

Offshore energy in Massachusetts:
Status of current projects
and
Development of a
comprehensive Ocean Plan

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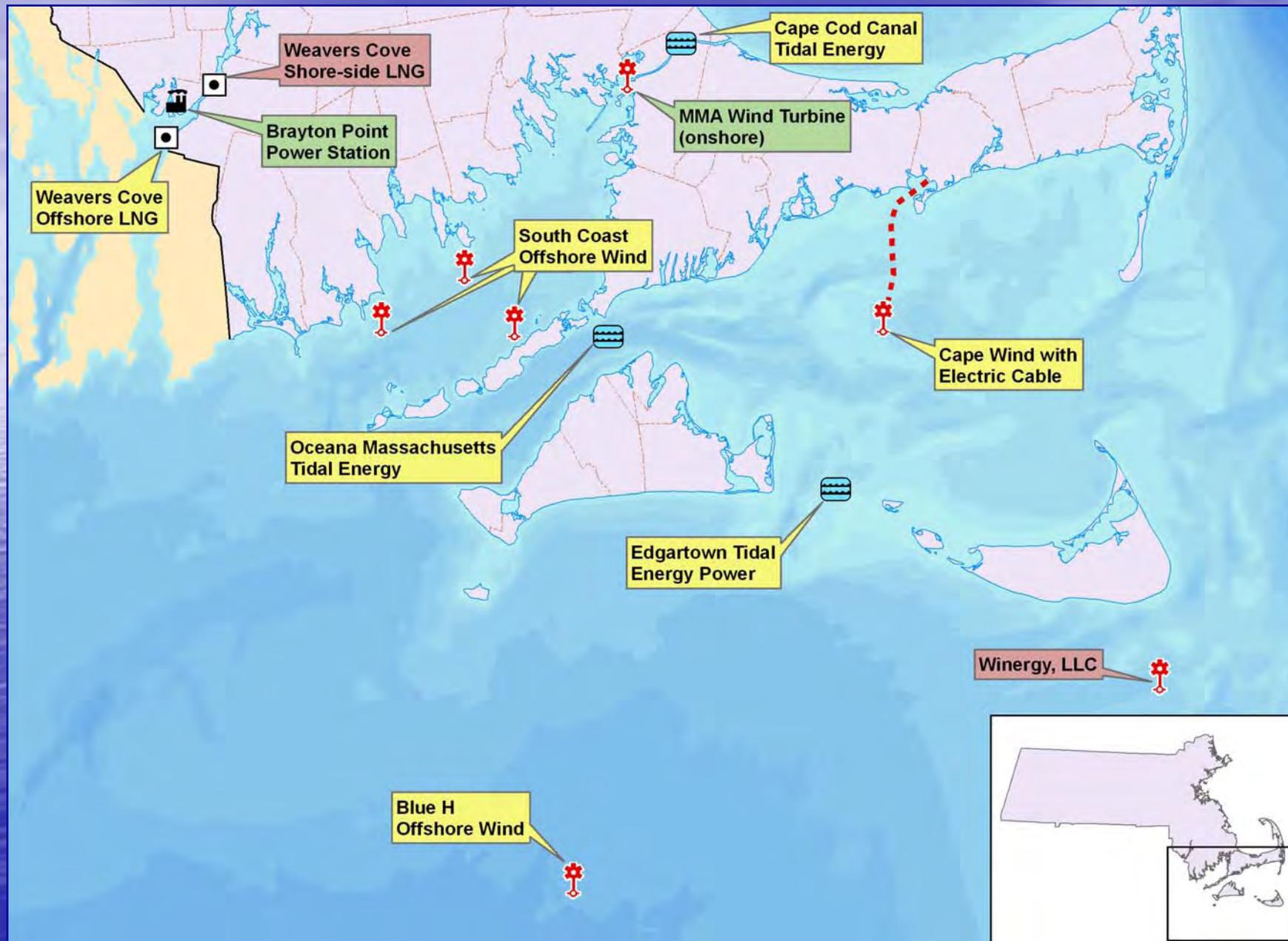
Outline

