

OFFSHORE WIND FARM APPROVAL PROCESS, NORTH CAROLINA

In a number of European nations, offshore wind farms are well established. However, in the United States, the concept is relatively new and an established approval process for offshore wind farm permitting does not yet exist. This document identifies the approval process one would need to take in order to site an offshore wind farm in coastal waters of the U.S., particularly North Carolina.

1. Introduction

The best way to get an overview of the approval process that an offshore wind project faces is to first mark out the various bodies of water the project activities can affect and then delineate the activities these projects represent. The bodies of water are distinguished in two ways: by whether they are navigable and by their distance from the shore (usually defined as the mean high tide line). The activities include permanent structures and various effects related to the operation of the projects.

The bodies of water are state waters, U.S. territorial sea, and exclusive economic zone. Figure 1 is a schematic that shows these waters and identifies state and federal jurisdiction over submerged lands and navigable waters.

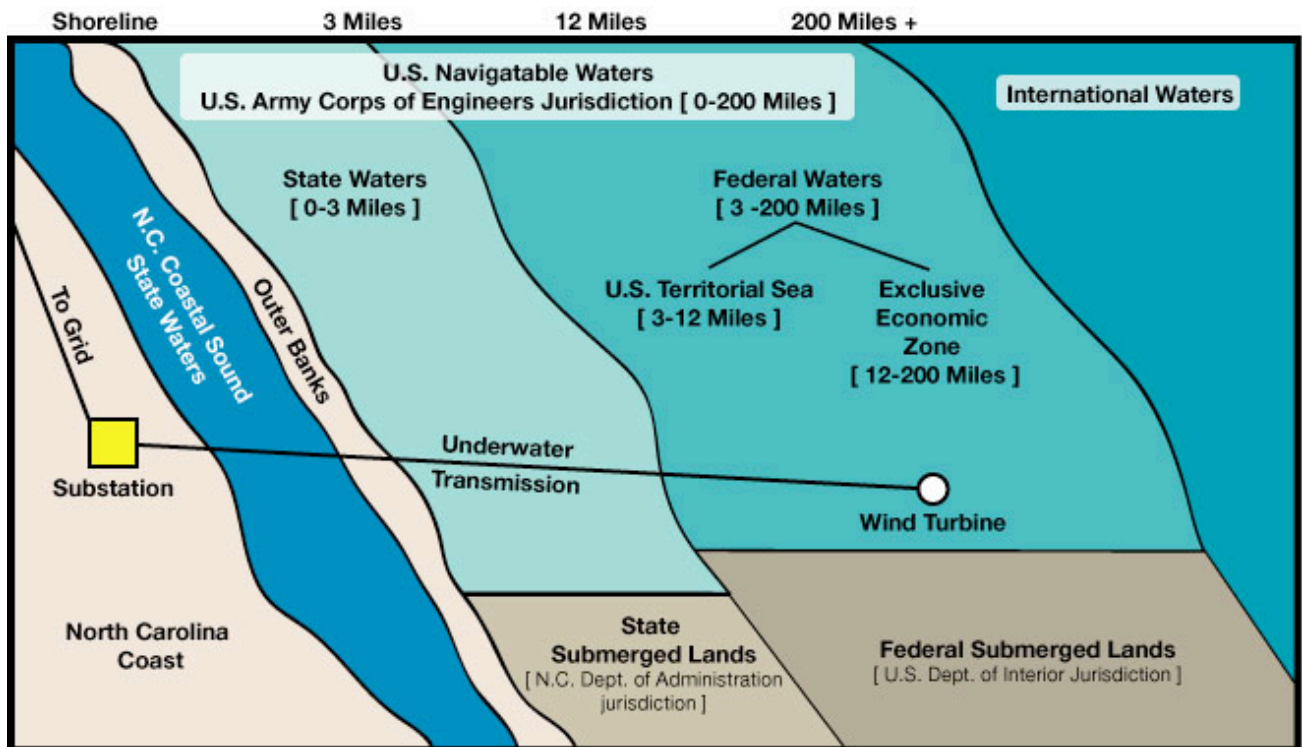


Figure 1. State and Federal Jurisdictions

In North Carolina, waters located between North Carolina's mainland and the Outer Banks (the Sound) are classified as state waters and therefore, under state jurisdiction. Figure 2 is a schematic that shows the State waters of North Carolina, including the Sound and the State's ocean waters.

