



AE Interim Policy Projects on the East Coast

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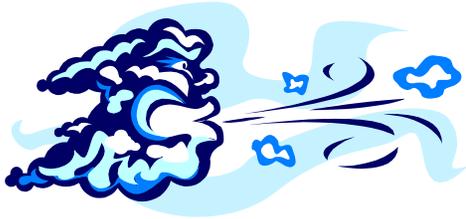
Interim Policy

- On 6 November 2007, MMS announced the IP for installing meteorological or marine data collection facilities to test feasibility for OCS AE projects
- Developers nominated 40 areas off the west & east coasts
- In April 2008 MMS culled nominations to a subset of areas to be considered for limited leasing under the IP
- IP limited leases provide for:
 - Non-competitive leasing, no overlapping spatial interest (MMS intended no lease sale under the IP program)
 - 5-year term
 - No future commercial development rights

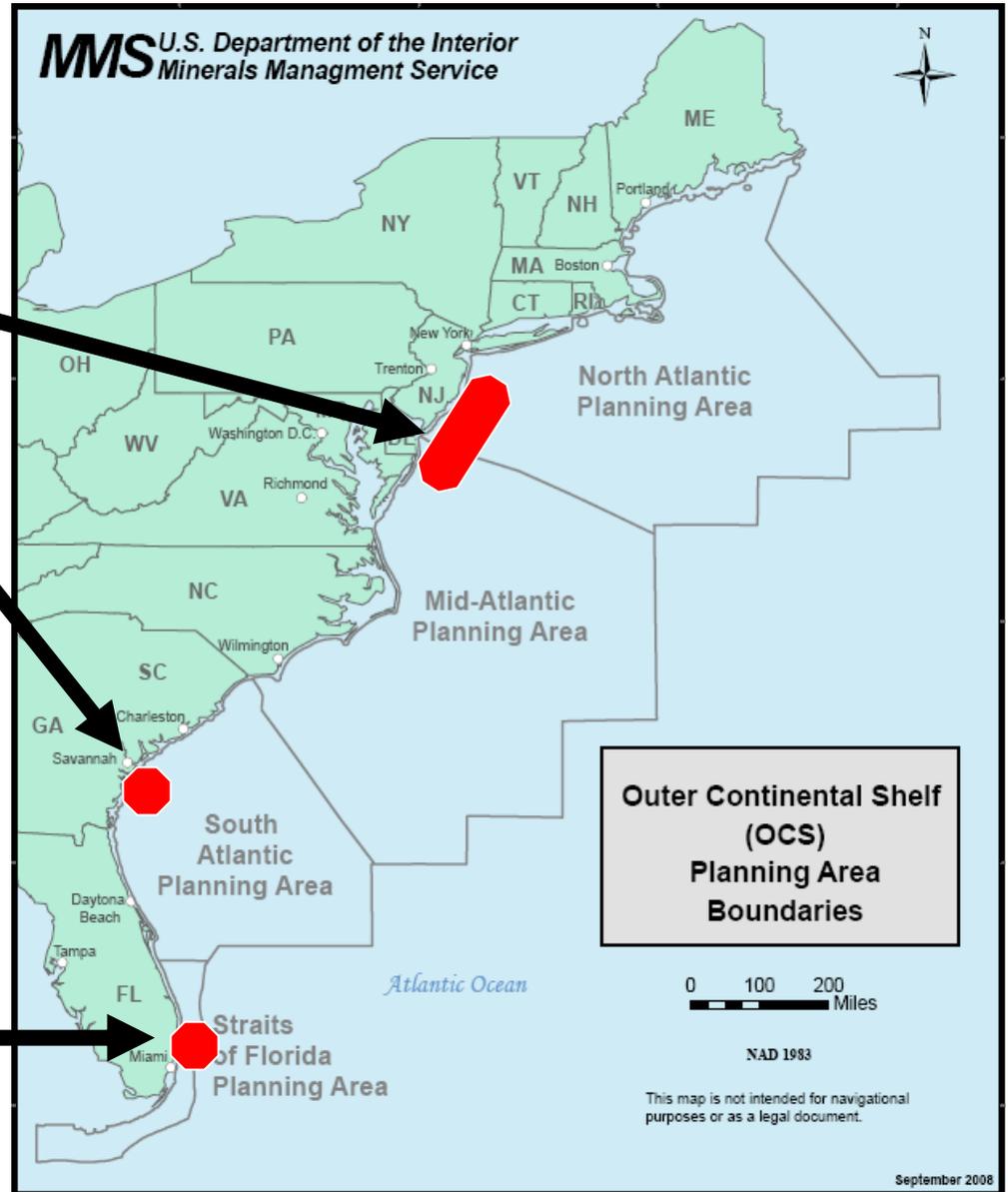
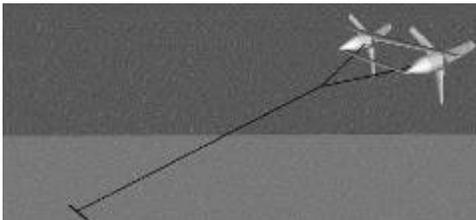


Interim Policy – East Coast Interest

Wind energy off mid- and south Atlantic



Gulf stream current energy off east Florida



IP Proposals – Full Facility Life Cycle

➤ Site Assessment Surveys

- Q1 2009 & beyond – few weeks
- Geotechnical, shallow hazards, & archaeological surveys



