Analysis of Site Suitability for Offshore Wind Energy Development

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DOS’s Offshore Planning Summary

• Purpose:
  – Site offshore wind to meet energy needs, promote economic development
  – Protect areas important to New York’s industries

• Products:
  – Offshore Atlantic Ocean Study
  – Maps showing potentially suitable offshore wind lease areas (Wind Energy Area(s) or WEAs)
  – Ocean-focused amendment (Routine Program Change) to the New York Coastal Management Program
State collects **EXISTING DATA**
*human use & natural resource*

State & Task Force analyze **EXISTING DATA**
*human use & natural resource*

State & BOEM conduct **OUTREACH TO STAKEHOLDER GROUPS**

State & Task Force identify/refine **PRE-WIND ENERGY AREAS (WEAs)**

BOEM publishes **CALL FOR INFORMATION & NOMINATIONS**

State & Task Force refine **PRE-WEAs**

BOEM identifies **WEAs**

Task Force meeting
State collects EXISTING DATA
  human use & natural resource

State & Task Force analyze EXISTING DATA
  human use & natural resource

State & BOEM conduct OUTREACH TO STAKEHOLDER GROUPS

State & Task Force identify/refine PRE-WIND ENERGY AREAS (WEAs)

BOEM publishes CALL FOR INFORMATION & NOMINATIONS

State & Task Force refine PRE-WEAs

BOEM identifies WEAs
Important Considerations

• This is a planning exercise to inform BOEM’s leasing process, which will include a full NEPA analysis.
• The result is a pre-screening, not a pre-clearance, of potential project sites in the planning area.
• The siting criteria are expected to change over time as technology matures, our understanding of the ocean increases, and public attitudes & policies evolve.
Process for Identifying “pre-WEAs”:
Data Analysis

• **Areas to be excluded** (no development)
  – Identify and map areas to *exclude* from wind development based on baseline criteria

• **Areas to be avoided** (development may be possible but not recommended)
  – Identify and map areas to *avoid* for wind development based on presence of offshore habitats (natural resources) / areas most vital to state industries

• **Areas that may be recommended for development** (potential WEAs)
  – Identify and map areas that the State may *recommend* for wind development, i.e. areas with greatest potential compatibility given available information on uses and resources
  – Further analysis will take place through BOEM lease process (NEPA)

• Continue refining as necessary with State agencies, stakeholders, Task Force
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Baseline Criteria

Focus on wind generation, substation/conversion facilities

Based on current technological limits, known/expected use constraints

• Areas greater than 60 meters / 180 foot depth (turbines only)
• Areas within established navigation lanes and:
  – their “logical extensions”
  – 1 nautical mile buffer around the lanes
  – areas between inbound/outbound lanes of the same fairway
  – areas based on further information from the US Coast Guard, eg ACPARS

Based on expected use constraints

• Areas within 12 nm from shore (turbines only) Airport approaches, tug/barge traffic, recreational activity, aesthetic concerns
• Areas within hazardous material disposal sites

New York Department of State
Preliminary Wind Energy Planning

EXCLUSION AREAS | New York Offshore Planning Area

Produced by New York State Department of State (September 2013)

Data Sources: US Marine Cadastre, US Coast Guard ACPAMS Interim Report (July 2012)
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Offshore Industries

• Data from the Offshore Atlantic Ocean Study
  – USCG Port Access Route Study (shipping)
  – NOAA NMFS (commercial fishing)
  – Cornell (commercial fishing)

• Data from online data portals
  – MARCO, Multi-purpose Marine Cadastre

• Ongoing analysis, discussions with commercial fishing, shipping interests
Preliminary Wind Energy Planning
US COAST GUARD ACPARS DATA | New York Offshore Planning Area

Produced by New York State Department of State (September 2013)
Data Sources: US Coast Guard ACPARS Interim Report (July 2012)

New York Department of State
COMMERCIAL FISHING DATA: trawl (annual)

New York Fishers (n=66*)
Data Source: Cornell Cooperative Extension 2012

Total Landings (lbs) Between 2001 & 2010
Data Source: NMFS VTR

*refers to number of records; does not necessarily represent the number of fishing vessels

Produced by New York State Department of State (September 2013)
FOR HIRE RECREATIONAL FISHING DATA (annual)

New York Fishers (n=18*)

Data Source: Cornell Cooperative Extension 2012

Total Landings (lbs) Between 2001 & 2010

Data Source: NMFS VTR

NUMBER OF OVERLAPPING FISHING AREAS*

1 2 3 4

*refers to number of records; does not necessarily represent the number of fishing vessels

TOTAL LANDINGS BETWEEN 2001 & 2010 (millions of lbs)

- 0.00002 - 0.001
- 0.001 - 0.002
- 0.003 - 0.006
- 0.007 - 0.037
- 0.038 - 1.930

Produced by New York State Department of State (September 2013)
Natural Resources

• Data from the Offshore Atlantic Ocean Study
  – NOAA NCCOS (seabirds, corals/sponges)
  – URI/New England Aquarium (marine mammals, turtles, large pelagic fish)
  – Stone Environmental (groundfish)

• Initial analysis by NYS Offshore Habitat Workgroup

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CORAL & SPONGE DISTRIBUTIONS | New York Offshore Planning Area

Produced by New York State Department of State (September 2013)
Data Sources: NOAA National Centers of Coastal and Ocean Science, Biogeoaphy Branch
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BLACK SEA BASS SEASONAL DISTRIBUTIONS | New York Offshore Planning Area

Spring Distribution (adults)  
Fall Distribution (adults)

Produced by New York State Department of State (September 2013)
Data Source: NOAA NMFS Northeast Fisheries Science, Bottom Trawl Survey 1975 - 2009

RELATIVE ABUNDANCE
0  0.1  1  3  8  20  279

RELATIVE ABUNDANCE
0  0.1  0.2  0.6  1.2  2.8  50

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New York Department of State
Next Steps

• Continue working with commercial fishing, shipping interests

• Identify data categories for additional spatial analysis
  – the list of additional uses and resources to be mapped within the planning area
  – analysis using available GIS data layers
  – identification of questions to be addressed through NEPA
Questions?