

WIND POWER SITING REGULATIONS AND WILDLIFE GUIDELINES IN THE UNITED STATES



Wind Farm – Sherman County, OR



April 2007

The contents of this report are the results of a survey of state fish and wildlife agencies as well as independent research. The results were made available for review by the States to verify the results and contents. All efforts were made to ensure the accuracy of the information and all information contained within is believed to be accurate as of April 11, 2007.

Notes:

State Data on Installed Utility-Scale Wind Power Capacity from the **American Wind Energy Association** as of 12/31/06 (<http://www.awea.org/projects/>).

State Data on Renewable Portfolio Standards and Renewable Energy Incentives from **Database of State Incentives for Renewable Energy** (www.dsireusa.org).

Research Conducted by:



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ALABAMA

Contact: Gary Moody, Gary.Moody@dcnr.alabama.gov

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Grant and loan programs

Power Siting Authority: No state agency regulates wind power in the state. Wind potential is limited and not a focus of the state renewable energy program. Utilities seeking to build a generation plant have to file with the Alabama Public Service Commission for a Certificate of Public Convenience and Necessity. The jurisdiction of the Commission is limited to investor-owned utilities providing retail service to the public. However, air permits are required from the Department of Environmental Management.

Wind Specific Siting Authority? No

Wildlife Guidelines for Wind Power Siting: No Guidance

ALASKA

Installed Utility Scale Wind Power: 2 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Loan programs

Power Siting Authority: Regulatory Commission of Alaska provides a Certificate of Public Convenience and Necessity to any utility that provides electricity (and other utility service) to ten or more people. This is not a siting review, but if a facility was to be used commercially without choosing to be unregulated it would need to go through this process. Smaller facilities or city utilities would be regulated at the municipal level. Most siting decisions would also be made at the local level.

Wind Specific Siting Authority? No

Wildlife Guidelines for Wind Power Siting: No Guidance

ARIZONA

Contact: Ginger Ritter, Arizona Game and Fish Dept.-WMHB, 602-789-3606, GRitter@azgfd.gov

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: Yes -15% by 2025

State Renewable Energy Incentives: Green Certification, tax incentives

Power Siting Authority: Arizona Power Plant and Transmission Line Siting Committee provides a Certificate of Environmental Compatibility (CEC) to build power plants of 100 MW or more. Smaller facilities are handled at the county level.

Wind Specific Siting Authority? No

Code or Regulations: APPLSC Authority: Arizona Revised Statute - 40-360.01. Criteria for Certificate for Environmental Compatibility - ARS § 40-360.06

Role of State Fish & Wildlife Agency: The Arizona Game & Fish Department reviews all CECs. However most proposed wind facilities are less than 100 MW, which does not require a CEC. Therefore, the Department is working with counties and the AZ State Land Department to get wildlife concerns incorporated into decisions.

How are wildlife laws applied: Same as any other development project; plans are analyzed for consistency with Commission and Department policies, management plans, and programs regarding the protection and conservation of fish and wildlife resources. The state provides project specific recommendations but does not have the authority to require mitigation.

Wildlife Guidelines for Wind Power Siting: Wind Energy Development Guidelines

Lead Agency on Guidelines: Arizona Game & Fish Department

Status of Wildlife Guidelines: Final - July 2006

Summary of Guidelines: Voluntary guidelines provide recommendations for minimizing the potential impacts of wind development on wildlife and their habitats. The guidance recommends a three year baseline survey, at various times of the year, prior to construction to assess the level of impact to wildlife and their habitats as well as an invasive species management plan. Outlines considerations for site placement, habitat fragmentation, power transmission, tower configuration, and tower design that should be addressed in the pre-construction phase. Describes steps to undertake during construction to reduce disturbance to habitats and wildlife including siting on previously disturbed areas, avoiding building during breeding periods, etc. Post-construction recommendations include conducting a three-year monitoring plan to assess movement, mortality, behavior changes, and abundance of local species for potential future facility design modifications to reduce impacts.

Web site for Guidelines: <http://www.azgfd.gov/hgis/pdfs/WindEnergyGuidelines.pdf>

ARKANSAS

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: No

State Renewable Energy Incentives: No state programs

Power Siting Authority: Small wind power is regulated by local jurisdictions through zoning and land use regulations. Major utility facility construction is authorized by a Certificate of Public Convenience and Necessity issued by the Arkansas Public Service Commission.

Wind Specific Siting Authority? No

Code or Regulations: Arkansas Public Service Commission siting authority: (Ark, Code Ann. §23-3-201 et seq.)

Wildlife Guidelines for Wind Power Siting: No Guidance

CALIFORNIA

Contact: Rick York, California Energy Commission, 916-654-3945, ryork@energy.state.ca.us

Installed Utility Scale Wind Power: 2361 MW

Renewable Portfolio Standard: Yes - 20% by 2017 (SB 1078) - working to achieve goal by 2010; CEC 2004 Integrated Energy Policy Report updates recommends 33% by 2020.

State Renewable Energy Incentives: Rebates, tax incentives and loan programs

Power Siting Authority: Local agencies issue land use permits for wind energy

Wind Specific Siting Authority? No

Code or Regulations: California Environmental Quality Act (CEQA) requires state and local agencies to assess environmental impacts of proposed actions they undertake or permit.

Role of State Fish & Wildlife Agency: For wind energy projects subject to CEQA, lead agencies are required to consult with the California Department of Fish and Game (CDFG). In addition to CDFG's responsible and trustee roles in the CEQA process, direct consultation with CDFG is required to ensure that a proposed project will meet the intent of Fish and Game Code statutes for protection of wildlife species, including the California's Fully Protected Species Act and the California Endangered Species Act. CDFG cannot approve or disapprove a project but lead agencies are required to consult with the Department.

How are wildlife laws applied: Plans are analyzed for consistency with Commission and Department policies, management plans, and programs regarding the protection and conservation of fish and wildlife resources.

Wildlife Guidelines for Wind Power Siting: California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development (pub # CEC-700-2006-013-SD)

Lead Agency on Guidelines: California Energy Commission in collaboration with CA Dept. of Fish & Game

Status of Wildlife Guidelines: Draft distributed for comment 12/06 revised draft expected spring 2007; final expected summer 2007

Summary of Guidelines: Voluntary guidelines provide information to help reduce impacts to birds and bats from new development or repowering of wind energy projects in California. Provides science-based reference for CA counties, cities and public utilities that permit wind energy projects. Include recommendations on preliminary screening of proposed wind energy project sites; assessing direct, indirect, and cumulative impacts to birds and bats in accordance with state and federal laws; developing avoidance and minimization measures; establishing appropriate compensatory mitigation; facilitating completion of the permitting process; and operations monitoring, analysis and reporting methods.

Web site for Guidelines: www.energy.ca.gov/renewables/06-OII-1/documents/index.html

COLORADO

Contact: Tom Blickensderfer, CO Department of Natural Resources, (303)866-3157, t.blick@state.co.us

Installed Utility Scale Wind Power: 291 MW

Renewable Portfolio Standard: Yes - 3% for 2007; 5% for the years 2008 to 2010; 10% for the years 2011 to 2014; 15% for the years 2015 to 2019 and 20% for 2020 and beyond.

State Renewable Energy Incentives: Tax incentives

Power Siting Authority: Public Utilities Commission regulates 1) “Eligible Renewable Energy Resources” (as defined CCR Sub Document 3650(f)); 2) Larger than 2 MW; 3) Structure exceeding over 50 feet in height. Counties have addressed siting through County Master Plans. Included in this are master planning statutes for “location and extent” of public utilities, access to alternate energy facilities and location of “areas containing.....endangered or threatened species”

Wind Specific Siting Authority? Yes

Code or Regulations: Code of Colorado Regulations for Public Utilities Commission; 4 CCR 723-3656(b)(c), Colorado State Statutes re: County Master Plans: 30-28-106(3)(a)(III) C.R. S.; 30-28-106(3)(a)(VI) C.R.S.; 30-28-106(3)(a)(XI)(B) C.R.S

Role of State Fish & Wildlife Agency: PUC is required to consult with Colorado Division of Wildlife and U.S. Fish & Wildlife Service.

How are wildlife laws applied: Broad statutory authority to the Colorado Wildlife Commission and the Colorado Division of Wildlife to investigate populations and habitat needs of species and to promulgate rules and regulations to implement management programs in order to insure perpetuation of wildlife species. State can require mitigation for wildlife (game, non-game and threatened, endangered, and species of concern).

Wildlife Guidelines for Wind Power Siting: Siting Authority serves as specific requirements for wildlife impact studies.