➤ Construction

- One to ten weeks
- Q2 2009 & beyond

➤ Operation

- Two to five years

➤ Decommissioning

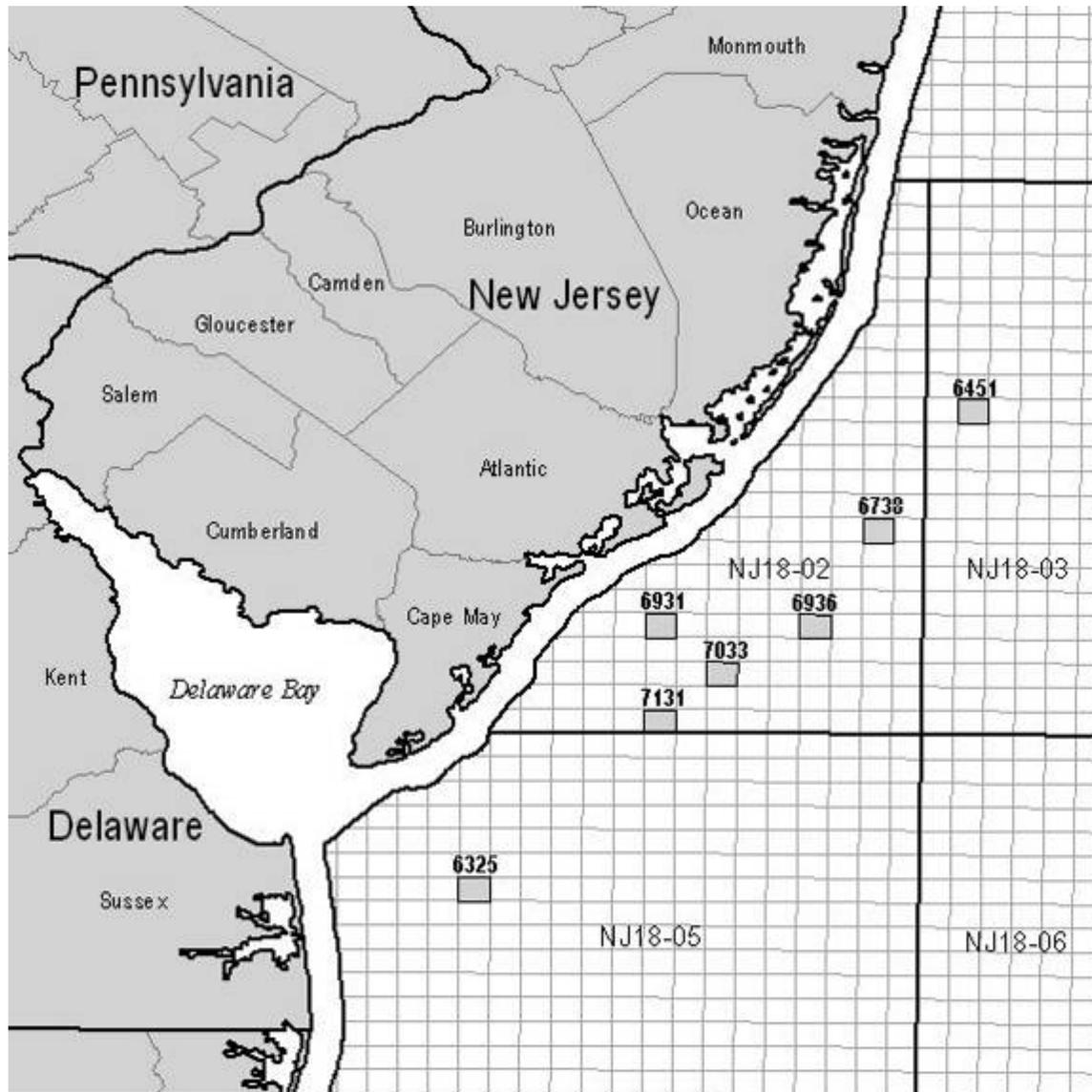
- Few weeks



Mid-Atlantic Proposed Area

➤ A total of seven meteorological towers are proposed by 3 companies offshore New Jersey and Delaware:

- Fishermen's Energy (1)
- Deepwater Wind (2)
- Bluewater Wind (4)



