

A SURVEY OF STATE REGULATION OF OFFSHORE WIND FACILITIES

**A Report by the Georgia Coastal Research Council
for the Coastal Resources Division,
GA Department of Natural Resources**

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About the Georgia Coastal Research Council:

The Georgia Coastal Research Council (GCRC) was established to provide mechanisms for improved scientific exchange between coastal scientists and decision makers, and to promote the incorporation of best-available scientific information into State and local resource management. The Council is not a policy organization, but rather seeks to provide unbiased, objective information about scientific issues. Baseline support for the program is shared by the Coastal Resources Division of the Georgia Department of Natural Resources (through the Coastal Management Program) and the Georgia Sea Grant, with project-specific support from the National Science Foundation and other agencies. For more information please contact us at gcrc@uga.edu or see our website at <http://www.gcrc.uga.edu>.

Table of Contents

Introduction	5
Federal Renewable Energy Leasing Process	6
State Offshore Renewable Energy Regulatory Process	13
Maine	15
Massachusetts	17
Rhode Island	20
New Jersey	22
Delaware	25
Maryland	27
Virginia	29
North Carolina	32
South Carolina	34
Louisiana	36
Texas	37
References	39
Additional Resources	43
Appendix: State and Local Statutes and Regulations Relevant to Offshore Wind Development	45
Maine	45
Massachusetts	47
Rhode Island	51
New Jersey	53
Delaware	55
Maryland	57
Virginia	59

North Carolina	61
South Carolina	63
Louisiana	64
Texas	66

REGULATION OF OFFSHORE WIND FACILITIES

Introduction

Offshore wind energy can potentially help the U.S. reduce its greenhouse gas emissions, diversify its energy supply, and provide cost-competitive electricity to coastal regions. Many coastal states have enacted renewable energy requirements that establish targets for renewable energy in the near- and long-term future. A few states (e.g., Maine and New Jersey) specifically require a portion of their renewable energy to come from offshore wind.

Although there is increasing interest in offshore wind energy, these projects face regulatory challenges related to uncertainties regarding permitting. However, this situation is beginning to change, as the U.S. Department of the Interior (DOI) has now developed a regulatory framework for the review of proposed offshore wind projects in federal waters. The agency also launched the Smart from the Start Initiative in 2010 to facilitate siting, leasing, and construction of new offshore projects. The initiative's objective is to accelerate renewable wind energy development on the Atlantic Outer Continental Shelf (OCS) by using appropriate designated areas, coordinated environmental studies, large-scale planning and expedited approval processes.

Both federal and state governments have roles to play in regulating offshore wind facilities. The extent of these roles depends on whether the project is located in state or federal waters. In most cases, state waters extend three nautical miles out from the shoreline (nine nautical miles in Texas and along the Gulf coast of Florida). Federal authority over the ocean and seabed extends beyond state waters, out to

200 nautical miles along the edge of the OCS (Fig. 1).

Figure 1: The Atlantic and Gulf of Mexico Outer Continental Shelf



Source:

<http://www.maintenanceandcure.com/OCSLA.html>.

Wind power projects located within state jurisdictional waters are mostly regulated through state permits and licenses and local ordinances, as long as this regulation is consistent with federal law. Facilities located entirely in federal waters do not need state or municipal approval, but must be consistent with the state's coastal management goals under the Coastal Zone Management Act (CZMA). However, any portion of the project that intersects or crosses into state waters such as electrical transmission lines and underwater cables running through state waters and onto the shoreline, as well as any assembly areas located onshore or in state waters will require state and municipal approval (Vann 2009).

The dual jurisdictional roles played by the federal government and coastal state governments in offshore wind permitting are exemplified by the Atlantic Wind Connection Project (AWC). The AWC is a proposed Mid-

Atlantic offshore wind energy subsea transmission line that would collect power generated by wind turbine facilities off the coasts of New Jersey, Delaware, Maryland, and Virginia and deliver up to 7,000 MW of wind turbine capacity to the electrical grid (Fig. 2). In 2012, the project received a “finding of no competitive interest” by the DOI, clearing the way for the project’s sponsors to begin preparation of an environmental impact statement that will consider the potential impacts of granting a 200- foot-wide right-of-way for 790 miles of underwater cables in federal waters (DOI 2012). The project will also require regulatory approval for each state that will be connected to the “transmission backbone.” At present, the project is awaiting regulatory approval from New Jersey for the first segment, which is planned to run from a substation near Pomona, New Jersey 14-miles out into federal waters where it will eventually connect to multiple wind farms located in the New Jersey Wind Energy Area. Approval is expected to be obtained by 2015 (Ward 2013).

Figure 2: Atlantic Wind Connection Project



Source: <http://atlanticwindconnection.com/wp-content/uploads/2013/01/AWC%20phases.jpg>.

This report begins with an overview of the federal permitting framework for offshore wind development, including leasing of federal offshore lands and necessary federal statutory compliance. It then reviews the regulatory schemes relevant to offshore wind facilities in 11 states along the Atlantic and Gulf coasts (ME, MA, RI, NJ, DE, MD, VA, NC, SC, LA, and TX; See Fig. 1). These states take a variety of approaches in terms of regulation, but all are actively pursuing or evaluating the potential for offshore wind development. Some of these states, such as Rhode Island and Delaware, are developing new rules for leasing state submerged lands for offshore wind energy production. The report includes a list of additional resources regarding offshore wind, with short descriptions and web links, as well as an Appendix that details the relevant statutes and regulations for each state.

Federal Leasing Process

The Energy Policy Act of 2005 authorized the DOI to issue leases, easements, or rights-of-way in federal waters three miles from the shoreline out to 200 nautical miles for the purpose of renewable energy development. This leasing authority was delegated to the Bureau of Ocean Energy Management

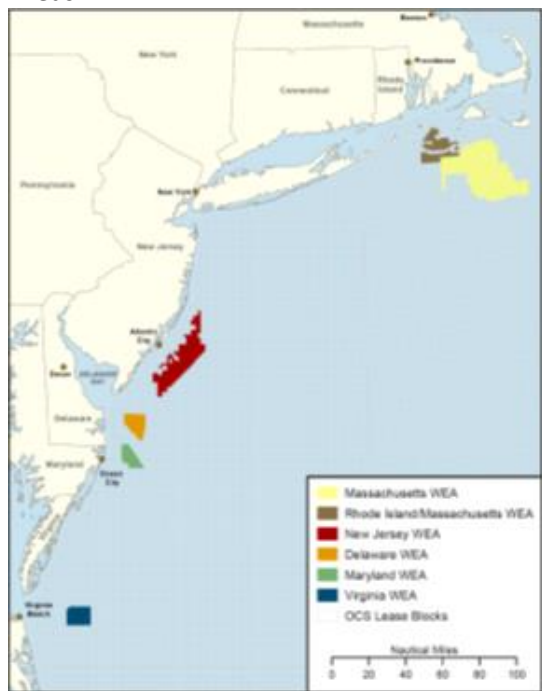
(BOEM), which promulgated renewable energy regulations in 2009 (Bradley 2010). These regulations establish the process BOEM uses for issuing leases for offshore renewable energy development activities on the OCS, including the siting, construction and operation, and decommissioning of wind generation facilities.

The issuance of leases and subsequent approval of wind energy development on the OCS occurs in four phases: (1) planning and analysis; (2) lease issuance; (3) approval of a site assessment plan; and (4) approval of a construction and operation plan. BOEM initiates the leasing process by establishing an Intergovernmental Renewable Energy Task Force in response to a request by a state or the receipt of an unsolicited application for a renewable energy project. These task forces are state-based, and their purpose is to facilitate communication between BOEM and state, local, tribal, and federal stakeholders regarding commercial renewable energy leasing and development. The task forces also serve as forums for data collection about existing resources and present uses along the OCS. Task forces have been established (or are in the process of being established) in ME, MA, RI, NY, NJ, DE, MD, VA, NC, and SC. Following consultation with other federal agencies and the task force, BOEM identifies areas of the OCS that appear most suitable for commercial wind energy activities, and which present the fewest apparent environmental and user conflicts. These areas are known as Wind Energy Areas (WEAs). Currently, BOEM has established WEAs for six states: MA, RI, NJ, DE, MD, and VA (Fig. 3). A preliminary WEA is under review for North Carolina.

Following WEA designation, BOEM next prepares an Environmental Assessment as required by the National Environmental Policy Act (NEPA). This Environmental Assessment considers whether issuing leases or approving site assessment activities would lead to reasonably foreseeable significant environmental impacts, and thus, whether an Environmental Impact Statement (EIS) should be prepared before leases are issued. If BOEM finds that issuing leases and approving site assessment activities within the WEAs would have no significant impact, preparation of an EIS is not necessary (Table 1).

BOEM's renewable energy program sets forth a two-tiered system of leases: (1) a limited lease that lasts five years and limits the amount of electricity that can be sold on the grid to the terms of the lease, and (2) a commercial lease that lasts for approximately 30 years (with possible renewals) that allows for the unlimited sale of electricity. A commercial lease also includes the right to a project easement, which allows the lessee to install electrical transmission and distribution cables as

Figure 3: Atlantic Offshore Wind Energy Areas



Source: BOEM 2012a, Map ID: PACB-2012-1060

Table 1: Federal Regulatory Process for Offshore Wind

Adapted from Bowes and Allegro 2012 p. 15.

<p>1. Initiate State Intergovernmental Task Force BOEM-led Task Force including state, federal, local, and tribal representatives that serves as a forum for informing government stakeholders, identifying conflicts, and collecting input throughout the leasing process.</p>
<p>2. Request for Interest/Determination of Competitive Interest BOEM issues a formal request for industry interest in a potential Wind Energy Area (WEA) to determine if a competitive leasing process will be needed.</p>
<p>3. Call for Information BOEM issues a formal request to collect information from interested stakeholders about potential WEAs.</p>
<p>4. Wind Energy Area Identification Based on information received in the Call, BOEM finalizes a WEA to be considered for leasing.</p>
<p>5. Environmental Assessment Formal NEPA review process where BOEM must analyze any potential adverse impacts on the environment that could result from leasing activities in the WEA. If a Finding of No Significant Impact is reached, BOEM can move forward and issue leases.</p>
<p>6. Leases Granted BOEM issues leases to developers conveying the right to submit plans (for Site Assessment and Construction & Operations) for specific sites. If more than one company is interested in leasing a specific area, leases will be granted via auction based on state-specific factors.</p>
<p>7. Site Assessment Plans Approved/Denied Developers submit a detailed Site Assessment Plan for collecting data needed to design Construction & Operations Plans.</p>
<p>8. Environmental Impact Statement Once a developer submits a Construction & Operations Plan, a comprehensive environmental review of the proposed project will occur. If BOEM approves the plan, the 25 year 'Operations Term' of the lease begins and construction may start.</p>
<p>9. Offshore Wind Energy Project/s Online</p>

well any other structures necessary to transmit electricity from the offshore wind facility to shore (Bradley 2010; DOI, MMS 2009). BOEM issues both limited and commercial leases according to either a competitive track, in which the lease is awarded to the highest bidder, or, when there is insufficient interest to attract multiple bids, a non-competitive track.

Applicants for a limited lease must submit a General Activities Plan that describes resources assessment surveys (e.g., meteorological and oceanographic data collection); technology testing; and construction activities, operations, and decommissioning plans for all planned facilities. Applicants for a commercial lease must submit a Site Assessment Plan that describes the activities a lessee plans to perform in order to characterize their commercial lease site, including the testing of new technologies and the installation of meteorological towers to measure wind, radar to assess avian resources, and deployment of instrumentation to measure waves or currents. Once the lessee submits a Site Assessment Plan or a General Activities Plan, BOEM then determines whether the initial Environmental Assessment prepared after the WEA determination adequately considers the environmental consequences of the specific activities proposed in the lessee's plan. If BOEM determines that the study is adequate, then no further NEPA analysis is required for plan approval. However, if BOEM determines that the Environmental Assessment analysis is inadequate, an EIS is required before the plan may be authorized. Once this preliminary research is completed, the applicant for a

commercial lease must then submit a Construction and Operation Plan for the project, including details of planned onshore and support facilities and all anticipated project easements. It also describes the actual activities related to the project including construction, commercial operations, maintenance, and decommissioning. At this point, the BOEM is required to prepare a separate site- and project-specific Environmental Assessment before plan approval, disapproval or approval with modifications can occur (Bradley 2010; BOEM 2012b).

In addition to the Environmental Assessment process described above, wind projects in both federal and state water require permits from the U.S. Army Corps of Engineers (USACE). Permits are required under Section 10 of the Rivers and Harbors Act, which gives USACE authority over any potential obstruction or alteration of navigable waters. Under Section 10, the USACE must approve the design and construction of offshore wind facilities as well as transmission cables to shore. The USACE also issues dredge and fill permits under Section 404 of the Clean Water Act. For projects located in federal waters the USACE Section 10 and Section 404 permits are incorporated into the overall leasing and development processes under the BOEM framework. For projects located in state waters, the USACE serves as the lead federal agency.

Several other federal entities also have mandates to review and/or approve particular aspects of offshore wind projects, regardless of whether they are located in state or federal waters, including the Environmental Protection Agency (EPA), the Fish and Wildlife Service (FWS), the National Park Service (NPS), the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), the Federal Aviation Administration (FAA), the U.S. Coast Guard (USCG), and the Federal Energy Regulatory Commission (FERC). A summary of the principal Federal statutes relevant to offshore wind facility leasing in both state and federal waters can be found in Table 2; more detailed information about the nature of the required permit or certification associated with each statute can be found in Table 3.

Table 2: Summary of the federal regulatory matrix for offshore wind facilities.

<i>Statute/Approval Type</i>	<i>Lead Agency</i>	<i>State Waters</i>	<i>Federal Waters</i>
Coastal Zone Management Act Consistency Review	State Coastal Management Agency	X	X
Outer Continental Shelf Lands Act BOEM Lease or ROW	BOEM		X
Federal Aviation Act Guidance Conformity	FAA	X	X
Federal Navigation laws Permit	USCG	X	X
National Environmental Policy Act Assessment Review	BOEM/USACE	X	X
River and Harbors Act §10 Permit	USACE	X	X
Clean Water Act §404 Permit	USACE	X	X

Table 3: Key Federal Statutes Involved in Offshore Wind Permitting

(Adapted from Table 2 in Beaudry-Loisique et al. 2011)

<i>Statute/Permit or Assessment</i>	<i>Authority</i>	<i>Description</i>	<i>Comments</i>
Outer Continental Lands Act (43 U.S.C. § 1331 et seq.) <i>Lease</i>	BOEM	DOI granted BOEM the authority to lease submerged lands on the OCS.	Requires desktop and field studies, including physical characterization (e.g., geological, geophysical and hazards) and baseline environmental information (e.g., biological, archeological). Also requires creation of a Site Assessment Plan and a Construction and Operations Plan.
National Environmental Policy Act (42 U.S.C. § 4321 et seq.) <i>Environmental impact statement</i>	USACE in state waters; BOEM in federal waters	Requires federal agencies to consider the potential environmental impacts of proposed federal actions. For any major federal action that is likely to result in significant environmental impacts, agencies must prepare an EIS.	EIS requires desktop and field studies similar to those required for BOEM-OCS lease application. NEPA review is required under BOEM and USACE permitting processes.
Coastal Zone Management Act (16 U.S.C. § 1451 et seq.) <i>Consistency determination certificate</i>	State permitting agency; OCRM	Specifies that coastal states may protect coastal resources and manage coastal development.	State agency reviews offshore wind project activities for consistency with state policies. The consistency determination is required as part of BOEM's permitting process and must take into account all reasonably foreseeable effects of the project.
Rivers and Harbors Act, Section 10 (33 U.S.C. § 403) <i>Individual permit</i>	USACE	Delegates to the USACE the authority to review and regulate certain structures and work that are located in or that affect navigable waters of the U. S., including submarine cable systems.	Requires desktop and field studies similar to those required for BOEM-OCS lease application.
Federal Power Act (16 U.S.C. §§ 792-823a) <i>License</i>	FERC; BOEM	Requires license for any type of electric power generation within/or on navigable waters.	Establishes BOEM as the lead authority to regulate offshore wind in federal waters.
Clean Water Act, Section 404 (33 U.S.C. § 1344) <i>Individual permit</i>	USACE	Requires a USACE permit for discharging dredged or fill materials into waters of the U.S., including wetlands.	Requires desktop and field studies similar to those required for BOEM-OCS lease application.
Clean Water Act, Section 401 (33 U.S.C. § 1341) <i>Water quality certification</i>	EPA in federal waters; lead state agency in state waters	Prohibits the discharge of oil or hazardous substances into waters or adjoining shorelines which may violate State water quality standards.	Consultation as part of permit review through lead state and federal agencies (BOEM and USACE).