- Energy projects in Massachusetts coastal zone
 - ✓ Update on selected projects
 - ✓ Contextual setting/backdrop for ocean management efforts
- Oceans Act of 2008
- Ocean planning and renewable energy
- Overview of ocean planning process

Recent Offshore Energy in MA (North)



Recent Offshore Energy in MA (South)



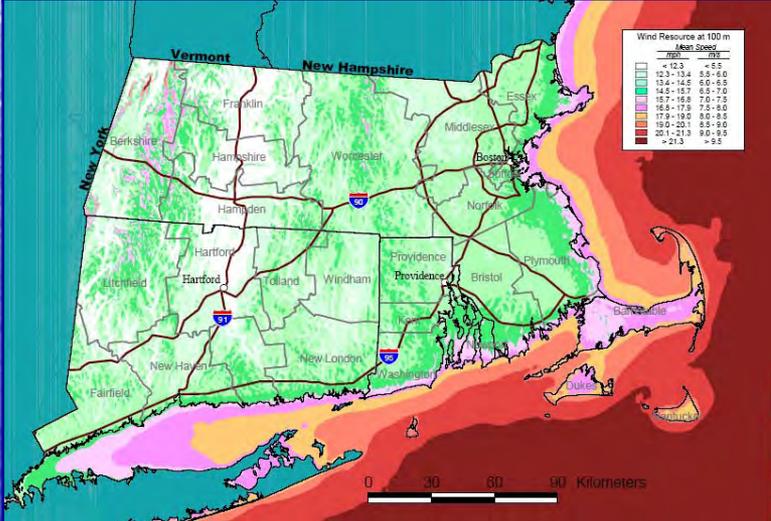


CAPE WIND

Money, Celebrity, Class, Politics, and
the Battle for America's Energy
Future on Nantucket Sound



Cape Wind



- Proposed project for 130 wind turbine generators
- Federal waters (donut): Horseshoe Shoals in Nantucket Sound
- Max output = 468 mW
- 2001 first application to Army Corps
- Corps DEIS filed 2004
- Energy Policy Act 2005: MMS as lead, new NEPA filings required
- MMS: special process for Cape Wind as rules under development

Cape Wind (continued)



