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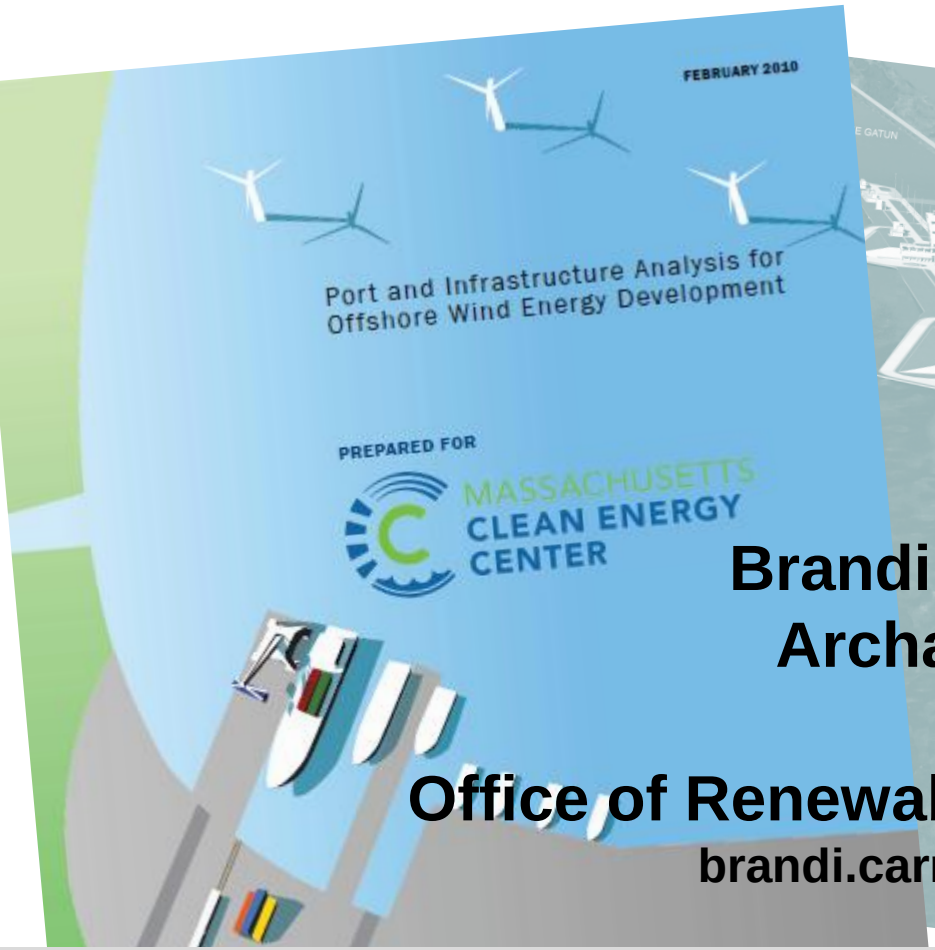
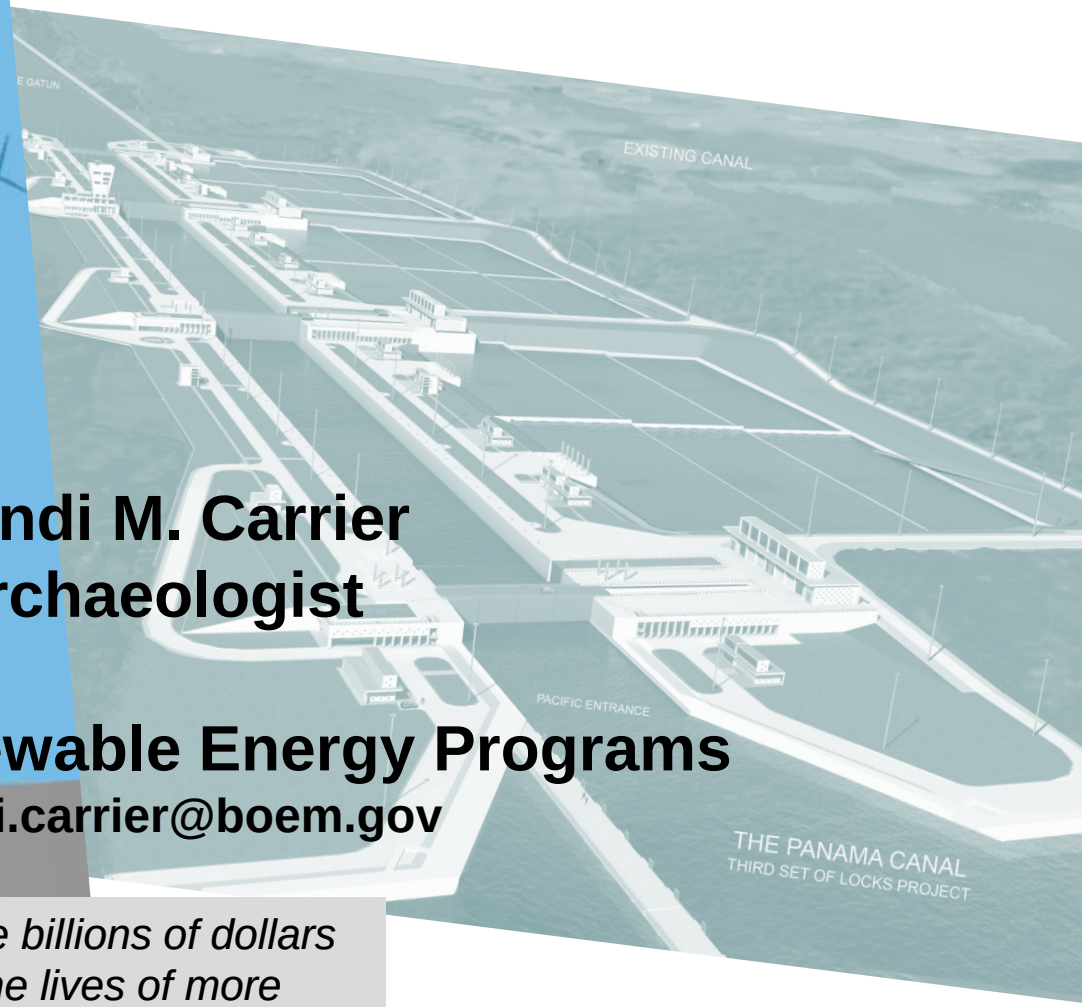
Port Modifications and their Consequences