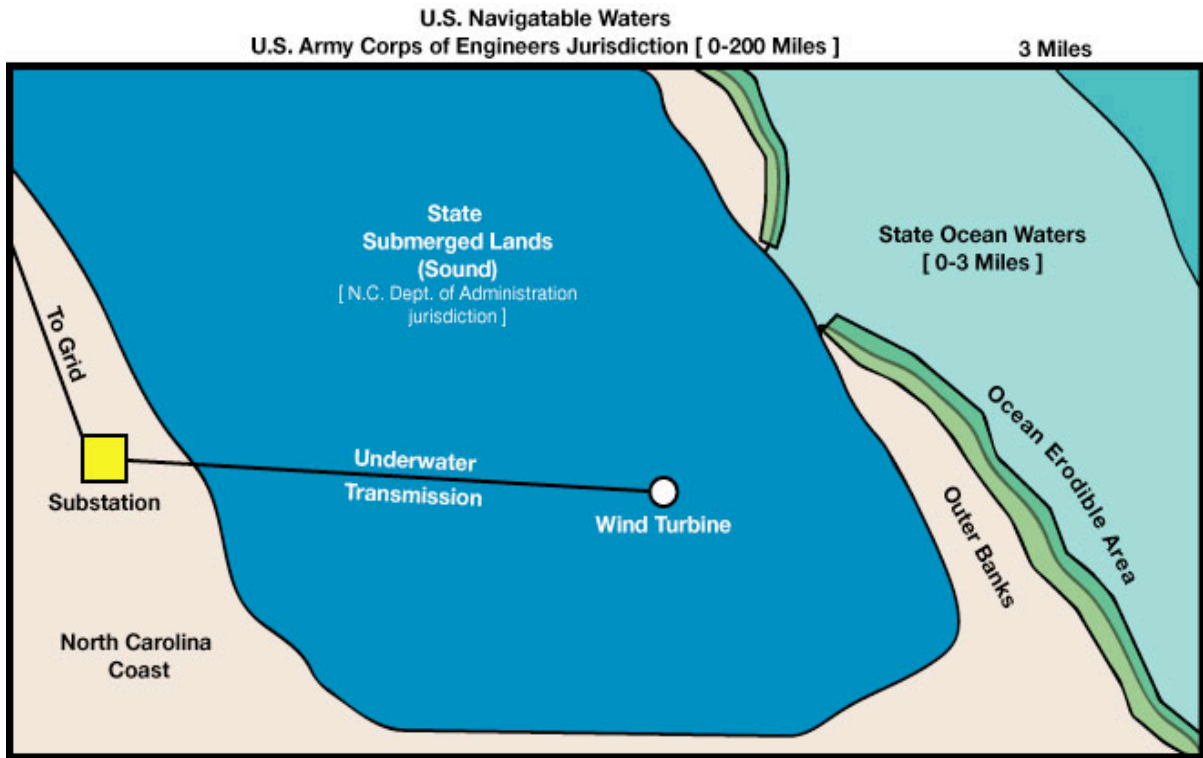


Figure 2. State Waters of North Carolina

The most obvious activity related to an offshore project will be the construction of permanent structures, particularly the platform and turbine. An offshore wind project is more than the platform and turbine, however. It also includes cables, landfall of cable, substation, grid interconnection, and shipping, dredging and associated construction activity. In addition, ongoing operation and maintenance includes the transport of employees by ship and helicopter and occasional hardware retrofits.

Strict federal and state laws govern coastal waters. Offshore wind farm development in coastal areas will not only have to comply with state and federal regulations, but also allay public concerns. In addition to any permitting requirements unique to offshore wind farm installations, the normal regulatory procedure for land-based wind farm interconnection to utility grids must then be followed. Interconnection requirements, other than those unique to offshore wind farms, are not addressed in this document.

