar and Wind Energy Commission, and directed it to study the feasibility of solar and wind power generation on state-owned property.¹⁸¹ The 11-member Commission is responsible for completing a year-long study to investigate and identify all state-owned property that could feasibly support solar or wind energy installations. The study must identify financial implications of installing and maintaining solar or wind energy facilities, project the energy and financial savings to the state, and identify “property values, land use, community impact, planning and development, and environmental factors related to the state-owned property sites where solar or wind energy installations are feasible.”¹⁸²

Colorado legislators directed the State Board of Land Commissioners to examine the state trust land properties under the Board’s control “to identify land suitable and appropriate for development of renewable energy resources.”¹⁸³ The Board must collaborate with the following organizations in identifying such property: the National Renewable Energy Laboratory, University of Colorado, Colorado State University, Colorado School of Mines, federal land management agencies, and the Office of Energy Management and Conservation.¹⁸⁴ All leasing arrangements that result from these efforts must include

provisions for environmental protection and for collecting royalties on the energy produced.¹⁸⁵ Pending legislation would require Colorado’s Department of Natural Resources to create an inventory and map of state lands that could potentially support renewable energy projects.¹⁸⁶

Several states have launched inventories of *offshore* areas suitable for wind facility siting. **Rhode Island’s** Coastal Resources Management Council prepared a Special Area Management Plan, released in October 2010, identifying state waters that are suitable for offshore wind projects.¹⁸⁷ The detailed maps and assessments provide clear guidance to where offshore wind facilities in state waters might be authorized, and where they should not be sited.

In 2009, **Michigan’s** governor established the state’s Great Lakes Wind Council by executive order.¹⁸⁸ In a second executive order that same year she directed the council to “identify those areas most favorable to lease for offshore wind development.”¹⁸⁹ The order directed the Council to identify locations and to solicit feedback on the identified locations to ensure the public’s consideration of statewide interests. The order also directed the Council to produce a proposed legislative framework for leasing

¹⁸⁰ Mass. Exec. Office of Energy and Env’tl. Affairs and Mass. Clean Energy Center, *Commonwealth of Massachusetts Renewable Energy and Energy Efficiency Potential at State-Owned Facilities and Lands* (Feb. 20, 2009).

¹⁸¹ N.J. P.L. 2009, c. 239.

¹⁸² N.J. P.L. 2009, c. 239, §1(a).

¹⁸³ COLO. REV. STAT. § 36-1-147.5(3)(a) (2007).

¹⁸⁴ *Id.* at §§ 36-1-147.5(3)(a) & (4).

¹⁸⁵ *Id.* at § 36-1-147.5(6).

¹⁸⁶ A Bill for an Act Concerning the Use of Renewable Energy to Supply the Needs of the State Government, and, in Connection Therewith, Commissioning the Creation of a Statewide Map of Available Renewable Energy Generation Areas on State Lands and Establishing the “Re-energize Colorado” Program in the Division of Parks and Outdoor Recreation in the Department of Natural Resources, HB10-1349.

¹⁸⁷ <http://seagrant.gso.uri.edu/oceansamp/> (Chapter 8)

¹⁸⁸ The Council was established in January 2009 as an advisory body within the Department of Energy, Labor and Economic Growth under Mich. Exec. Order 2009-1.

¹⁸⁹ Mich. Exec. Order 2009-46.

and permitting. In October 2010, the Council produced a report identifying specific areas suitable and unsuitable for Michigan's Great Lakes wind development projects. The report prioritizes development of five specific "wind resource areas" in Lake Huron, Lake Superior, and Lake Michigan, identified based on 22 criteria developed by the Council. These criteria include, among others, recognition of wind potential, depth of water, competing uses and resources, areas of contiguous parcels, and buffer areas. The priority "wind resource areas" are a subset of those areas identified by the Council as "most favorable" for wind development projects. The report also identifies large "conditional" areas within Michigan's Great Lakes that may also be suitable for wind development.¹⁹⁰