<i>Statute/Permit or Assessment</i>	<i>Authority</i>	<i>Description</i>	<i>Comments</i>
Endangered Species Act (16 U.S.C. § 1531 <i>et seq.</i>) <i>Biological assessment</i> <i>Incidental take permit</i> <i>Habitat conservation plan</i>	FWS; NMFS	Requires federal agencies to consult with FWS and NMFS to ensure that proposed federal actions are not likely to jeopardize the continued existence of any species listed as endangered or threatened, or result in the destruction or adverse modification of critical habitat.	Consultation as part of permit review through BOEM and USACE; requires development of Biological Assessment and habitat conservation plan; summaries of desktop and field studies similar to those required for BOEM-OCS lease.
Marine Mammal Protection Act (16 U.S.C. § 1361 <i>et seq.</i>) <i>Incidental take permit</i> <i>Habitat conservation plan</i>	FWS; NMFS	Prohibits, with certain exceptions, the take of marine mammals in U.S. waters by U.S. citizens on the high seas, and importation of marine mammals and marine mammal products into the U.S.	Assessment of potential impacts to marine mammals. Consultation as part of permit review through BOEM and USACE; development of habitat conservation plan; summaries of desktop studies and field studies similar to those required for BOEM-OCS lease.
Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1855(b)) <i>Essential fish habitat assessment</i>	NMFS	Requires federal agencies to consult with NMFS on proposed federal actions that may adversely affect essential fish habitats necessary for spawning, breeding, feeding, or growth to maturity of federally managed fisheries.	Consultation as part of permit review through BOEM and USACE; development of an EFH assessment; assessment of EFH impacts; summaries of desktop and field studies similar to those required for BOEM-OCS lease.
National Historic Preservation Act (16 U.S.C. § 470) <i>Review requirement</i>	NPS; Advisory Council on Historic Preservation; State or Tribal Historic Preservation Officer	Requires each federal agency to consult with the Advisory Council on Historic Preservation and the State or Tribal Historic Preservation Officer before allowing a federally licensed activity to proceed in an area where cultural or historic resources might be located.	Consultation as part of permit review through BOEM and USACE. May consider, among other factors, any visual impacts from the proposed offshore wind facility upon a historic property.
Marine Protection, Research, and Sanctuaries Act <i>Individual permit</i>	EPA; USACE	Prohibits, with certain exceptions, the dumping of materials including, but not limited to, dredged material, garbage, and other waste into ocean waters.	USACE issues permits for dumping of dredged materials. EPA issues permits for all other waste.
Federal Aviation Act (49 U.S.C. § 44718)) <i>Individual permit</i>	FAA	Requires that, when construction, alteration, establishment, or expansion of a structure is proposed, adequate public notice be given to the FAA as necessary to promote safety in air commerce and the efficient use and preservation of the navigable airspace.	Permit required for structures ≥ 200 feet in height. Requires desktop studies to identify location of wind turbines and provide lighting plan.
National Marine Sanctuaries Act (16 U.S.C. § 1431 <i>et seq.</i>) <i>Review requirement</i>	NOAA	Prohibits the destruction, loss of, or injury to any sanctuary resource managed under the Act.	Consultation as part of permit review through BOEM and USACE.

<i>Statute/Permit or Assessment</i>	<i>Authority</i>	<i>Description</i>	<i>Comments</i>
Migratory Bird Treaty Act (16 U.S.C. § 703) <i>Review requirement</i>	FWS	Requires assessment of impacts to migratory bird species.	Consultation as part of permit review through BOEM and USACE
Bald & Golden Eagle Protection Act (16 U.S.C. § 668) <i>Review requirement</i>	FWS	Requires assessment of impacts to bald or golden eagles.	Consultation as part of permit review through BOEM and USACE
Ports and Waterways Safety Act (33 U.S.C. § 1221 <i>et seq.</i>) <i>Navigation safety plan</i>	USCG	Authorizes the USCG to implement measures for controlling or supervising vessel traffic or for protecting navigation and the marine environment.	Permit for private aid to navigation on fixed structures in U.S. waters (e.g., marking and lighting). Requires desktop studies; Navigational risk assessment by USCG may be necessary.
Clean Air Act (42 U.S.C. § 7627(a)) <i>Permit for vessel emissions</i>	EPA	Prohibits federal agencies from issuing a license or other approval to any activity that does not conform to an implementation plan for achieving and maintaining the National Ambient Air Quality Standards.	Requires emission estimates/modeling for all vessels used in project construction, operations, and maintenance.

State Offshore Renewable Energy Regulatory Process

Before issuing a commercial or limited lease, BOEM must determine if the proposed activity is reasonably likely to affect any land, water, or natural resource use of a state's coastal zone. If so, the lease applicant must submit a statement of consistency that includes a detailed description of the proposed activity, its expected coastal effects, and an evaluation of how the proposed project is consistent with the applicable enforceable policies¹ contained in the state's Coastal Zone Management Plan. This federal consistency review process gives coastal states the ability to participate in the siting and operational activities of an offshore wind development even if it is located outside of the State's jurisdictional waters. The state coastal management agency reviews the statement of consistency and will either approve or reject its determination. If the state objects to the statement of consistency, no federal permit may be issued. If a permit is denied, the applicant may appeal the state's decision to the U.S. Secretary of Commerce, who may overturn the state's objection either because the proposed project is: (1) consistent with the objectives of the federal CZMA; or (2) is considered necessary for national security purposes (Street 2008). There have been no tests to-date regarding wind permits, but between 1978 and 2009 there were 18 appeals related to oil and natural gas plans, nine of which were overridden (NOAA 2009).

Projects located in federal waters must obtain state permits for transmission cables for connection to the electrical grid (including building substations), and for dredging activities that occur in state waters. In addition, portions of the offshore wind project that are within state waters are required to receive section 401 Water Quality Certification under the Clean Water Act to ensure that the project meets state water quality standards (i.e. thermal pollution, pollution, changes to water flow, and turbidity). New transmission lines and cables associated with offshore wind projects may be required to demonstrate "public convenience and necessity" by utility regulatory agencies in some states before installation may begin.

Because offshore wind projects will potentially compete with existing commercial, recreational, and industrial uses of state ocean waters, the permitting process in all states requires interagency coordination as well as stakeholder engagement in order to anticipate potential conflicts within the siting location. In cases where leasing or permitting will impact submerged lands, waters, or natural resources under a specific agency jurisdiction (e.g., port authorities, fisheries, or public works departments), authorization or approval from the affected agency may be required. In addition, where encroachment upon previously existing leases, easements, or privately held property is necessary, potential developers will have to reach an accommodation with the interest holder before federal or state leases will be granted.

¹ An enforceable policy is one that is legally binding through constitutional provisions, laws, regulations, land use plans, ordinances, or judicial or administrative decisions, by which a state exerts control over private and public and water uses and natural resources in the coastal zone and which are incorporated in a management program (15 CFR Part 930.11(h)).

In addition to federal and state permitting, local government approval is also required in several states when resources within a local jurisdiction would be affected by a proposed project. Local ordinances that affect offshore wind projects include ordinances concerning land use and development restrictions in environmentally sensitive areas such as wetlands, dunes, and beaches. These ordinances mostly apply to transmission lines and cables that connect the offshore wind turbines to the onshore electrical grid, but may also apply to related onshore construction activities.

What follows is a survey of the offshore wind permitting processes of selected Atlantic and Gulf coastal states. Each state summary includes a description of any offshore wind energy development and research in progress, a synopsis of their regulatory scheme, and a table listing relevant state and local statutes and ordinances. A more complete description of these statutes is located in the Appendix.

Maine

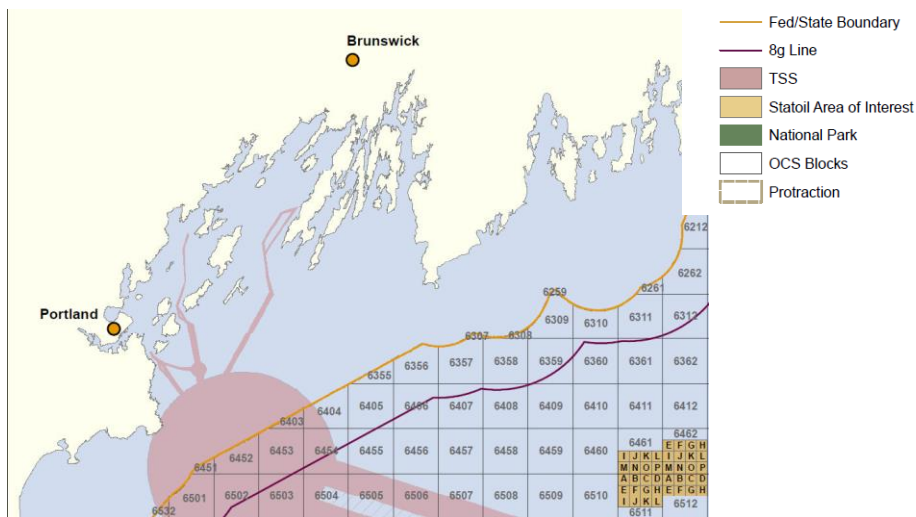
Offshore Wind Development in Maine

Maine is requiring utilities to produce 40 percent of their electricity from renewable energy sources by 2017, 10 percent of which must come from new renewable energy projects. They have also set a goal of producing 5 GW of electricity from offshore wind turbines by 2030 (DSIRE 2012).

Offshore project activities

BOEM has an active Task Force process underway in Maine, and has held four meetings as of 2012. In 2011, BOEM received an unsolicited lease application from the Statoil North America Company for a 12-MW floating turbine demonstration project that would be located 12 miles off Maine's coast (Fig. 4). Statoil is scheduled to submit the Construction and Operations plan in 2012 and is currently holding public meetings to inform local stakeholders about the proposal. Once submitted, BOEM will prepare an EIS reviewing the plan (BOEM 2012c).

Figure 4: Maine Statoil Requested Lease Area



Source: BOEM,

http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/State_Activities/maine_statoil_10-18-11.pdf.

Research and development activities

The University of Maine's Advanced Structures and Composites Center is building a new Offshore Wind Laboratory that will be involved in research, design, and deployment of composite technology for floating offshore wind energy turbines (UMaine 2012; UMaine 2010).

DeepCWind, a University of Maine led-consortium of over 30 academic institutions, industry leaders, utility companies, and nonprofit organizations, is working to develop a demonstration site where

researchers will provide independent, third-party assessment of new deepwater turbine, platform, and foundation designs as well as conduct geophysical, wind resource, and wave assessment studies (DeepCWind 2012a; DeepCWind 2012b).

Regulatory Summary

The Maine Bureau of Parks and Lands is the agency responsible for issuing leases and easements for projects located on publicly owned submerged lands. Offshore wind development activities on state submerged lands, onshore, and in state waters must also receive a permit from the Department of Environmental Protection and/or the Land Use Regulation Commission. Additional approvals for transmission line installations may be required from the Public Utilities Commission and local governments.

Table 4: Offshore wind regulatory matrix for Maine.*

	Statute/Approval Type	Lead Agency
State	Site Location of Development Act <i>Permit</i>	Department of Environmental Protection
	Natural Resources Protection Act <i>Permit</i>	Department of Environmental Protection
	Submerged Lands Act <i>Lease/Easement</i>	Bureau of Parks and Lands
	Certificate of Public Convenience and Necessity <i>Certificate</i>	Public Utilities Commission
	Land Use Standards <i>Permit</i>	Land Use Regulation Commission
	Coastal Zone Management Act <i>Consistency Review</i>	State Planning Office
	Stormwater-Erosion & Sedimentation Control laws <i>Permit-Assessment</i>	Department of Environmental Protection
	Clean Water Act §401 <i>Water Quality Certificate</i>	Department of Environmental Protection/ Land Use Regulation Commission
Local	Mandatory Shoreland Zoning Act <i>Permit</i>	Municipal Zoning Board
	Local land use permits and building permits may be required for land-based activities.	Local permitting authority

* More detailed information about each entry can be found in the Appendix.

Massachusetts

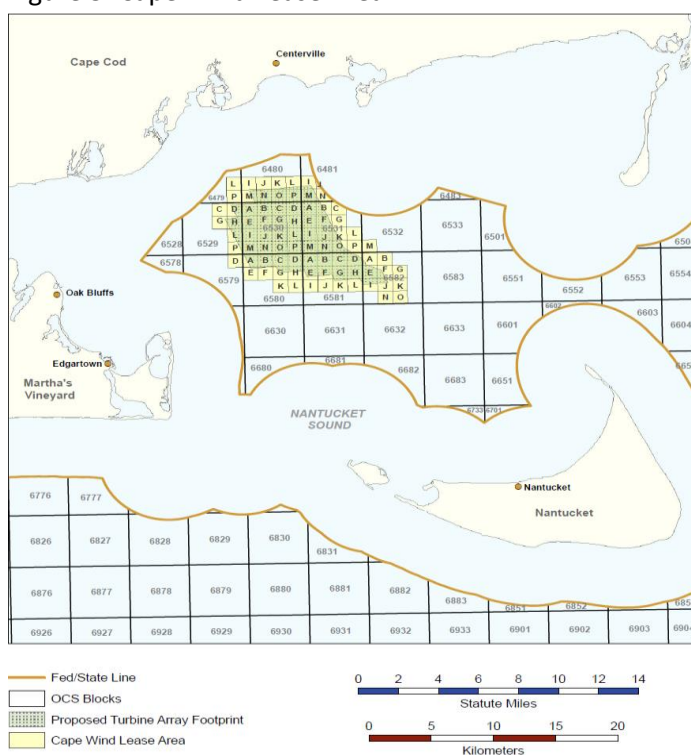
Offshore Wind Development in Massachusetts

Massachusetts' renewable energy portfolio standard requires the state to meet at least 15 percent of its electrical needs from renewable sources by 2020, with an increase of one percent/year thereafter. The state also has a goal of developing 2 GW of on and offshore wind energy by 2020 (DSIRE 2012).

Offshore project activities

The Cape Wind Energy Project was proposed by Cape Wind Associates 2001. Prior to BOEM's involvement, the USACE assumed the lead federal regulatory role under the River and Harbors Act, and issued a draft EIS in 2004. In 2005, Cape Wind applied for a commercial lease to construct and operate a 130 turbine, 486-MW offshore wind facility located in federal waters offshore of Cape Cod (Fig. 5). In 2010, BOEM issued the commercial lease and approved the project's Construction and Operations Plan. However, there are currently four pending federal lawsuits challenging Cape Wind's federal environmental and permitting reviews, and construction on the project has not yet begun (Bowes and Allegro 2012).

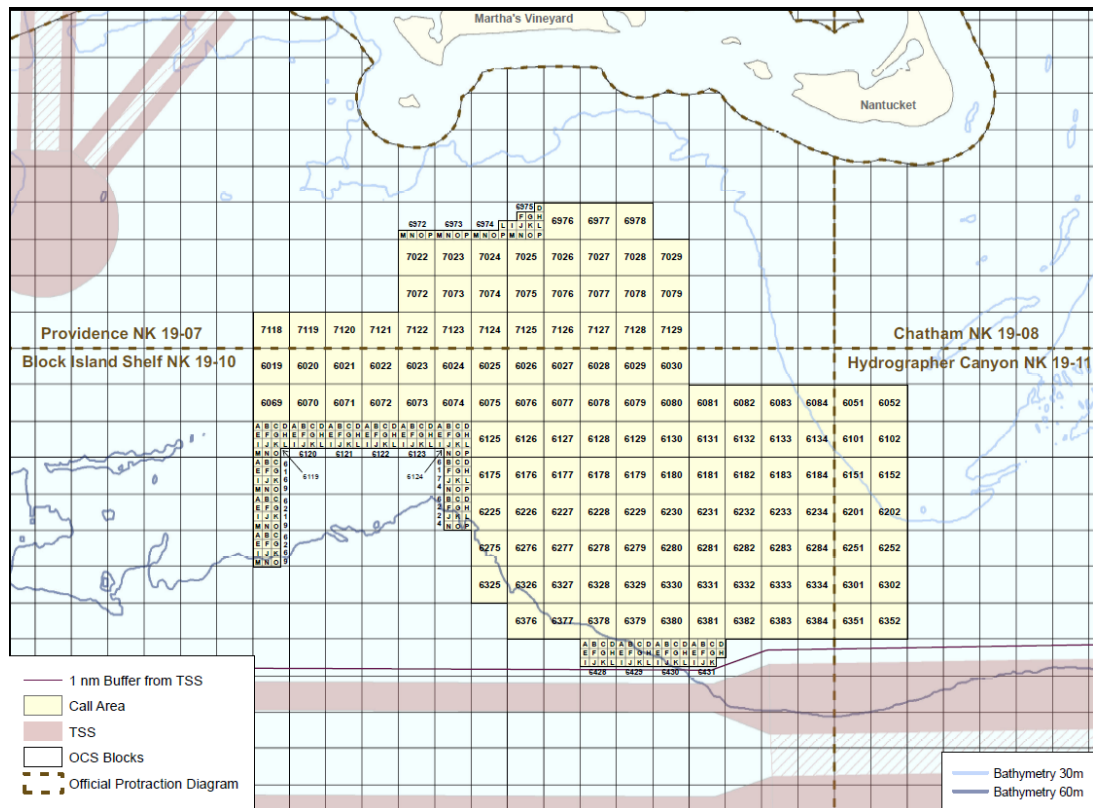
Figure 5: Cape Wind Lease Area



Source: BOEM,
http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/Studies/Lease%20Area.pdf.