The approval process will potentially involve obtaining permits from agencies with federal and state coastal jurisdiction. Federal and state permits will in turn require the National Environmental Policy Act (NEPA) and state environmental protection act to be satisfied. There are also a number of other statutes and regulations that need to be met. Appendices

and a NEPA process flowchart are included in this document to assist in the clarification of the approval process.

2. Jurisdiction Over Activities in Coastal Waters

Coastal states and the federal government have laws in place to regulate activities in navigable waters¹ of the U.S. Individual coastal states have jurisdiction over activities in coastal waters that extend from the shoreline to three nautical miles seaward. These are termed state waters. Federal waters are waters that extend from the 3-mile to 200-mile economic exclusive zone boundary. U.S. territorial seas are defined as waters extending from the shoreline seaward to 12 nautical miles. As described below, certain federal agencies also have authority over certain activities located within three nautical miles from the shoreline and beyond. Where the jurisdictional line falls depends on what the activity is and where it is conducted. The three major issues affecting coastal jurisdiction are:

- Coastal Zone Management Act - This Act states that federal activities (i.e. issuing a permit or license) affecting land or water resources located in the coastal zone must be fully consistent with the adjacent state's federally approved state coastal management plan. The National Oceanic and Atmospheric Administration's Office of Ocean and Coastal Resource Management administers the act. Thirty-four (34) coastal states and territories have federally approved state coastal management plans managing over 99% of the nation's shoreline.² An individual or agency desiring an activity within the coastal zone of a state must first demonstrate the activity complies with the state's coastal management plan. In other words, the activity must be "consistent." Once a determination is made, it is submitted for review to the appropriate state agency responsible for implementing the state coastal management plan. If the state determines the activity to be consistent with the state coastal management plan, including local land-use plans, then state and federal permits will be issued. If the activity is not consistent, the state may negotiate conditions when issuing a permit. In times when the state declares an activity "inconsistent" and disallows the activity, the applicant has the right to appeal the decision. The appeal is reviewed by the federal Secretary of Commerce (Secretary). If the Secretary finds the activity to be consistent with the objectives of the Coastal Zone Management Act or is otherwise necessary in the interest of national security, the Secretary will override the state's objection. Only where the activity significantly or substantially furthers the national interests and that interest outweighs the adverse coastal affects of the activity will the state's objection be overturned.
- Leasing Submerged Lands - As stated above, coastal states own submerged lands up to three nautical miles from the shoreline and are allowed to lease state-owned submerged lands to interested parties for a fee. Interested parties wishing to lease lands beyond the three nautical mile mark must lease submerged lands from the Department of Interior whose jurisdiction extends to the outer continental shelf. Most

¹ Navigable waters are all waters that are subject to the ebb and flow of the tide, including interstate wetlands, lakes, rivers, streams, and similar water bodies. The technical definition can be found at 33 C.F.R. 328.3.

² National Oceanic and Atmospheric Administration. Celebrating 30 Years of the Coastal Zone Management Act. Accessed April 24, 2003 at <http://www.ocrm.nos.noaa.gov/czm/>

states will not authorize a lease of state lands until all necessary federal and state permits and approvals are in place.

- Navigable Waters - The federal government and individual coastal states have jurisdiction over coastal waters. The U.S. Army Corps of Engineers (USACE) has regulatory jurisdiction over U.S. navigable waters and Section 10 of the federal Rivers and Harbors Act states that structures or work in or affecting U.S. navigable waters requires a permit from the USACE. Individual coastal states also have jurisdiction over activities within the three nautical mile zone. Thus, depending on the type of activity and the activity's location, there may be an overlap in federal and state jurisdictional authority. In most cases, this jurisdictional overlap is not problematic.

3. Jurisdiction Over Federal Decisions

National Environmental Policy Act (NEPA)

In 1969, the National Environmental Policy Act (NEPA) was passed requiring federal agencies to become more sensitive as to how their decisions may impact the environment, including the human environment.³ The Council on Environmental Quality administers this Act.