Lead Agency on Guidelines: CO Division of Wildlife

Status of Wildlife Guidelines: Current

Summary of Guidelines: Mandatory guidelines contained within PUC Rule require consultation with Colorado Division of Wildlife and U.S. Fish and Wildlife Service. Developers must provide certification of site-specific avian surveys conducted on facility site and verification that surveys are used in design, placement and management of facilities for state or federal listed species, sites shown to be local bird migration pathways and critical habitat and areas where birds or other wildlife are highly concentrated and are considered at risk.

Web site for Guidelines: www.sos.state.co.us/CCR

CONNECTICUT

Contact: Greg Chasko, Assistant Director, CT DEP - Wildlife Division, 860-424-3494, Greg.Chasko@po.state.ct.us, 79 Elm Street, Hartford, CT 06106

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: Yes - 10% by 2010

State Renewable Energy Incentives: Grant programs and planning assistance

Power Siting Authority: Connecticut Siting Council provides a Certificate of Environmental Compatibility and Public Need for electricity generating facilities and regulates facilities 1 MW or larger that are fueled by renewable energy sources. Town planning and zoning will also impact development. State environmental permitting affects development; requirements will vary by location, for example, offshore sites would be governed by Coastal Zone Management authorities.

Wind Specific Siting Authority? No

Code or Regulations: CT Siting Council - General Statutes § 16-50i, Environmental statutes: various sections of Connecticut General Statutes - Titles 22a26 would apply.

Role of State Fish & Wildlife Agency: Towns can consult with CT Dept. of Environmental Protection

How are wildlife laws applied: Energy facility applications must include “a description of the effect that the proposed facility would have” on ecological integrity, wetlands and watercourses, and wildlife and vegetation, including rare and endangered species, critical habitats, and species of special concern, with documentation by the Department of Environmental Protection Natural Diversity Data Base. State can require mitigation if a state permit is required, state listed endangered or threatened species can overrule other factors

Wildlife Guidelines for Wind Power Siting: No Guidance

DELAWARE

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: Yes - 10% by 2019

State Renewable Energy Incentives: Grant and rebate programs

Power Siting Authority: Delaware's utility grade wind power potential is primarily offshore, this would likely fall under the jurisdiction of the Delaware Department of Natural Resources and Environmental Control through the Coastal Zone Act. Small wind power generation is governed by local zoning ordinances.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: Permits from Department of Natural Resources and Environmental Control required for components of wind siting.

Wildlife Guidelines for Wind Power Siting: No Guidance but DNREC has included a recommendation in their State Wildlife Action Plan to work with industry to develop standards for the siting of wind towers.

FLORIDA

Contact: Julie Rowland, Legislative Affairs Office, Florida Fish & Wildlife Conservation Commission, 850-487-3795, julie.rowland@MyFWC.com, 620 South Meridian Street, Tallahassee, FL 32399-1600

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Grant and rebate programs, tax incentives

Power Siting Authority: There is not significant wind power potential at this time, so no current regulations and local governments would most likely have jurisdiction for small scale projects. Florida DEP, Siting Coordination Office has broad authorities for certification of power plants - these are currently defined as traditional as well as solar power plants 75 MW or greater. Should utility scale wind power opportunities increase, this would be the most likely authority.

Wind Specific Siting Authority? No

Code or Regulations: The Power Plant Siting Act (PPSA), ss. 403.501-.518, F.S.

Role of State Fish & Wildlife Agency: Florida Fish & Wildlife Conservation Commission has joint environmental review with Department of Environmental Protection for utility projects.

How are wildlife laws applied: Same as any other development project. The agency is authorized to collect development-of-regional-impact wildlife mitigation contributions pursuant to s. 372.074(2), Florida Statutes, which are directed to the purchase and management of lands important to the conservation of fish and wildlife.

Wildlife Guidelines for Wind Power Siting: No Guidance

GEORGIA

Contact: Jim Ozier, Georgia DNR, (478) 994-1438, jim_ozier@dnr.state.ga.us, 116 Rum Creek Drive, Forsyth, GA 21029

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Green Certification, tax incentives

Power Siting Authority: Voluntary review of projects, local governments (through zoning authority or county planning boards) have primary authority. Environmental regulations apply to construction.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: Department of Natural Resources has a memorandum of understanding with environmental regulator for project review and will provide joint environmental review. May be asked for integrated resource planning.

How are wildlife laws applied: Same as any other development project, State cannot require mitigation.

Wildlife Guidelines for Wind Power Siting: No Guidance

HAWAII

Installed Utility Scale Wind Power: 49 MW

Renewable Portfolio Standard: Yes - 20% by 2020

State Renewable Energy Incentives: Tax incentives and industry recruitment.

Power Siting Authority: Most wind facilities are currently small in scale and addressed by local government through zoning. Facilities subject to standard environmental regulating.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: Permits are required from Hawaii Department of Land and Natural Resources. The State Department of Forestry and Wildlife (DOFAW) will provide general comments to potential site data that can be used to plan renewable energy projects. Historically, DOFAW reviews projects based on its environmental impacts to endangered flora and fauna since most requests occur outside of its primary forestry and wildlife management responsibilities.

IDAHO

Contact: Gregg Servheen, Wildlife Program Coordinator, Idaho Department of Fish and Game, 208-287-2713, gservheen@idfg.idaho.gov, 600 South Walnut, PO Box 25, Boise, ID 83707

Installed Utility Scale Wind Power: 75 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives and loan programs

Power Siting Authority: Wind power is currently unregulated at any level of government - local zoning may impact siting but this is variable. State energy siting legislation has been proposed this year but it may not pertain to wind project but rather only very large energy projects such as coal fired and nuclear power plants.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: Idaho Department of Fish & Game has no formal role in the siting process.

How are wildlife laws applied: Same as any other development project, State cannot require mitigation.

Wildlife Guidelines for Wind Power Siting: No Guidance

ILLINOIS

Contact: Todd Rettig, Manager, Division of Ecosystems and Environment, Illinois Department of Natural Resources, 217-557-0877, todd.rettig@illinois.gov, One Natural Resources Way, Springfield, IL 62702

Installed Utility Scale Wind Power: 107 MW

Renewable Portfolio Standard: Yes (goal) 8% by 2013

State Renewable Energy Incentives: Grant programs and tax incentives

Power Siting Authority: There are no specific authorities for regulating siting at the State level. Most projects would currently fall under the jurisdiction of local governments through county-level zoning or building permits.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: Decisions to grant zoning changes and building permits is subject to the Illinois Endangered Species Act (520 ILCS 10/1 – 11) and the Illinois Natural Areas Preservation Act (525 ILCS 30/1-26). These two statutes set up a consultation process that involves the IDNR evaluating impacts to protected natural resources and making recommendations (if necessary) to avoid or mitigate any adverse impacts. Units of local government are not required to adopt any IDNR recommendations during their zoning or permitting process. The consultation process is detailed in regulations at 17 Ill. Adm. Code Part 1075.

How are wildlife laws applied: Same as any other development or utility project; State cannot require mitigation unless threatened or endangered species are adversely affected.

Wildlife Guidelines for Wind Power Siting: No Guidance

INDIANA

Contact: Jon Eggen, Environmental Supervisor, DNR Division of Fish and Wildlife, (317) 233-4666, jeggen@dnr.IN.gov

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives

Power Siting Authority: Wind power facilities are regulated but only at the local level and siting requirements vary by location.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: Department of Natural Resources provides comments and recommendations if requested, but counties are under no obligation to seek input.

How are wildlife laws applied: Same as any other development project. DNR can require mitigation under certain circumstances through regulations that apply to all construction projects but are not specific to wind power. The Flood Control Act regulates construction in a floodway and allows for mitigation.

Wildlife Guidelines for Wind Power Siting: Draft guidelines

Lead Agency on Guidelines: Department of Natural Resources, Environmental Section

Status of Wildlife Guidelines: Internal draft, not available to public yet, they will be voluntary.

IOWA

Contact: Jennifer Moehlman, Iowa Department of Natural Resources, Energy and Waste Management Bureau, (515)281-8518, jennifer.moehlmann@dnr.state.ia.us,

Installed Utility Scale Wind Power: 936 MW

Renewable Portfolio Standard: Yes - 105 MW

State Renewable Energy Incentives: Grant and loan programs; tax incentives

Power Siting Authority: In Iowa, zoning and permitting is handled on a county and/or city level. Each county or city may have different guidelines and application procedures to follow. The Iowa Department of Natural Resources (DNR) has developed guidance – *Iowa Wind Energy Checklist* – on developing a small-scale wind turbine project in Iowa.