Virginia's Coastal Energy Research Consortium, led by Virginia Tech, with the backing of the state, examined the potential for siting offshore wind facilities in federal as well as state waters off the coast of Virginia. It has compiled information indicating where use of submerged lands would be compatible and incompatible with shipping, fishing, communications, Department of Defense activities, and other uses. This inventory will assist the Commonwealth and neighboring states in deciding what activities to support, and how to interact with federal offshore renewable energy leasing administered by the Bureau of Ocean Energy Management, Regulation and Enforcement.¹⁹¹ Excluding incompatible

uses, VCERC has identified "25 [Outer Continental Shelf] OCS lease blocks of entirely Class 6 winds beyond 12 nautical miles offshore (the approximate visual horizon), in water depths less than 30 meters (suitable for commercially available monopile foundations), which could support *approximately* 3,200 MW of offshore wind farm capacity."¹⁹²

¹⁹⁰ Report of the Michigan Great Lakes Wind Council (October 1, 2010), available at

<http://www.michiganlowsoundcouncil.org>

¹⁹¹ <http://www.vcerc.org/> VCERC is charged with "ensur[ing] that energy generation and delivery systems are located in places that minimize impacts to pristine natural areas and other significant onshore natural resources, and that are as near as possible to compatible development." See Virginia Coastal

Energy Research Consortium, *Virginia Offshore Wind Studies, July 2007 to March 2010, Final Report* (2010), available at

http://www.vcerc.org/VCERC_Final_Report_Offshore_Wind_Studies_Full_Report_newest.pdf

¹⁹² Id.

VI. STATE LANDS OFF-LIMITS TO COMMERCIAL-SCALE WIND DEVELOPMENT

Some states have expressly ruled certain lands off limits to commercial-scale wind facilities. This section examines some of the ways in which states have expressed these limitations, noting that in many cases the relevant action has been a statement of policy that is intended to constrain the use of a more broadly available authority to lease or otherwise dispose of state lands.

In 2004 **Vermont's** Agency of Natural Resources (ANR) issued a policy paper on "Wind Energy and Other Renewable Energy Development on ANR Lands." These lands include "all state parks, state forests, wildlife management areas, and other miscellaneous ANR holdings."¹⁹³ This policy states that:

Large-scale renewable energy development on ANR lands such as commercial wind farms would be incompatible with the uses of and contrary to the purposes for which ANR acquired these lands. Therefore such uses are not allowed on ANR lands. Temporary wind measurement towers and other exploratory uses that are designed to evaluate the potential for future large-scale renewable energy development on ANR lands are also not allowed.¹⁹⁴

Among the reasons cited by the Vermont agency were the importance of these lands for their conservation purposes, the small

¹⁹³ Vermont Agency of Natural Resources, Wind Energy and Other Renewable Energy Development on ANR Lands (December 2004), at 3-4, available at <http://www.vtpr.org/lands/documents/windpower.pdf>.

¹⁹⁴ Id.

percentage of state conservation lands that even have a commercially viable wind resource, and the availability of private land alternatives. However, the policy did support "small-scale, non-commercial" renewable energy projects compatible with agency management goals, including meeting on-site energy needs of state facilities. The agency reaffirmed this state policy in 2010 in response to a 2009 statutory reporting requirement from the legislature asking for updated information, if any.¹⁹⁵

In 2008, **Maryland's** Governor issued an order prohibiting construction of commercial wind turbines on state lands administered by the Maryland Department of Natural Resources.¹⁹⁶ This order followed months of controversy concerning the state's environmental evaluation of potential wind facilities, mostly on private lands, on Maryland's forested western ridge tops. A press release issued at the time of the order stated, "The decision to prohibit the placement of large-scale commercial and temporary exploratory wind power generation infrastructure applies exclusively to conservation lands held in fee simple ownership by the state and managed by the Maryland Department of Natural Resources."¹⁹⁷ According to the guidance document implementing the governor's order, the policy basis for the ban is that such commercial facilities "are contrary to purposes for which DNR acquired lands and waters held and managed in the public

¹⁹⁵ Memorandum to Virginia Lyons & Tony Klein from Jonathan L. Wood, ANR Secretary (Feb. 4, 2010).

¹⁹⁶

<http://www.governor.maryland.gov/speeches/080412.asp> (last visited Sept. 25, 2009).