BOEM has had an active Task Force process underway in Massachusetts since 2009, and has held ten meetings as of 2012. BOEM has also identified two WEAs off Massachusetts' coast (Fig. 6). The Massachusetts WEA (MA WEA) covers nearly 1,000 square miles, about 15 miles south of Nantucket. The Rhode Island-Massachusetts WEA (RI-MA WEA) is a 257 square mile area between these two states. In July 2012, BOEM released an Environmental Assessment for the RI-MA WEA that evaluated the potential impacts of issuing leases for site assessment activities. The agency is currently in the process of preparing an Environmental Assessment for the MA WEA. To date, BOEM has received 10 expressions of interest from developers for sites within the MA WEA and eight for sites within the RI-MA WEA. Because of this showing of competitive interest, BOEM will grant

Figure 6: Massachusetts Wind Energy Area



leases through an auction process. Leases are expected to be issued for these areas in early 2013 (BOEM 2012c).

Research & development activities

In 2012, public hearings were held in New Bedford on the permitting of a proposed marine commerce terminal which would support the delivery, assembly, and installation of offshore wind turbines (Massachusetts Office of the Governor 2010).

In 2011, the Massachusetts Clean Energy Center's Wind Technology Testing Center became the first facility in the U.S. capable of testing 100+ meter turbines. This is a joint federal-state project (Massachusetts Clean Energy Center 2011).

Also in 2011, the University of Massachusetts - Dartmouth's New England Marine Renewable Energy Center performed the first in-ocean technology test of its National Offshore Renewable Energy Innovation Zone. The site provides a variety of platforms for marine renewable energy companies to test

and develop marine-related technology designed to capture energy from ocean wind, waves, tides, and current (MREC 2010).

Regulatory Summary

Massachusetts has developed an ocean management plan that establishes three categories of management areas: prohibited, regional energy, and multiuse. Under the plan, commercial-scale wind projects can only be developed in specified areas. Projects are overseen by the state Executive Office of Energy and Environmental Affairs, but they also require an assessment review under the Massachusetts Environmental Policy Act and a permit from the state Department for Environmental Protection. Additional approval for development activities located in coastal wetlands areas, freshwater wetlands, or on Cape Cod may be required from local governments and/or the Cape Cod Commission.

Under certain conditions, including situations where any state or local agency imposes a burdensome condition or limitation on a license or permit, an applicant for an offshore wind facility may request the Massachusetts Energy Facilities Siting Board to issue a Certificate of Environmental Impact and Public Interest. If this certificate is issued, no other permits or approvals from state agencies or local governments are required.

Table 5: Offshore wind regulatory matrix for Massachusetts.*

	Statute/Approval Type	Lead Agency
State	Ocean Sanctuaries Act <i>Assessment review</i>	Department of Conservation and Recreation
	Environmental Policy Act <i>Assessment review</i>	Executive Office of Energy and Environmental Affairs
	Coastal Wetlands Restriction Act <i>Coastal Wetlands Order</i>	Department of Environmental Protection
	Certificate of Environmental Impact and Public Interest <i>Certificate</i>	Energy Facilities Siting Board
	Public Waterfront Act <i>Permit</i>	Department of Environmental Protection, Division of Wetlands and Waterways
	Coastal Zone Management Act <i>Consistency Review</i>	Office of Coastal Zone Management
	Stormwater-Erosion & Sedimentation Control Laws <i>Permit/Assessment</i>	Department of Environmental Protection
	Clean Water Act §401 <i>Water Quality Certificate</i>	Department of Environmental Protection
Local	Wetlands Protection Act <i>Order of Conditions</i>	Department of Environmental Protection /local Conservation Commission
	Local land use permits and building permits may be required for land-based activities.	Local permitting authority

* More detailed information about each entry can be found in the Appendix.

Rhode Island

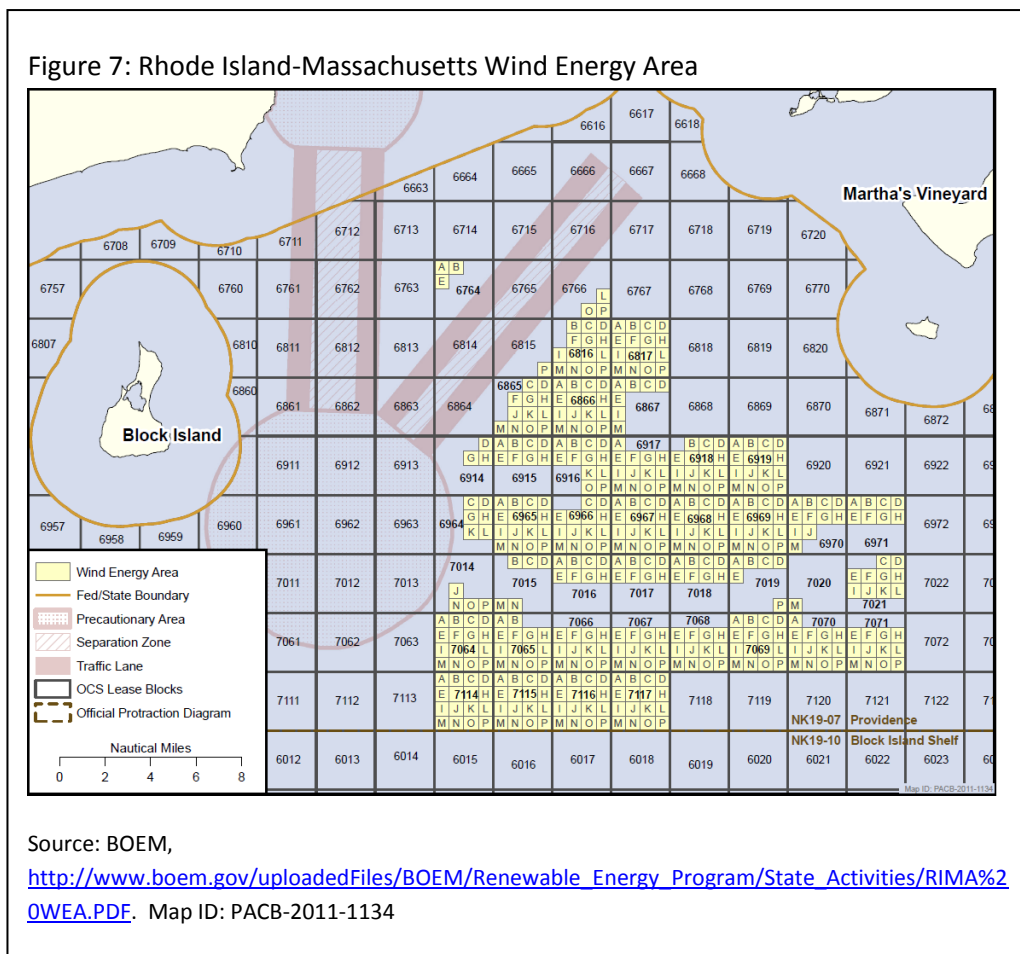
Offshore Wind Development in Rhode Island

Rhode Island has a renewable energy portfolio standard requiring the state to meet at least 16 percent of its electrical needs from renewable energy by 2019 (DSIRE 2012).

Offshore project activities

Rhode Island is currently considering an application by Deepwater Wind for a five turbine, 30-MW demonstration project in state waters off the coast of Block Island. The project also includes a 21-mile transmission cable, which will connect the project to the mainland electric grid. Deepwater Wind expects to begin construction in 2013-2014 (Bowes and Allegro 2012).

BOEM has had an active Task Force process underway in Rhode Island since 2009, and has held six meetings as of 2012. As described above, BOEM has also identified a Rhode Island-Massachusetts WEA (RI-MA WEA) of 257 square miles off the coast of Rhode Island (Fig. 7). To date, BOEM has received eight expressions of interest for projects in the RI-MA WEA. Because of this showing of competitive interest, BOEM will grant leases through an auction process. Leases are expected to be issued for this area in early 2013 (BOEM 2012c).



Research and development activities:

The University of Rhode Island's Center of Excellence for Research on Offshore Renewable Energy was established in 2008 to advance research and development of offshore wind and other technologies (URI GSO 2012).

The University of Rhode Island's Coastal Resources Center has helped advance planning for offshore wind energy through the Ocean Special Area Management Plan process (OceanSAMP 2012).

Regulatory Summary

The Rhode Island Coastal Resources Management Council has jurisdiction over state coastal submerged lands and wetlands and is authorized to issue leases for use of these lands and permits for all development activities that take place on these lands. In 2010, the Council approved the Ocean Special Area Management Plan (SAMP), a comprehensive management and regulatory tool for siting offshore renewable energy projects in the Rhode Island Sound. The Council identified a Renewable Energy Zone within the Ocean SAMP boundary as the preferred area for offshore wind renewable energy projects. Permits for offshore wind projects are approved if the Council determines that the project would not result in significant adverse impacts on the natural resources or human uses of the coastal zone. Offshore wind facilities also require a license from the Rhode Island Energy Facilities Siting Board as well as a freshwater wetlands permit for any associated transmission lines.

Table 6: Offshore wind regulatory matrix for Rhode Island.*

	Statute/Approval Type	Lead Agency
State	Coastal Zone Management Program <i>Permit-Lease</i>	Coastal Resources Management Council
	Ocean Special Area Management Plan <i>Permit</i>	Coastal Resources Management Council
	Energy Facility Siting Act <i>License</i>	Energy Facilities Siting Board
	Freshwater Wetlands <i>Permit</i>	Department of Environmental Management, Office of Water Resources
	Coastal Zone Management Act <i>Consistency Review</i>	Coastal Resources Management Council
	Stormwater-Erosion & Sedimentation Control Laws <i>Permit/Assessment</i>	Department of Environmental Management, Office of Water Resources
	Clean Water Act §401 <i>Water Quality Certificate</i>	Department of Environmental Management, Office of Water Resources
Local	Local land use permits and building permits may be required for land-based activities.	Local permitting authority

* More detailed information about each entry can be found in the Appendix.

New Jersey

Offshore Wind Development in New Jersey

New Jersey's Energy Master Plan calls for the installation of 1,000 MW of offshore wind capacity by 2012 and 3,000 MW of capacity by 2020 in order to help meet the state's renewable energy goals. New Jersey currently has developer proposals for 1,050 MW of offshore wind. The state also has a goal of producing 23 percent of its electricity from renewable energy sources by 2021 (DSIRE 2012). New Jersey's Offshore Wind Economic Development Act established a requirement that energy suppliers obtain a percentage of their power from qualified offshore wind projects, as determined by the Board of Public Utilities.

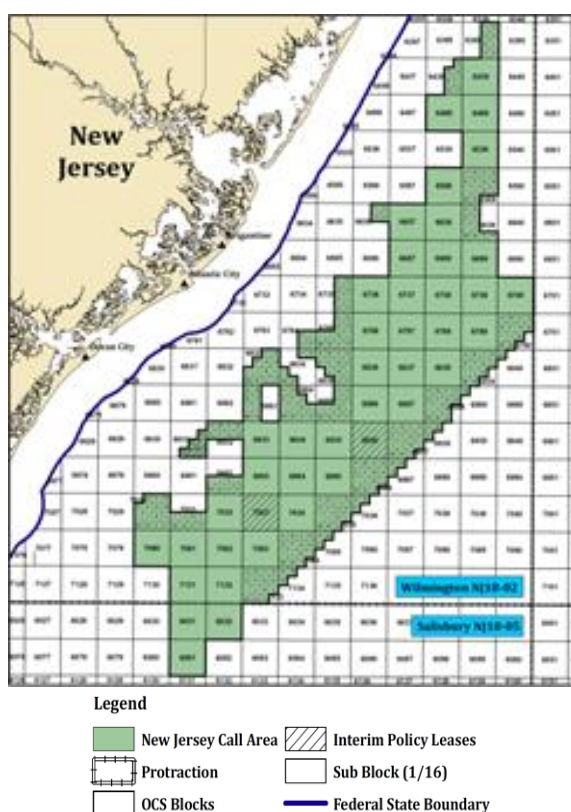
Offshore project activities

BOEM has an active Task Force process underway in New Jersey, and has held four meetings as of 2012. BOEM has also identified a WEA for New Jersey approximately seven nautical miles from shore (Fig. 8). Eleven offshore wind companies have expressed interest in lease sites within the New Jersey WEA.

Because of this showing of competitive interest, BOEM will grant leases through an auction process. Leases are expected to be issued in early 2013 (BOEM 2012c).

In 2012, the offshore wind developer, Fishermen's Energy, finalized all necessary permitting requirements for a 25-MW, five-turbine pilot project in state waters, 2.8 miles off the coast of Atlantic City. This array will be connected by submarine cable to the mainland electrical transmission grid, and the resulting electrical power sold to New Jersey utility customers. Construction is planned to begin onshore in Atlantic City in 2013, with offshore construction and commissioning expected in 2014. The New Jersey Board of Public Utilities is currently reviewing the project's potential impacts on the state's ratepayers (Fishermen's Energy 2012a). Fishermen's Energy also has plans to develop a larger offshore wind facility made up of 66, 5-MW turbines located in the New Jersey WEA. The company has obtained a limited lease from BOEM to study the wind, sea and biological characteristics of this site (Fishermen's Energy 2012b).

Figure 8: New Jersey Wind Energy Area



Source: BOEM,
http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/State_Activities/NewJerseyCallPlainFinalG.pdf

In February 2012, BOEM finalized its regional Environmental Assessment of the Mid-Atlantic Wind Energy Areas (New Jersey, Maryland, Delaware, and Virginia). BOEM concluded that no significant impacts would result from issuing leases to developers for site assessment activities in the New Jersey WEA (77 FR 5560).

In February 2013, sponsors of the backbone transmission project, Atlantic Wind Connection, announced plans for commencement of the project's first phase: a 189-mile segment of underwater transmission cables connecting Jersey City to a location south of Atlantic City and extending up to 14 miles out to sea. AWC hopes to secure state regulatory approval and begin construction by 2015. The project also needs to be signed off on by the regional grid operator, PJM Interconnection, which coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia (Wald 2013).

Research and development activities

The Rutgers University Institute of Marine and Coastal Sciences provided the New Jersey Board of Public Utilities with offshore and coastal wind resource assessments to indicate cost-effective and environmentally sensitive wind energy resource areas (Rutgers University Institute of Marine and Coastal Sciences 2012).

Regulatory Summary

Under the New Jersey Offshore Wind Economic Development Act, when certified offshore wind projects generate electricity they are awarded tradable credits known as Offshore Wind Renewable Energy Certificates (ORECs). Generators are able to market ORECs to state energy suppliers, who must obtain enough ORECs to cover the specified portion of the customer load they serve. New Jersey will also provide financial assistance and tax credits for the development of key renewable energy infrastructure.

Potential offshore wind developers must obtain a grant or lease from the Tidelands Resource Council for the use of state tidelands if the project is to be located in state waters. The Department of Environmental Protection must also issue a coastal wetlands permit and, if the project is to be located in waters off southern New Jersey, a Coastal Area Facility Review Act permit, including an EIS. Associated transmission cables or power lines may require a waterfront development permit, also issued by the Department.