NEPA's intent is to have all federal agencies consider environmental issues and potential environmental impacts by opening the permitting decision making process to all stakeholders, including state and local agencies, the general public, private organizations, and Indian tribal governments. NEPA is triggered by a federal action, such as granting a federal permit. If there is no federal decision involved in a project or activity, the NEPA process is not required.

The first step of the NEPA process is to determine whether the federal action's impact on the environment is potentially significant. This initial analysis is an Environmental Assessment (EA). The EA helps identify and clarify the issues and environmental effects of a proposed activity and determines whether an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI) will be prepared. If the information collected indicates that there may be a significant impact on the environment, including the human environment, or a heightened level of controversy exists, an EIS will need to be completed. The key components of an EIS are: (a) to declare the purpose and need of an activity; (b) to list all alternatives to the activity; (c) to identify the impacts of the activity on affected environments, and; (d) to identify all the environmental consequences of the activity.

A lead federal agency (there may be more than one lead agency) is selected by all the permitting and cooperating federal agencies involved in the action to oversee the preparation of the NEPA document (i.e. EA or EIS). Agencies not directly involved in the action are referenced as non-cooperating agencies. It is the lead agency's responsibility to coordinate EIS efforts with other cooperating federal, state, local and tribal agencies, as well as non-cooperating agencies and the general public.

³ The human environment includes economic, social, historical, cultural, and human health considerations.

All environmental statutes and regulations are taken into consideration during the preparation of an EIS. These include:

- Fish and Wildlife Coordination Act
- Clean Water Act
- Clean Air Act
- National Historic Preservation Act
- Endangered Species Act
- Executive Orders, such as Environmental Justice
- State, tribal, and local statutes and regulations

Failure to consider all of the potential significant environmental impacts of an action may delay the implementation of the action - sometimes for years.

Once the NEPA process has been completed and permits have been issued, the proposed action may be implemented. The action will be monitored by the permitting authorities to ensure that all impacts are mitigated properly and promptly, including significant fines and penalties for non-compliance.

- An offshore wind farm will require federal permits and therefore, the NEPA process will be triggered. It is highly unlikely an EA will be sufficient for a proposed offshore wind farm in North Carolina due to the likelihood of significant impacts on the human environment. Therefore, it should be assumed from the beginning that an EIS will need to be prepared rather than attempting to submit a more than likely insufficient EA. Starting the permitting process with the intent of producing an EIS will ultimately save a developer time and money.

Appendices A and B provide an initial list of potential federal statutes and regulations that may be considered during the NEPA process. Appendix A identifies potential Code of Federal Regulations and Appendix B identifies potential United States Codes.

4. Jurisdiction of State Decisions

In addition to any federal requirements, any party interested in developing an offshore structure in a particular state, such as North Carolina, needs to comply with the respective state's statutes and regulations.

North Carolina Environmental Policy Act of 1971 (NCEPA) - The North Carolina Environmental Policy Act (NCEPA) is similar to NEPA in terms of regulatory requirements of agencies, except that it only applies to North Carolina state actions. Thus, if a state agency is asked to provide a permit for an activity within the state of North Carolina, the state and its agencies must ensure that the action does not pose a significant threat to North Carolina's environmental health. The Department of Administration administers this Act.

If a federal EIS is prepared to meet federal requirements for a project located within North Carolina, the federal EIS is considered sufficient to meet the requirements of NCEPA. Therefore, a party would not have to create an additional state document to fulfill NCEPA. However, the federal EIS must be submitted through the North Carolina State Clearinghouse process, giving North Carolina state agencies a chance to review and comment on the federal

EIS. This is done when the draft EIS is submitted for public review. Once the state agencies have had a chance to review and comment on the EIS, and possibly require some conditions of their own, permits may be issued and the action implemented. If the state ultimately denies a permit, the action will not be implemented.

- NEPA documentation will satisfy the North Carolina Environmental Policy Act requirements. However, North Carolina state agencies will have an opportunity to review and comment on the federal EIS and determine whether or not to issue required state permits.