¹⁹⁷ Maryland DNR, Press Release (April 12, 2008), available at

<http://www.dnr.state.md.us/dnrnews/pressrelease2008/041208.html>

trust.”¹⁹⁸ However, the decision “is not meant to guide or influence renewable energy development on other local, federal, or privately-owned land in Maryland.”¹⁹⁹ A DNR policy memo issued in November 2008 further clarifies that “private requests for a right-of-way across DNR lands for utility infrastructure (i.e., power transmission lines), to support wind power facilities *not* located on DNR lands may be considered using the standard protocols.”²⁰⁰

Oregon’s Energy Facility Siting Council rules, which apply to wind facilities as well as to other energy facilities, prohibit siting of commercial scale energy facilities in a large number of listed areas, including parks, refuges, natural heritage areas, research forests, agricultural experimental stations, and others.²⁰¹

Texas, which does support commercial scale wind facilities on many of its state-owned lands, does not allow such facilities in Texas state parks.²⁰²

Maine’s lands held by the Department of Conservation’s Bureau of Parks and Lands for conservation and recreational purposes are subject to substantial limitations. Maine’s constitution dictates that public land that is held for conservation and recreation “may not be reduced or its uses substantially altered” unless there is a 2/3 vote of elected members from each House, and the sale’s proceeds are used to buy a replacement property in the same county and for the same designated purpose.²⁰³ They may be leased for commercial-scale wind development but only with the approval of the Commissioner, Governor, and 2/3 of each house of the Legislature.²⁰⁴ Lands subject to these strict review and approval provisions include “state parks and historic sites, public reserved lands, public non-reserved lands, [the] Allagash Wilderness Waterway; public boat launch sites, lands gifted to the State for conservation purposes, [and] lands acquired pursuant to a referendum.”²⁰⁵ Furthermore, leases of public reserved and non-reserved lands for utilities for transmission purposes may not exceed a term of 25 years and leases for industrial or commercial purposes may not exceed a term of 10 years, effectively making the lands unattractive for commercial-scale wind power generation facilities.²⁰⁶

¹⁹⁸ DNR, Wind Power Development on Land Managed by the Department of Natural Resources, No. 2008:11 (Nov. 3, 2008). Other than this single reference to waters, all other references in the document are to “lands” only. Also the reference to “lands owned by the state in fee simple through the Department” and to lands “acquired” by DNR, suggest that the governor’s order does not apply to the state’s submerged lands, which Maryland manages through the Board of Public Works.

¹⁹⁹ Maryland DNR, Press Release (April 12, 2008), available at <http://www.dnr.state.md.us/dnrnews/pressrelease2008/041208.html>

²⁰⁰ DNR, Wind Power Development on Land Managed by the Department of Natural Resources, Pol’y No. 2008:11 (effective November 3, 2008) (emphasis supplied).

²⁰¹ OAR 345-022-0040.

²⁰² Interview with Adan Martinez, Legal Services Division, Energy Section, Texas General Land Office (May 11, 2010).

²⁰³ *Existing Statutory and Policy Framework For Siting of Wind Turbine Projects on DOC-Held Public Lands*, Bureau of Parks and Lands (Jan 22, 2008) (on file with author); ME. CONSTIT. art. 9, § 23.

²⁰⁴ Email from Alan Stearns, Deputy Director, Maine’s Bureau of Parks and Lands (May 9, 2010, 10:01 EST) (on file with author); ME. REV. STAT. ANN. tit. 12, § 598. The restrictions discussed do not apply to submerged lands. ME. REV. STAT. ANN. tit. 12, §§ 1814, 1851, and 1837.

²⁰⁵ *Existing Statutory and Policy Framework For Siting of Wind Turbine Projects on DOC-Held Public Lands*, *supra*; ME. REV. STAT. ANN. tit. 12, § 598-A.

²⁰⁶ ME. REV. STAT. ANN. tit. 12, §§ 1838, 1852.