(<http://www.iowadnr.com/energy/renewable/files/windchecklist.pdf>). The Iowa Utilities Board provides a certificate of public convenience, use, and necessity for electric power generating plant or a combination of plants at a single site, owned by any person, with a total capacity of 25 MW of electricity or more. However it has been argued successfully that wind does not always have to go through the Board since it is typically individual generating units connecting to several different lines. Exemptions have been authorized in part because wind is a renewable energy source that the Board has been required to promote.

Wind Specific Siting Authority? No

Code or Regulations: Iowa Code §§ 476A.1 to 19

Role of State Fish & Wildlife Agency: All projects are reviewed and subject to environmental regulation by the Department of Natural Resources. The Utilities Board often defers to the DNR on environmental and land use factors. Counties are not required to consult with DNR. DNR is monitoring wind farms for avian mortality.

Wildlife Guidelines for Wind Power Siting: No Guidance for wildlife; The DNR has developed a map of “Areas of Concern for Wind Farm Sitings.” The map highlights protected natural resource and wildlife areas where developers may want to take extra precautions when developing wind farms.

KANSAS

Contact: Jim Hays, Kansas Department of Wildlife and Parks, jamesh@wp.state.ks.us

Installed Utility Scale Wind Power: 364 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Grant programs and tax incentives

Power Siting Authority: The authority to regulate land use in Kansas is under the purview of local governments through the state's planning and zoning statutes. Wind energy siting and permitting requirements vary from county to county based largely on whether or not a county is zoned. Currently, statewide regulations for siting wind projects do not exist. Kansas Energy Council provides coordination with counties and the Kansas Renewable Energy Working Group has developed siting guidelines to assist the counties' in their planning efforts.

Wind Specific Siting Authority? No

Code or Regulations: Planning & Zoning Statutes: (K.S.A. 12-741 et seq.)

Role of State Fish & Wildlife Agency: The guidelines suggest that counties have developers contact the Kansas Department of Wildlife and Parks to outline potential impacts to wildlife and habitat.

Wildlife Guidelines for Wind Power Siting: Kansas Department of Wildlife and Parks has a position statement on wind projects (www.kdwp.state.ks.us search for 'wind power' - see 'wind power position'). In addition, the Kansas Energy Council has developed a Wind Energy Siting Handbook, and the Kansas Renewable Energy Working Group has developed guidelines.

Lead Agency on Guidelines: Kansas Energy Council

Status of Wildlife Guidelines: Final - April 2005

Summary of Guidelines: Wind Siting Handbook provides voluntary guidelines on all aspects of wind power siting based on existing regulations in four counties (land use regulation is solely under the purview of local government in Kansas) and recommends requiring environmental assessment in siting decisions. Recommends developers contact appropriate agencies to assess impacts to potentially sensitive land uses and encourages avoidance of rare or disappearing ecosystems. Outlines biological and environmental assessment prior to development (encourages use of biological and environmental experts, including agency or university personnel. Recommends requiring resource management agency be contacted early in process and careful review of legally protected species' use of area. Provides specific recommendations including burying power lines, minimizing perching areas on turbines and siting away from known migratory routes. Outlines mitigation options for unavoidable impacts which may include ecological restoration, conservation easements, and long-term management agreements.

Web site for Guidelines: http://www.kansasenergy.org/KEC/documents/wind_siting_handbook.pdf
AND http://www.naseo.org/energy_sectors/wind/kansas_siting_guidelines.pdf

KENTUCKY

Contact: James Bush, Division of Renewable Energy & Energy Efficiency, (502) 564-7192, James.Bush@ky.gov, 500 Mero Street, 12th Floor, Capital Plaza Tower, Frankfort, KY 40601

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: No

State Renewable Energy Incentives: No state programs

Power Siting Authority: In general, Kentucky has low wind speeds and therefore limited wind energy potential. Most likely development would be for individual use which would be regulated by local zoning. If there were utility grade wind power developments, the Kentucky State Board on Electric Generation and Transmission Siting or the Public Services Commission would likely have authority. The Siting Board reviews generating facilities that sell power on the wholesale market and are commonly known as merchant power plants. Siting Board approval is required for merchant plants with a generating capacity of 10 MW or more.

Wind Specific Siting Authority? No

Code or Regulations: KRS 278.700 to 278.716

Role of State Fish & Wildlife Agency: The Secretary of the Environment and Public Protection Cabinet is one of 7 members of the Siting Board. Siting board review covers environmental matters not covered by permits issued by the Kentucky Department for Environmental Protection. The Department issues permits for air emissions, water withdrawals and discharges and solid waste disposal. The Siting Board review covers matters such as noise and visual impacts, among others.

Wildlife Guidelines for Wind Power Siting: No Guidance

LOUISIANA

Contact: Erik Baka, Biologist Manager, LA Dept. of Wildlife and Fisheries, Avian Nongame Program, (225) 765-2359, ebaka@wlf.louisiana.gov, PO Box 98000 Baton Rouge, LA 70898-9000

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives and loan programs

Power Siting Authority: Onshore wind power generation is very limited in Louisiana. Offshore development has more potential in Louisiana and possible siting might be on abandoned oil and gas platforms. This development would likely be regulated through Coastal Zone Management Act or Coastal Use Permits implemented by the LA Department of Natural Resources.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: LA Dept. of Fisheries and Wildlife is in negotiations to have joint environmental review but this is not finalized yet.

How are wildlife laws applied: Same as any other utility project, State can require mitigation

Wildlife Guidelines for Wind Power Siting: No Guidance

MAINE

Contact: Tom Hodgman, Wildlife Biologist, MDIFW - Bird Group, (207) 941-4482, tom.hodgman@maine.gov, 650 State St., Bangor, ME 04401

Installed Utility Scale Wind Power: 9 MW

Renewable Portfolio Standard: Yes - 10% by 2017

State Renewable Energy Incentives: Grant and rebate programs

Power Siting Authority: The Department of Environmental Protection regulates the construction of large structures and developments with a footprint exceeding 20 acres through "Site Law".

Wind Specific Siting Authority? No

Code or Regulations: Maine Site Law - Title 38, Chapter 3, §§ 481-490

Role of State Fish & Wildlife Agency: Department of Inland Fisheries & Wildlife is specifically responsible for Threatened and Endangered species impacts. DIFW has joint environmental review with Department of Environmental Protection and Land Use Regulatory Committee (for projects in state's unorganized territories) and advises regulatory agency on issues regarding the fish and wildlife resource.

How are wildlife laws applied: Projects that exceed a certain threshold for size (i.e., footprint) or occur in regulated habitats trigger review. Review includes occurrence of RTE species and an assessment that the proposed development does not adversely impact Fish and wildlife life cycles. Biological review can overrule other factors and prevent permit issuance. DEP provides a specific guidance on factors considered during wind power development at: <http://www.maine.gov/dep/blwq/docstand/windpower.pdf>. State has the authority to require mitigation.

Wildlife Guidelines for Wind Power Siting: Proposed Guidelines

Status of Wildlife Guidelines: Stakeholders group is in preliminary stages of drafting guidelines.

Summary of Guidelines: Department of Inland Fisheries & Wildlife typically asks for studies of bird migration including radar studies of night migrants and daytime counts of raptors. Radar and acoustic surveys for migrating bats. If appropriate, surveys for rare small mammals have been conducted. Rare community and rare plant surveys are commonly conducted as well as full work up for wetlands.

MARYLAND

Contact: Gwen Brewer, Science Program Manager, MD Department of Natural Resources, (410) 260-8558, gbrewer@dnr.state.md.us, or John Sherwell, Power Plant Research Program, (410-260-8667), jsherwell@dnr.state.md.us

Installed Utility Scale Wind Power: None (3 projects licensed)

Renewable Portfolio Standard: Yes - 7.5% from Tier I including wind, solar, biomass, etc. by 2019

State Renewable Energy Incentives: Rebates, tax incentives and loan programs

Power Siting Authority: Public Service Commission issues a Certificate of Public Convenience and Necessity (CPCN) for construction of electricity generating facilities, wind developments previously included. Legislation passed to exempt wind developments 70 MW or below from CPCN process (not yet signed into law as of 4/10/07).

Wind Specific Siting Authority? In limited situations if siting guidelines are adopted as regulations.

Code or Regulations: Siting Authority: Public Utility Companies Article, §§2-121 and 7-205—7-208, Annotated Code of Maryland; Environmental Requirements: COMAR 20.79.03.02

Role of State Fish & Wildlife Agency: Department of Natural Resources is one of the 8 State agencies that is an intervener on the application for a CPCN; DNR contributes conditions for operation and siting

How are wildlife laws applied: Currently same as any other utility project. State endangered species law instructs other state agencies to avoid impacts for listed species. Under the Power Plant Siting Law, more specific mitigation is described.