Table 7: Offshore wind regulatory matrix for New Jersey.*

	Statute/Approval Type	Lead Agency
State	Offshore Wind Economic Development Act <i>Certificate</i>	Board of Public Utilities
	Coastal Area Facility Review Act <i>Permit</i>	Department of Environmental Protection, Division of Land Use Regulation
	Tidelands Act <i>Grant-Lease</i>	Tidelands Resource Council/ Department of Environmental Protection
	Wetlands Act <i>Permit</i>	Department of Environmental Protection, Division of Land Use Regulation
	Waterfront Development <i>Permit</i>	Department of Environmental Protection, Division of Land Use Regulation
	Coastal Zone Management Act <i>Federal Consistency Review</i>	Department of Environmental Protection, Division of Land Use Regulation
	Clean Water Act §401 <i>Water Quality Certificate</i>	Department of Environmental Protection, Division of Land Use Regulation
	Stormwater-Erosion & Sedimentation Control Laws <i>Permit/Assessment</i>	Department of Environmental Protection, Division of Water Quality
Local	Local land use permits and building permits may be required for land-based activities.	Local permitting authority

* More detailed information about each entry can be found in the Appendix.

Delaware

Offshore Wind Development in Delaware

Delaware's renewable portfolio standard requires that 25 percent of its electricity be generated from renewable energy sources by 2025 (DSIRE 2012).

Offshore project activities

BOEM has had an active Task Force process underway in Delaware since 2009 and has held four meetings as of 2012. BOEM has also identified a WEA for Delaware that is approximately 122 square nautical miles, roughly seven nautical miles from the coast (Fig. 9) (BOEM 2012c).

In 2009, the offshore wind development company, NRG Bluewater proposed to develop a 200-MW offshore wind project located 13 miles off the Delaware coast. However, this effort was suspended in December 2011 due to lack of funding for the federal loan guarantee program and uncertainty over tax credits for wind projects. The company is maintaining development rights and was granted a

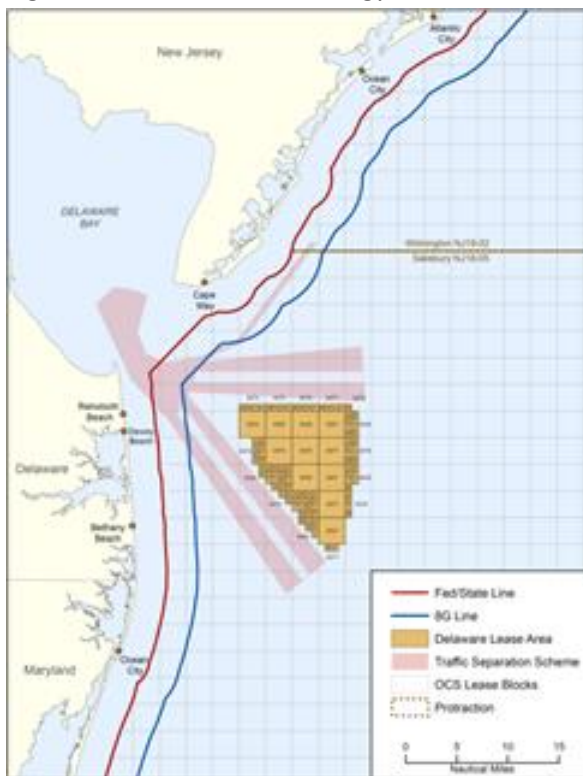
commercial lease for site characterization activities by BOEM in October 2012 (BOEM 2012c; Hurdle 2012).

In February 2012, BOEM finalized its regional Environmental Assessment of the Mid-Atlantic Wind Energy Areas (New Jersey, Maryland, Delaware, and Virginia), concluding that no significant impacts would result from issuing leases to developers for site assessment activities in the Delaware WEA (77 FR 5560).

Research and development activities

The University of Delaware's Center for Carbon-free Power Integration is hosting a 2-MW research turbine on its coastal campus. Since becoming operational in 2010, the turbine has generated 9.5 million kWh, producing enough electricity to power the University's entire coastal campus. Proceeds from the sale of surplus electricity are used to operate and maintain the wind turbine and to fund related research projects (UD CEOE 2012).

Figure 9: Delaware Wind Energy Area



Source: BOEM,
http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/State_Activities/de_lease_area_regional.pdf.

In 2012, the Center for Carbon-free Power Integration produced the comprehensive report, *Delaware Marine Spatial Planning: Offshore Wind Context* (Bates et al. 2012). The report identifies existing ocean uses and highlights areas where conflicts with offshore wind development are likely to occur off the coast of Delaware.

Regulatory Summary

The Delaware Department of Natural Resources and Environmental Control is the agency that oversees permitting of development activities that affect the state's submerged lands, beaches, wetlands, and coastal zones. Although Delaware lacks a specific offshore wind leasing/permitting process, offshore alternative energy development is conditionally authorized, and utilities that buy energy from offshore wind developments may receive 3.5 renewable energy credits per MW-hour purchased. Delaware is currently working on developing a management plan for the state's Atlantic Coast Marine Area, which will include siting criteria for offshore wind projects.

Table 8: Offshore wind regulatory matrix for Delaware.*

	Statute/Approval Type	Lead Agency
State	Subaqueous Lands Act <i>Permit</i>	Department of Natural Resources and Environmental Control, Division of Water
	Wetlands Act <i>Permit</i>	Department of Natural Resources and Environmental Control, Division of Water
	Coastal Zone Act <i>Permit</i>	Department of Natural Resources and Environmental Control, Planning Section
	Beach Preservation <i>Permit</i>	Department of Natural Resources and Environmental Control, Division of Watershed Stewardship
	Stormwater-Erosion & Sedimentation Control Laws <i>Permit/Assessment</i>	Department of Natural Resources and Environmental Control, Division of Watershed Stewardship
	Coastal Zone Management Act <i>Federal Consistency Review</i>	Department of Natural Resources and Environmental Control, Division of Watershed Stewardship & Coastal Programs Section
	Clean Water Act §401 <i>Water Quality Certificate</i>	Department of Natural Resources and Environmental Control
Local	Local land use permits and building permits may be required for land-based activities.	Local permitting authority

* More detailed information about each entry can be found in the Appendix.

Maryland

Offshore Wind Development in Maryland

Maryland has a renewable portfolio standard requiring that 20 percent of the state's electricity be generated by renewable sources by 2022 (DSIRE 2012).

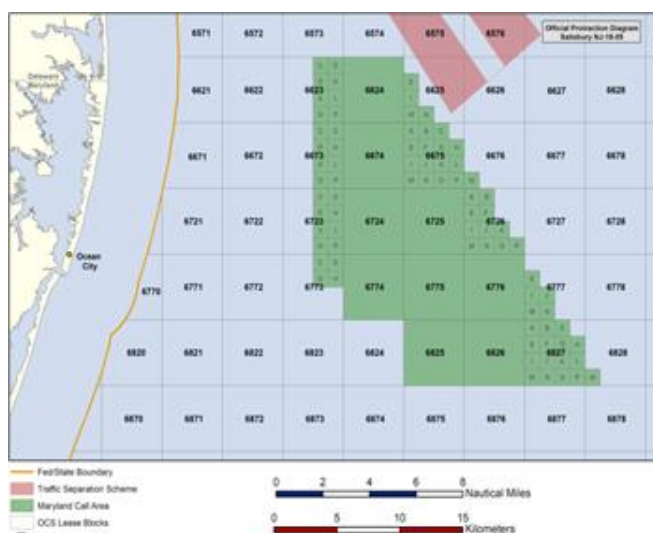
Maryland is in the process of crafting legislation that will, if enacted, encourage the development of offshore wind projects. The latest attempt, the Maryland Offshore Wind Energy Act, which would have encouraged the development of 200 MW of offshore wind energy, failed to come to a vote in the state Senate before the end of the 2012 legislative session. Similar legislation is expected to be proposed during the 2013 session.

Offshore project activities

BOEM began a Maryland Task Force process in 2010 and has held five meetings as of 2012. BOEM also identified a WEA for Maryland that is 10 nautical miles from Ocean City and covers about 94 square nautical miles (Fig. 10) (BOEM 2012c).

In February 2012, BOEM finalized its regional Environmental Assessment of the Mid-Atlantic Wind Energy Areas (New Jersey, Maryland, Delaware, and Virginia), concluding that no significant impacts would result from issuing leases to developers for site assessment activities in the Maryland WEA (77 FR 5560).

Figure 10: Maryland Wind Energy Area



Administration, Towson University, the University of Maryland, The Nature Conservancy, and the National Oceanic and Atmospheric Administration have collaborated to develop the Coastal Atlas. This online mapping and planning tool allows users to explore data for coastal and ocean planning activities, including renewable offshore energy exploration, and identifies potential conflict zones such as areas that are environmentally sensitive or used for military activities (MD DNR 2012).

AC Wind, a wind energy composites manufacturing firm, has proposed an offshore wind turbine manufacturing facility to be located in Salisbury, MD (Associated Press 2011).

Regulatory Summary

Offshore wind development in Maryland is regulated through permitting requirements for activities located in tidal wetlands, including submerged lands, and in designated critical areas along the coast. Permits are issued by the Maryland Department of the Environment, Board of Public Works, and/or local governments. Additional approval for the laying of transmission lines may be required from the Maryland Public Service Commission.

Table 9: Offshore wind regulatory matrix for Maryland.*

	Statute/Approval Type	Lead Agency
State	Tidal Wetland Act <i>License/Permit</i>	Board of Public Works / Department of the Environment
	Beach Erosion Control & Replenishment	Board of Public Works/Department of the Environment/Department of Natural Resources /Department of Planning
	Public Service Commission Article <i>Certificate</i>	Public Service Commission
	Critical Area Act <i>Assessment</i>	Critical Area Committee
	Coastal Zone Management Act <i>Federal Consistency Review</i>	Department of the Environment
	Stormwater-Erosion & Sedimentation Control Laws <i>Permit/Assessment</i>	Department of the Environment
	Clean Water Act §401 <i>Water Quality Certificate</i>	Department of the Environment
Local	Critical Area Act <i>Assessment</i>	Local critical area committee
	Local land use permits and building permits may be required for land-based activities.	Local permitting authority

* More detailed information about each entry can be found in the Appendix.

Virginia

Offshore Wind Development in Virginia

Virginia has a voluntary goal of generating 15 percent of its electricity from energy efficiency and renewable energy sources by 2025 (DSIRE 2012).

Offshore project activities

BOEM began the Virginia Task Force process in 2009 and has held six meetings as of 2012. BOEM also identified a WEA for Virginia that is 23 nautical miles from Virginia Beach and covers about 133 square nautical miles (Fig. 11) (BOEM 2012c).

In February 2012, BOEM finalized its regional Environmental Assessment of the Mid-Atlantic Wind Energy Areas (New Jersey, Maryland, Delaware, and Virginia). BOEM concluded that no significant impacts would result from issuing leases to developers for site assessment activities in the Virginia WEA (77 FR 5560).

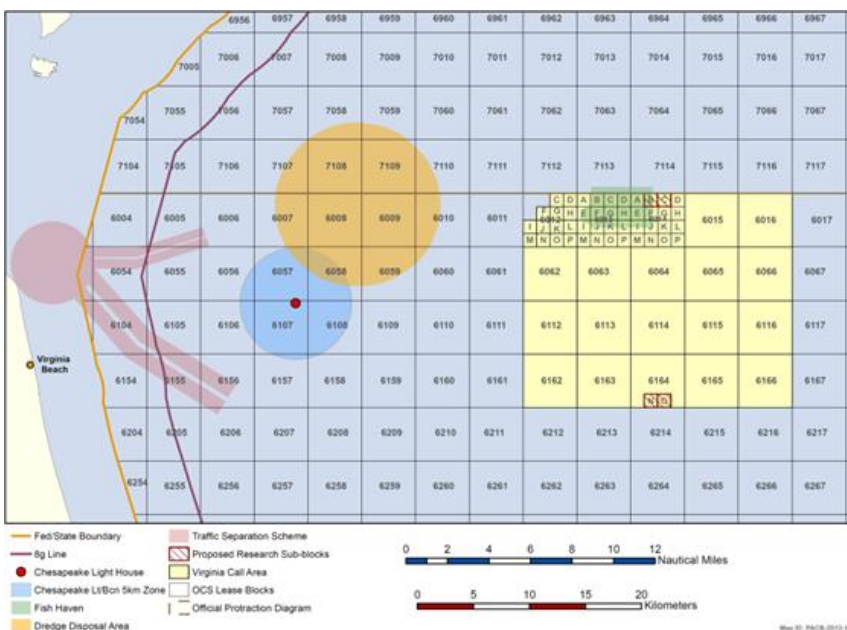
To date, BOEM has received eight expressions of interest from developers for sites within the Virginia WEA. Because of this showing of competitive interest, BOEM will grant leases through an auction process. Leases are expected to be issued in 2013 (BOEM 2012c).

Research and development activities

The Virginia Economic Development Partnership released the 2012 report, *Virginia Advantages, Energy Industries*, which included offshore wind energy as an economic development opportunity for the state (VA EDP).

The Virginia Marine Resources Commission has evaluated whether sufficient subaqueous land exists in State territorial waters to support offshore wind resource generations and concluded that the best

Figure 11: Virginia Wind Energy Area



Source: BOEM,

http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/State_Activities/VA%20Call%20Map%20without%20NOAA%20chart.pdf

potential exists on the Outer Continental Shelf (VA MRC 2010).

The Virginia Coastal Zone Management Program commissioned the Environmental Law Institute to create two reports recommending changes to Virginia environmental and regulatory policies in light of offshore wind development (ELI 2008).

The Virginia Coastal Energy Research Consortium was established by Virginia's 2006 Energy Plan to evaluate coastal energy resources and develop commercially feasible projects. It is comprised of several universities, government agencies, and industry developers. The Consortium's 2010 report identified an area closer to shore than the Virginia WEA that has 3.2 GW of potential offshore wind capacity in relatively shallow waters no deeper than 98.4 feet (VCERC 2010).

Regulatory Summary

In 2010, the Virginia Offshore Wind Project Development Authority was created to facilitate and support the development of the offshore wind industry and wind-powered electric energy facilities located off the coast of Virginia beyond the state's three-mile jurisdictional limit. Among other tasks, the Authority is charged with: (1) identifying existing state and regulatory or administrative barriers to the development of the offshore wind industry, (2) collecting environmental data, (3) upgrading port facilities to accommodate the manufacturing and assembly of project components and vessels that will support such projects, and (4) applying to the U.S. Department of Energy for loan guarantees for such projects.

In Virginia, a small (< 100 MW) renewable energy wind project will be authorized to proceed if the Department of Environmental Quality determines that environmental analyses of the project meet the Department's conditions and standards necessary to protect the State's natural resources. In addition, any activity that uses or disturbs the water bottoms of Virginia, including subaqueous land, tidal wetlands, or coastal primary sand dunes requires a permit from the Marine Resources Commission. Offshore wind developments may also need to obtain an easement from the Commission. Local governments that adopt a wetlands ordinance pursuant to the Submerged Lands Act may require a wetlands permit as well.

Table 10: Offshore wind regulatory matrix for Virginia.*

	Statute/Approval Type	Lead Agency
State	Submerged Lands Act <i>Permit</i>	Marine Resources Commission
	Small Renewable Energy Project (Wind) Permit by Rule <i>Permit</i>	Department of Environmental Quality
	Stormwater-Erosion & Sedimentation Control Laws <i>Permit/Assessment</i>	Department of Conservation and Recreation
	Coastal Zone Management Act <i>Federal Consistency Review</i>	Department of Environmental Quality
	Clean Water Act §401 <i>Water Quality Certificate</i>	Department of Environmental Quality
Local	Local Wetlands Permits	Local wetlands boards
	Local land use permits and building permits may be required for land-based activities.	Local permitting authority

* More detailed information about each entry can be found in the Appendix.