Mid-Atlantic Proposals

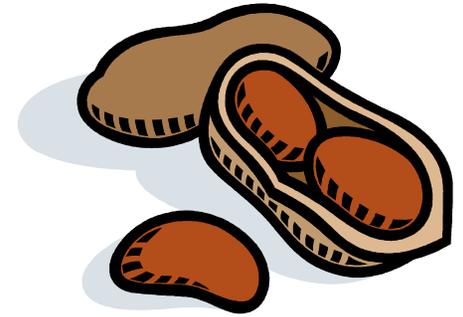
➤ Types of Data Collection Activity

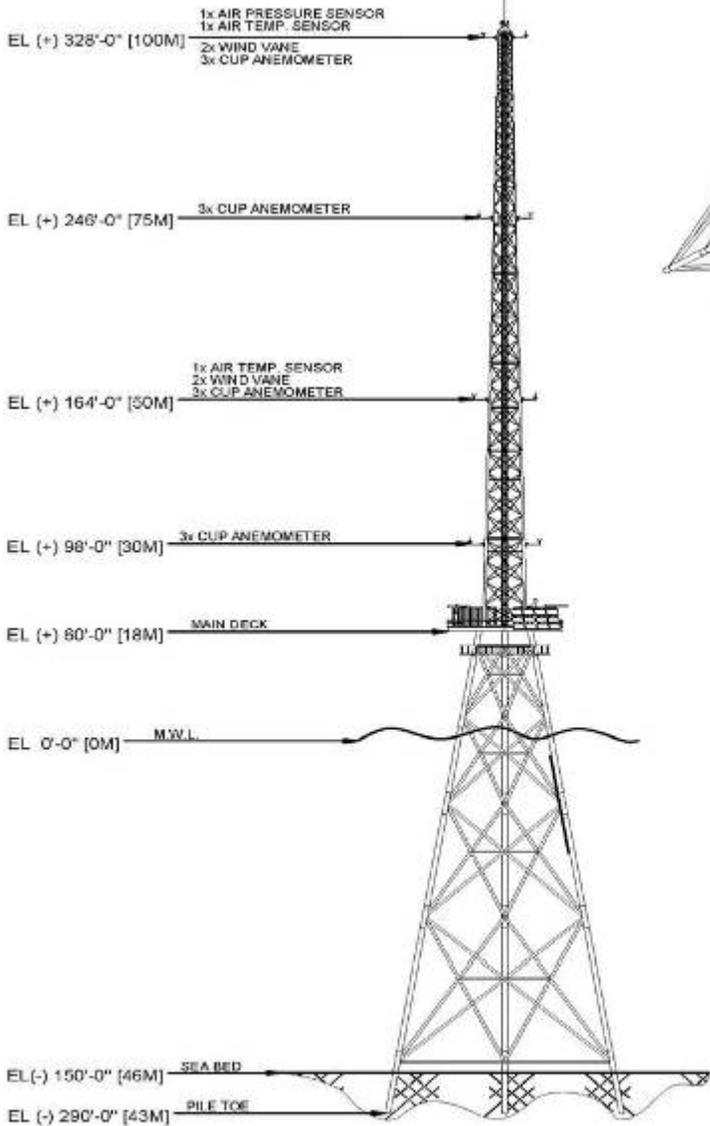
- Meteorological Data Collection
 - Anemometers, vanes, barometers, & temperature transmitters
 - Mounted directly on the tower or on support arms extending out 10 feet
 - Instrumentation located at 3–4 levels on the structure
- Ocean Monitoring Equipment
 - Bottom-founded buoys to measure sea state
 - Acoustic Doppler Current Profilers (ADCP)



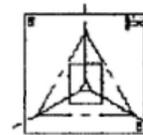
In a Nut Shell

- Distance to shore 8–17 miles
- Water depth 40–110 ft
- Structure height ASL 295–328 ft (90–100 m)
- Operational duration 2–5 years
- Meteorological towers are a monopole or lattice tower mounted on a fixed foundation
- Foundation from a range of options pending final design:
 - 10-ft-diameter monopole
 - Tripod configuration
 - Steel jacket with three to four 36-in-diameter piles
- Facility footprint ranges from 300 to 2,000 sq ft of ocean bottom depending on foundation type
- Scour control structures on bottom increase footprint slightly

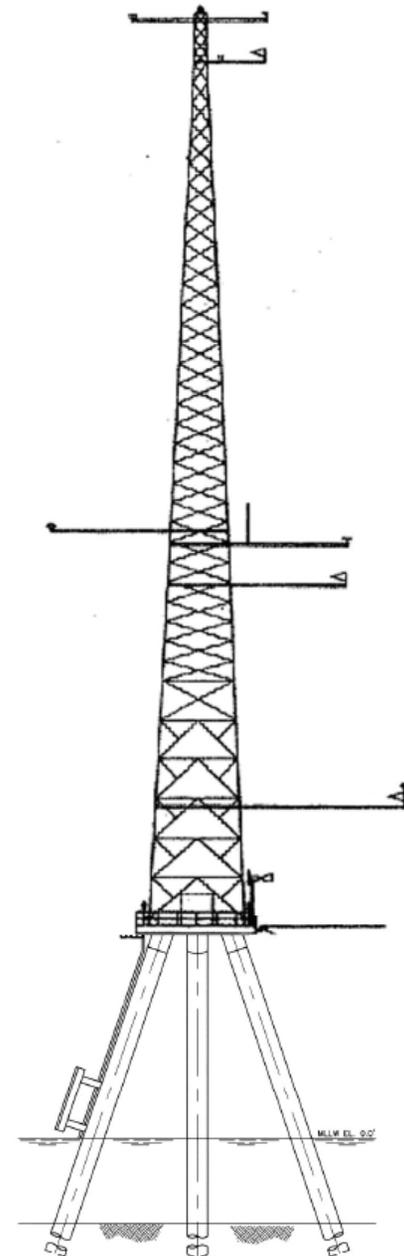




TOP VIEW



Plan



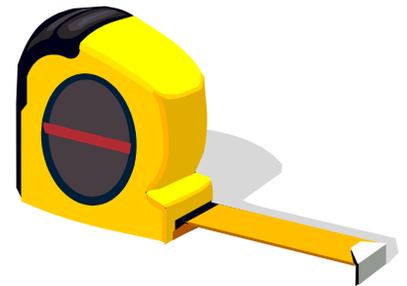
Profile

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DWN	J. POWELL	01/25/07	ON PROJECT REVIEW	DATE	01/25/07
TRD	S. ZAMAN	01/25/07	ALL DIMENSIONS ARE AS SHOWN	SCALE	AS SHOWN
GRD	S. ZAMAN	01/25/07	ANGLED: 41°	PROJECT NO.	445XXXX
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NOT RELEASED FOR CONSTRUCTION

Mid-Atlantic Project Status

- MMS has received applications for 4 of 7 proposals
- Currently preparing a Multi-Project Environmental Assessment
 - Proposed activities are similar
 - Proposed lease areas share the same affected environment
- Army Corps of Engineers is a cooperating agency on the EA
- The EA is expected to be published during Q1 2009
- ESA, MMPA, & EFH consultations underway