Wildlife Guidelines for Wind Power Siting: Guidelines completed (Siting Guidelines to Mitigate Avian and Bat Risks from Wind power Projects), but formal regulations not yet proposed and might only apply to limited situations because of recent legislation.

Lead Agency on Guidelines: Technical Advisory Group including representatives from DNR, university, federal agency, conservation organization and industry.

Status of Wildlife Guidelines: Public comment period closed, but proposed regulations are likely to be revised given recent legislation. If approved, will be mandatory but only for limited situations.

Summary of Guidelines: The guidelines are comprehensive for pre-siting evaluation, design and construction recommendations, lighting issues, etc. The applicant is required to get an Environmental Review from the State's Wildlife and Heritage Service to assess species and habitats of concern. A consultation with DNR Natural Heritage biologists is required to minimize seasonal (e.g. avian and bat breeding seasons) disturbance during construction and to outline pre-construction studies (one year of monitoring, additional monitoring of species of special concern) that must be undertaken. Studies will continue during development and the developer is required to do three years of monitoring post-construction. Impacts should be avoided or minimized before seeking mitigation; the guidelines outline mitigation options and adaptive management for unforeseen impacts.

Web site for Guidelines: <http://www.psc.state.md.us/psc/index.htm>; Admin Docket RM24

MASSACHUSETTS

Contact: Department of Energy Resources, (617) 727-4732, DOER.Energy@State.MA.US,

Installed Utility Scale Wind Power: 4 MW

Renewable Portfolio Standard: Yes - 4% by 2009 + 1% annual increase

State Renewable Energy Incentives: Rebates, tax incentives, grant and loan programs, industry recruitment and production incentives.

Power Siting Authority: Energy Facilities Siting Board regulates construction of power plants greater than 100 MW - none of Massachusetts current wind power plants would fall under this category. Smaller projects are dealt with through zoning and ordinances of cities and towns. State has developed model zoning by-laws that municipalities can enact. Offshore wind development has much greater potential in Massachusetts.

Wind Specific Siting Authority? No

Code or Regulations: Regulatory Authority for Siting Board: 980 CMR 2.00: M.G.L. c. 164, § 69H

Role of State Fish & Wildlife Agency: The Secretary of the Executive Office of Environmental Affairs is one of nine members of the Siting Board. Numerous agencies, including the Massachusetts Natural Heritage and Endangered Species program and the Department of Environmental Protection, may regulate components of the project (wetlands concerns, species concerns, etc.) no matter what government unit has final say in the project.

How are wildlife laws applied: Same as any development project.

Wildlife Guidelines for Wind Power Siting: No specific guidelines for wildlife, however the Department of Energy Resources and the Executive Office of Environmental Affairs have developed a model wind zoning by-laws to assist Massachusetts cities and towns in establishing reasonable standards for wind power development.

Lead Agency on Guidelines: Department of Energy Resources and Executive Office of Environmental Affairs

Summary of Guidelines: The recommended by-laws are voluntary and are very limited on wildlife related recommendations. The only components are for lighting, to limit non-blinking red lights to reduce attraction for wildlife, and a limited section on habitat impacts, recommending to limit the amount of ground cleared for construction.

Web site for Guidelines: Model County Ordinance:

<http://www.mass.gov/Eoca/docs/doer/renew/model-allow-wind-by-permit.pdf>

MICHIGAN

Contact: Karen Cleveland, Wildlife Biologist, P.O. Box 30444, Lansing, MI 48909-7944

Installed Utility Scale Wind Power: 3 MW

Renewable Portfolio Standard: Proposed - 10% by 2015 and 20% by 2025

State Renewable Energy Incentives: Grant programs, tax incentives and industry recruitment.

Power Siting Authority: Local Government manages land use through zoning and ordinances; Some local governmental units (i.e. townships and counties) have adopted local ordinances regarding the siting of wind power.

Wind Specific Siting Authority? No

Code or Regulations: State level: Michigan Tall Structures Act, Michigan Natural Resources and Environmental Protection Act.

Role of State Fish & Wildlife Agency: For projects requiring environmental review, the Department works with developers who contact them to avoid and minimize impacts.

How are wildlife laws applied: Same as any development project. Can require mitigation when Threatened or Endangered Species are involved or on Michigan DNR lands.

Wildlife Guidelines for Wind Power Siting: Michigan Siting Guidelines for Wind Energy Systems

Lead Agency on Guidelines: The Energy Office, Michigan Dept. of Labor and Economic Growth

Status of Wildlife Guidelines: Final - 12/14/2005

Summary of Guidelines: Voluntary guidelines provide recommended local zoning ordinances for set back requirements, sound requirements, environmental impact and avian & wildlife impact analysis, etc. Environmental Impact Analysis to assess impacts to natural environment and outline measures to minimize, eliminate or mitigate for impacts; shall comply with appropriate portions of the Michigan Natural Resources and Environmental Protection Act. Avian & Wildlife Impact Analysis, applicants shall have a third party professional to identify and assess any potential impacts on wildlife and endangered species; outlines siting that requires special scrutiny (near high concentrations of birds or bat hibernacula, etc.) must document plans to minimize, eliminate or mitigate for identified impacts. Must comply with federal and state endangered species laws. Includes guidelines for post-construction mortality study. Directs applicants to FWS Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines.

Web site for Guidelines:

http://www.michigan.gov/documents/Wind_and_Solar_Siting_Guidelines_Draft_5_96872_7.pdf

MINNESOTA

Contact: Energy Information Center, (651) 296-5175, energy.info@state.mn.us,

Installed Utility Scale Wind Power: 895 MW

Renewable Portfolio Standard: Yes (goal) - 10% by 2015 + Xcel Energy mandate of 1125 MW wind by 2010

State Renewable Energy Incentives: Rebates, tax incentives, loan programs, production incentives.

Power Siting Authority: Minnesota Public Utility Commission for projects greater than 5 MW - this regulatory authority was transferred to the PUC from the Minnesota Environmental Quality Board in July 2005. The PUC has a specific set of requirements for siting of wind energy facilities (separate from other electric generating facilities). Information on wind siting can be found at: <http://energyfacilities.puc.state.mn.us/wind.html>. County governments are responsible for smaller wind facilities

Wind Specific Siting Authority? Yes

Code or Regulations: Wind siting authority – Minn. Stat. §§ 116C.691-.697; Permitting requirements – Minnesota Rules Chapter 4401

Role of State Fish & Wildlife Agency: The commission requires, among other things, an analysis of the proposed facility's potential environmental and wildlife impacts, proposed mitigative measures, and any adverse environmental effects that cannot be avoided.

How are wildlife laws applied: Much of the wind power development potential is in the southwest portion of the state, so the state conducted one large 4-year avian impact study and a 2-year bat impact study in the area. On the basis of the results of the state-required studies, state and local agencies in Minnesota are not requiring post-construction studies for wind power development in this portion of the state.

Wildlife Guidelines for Wind Power Siting: No Guidance

MISSISSIPPI

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Loan programs

Power Siting Authority: There isn't much emphasis on wind power development in the state, and wind energy is not specifically covered by any state regulatory authority.

Wind Specific Siting Authority? No

Wildlife Guidelines for Wind Power Siting: No Guidance

MISSOURI

Contact: Brad Jacobs, MO Department of Conservation, (573) 751-4115 ext. 3648,
Brad.jacobs@mdc.mo.gov,

Installed Utility Scale Wind Power: 1 project under construction, 1 project proposed.

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Grant programs and planning assistance

Power Siting Authority: No governmental entity in the state regulates siting for wind power; the first commercial grade wind system was installed in the state less than 6 months ago. Missouri's Public Service Commission and Department of Natural Resources will likely have review/oversight but no policies are in place yet. Developments would be subject to standard environmental laws including voluntary review for threatened and endangered species through the Heritage database. Projects may be affected by local zoning if local governments have anything in place.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: Department of Conservation currently has no formal role in the process but would be involved should development impact existing wildlife related laws and are in contact with Department of Natural Resources which is the agency currently most involved in wind power issues. State can not require mitigation.

Wildlife Guidelines for Wind Power Siting: No Guidance

MONTANA

Installed Utility Scale Wind Power: 147 MW

Renewable Portfolio Standard: Yes - 15% by 2015

State Renewable Energy Incentives: Tax incentives and loan programs

Power Siting Authority: Wind power development specifically is generally unregulated at any level of government. However, components of the development may be regulated by the Department of Environmental Quality, for instance if it impacts wetlands, water quality, etc. In addition, if transmission lines greater than 69 kilovolts are necessary a Certificate of Environmental Compatibility might be necessary. Madison County has also enacted an ordinance to regulate the construction of tall towers including Wind Energy Conversion Systems.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: The Department of Natural Resources and Conservation may require easements or leases when state lands are used or crossed. But Montana Department of Fish, Wildlife & Parks is not specifically included in the process unless there are Threatened & Endangered species issues.