North Carolina

Offshore Wind Development in North Carolina

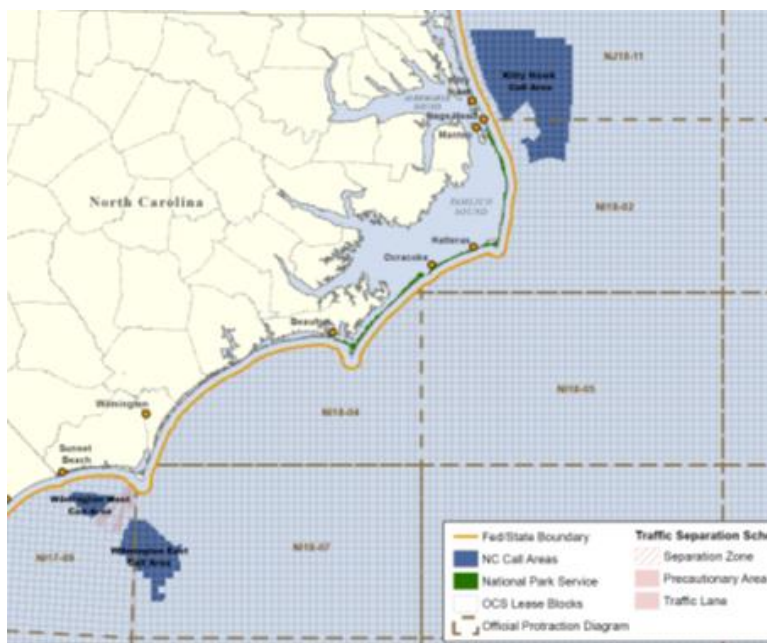
North Carolina has a requirement that utilities generate 12.5 percent of their electricity from renewable energy sources by 2021 (DSIRE 2012).

Offshore project activities

BOEM began the North Carolina Task Force process in 2011 and has held four meetings as of 2012. BOEM is in the process of developing several WEAs for North Carolina. Towards this end, BOEM has identified three Call Areas : Wilmington – West, Wilmington-East, and Kitty Hawk. Wilmington-West (103 square miles) and –East (432 square miles) both begin seven miles from shore and extend about 11 nautical miles seaward. Kitty Hawk is 1372 square miles and is located six miles offshore, extending 34 miles out to sea (Fig. 12). A decision on whether these Call Areas will be designated as WEAs and become eligible for leasing is expected in 2013(BOEM 2012c).

Research and development activities

Figure 12: North Carolina Call Areas



Source: BOEM,

http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/State_Activities/NC_Call_Area_Names.pdf

The Carolinas Offshore Wind Integration Case Study is an ongoing collaborative effort including industry, the University of North Carolina, and the National Renewable Energy Laboratory, that is working to evaluate large-scale grid integration opportunities for offshore wind in North and South Carolina (ABB Group 2011).

The University of North Carolina has conducted research supporting large scale offshore wind development in the state including initial wind turbine assessments. A feasibility study by the University's Department of Marine Sciences found significant potential for offshore wind energy production off North Carolina's coast (UNC 2009).

Regulatory Summary

In North Carolina, any offshore wind development located in a designated area of environmental concern requires a permit from the state Department of Environment and Natural Resources. Permit approval depends on a showing of compliance with state coastal area guidelines and/or local land-use plans, and applicants must show that there will be no significant adverse impacts on public trust areas. In addition, any development on marshlands, tidelands, or estuarine waters requires a dredge and fill permit. A Certificate of Environmental Compatibility and Public Convenience and Necessity from the North Carolina Utilities Commission is also required for construction of new associated transmission lines.

Table 11: Offshore wind regulatory matrix for North Carolina.

	Statute/Approval Type	Lead Agency
State	Guidelines for Areas of Environmental Concern <i>Permit</i>	Department of Environment and Natural Resources, Coastal Resources Commission
	Coastal Area Management Act <i>Permit</i>	Department of Environment and Natural Resources, Coastal Resources Commission
	Environmental Policy Act <i>Assessment</i>	Department of Administration
	Dredge and Fill Act <i>Permit</i>	Department of Environment and Natural Resources
	Siting of Transmission Lines <i>Certificate</i>	North Carolina Utilities Commission
	Stormwater-Erosion & Sedimentation Control Laws <i>Permit/Assessment</i>	Department of Environment and Natural Resources, Division of Water Quality
	Coastal Zone Management Act <i>Federal Consistency Review</i>	N.C. Division of Coastal Management's Federal and State Consistency Review Coordinator
	Clean Water Act §401 <i>Water Quality Certificate</i>	Department of Environment and Natural Resources, Division of Water Quality
Local	Local Coastal Area Management Programs <i>Permit</i>	Local permitting authority
	Local land use permits and building permits may be required for land-based activities.	Local permitting authority

* More detailed information about each entry can be found in the Appendix.

South Carolina

Offshore Wind Development in South Carolina

A 2010 report, *South Carolina's Role in Offshore Wind Energy Development*, produced by the state Wind Energy Production Farms Feasibility Study Committee, outlined 18 recommendations to the South Carolina General Assembly, including the establishment of a state policy to support 1,000 MW of offshore wind energy development by 2018. The report also identified the need for a state renewable energy policy, a state leasing process, and a one-stop shop entity to coordinate developers' permitting and regulatory needs (SC Wind Energy Production Farms Feasibility Study Committee 2010).

South Carolina does not currently have any energy efficiency resource standards.

Offshore project activities

BOEM launched the South Carolina Renewable Energy Task Force in 2012 and has held two meetings to date (BOEM 2012c).

Research and development activities

The South Carolina Consortium for Offshore Wind, including the Savannah River National Laboratory, the Clemson University Restoration Institute, Santee Cooper, Clemson University's S.C. Institute for Energy Studies, Coastal Carolina University, the Center for Hydrogen Research, and the U.S. Coast Guard installed a SODAR wind measurement tool on a Coast Guard platform off the South Carolina coast in an effort to accurately gauge the state's offshore wind potential. This is the first sonic wind test of its kind off the North American coast (Gellatly 2010).

The Clemson University's Restoration Institute Wind Turbine Drivetrain Testing Facility broke ground in 2010 on the world's largest turbine drive train testing facility. The 7.5-MW test rig is scheduled to begin contracting in the fall of 2012, with a 15-MW rig to follow in early 2013 (Clemson University 2012).

Regulatory Summary

In South Carolina, a Certificate of Environmental Compatibility and Public Convenience and Necessity from the Public Services Commission is required for the construction or maintenance of major utility facilities. In addition, installation of cables and transmission lines must obtain a critical area permit from the Office of Ocean and Coastal Resource Management. Critical area permits are also necessary for utility facilities generating 75 MW of power or less.

Table 12: Offshore wind regulatory matrix for South Carolina.*

	Statute/Approval Type	Lead Agency
State	Coastal Tidelands and Wetlands Act <i>Permit</i>	Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management
	Utility Facility Siting and Environmental Protection Act <i>Certificate</i>	Public Services Commission
	Stormwater-Erosion & Sedimentation Control Laws <i>Permit/Assessment</i>	Department of Land Resources Conservation Commission
	Coastal Zone Management Act <i>Federal Consistency Review</i>	Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management
	Clean Water Act §401 <i>Water Quality Certificate</i>	Department of Health and Environmental Control, Bureau of Water
Local	Local land use permits and building permits may be required for land-based activities.	Local permitting authority

* More detailed information about each entry can be found in the Appendix.

Louisiana

Offshore Wind Development in Louisiana

Louisiana does not currently have any energy efficiency resource standards.

Offshore project activities

Louisiana is not part of BOEM's Smart from the Start offshore wind strategy program; therefore the agency has not played a role in offshore wind development in federal waters off Louisiana's coast. In addition, in spite of the existence of a regulatory offshore wind leasing process, there has been no interest in offshore wind development in state waters to date.

Research and development activities

In 2011, the British offshore wind turbine blade manufacturer, Blade Dynamics, produced its first products at their New Orleans plant (McCusker 2011).

Regulatory Summary

Louisiana's State Mineral and Energy Board, in conjunction with the Department of Natural Resources, is authorized to lease state submerged land for offshore wind energy production. This process involves an environmental review that is overseen by the Department of Natural Resources, which also issues coastal use permits. Approval from local governments and port authorities may also be necessary if portions of the offshore wind development falls within and impacts either jurisdiction.

Table 13: Offshore wind regulatory matrix for Louisiana.*

	Statute/Approval Type	Lead Agency
State	Leases for Production of Wind Energy <i>Lease</i>	Department of Natural Resources /State Mineral and Energy Board
	State and Local Coastal Resources Management Act <i>Permit</i>	Department of Natural Resources, Office of Coastal Management
	Port Authority Approval <i>Approval</i>	relevant Port Authority
	Coastal Zone Management Act <i>Federal Consistency Review</i>	Department of Natural Resources, Office of Coastal Management
	Clean Water Act §401 <i>Water Quality Certificate</i>	Department of Environmental Quality, Water Permits Division
Local	State and Local Coastal Resources Management Act <i>Permit</i>	Local permitting authority
	Local land use permits and building permits may be required for land-based activities.	Local permitting authority

* More detailed information about each entry can be found in the Appendix.

Texas

Offshore Wind Development in Texas

Texas' current renewable portfolio standard provisions require 5,880 MW of renewable energy by 2015. The state also set a target of reaching 10,000 MW of renewable capacity by 2025, which the wind energy industry met in 2010 (DSIRE 2012).

Offshore project activities

Texas is not part of BOEM's Smart from the Start offshore wind strategy program; therefore the agency has not played a role in offshore wind development in federal waters off the Texas coast.

The Texas wind development firm, Coastal Point, is planning a 300-MW wind facility 8.5 miles off the Galveston coast where the company has had meteorological instruments deployed since 2008. Coastal Point plans to place a 3-MW test turbine on the same site, however, the permitting process to construct a wind farm offshore could take as long as two years. Coastal Point is also planning four more projects along the Texas coast and investment in the five-facility, 2,100-MW enterprise is expected to be completed over the next 10 years (Breen 2011).

The Baryonyx Corporation has proposed two offshore wind projects located entirely within Texas-jurisdictional waters. The Mustang Project has a potential capacity of 1.2 GW. Baryonyx's second project, the Rio Grande Project, would be split across two sites off South Padre Island. The company suggests that each site has the potential to accommodate about 160 turbines, resulting in an installed capacity of about 1 GW for each half of the Project. Baryonyx has applied to the USACE for Section 10 and Section 404 permits for both of these projects. Following completion of an EIS analysis, construction on the projects could begin in 2015 (Griset 2011).

Research and development activities

Texas Tech's Wind Science and Engineering Research Center is partnering with the French offshore wind company, Alstom Wind, on a five-year project aimed at improving offshore wind turbines. The research will focus on developing a reliable offshore system for 6-MW wind turbines suited for U.S. deepwater conditions (Nett 2011).

Regulatory Summary

In Texas, the General Lands Office through the School Land Board is authorized to lease state lands for sustainable energy sources including offshore wind. Leasing is accomplished through a competitive bidding process that is divided into two phases; the first phase allows for research and data collection, followed by development and production in the second phase. In Phase I, within 60 days of the start of the lease, the lessee must submit a research plan to the Office for approval. This plan must include, among other items, a description of the environmental impact studies which the developer will

undertake. After this initial research plan, the lessee must submit a quarterly Phase I progress report to the Office, followed by submission of a final report and a production plan. The production plan must contain language that affirms that the lessee will either prepare an Environmental Impact Statement if required by the USACE, or else submit a mitigation plan to the Office. In addition, the production plan must contain economic analyses, a construction schedule, and a final description of the project. Once the production plan is approved, the lessee may begin construction. The lessee has 36 months to complete construction for the first 250 MW of capacity. Phase II begins when production facilities are ready to operate. There is a 'no transfer of lease' clause in the lease agreement, and the lands revert back to the Office after the lease expires (Snyder and Kaiser 2009).

Before such leases may be issued, the Coastal Coordination Council must affirm that the project is consistent with the state Coastal Management Program. Local governments with jurisdiction over shoreline require a permit for development seaward of a dune protection line or within a dune protection area. Prospective developers must also obtain a certificate from local governments for projects adjacent to public beaches.

Table 14: Offshore wind regulatory matrix for Texas.*

	Statute/Approval Type	Lead Agency
State	Coastal Coordination Act <i>Consistency Review</i>	General Land Office, Coastal Coordination Counsel
	Open Beaches Act <i>Certificate</i>	General Land Office
	Coastal Public Lands Management Act <i>Lease</i>	General Land Office, School Land Board
	Dune Protection Act <i>Permit</i>	General Land Office
	Coastal Zone Management Act <i>Federal Consistency Review</i>	General Land Office, Coastal Coordination Counsel
	Stormwater-Erosion & Sedimentation Control Laws <i>Permit/Assessment</i>	Commission on Environmental Quality
	Clean Water Act §401 <i>Water Quality Certificate</i>	Commission on Environmental Quality
Local	Open Beaches Act <i>Certificate</i>	Local permitting authority
	Dune Protection Act <i>Permit</i>	Local permitting authority
	Local land use permits and building permits may be required for land-based activities.	Local permitting authority

* More detailed information about each entry can be found in the Appendix.

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Additional Resources

Offshore Renewable Energy Regulatory Process (2010). Jessica Bradley; U.S. Bureau of Ocean Energy Management, Regulation, and Enforcement, Offshore Alternative Energy Programs (restructured as the U.S. Bureau of Ocean Energy Management, Renewable Energy Program).

Description: This PowerPoint presentation outlines the federal offshore wind development permitting process.

<http://www.boem.gov/Renewable-Energy-Program/State-Activities/RegulatoryFrameworkPresentation.aspx>.

Offshore Renewable Energy: Regulatory Primer (2011). Stephanie Showalter and Terra Bowling; National Sea Grant Law Center.

Description: This regulatory primer is designed to serve as an introduction to the major federal laws and regulations governing renewable energy development offshore and coastal state authority under those laws. The primer also discusses local concerns about offshore renewable energy projects. While the report was written in 2009 and updated in 2011, some discrepancies remain; for example, the Mineral Management Service is still listed as the lead federal regulatory agency for offshore wind permitting when that authority was actually transferred to a new agency, the Bureau of Ocean Energy Management. Overall, however, the report provides a good review of the federal permitting process.

<http://nsglc.olemiss.edu/offshore.pdf>.

Climate Change, Offshore Wind Power, and the Coastal Zone Management Act (2008). Thomas Street; U.S. National Oceanic and Atmospheric Administration.

Description: In the context of federal environmental and resource law, this paper focuses on how the federal Coastal Zone Management Act has potential impact upon wind power projects located in the United States coastal zone and on its Outer Continental Shelf. The analysis begins by briefly developing the history of wind power so as to provide essential context, while also introducing the benefits of offshore wind as a power source. Next, the paper examines the maritime zones established by the United Nations Convention on the Law of the Sea, reviewing U.S. implementation of relevant principles. The article then examines the overarching legal environment regulating wind power projects in the U.S., specifically focusing on those marine specific laws that are the most relevant. Finally, the paper examines how the federal Coastal Zone Management Act and the doctrines of federal and interstate consistency have great potential influence on coastal and offshore wind power projects.

<http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA502125>.

A National Offshore Wind Strategy: Creating an Offshore Wind Energy Industry in the United States (2011). U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Wind & Water Power Program, Department of the Interior, Bureau of Ocean Energy Management, Regulation, and Enforcement.

Description: As the agency with primary jurisdiction over reviewing and approving offshore wind projects in federal waters, the Department of the Interior (DOI) is a partner with the Department of Energy in implementing this National Offshore Wind Strategy and ensuring the creation of a robust and environmentally responsible offshore wind energy industry in the U.S. Over the past two years, DOI has developed a regulatory framework to review proposed offshore wind projects in federal waters. This report describes that process.

http://www1.eere.energy.gov/wind/pdfs/national_offshore_wind_strategy.pdf.

Wind Energy: Offshore Permitting (2009). Adam Vann; Congressional Research Service Report R40175.

Description: This report outlines federal and state jurisdiction over the ocean and examines state and federal permitting schemes for offshore wind developments.

http://assets.opencrs.com/rpts/R40175_20090903.pdf.

Regulating Offshore Wind Power and Aquaculture: Messages from Land and Sea (2005). Jeremy Firestone, Willett Kempton, Andrew Krueger, and Christen E. Loper; *Cornell Journal of Law and Public Policy* 14(1):71.

Description: This paper considers two emerging ocean uses: offshore wind power turbine development and marine aquaculture. The authors assess the present regulatory framework for both these uses, look to experiences in other countries that have moved more quickly and aggressively than the U.S. to develop and regulate these new uses and to more mature regulatory programs in the U.S. (particularly the onshore wind right-of-way grant program and the offshore oil and gas leasing program) to provide insight into the future of offshore wind leasing possibilities.

<http://www.lawschool.cornell.edu/research/JLPP/upload/Firestone-Kempton-Krueger-Loper.pdf>.

Offshore Wind Power in the U.S.: Regulatory Issues and Models for Regulation (2009). Brian Snyder and Mark J. Kaiser; *Energy Policy* 37:442-453.

Description: Offshore wind farms have the potential to generate a significant fraction of U.S. electrical consumption, but the U.S. currently lacks offshore wind farms and is still developing a regulatory system. This paper reviews and compares the regulatory and leasing systems developed in Europe and the U.S.