In addition to state constraints, conservation and recreation lands that were acquired by states with **Federal Land and Water Conservation Fund** monies may not be available for leasing for wind facility use. Federal law allows the conversion of such lands to other than public recreational use only if the conversion is in accordance with the approved State Comprehensive Outdoor Recreation Plan and the state will substitute other recreational properties of at least the same fair market value and reasonably equivalent usefulness and location. Otherwise the land reverts to the federal government.²⁰⁷ However, temporary occupation of such land by wind facilities in a manner that does not impair their recreational use might be allowed with approval of the Secretary of the Interior.²⁰⁸

Some states have also begun to examine whether to make some of their state submerged lands off limits to wind facilities.

Delaware's Department of Natural Resources and Environmental Control has stated that wind development, including development of a wind test site, will not be approved on any of the state's submerged lands in Delaware Bay. This policy position is not expressed in law or regulation, but represents the way in which DNREC currently interprets its conservation responsibilities. DNREC cites the importance of and uncertainties about the "benthic, avian, fisheries, and marine trade" issues within the Bay as a basis for this

determination.²⁰⁹ In contrast to the Bay, Delaware is actively encouraging offshore wind development in federal waters of the Atlantic Ocean off its coast.

Michigan is considering legislation that would prohibit offshore wind farms in the Great Lakes within three miles of the shoreline, and that would allow counties to determine whether wind farms would be allowed in the zone between three and six miles offshore.²¹⁰

Decisions to rule certain areas off limits are being made under differing laws, applying differing statutory requirements. In some cases the decisions are not durable but merely represent the position of a governor (effective during that governor's term), or state a policy position of a state agency subject to potential change.

Decisions about whether certain areas should be off limits can most effectively be made in the context of an inventory of state lands, an evaluation of offsetting values and uses for the lands, and selection of appropriate legal tools to implement the limitation or prohibition.

²⁰⁷ 16 U.S.C. §§ 4601-8(f)(3). Approval of the Secretary of the Interior is also required.

²⁰⁸ Courts have questioned whether occupation of public recreation lands by a golf course, or a private marina could be properly approved under the LWCF. See *Friends of the Shawangunks v. Clark*, 754 F. 2d 446 (2d Cir. 1985); *City of Jersey City v. Hodel*, 714 F1 Supp. 126 (D. N.J. 1989).

²⁰⁹ Email from DNREC Secretary Collin O'Mara to Dr. Jeremy Firestone, University of Delaware (August 12, 2010) (on file with author).

²¹⁰ Mich. H.B. 6567, H.B. 6564, S.B. 1591 (2010). An even more recent bill would prohibit leasing of any Lake Michigan submerged lands for wind facilities. H.B. 4499 (2011).

VII. FINDINGS AND CONCLUSIONS

1. States should inventory their lands and waters to determine where there are areas suitable for wind power electric generating facilities.

An inventory is essential so that the state is not limited to reacting to proposals coming from wind development interests. An inventory also enables the state to identify suitable opportunities where it might use available state lands to encourage development of this new industrial sector. In turn, this creates opportunities to streamline and improve processes that can direct proposals for wind facilities toward appropriate locations. Inventories can be launched by statute, executive order, or simply by management action of the boards or executive agencies responsible for managing state lands. The advantages are chiefly (1) to help the state figure out where to focus its efforts, (2) to determine what areas to protect because of uses that may be incompatible with large wind development (e.g., key fishing or shipping areas, important habitats, historic viewsheds, or ecological areas important for species of special management concern), and (3) to identify opportunities to simplify leasing, bidding, and permitting processes in locations where lands are particularly suitable for wind facilities.

2. States should explicitly revise and adapt their trust land programs to enable leasing for commercial scale wind facilities.

Most states with trust land programs developed their procedures, lease terms and conditions, and management programs without reference to wind facilities. Thus, they are often faced with

determining what processes should be used, what lease rates should be set, and how long lease terms should be. By explicitly recognizing wind power as an authorized use of trust lands, state trust land boards and/or state legislators can establish the following parameters:

- Types and lengths of leases.
- Basis for evaluating comparative/alternative uses of lands when deciding whether to offer lands for wind power, including providing for simultaneous compatible uses of the same lands where appropriate.
- Providing legally-sanctioned opportunities for developers to occupy lands temporarily or under short-term agreements while conducting wind assessments and testing before entering into a longer term lease.
- Adopting standard or preferred terms and conditions that will provide a good return to the trust beneficiaries while recognizing the differences between wind facilities and other trust uses.
- Providing for appropriate monitoring and operational requirements unless provided for elsewhere in state permitting.
- Requiring decommissioning and reclamation of wind sites after their useful life.