How are wildlife laws applied: Same as any development project.

Wildlife Guidelines for Wind Power Siting: Uses US Fish & Wildlife Service's interim guidelines.

Summary of Guidelines: The State Department of Environmental Quality's wind power website (<http://deq.mt.gov/Energy/Renewable/WindWeb/indexWindinMT.asp>) references the U.S. Fish & Wildlife Service's Interim Guidance and provides information on the Service's recommended ranking system, developed in Montana, that focuses on pre-development evaluation of proposed sites based on the potential impacts to wildlife. These are voluntary recommendations.

NEBRASKA

Installed Utility Scale Wind Power: 73 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives and loan programs. Public ownership of electric utilities in Nebraska precludes wind projects from federal wind energy Production Tax Credit.

Power Siting Authority: Electric utility facilities are all publicly owned in Nebraska (by historical precedent, not by statute) so wind power facilities must first be approved by the local utility district. The project is then brought before the Nebraska Power Review Board which approves construction for new electric generating facilities; one of the PRB's primary focuses is on ensuring "least cost" construction and power production to reduce costs for rate payers which could undermine some wind development. Local government has authority over small, consumer-scale wind power.

Wind Specific Siting Authority? No

Code or Regulations: Nebraska Power Review Board authority: Neb. Rev. Stat. §§ 70-1001 through 70-1027; construction review: §§ 70-1012 through 1014

Role of State Fish & Wildlife Agency: Environmental review and considerations do not appear to be part of the Power Review Board permitting process.

Wildlife Guidelines for Wind Power Siting: No Guidance

NEVADA

Contact: Shawn Espinosa, Nevada Department of Wildlife, sespinosa@ndow.org, 1100 Valley Road Reno, NV 89512

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: Yes - 20% by 2015

State Renewable Energy Incentives: Rebates and tax incentives

Power Siting Authority: Because much of Nevada is federally owned public lands, federal agency (BLM, FWS, NPS, etc.) requirements and NEPA could affect much wind development in the state. Public Utilities Commission of Nevada issues a permit for construction of electrical facilities, this includes renewable energy generating facilities greater than 150 KW.

Code or Regulations: NRS 704.820 through 704.900

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: Department of Natural Resources has integrated resource management and joint environmental review for projects

How are wildlife laws applied: Utility regulator considers trade-offs and decides. State does not have the authority to require mitigation.

Wildlife Guidelines for Wind Power Siting: Use US Fish & Wildlife Service interim guidelines as well as Oregon and Washington state guidance.

NEW HAMPSHIRE

Contact: Michael Marchand, Wildlife Biologist, NH Fish & Game,
michael.marchand@wildlife.state.nh.us, 11 Hazen Drive, Concord NH 03301

Installed Utility Scale Wind Power: 1 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives and loan programs

Power Siting Authority: New Hampshire Energy Facility Siting Evaluation Committee provides a Certificate for Site and Facility for energy facilities over 30 MW; developers of facilities less than 30 MW can opt-in to the SEC process to preempt local jurisdiction or to access the aggressive schedule (within 9 months from application) that the SEC is required to pursue. If not going through the SEC process, wind development would fall under local jurisdiction. The state is currently going through their first wind power siting evaluation.

Wind Specific Siting Authority? No

Code or Regulations: RSA 162-H

Role of State Fish & Wildlife Agency: The Executive Director of the New Hampshire Fish & Game Department (NHFG) is one of 15 officials from 8 state agencies that sit on the Siting Evaluation Committee. NH Fish & Game Department has review of the project for impacts to wildlife especially threatened & endangered species. Department of Environmental Services is responsible for wetlands, alteration of terrain

How are wildlife laws applied: The siting application includes an evaluation of potential impacts on the environment and plans to study and resolving environmental problems.

Wildlife Guidelines for Wind Power Siting: Proposed guidance, using Vermont's guidance as a basis.

Lead Agency on Guidelines: A stakeholders group led by NH Audubon and Appalachian Mountain Club (AMC) with representatives from NHFG, USFWS, non-profits (Audubon, AMC, TNC) and wind representatives is drafting the guidelines.

Status of Wildlife Guidelines: Preliminary draft, not available at this time.

Summary of Guidelines: Evaluation of whether project is likely or less likely to have major impacts. Projects are placed into categories. For wildlife, pre- and post-monitoring studies are outlined.

NEW JERSEY

Contact: Dave Golden, dgolden@gtc3.com; Ted Nichols: tnichols@gtc3.com

Installed Utility Scale Wind Power: 8 MW

Renewable Portfolio Standard: Yes – 22.5% by 2021

State Renewable Energy Incentives: Rebates, tax incentives, loan programs, industry recruitment, production incentives.

Power Siting Authority: Department of Environmental Protection through environmental regulations. Local governments through planning/zoning commission. Most wind power potential is offshore and would be subject to state coastal zone management rules.

Wind Specific Siting Authority? No

Code or Regulations: NJDEP Coastal Zone Management Rules

Role of State Fish & Wildlife Agency: Agency is a primary decision-maker regarding siting.

Wildlife Guidelines for Wind Power Siting: No Guidance

NEW MEXICO

Contact: Michael McDiarmid, Wind Power Program Manager, State of New Mexico Energy, Minerals & Natural Resources Department, (505) 476-3319, mmcdiarmid@state.nm.us, 1220 S. St. Francis Drive Santa Fe, NM 87505

Installed Utility Scale Wind Power: 497 MW

Renewable Portfolio Standard: Yes - 10% by 2011

State Renewable Energy Incentives: Tax incentives and bonds

Power Siting Authority: Counties regulate wind power siting through zoning approval, requirements vary by county. Building permits from the Construction Industries Division (CID) of the New Mexico Regulation and Licensing Department are necessary for all wind power developments in the state. For projects less than 300 MW in size and producing no emissions, there is no official process for review by the New Mexico Public Regulation Commission, although they might review the project.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: The state recommends a “fatal flaw” analysis, similar to general NEPA guidelines, to assess specific siting considerations including wildlife; developers are recommended to consult with the New Mexico Game & Fish Department in this process.

Wildlife Guidelines for Wind Power Siting: Impacts of Wind Energy Development on Wildlife

Lead Agency on Guidelines: New Mexico Game & Fish Department

Status of Wildlife Guidelines: January, 2004

Summary of Guidelines: Based on the U.S. Fish & Wildlife Service’s Interim Guidance, the New Mexico Game & Fish Department's voluntary guidelines focus on Site Development recommendations and Turbine Design and Operation recommendations. The Siting recommendations focus on avoiding important wildlife habitat including bird migration pathways, bat hibernacula, etc. The guidelines specifically recommend avoiding known Lesser Prairie Chicken habitat recommending a 5 mile buffer from known leks. In addition, habitat restoration and mortality studies post-construction are encouraged. The turbine design component references both the FWS guidance and NMGF guidelines on towers and power line trenching. Recommend and focuses on specific design concepts to minimize roosting and avoid air strikes. Seasonal shut-downs during migratory times are encouraged as necessary.

Web site for Guidelines:

http://www.wildlife.state.nm.us/conservation/habitat_handbook/WindEnergyGuidelines.htm

NEW YORK

Contact: Brianna Gary, Avian Ecologist, NYSDEC, 518-402-8858, bmgary@gw.dec.state.ny.us, 625 Broadway, 5th Floor, Albany, NY 12233-4756

Installed Utility Scale Wind Power: 368 MW plus 20 MW project scheduled for completion in April 2007

Renewable Portfolio Standard: Yes - 25% by 2013

State Renewable Energy Incentives: Rebates, tax incentives, grant and loan programs, industry recruitment.

Power Siting Authority: Local government manages land use including wind energy development through zoning permits within requirements for state and local environmental review; State Public Service Commission approves construction of facilities over 80 MW.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: Dept. of Environmental Conservation will participate in environmental review of project but may not have discretionary authority over siting

Wildlife Guidelines for Wind Power Siting: Draft Guidelines, currently not public.

Lead Agency on Guidelines: New York State Department of Environmental Conservation

Summary of Guidelines: NYS Department of Environmental Conservation is in the process of developing voluntary guidelines for conducting pre-and post-construction bird and bat studies at proposed and operating wind projects. A draft is currently under review by staff biologists, and will be available for public comment prior to finalizing the document.

