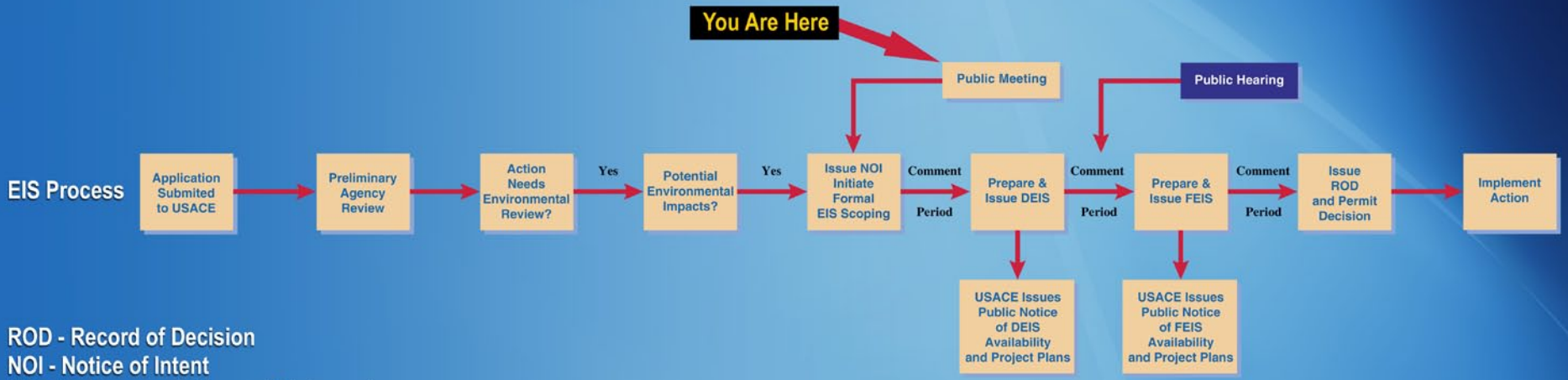
Proposed Baryonyx Offshore Wind Project

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

The NEPA Process provides a method for:

- Evaluating potential project impacts
- Incorporating public and agency involvement in the Federal decision-making process



ROD - Record of Decision
NOI - Notice of Intent
EIS - Environmental Impact Statement
DEIS - Draft Environmental Impact Statement
FEIS - Final Environmental Impact Statement

NEPA Process

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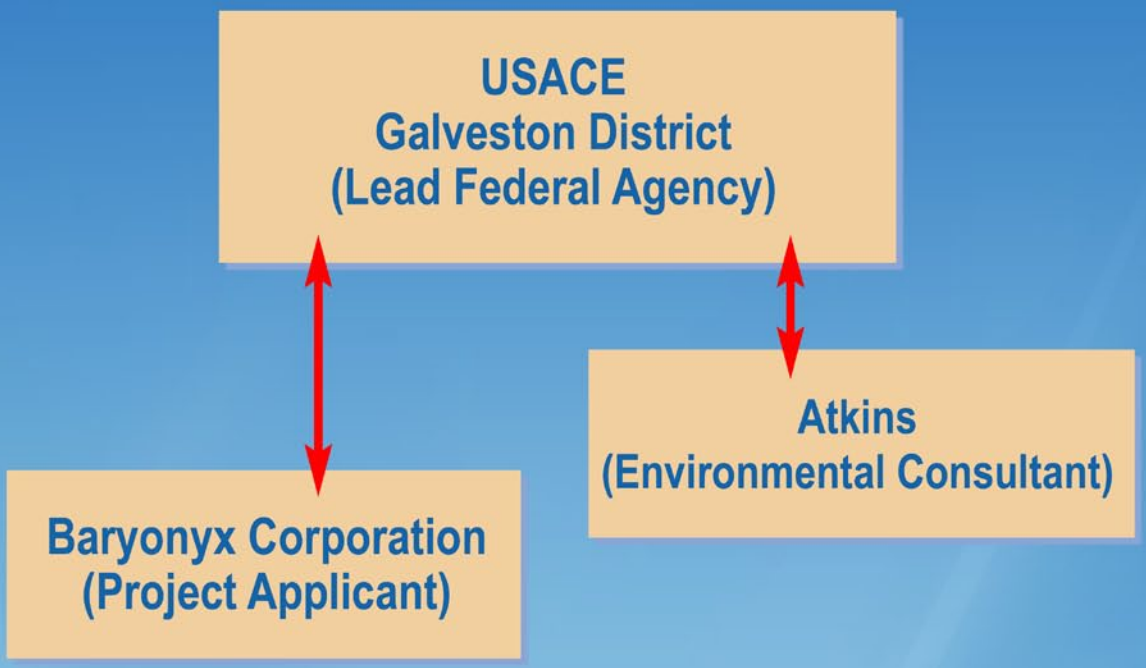
Proposed Baryonyx Offshore Wind Project