Appendix C identifies potential North Carolina General Statutes that will be examined upon review of a submitted federal EIS.

Coastal Area Management Act - As part of the federal Coastal Zone Management Act, a state is allowed to require activities in its coastal zone to comply with their federally approved state coastal management plan. North Carolina's Division of Coastal Management implements North Carolina's Coastal Area Management Act, a federally approved state coastal management plan. Any federal or state activity affecting North Carolina's coastal zone will need to comply with the Act, which includes the review of ten state and four federal agencies. If an activity is determined not to be consistent with the Act, including local land-use plans and regulations, the activity will not be permitted. The Division of Coastal Management may negotiate conditions to allow a project to go through.

“Federal Consistency” and North Carolina’s Coastal Area Management Act
Any activity that impacts North Carolina’s coastal zone must first be reviewed by the North Carolina Division of Coastal Management to make sure it complies with the Act, even if the activity does not require a CAMA permit under state law. Any federal activity, within or outside the coastal zone, must show “federal consistency” with the Act. If the activity is determined to be consistent with the Act, then federal permits may be issued. If the activity is determined to be inconsistent with the Act, a variance may be issued by the Division or federal permits will be denied. The State’s decision of inconsistency may be appealed and may be overruled by the federal Secretary of Commerce if he or she determines the activity to be of national significance and importance.

Activity in State Waters Affecting North Carolina’s Coastal Zone

Any activity that occurs within North Carolina’s state coastal waters must first obtain a CAMA permit from the Division. An offshore wind farm, or any of its parts, located within North Carolina’s state coastal waters would require a CAMA permit. A “major” permit is usually required if there is any dredging or filling of water or marsh and serves as an application for several other state and federal permits. These other permits are:

- Dredge and Fill (North Carolina)
- Easement to Fill (North Carolina)
- Water Quality Certification (North Carolina)
- Section 10 of the Rivers and Harbors Act (Federal)
- Section 404 of the Clean Water Act (Federal)

An offshore wind farm would require a major CAMA permit from the Division. If a major CAMA permit is denied, an applicant has a right to appeal the permit denial or ask for a variance from the North Carolina Coastal Resources Commission.

Ocean Erodible Area of Environmental Concern

North Carolina code defines a number of Areas of Environmental Concern. Any development in these areas is subject to permit review under this code. One such area is the Ocean Erodible area. The Ocean Erodible area has two boundaries: seaward and landward. The seaward oceanfront boundary is the mean low water line and the landward limit is measured from the first line of stable natural vegetation. The law regulating this area states that no development will be permitted that involves the significant removal or relocation of primary or frontal dune sand or vegetation thereon. This includes power cables crossing the shoreline, even if deeply buried and installed by directional drilling that does not disturb the shoreline or vegetation. According to the North Carolina's Department of Justice, permits for any section of an offshore wind farm that impacts the oceanfront area will be automatically denied. In these cases, the applicant must apply for a variance claiming, for instance, that unique situations may not have been considered in current coastal rules and regulations. The Ocean Erodible area rules and regulations are not applicable to those areas adjacent to the Sound. Figure 2 above shows the Ocean Erodible Area and how it relates to North Carolina's sound and oceanfront coastlines.

- An offshore wind farm in North Carolina would be located in North Carolina's coastal zone and therefore, would need to demonstrate consistency with the Act and/or obtain a CAMA permit.

Appendix D identifies the twenty coastal counties covered by CAMA.

North Carolina Dredge & Fill Act - This law governs dredge and fill activities in North Carolina's waters and is likely to be triggered by an offshore platform development. In many ways, this law regulates much like the federal Section 404 permit of the Clean Water Act, which regulates dredge and fill activities in U.S. navigable waters. According to the North Carolina Dredge & Fill Act, the Coastal Resource Committee of the Division of Coastal Management, "may, by rule, designate certain classes of major and minor developments for which a general or blanket permit may be issued." The Act also requires "notification of permit applications to the owner of each tract of riparian property that adjoins that of the applicant."

