ENVIRONMENTAL STUDIES PROGRAM: Ongoing Studies

Region: Atlantic

Planning Area(s): North, Mid-, and South Atlantic

Title: Wind Energy Development on the Atlantic OCS: The Identification of Port Modifications and their Environmental and Socioeconomic Consequences

BOEM Cost: $340,022 **Period of Performance:** FY 2015-2016

Conducting Organization(s): ESS Group, Inc.

BOEM Contact: Amy Stillings

Description:

Background: Facilities to support activities related to offshore wind energy development will likely be located at existing ports near the areas leased. Development activities could lead to port expansion to accommodate the size of construction vessels, space required for staging and maneuvering turbine components, and cranes capable of handling the weight of the nacelles and other components. The potential expansion and changes in operations resulting could produce a variety of environmental (e.g., air and water quality) and socioeconomic (land use changes, employment changes, strain on existing infrastructure, conflict with other port uses).

BOEM will need to conduct National Environmental Policy Act assessments to evaluate the potential environmental and socioeconomic consequences of wind facility construction, including the impacts from required onshore infrastructure. The information from this study will support these assessments.

Objectives: This study will provide an understanding of:

- Current port capacity for handling offshore wind facility construction, as well as the necessary modifications required to support this function;
- Environmental and socioeconomic impacts from port modifications, as well as the consequences of alterations to port operations; and
- Effectiveness of potential mitigations measures for port modifications impacts based on experience to date.

Methods:

The study will identify the port characteristics (e.g., distance to likely project locations, size of staging/storage areas, quayside length, access channel depth and width) necessary to support

offshore energy facility construction. Additional research will be conducted to determine any co-benefits or potential conflicts related to modifications and operational changes as some ports prepared for larger Post-Panamax ships. Exploratory discussions will be held with port authorities, wind energy developers, and turbine manufacturers to ground truth assumptions and to collect additional insights on desired port characteristics, potential environmental and socioeconomic impacts, and mitigations for these impacts.

A ranking method (high, medium, low) will then be designed based on the desired characteristics to demarcate a given port's potential for build-up to support wind energy development. This methodology will be applied to the 60 largest ports in the planning area. BOEM will select 20 of these ports for further assessment. The more detailed port profiles will discuss other port users, financial structure and health, any environmental justice concerns, along with the likely environmental and socioeconomic impacts that may occur if the port becomes a wind energy hub.

A comprehensive final report will be prepared combining the information collected from the literature search, stakeholder discussions, port rankings, port profiles, and recommendations for further research.

Importance to BOEM: As the offshore wind energy industry develops, it will be important for Federal, state, and local stakeholders to understand the environmental and socioeconomic consequences of such development, including the impacts from port expansion and changes in port operations. Due to the potential impact wind facility construction could have on individual ports and the surrounding area, BOEM will need to prepare project-specific environmental impact statements that evaluate the potential environmental and socioeconomic impacts.

Current Status: Awarded December 16, 2014 and kickoff meeting held January 6, 2015. Draft report expected in January 2016.

Final Report Due: April 15, 2016

Publications: None.

Affiliated Web Sites: None.

Revised Date: Dec. 2, 2015

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http://www.data.boem.gov/homepg/data_center/other/espis/espisfront.asp