<http://ideas.repec.org/a/eee/enepol/v37y2009i11p4442-4453.html>.

The Turning Point for Atlantic Offshore Wind Energy: Time for Action to Create Jobs, Reduce Pollution, Protect Wildlife, and Secure America's Energy Future (2012). Catherine Bowes and Justin Allegro; National Wildlife Federation.

Description: This report provides summaries of the status of offshore wind development for states on the Atlantic seaboard. The report also tracks the U.S. Bureau of Ocean Energy Management's progress in permitting offshore wind energy since the 'Smart from the Start' process was launched in 2010.

http://www.nwf.org/~media/PDFs/Global-Warming/Reports/NWF_2012OffshoreWind_Final.pdf?dmc=1&ts=20130204T1419304027.

Appendix: State and Local Statutes and Regulations Relevant to Offshore Wind Development

Maine

Site Location of Development Act (Site Law)

Statutory reference: 38 M.R.S. § 481, *et seq.*

Permit/Assessment: Permit

Lead Agency: Department of Environmental Protection

Description: Requires a permit for development of offshore wind project activities (including land-based support construction and transmission lines) occurring onshore and on state submerged lands. In order to receive a permit, the proposed development must employ proper stormwater management and erosion control; not adversely impact the natural environment; ensure that the project fits harmoniously into the existing natural environment; and avoid any unreasonably adverse shadow flicker effects.

Permit applications must include: a project description, site plans, an assessment of the project's expected impact on human and natural resources, and proposed mitigation measures.

Comments: Applies to organized areas of the state defined as townships or municipalities that implement their own land use controls.

Natural Resource Protection Act

Statutory reference: 38 M.R.S. § 480-A, *et seq.*

Permit/Assessment: Permit

Lead Agency: Department of Environmental Protection

Description: Requires a permit for activities that occur onshore or in state waters that may impact natural resources (e.g., dredging, filling, or construction of any permanent structure). Permit standards include: no unreasonable interference with significant wildlife habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.

Permit applications must include: a project description, site plans, an assessment of the project's expected impact on human and natural resources, and proposed mitigation measures.

Comments: Applies to organized areas of the state. Organized areas are defined as townships or municipalities that implement their own land use controls.

Land Use Standards

Statutory reference: 12 M.R.S. §§ 681-689

Permit/Assessment: Permit

Lead Agency: Land Use Regulation Commission

Description: Requires a permit before any development on land within unorganized areas of the state. The applicant must submit information about possible bird and bat impacts,

noise, shadow flicker, public safety-related setbacks, and scenic impacts before permit approval. Only applicable if onshore portion of the wind project impacts unorganized areas of the state that are not included in an expedited wind permitting area.

Comments: Unorganized areas are defined as all areas of the state that are not part of an organized township or municipality. Expedited permitting areas are defined as: (1) the organized areas of the state not including waters subject to tidal influence and, (2) specific places within the state's unorganized areas as identified by the Land Use Regulation Commission.

Submerged Lands Act

Statutory reference: 12 M.R.S. § 1862(13)

Permit/Assessment: Lease/easement

Lead Agency: Bureau of Parks and Lands

Description: Developers of ocean energy projects, including offshore wind projects, must obtain a state submerged lands lease from the Bureau of Parks and Lands. Full-term leases last 30 years, however, upon request, before the full lease is issued, the Bureau may issue a 2-, 3-, or 5-year lease option for specific project start up activities.

Comments: Requires applicant to take part in a joint interagency pre-application meeting with the Bureau, the Department of Marine Resources, and the Department of Environmental Protection/Land Use Regulation Commission. The permitting process must also take into account comments from the Marine Resources Advisory Counsel and relevant lobster management policy counsels.

Certificate of Public Convenience and Necessity

Statutory reference: 35-A M.R.S. § 3132(2)

Permit/Assessment: Certificate of public convenience and necessity

Lead Agency: Maine Public Utilities Commission

Description: Requires approval from the Maine Public Utilities Commission for any proposal to build a transmission line capable of operating at 69 kilovolts or more. If the Commission finds that a public need exists, it will issue a certificate of public convenience and necessity for the transmission line. In determining public need, the Commission must take into account economics; reliability; public health and safety; scenic, historic and recreational values; state renewable energy generation goals; the proximity of the proposed transmission line to inhabited dwellings; and alternatives to construction of the transmission line, including energy conservation, distributed generation, or load management.

The Mandatory Shoreland Zoning Act

Statutory reference: 38 M.R.S. §§ 435-448

Permit/Assessment: Municipal permit

Lead Agency: Municipal zoning board

Description: Requires a municipal permit for approval of offshore wind project activities (e.g., transmission lines, substations, etc.) in shoreland areas based on compliance with local land use ordinances. Obtaining local land use approval may require a zoning change, variance, building permit, or other project-specific approval. However, a municipality is prohibited from enacting or enforcing a land use ordinance that prohibits the siting of ocean energy projects, including their associated facilities, within the municipality.

Comments: Applies to areas within 250 feet of the normal high-water line of a saltwater body or coastal wetland.

Massachusetts

Ocean Sanctuaries Act

Statutory reference: M.G.L. c. 132A, §§ 12A-16F, 18; 302 CMR 5.00

Permit/Assessment: Assessment review

Lead Agency: Department of Conservation and Recreation

Description: Prohibits activities that may significantly alter or endanger the ecology or appearance of the ocean, seabed, or subsoil of sanctuaries or the Cape Cod National Seashore. Specifically, the Act prohibits:

- Building structures on or under the seabed;
- Construction or operation of offshore or floating electrical generating stations;
- Drilling or removal of sand (except for the purposes of beach nourishment), gravel, other minerals, gases, or oils;
- Dumping or discharge of commercial, municipal, domestic or industrial wastes;
- Commercial advertising; and
- Incineration of solid waste or refuse on vessels within sanctuary boundaries.

These prohibitions may be waived if a finding of “public necessity and convenience” can be made for the proposed project or activity.

Comments: There is no separate Ocean Sanctuaries review process. Ocean Sanctuaries staff comment on Massachusetts Environmental Policy Act filings and on Chapter 91 license applications during the respective public comment periods. Proposals that are below the Massachusetts Environmental Policy Act thresholds are presumed to comply with the Ocean Sanctuaries Act. A project that receives a Chapter 91 license is also presumed to comply with the Ocean Sanctuaries Act.

Ocean Act of 2008

Statutory reference: M.G.L. c. 21A, § 4C

Permit/Assessment: N/A

Lead Agency: Executive Office of Energy and Environmental Affairs, Office of Coastal Zone Management

Description: Amended the Ocean Sanctuary Act by transferring the oversight of the state’s ocean sanctuaries to the Office of Coastal Zone Management and by allowing the development of “appropriate scale” renewable energy facilities in ocean sanctuaries (except the Cape

Cod Ocean Sanctuary) provided such facilities are consistent with the state Ocean Management Plan. The Act also requires that all state certificates, licenses, permits, and approvals for any proposed structures, uses, or activities be consistent with the Ocean Management Plan.

Massachusetts Environmental Policy Act (MEPA)

Statutory reference: M.G.L. c. 30, §§ 61-62H; 301 CMR 11.00

Permit/Assessment: Assessment review

Lead Agency: Executive Office of Energy and Environmental Affairs

Description: Proposed projects requiring a state environmental license, permit or funding are subject to MEPA review if they equal or exceed the MEPA thresholds. Examples of threshold activities include:

- Alteration of 25 or more acres of land.
- Alteration of designated significant habitat, and/or taking of endangered or threatened species or species of special concern.
- Alteration of coastal dunes, barrier beaches, or coastal banks; alteration of 500 ft. of fish run or inland bank; alteration of 1,000 square feet of salt marsh or outstanding resource waters; alteration of 5,000 square feet of bordering or isolated vegetated wetlands; new or expanded fill or structure in a velocity zone or regulatory floodway; or alteration of one-half acre of other wetlands.
- Projects proposed within an Area of Critical Environmental Concern.

The intent of the MEPA review is to inform project proponents and state agencies of potential adverse environmental impacts while a proposal is still in the planning stage. The proponent, through the preparation of one or more review documents, identifies required state agency actions and describes the means by which the proposal complies with applicable regulatory standards and requirements. All relevant state agencies are required to identify any aspects of the proposal that require additional description or analysis prior to completion of the agency action, most commonly issuance of an environmental permit.

Comments: MEPA review applies only to those portions of the offshore facility project that are located within state waters.

Public Waterfront Act (Chapter 91 license)

Statutory reference: M.G.L. c. 91, § 1 *et seq.*; 310 CMR 9.00

Permit/Assessment: Permit/license

Lead Agency: Department of Environmental Protection, Division of Wetlands and Waterways

Description: Requires a license for any project involving dredge and fill activities or the placement, change of use, or alteration of existing structures whose proposed location falls below the current or historic high water line (i.e., tidelands), or in great ponds and navigable rivers and streams. Projects are reviewed to ensure that they: (1) do not unreasonably interfere with navigation, (2) are structurally sound, (3) provide a proper public purpose, (4) do not interfere with public rights or rights of adjacent property owners, (5) will not

adversely affect natural resources, and (6) preserve Designated Port Areas for maritime industrial use. The applicant must provide the Department of Environmental Protection with information about other applicable state permits, a certification that the project does not violate municipal zoning, and notification of the municipal planning board.

Comments: Chapter 91 is the Massachusetts public trust statute and, as such, protects the public's rights to fish, fowl, and navigate in the state's public trust waters.

Certificate of Environmental Impact and Public Interest

Statutory reference: M.G.L. c. 164, § 69K

Permit/Assessment: Certificate

Lead Agency: Energy Facilities Siting Board

Description: Any applicant that proposes to construct or operate a generating facility may request the Energy Facilities Siting Board for a certificate of environmental impact and public interest. The Board will consider a request under the following conditions:

- (i) The applicant is prevented from building a generating facility because it cannot meet standards imposed by a state or local agency with reasonable and commercially available equipment;
- (ii) The processing or granting by a state or local agency of any approval, consent, permit, or certificate has been unduly delayed for any reason, including the preparation and publication of any environmental impact report;
- (iii) The applicant believes there are inconsistencies among resource use permits issued by such state or local agencies;
- (iv) The applicant believes that a nonregulatory issue or condition has been raised or imposed by such state or local agencies, such as, but not limited to, aesthetics and recreation;
- (v) The generating facility cannot be constructed due to any disapprovals, conditions, or denials by a state or local agency or body, except with respect to any lands owned or managed by any state agency or local government excluding public lands; or
- (vi) The facility cannot be constructed because of delays caused by the appeal of any approval, consent, permit, or certificate.

The Board will also consider an application if it finds that any state or local agency has imposed a burdensome condition or limitation on any license or permit which has a substantial impact on the responsibilities of the Board.

When a certificate is issued, no state agency or local government may require any approval, consent, permit, certificate, or condition for the construction, operation, or maintenance of the generating facility, and no state agency or local government may take any action which would delay or prevent the construction, operation, or maintenance of the facility.

Comments: This certificate constitutes a composite of the individual permits, approvals or authorizations which would otherwise be necessary for the construction and operation of the proposed project.

Coastal Wetlands Restriction Act

Statutory reference: M.G.L. c. 130, § 105; 310 CMR 12.00

Permit/Assessment: Coastal Wetlands Orders

Lead Agency: Department of Environmental Protection

Description: Directs development in registered coastal wetlands through the adoption of Coastal Wetlands Orders. These orders are issued by the Department of Environmental Protection in cases where the alteration of a coastal wetland area would negatively impact public health, safety and welfare; private property; wildlife; or marine fisheries. Regulated activities in restricted wetlands include dredging, filling, removing, otherwise altering, or polluting coastal wetlands. Because orders must be consistent with the state Coastal Zone Management Program, the Department must notify the Coastal Zone Management Office before adopting any proposed order. Local government agencies are also given notice of the proposed orders.

Comment: Coastal wetlands are defined as any bank, marsh, swamp, meadow, flat or other low land subject to tidal action or coastal storm flowage.

Massachusetts Wetlands Protection Act

Statutory reference: M.G.L. c. 131, § 40; 310 CMR 10.00

Permit/Assessment: Order of Conditions

Lead Agency: Department of Environmental Protection/local Conservation Commission

Description: Under this Act, no person may remove, fill, dredge or alter any freshwater or coastal wetland, beach, marsh, or any land subject to tidal action, coastal storm flowage, or flooding, without receiving an order of conditions from the Department of Environmental Protection or a local conservation commission. Upon receiving a notice of intent, the local commission must determine whether the proposed location or activity will require an order of condition under this Act. If the local commission fails to make this determination, the Department will issue any necessary order.

Comments: Freshwater wetlands include wet meadows, marshes, swamps, bogs, areas where groundwater, flowing or standing surface water, or ice provide a significant part of the supporting substrate for a plant community for at least five months of the year; inland waters with emergent and submergent plant communities; and that portion of any bank which touches any inland waters.

Cape Cod Commission Act

Statutory reference: St. 1989, c. 716 (§ 16(c))

Permit/Assessment: Coastal Zone Management consistency certification

Lead Agency: Cape Cod Commission

Description: The Office of Coastal Zone Management refers all consistency certifications it receives for proposed activities in Barnstable County (Cape Cod) to the Cape Cod Commission for review. If the Commission finds inconsistencies between the proposed activities and the Commission's Regional Policy Plan or local comprehensive plans certified by the

Commission, it notifies the Office of Coastal Zone Management of any objections it may have to a consistency certification. The Office will consider objections that are directly related to their enforceable policies. Any conflict between the Office and the Commission is referred to and resolved by the Executive Office of Energy and Environmental Affairs.

Comments: The Cape Cod Commission is the regional planning and land use commission authorized to prepare and oversee the implementation of a regional land use policy plan for all of Barnstable County, to recommend for designation specific areas of Cape Cod as districts of critical planning concern, and to review and regulate developments of regional impact.

Rhode Island

Coastal Resources Management Council

Statutory reference: R.I.G.L. § 46-23-6(4)(iii)

Permit/Assessment: Lease/License

Lead Agency: Coastal Resources Management Council

Description: The Coastal Resources Management Council has sole authority for the leasing of submerged and filled state lands and granting licenses for the use of that land.

Comments: Applies to facilities located in state waters and transmission cables sited in state waters.

Coastal Zone Management Program

Statutory reference: R.I.G.L. § 46-23-1 *et seq.*; CRIR 04-000-010; CRIR 04-000-017

Permit/Assessment: Permit

Lead Agency: Coastal Resources Management Council

Description: The Coastal Resources Management Council has exclusive jurisdiction over lands below the mean high water mark for all development, operations, and dredging activities. The Council also has authority over coastal wetlands and all directly associated contiguous areas which are necessary to preserve the integrity of the wetlands including any freshwater wetlands located in the vicinity of the coast. The Council is responsible for issuing, modifying, or denying permits for dredging, filling, or any other physical alteration of coastal wetlands and all directly related contiguous areas, including but not limited to, the transportation and disposal of dredge materials in tidal waters.

Comments: A coastal wetland is any salt marsh bordering on the tidal waters of Rhode Island, whether or not the tidal waters reach the littoral areas through natural or artificial watercourses, and any contiguous uplands which are necessary to preserve the integrity of that marsh.

This Act applies to facilities and transmission cables located in state waters.

Ocean Special Area Management Plan

Statutory reference: N/A

Permit/Assessment: Permit

Lead Agency: Coastal Resources Management Council

Description: The Rhode Island Ocean Special Area Management Plan (SAMP) designates suitable areas in state waters within the Ocean SAMP for offshore renewable energy (Renewable Energy Zones) and sets forth policies and standards with which offshore developments must comply. If the Council determines that impacts on the natural resources or human uses of the coastal zone through the pre-construction, construction, operation, or decommissioning phases of a project would result in significant adverse effects, the Council will either require that the applicant modify the proposal to avoid and/or mitigate the impacts or deny the proposal.

The Ocean SAMP also designates Areas of Particular Concern (APCs) in state waters which include areas with:

- Unique or fragile physical features or important natural habitats;
- High natural productivity;
- Features of historical significance or cultural value;
- Substantial recreational value; and
- High fishing activity.

APCs also include areas that are important for navigation, transportation, military and other human uses.

All offshore development is excluded from APCs unless the applicant can demonstrate that there are no less damaging practicable alternatives in areas outside of the APC, or that the proposed project will not result in a significant alteration to the values and resources of the APC.