- A proposed offshore wind farm located within North Carolina's waters would need to obtain a North Carolina Dredge and Fill permit, in addition to the federal Section 404 permit. Adjoining riparian property owners may have a significant influence on a permitting authority's decision.

North Carolina Public Utilities Act - This act is implemented by the North Carolina Utilities Commission. Any party, whether it is a merchant or a public utility, interested in generating power will need to apply for a certificate of environmental compatibility and public

convenience and necessity. A certificate will be granted when an interested merchant or public utility demonstrates an additional need of electrical power to meet regional growth estimates. If the party wishes to construct a transmission line of 161kV or greater, another certificate needs to be obtained. If the transmission line is less than 161kV, no additional certificate is required. In addition to any required certificates, the normal transmission interconnection and contracting agreements will need to be negotiated.

- Under current regulations, an offshore wind farm proposal would need to demonstrate the need for additional power in the region to gain a certificate of environmental compatibility and public convenience and necessity. In addition, if an offshore wind farm requires a transmission line 161kV or more, an additional certificate from the North Carolina Public Utilities Commission will need to be obtained. The installation of new, clean power generation technologies to reduce pollution, even if load is not growing, is not addressed by current regulations.

Submerged Land Leases - Any party wishing to lease land from the State of North Carolina will need to work through the Office of Property, Department of Administration. The Office of Property serves as a coordinating agency for items to be considered for approval by the Council of State. All requests for land leases that exceed three (3) years in duration or which exceed \$25,000 in annual rent require approval by the Council of State and the Governor. Land lease requests less than three (3) years in duration and do not exceed \$25,000 in annual rent may be authorized by the Office of Property. If a private party is interested in leasing state lands, the lands will be leased at fair-market value. If a party wishes to lease land for a purpose that will benefit the general public,⁴ the land lease will be classified as a public lease and the party will pay below fair-market value for the lease. The below fair-market value lease needs to be approved by the Joint Governmental Operations Committee comprised of members from the North Carolina House of Representatives and Senate.

- State land leases will not be considered until all required permits and approvals for an offshore wind farm are in place. Not until then will a land lease request that exceeds a three (3) year duration or exceeds a \$25,000 annual rent be reviewed for approval by the Council of State and the Governor.

North Carolina Archives and History Act - This law governs the identification, protection, and enhancement of historic properties and archaeological sites, including those that are located underwater. The Department of Cultural Resources oversees this law. A permit will need to be obtained from the Department to allow development in the coastal area.

- Many underwater archaeological sites, such as civil war shipwrecks, are located along the coast of North Carolina. Any offshore development, including offshore wind farms, will need to obtain a permit. Information on the locations of these sites is available from the Division of Archives and History, Department of Cultural Resources.

⁴ Public benefit is determined by the applicable agency or regulatory authority.

5. Jurisdiction of Other Agencies

All federal, tribal, state, and local agencies will have an opportunity to comment and review a federal EIS. Some agencies will have permitting authority; others will be limited to comments. Agencies that only provide comments should not be treated lightly, however. If an agency, acting within its jurisdiction, objects to a proposed activity, a permit will not be issued. In addition, even though the general public is not considered an agency, so-to-speak, the NEPA process clearly states that agencies should involve the public in the preparation and implementation of the NEPA procedures.

Potential agencies that may be involved in the decision-making process for an offshore wind farm proposal in North Carolina include:

Federal

The Department of Defense, including the U.S. Army Corps of Engineers, Army, Navy, Airforce, and Marines, has jurisdiction over certain areas or activities that may be of importance to national security, radar, or military practice ranges. The Department of Interior, whose offices administer a wide range of policies, would oversee activities that affect national parks, wildlife refuges and sanctuaries, submerged land leases beyond the 3-nautical mile range, and fisheries. Air and water quality issues would be managed by the Environmental Protection Agency. The Federal Aviation Administration would review any development that may interfere with aviation, such as an offshore wind tower. Finally, the Federal Energy Regulatory Commission regulates the transmission and wholesale sales of electricity in interstate commerce.

