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James Bennett, Manager
Office of Renewable Energy Programs
Bureau of Ocean Energy Management
45600 Woodland Road
VAM-OREP
Sterling, Virginia 20166

Dear Mr. Bennett:

Thank you for the opportunity to respond to your Request for Information on the State of the Offshore Renewable Energy Industry. We support the efforts of the U.S. Bureau of Ocean Energy Management (BOEM) to responsibly develop energy from offshore wind, waves and ocean currents. With proper siting, design, and construction, and with continued efforts to reduce costs, offshore renewable energy projects can enhance North Carolina's all-of-the-above energy strategy.

Potential energy production is one of many valuable resources North Carolina's coastal region provides. North Carolina has some of the most scenic, biologically diverse and productive coasts in the world. Its coastal region includes more than 300 miles of ocean shoreline, 12,000 miles of estuarine shoreline and 2.5 million acres of marine and estuarine waters. The estuaries, brackish swamps and mud flats between the mainland and barrier islands serve as nursery areas for shrimp, crabs, finfish and shellfish and place North Carolina among the top ten seafood-producing states. Roughly 4,000 full-time commercial fishermen and two million recreational anglers enjoy the bounty of the state's marine resources each year. In addition, the Outer Banks attract more than five million tourists annually who come to enjoy our beaches, historic areas, and natural wonders.

Establishing an appropriate coastal buffer for offshore wind energy would allow wind energy facilities to be permitted more expediently while protecting North Carolina's natural resources, marine life and vibrant coastal economy. The wind energy development exclusion areas within 33.7 nautical miles of Bodie Island Lighthouse, provided by BOEM at the request of the National Park Service, will maintain the pristine views from the Bodie Island Lighthouse and Cape Hatteras National Seashore, minimize the impacts of offshore wind energy projects on migrating birds and threatened species, and allow most recreational and commercial ocean activities to continue unimpeded. BOEM should create a statewide coastal buffer for North Carolina that takes into consideration the future heights of wind turbines and prohibits offshore wind energy projects from being sited in areas that are visible from the shore.

Allocating a portion of the rents, royalties and bonus that BOEM receives from offshore energy leases in federal waters to affected coastal states is also critical to developing a wind energy





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industry in the Mid-Atlantic. States such as North Carolina need to make infrastructure upgrades to support offshore energy integration. A 2010 study by the North Carolina Transmission Planning Collaborative estimated that \$1.3 billion in transmission system upgrades would be needed to accommodate 3,000 MW of offshore wind energy nameplate capacity. Offshore energy revenues would support such upgrade efforts.

Expeditious approval of permits for seismic surveying is also essential to the exploration of offshore renewable energy. Seismic surveys for offshore wind energy projects would collect information about the local seafloor, identify archaeological resources and construction hazards, and map the underwater terrain. The existing seismic data for the Mid-Atlantic region is incomplete and must be updated to support the safe siting of offshore wind turbine generators.

Additionally, expediting the approval of each development phase of the Virginia Offshore Wind Technology Advancement Project (VOWTAP) could help make commercial-scale offshore wind projects economically viable and establish the proper design standards for wind turbines in hurricane-prone waters. The demonstration project may yield cost-effective technologies that allow wind turbines to withstand hurricane force winds without buckling or blade loss. Reducing wind energy development risks and costs in areas subject to hurricanes would advance offshore wind energy development in the eastern United States.

Finally, additional studies evaluating the risk offshore wind energy facilities pose to ocean vessels based on projected vessel traffic would improve the siting of wind energy facilities. Your report entitled “Environmental Risks, Fate and Effects of Chemicals Associated with Wind Turbines on the Atlantic Outer Continental Shelf” estimated an annual incident rate of 28.2 large vessel allisions and 4.6 small vessel allisions with wind turbine generators in the Kitty Hawk Wind Energy Area. It also noted that “As the density of vessels increases, the number of vessel encounters and potential collisions increases exponentially.” Identifying the high-risk areas prior to wind facility siting could eliminate many potential vessel allisions.

We appreciate your consideration of our recommendations for improving aspects of the offshore renewable energy program. Please do not hesitate to contact me at jenny.kelvington@ncdenr.gov or via telephone at 919-707-8481 if you have any questions.

Sincerely,

Jenny Kelvington

Executive Director, Energy Group

N.C. Department of Environmental Quality