NORTH CAROLINA

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives and loan programs

Power Siting Authority: North Carolina Utilities Commission provides a certificate of public convenience and necessity for energy facilities greater than 300 MW. Small wind energy facilities are typically handled by County Planning Boards, specific consideration or ordinances relating to wind power are variable. Watauga county has an ordinance in place for permitting small facilities

Wind Specific Siting Authority? No

Code or Regulations: Procedures for obtaining a CPCN are included in General Statutes (NCUC Docket No. E-100, Sub 54, 12/8/88; E-100, Sub 78A, 4/29/98). NCUC Rule R8-61 outlines what should be included in an application for a CPCN.

Wildlife Guidelines for Wind Power Siting: No Guidance

NORTH DAKOTA

Contact: John Schumacher, Resource Biologist, ND Game & Fish Dept, (701) 328-6321, jdschumacher@nd.gov

Installed Utility Scale Wind Power: 178 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives

Power Siting Authority: North Dakota Public Service Commission regulates siting of wind power facilities greater than 100 MW by providing a Certificate of Site Compatibility, facilities smaller than 80 MW may choose to receive certification by the PSC. Smaller facilities may be regulated by local zoning but this is highly variable by township or county board.

Wind Specific Siting Authority? Yes

Code or Regulations: North Dakota Administrative Code, Title 69-06

Role of State Fish & Wildlife Agency: The Game & Fish Department has joint environmental review and is one of 21 designated state agencies entitled to receive notice on energy facility siting reviewed by PSC (69-06-01-05).

How are wildlife laws applied: Same as any other utility project. The PSC can require mitigation as part of the permitting process for facilities greater than 100 MW.

Wildlife Guidelines for Wind Power Siting: Uses US Fish & Wildlife Service's interim guidelines.

OHIO

Installed Utility Scale Wind Power: 7 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives, grant and loan programs, industry recruitment

Power Siting Authority: Ohio Power Siting Board must provide a certificate of environmental compatibility and public need prior to construction of major utility facility (50 MW or more). Smaller facilities fall under local jurisdiction.

Wind Specific Siting Authority? No

Code or Regulations: Siting of major facilities is guided by Ohio Revised Code, Chapter 4906 and Ohio Administrative Code, Chapter 4906.

Role of State Fish & Wildlife Agency: Ohio Department of Natural Resources a member of OPSB

Wildlife Guidelines for Wind Power Siting: 1) Siting New Energy Infrastructure in Ohio - A Guidance Document (General Siting Manual) 2) Summary of the Ohio Dept. of Natural Resources Authorities & Guidance for the Siting & Operation of Wind Power Generating Facilities in Ohio

Status of Wildlife Guidelines: OPSB Manual - February 2005; ODNR Guidance - 11/21/05 Draft

Summary of Guidelines: Ohio has two documents that are relevant to wind siting. The first is a manual developed by the Ohio Power Siting Board that outlines the process including application, review, hearings etc. for receiving approval to develop a major utility facility. This siting manual does not provide details on wildlife or environmental concerns, but lists the ODNR divisions that might review siting proposals. The ODNR Guidance provides general guidance of the permits, project reviews, authorities, etc. within the Divisions and Offices of ODNR as they relate to the siting and operation of wind power generating facilities. The guidance outlines how each division/office might be involved in reviewing permits and environmental assessments for each project and provides the codes and authorities that relate to specific areas of concern. This is a more detailed overview of a table that is included in the OPSB Siting Manual.

Web site for Guidelines: OPSB Siting Manual -

<http://www.puco.ohio.gov/emplibrary/files/media/OPSB/OhioSitingManual.pdf>

OKLAHOMA

Contact: Russ Horton, Lands & Wildlife Diversity Supervisor, OK Dept. of Wildlife Conservation, (405) 202-5901, rhorton270@sbcglobal.net,

Installed Utility Scale Wind Power: 535 MW

Renewable Portfolio Standard: No - Legislation has been introduced but has failed to pass so far

State Renewable Energy Incentives: Green Certification, tax incentives and industry recruitment

Power Siting Authority: Wind power can go through voluntary review by the Oklahoma Corporation Commission.

Wind Specific Siting Authority? No

How are wildlife laws applied: Same as any other utility project. State has the authority to require mitigation.

Wildlife Guidelines for Wind Power Siting: Uses US Fish & Wildlife Service's interim guidelines.

OREGON

Installed Utility Scale Wind Power: 439 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Rebates, tax incentives, grant and loan programs

Power Siting Authority: Energy Facility Siting Council approves site certificates for wind power plants with an average electric generating capacity of 105 MW or more. Land use approval can either be through local jurisdiction or the Siting Council can make the land use decision. The site certificate serves as a consolidated state permit. Smaller wind generating facilities are regulated by zoning laws at city or county level. Developers would initially apply to the land use planning authorities in local jurisdictions where wind facilities are proposed and follow their procedures to obtain conditional use permits. Concurrently, developers would need to contact all appropriate state agencies to ensure that proposed wind facilities would qualify under all other permitting regulations.

Wind Specific Siting Authority? Yes

Code or Regulations: OR Rev. Stat. §§469.300 – 469.560 OR Admin. Rules Chapter 345

Role of State Fish & Wildlife Agency: Oregon Department of Fish & Wildlife is involved in siting review of habitat and threatened or endangered species issues by EFSC standards.

How are wildlife laws applied: Energy Siting Council Standards require compliance with Oregon Department of Fish & Wildlife (ODFW) habitat mitigation goals and standards; also requires documentation of potential threatened and endangered species and consultation with ODFW if facility will impact state or federally listed species. ODFW has specific Administrative Rules outlining fish & wildlife habitat mitigation policy for development (OAR 635-415 0000 to 0025).

Wildlife Guidelines for Wind Power Siting: Energy Facility Siting Standards

Lead Agency on Guidelines: Oregon Department of Energy developed model ordinance

Status of Wildlife Guidelines: Final

Summary of Guidelines: The Energy Siting Council Standards, codified in OAR Chapter 345, Division 22, are mandatory and require that the proposed facility comply with the habitat mitigation goals and standards of the Oregon Department of Fish and Wildlife (ODFW). The Council must determine whether the applicant has done appropriate site-specific studies to characterize the fish and wildlife habitat at the site and nearby. The applicant must provide appropriate studies of the site to identify threatened or endangered species that the proposed facility could affect. If the facility might adversely affect either a state or federally-listed threatened or endangered wildlife species, the applicant should consult with the Oregon Department of Fish and Wildlife. If a potential risk to the survival or recovery of a threatened or endangered species exists, the applicant must redesign or relocate the facility to avoid that risk or propose appropriate mitigation measures.

Web site for Guidelines: Energy Siting Standards are at <http://www.oregon.gov/ENERGY/SITING/standards.shtml>

Model ordinance for cities and counties can be found at: <http://www.oregon.gov/ENERGY/SITING/docs/ModelEnergyOrdinance.pdf>

PENNSYLVANIA

Contact: William A. Capouillez, Bureau Director, Pennsylvania Game Commission, (717) 787-6818, wcapouille@state.pa.us, 2001 Elmerton Ave., Harrisburg PA 17110

Installed Utility Scale Wind Power: 179 MW

Renewable Portfolio Standard: Yes - 8% Tier I, 10% Tier II by 2020

State Renewable Energy Incentives: Grant programs and tax incentives

Power Siting Authority: Local government has the authority to plan and regulate land use.

Wind Specific Siting Authority? No

Code or Regulations: Land use authority granted to local government in Municipalities Planning Code

Role of State Fish & Wildlife Agency: Department of Conservation & Natural Resources and Pennsylvania Game Commission and PA Fish & Boat Commission all can review proposal; mandatory for Threatened or Endangered Species, wetlands etc.

How are wildlife laws applied: The Game Commission has also developed a cooperative agreement for wind developers to encourage development that is in the best regard for the Commonwealth's wildlife resources. Mitigation is mandatory only when impacting T&E species.

Wildlife Guidelines for Wind Power Siting: Standardized Site Assessment and Monitoring Procedures Regarding Bats/Birds and Wind Power Development; Mortality Studies Guidance

Lead Agency on Guidelines: Pennsylvania Game Commission

Status of Wildlife Guidelines: Final expected late winter 2007

Summary of Guidelines: A model ordinance was developed by the state in March 2006 to help prepare municipalities for future wind power facilities but there is no mention of wildlife or environmental requirements within the model. The Pennsylvania Game Commission developed voluntary standardized procedures for site assessment and monitoring of birds and bats at wind facilities. The recommendations were developed to accomplish two main goals: to standardize the process of documenting the wildlife impacts at wind farms so they may be comparable and to collect data before construction in an attempt to determine site assessment for future use. The Game Commission has also outlined steps for appropriate post-construction mortality studies and in 2005 finalized guidelines for development of wind facilities on Game Lands.