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"In an industry where one port can generate billions of dollars in state and local tax revenues and affect the lives of more than 3 million industry-related employees throughout the U.S., any change is a big deal. – NBC News' Brad Racino

Information Needs

- Modifications to Atlantic coast ports, including expansion and changes in operations, may be necessary for offshore commercial wind development.
- BOEM needs to evaluate environmental and socioeconomic consequences of such modifications.
- Project-specific Environmental Impact Statements (EIS) will analyze expansions associated with specific developments; the information from this study will support these assessments.

Background

- Onshore facilities to support activities on future leases would be located at existing ports near lease areas.
- Development activities will eventually lead to the expansion of ports to accommodate
  - the size of construction vessels,
  - space required for staging and maneuvering turbines, and
  - cranes capable of handling the weight of the nacelles and other components.

Background

- Expansion of port facilities can produce a variety of environmental impacts, such as emissions, expansion into undeveloped areas, vessel-induced wake erosion, increased dredging, and discharges on air and water quality and coastal habitats.
- In addition, a variety of socioeconomic impacts may occur, such as the increase in employment and changing characteristics and use of a port (i.e. a traditional fishing port changing to a wind energy hub).

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Objectives

- Synthesize current port capacity and necessary modifications;
- Discuss environmental and socioeconomic consequences from modifications and alterations to port operations; and
- Analyze effectiveness of potential mitigations measures.

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Methods

- Identify ports that can accommodate the types of vessels required for offshore wind development;
- Refine the list based on existing proposals, state initiatives, and additional characteristics (e.g., distance to WEAs, regional expertise, reinforced quaysides, large staging areas, easy access, and facilities to move foundations);
- Identify potential modifications that would be necessary to accommodate the activities associated with offshore wind energy facility construction;

Methods

- Extrapolate environmental and socioeconomic consequences from analyses of similar, world wide port improvements and expansions;
  - air and water quality, and coastal habitats;
  - land use changes, environmental justice issues, population changes, and strain on existing infrastructure, such as traffic congestion;
- Describe cumulative impacts of modifications and effective mitigation measures.

Additional Information

- Example 1: Monopile construction offshore.
  - Port of Harwich, UK. Using DPS self-propelled jackup vessels
  - Video
- Example 2: Floating turbines constructed at port, towed to lease site, and moored.
  - Port of Lisnave, Portgual. Using drydock construction and tugs to tow to lease site
  - Video

Additional Information

- Builds on and expands a 2008-2012 study entitled "Energy Market and Infrastructure Information for Evaluating AE Projects," but focuses exclusively and intensively on port infrastructure.

- The study will take place in two phases (North Atlantic and Mid-Atlantic) in relation to the progress of leasing activities in that area of the Atlantic OCS.

Questions and Discussion

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