South Atlantic Project

- OCS off Savannah, Georgia
 - 1–3 meteorological towers
 - Southern Company



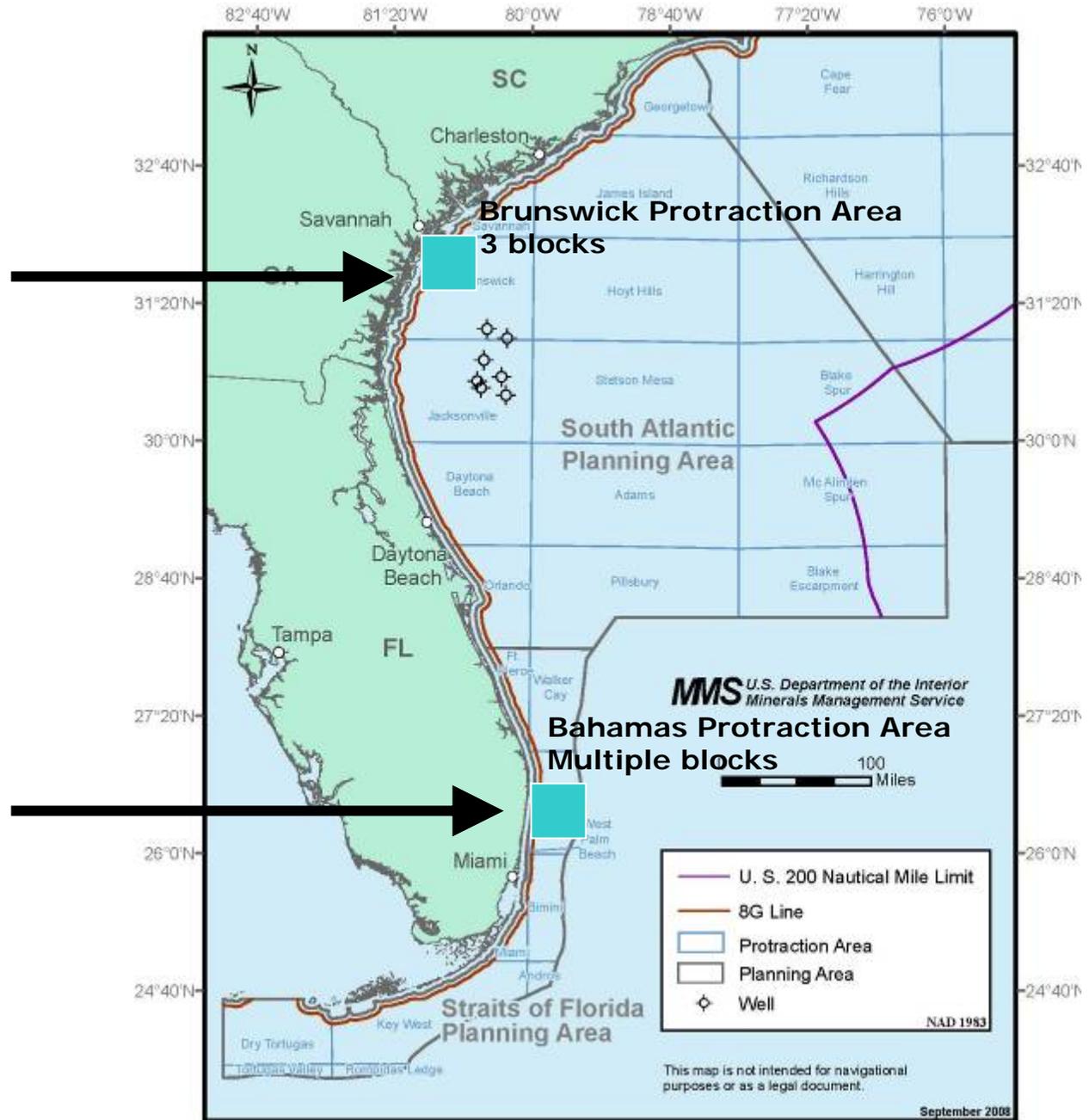
Straits of Florida Projects

- OCS off Miami-Dade County, Florida
 - Ocean current energy data collection & later phase technology testing
 - Aquantis
 - Florida Atlantic University (consortium)
 - Marine Science
 - Vision Energy