Web site for Guidelines: PA Model Wind Ordinance - http://www.pawindenergy.com/pa/Model_Wind_Ordinance_Final_3_21_06.pdf

RHODE ISLAND

Installed Utility Scale Wind Power: 1 MW

Renewable Portfolio Standard: Yes - 15% by 2020

State Renewable Energy Incentives: Rebates and tax incentives

Power Siting Authority: Rhode Island Energy Facility Siting Board, operating under the Public Utilities Commission, licenses energy facilities capable of operating at a gross capacity of 40 MW or more.

Wind Specific Siting Authority? No

Code or Regulations: RI Gen. Laws Section 42-98-1

Role of State Fish & Wildlife Agency: The Director of the Department of Environmental Management is one of three members of the Energy Facility Siting Board.

Wildlife Guidelines for Wind Power Siting: No Guidance

SOUTH CAROLINA

Contact: Lauren Chestnut, Law Clerk, SCDNR, (803) 734-4006, ClerksL@dnr.sc.gov, P.O. Box 167,1000 Assembly Street, Columbia, SC 29202

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Planning Assistance, tax incentives and rebates

Power Siting Authority: Wind power is currently unregulated at any level of government. Legislation has been introduced in the State House to establish a committee to determine feasibility of establishing wind energy production farms. (www.scstatehouse.net; House Bill H 3533). State Public Service Commission regulates major utility facilities (electric generating facilities greater than 75 MW) - wind is not specifically part of the PSC jurisdiction at this time. SC's wind potential may be limited, but a Joint Resolution to create a Wind Energy Production Farms Feasibility Study Committee was introduced in the state legislature on Feb. 15, 2007.

Wind Specific Siting Authority? No

Code or Regulations: SC Code of Law 58-33-10 to 170

Role of State Fish & Wildlife Agency: SC Department of Natural Resources is a party to PSC certification proceedings.

How are wildlife laws applied: State can require mitigation under Section 401 of the Clean Water Act.

Wildlife Guidelines for Wind Power Siting: No Guidance

SOUTH DAKOTA

Contact: Silka Kempema, South Dakota Department of Game, Fish and Parks (SDGFP), (605) 773-2742, silka.kempema@state.sd.us, 523 East Capitol Avenue, Pierre, SD 57501

Installed Utility Scale Wind Power: 44 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives

Power Siting Authority: South Dakota Public Utility Commission (SDPUC) has permitting authority for energy conversion and transmission facilities and has regulatory authority to provide siting guidelines for wind power projects greater than 100 MW. Smaller projects are subject to local government review, only a few counties currently have regulations specific to wind power.

Wind Specific Siting Authority? Yes

Code or Regulations: SDCL 49-41B provides SDPUC regulatory authority; SDPUC Energy Facility Siting Rules (20:10:22); South Dakota Environmental Policy Act (SDCL 34A-9).

Role of State Fish & Wildlife Agency: SDPUC has agreed to distribute siting guidelines developed by SD Department of Game, Fish & Parks to stakeholders involved in the development of wind power in South Dakota.

How are wildlife laws applied: Prior to the issuance of a permit, the SDPUC may prepare or require the preparation of an environmental impact statement and applicants must demonstrate that all applicable state water and air quality standards and regulations (administered by SDDENR) are met. State does not have the authority to require mitigation. The state Endangered and Threatened Species law (SDCL 34A-8) does not allow for take except as provided for in the statute.

Wildlife Guidelines for Wind Power Siting: Siting Guidelines for Wind Power Projects in South Dakota

Lead Agency on Guidelines: Department of Game, Fish & Parks

Status of Wildlife Guidelines: Final

Summary of Guidelines: South Dakota's voluntary guidelines were developed using Kansas Renewable Energy Working Group Environmental and Siting Committee's Siting Guidelines for Wind power Projects in Kansas and the National Wind Coordinating Committee's Permitting of Wind Energy Facilities: A Handbook. The guidelines address activities and concerns associated with siting and permitting wind turbines. Items addressed within the guidelines are divided into eleven categories. These categories are as follows: 1) land use, 2) natural and biological resources, 3) noise, 4) visual resources, 5) public interaction, 6) soil erosion and/or water quality, 7) health and safety, 8) cultural, archaeological, and paleontological resources, 9) socioeconomic, public service, and infrastructure, 10) solid and hazardous wasters, and 11) air and climate.

Web site for Guidelines: <http://www.sdgifp.info/Wildlife/Diversity/windpower.htm>

TENNESSEE

Installed Utility Scale Wind Power: 29 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Grant and loan programs; tax incentives

Power Siting Authority: It was recommended in the State Energy Policy that power producers apply to Tennessee's Department of Economic & Community Development (TECD) for permitting of merchant power plants greater than 50 MW. It is unclear if this has been codified in law or regulation.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: TECD performs an initial review for baseline information about project need, transmission and economic needs. If the application is recommended for further consideration it is forwarded to the TN Department of Environment & Conservation for environmental permitting which includes review of potential impacts to Threatened & Endangered Species.

Wildlife Guidelines for Wind Power Siting: No Guidance

TEXAS

Contact: Kathy Boydston, Texas Parks & Wildlife Department, Kathy.Boydston@tpwd.state.tx.us

Installed Utility Scale Wind Power: 2768 MW

Renewable Portfolio Standard: Yes - 5880 MW by 2015, 2280 by Jan. 2007 which was exceeded in summer 2006

State Renewable Energy Incentives: Grant programs, planning assistance, tax incentives and industry recruitment

Power Siting Authority: Voluntary Review; unregulated by any level of government - county board can choose not to give a tax abatement if there is public opposition.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: If Texas Parks & Wildlife Department (TPWD) is asked by industry to review a project, they will review it as if it were a development project regulated by NEPA.

How are wildlife laws applied: Same as any other development or utility project. Texas Parks and Wildlife works under NEPA, ESA, Clean Water Act, etc. TPWD has own code that states they will review projects that impact fish and wildlife resources and make recommendations to minimize those impacts, which would include recommendations for appropriate mitigation (TPWD Code §12.0011).

Wildlife Guidelines for Wind Power Siting: Draft Guidelines in review process

Summary of Guidelines: Current draft recommends pre- and post-construction surveys, with a step down method. This would require 3 years pre-construction surveys (birds and bats) in an area where no wind development has occurred, 2 years where there have been other wind farms and preconstruction surveys performed, 1 year where the preconstruction surveys and post construction surveys support little or no use of the area and minimal mortality. Asking for a minimum of 2 years post-construction surveys for both species. Also looking at voluntary mitigation, based on habitat impacts. TPWD is still in negotiations on these guidelines.

UTAH

Contact: Bill James, Energy Development / NEPA Coordinator, Utah Division of Wildlife Resources, billjames@utah.gov

Installed Utility Scale Wind Power: 1 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives

Power Siting Authority: There is no single Utah State government agency with primary responsibility for electric generation plant siting. Public Service Commission of Utah, Utah Division of Public Utilities and many others are included in the list and it is the developer's responsibility to contact each agency to determine the necessary requirements for the specific proposed project.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: The Utah Department of Natural Resources, Division of Wildlife Resources are listed as agencies that developers must contact for their specific project.

Wildlife Guidelines for Wind Power Siting: No Guidance

VERMONT

Contact: Julie Moore, Agency of Natural Resources, (802) 241-3687, julie.moore@state.vt.us

Installed Utility Scale Wind Power: 6 MW

Renewable Portfolio Standard: Yes – Renewable Energy meets load growth by 2012; draft legislation to require 100MW from wind by 2017

State Renewable Energy Incentives: Rebates and tax incentives

Power Siting Authority: Vermont Public Service Board provides Certificate of Public Good for all wind power facilities except where it is operated solely for on-site consumption by the owner.

Wind Specific Siting Authority? Yes

Code or Regulations: 30 V.S.A. § 248, 10 V.S.A. § 1424a(d) and § 6086(a)(1) through (8) and (9)(K)

Role of State Fish & Wildlife Agency: The Vermont Agency of Natural Resources is a statutory party to the proceedings of utility-scale projects subject to the reviewing authority of the Vermont Public Service Board under state statute. In this capacity the Agency acts as an advisor to the Board on matters pertaining to natural resource protection, impact assessment, and mitigation associated with public utility projects subject to their regulatory authority.