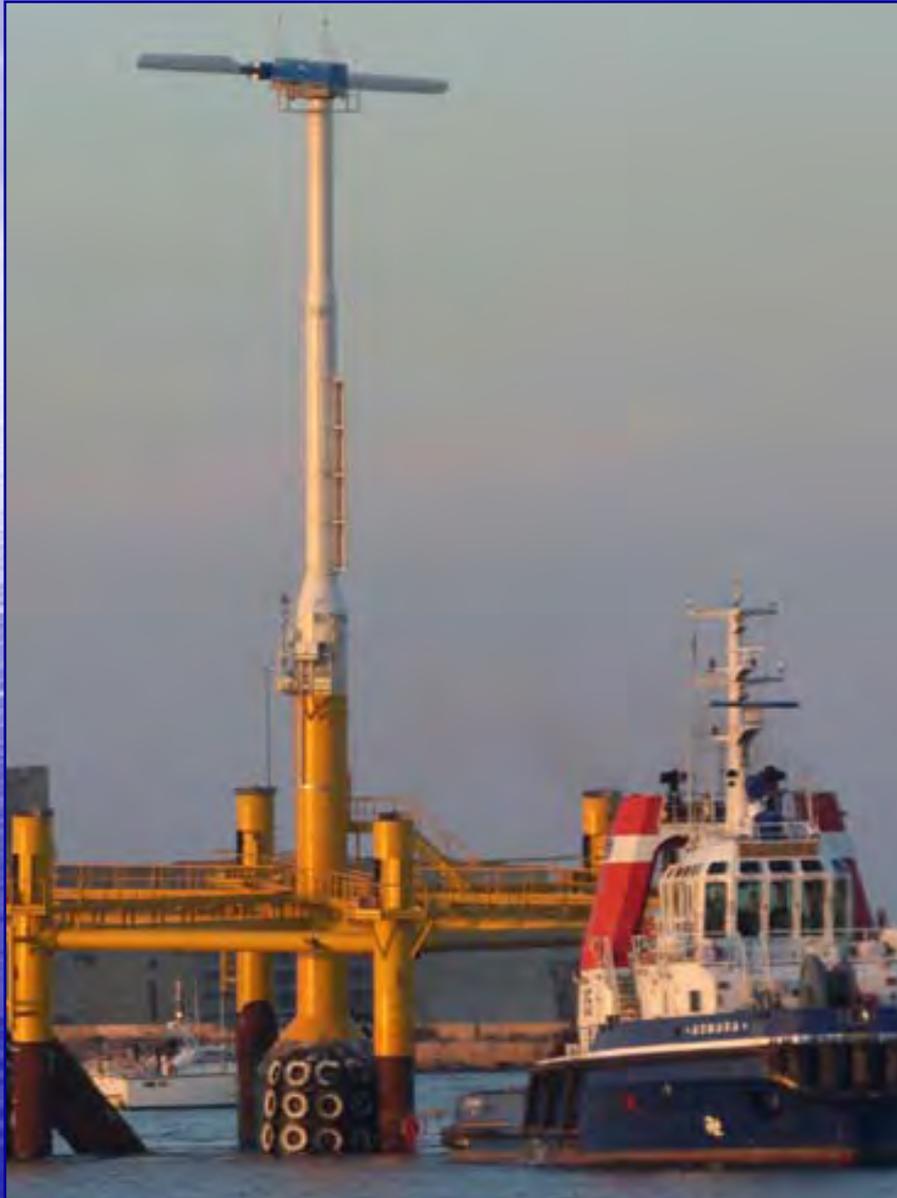
- Completed state MEPA review in March 2007
- NEPA: Draft EIS released January 2008
- NEPA: Final EIS planned for January 2009
- CZM looking to FEIS for:
 - ✓ Measures to reduce avifauna, SAV impacts
 - ✓ Monitoring system to track avifauna, SAV, monopile colonization, invasives, sediment bedform, cable burial
 - ✓ Mitigation and lease revenue program: \$10m over 20 yrs.
- After FEIS and state permits/licenses, CZM issues Federal Consistency decision

South Coast Wind



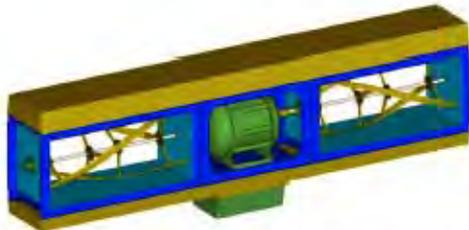
- ~100 wind turbine generators in 3 areas of Buzzards Bay (entirely in state waters)
- Proposed in 2006 with first MEPA filing
- Ocean Sanctuaries Act express prohibition on “offshore electric generating stations”
- One of several drivers for legislative action: Oceans Act of 2008

Blue H: Deepwater Wind Energy Project

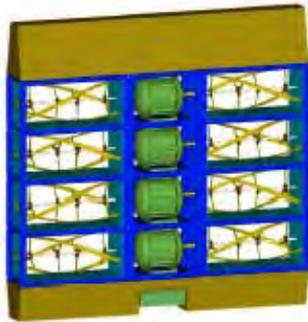


- Submitted application to MMS under “interim policy” rules
- Floating platform with 3.5 mW WTG to test technology
- Based on pilot Submerged Deepwater Platform currently deployed in southern Italy (108m)
- Proposes projects in depths 40-60m