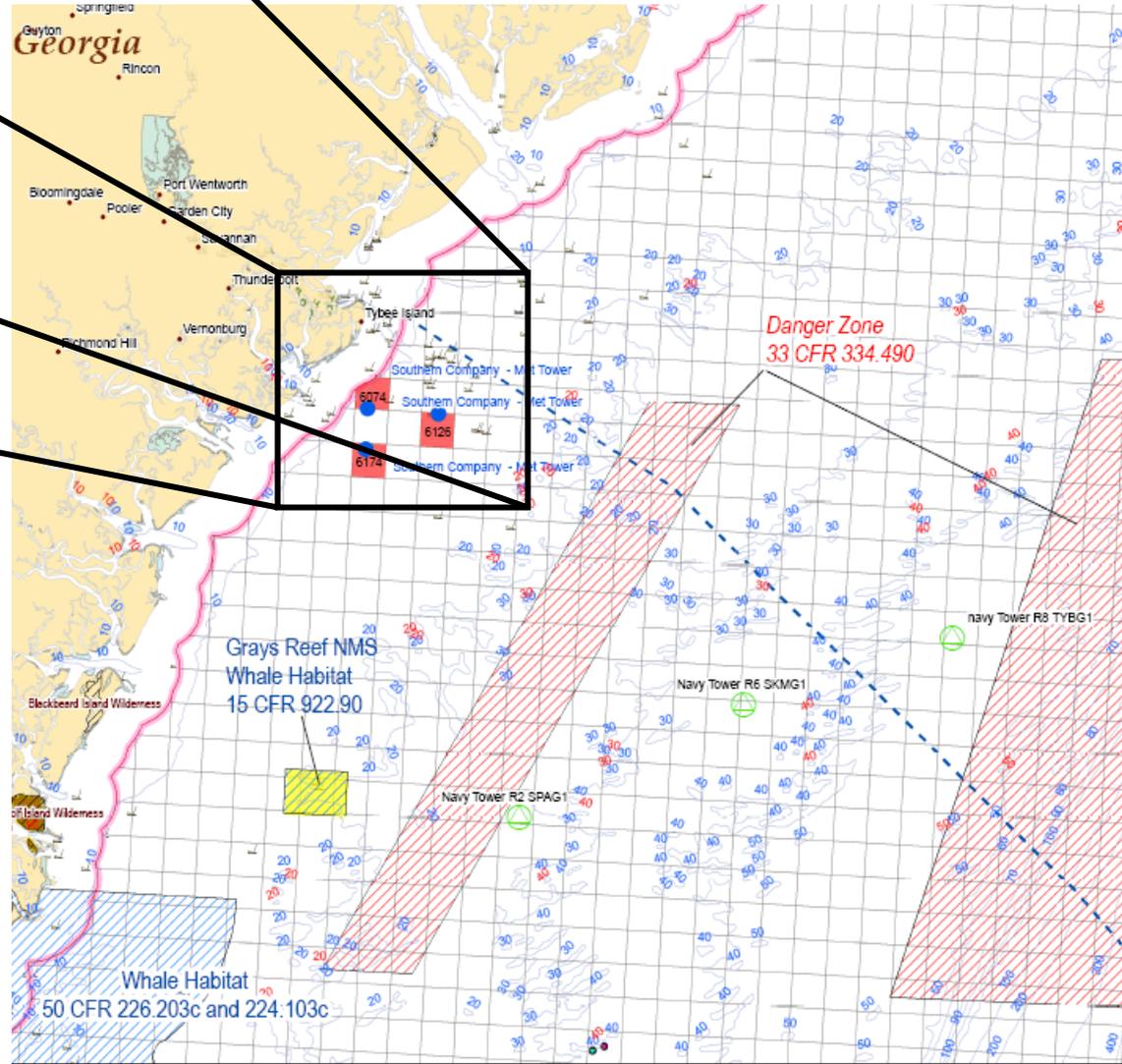
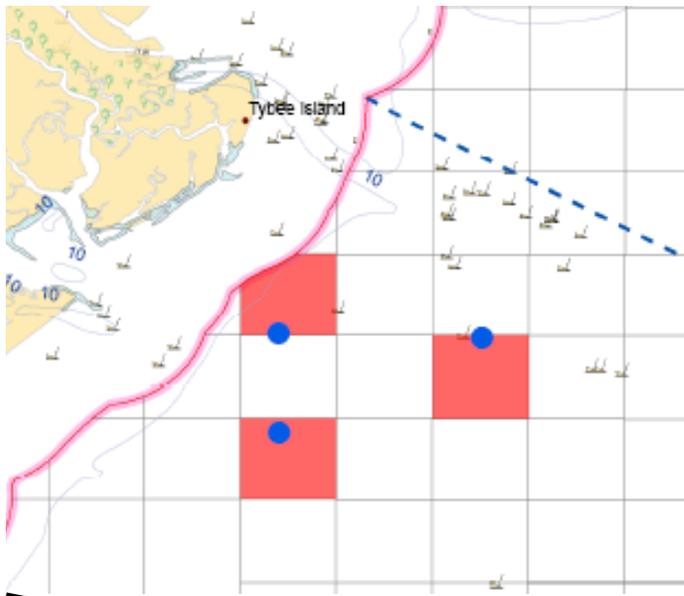


South Atlantic
Planning Area

Straits of Florida
Planning Area



Southern Company's Proposed Meteorological Towers



Brunswick Blocks

6074

6125

6174

Southern Company's Project Status?

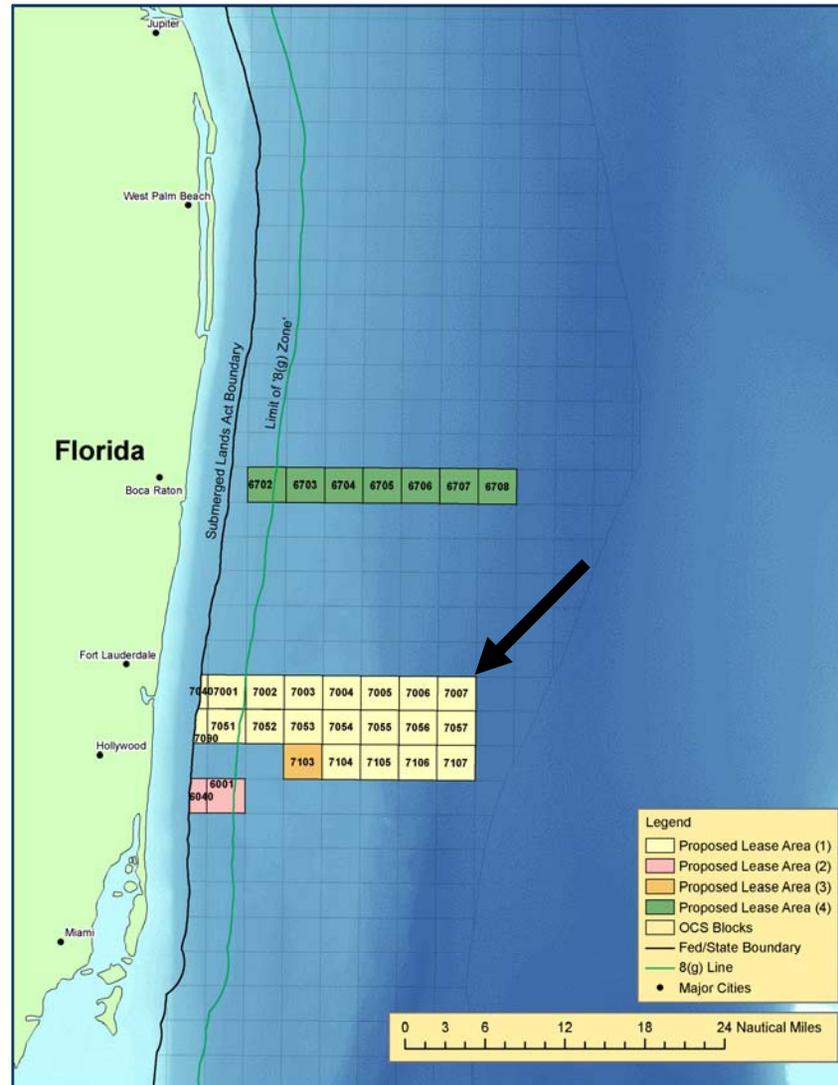
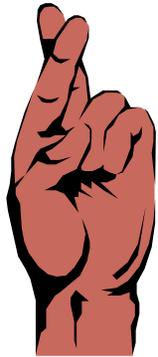
- Southern Company has retained a consultant to prepare an application