NEPA THIRD-PARTY CONTRACTING



- Lead Federal agency, project applicant and environmental consultant enter into an agreement for preparation of NEPA compliance documentation (EIS)
- Project applicant pays environmental consultant for services related to preparation of documentation
- Environmental consultant prepares documentation under direction of the lead Federal agency
- Lead Federal agency is responsible for:
  - Guiding and participating in NEPA process and EIS preparation
  - Independent evaluation of the EIS prior to approval
  - Takes responsibility for the scope and contents of the EIS

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Proposed Baryonyx Offshore Wind Project

EIS CONTENT

- Introduction, Purpose and Need
- Description and Evaluation of Alternatives
- Affected Environment
  - Air Quality
  - Noise
  - Physiography, Topography, and Bathymetry
  - Geology and Soils
  - Energy and Mineral Resources
  - Ground Water Hydrology
  - Water and Sediment Quality
  - Commercial and Recreational Navigation
  - Vegetation
  - Terrestrial Wildlife
  - Marine Mammals
  - Aquatic Ecology
  - Endangered and Threatened Species
  - Migratory Bird Treaty Act
  - Cultural Resources
  - Land Use/Recreation/Aesthetics
  - Socioeconomics
- Environmental Consequences
- Cumulative Effects
- Appendices
  - Clean Water Act 404(b)(1) Analysis
  - Endangered Species Biological Assessment
  - Texas Coastal Zone Consistency Determination
  - Section 10 Rivers and Harbors Act

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SCOPING MEETING

Purpose: To identify cooperating agencies, interested parties, significant issues and alternatives to be addressed in the EIS

- Provide the public with information about the EIS, the project, and how the public will participate in the process
- Gather information regarding public opinions, concerns and issues regarding the planned project
  - Verbal comments recorded
  - Comment cards submitted

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Proposed Baryonyx Offshore Wind Project

APPLICANTS STATED PURPOSE

- The purpose of the project is to develop two offshore wind farms in the Gulf of Mexico off the Texas coast, North Rio Grande Project and Rio Grande Project Wind Farms, with the intent to provide a renewable energy source

- The project is needed to optimize the role of renewable energy in large scale power provision and reduce carbon emissions

- Texas' offshore wind profile favors power generation during hours of peak electricity demand, significantly adding to the value and reliability of wind as a production asset in the Electric Reliability Council of Texas (ERCOT) system

- The project will provide utility scale power generation, producing up to 2 gigawatts (GW) of power with no associated fuel cost or need for freshwater throughout the life of the project

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Proposed Baryonyx Offshore Wind Project

PROJECT OVERVIEW

- Development of up to 41,468 acres of submerged lands under lease from the Texas General Land Office (GLO)
- Two offshore wind farms will be developed on two GLO lease sites:
  - Rio Grande Project
  - North Rio Grande Project
- The Baryonyx Offshore Wind Project involves:
  - Installation, operation, maintenance, and decommissioning of approximately 300 offshore wind turbine generators
  - Generating up to approximately 2.0 gigawatts (GW) of power
  - Turbines will be installed and arranged in a grid pattern
  - Network of buried electrical cabling will be required offshore and onshore
  - Installation of up to 4 substations per lease site
  - A third site, Mustang Site, located off of Corpus Christi was originally planned. Baryonyx removed this site to avoid potential impacts to the Padre Island National Seashore and Naval Air Station Corpus Christi.
- USACE will prepare an Environmental Impact Statement (EIS) to assess the potential impacts associated with project
- A range of alternatives will be developed, screened, and evaluated in the EIS