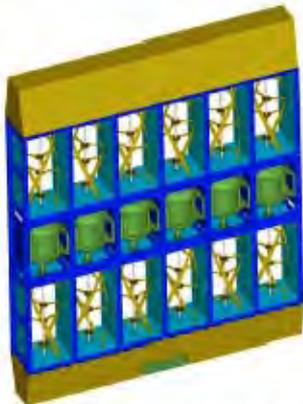
Edgartown: Nantucket Tidal Energy Plant



Single-T-G Unit Prototype Configuration



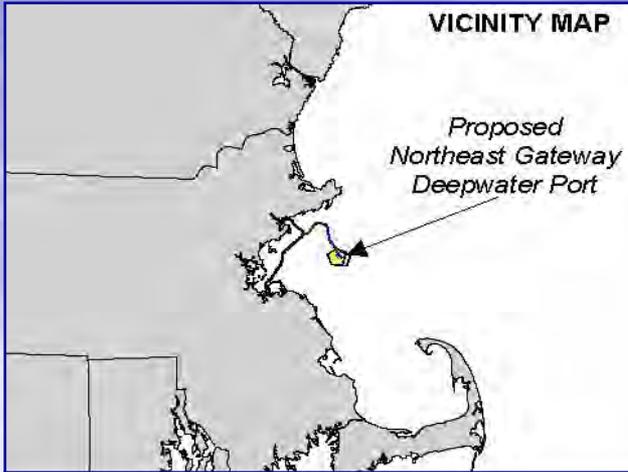
4 T-G Unit Horizontal Configuration



6 T-G Unit Vertical Configuration

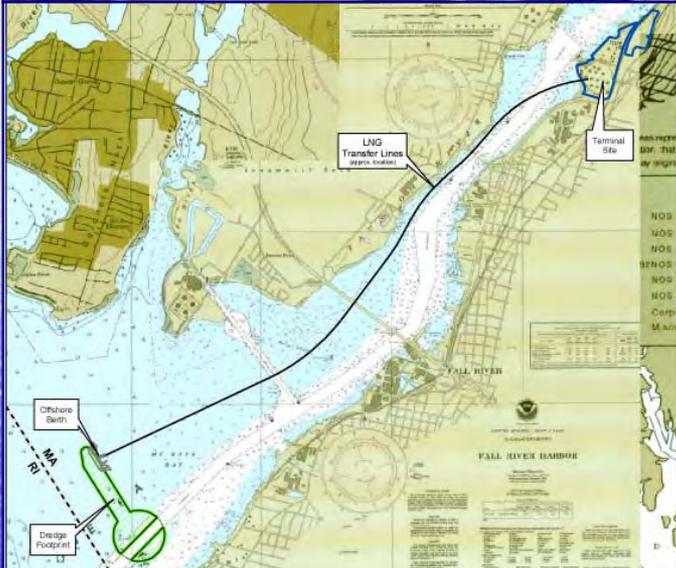
- Competing FERC applications for Muskeget Channel in 2007
- Natural Current Energy and Edgartown (town on Martha's Vineyard)
- FERC preliminary permit issued to Edgartown March 2008
- Edgartown has begun work with UMass and its new Marine Renewable Energy Center to characterize area

Excelerate & Suez Deepwater LNG Ports



- Two LNG regassification projects proposed in Massachusetts Bay (federal waters) in 2005
- US Maritime Administration authority, but requires Governor approval
- Issues of concern: cetacean impacts' pipeline installation, and security zone closure; not public safety
- Authorized in December 2006
- Northeast Gateway complete in December 2007; Neptune just complete

Weaver's Cove LNG



- LNG receiving terminal in Fall River on Taunton River
- FERC and MEPA applications in 2004
- Primary issues: navigation through narrow river and bridges; significant dredging
- Federal consistency denied; appeal upheld
- Alternative project proposed
- Offshore berth; unload LNG and transfer to shore via buried, insulated, pipelines

Context for new Oceans Act

- Increasing proposals for new ocean uses
- Management challenges for existing uses
- 2003: Ocean Management Task Force established
- 2004: *Waves of Change* report issued
- Set of 16 recommendations, including: develop new, comprehensive Ocean Resources Management Act
- Initial bills filed in 2005
- Concerns: fishing; additional regulatory burdens; renewable energy

Context (continued)

- Pew and US Ocean Commissions calling for sea change in national ocean policy
- Change of administration in 2007: new platforms and policies in support of renewable energy
- Specific projects generating lots of public debate
- CZM continued to work on tasks in support of ocean management, including:
 - Seafloor mapping
 - Coastal and ocean economies
 - Assessment of offshore energy potential
- Massachusetts Ocean Partnership created in 2006; renewed support and funding