Areas Designated for Preservation within the Ocean SAMP are also identified and are set aside for the preservation of their ecological value. All offshore development is prohibited in these areas except for the installation of associated underwater cables.

Comment: Offshore developments are defined as large-scale projects including offshore wind facilities with five or more turbines within two kilometers (1.2 miles) of each other, or a capability of 18 MW of power, and their associated underwater cables.

Freshwater Wetlands Permit

Statutory reference: R.I.G.L. §§ 2-1-18 – 24; CRIR 12-190-025

Permit/Assessment: Permit

Lead Agency: Department of Environmental Management, Office of Water Resources

Description: No alteration of any freshwater wetland may occur without a permit. The permit will be denied if the Department of Environmental Management determines that approval is not in the public interest.

Comments: Freshwater wetlands include but are not limited to, marshes, swamps, bogs, ponds, rivers, river and stream floodplains and banks, areas subject to flooding or storm flowage, emergent and submergent plant communities in any body of fresh water including rivers and streams as well as land within 50 feet of the edge of any bog, marsh, swamp or pond.

Applies to onshore connection of associated transmission cable.

Energy Facility Siting Act

Statutory reference: R.I.G.L. § 42-98-1 *et seq.*

Permit/Assessment: Energy facility license

Lead Agency: Energy Facilities Siting Board

Description: A license from the Energy Facilities Siting Board is required for the construction, or alteration of a major energy facility. A major energy facility is defined as electrical facilities designed or capable of operating at 40-MW or more with transmission lines capable of carrying 69 kilovolts or more. Applications must include a detailed description of the proposed facility, as well as a complete life-cycle management plan that includes measures for protecting the public health and safety and the environment during the facility's operations. The Board is directed to give preference to energy projects based on eight criteria including the use of renewable fuels.

Comments: Applies to facilities located in State waters.

New Jersey

Offshore Wind Economic Development Act

Statutory reference: N.J.A.C. § 14:8.6 *et seq.*

Permit/Assessment: Offshore wind renewable energy certificate (OREC)

Lead Agency: Board of Public Utilities

Description: Any person seeking an offshore wind renewable energy certificate (OREC) must apply to the Board of Public Utilities for approval as a qualified offshore wind project. OREC applications must include a detailed description of the project as well as a construction plan, a financial analysis, and plan(s) for operation, maintenance, safety, and decommissioning. The application must also include a cost-benefit analysis that demonstrates positive economic and environmental net benefits to the state. This analysis must provide three types of information: (1) an analysis of the potential impacts on electricity rates of residential and industrial customers over the life of the project; (2) impacts on income, employment, wages, indirect business taxes, and output with a particular emphasis on in-state manufacturing employment; and (3) net environmental effects of the project.

Comments: A qualified offshore wind project is defined as a wind turbine electric generation facility in the Atlantic Ocean that is connected to the electrical transmission system in the State of New Jersey. It also includes the associated transmission-related interconnection facilities and equipment.

The Coastal Area Facility Review Act (CAFRA)

Statutory reference: N.J.S.A. § 13:19 *et seq.*

Permit/Assessment: Permit

Lead Agency: Department of Environmental Protection, Division of Land Use Regulation

Description: The Act divides the CAFRA area into zones, and regulates different types of development in each zone. Regulated activities within the CAFRA area include a wide variety of residential, commercial or industrial development such as construction, relocation, and enlargement of buildings and structures; and associated work such as excavation, grading, site preparation and the installation of shore protection structures.

Any person proposing to construct a development in the coastal area must obtain a permit from the Department of Environmental Protection. The permit application must include an Environmental Impact Statement which provides the information needed to evaluate the effects of a proposed development upon the environment of the coastal area. A permit may be issued only upon a finding that the proposed development, among other criteria, would result in minimal practicable degradation of unique or irreplaceable land types, historical or archeological areas, and existing public scenic attributes at the site and within the surrounding region. If the Department finds that the proposed development would materially contribute to an already serious and unacceptable level of environmental degradation or resource exhaustion, the Department may deny the permit application, or issue a permit containing conditions reasonably necessary to promote the public health, safety and welfare, to protect public and private property, wildlife and marine fisheries, and to preserve, protect and enhance the natural environment.

Comments: The CAFRA area includes coastal waters in southern New Jersey.

Waterfront Development Permit

Statutory reference: N.J.S.A. § 12:5-3

Permit/Assessment: Permit

Lead Agency: Department of Environmental Protection, Division of Land Use Regulation

Description: Authorizes the Department of Environmental Protection to regulate the construction or alteration of a dock, wharf, pier, bulkhead, bridge, pipeline, cable or other similar development on or adjacent to tidal waterways throughout the state. Outside of the CAFRA area and Hackensack Meadowlands District, the Act applies in upland areas adjacent to tidal waters extending from the mean high water line landward a minimum of 100 feet and not exceeding 500 feet. Within this area, construction, reconstruction, alteration, expansion or enlargement of any structure, or the excavation or filling of any area are subject to this Act.

Comments: Applies to transmissions cables or lines associated with offshore wind projects.

Wetlands Act of 1970

Statutory reference: N.J.S.A. § 13:9A

Permit/Assessment: Permit

Lead Agency: Department of Environmental Protection, Division of Land Use Regulation

Description: Authorizes the Department of Environmental Protection to regulate activities on all coastal wetlands that have been delineated and mapped by the Department. Regulated activities include excavation, dredging and filling, or construction. Any person proposing

to conduct a regulated activity upon a mapped coastal wetland must file a permit application with the Department. In granting, denying or limiting any permit the Department will consider the effect of the proposed activity on:

- The public health and welfare;
- Marine and shell fisheries, and wildlife;
- The protection of life and property from flood, hurricane and other natural disasters; and
- Preservation of the ecological balance of coastal wetlands.

Comments: Coastal wetlands are defined as any bank, marsh, swamp, meadow, flat or other low land subject to tidal action as well as coastal inland waterways connected to tidal waters not more than one foot above local extreme high water.

Tidelands Act

Statutory reference: N.J.S.A. § 12:3-1 *et seq.*

Permit/Assessment: Grant/lease

Lead Agency: Tidelands Resource Council/Department of Environmental Protection

Description: The Tidelands Resource Council is authorized to make the initial decision to sell or rent tidelands belonging to the state, before passing their decision on to the Department of Environmental Protection for subsequent approval. Tidelands grants and leases must also be approved and signed by the Attorney General and the Governor. Under the Act, it is the responsibility of the Council to determine whether applications are in the public interest; and, in assessing applications, determine whether the state may have a future use for such lands.

Comments: Tidelands are those lands along the shore which are tide-flowed; they extend from the mean high water mark to the seaward territorial jurisdiction of the state. The term includes tidal swamps, or "meadowlands."

Delaware

Subaqueous Lands Act

Statutory reference: 7 Del. C., c. 72, §§ 7201-7217

Permit/Assessment: Permit/lease

Lead Agency: Department of Natural Resources and Environmental Control, Division of Water

Description: Requires a permit or lease from the Department of Natural Resources and Environmental Control for activities on subaqueous lands in order to prevent impairment of navigation or impediments to public access to navigable waters resulting from haphazard development. Activities requiring a permit include the laying of electric transmission lines or any other utility structure in, on, over, or under the beds of subaqueous lands.

In the permitting process, the Department considers the public interest in the proposed activity which might affect the use of subaqueous lands. The Department also must take into account any possible environmental impacts including impaired water

quality, as well as impacts on navigation, recreation, aesthetic enjoyment, and other uses of the subaqueous lands.

Comments: Applies to subaqueous lands below mean low tide.

Wetlands Act

Statutory reference: 7 Del. C., c. 66, §§ 6601-6620

Permit/Assessment: Permit

Lead Agency: Department of Natural Resources and Environmental Control, Division of Water

Description: Requires that activities in or adjacent to wetlands be conducted in such a way as to minimize wetlands destruction or degradation, preserve the natural and beneficial values of wetlands, and protect the public interest. Activities which may adversely affect wetlands require a permit from the Department of Natural Resources and Environmental Control. The following factors must be considered prior to such approval:

- The environmental impact of the proposed use;
- The number and type of supporting facilities required and their impact;
- The effect of the activity on neighboring land uses;
- The appropriate state and local comprehensive plans for the general area;
- The economic impact of the activity in terms of jobs, taxes generated, and land area required;
- The aesthetic impact of the proposed activity.

Alternative methods of construction may also be considered prior to permit approval. In addition, no permit may be granted unless the county or municipality having jurisdiction has first approved the activity through zoning ordinances.

Comments: Applies to tidal and non-tidal wetlands. Applies to instances when the electric cable transporting power generated from wind turbines makes landfall in a regulated wetland.

Delaware Coastal Zone Act

Statutory reference: 7 Del. C., c. 70, §§ 7001-7013

Permit/Assessment: Permit

Lead Agency: Department of Natural Resources and Environmental Control, Planning Section

Description: Regulates coastal zone uses in order to protect and preserve the ecosystem and to control development, both landward and seaward of the tidal zone. Heavy industrial uses of any kind are prohibited in the coastal zone and no such permits may be issued. Heavy industry uses involve more than 20 acres, and employ equipment such as smokestacks, tanks, distillation or reaction columns, chemical processing equipment, scrubbing towers, pickling equipment, or waste-treatment lagoons. The definition does not include on-shore facilities less than 20 acres in size that are required for support of exploration and development operations. Offshore development for alternative energy is permitted provided such activities do not result in the degradation of Delaware's natural resources.

Comments: Does not explicitly allow offshore wind development.

Beach Preservation Act

Statutory reference: 7 Del. C., c. 68, §§ 6801-6812

Permit/Assessment: Permit

Lead Agency: Department of Natural Resources and Environmental Control, Division of Watershed Stewardship

Description: No construction, modification, or reconstruction of any structures or facilities on any beach seaward of the building line may be undertaken without a permit from the Department of Natural Resources and Environmental Control. Likewise, no beach alteration which may affect the enhancement, preservation or protection of the state's beaches may be conducted without having first obtained a permit from the Department.

Comment: Applies to public and private beaches of the state. The building line is defined as a line generally paralleling the coast.

Public Utilities Act

Statutory reference: 26 Del. C., c. 1, sub.c. III-A, § 256(c)

Permit/Assessment: N/A

Lead Agency: Public Service Commission

Description: State regulated utilities can receive 3.5 renewable energy credits for each MW hour of offshore wind energy purchased from offshore wind energy facilities located off the Delaware coast before May 31, 2017. To be entitled to the credits, utilities must contract for energy and renewable energy credits from offshore wind energy installations before construction of the facility begins.

Maryland

Tidal Wetland Act

Statutory reference: M.C.A., Env't. §16-102

Permit/Assessment: License/permit

Lead Agency: Board of Public Works /Department of the Environment

Description: Before beginning any work in tidal wetlands (including submerged lands), a person who intends to build or rebuild structures or to dredge or fill or use tidal wetlands in a way that would destroy the wetland's natural vegetation or tidal flow or alter its beneficial character must obtain a license from the Board of Public Works or a permit from the Department of the Environment. In general, permits are issued by the Department for activities in private wetlands (i.e., emergent tidal marsh landward of the mean high water line or any land not considered state wetland bordering on or lying beneath tidal waters), while licenses are issued by the Board for state wetlands (i.e., lands under the navigable waters of the state below the mean high tide line that are affected by the regular rise and fall of the tide) after receipt of the Department's recommendation.

Comments: Applies to construction of associated transmission lines.

Beach Erosion Control & Replenishment

Statutory reference: M.C.A., Nat. Resources. § 8-1102

Permit/Assessment: Prohibited w/o exemption

Lead Agency: Board of Public Works/Department of the Environment, Department of Natural Resources, Department of Planning

Description: Prohibits any land clearing, construction activity, or placement of permanent structures within the Beach Erosion Control District except for specified works. The exceptions do not include energy facilities or transmission lines. Thus, transmission lines would need to be directionally drilled so as not to enter the protected beach zone.

Comments: The Beach Erosion Control District consists of the area between the waters of the Atlantic Ocean and, respectively, the west crest of the dune (on Assateague Island) and the State-Ocean City building limit line.

Maryland Chesapeake and Atlantic Coastal Bay Critical Area Act

Statutory reference: M.C.A., Nat. Resources. § 8-1801 *et seq.*

Permit/Assessment: Assessment

Lead Agency: Critical Area Committee/local government

Description: Establishes a critical area along the state's shoreline that is subject to restricted development standards in order to protect the area's natural resources. Each local government in the critical area must develop and implement a critical area protection program for its jurisdiction designed to minimize adverse impacts on water quality; conserve fish, wildlife, and plant habitat; and establish land use policies for development which accommodate growth while accounting for possible adverse environmental impacts. Land uses within the critical area are prescribed by the degree of existing development. The greatest amount of development in the critical area is allowed on land designated as Intensely Developed Areas. These areas are primarily residential, commercial, institutional, and/or industrial with little existing natural habitat.

Local jurisdictions are also required to establish habitat protection areas within the critical area. Habitat protection areas include buffers, nontidal wetlands, and conservation habitats. Construction of roads, bridges, or utilities in any habitat protection area is prohibited.

Utility transmission facilities are only allowed within the critical area if they are located in Intensely Developed Areas, unless there is no feasible alternative, they are necessary to serve permitted uses within the critical area, or they occur where regional or interstate facilities must cross tidal waters.

Comments: Critical areas are defined as all land and water areas within 1,000 feet of the mean high water line and the landward boundaries of wetlands as well as all waters of and lands under the Chesapeake Bay, its tributaries to the head of tide, and state and private wetlands.

Public Service Commission Article

Statutory reference: M.C.A. Public Utilities. § 7-101 *et seq.*

Permit/Assessment: Certificate of Public Convenience and Necessity

Lead Agency: Public Service Commission

Description: Any construction or modification of a generating station or an overhead transmission line carrying over 69 kilovolts cannot begin without first obtaining a Certificate of Public Convenience and Necessity (CPCN) from the Public Service Commission. In considering whether to grant a CPCN, the Commission must take into account: (1) the recommendation of the governing body of each local government in which any portion of the generating station or overhead transmission line is proposed to be located; (2) in the case of an overhead transmission line, the need to meet existing and future demand for electric service, and (3) the effect of the generating station or overhead transmission line on: the stability and reliability of the electric system; economics; aesthetics; historic sites; aviation safety; air and water pollution; and waste disposal.

When the Commission receives a CPCN application that entails dredging or filling in state waters, it must notify the Department of Natural Resources and the Department of the Environment. These two departments must then complete all necessary studies, investigations, and reviews, and forward these materials to the Commission along with a recommendation that the CPCN be granted, denied, or granted with conditions.

Comments: The Act does not expressly address all of the circumstances of offshore, submerged transmission lines necessary to carry electricity from offshore wind energy generating stations to the grid. While a CPCN is required for construction of an overhead transmission line that carries over 69 kilovolts, the Act does not address the Commission's role in construction of new submerged or underground lines.

Virginia

Submerged Lands Permit

Statutory reference: V.C.A. § 28.2 -1203

Permit/Assessment: Permit

Lead Agency: Marine Resources Commission, Habitat Management Division

Description: Any activity that uses, encroaches on, or disturbs the water bottoms of the State, including subaqueous land, tidal wetlands, or coastal primary sand dunes, requires a permit from the Marine Resources Commission. When determining whether to grant a permit, the Commission considers the public and private benefits of the proposed project and exercises its authority under the public trust doctrine in order to protect and safeguard the public right to the use and enjoyment of the subaqueous lands. The Commission also considers the project's effect on the following: marine and fisheries resources, tidal wetlands, water quality, submerged aquatic vegetation, and adjacent or nearby property. The Commission consults with other state agencies, including the Virginia Institute of Marine Science, the State Water Control Board, the Virginia Department of Transportation, and the State Corporation Commission, whenever the

Commission's decision on a permit application relates to or affects the particular concerns or activities of those agencies. When determining whether to grant a permit, the Commission must conform to the following standards: wetlands of primary ecological significance may not be altered so that the ecological systems in the wetlands are unreasonably disturbed; and development in tidewater Virginia, to all practical extent, must be concentrated in wetlands of lesser ecological significance.

The Commission may also grant easements over or under the waters of the state for a period not to exceed 30 years in the case of offshore renewable energy leases.

Small Renewable Energy (Wind) Project Permit by Rule

Statutory reference: V.C.A. § 10.1 *et seq.*

Permit/Assessment: Permit

Lead Agency: Department of Environmental Quality

Description: The conditions for issuance of the permit by rule for small renewable energy projects include, but are not limited to:

- Certification by the local governing body where the project will be located that the project complies with all applicable land use ordinances;
- Analysis of potential environmental impacts of the project on attainment of national ambient air quality standards;
- Analysis of the beneficial and adverse impacts of the proposed project on natural resources; and
- Certification that the applicant has applied for or obtained all necessary environmental permits.

