

# Offshore Renewable Energy: Port Facilities

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# Presentation Topics

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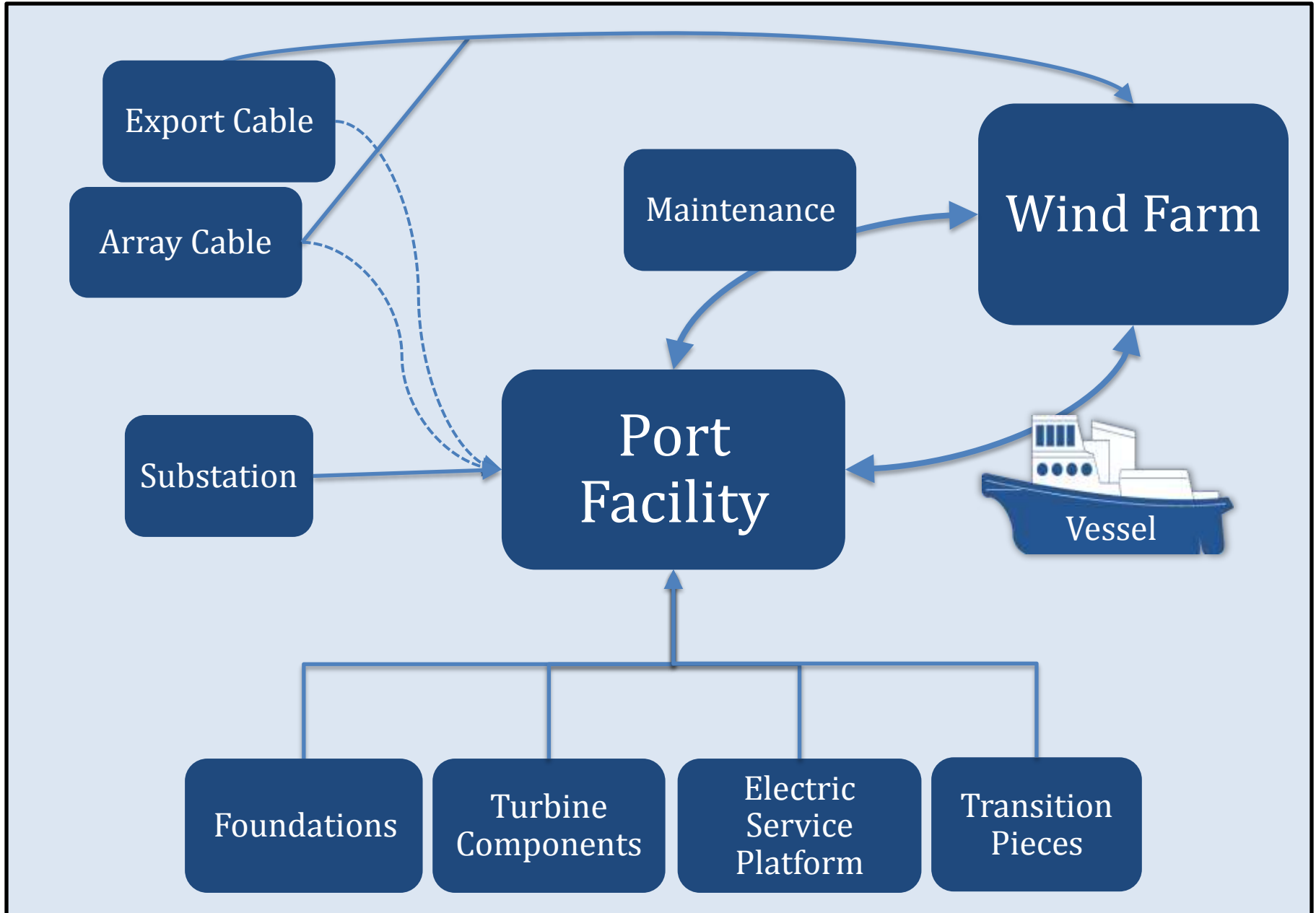
- MassCEC Overview
- The logistical role of a port facility in an offshore wind project
- Port selection criteria and basic requirements
- Major design elements of an offshore wind port facility
- Economic development benefits
- How ports create industry clusters: Southern New England offshore wind cluster as a case study

# Massachusetts Clean Energy Center's Mission

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- MassCEC enabling legislation demands the following:
  - Advancement of Technology
  - Job Creation
  - Workforce Development
- With the addition of MRET, MassCEC now also works to accelerate the adoption of renewable energy generating assets in the Commonwealth
- MassCEC's Investments in Clean Technology division is focused on *advancing technology* and *creating jobs* in the Commonwealth's clean technology sector

# Logistics Roles of Port Facilities



# Port Selection Criteria

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- Size of land area available for facility
- Minimum 1,000 ft bulkhead capacity
- Distance to high wind areas
- Overhead obstructions
- Ability to prioritize offshore wind vessel traffic
- Access to land-based transportation
- Harbor channel depth and width
- Availability of marine industrial skilled labor
- Protected harbor or other risk mitigating factors







New Bedford Marine Commerce Terminal

# Economic Development Case Study: Bremerhaven

- Formerly a region of high-unemployment, the German port of Bremerhaven has experienced a remarkable economic upturn
- So far, Bremerhaven has attracted:
  - Two offshore wind turbine manufacturers Repower and Multibrid
  - Two onshore wind turbine manufacturers, PowerWind and Innovative wind
  - powerBlades, which is manufacturing blades up to 61.5m long for REpower 5 and 6 MW turbines
  - WeserWind Offshore Construction weorgsmarienhütte, specialised in the design and manufacturing of heavy steel offshore foundation structures



Bremerhaven has attracted half of the €500 million invested in offshore wind power development along the German North Sea coastal region during the past years.

# Economic Development Case Study: Southern New England

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- Construction of the New Bedford Marine Commerce Terminal is estimated to expand business output by more than \$44 million and provide 1,000 jobs to Southern New England
- In conjunction with regional port development, the Southern New England offshore wind cluster is growing to become the center for offshore wind development in the US:
  - Wind Technology Testing Center opened May 2011 as the largest blade testing facility in the world
  - TPI Composites operates blade manufacturing and prototype facilities in RI and MA
  - MassTank and EEW – a cross-Atlantic partnership to create the first manufacturing facility for offshore wind foundations in North America
- Both Rhode Island and Massachusetts have undergone intensive ocean spatial planning processes.



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# Contact Info

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