North Carolina

In North Carolina, divisions and offices within the Department of Environment and Natural Resources will have a large role in the approval process of the siting of an offshore wind farm. A few divisions that will be directly involved are the Divisions of Coastal Management, Water Quality, and Marine Fisheries. Other departments, such as Cultural Resources, Tourism, Commerce, and Administration, and commissions, such as the North Carolina Public Utilities and Coastal Resources, will also be involved in the decision-making process at some point.

Local/Tribal Laws and Regulations

Local planning and zoning boards, as well as tribal nations, will require proposed activities to comply with their laws and regulations.

6. Precedent for Offshore Permitting

In terms of coastal development, an offshore wind farm is a new concept. However, other coastal developments, such as oil and gas platforms, have been around for decades. It is possible that much of the permitting process used in siting oil and gas platforms could be adopted for use in siting offshore wind farms. Offshore wind farms and oil/gas platforms are similar in that both (a) are energy-related activities, (b) require the installation of structures in U.S. navigable waters, (c) are potentially visible from the shoreline, and (d) may affect the coastal zone.

7. Summary

In summary, the potential siting of offshore wind farms anywhere in the U.S. will have many issues to address before an actual installation is approved and built. A proposed siting will need to comply with Federal, state, local, and tribal laws and regulations and address private and public interests' concerns.

While some states like North Carolina are still in the initial stages of researching the concept of offshore wind farms, actual offshore wind farm proposals are already being reviewed and sent through approval processes in the states of Massachusetts and New York. Public review and comment will be significant and a major influence in the approval process. Public education on the impacts of offshore wind farms, including local economic benefits and pollution prevention, can proceed in parallel to the permit review process.

This document has attempted to identify and clarify the approval process for the siting of offshore wind farms. It is hoped that policies will be created or amended to streamline the approval and permitting process for future offshore wind farms and ultimately, usher forth an era of clean, alternative energy production. A conceptual flowchart for the NEPA approval process as it may apply to offshore wind permitting is provided in Appendix E.

Appendix A

Code of Federal Regulations

Title 14 - Aeronautics and Space

Part 77: Objects Affecting Navigable Space

http://www.access.gpo.gov/nara/cfr/waisidx_03/14cfr77_03.html

Title 15 - Commerce and Foreign Trade

Part 930: Federal Consistency with Approved Coastal Management Programs

http://www.access.gpo.gov/nara/cfr/waisidx_03/15cfr930_03.html

Title 33- Navigation and Navigable Waters

Part 62: Unites States Aids to Navigation

http://www.access.gpo.gov/nara/cfr/waisidx_02/33cfr62_02.html

Part 64: Marking of Structures, Sunken Vessels and Other Obstructions

http://www.access.gpo.gov/nara/cfr/waisidx_02/33cfr64_02.html

Part 66: Private Aids to Navigation

http://www.access.gpo.gov/nara/cfr/waisidx_02/33cfr66_02.html

Part 67: Aids to Navigation on Artificial Islands and Fixed Structures

http://www.access.gpo.gov/nara/cfr/waisidx_02/33cfr67_02.html

Part 322: Permits for Structures Or Work In Or Affecting Navigable Waters of the United States

www.access.gpo.gov/nara/cfr/waisidx_02/33cfr322_02.html

Part 323: Permits For Discharges of Dredged Or Fill Material Into Waters Of The United States

www.access.gpo.gov/nara/cfr/waisidx_02/33cfr323_02.html

Part 324: Permits for Ocean Dumping of Dredged Material

www.access.gpo.gov/nara/cfr/waisidx_02/33cfr324_02.html

Part 328: Definition of Waters of the United States

www.access.gpo.gov/nara/cfr/waisidx_02/33cfr328_02.html

Part 329: Definition of Navigable Waters of the United States

www.access.gpo.gov/nara/cfr/waisidx_02/33cfr329_02.html

Title 36 - Parks, Forests, and Public Property

Part 60: National Register of Historic Places

http://www.access.gpo.gov/nara/cfr/waisidx_02/36cfr60_02.html

Title 40 - Protection of Environment

Part 50: National Primary and Secondary Ambient Air Quality Standards

http://www.access.gpo.gov/nara/cfr/waisidx_02/40cfr50_02.html

Part 230: Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material

http://www.access.gpo.gov/nara/cfr/waisidx_02/40cfr230_02.html

Part 122: National Pollutant Discharge Elimination System

http://www.access.gpo.gov/nara/cfr/waisidx_02/40cfr122_02.html

Part 1500: Purpose, Policy, and Mandate (Council of Environmental Quality)