Proposed Baryonyx Offshore Wind Project
PROPOSED PROJECT CHARACTERISTICS

Feature	North Rio Grande Project	Rio Grande Project
Installed Capacity (megawatts)	1,000	900
Acreage	21,673	19,795
Number of Turbines (6 megawatts)	160	150
Distance Offshore (miles)	5.0 to 10.35	4.25 to 10.35
Depth Range (feet)	55 to 85	55 to 90

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Proposed Baryonyx Offshore Wind Project

STUDY AREA

- Currently coordinating to define
- The lease sites are located off the southern Texas coast off Port Isabel
- The study area will be delineated primarily for potential ecological effects
- There may be a separate study area for the following:
  - Air
  - Noise
  - Socioeconomics

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Proposed Baryonyx Offshore Wind Project
POTENTIAL ENVIRONMENTAL CONCERNS

Include potential impacts to:

- Migratory birds and bats
- Marine mammals
- Endangered and threatened species
- Essential Fish Habitat
- Commercial and recreational fisheries
- Submerged and shoreline aquatic habitat
- Wetlands
- Water quality
- Water flow and sediment distribution
- Air quality
- Aesthetics
- Cultural resources
- Recreation and recreational resources
- Energy supply
- Navigation

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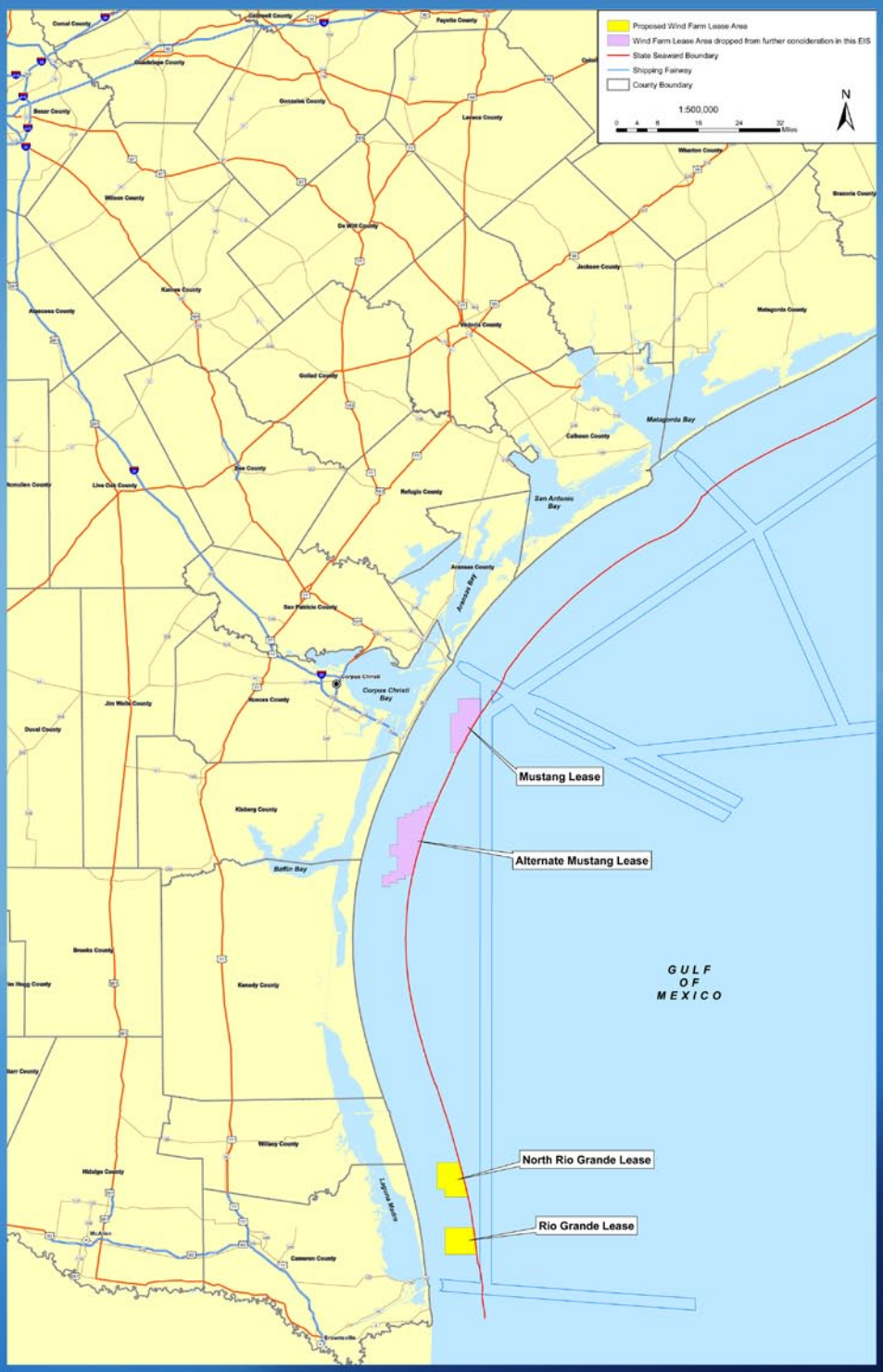
Proposed Baryonyx Offshore Wind Project