Oceans Act of 2008

- Establishes Secretary of EEA as trustee of Commonwealth oceans
- Directs Secretary to establish an integrated ocean management plan by December 31, 2009
- Plan to be submitted to legislature and formal public hearings required at least 6 months prior
- Creates Ocean Advisory Commission: assist in developing plan
- Establishes Ocean Science Advisory Council: assist in baseline assessment and obtaining scientific information

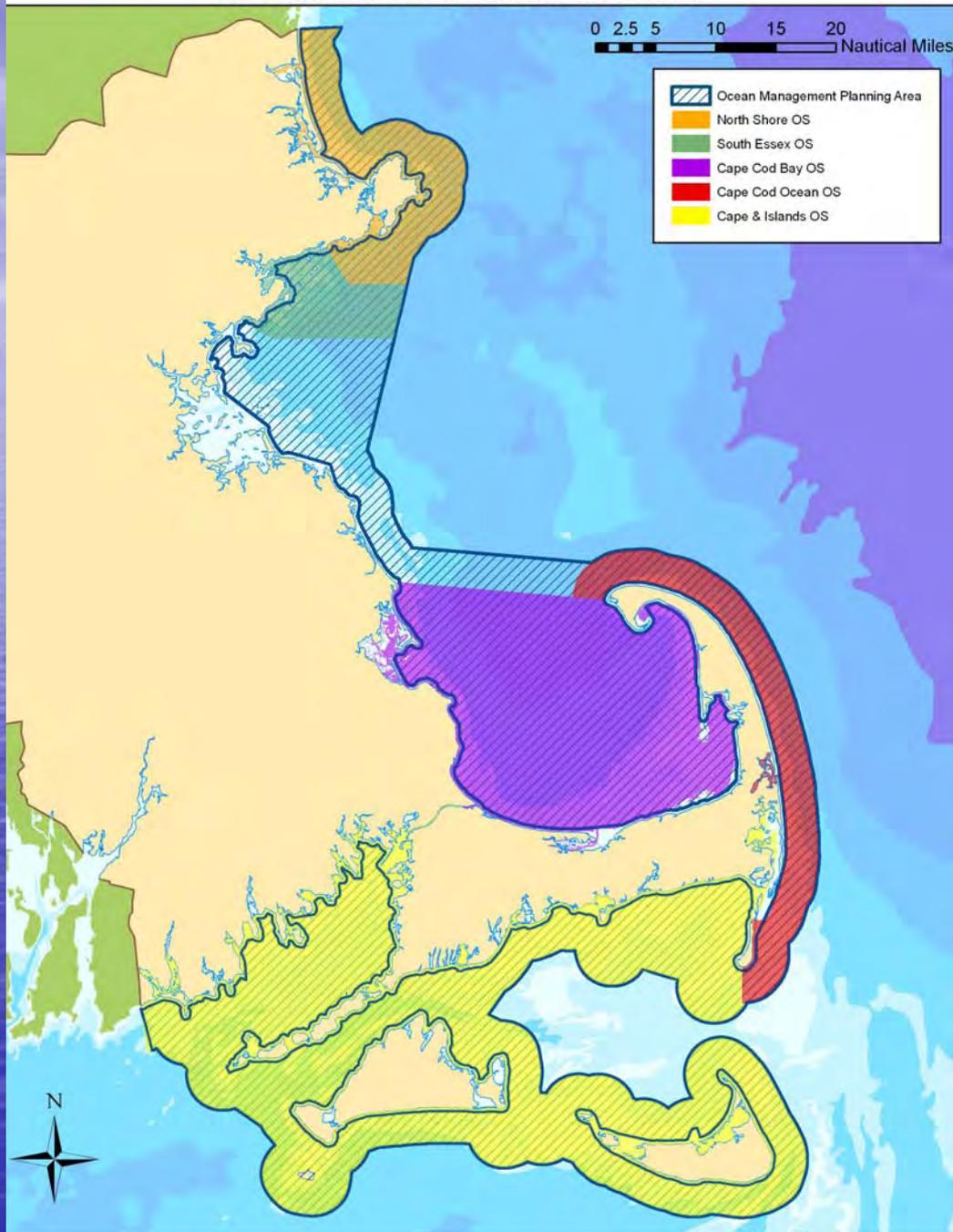
Oceans Act of 2008

- Integrated Ocean Management Plan must contain goals, siting priorities, and standards for:
 - ✓ Energy facilities, including renewables
 - ✓ Extraction of sand and gravel for shore protection or beach restoration
 - ✓ Discharges and intakes
 - ✓ Navigation
 - ✓ Educational and scientific activities
- Coordinates uses including international, federal, state and local jurisdictions

Oceans Act of 2008

- Foster sustainable uses that capitalize on economic opportunity without significant detriment to ocean ecology or natural beauty
- Directs that commercial and recreational fishing shall be subject to the exclusive jurisdiction of the state Marine Fisheries (or Federal plans) BUT shall be integrated to maximum extent practicable with Plan
- Requires all state approvals to be consistent to the (maximum extent practicable) with the plan
- Directs that the plan be incorporated in the Coastal Zone Management program

Massachusetts Ocean Management Planning Area and Massachusetts Ocean Sanctuaries



Ocean
Planning
Area

Oceans Act and Renewable Energy

- Amends Ocean Sanctuaries Act to allow development of renewable energy facilities
- Renewable projects must be of “appropriate scale” and otherwise consistent with the plan
- Directs that plan identify suitable [or not] areas and management measures for renewables
- Act specifies review of the OSA standards for “necessity and convenience” and “significant alteration”
- Moves administration of OSA to CZM

Oceans Act and Renewable Energy

- Provides formal policy basis for coordination with other NE states and federal government
- Plan contents and supporting data/analysis will be used as basis for MEPA/NEPA and permit streamlining (State waters: ACOE; Federal waters: MMS)
- Federal consistency: plan will be incorporated in state coastal program