The analyses of potential impacts of the project on natural resources must include a wildlife analysis that contains desktop surveys and maps, breeding bird surveys, a field survey of non-avian resources, raptor migration surveys, bat acoustic surveys and a wildlife report. The overall natural resource analysis must also contain a desktop survey of natural heritage resources within the site and within two miles of the site, as well as field surveys of ecological community groups, wetlands, invasive plant species, cliffs, caves, and rock outcrops. A scenic resources analysis of the impact of the project on existing federal or state-designated scenic resources, including national parks, national forest-designated scenic areas, state parks, state natural area preserves, national scenic trails, national or state-designated scenic roads, and national or state-designated scenic rivers is also required.

If the Department of Environmental Quality determines that the application meets the above requirements, then it will notify the applicant that he is authorized to construct and operate a small wind energy project.

Comments: A small renewable energy wind project is defined as an electrical generation facility with a rated capacity greater than 5 MW but not exceeding 100 MW that generates electricity from wind. Two or more wind energy projects otherwise spatially separated but under common ownership or operational control, which are connected to the

electrical grid under a single interconnection agreement, are considered to be a single wind energy project.

Local Wetlands Permits

Statutory reference: V.C.A. § 28.2-1302

Permit/Assessment: Permit

Lead Agency: local wetlands boards

Description: Any local government may adopt the model ordinance included in the Submerged Land Act. This is the only wetlands zoning ordinance under which any local wetlands board is authorized to operate.

North Carolina

Guidelines for Areas of Environmental Concern

Statutory reference: N.C.G.S. § 113A-100 *et seq.*; 15A NCAC 07H .0106(5), 0207, .008(b)(13)

Permit/Assessment: Permit

Lead Agency: Department of Environment and Natural Resources, Coastal Resources Commission

Description: No development in any Area of Environmental Concern may begin without a permit. Local governments within the coastal area may petition the Coastal Resources Commission to act as a permit-letting agency in lieu of the Commission if their local implementation and enforcement programs meet the Commission's criteria. Permits may be denied if the Commission or its local government agent finds that the development would be inconsistent with state coastal area guidelines or local land-use plans which specify that development and construction activities must be sited and designed to avoid significant adverse impacts on the productivity and biologic integrity of coastal wetlands, shellfish beds, submerged aquatic vegetation and spawning and nursery areas.

In addition to the above conditions, applicants for the development and operation of a wind energy facility must provide an evaluation of the following: proposed noise impacts, shadow flicker impacts, avian and bat impacts, viewshed impacts, and potential user conflicts. Wind energy facilities must also avoid natural and artificial reefs, coal outcrops, seaweed communities, and significant benthic communities. Development must be timed so as to avoid significant adverse impacts on the life cycles of estuarine or ocean resources, or wildlife, and the development must not jeopardize the use of the surrounding waters for navigation or for other public trust rights.

Comments: Areas of Environmental Concern are designated by the Commission and may include coastal wetlands, estuarine waters, environmentally fragile areas, waterways, lands under or flowed by tidal waters, and primary nursery areas.

Coastal Area Management Act (Coastal Energy Policies)

Statutory reference: N.C.G.S. § 113A-100 *et seq.*; 15A NCAC 07M .0400 - .0403

Permit/Assessment: Permit

Lead Agency: Department of Environment and Natural Resources, Coastal Resources Commission

Description: In order to be permitted, major energy facilities, which include offshore wind facilities, must avoid significant adverse impact on vital coastal resources or uses, public trust areas and public access rights. Permit applications must include an impact assessment which discusses the potential environmental, economic and social consequences, including cumulative and secondary impacts, of a proposed major energy facility on the use of public trust waters, adjacent lands and on the coastal resources, including the effects caused by activities outside the coastal area. Energy development must also be sited and designed to provide maximum protection of views to and along the ocean, sounds and scenic coastal areas, and to minimize the alteration of natural landforms.

Comments: Public trust areas in North Carolina include, but are not limited to, all waters of the Atlantic Ocean and the lands underneath from the mean high water mark to the seaward limit of state jurisdiction, and all natural bodies of water subject to measurable lunar tides and their submerged lands to the normal high water or normal water level mark. These areas must be managed in such a way as to protect public rights for navigation and recreation and to safeguard and perpetuate their biological, economic, and aesthetic value.

Siting of Transmission Lines

Statutory reference: N.C.G.S. §§ 62- 100-106

Permit/Assessment: Certificate of Environmental Compatibility and Public Convenience and Necessity

Lead Agency: North Carolina Utilities Commission

Description: No construction of a new transmission line with a capacity of at least 161 kilovolts may begin without first obtaining a Certificate of Environmental Compatibility and Public Convenience and Necessity from the Utilities Commission. Among other information, the application must include the reasons the transmission line is needed, an environmental report setting forth the environmental impact of the proposed construction, any mitigating measures that may minimize the impact, and alternatives to the proposed construction. The Commission will grant a certificate for the construction, operation, and maintenance of the proposed transmission line if it finds that: (1) the environmental impact of the proposed line is justified considering the state of the available technology, the nature and economics of the various alternatives, and other material considerations; and (2) public convenience and necessity require the transmission line.

North Carolina Environmental Policy Act

Statutory reference: N.C.G.S. § 113A-1 *et seq.*

Permit/Assessment: Assessment

Lead Agency: Department of Administration

Description: Requires every state agency to include in every recommendation or report on any action involving expenditure of public moneys or use of public land for projects and programs

significantly affecting the quality of the environment, a detailed statement by the responsible official setting forth the following:

- The environmental impact of the proposed action;
- Any significant adverse environmental effects which cannot be avoided should the proposal be implemented;
- Mitigation measures proposed to minimize the impact;
- Alternatives to the proposed action;
- The relationship between the short-term uses of the environment involved in the proposed action and the maintenance and enhancement of long-term productivity; and
- Any irreversible and irretrievable environmental changes which would be involved in the proposed action should it be implemented.

Comments: An action is defined as licensing, certification, permitting and other similar final agency decisions, required for approval of the proposed activity.

Environmental effects include any direct, indirect, and cumulative impacts of the project or program that may be significant, depending on the manner in which the activity is carried out.

North Carolina Dredge and Fill Act

Statutory reference: N.C.G.S. § 113-229

Permit/Assessment: Permit

Lead Agency: Department of Environment and Natural Resources

Description: No excavation or filling project located in any estuarine waters, tidelands, or marshlands may begin without first obtaining a permit. The Department of Environment and Natural Resources may deny an application for a dredge or fill permit upon finding that the proposed activity will have a significant, adverse effect on: (1) public use of the water; (2) the value and enjoyment of the property of any riparian owners; (3) public health, safety, and welfare; (4) the conservation of public and private water supplies; or (5) wildlife and freshwater, estuarine, or marine fisheries.

Comments: Estuarine waters include all the waters of the Atlantic Ocean within the boundary of North Carolina and all the waters of the bays, sounds, rivers, and tributaries seaward of the dividing line between coastal and inland fishing waters.

Marshland is defined as any salt marsh or other marsh subject to regular or occasional flooding by tides, including wind (excluding hurricane or tropical storm tides).

South Carolina

Coastal Tidelands and Wetlands Act (Critical Areas Permit)

Statutory reference: S.C.C.A. § 48-39-10 *et seq.*; R 30-1

Permit/Assessment: Permit

Lead Agency: Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management

Description: Any person wishing to alter a critical area must receive a permit from the Office of Ocean and Coastal Resource Management. In determining the potential impacts of projects in critical areas, the Office will consider the extent to which the activity:

- Is water dependent;
- Would obstruct the natural flow of navigable water;
- Would affect the production of fish, shrimp, oysters, crabs, or clams, or any marine life or wildlife, or other natural resources in a particular area;
- Would affect existing public access to tidal and submerged lands, navigable waters and beaches, or other recreational coastal resources; and
- Could affect habitats for rare and endangered species of wildlife or irreplaceable historic and archeological sites in South Carolina's coastal zone.

Installation of cables and transmission lines is preferred in non-wetland areas but is allowed in critical areas provided the installations are designed to minimize adverse environmental impacts.

Utility facilities that generate less than or equal to 75 MW and transmit less than or equal to 125 kilovolts need to obtain a critical area permit.

Comments: Critical areas include coastal waters, tidelands, beach/dune systems, and beaches.

The Utility Facility Siting and Environmental Protection Act

Statutory reference: S.C.C.A. §§ 58-33-10 – 430

Permit/Assessment: Certificate of Environmental Compatibility and Public Convenience and Necessity

Lead Agency: Public Services Commission

Description: A Certificate is required for the construction or maintenance of major utility facilities, defined as electric generating plants designed and capable of generating more than 75 MW, and electric transmission lines and associated facilities designed to carry 125 kilovolts or more. No critical area permit is required for a major energy facility, however, the Public Services Commission must keep the Office of Ocean and Coastal Resource Management apprised of their activity. The Certificate application must contain a summary of all studies made by or for the applicant concerning the environmental impact of the proposed facility. The Commission may not grant a Certificate unless it determines: (1) the nature of the probable environmental impact; (2) that the environmental impact is justified; (3) the basis of the need for the facility; and (4) that public convenience and necessity require the construction of the facility.

Louisiana

Leases for Production of Wind Energy

Statutory reference: L.R.S. § 41:1731 *et seq.*; L.A.C. 43:I c. 10 §§ 1001-1033

Permit/Assessment: Lease

Lead Agency: Department of Natural Resources/State Mineral and Energy Board

Description: Development and production of wind energy on state land and water bottoms requires a lease issued by the State Mineral and Energy Board. Leases are awarded by public bid.

Upon receiving an application, the Department of Natural Resources evaluates the environmental impact of the placement of wind turbines and other equipment necessary for the exploration, development, or production of wind energy, as well as the impact of the proposed lease on any other leases. The Department also consults with the Department of Wildlife and Fisheries when the proposed lease is under the jurisdiction of the Louisiana Wildlife and Fisheries Commission and may consult with any other state agency or governmental entity that may have jurisdiction over areas within the proposed lease. If the Department determines that the proposed lease is appropriate, the application is recommended to the Board which then conducts the public bidding process.

Comments: As part of the bidding process, the prospective leaseholder must submit a summary of the environmental issues raised by the proposed wind development including, but not limited to, avian safety and baseline noise levels, the environmental impact of the placement of wind turbines and other equipment necessary for the exploration, development and production of wind energy, and the steps proposed to minimize the environmental impact, along with any supporting environmental impact documentation.

Port Authority Approval

Statutory reference: L.A.C. 43:I. § 1112

Permit/Assessment: Approval

Lead Agency: relevant Port Authority

Discussion: A wind lease cannot be granted without the approval of a Port Authority if it affects lands owned or leased by a Port Authority or public navigable waters that flow through any lands within the jurisdiction of a Port Authority. Approval cannot be withheld unless the project would be detrimental to the needs of commerce and navigation.

State and Local Coastal Resources Management Act

Statutory reference: L.A.C. § 49:214.21 *et seq.*

Permit/Assessment: Coastal use permit

Lead Agency: Department of Natural Resources, Office of Coastal Management

Description: No use or activity which has a direct and significant impact on coastal waters may begin in the coastal zone without a coastal use permit. Such uses include but are not limited to dredging or filling and discharges of dredged or fill material and energy development activities. Any proposed activity must comply with the guidelines set forth in the state Coastal Zone Management Program. Among other provisions, the guidelines require developers to minimize, whenever feasible and practical, detrimental impacts on natural areas and wildlife habitat and fisheries by encouraging minimum change of natural systems. If local governments choose to develop a local coastal management program, then uses of local concern within the parish's coastal zone must be consistent with the local program and will require the issuance of coastal use permits by the local government.

Comments: Uses of local concern are those uses which: (1) directly and significantly affect coastal waters, (2) are in need of coastal management but are not uses of state concern, and (3) should be regulated primarily at the local level if the local government has an approved program. Uses of state concern are those uses which: (1) directly and significantly affect coastal waters, (2) are in need of coastal management and have impacts of greater than local significance, or (3) significantly affect interests of regional, state, or national concern.

Texas

Coastal Coordination Act

Statutory reference: Tex. Nat. Res. Code Ann. § 33:201 *et seq.*; 31 T.A.C. §§ 501, 503, 505, and 506

Permit/Assessment: Consistency review

Lead Agency: Coastal Coordination Counsel, General Land Office

Description: Any state agency that issues permits, certificates, leases, easements, or approvals of developments that may adversely affect a Coastal Natural Resource Area (CNRA) must comply with the goals and policies of the coastal management program. CNRAs include: barriers, historic areas, preserves, shore areas, wetlands, critical dune and erosion areas, gulf beaches, submerged land, tidal sand or mud flats, water of the open Gulf of Mexico, and water under tidal influence. Any agency that is considering approval of a development that may adversely affect a CNRA must affirm that it has taken into account the coastal management program goals and policies by issuing a written determination that the proposed action is consistent with the program goals and policies, or will not have any direct and significant impacts on applicable CNRAs. The Coastal Coordination Council may affirm or protest an agency's proposed action.

Development in critical coastal areas will not be authorized if significant degradation will result. Critical areas are coastal wetlands, oyster reefs, hard substrate reefs, submerged aquatic vegetation, or tidal sands or mud flats. Significant degradation occurs if the activity will:

- Jeopardize the continued existence of an endangered or threatened species, or will likely result in the destruction or adverse modification of critical habitat;
- Violate any surface water quality standards;
- Violate any requirement imposed to protect a marine sanctuary;
- Cause or contribute to significant adverse effects on:
 - Human health and welfare,
 - The life stages of aquatic life and other wildlife dependent on aquatic ecosystems,
 - Ecosystem diversity, productivity, and stability, including loss of fish and wildlife habitat or loss of the capacity of a coastal wetland to assimilate nutrients, purify water, or reduce wave energy; or
- Generally accepted recreational, aesthetic or economic values of the critical area which are of exceptional character and importance.

Open Beaches Act

Statutory reference: Tex. Nat. Res. Code Ann. § 61:001 *et seq.*

Permit/Assessment: Certificate

Lead Agency: General Land Office/Local governments

Description: No person may begin construction landward of and adjacent to a public beach in a manner that will or is likely to adversely affect public access to and use of the public beach unless the project is properly certified as consistent with the goals and policies of the coastal management program. Local governments with public beaches within their jurisdiction must adopt a plan for preserving and enhancing public beach access and use. The proposed plan must be submitted to the General Land Office for certification of consistency with state policies. When a project adjacent to a public beach is proposed, the developer must submit a development plan to the local government for consistency review. The local government, after considering all appropriate information, makes the determination and certifies whether or not the proposed construction is consistent with the local government's beach access and use plan.

Comment: Public beaches are any beach bordering on the Gulf of Mexico that extends inland from the line of mean low tide to the natural line of vegetation bordering on the seaward shore of the Gulf of Mexico, or such larger contiguous area to which the public has acquired a right of use.

Dune Protection Act

Statutory reference: Tex. Nat. Res. Code Ann. § 63.001 *et seq.*

Permit/Assessment: Permit

Lead Agency: General Land Office/Local governments

Description: Each county with jurisdiction over mainland shoreline, a barrier island, or a peninsula located on the seaward shore of the Gulf of Mexico must establish a dune protection line for the purpose of preserving sand dunes. The line cannot be located further than 1,000 feet landward of the mean high tide line of the Gulf of Mexico. Unless a permit is properly issued by the appropriate local government, no person may damage, destroy, or remove a sand dune or portion of a sand dune seaward of a dune protection line or within a critical dune area as designated by the General Land Office. In addition, no person may kill, destroy, or remove in any manner any vegetation growing on a sand dune seaward of a dune protection line or within a critical dune area without a permit.

Comment: A critical dune area is defined as a protected sand dune complex on the Gulf shoreline within 1,000 feet of mean high tide designated by the Office.

Coastal Public Lands Management Act

Statutory reference: Tex. Nat. Res. Code Ann. § 33:001 *et seq.*

Permit/Assessment: Leases/easements

Lead Agency: School Land Board/General Land Office

- Description: Any person who desires to acquire rights in any coastal public land must apply to the School Land Board. The Board may grant the interest in coastal public land if it determines that the grant is in the best interest of the state.
- Comment: Coastal public land means all or any portion of state-owned submerged land, the water overlying that land, and all state-owned islands or portions of islands in the coastal area.