JUNE 2011 PERMIT APPLICATION LEASE SITES



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Proposed Baryonyx Offshore Wind Project

PROPOSED WIND FARM LEASE AREAS

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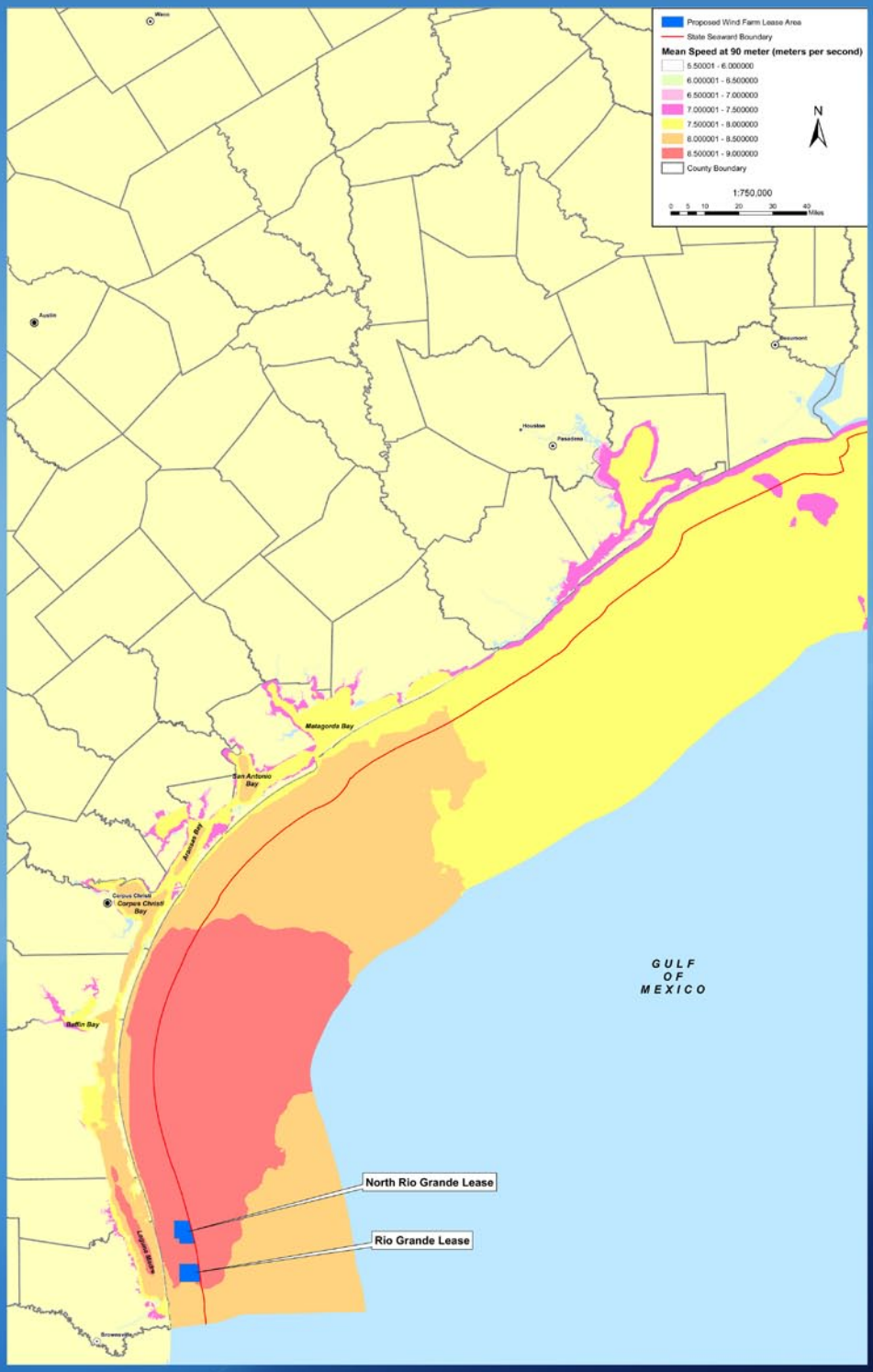
WIND RESOURCE OF OFFSHORE TEXAS