- Parallel effort: data acquisition and preliminary planning in federal waters

Planning Process

- 4 Phase Process:
 1. Acquire data, information, and public comment
 2. Synthesize and integrate above into a working plan
 3. Review and modify plan
 4. Formal public hearings, legislative review, promulgation
- 2 Products:
 1. Framework plan with spatial components and defined management measures (rules or standards)
 2. Framework for ongoing, dynamic plan evolution (Act requires review of plan at least once every 5 years)

Timeline

Acquire data, information,
and public comment

180 days

Synthesize and
integrate above into
a working plan

90 days

Review and
modify plan

60 days

Formal public hearings,
legislative review, promulgation

180 days

Phase 1: Data and Information

- Working groups
- Started as internal; expanded to include outside expertise
 - ✓ Habitat
 - ✓ Commercial and Recreational Fishing
 - ✓ Renewable Energy
 - ✓ Navigation and Infrastructure
 - ✓ Sediment Management
 - ✓ Social, Cultural and Historic
 - ✓ Regulatory

Phase 1: Data and Information

- Working group emphasis on spatial data and information
- Very good information but there are significant gaps
- Science Advisory Council will review and recommend additional or modified data to create working baseline assessment
- Council will identify short- and long-term baseline issues, data and processes needed to address them

Phase 1: Public comment and input

- Intent is to ensure broad-based, ongoing public participation in developing Plan
- September and October: 18 separate public listening sessions coastwide (and inland) to gather public and stakeholder comment
- Focus “stakeholder” sessions
- Website(s), online commenting, planning “alerts”

Develop Working Plan

- Regional and national ocean management, EBM, and spatial planning efforts being examined for applicable and transferable concepts/components
- Working plan ingredients:
 - ✓ Data and information from Work Groups and Council
 - ✓ Planning principles from Act and Advisory Commission
 - ✓ Public and stakeholder comment
 - ✓ Selected plan framework
- Identify areas suitable for different kinds of uses and protections: compatibility and conflict
- Performance standards; management measures



For more information:



<http://www.mass.gov/czm/>

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