Florida Atlantic University Project

- Consortium of academia, industry & gov't labs with core capabilities for the R&D & commercialization of current, thermal, wave, & tidal-based ocean energy technologies
- FAU established Center for Ocean Energy Technology that includes a test facility
- FAU envisions a three-phase project
 - 1st phase – data collection in the Gulf Stream
 - 2nd phase – single current turbine deployment
 - 3rd phase – multiple current turbine deployments, power generation, cabling to shore (demonstration project)

FAU's Proposed Lease Area



FAU's Current Energy Concept

CENTER FOR EXCELLENCE
IN OCEAN ENERGY

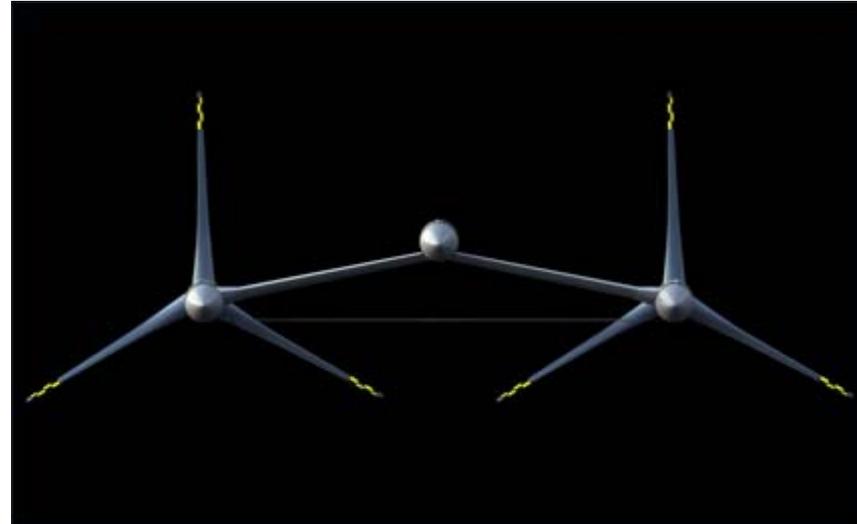
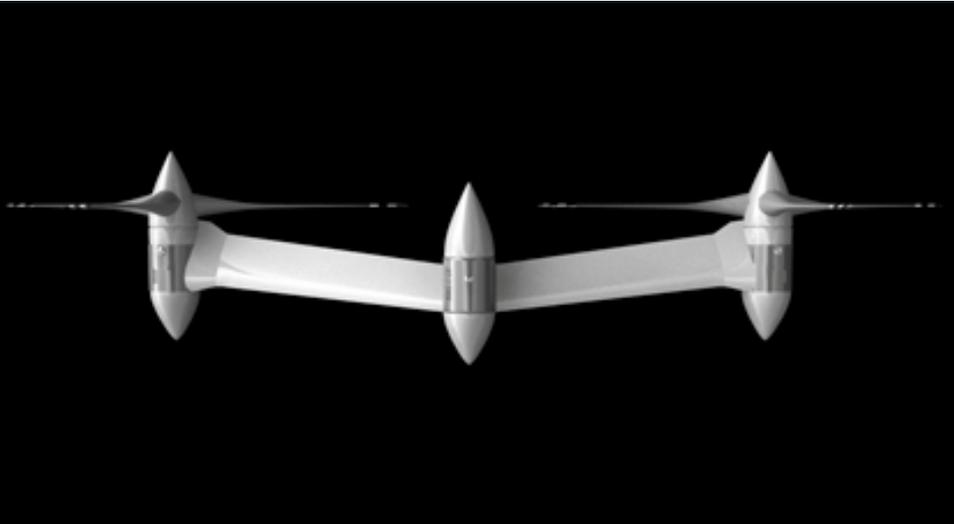
OCEAN TURBINE PROJECT

FAU's Project Status?