How are wildlife laws applied: Same as any other development project, different standards/processes apply. State F/W Agency can Require Mitigation

Wildlife Guidelines for Wind Power Siting: Guidelines for the Review and Evaluation of Potential Natural Resources Impacts from Utility-Scale Wind Energy Facilities in Vermont

Lead Agency on Guidelines: Vermont Agency of Natural Resources

Status of Wildlife Guidelines: Draft - April 2006

Summary of Guidelines: The draft voluntary guidelines establish a process for the Agency of Natural Resources to review proposals and applications for Certificates of Public Good (CPGs) related to the development of utility-scale wind power facilities. The guidelines provide a detailed outline of expectations for pre- and post-construction data collection as well as general guidelines for construction, operation and maintenance of utility-scale wind facilities. Included are recommendations for preliminary site assessment, resource analysis and inventory of wildlife including rare, threatened or endangered species. ANR provides consultation, preferably at the earliest stages of development, that includes site visits, review of initial resource assessments and guidance on pre-construction studies and land management plans. Finally, the guidelines outline components of post-construction studies and operational protocols with detailed information about possible mitigation options should surveys find the project is having undue adverse impacts on the natural environment.

Web site for Guidelines: <http://www.anr.state.vt.us/site/html/plan/DraftWindGuidelines.pdf>

VIRGINIA

Contact: Rick Reynolds, Virginia Department of Game and Inland Fisheries, (540) 248-9360, Rick.Reynolds@dgif.virginia.gov, P.O. Box 996, Verona, VA 24482

Installed Utility Scale Wind Power: None

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives and industry recruitment.

Power Siting Authority: The Virginia State Corporation Commission provides a certificate of convenience and necessity for siting new public utility facilities. Small wind power is regulated at the local level only.

Wind Specific Siting Authority? No

Code or Regulations: Power Siting Law - 56-265.1 to 9

Role of State Fish & Wildlife Agency: With respect to wildlife, the VA State Corporation Commission (SCC) has an MOU with the VA Dept. of Environmental Quality to review and consider environmental issues concerning power projects in VA. DEQ compiles comments from the other state natural resource agencies and provides these to the SCC for their consideration

How are wildlife laws applied: Same as any other development/utility project, State Threatened and Endangered Species law and state code prohibits unauthorized take of wildlife. State cannot require mitigation.

Wildlife Guidelines for Wind Power Siting: No state guidelines, state has been required to develop potential siting areas and fish & wildlife considerations is expected to be part of that.

WASHINGTON

Contact: Greg Hueckel, Assistant Director, Washington Dept. of Fish & Wildlife, hueckgjh@dfw.wa.gov,

Installed Utility Scale Wind Power: 818 MW

Renewable Portfolio Standard: Yes - 15% by 2020

State Renewable Energy Incentives: Grant programs, planning assistance, tax and production incentives, industry recruitment; green certification exists but not a state program

Power Siting Authority: The State Energy Facility Site Evaluation Council has jurisdiction over all major energy facilities (greater than 350 MW) and any sized renewable energy facilities that choose to participate in the EFSEC review process. Local governments permit smaller projects and those that choose not to go through the EFSEC review. Projects are subject to State Environmental Policy Act and the Washington Legislature passed HB 2402 in March 2006, which provides for expedited review for those facilities that pass the State Environmental Policy Act checklist for renewable energy applications.

Wind Specific Siting Authority? No

Code or Regulations: State Energy Facility Site Evaluation Council – Wash. Rev. Code §§80.50.010 - 80.50.904 and Wash. Admin. Code chaps. 463-06 - 463-78; State Environmental Policy Act – Wash. Rev. Code 80

Role of State Fish & Wildlife Agency: Regulatory agency must consult with Dept. of Fish & Wildlife and provide opportunity to comment on project through State Environmental Policy Act. WDFW is one of 5 Agencies represented on EFSEC.

How are wildlife laws applied: There are no State Statutes that require protection of wildlife habitat unless EFSEC process is selected. The State does not have authority to require mitigation

Wildlife Guidelines for Wind Power Siting: Baseline & Monitoring Studies for Wind Projects

Status of Wildlife Guidelines: Final - August 2003

Summary of Guidelines: The voluntary Wind Power Guidelines are used by the Department for its comments on wind energy projects through the State Environmental Policy Act. The guidelines outline pre-project assessment with the goal of avoiding or minimizing avian and bat mortality. It also provides information on operational monitoring after construction and recommends the establishment of a Technical Advisory Committee to review monitoring data and make adaptive management recommendations. The guidelines also provide alternatives for mitigation by directing development to previously disturbed habitats (as opposed to undisturbed native habitat) and provides ratios for replacement habitat as mitigation for projects. In addition, it provides an alternative mitigation option to streamline the mitigation process and ensure that mitigation dollars are spent on acquiring, restoring and managing strategically important habitat.

Web site for Guidelines: <http://wdfw.wa.gov/hab/engineer/windpower/index.htm>

WEST VIRGINIA

Contact: Curtis Taylor, Chief Wildlife Resources, WV Dept. of Natural Resources, 304-558-2771, curtistaylor@wvdnr.gov

Installed Utility Scale Wind Power: 66 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Tax incentives

Power Siting Authority: State Public Service Commission has sole authority to regulate development though local government can exert authority through zoning laws.

Wind Specific Siting Authority? No

Role of State Fish & Wildlife Agency: State Public Service Commission requires wildlife assessments in their siting review, but the Department of Natural Resources is not involved in the review. DNR has the same rights as the public and can intervene and provide testimony regarding concerns, but no formal role.

How are wildlife laws applied: Same as any other development project. The DNR has the ability to require mitigation through replacement costs for impacts to mammals and birds that are taken above any threshold set by the agency.

Wildlife Guidelines for Wind Power Siting: The agency is considering drafting guidance for the wind power industry that addresses the many wildlife issues brought forward by the wind industry. To date they are reviewing policies, guidance and procedures prepared and implemented by other states to determine the best tools for the tool box.

WISCONSIN

Contact: Steve Ugoretz, DNR Office of Energy, (608) 266-6673, steven.ugoretz@dnr.state.wi.us,

Installed Utility Scale Wind Power: 53 MW

Renewable Portfolio Standard: Yes (goal) - 10% by 2015

State Renewable Energy Incentives: Grant programs, planning assistance, rebates and tax incentives

Power Siting Authority: Public Service Commission of Wisconsin provides Certificate of Public Convenience & Necessity for projects over 100MW and these projects also require an EIS. PSC Certificate of Authority may be necessary for smaller facilities depending on project cost. Smaller projects may be subject to local approval where zoning regulations include wind energy provisions.

Wind Specific Siting Authority? No

Code or Regulations: Wis. Stat. ch. 196.491. Includes environmental, socio-economic and power system considerations

Role of State Fish & Wildlife Agency: DNR has a cooperative agreement with PSC to ensure cooperative review and approval of energy projects. Environmental review is centralized in DNR's Office of Energy.

How are wildlife laws applied: Same as any other utility project, wildlife considerations are balanced against other factors. The DNR has the ability to require mitigation through the PSC siting statute.

Wildlife Guidelines for Wind Power Siting: Considering Natural Resource Issues in Wind Farm Siting in Wisconsin

Status of Wildlife Guidelines: Final - August 29, 2005

Summary of Guidelines: Voluntary guidelines outline specific habitat types and areas that need to be considered when siting wind farms. Recommends site characterization studies that consist of identifying habitat resources, the communities and species likely to use them, and the numbers and timing (seasonal & daily) of use. Recommends using FWS and NWCC guidelines for wildlife studies. Developers encouraged to contact DNR Office of Energy early in the process to coordinate with agency wildlife and endangered resource experts. Outlines potential mitigation measures to minimize collisions and recommends use of Avian/Power Line Interaction Committee (APLIC) technologies. Recommends monitoring and evaluating collisions and mortalities for 2 years, to determine of modifications to the wind farm or mitigation is necessary, and encourages an adaptive management approach.

Web site for Guidelines: <http://dnr.wi.gov/org/es/science/energy/wind/guidelines.pdf>

WYOMING

Contact: Vern Stelter, Wyoming Game & Fish Department, (307) 777-4587, Vern.Stelter@wgf.state.wy.us

Installed Utility Scale Wind Power: 288 MW

Renewable Portfolio Standard: No

State Renewable Energy Incentives: Rebates and tax incentives

Power Siting Authority: State Industrial Siting Council, if capital construction costs exceed \$160 million (amount adjusted based on construction costs)

Wind Specific Siting Authority? No

Code or Regulations: W.S. 35-12-104

Role of State Fish & Wildlife Agency: Collaborative Review process among agencies. Wyoming Game and Fish Department is asked for input on what requirements they would like to have included in the permit (monitoring, siting considerations, impact mitigation). If the Council agrees, those requirements become part of the permit.

How are wildlife laws applied: Same as any other development project. The Industrial Siting Council has the authority to require mitigation in the permit.

Wildlife Guidelines for Wind Power Siting: No formal guidance, projects are dealt with on a case by case basis. Agency typically asks for monitoring of impacts on wildlife (the specifics depending on the site), some siting considerations (e.g., towers built back from ridge edges), and mitigation for unavoidable losses.