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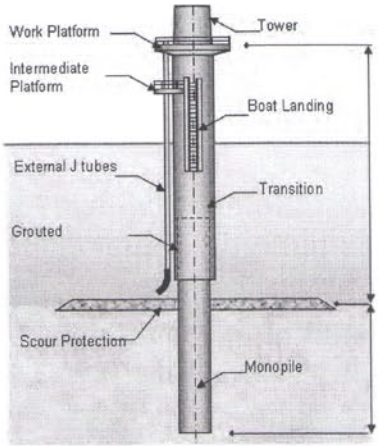
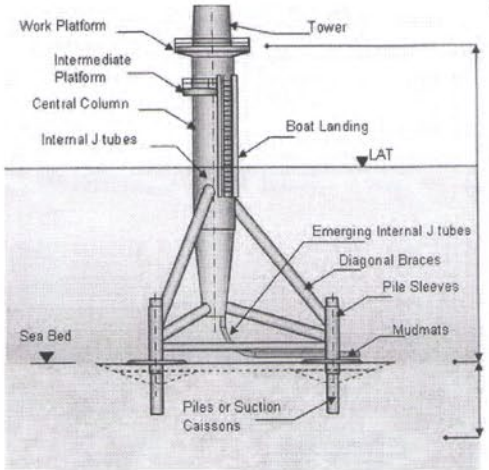
FOUNDATION TYPES FOR OFFSHORE WIND TURBINES

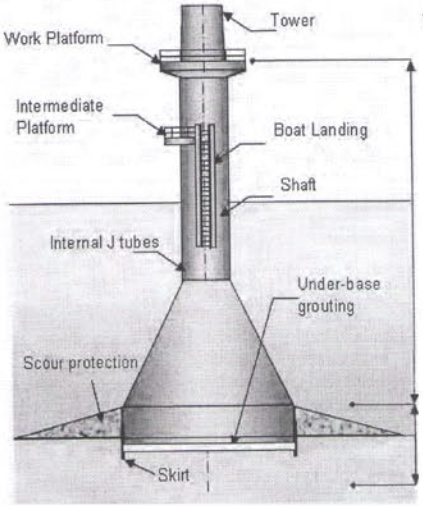
MONOPILE FOUNDATION



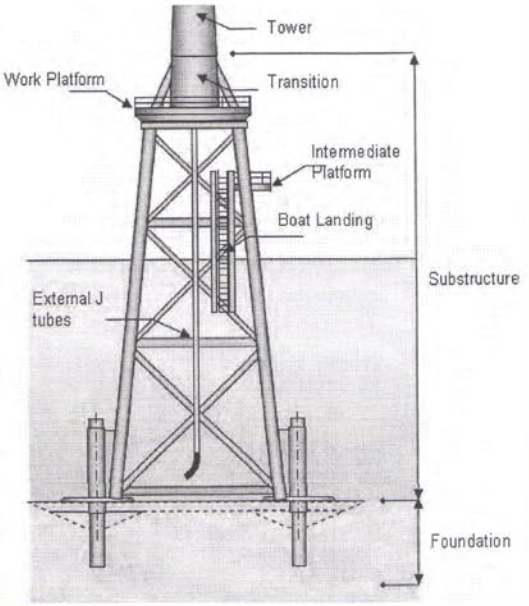
TRIPOD FOUNDATION



GRAVITY-BASED FOUNDATION



4-LEGGED JACKET FOUNDATION



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