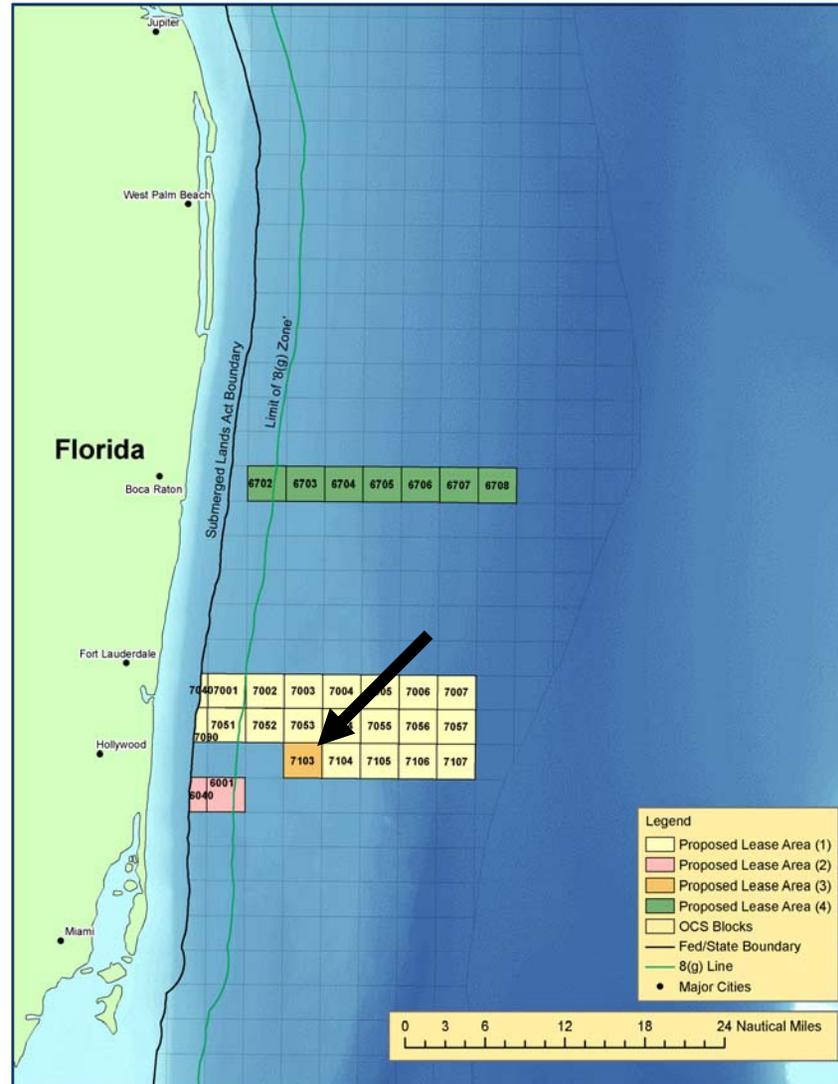
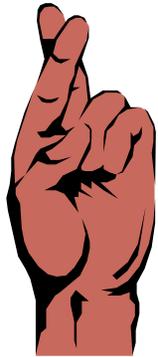
- No application has been received
- Phase 1 is not being reviewed by MMS under the IP program
 - FAU is an educational institution & intends to make the information public
- Processing under the IP for Phase 2 depends on what FAU proposes in their application
- As we understand Phase 3, it is not an IP-type of activity

Aquantis's Project

- Acquire data on ocean currents in the Florida Straights including bathymetrically variable data & environmental data with which to assess potential impacts of ocean current technology
- Aquantis plans to test one Aquantis C-Plane with a multi-point mooring & stability system

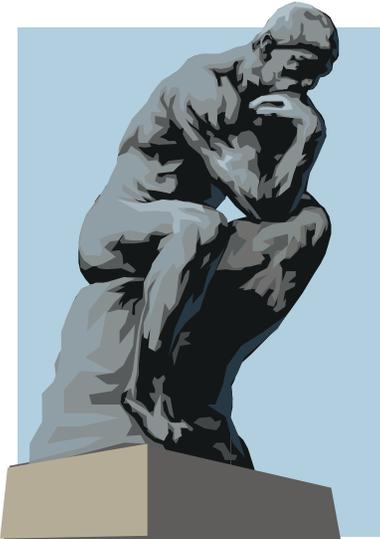


Aquantis's Proposed Lease Area



Aquantis's Project Status?

- No application has been received

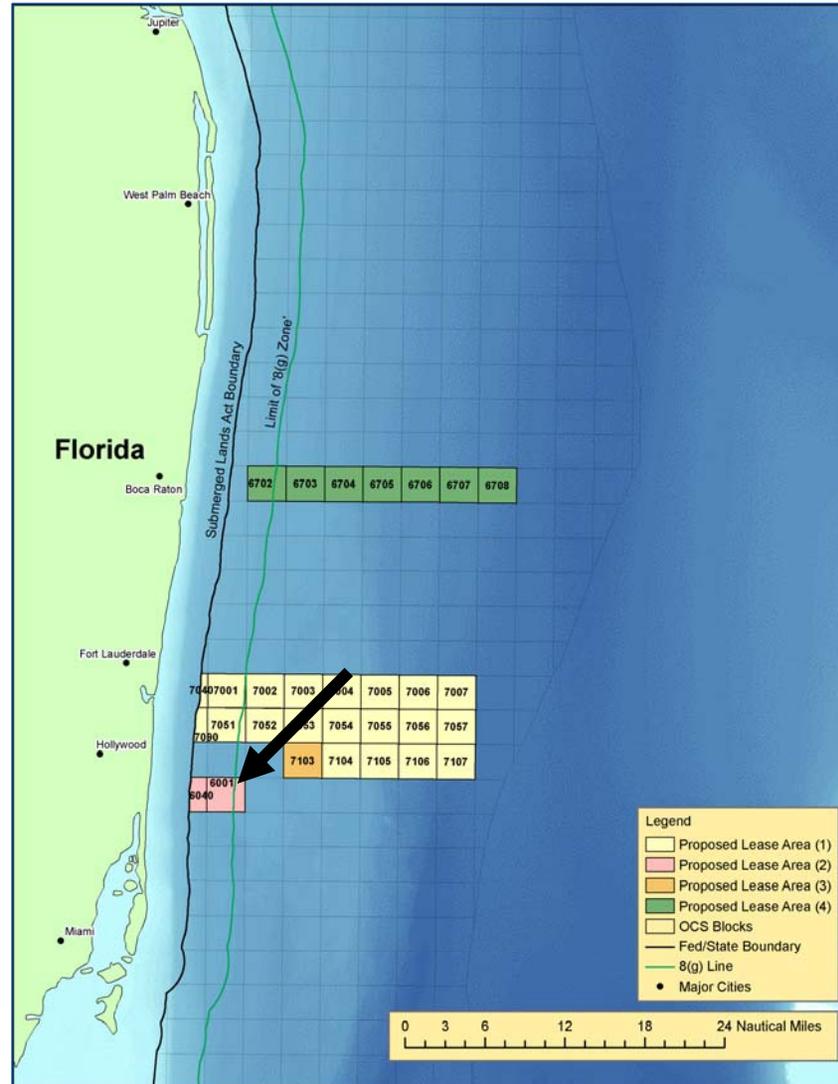
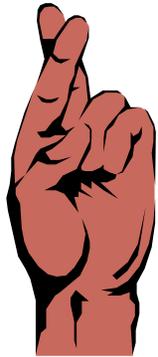


Marine Science's Project

- Marine Science plans to acquire data on ocean currents in the Florida Straights using ADCP's.