http://www.access.gpo.gov/nara/cfr/waisidx_02/40cfr1500_02.html

Appendix B

United States Code

Title 16 - Conservation

Section 469: Preservation of historical and archeological data threatened by dam construction or alterations of terrain

<http://www4.law.cornell.edu/uscode/16/469.html>

Section 661: Protections and Conservation of Wildlife

<http://www4.law.cornell.edu/uscode/16/661.html>

Section 668: Bald and Golden Eagles

<http://www4.law.cornell.edu/uscode/16/668.html>

Section 701: Game and wild birds; preservation

<http://www4.law.cornell.edu/uscode/16/701.html>

Section 1361: Marine Mammal Protection

<http://www4.law.cornell.edu/uscode/16/1361.html>

Section 1221: Estuarine Areas

<http://www4.law.cornell.edu/uscode/16/1221.html>

Section 1431: Marine Sanctuaries

<http://www4.law.cornell.edu/uscode/16/1431.html>

Section 1456: Coastal Zone Management

<http://www4.law.cornell.edu/uscode/16/1456.html>

Section 1531: Endangered Species

<http://www4.law.cornell.edu/uscode/16/1531.html>

Section 1851: National Standards for Fishery Conservation and Management

<http://www.access.gpo.gov/uscode/uscmmain.html>

Section 2801: National Aquaculture Policy, Planning and Development

<http://www4law.cornell.edu/uscode/16/2801.html>

Section 2901: Fish and Wildlife Conservation

<http://www4.law.cornell.edu/uscode/16/2901.html>

Title 33 - Navigation and Navigable Waters

Section 403: Obstruction of Navigable Waters Generally

<http://www4.law.cornell.edu/uscode/33/403.html>

Section 1311: Effluent Limitations

<http://www4.law.cornell.edu/uscode/33/1311.html>

Section 1344: Dredge and Fill

<http://www4.law.cornell.edu/uscode/33/1344.html>

Title 42 - National Environmental Policy

Section 4321: Congressional Declaration of Purpose

<http://www4.law.cornell.edu/uscode/42/4321.html>

Appendix C

North Carolina General Statutes

North Carolina Environmental Policy Act of 1971 (NCEPA), Chapter 113A

http://www.ncga.state.nc.us/Statutes/GeneralStatutes/HTML/ByChapter/Chapter_113A.html

Coastal Area Management Act of 1974 (CAMA), Article 7

<http://dcm2.enr.state.nc.us/Rules/cama.htm>

North Carolina Dredge and Fill Law, Chapter 113-229

<http://dcm2.enr.state.nc.us/Rules/dredgefill.htm>

North Carolina Public Utilities Act, Chapter 62

http://www.ncga.state.nc.us/Statutes/GeneralStatutes/HTML/ByChapter/Chapter_62.html

North Carolina Archives and History Act, Chapter 121, Article 3

http://www.ncga.state.nc.us/Statutes/GeneralStatutes/HTML/ByChapter/Chapter_121.html

Appendix D

Coastal Counties Covered Under the Coastal Area Management Act (CAMA)



If a project is in one of the following 20 counties and is located along the state's rivers, sounds or the Atlantic Ocean, a permit may be required under CAMA:

Beaufort	Currituck	Pamlico
Bertie	Dare	Pasquotank
Brunswick	Gates	Pender
Camden	Hertford	Perquimans
Carteret	Hyde	Tyrell
Chowan	New Hanover	Washington
Craven	Onslow	

Source: CAMA Handbook for Development in Coastal North Carolina
<http://dcm2.enr.state.nc.us/handbook/handbook.htm>

Appendix E

Conceptual NEPA Permit Process Flowchart