Wind facilities do present differences from other uses of trust lands (especially mining, timber, grazing, commercial). This means that there will typically need to be new or modified processes if trust lands are to become an important part of the wind energy complement within the states.

3. States should evaluate their state submerged lands as a key area for wind development. These opportunities are especially important offshore in shallow marine waters and in the Great Lakes. They may also be meaningful in larger estuaries and near industrial areas with substantial access to the electrical grid. While many of the best opportunities lie in federal waters on the Outer Continental Shelf, even these wind facilities will need substantial support via use of state submerged lands for transmission, construction, and other facilities. States will need to develop lease terms and conditions, royalty or rental policies, rules for deciding where wind facilities and transmission lines should be located given other uses of submerged lands, and provisions for decommissioning wind facilities on submerged lands. States should review their laws and rules to identify and deal with possibly obsolete preferences for riparian landowners, provisions narrowly tailored to other uses but inapplicable to wind facilities, and procedural impediments to consideration of wind facility siting.

4. States should make sure that they have some process in place that allows for meteorological testing and appropriate ecological and surveying in advance of final commercial leasing. This may take the form of phased leasing, short term use permits, cooperative investigation, or other activities. It will not likely be possible for wind developers to enter into commitments for use of state lands without a meaningful opportunity to test actual conditions and evaluate potential impacts.

5. Wind facilities on conservation and “other” lands will inevitably present a special case for legislators and administrators based on the types of lands under consideration. Most states have differing kinds of authority to lease or

convey, and prohibitions related to particular kinds of conservation lands such as forests, parks, and refuges. State policy makers will need to determine whether it is in the state’s interest to seek additional statutory authority if wind facilities are wanted on any of these lands. This decision is best made after an inventory makes clear whether there is any significant wind resource at issue, and what types of state lands and waters are potentially of interest. An inventory can also identify what conservation values, wildlife areas, forest and grasslands, viewsheds, and other resources may be important to a policy decision. This will enable state decision makers to determine whether they should seek additional authority and/or adopt rules and procedures under existing authorities to address the potential conflicts and recognize the likely opportunities.

6. States should develop lease conditions or leasing considerations that take into account potential impacts on habitats, adjacent land uses, and future leasing decisions. Commercial-scale wind facilities can result in habitat fragmentation in some areas and may have unforeseen effects on bats, birds, and other wildlife. These impacts may be particularly important where state lands represent a significant portion of an intact habitat area, or important areas in a matrix of otherwise degraded lands. States should consider what, if any, provisions to put in place to allow sufficient consideration of these issues, and to provide for appropriate pre- and post-construction monitoring to allow for adjustments in operation, adaptive management, and continuous improvement of the leasing process.

7. States should improve the transparency and predictability of the process for evaluating commercial-scale wind on state lands. States should also consider the

durability of the selected policy conditions and outcomes. For example, prohibitions based on policy declarations or executive orders are less durable than those based on statute (or implementing statutory directions). Similarly, indeterminate lease terms (such as leases that are variable or typically short) may not provide sufficient guidance to potential bidders or developers.

The Environmental Law Institute (ELI) makes law work for people, places, and the planet. For nearly four decades, ELI has played a pivotal role in shaping the fields of environmental law, policy, and management, domestically and abroad. Today, ELI is an internationally recognized independent research and education center known for solving problems

and designing fair, creative, and sustainable approaches to implementation.

The Institute delivers timely, insightful, impartial analysis to opinion makers, including government officials, environmental and business leaders, academics, members of the environmental bar, and journalists. ELI serves as a clearinghouse and a town hall, providing common

ground for debate on important environmental issues.

The Institute's board of directors represents a balanced mix of leaders within the environmental profession. Support for ELI comes from individuals, foundations, government, corporations, law firms, and other sources.

Environmental Law Institute

2000 L Street, N.W., Suite 620

Washington, D.C. 20036

Telephone: (202) 939-3800

Fax: (202) 939-3868

www.eli.org