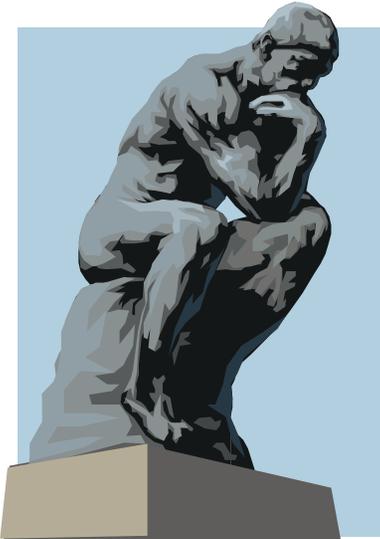


Marine Science's Proposed Lease Area



Marine Science's Project Status?

- No application has been received

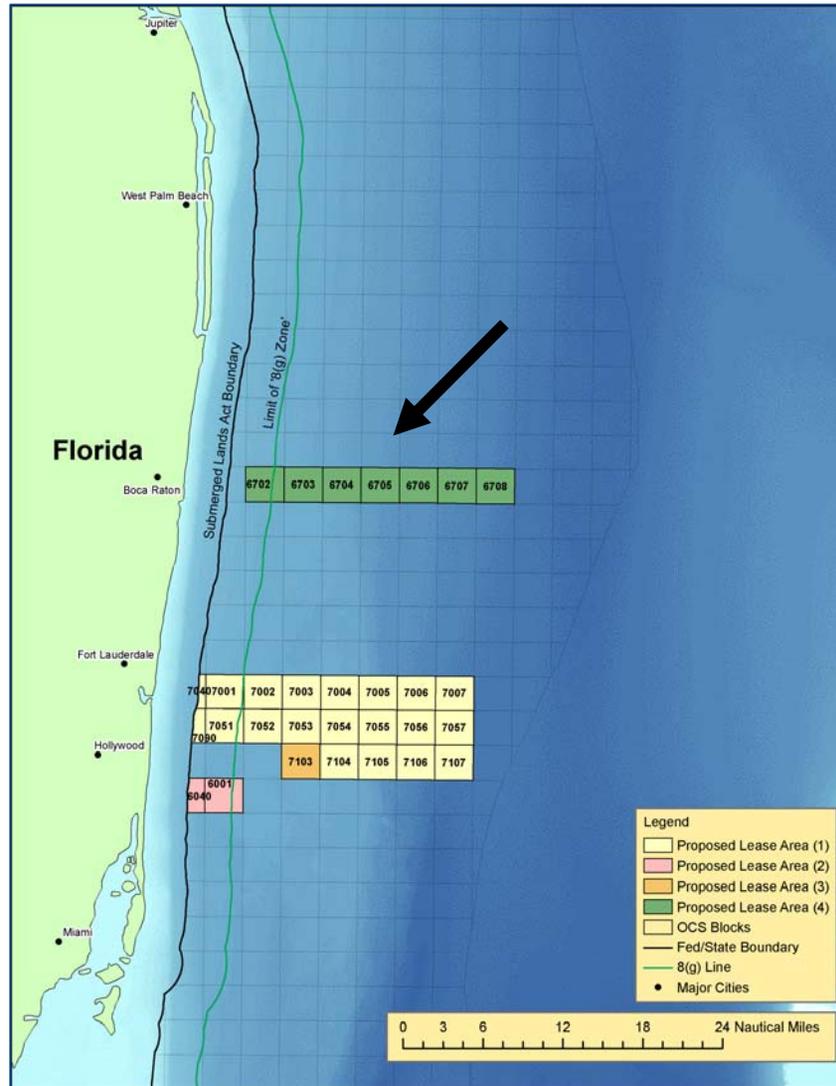


Vision Energy's Project

- Vision Energy plans to acquire data on ocean currents in the Florida Straights using ADCPs.

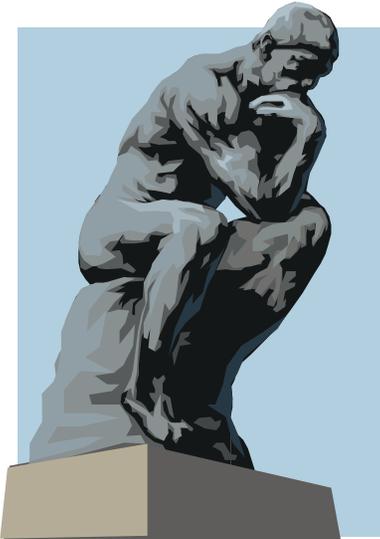


Vision Energy's Proposed Lease Area



Vision Energy's Project Status?

- No application has been received



East Coast IP Projects – Summary

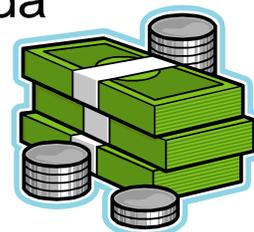
➤ Mid-Atlantic projects – proceeding

- Mid-Atlantic coastal states have Renewable Portfolio Standards (RPS) in place
- State governments are engaged – New Jersey has authorized multi-year study and data collection programs
- Developers are eager



➤ South Atlantic projects

- South Atlantic coastal states do not have RPS or they are goals rather than requirements
- Competing uses of OCS space with U.S. Navy where current energy is prospective in the Gulf Stream offshore S. Florida
- Capitalization and cash flow may be an issue for small developers on the OCS



Current Energy Conceptualization

